Final Site Assessment Plan and Report of Findings

Long Beach Industrial Park Site
(a.k.a. Former Oil Operators)
3701 North Pacific Place
Long Beach, California
(Site Code: 401282)

March 13, 2020

Prepared for:

Artesia Acquisition Company, LLC
811 North Catalina Ave., Suite 1306
Redondo Beach, CA 90277

Prepared by:

Roux Associates, Inc.
5150 East Pacific Coast Highway, Suite 450
Long Beach, California 90804

Environmental Consulting
& Management
+1.800.322.ROUX
rouxinc.com

3370.0001L.106/CVR

Table of Contents

Executive Summary 1

1. Introduction 1

2. General Background 3
   2.1 Site Identification Information 3
   2.2 Site and Vicinity General Characteristics 3
   2.2 Physical Setting 3
      2.2.1 Surface Water and Drainage 3
      2.2.2 Physiographic Setting 3
   2.3 Site Geology and Hydrogeology 4
      2.3.1 Site Geology 4
      2.3.2 Site Hydrogeology 4
   2.4 Summary of Site History 5
   2.5 Previous Environmental Investigations 5
      2.5.1 Final Remedial Investigation Report (RI) (LFR, May 27, 2009) 7
      2.5.2 Oil Sump Site Development Feasibility Study (August 25, 1983) and Oil Sump Site Development, Supplemental Investigation (January 1984), prepared by Earth Technology Corporation 8
      2.5.3 Geotechnical Investigation (GEOFON, Inc., January 1986) 8
      2.5.4 Site Characterization Study (Jaykim Engineers, Inc. and GEOFON, October 1986) 9
      2.5.5 Agency Correspondences Related to Test Plot at Oil Operators North Site (Jaykim, 1988) 10
      2.5.6 Documents Detailing Land Farming Activities (Jaykim, Jack K. Bryant & Associates, 1987-1989) 10
      2.5.7 Letter Detailing the Results of Post-Excavation Soil Sampling (JB, August 1989) 11
      2.5.8 Preliminary Assessment (Ecology and Environment, Inc., 1990) 11
      2.5.9 Documentation Regarding Groundwater Monitoring Activities (JB, RWQCB; 1987-1997) ... 11
      2.5.10 Groundwater Monitoring Report for Oil Operators North Site (JB, February 1996) 11
      2.5.11 Annual Groundwater Monitoring Report 1996 for Oil Operators North Site (JB, March 1997) 12
      2.5.12 Regional Degradation of Groundwater Quality (LFR, 2009) 12
      2.5.13 Remedial Investigation Activities (LFR, 2009) 13
      2.5.14 Final Remediation Investigation for Former Oil Operators North Site (June 15, 2009) 14

3. Subsurface Field Investigation in 2019 15
   3.1 Investigation Objectives 15
   3.2 Pre-field Activities 15
      3.2.1 Health and Safety 15
      3.2.2 Utility Clearance and Geophysical Investigation 15
      3.2.3 Permitting 16
   3.3 Field Activities 16
      3.3.1 Boring Advancement 16
      3.3.2 Soil Sampling and Analysis 16
      3.3.3 Soil Vapor Probe Installation, Soil Vapor Sampling, and Analysis 17
      3.3.4 Groundwater Sampling and Analysis 18

3.3.5 Borehole Abandonment 19
3.3.6 Field Sampling Quality Control 19
3.3.7 Equipment Decontamination 19
3.3.8 Investigation-Derived Waste 19
3.3.9 Ambient Air Monitoring 20

4. Results and Discussion – Site and COPC Characterization 21
4.1 Existing Soil Cover Thickness 21
4.2 Soil Cover Sample Results 21
4.2.1 TPH-cc 21
4.2.2 Metals 22
4.2.3 PCBs 22
4.2.4 VOCs 22
4.2.5 SVOCs 23
4.2.6 Organochlorine Pesticides 23
4.2.7 Chlorinated Herbicides 23
4.3 Soil Vapor Sample Results 23
4.3.1 VOCs 23
4.3.2 Methane 25
4.4 Groundwater Results 25
4.4.1 Metals 25
4.4.2 TPH 25
4.4.3 VOCs 26
4.4.4 Geochemical Parameters 26
4.5 Laboratory Quality Control 27

5. Conceptual Site Model and Summary of Site Characterization 28
5.1 Site Description 28
5.2 Geology 28
5.3 Hydrogeology 29
5.4 Sump Materials / Impacted Soils 29
5.5 Reasonably Anticipated Foreseeable Uses - Proposed Development 30
5.6 Contaminants of Potential Concern 30
5.6.1 Former Sump Materials / Impacted Soils 30
5.6.2 Soil 32
5.6.3 Soil Vapor 33
5.6.4 Groundwater 33
5.7 Exposure Pathways 34
5.7.1 Soil Pathway 34
5.7.2 Indoor Air Pathway 34
5.7.3 Groundwater / Surface Pathway 34
5.8 Data Gaps 34
5.8.1 Recommendations 35

6. Screening Level Human Health Risk Evaluation 36
6.1 Evaluation of Exposure Pathways 36
6.2 Evaluation of Exposure to COPCs and Exposure Point Concentrations 36

6.3 Evaluation of Chemical Toxicity 37
6.4 Risk Characterization 37
7. Summary and Conclusions 39
7.1 Existing Sump Materials / Impacted Soil 39
7.2 Cover Soil 39
7.3 Soil Vapor 39
7.4 Groundwater 39
7.5 Future Risk to Receptors 40
7.6 Recommendations 40
8. References 41

Tables

1. Summary of Sampling and Analysis
2. Total Petroleum Hydrocarbons (TPH) in Soil
3. Metals in Soil
4. Polychlorinated Biphenyls (PCBs) in Soil
5. Volatile Organic Compounds (VOCs) in Soil
6. Semi-Volatile Organic Compounds (SVOCs) in Soil
7. Organochlorine Pesticides (OCPs) in Soil
8. Chlorinated Herbicides in Soil
9. VOCs and Methane in Soil Vapor
10. Metals in Groundwater
11. TPH in Groundwater
12. Detected VOCs in Groundwater
13. Geochemical Parameters in Groundwater

Figures

1. Site Location Map
2. Existing Site Plan
3. Conceptual Development Site Plan
4. Site Plan with Supplemental Investigation Locations
5. Soil Cover Thickness Isopach
6. Interpreted Impacted Soil Surface Elevations
7. Soil Results – TPH and Lead Exceedances
8. Soil Results – Arsenic
9. Soil Vapor Results – Methane and Benzene
10. Select Groundwater Results
11. Areas of Elevated Concentrations (AECs) in Soil

Appendices

A. LFR Reports
B. Health and Safety Plan (HASP)
C. Soil Boring Permit
D. Boring Logs
E. Field Records
F. Laboratory Data Reports
G. Technical Memo for Development of Soil Arsenic Action Level
H. Screening Level Human Health Risk Evaluation

Abbreviations and Acronyms

1,1-DFA	1,1-Difluoroethane
ALM	Adult Lead Model
AIS	American Integrated Services, Inc.
AECs	Areas of elevated concentrations
Artesia	Artesia Acquisition Company, LLC
APN	Assessor's Parcel Number
Bgs	Below ground surface
BMPs	Best Management Practices
HCO_3	Bicarbonate
BFP	Bona fide purchaser
BPS	Building protection system
CalTrans	California Department of Transportation
CHHSLs	California Human Health Screening Levels
CLRRA	California Land Reuse and Revitalization Act
CO3	Carbonate
CSM	Conceptual site model
CPT	Cone penetrometer test
COPCs	Contaminants of potential concern
CY	Cubic yards
DTSC	Department of Toxic Substances Control
DPT	Direct push technology
DOGGR	Division of Oil, Gas and Geothermal Resources
ETC	Earth Technology Corporation
Enthalpy	Enthalpy Analytical
ESA	Environmental Site Assessment
EPCs	Exposure point concentrations
FS	Feasibility Study
GPS	Geo Global Positional System
GEOFON	GEOFON, Inc.
GPR	Ground penetrating radar
H&P	H&P Mobile Geochemistry
HASP	Health and Safety Plan
HERO	Human and Ecological Risk Office
OH	Hydroxide
iPRGs	Industrial preliminary remediation goals
IDW	Investigation-derived waste
Jaykim	Jaykim Engineers, Inc.
LFR	LFR Inc.
LARWQCB	Los Angeles Regional Water Quality Control Board
LEL	Lower explosive limit
MA DEP	Massachusetts Department of Environmental Protection
MCLs	Maximum contaminant levels
msl	Mean sea level
MEK	Methyl Ethyl Ketone
$\mu g/m^3$	Micrograms per cubic meter
µg/kg	Micrograms per kilogram
µg/L	Micrograms per liter
µg/dL	Micrograms per deciliter
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
NIFZ	Newport-Inglewood fault zone
OSHA	Occupational Safety and Health Administration
Oil Operators	Oil Operators, Inc.

OM&M	Operation, maintenance and monitoring
OCPs	Organochlorine Pesticides
ppmv	Parts per million by volume
ppm	Parts per million
Pender	Pender Properties, Inc.
PID	Photoionization detector
PCBs	Polychlorinated biphenyls
QA/QC	Quality assurance and quality control
RME	Reasonable Maximum Exposure
RECs	Recognized Environmental Conditions
RSLs	Regional Screening Levels
RWQCB	Regional Water Quality Control Board
RI	Remedial Investigation
Roux	Roux Associates, Inc.
SFRWQCB	San Francisco Regional Water Quality Control Board
Screening Risk Evaluation	Screening Level Human Health Risk Evaluation
SVOCs	Semi-volatile organic compounds
Report	Site Assessment Plan and Report of Findings
SMP	Soil Management Plan
SCAQMD	South Coast Air Quality Management District
Strongarm	Strongarm Environmental Services, Inc.
Subsurface Surveys	Subsurface Surveys Associates, Inc.
Sukut	Sukut Development, Inc.
TBA	Tert-butyl alcohol
PCE	Tetrachloroethene
TDS	Total dissolved solids
TPH-cc	Total petroleum hydrocarbon-carbon chain
TPH	Total petroleum hydrocarbons
TRPH	Total recoverable petroleum hydrocarbons
TCE	Trichloroethene
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UEL	Upper explosive limit
VOCs	Volatile organic compounds
VCP	Voluntary Cleanup Program
WRD	Water Replenishment District

Site Assessment Plan and Report of Findings
Long Beach Industrial Park (a.k.a. Former Oil Operators)
3701 N Pacific Place
Long Beach, California 90806

March 13, 2020

Prepared By:

Peter Shimer, P.G.
Project Geologist

Jaydeep Purandare, P.E.
Senior Engineer



Mauricio H. Escobar, P.G.
Principal Geologist



Roux Associates, Inc.
5150 East Pacific Coast Highway, Suite 450
Long Beach, California 90804

Executive Summary

Roux Associates, Inc. (Roux), on behalf of Artesia Acquisition Company, LLC (Artesia), prepared this Site Assessment Plan and Report of Findings (Report) for the three vacant contiguous parcels located at 3701 North Pacific Place in the City of Long Beach, California 90806 (Site; Figures 1 and 2). Artesia acquired the Site for industrial development from Pender Properties, Inc. (Pender) and Sukut Development, Inc. (Sukut) on November 1, 2019. The proposed development plans include a self-storage facility and RV parking as shown on Figure 3. The California Department of Toxic Substances Control (DTSC) is the lead regulatory agency for the Site. DTSC refers to the Site as the Long Beach Industrial Park (a.k.a. Former Oil Operators), Envirostor ID No. 70000161 (Site Code: 401282). Artesia finalized a California Land Reuse and Revitalization Act (CLRRA) agreement with the DTSC on October 23, 2019. This Report was prepared for Artesia as part of due diligence and therefore a Workplan was not prepared for DTSC; however, the scope of work was discussed with the DTSC prior to implementation.

The Site consists of three contiguous parcels located in the Los Cerritos neighborhood of Long Beach, California (Figure 1). The parcels are identified by Los Angeles Assessor's Parcel Numbers (APNs) 7140-014-019 (subsequently identified as Parcel 1), 7140-014-032 (Parcel 2), and 7140-014-033 (Parcel 3). According to Los Angeles County Assessor data, the area of Parcel 1 is 9.75 acres, the area of Parcel 2 (located east of Parcel 1) is 2.96 acres, and the area of Parcel 3 (located east of Parcel 2) is 0.98 acres, for a combined total of 13.69 acres. The Site is bounded by a railway to the northeast, the Interstate 405 San Diego Freeway (I-405) to the south and by the Los Angeles River to the west (Figure 2).

Based on Roux's review of historical sources and previous reports, the Site was undeveloped until at least 1896. By 1926, the Site was part of a bigger facility operated by Oil Operators, Inc. (Oil Operators), as an oil brine water treatment facility; the majority of the Site was used as a treatment sump/pond. Oil Operators pumped oil into sumps and water was allowed to evaporate from the brine or seep into the subsurface below the sumps leaving sludge behind. Following evaporation, the remaining sludge was left in the sumps or dumped elsewhere. Oil Operators ceased operations at the Site in the mid-1950s. Five active oil wells were located on the Site from approximately 1951 through 1964. Based on information obtained from the State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), the oil wells were abandoned between 1992 and 2014. In the 1970s, a partial cleanup/treatment of the Site was conducted. The partial cleanup included removal, treatment, and replacement of a portion of the sump materials. However, detailed records describing the cleanup activities were not available for review. Remnants of the former on-Site sumps were present on the Site until approximately 1989, by which time the Site was vacated. The Site was developed as a golf learning facility, including a driving range, between 1996 and 1998. The golf learning facility ceased operations in 2016, and the structures associated with the driving range were removed in 2017; the Site has been vacant since.

The Site has been the subject of several environmental investigations beginning in 1983. A Remedial Investigation (RI) report published by LFR Inc. (LFR) in 2009 provides a detailed description of the on-Site investigations. Numerous reports reviewed by LFR and discussed in the RI are summarized in Section 2.4 of this Report. Historical investigations documented that former operations resulted in subsurface impacts to soil and soil vapor. Groundwater quality beneath the Site also is degraded, but impacts are regional and caused by numerous complex interactions of natural dynamics, including salt water intrusion, with historical releases related to industrial and oilfield operations in the area.

During August 2019, Roux performed a subsurface investigation at the Site to further characterize the existing cover soil and determine whether the current soil vapor and groundwater conditions remain consistent with those observed during previous on-Site investigations, in particular those discussed in the RI (LFR, 2009).

Based on the results of the on-Site investigations and a Screening Risk Evaluation conducted using the sample results, and in consideration of the future industrial development, Roux concludes the following:

Existing Sump Materials / Impacted Soil

- The existing sump materials and impacted soils have been adequately delineated and characterized during past investigations and as a result of Roux's subsurface investigation.

- Based on regional and Site vicinity groundwater quality the Site's existing impacted materials do not appear to have significantly affected groundwater quality.

Cover Soil

- Cover soils have been adequately characterized and the approximate thickness determined over the entire Site (Figure 5). Based on the thickness of the existing cover, the Site could be graded and flattened without penetrating the top of the impacted soil.

- Based on the cover soil characterization, lead, arsenic and total petroleum hydrocarbon (TPH) concentrations exceeded their corresponding screening levels/action levels in 10 localized areas. Roux considers these 10 locations as potential areas of elevated concentrations (AECs), as shown on Figure 11.

- Based on the characterization, the cover soil, excluding the AECs, appears to be environmentally suitable for use as a future soil cap.

Soil Vapor

- Soil vapor has been adequately characterized and current concentrations are consistent with and generally lower than those reported in the RI (LFR, 2009). Elevated concentrations of benzene and methane were detected in soil vapor at nine locations on-Site (Figure 9).

Groundwater

- Recent groundwater sample results indicate that current groundwater quality is consistent with that observed in 2008 and 2009. Roux concurs with LFR's conclusion that Site groundwater conditions do not appear to differ significantly from the regional groundwater quality, that *"groundwater in the area is degraded from numerous and complex interactions of nature as well as historical man-caused activities that date back numerous decades",* and that the Site was likely part of these interactions but does not appear to be the sole or even primary cause of groundwater degradation.

- Based on current and historical groundwater data, Roux does not anticipate any active groundwater remediation.

Future Risk to Receptors

- As summarized in the table below, the estimated incremental lifetime cancer risks for on-Site commercial/industrial workers and construction workers at the Site were conservatively estimated to be 6.9E-06 and 5.1E-06, respectively. Both the estimated cancer risks fall within the acceptable range of 1E-04 and 1E-06.

- The cumulative risk to a future industrial worker or current construction worker is within the acceptable cancer target range. The cumulative risk to a future industrial worker also does not exceed the acceptable non-cancer target risk threshold of 1; however, the cumulative risk to a current construction worker exceeds the non-cancer target threshold. Although the non-cancer target risk estimates exceeded the target threshold of 1 for the construction worker scenario, none of the soil exposure point concentrations (EPCs) exceeded applicable 2019 San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs). The non-cancer risk estimate was not driven by a single compound, but multiple (thallium, cobalt, and others). Moreover, none of the COPCs associated with historical Site operations (e.g.TPH) contributed significantly to the non-cancer risk estimate.

Receptor	Incremental Lifetime Cancer Risk	Hazard Index
Target Threshold	*1E-04 to 1E-06*	*1.0*
Commercial/Industrial Worker	6.9E-06	5.6E-01
Construction Worker	5.1E-07	2.4E+00

Recommendations

Roux recommends preparation of a Response Plan that will outline mitigation measures, engineering controls, future operation and monitoring (O&M) activities, and administrative controls to allow for commercial/industrial development of the Site.

1. Introduction

Roux Associates, Inc. (Roux), on behalf of Artesia Acquisition Company, LLC (Artesia), prepared this Site Assessment Plan and Report of Findings (Report) for the three vacant contiguous parcels located at 3701 North Pacific Place in the City of Long Beach, California 90806 (Site; Figures 1 and 2). Artesia acquired the Site for industrial development from Pender Properties, Inc. (Pender) and Sukut Development, Inc. (Sukut) on November 1, 2019. The proposed development plans include a self-storage facility and RV parking as shown on Figure 3. The California Department of Toxic Substances Control (DTSC) is the lead regulatory agency for the Site. DTSC refers to the Site as the Long Beach Industrial Park (a.k.a. Former Oil Operators), Envirostor ID No. 70000161 (Site Code: 401282). Artesia finalized a California Land Reuse and Revitalization Act (CLRRA) agreement with the DTSC on October 23, 2019. This Report was prepared for Artesia as part of due diligence and therefore a Workplan was not prepared for DTSC; however, the scope of work was discussed with the DTSC prior to implementation.

The Site consists of three contiguous parcels located in the Los Cerritos neighborhood of Long Beach, California (Figure 1). The parcels are identified by Los Angeles Assessor's Parcel Numbers (APNs) 7140-014-019 (subsequently identified as Parcel 1), 7140-014-032 (Parcel 2), and 7140-014-033 (Parcel 3). According to Los Angeles County Assessor data, the area of Parcel 1 is 9.75 acres, the area of Parcel 2 (located east of Parcel 1) is 2.96 acres, and the area of Parcel 3 (located east of Parcel 2) is 0.98 acres, for a combined total of 13.69 acres. The Site is bounded by a railway to the northeast, the Interstate 405 San Diego Freeway (I-405) to the south and by the Los Angeles River to the west (Figure 2).

Based on Roux's review of historical sources and previous reports, the Site was undeveloped until at least 1896. By 1926, the Site was part of a bigger facility operated by Oil Operators, Inc. (Oil Operators), as an oil brine water treatment facility; the majority of the Site was used as a treatment sump/pond. Oil Operators pumped oil into sumps and water was allowed to evaporate from the brine or seep into the subsurface below the sumps leaving sludge behind. Following evaporation, the remaining sludge was left in the sumps or dumped elsewhere. Oil Operators ceased operations at the Site in the mid-1950s. Five active oil wells were located on the Site from approximately 1951 through 1964. Based on information obtained from the State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), the oil wells were abandoned between 1992 and 2014. In the 1970s, a partial cleanup/treatment of the Site was conducted. The partial cleanup included removal, treatment, and replacement of a portion of the sump materials. However, detailed records describing the cleanup activities were not available for review. Remnants of the former on-Site sumps were present on the Site until approximately 1989, by which time the Site was vacated. The Site was developed as a golf learning facility, including a driving range, between 1996 and 1998. The golf learning facility ceased operations in 2016, and the structures associated with the driving range were removed in 2017; the Site has been vacant since.

The Site has been the subject of several environmental investigations beginning in 1983. A Remedial Investigation (RI) report published by LFR Inc. (LFR) in 2009 provides a detailed description of the on-Site investigations. Numerous reports reviewed by LFR and discussed in the RI are summarized in Section 2.4 of this Report. Historical investigations documented that former operations resulted in subsurface impacts to soil and soil vapor. Groundwater quality beneath the Site also is degraded, but impacts are regional and caused by numerous complex interactions of natural dynamics, including salt water intrusion, with historical releases related to industrial and oilfield operations in the area.

During August 2019, Roux performed a subsurface investigation at the Site to further characterize the existing cover soil and determine whether the current soil vapor and groundwater conditions remain consistent with those observed during previous on-Site investigations, in particular those discussed in the RI (LFR, 2009). The results of the Roux investigation are reported in this document.

2. General Background

2.1 Site Identification Information

The Site consists of three contiguous parcels located in the Los Cerritos neighborhood of Long Beach, California (Figure 1). The parcels are identified by Los Angeles APNs 7140-014-019 (subsequently identified as Parcel 1), 7140-014-032 (Parcel 2), and 7140-014-033 (Parcel 3). According to Los Angeles County Assessor data, the area of Parcel 1 is 9.75 acres, the area of Parcel 2 (located east of Parcel 1) is 2.96 acres, and the area of Parcel 3 (located east of Parcel 2) is 0.98 acres, for a combined total of 13.69 acres. The Site is bounded by a railway to the northeast, the Interstate 405 San Diego Freeway (I-405) to the south and by the Los Angeles River to the west (Figure 2).

The three parcels are currently vacant and owned by Pender and Sukut.

2.2 Site and Vicinity General Characteristics

As depicted in the Long Beach, California (2012) 7.5-minute quadrangle topographic map published by the United States Geological Survey (USGS), the elevation of the Site is approximately 40 to 50 feet above mean sea level (msl). The topography of the Site and surrounding areas is varied and consists of small rolling hill-type features. The northwestern corner of the Site sits at an elevation approximately 10 to 15 feet lower than the majority of the Site. At the time of Roux's investigation, the Site was vacant, having previously been occupied by a golf learning facility. The former golf learning facility structures had been removed by the time of Roux's investigation with the exception of a canopy toward the southeastern corner of the Site. An asphalt-paved parking area was located in the southeastern corner of the Site and a concrete sidewalk ran beneath the canopy and transected the southern portion of the Site. A dilapidated stone wall was present toward the northern corner of the Site. A billboard was located in the southwestern corner of the Site, along the adjacent I-405. Remnants of the fencing system associated with the former golf driving range were located along the western and northern boundaries. Unpaved walkways and access roads ran along the western and northeastern borders of the Site. The majority of the Site was overgrown with significant amounts of unmanaged vegetation.

2.2 Physical Setting

2.2.1 Surface Water and Drainage

A section of the Los Angeles River flows approximately 200 feet to the west of the Site at its closest approach. The Los Angeles River is a concrete-lined channel that runs generally north to south in the Site vicinity and discharges into the Pacific Ocean at the San Pedro Bay. No other significant surface water features were identified within the immediate Site vicinity.

2.2.2 Physiographic Setting

According to prior investigations, the Site lies within the southern portion of the Coastal Plain of Los Angeles County, which gently slopes to the south-southwest. The Site is located within the West Coast Basin which is divided into four structural blocks delineated by zones of faulting and flexure. It is bounded on the north by the Ballona Escarpment, on the east by the Newport-Inglewood fault zone (NIFZ), and on the south and west by the Pacific Ocean and consolidated rocks of the Palos Verdes Hills (Groundwater Bulletin 118, February 2004). The Site is located along the NIFZ, which forms the boundary between the Central and West Coast subbasins and acts as a partial barrier to groundwater movement in the area. The NIFZ offsets,

thins, and folds many of the aquifers. Due to the proximity of the Site to the NIFZ, aquifer depths, thicknesses, and potential for interconnections may vary significantly across the Site. The West Coast Basin is underlain by a series of marine and continental deposits ranging in age from Holocene to Middle Miocene. These deposits, which are thought to reach a cumulative thickness of up to 13,000 feet in some areas, overlie a basement complex of pre-Cretaceous igneous and metamorphic rock (LFR, 2009).

2.3 Site Geology and Hydrogeology

2.3.1 Site Geology

According to prior investigations, the Site is located within a transition area of the Peninsular Ranges and Transverse Range geomorphic provinces. The primary geologic feature in the vicinity of the Site is the NIFZ, which traverses the Site in a northwest-southeast direction. The term fault zone refers to the occurrence of a series of interconnected fault planes, rather than a single defining fault plane. Tertiary and younger sediments are structurally folded and deformed along the NIFZ. The Long Beach Anticline is expressed at Signal Hill and is composed of Middle Miocene through Pleistocene and Holocene sediments resting unconformably on the Late Cretaceous to Late Jurassic Catalina Schist (LFR, 2009).

Soil beneath the Site reportedly consists of sand, silt, and clay of variable thicknesses; Site geological conditions were confirmed by Roux during the August 2019 investigation. The soil is underlain by a thin veneer of Recent alluvium, alluvial sediments of the Late Pleistocene-age Lakewood Formation, and sediments of the Early Pleistocene-age San Pedro Formation. The thickness of the sedimentary section underlying this area is approximately 12,000 feet (Dames & Moore 1988). The Site is located within the active Long Beach Oil Field, although no oil or gas exploration, production, storage or treatment activities occur on the Site. According to DOGGR agency records and geophysical investigations performed by Roux in August 2019, five former oil wells are located on the Site (Figure 2).

According to an interview with Site owner, Mark Pender, soil was imported to fill the on-Site oil sumps in or around the 1950s and the fill may have originated from a nearby California Department of Transportation (CalTrans) freeway project. Subsequently, according to Mr. Pender, approximately 80,000 cubic yards of sandy soil was imported from dredging operations at the Los Angeles River. Finally, the other site owner, Steve Sukut, indicated that additional fill material was imported to the Site to facilitate grading for the golf learning facility (Roux, 2019).

2.3.2 Site Hydrogeology

The Bellflower aquitard immediately underlies the Site at approximately 5 to 50 feet below ground surface (bgs). Identified aquifers beneath the Site in order of increasing depth are the Lakewood Formation (which contains the Gaspur and Gage aquifers) and the San Pedro Formation (which contains the Lynwood, Silverado, and Sunnyside aquifers).

The Gaspur aquifer is present beneath the Site from approximately 50 to 70 feet bgs as sand and gravel. Shallow groundwater was encountered at 8 feet bgs in one boring located in the central portion of the Site during 1986 soil sampling activities; however, the presence of shallow groundwater was presumed to be a localized perched condition. During December 2007 monitoring activities, the depth to groundwater beneath the Site ranged from approximately 32.6 to 49.3 feet bgs, with a shallow gradient flowing in a southerly direction. The depth to groundwater during the August 2019 Roux investigation was 49.65 feet bgs. The

groundwater encountered during the December 2007 monitoring activities was believed to be the Gaspur aquifer (LFR, 2009).

The Gage aquifer has a base at approximately 180 feet bgs and has been found to be approximately 35 feet thick in the vicinity of the Site. Deposits in the Gage aquifer reportedly vary from silty sand to minor gravel. Groundwater in both aquifers of the Lakewood Formation has been reported to be of inferior chemical quality (LFR, 2009).

The lower Pleistocene San Pedro Formation unconformably underlies the Lakewood Formation and contains numerous aquifers of varying quality. The Lynwood aquifer has a base at approximately 600 feet bgs and is approximately 400 feet in thickness. According to data from the Water Replenishment District of Southern California (WRD), the shallowest contact with the Lynwood aquifer in the Site vicinity was approximately 280 feet bgs (WRD, 2018). The Silverado aquifer joins the Lynwood aquifer at approximately 600 feet bgs and continues to over 1,000 feet bgs. The deep Silverado aquifer is the only significant water-producing zone; the City of Long Beach obtains groundwater from more than 1,000 feet bgs within it (LFR, 2009).

Although groundwater underlying the Site is considered of beneficial use by the Regional Water Quality Control Board (RWQCB), regional groundwater quality is generally poor due to salt water intrusion and industrial waste disposal. Particularly in the vicinity of the Site, historic oil and gas production activities have contributed to poor groundwater quality. No active drinking water production wells were identified within one mile of the Site (LFR, 2009).

2.4 Summary of Site History

Roux has compiled the following Site history section using sources obtained and referenced from previous reports. In particular, Site history has been documented based on a review of information presented in the Phase I Environmental Site Assessment (ESA) prepared by Roux in August 2019.

Based on Roux's review of historical sources and previous reports, the Site was undeveloped until at least 1896. By 1926 the Site was part of a bigger facility operated by Oil Operators, as an oil brine water treatment facility; the majority of the Site was used as a treatment sump/pond. Oil Operators pumped oil into sumps and water was allowed to evaporate from the brine or seep into the subsurface below the sumps leaving sludge behind. Following evaporation, the remaining sludge was left in the sumps or dumped elsewhere. Oil Operators ceased operations at the Site in the mid-1950s. Five active oil wells were located on the Site from approximately 1951 through 1964. Based on information obtained from DOGGR, the oil wells were abandoned between 1992 and 2013. In the 1970s a partial cleanup/treatment of the Site was conducted. The partial cleanup included removal, treatment, and replacement of a portion of the sump materials. However, detailed records describing the cleanup activities were not available for review. Remnants of the former on-Site sumps were present on the Site until approximately 1989, by which time the Site was apparently vacated. The Site was developed as a golf learning facility between 1996 and 1998. The golf learning facility ceased operations in 2016, and the structures associated with the driving range were removed in 2017. The Site has been vacant since. A detailed description of the Site history and adjoining properties is presented in the Phase I ESA report (Roux, 2019).

2.5 Previous Environmental Investigations

Roux reviewed documents that included historical environmental investigations and other relevant studies conducted at the Site. Roux reviewed the following reports:

- January 1, 1986 Geofon Geotechnical Investigation (no cover page)
- Statewide Investors Site Characterization Study (GEOFON, Jaykim; October 1, 1986)
- January 22, 1988 Jaykim Engineers Revisions to the Rule 1150 Permit for Land Farming
- February 11, 1988 South Coast Air Quality Management District (SCAQMD) Rule 1150 Excavation Permit
- July 18, 1988 Jaykim Engineers 72-hour Notice to Proceed with Land Farming
- July 18, 1988 Jaykim Engineers Results of Biodegradation Test Plot
- April 19, 1989 Jack K Bryant SCAQMD Rule 1150 Permit Letter for Remedial Activities
- August 30, 1989 Jack K Bryant Results of Post Excavation Soil Sampling
- October 24, 1990 Oil Operators Letter to Water Board RE Monitoring
- September 20, 2002 City of Long Beach Request for DTSC Assistance with FOONS
- October 1, 2002 DTSC Response to City of Long Beach Letter (2002-09-20)
- November 24, 2003 Gregg Presentation of CPT Data
- March 24, 2005 LFR, Inc. (LFR) Letter to DTSC to Engage in VCA
- December 13, 2005 DTSC-CRG Properties VCA
- April 4, 2006 LFR Characterization Data Report - Part 1 of 2
- May 2, 2006 DTSC Meeting Agenda
- July 12, 2006 DTSC Comments to LFR Characterization Data Report (2006-04-04)
- March 7, 2007 LFR Historical Summary of Files Reviewed
- March 12, 2007 LFR Revised Characterization Data Report
- March 12, 2007 LFR RI Workplan
- March 12, 2007 LFR RTC DTSC (2006-07-12) Characterization Data Report (2006-04-04)
- August 29, 2007 LFR RI Workplan
- September 6, 2007 DTSC Comments to LFR Final RI Workplan (2007-08-29)
- September 6, 2007 DTSC Comments to LFR GW MS Q12008 (2008-06-06)
- October 19, 2007 DTSC Community Survey Questionnaire
- November 1, 2007 Multiple Community Comment Emails
- November 20, 2007 DTSC Annual Cost Estimate 2008
- March 4, 2008 LFR RI Report (missing pages)
- April 15, 2008 DTSC Fran Collier Comments to RI Report (2008-03-04)
- July 9, 2008 LFR Summary of GW Conditions and Request for Clarification for the RI and FS
- October 1, 2008 DTSC Geologist Comments to Q12008 GW MS Report
- October 10, 2008 LFR RTC DTSC (2008-04-23) RI Report (2008-03-04)

- December 18, 2008 DTSC Approval Letter for Preparation of HHRA and FS - Response to 2008-10-10 LFR Letter
- May 27, 2009 LFR Final RI Report
- June 15, 2009 DTSC Final RI Approval letter

A summary of key environmental documents is provided in the subsequent sections, mostly in the context of the 2009 LFR RI. The RI is a relatively comprehensive report that included discussion of numerous documents provided to Roux. The following sections summarize the findings from prior investigations by other consultants and do not include or reflect the opinions or recommendations of Roux unless explicitly stated.

2.5.1 Final Remedial Investigation Report (RI) (LFR, May 27, 2009)

According to the RI, the Site was a Brownfield development occupied by Long Beach Golf Learning Center, consisting of a driving range, putting practice and chipping areas, a snack bar, a golf shop, a maintenance building, and a paved parking lot. The subject of the RI consisted of the following APNs, which include, but are not limited to, the Site parcels: 7140-014-019, 7140-014-020, 7140-014-021, 7140-014-022, 7140-014-023, 7140-014-025, and 7140-014-027.

The RI divides the subject into the following three areas:

Portion 1 (APNs 7140-014-019 and 7140-014-020),

Portion 2 (APNs 7140-014-021, 7140-014-022, 7140-014-023, and 7140-014-027), and

Portion 3 (APN 7140-014-025).

Portions 2 and 3 are not part of the Site; they are located to the southeast of the Site. As previously stated in Section 2.1, the Site consists of parcels 7140-014-019, 7140-014-032, and 7140-014-033 which generally correspond to Portion 1 in the RI.

According to the RI, the Site was formerly owned by Oil Operators, a non-profit cooperative organization that functioned as a central oil brine water treatment facility serving member oil companies. Oil brine is generally comprised of drilling mud and other waste generated from oil production activities. The Oil Operators facility encompassed a large area of which the Site was the northernmost portion. Brine water treatment operations began in 1926. Oil brine was pumped to sumps on the Oil Operators facility, the majority of the Site was used as a treatment sump. Water was allowed to evaporate from the brine or seep into the subsurface below the sumps leaving behind a sludge. Following evaporation, the remaining sludge was left in the sumps or dumped elsewhere. Evaporation operations ceased at the Site when a water treatment plant (including evaporation ponds) was built south of the Site in the mid-1950s.

In the 1970s, a partial cleanup/treatment of the Site was conducted. The partial cleanup included removal, treatment, and replacement of a portion of the sump materials. However, detailed records describing the cleanup activities were not available for review. Additional investigations were performed in the 1980s. Numerous reports reviewed by LFR and discussed in the RI are discussed below. It should be noted that the following information was obtained from the RI; not all of the reports that were apparently prepared were made available to Roux for direct review.

2.5.2 Oil Sump Site Development Feasibility Study (August 25, 1983) and Oil Sump Site Development, Supplemental Investigation (January 1984), prepared by Earth Technology Corporation

In an effort to assess the feasibility of supporting light industrial structures on the sump materials at the Oil Operators facility, 16 electric cone penetrometer tests (CPTs) were performed during two investigations by Earth Technology Corporation (ETC). The results indicated that the majority of sump materials remaining at the property were too compressible to directly support shallow foundations and differential foundation settlement would likely be excessive. Three subsurface profiles located across the Site were created based on the CPT results. The following four zones were identified in the RI:

Zone 1: Stiff clay and sandy clay soil with occasional sand near the ground surface; relatively high to moderate oil content; "appeared to have been treated and recompacted."

Zone 2: Firm to soft clay and silt; moderate to low oil content; may have been lightly treated and replaced; very compressible.

Zone 3: Very soft clay; untreated and uncompacted; water saturated; highly compressible. Zone 3 materials reached as deep as 30 feet bgs in some locations at the Site. The deepest area appeared to be in the central portion of the Site.

Zone 4: Natural soil with some moderately compacted sump material near the top.

2.5.3 Geotechnical Investigation (GEOFON, Inc., January 1986)

GEOFON, Inc. (GEOFON) conducted a geotechnical investigation to evaluate subsurface conditions at the Oil Operators facility for a potential business park development. A 1986 Site Characterization Study apparently referenced the report; however, the date of the GEOFON report is unknown. A total of 12 borings (GB-1 through GB-12) were advanced on the property to assess soil types, levels of soil contamination, and depth of sump materials. Data from prior geotechnical investigations, including the previously discussed ETC activities were incorporated into the GEOFON report. The total volume sump material at the Site, including unprocessed, moderately processed, and lightly processed sump material was estimated to be 390,000 to 490,000 cubic yards (CY), of which an estimated 80,000 to 100,000 CY was unprocessed sump material. The sump materials were described as primarily "mud similar to clayey soils, mixed with highly variable amounts of salty water (brine) and oily wastes." Two areas with the greatest amount of sump material were described as follows:

Approximately 75,000 CY of sump material was distributed throughout a rectangular area approximately 450 feet long, 300 feet wide, and 15 feet thick in the central portion of the Site; and

Approximately 7,000 CY of sump material was distributed throughout a triangular area approximately 7 to 10 feet thick in the northern corner of the Site.

The primary area of occurrence of soft, unprocessed sump material was found at the base of the sump, approximately 20 to 30 feet bgs. Shallow groundwater was encountered at 8 feet bgs in one boring located in the central portion of the Site (GB-4). GEOFON concluded that this was a localized perched condition due to the presence of native sands at greater depths which were not saturated, and the lack of groundwater encountered in any other borings suggested localized perched groundwater.

GEOFON concluded that present surface conditions at the Oil Operators property were not suitable for supporting structures on shallow foundations due to the highly variable engineering properties of the sump materials and the high compressibility. However, following moisture-conditioning and compacting, the soils would be suitable for supporting structures according to GEOFON.

2.5.4 Site Characterization Study (Jaykim Engineers, Inc. and GEOFON, October 1986)

The scope of work for the Jaykim Engineers, Inc. (Jaykim) and GEOFON investigation consisted of 12 borings advanced to collect soil samples for geophysical and chemical analysis. The borings were converted to gas monitoring probes for the purpose of monitoring gas pressures and lower explosive limit (LEL) levels. The borings denoted GB-1 through GB-12 are reportedly the same borings referenced in the previously discussed GEOFON investigation.

According to the RI, soils at the property were characterized into the following six types based on physical characteristics:

- *Type 1 – Low to medium oil content in a dark silty or sandy clay;*
- *Type 2 – Medium to high oil content, with some samples showing liquid oil, in a black, silty to sandy clay;*
- *Type 3 – Extremely high oil content in a toothpaste-like consistency;*
- *Type 4 – Very low oil content in a dry blue clay;*
- *Type 5 – Very low oil content in a dry gray sand; and*
- *Type 6 – None to very low oil content in a brown silty sand.*

Concentrations of total petroleum hydrocarbons (TPH) in the samples analyzed ranged from non-detect (Type 6) to 75,800 milligrams per kilogram (mg/kg) (Type 3). Lead was detected up to 444 mg/kg (Type 3). Benzene and xylenes were detected at concentrations up to 3.0 mg/kg (Type 3) and 28 mg/kg (Type 2), respectively. Complete copies of the Jaykim and GEOFON reports were not available for LFR to review and tables and figures were absent. Therefore, the location and distribution of the contaminants are unknown.

Also discussed in the Site Characterization Study were four samples collected with a backhoe in April 1986. The analytical results were summarized with xylenes averaging 93 mg/kg, other volatile organic hydrocarbons averaging 11,158 mg/kg, non-volatile compounds averaging 130,200 mg/kg, and organic lead averaging 3.21 mg/kg. Detailed analytical results, tables, and figures were absent from the report.

As previously mentioned, the 12 borings advanced during the Jaykim and GEOFON investigations were converted to gas probes following collection of soil samples. Gas analysis included field testing for LEL concentrations and probe pressures, as well as “GC/halogenated compounds and BTX.” Methane concentrations reportedly ranged from 12.1 to 83.6 percent. Detailed analytical results, tables, and figures were absent from the report.

One groundwater sample was collected by GEOFON in 1986 from boring GB-4 in the presumed perched groundwater layer at 8 feet bgs. Concentrations reportedly included 26,000 micrograms per liter (µg/L) of TPH, 18,000 µg/L of zinc, and 16,000 µg/L of lead. Jaykim reportedly collected additional perched groundwater samples in 1988. Concentrations reportedly included 16 milligrams per liter (mg/L) of lead, 5.5 mg/L of chromium, and 7.3 mg/L of copper. The perched water appears isolated (not identified in other borings) at a location central to the Site. Off-Site migration of the perched water appears unlikely.

The Jaykim report also stated that the volume of fill material to be reprocessed was approximately 400,000 to 500,000 CY, of which approximately two thirds of the fill material were previously processed and had a relatively low oil content and soil-like properties. Jaykim stated that the low oil content fill material could be relatively easily removed, replaced, and compacted and that the remaining one third of fill material with a high oil content could be mixed with clean fill dirt, replaced, and compacted.

2.5.5 Agency Correspondences Related to Test Plot at Oil Operators North Site (Jaykim, 1988)

In a July 1988 letter to the RWQCB, Jaykim described the operation of a test plot to demonstrate the feasibility of soil bioremediation at the Oil Operators property. On May 31, 1988, the test plot area was cleared and leveled, and soil vapor readings within three inches of the soil surface were taken with a combustible vapor detector. Six “cells” that were approximately 8 feet wide by 50 feet long were staked out and rototilled. Ammonium nitrate and phosphate were then applied to the cells and tilled into the soil.

In June 1988, composite soil samples were collected from each cell. Oil-utilizing bacteria and warm water were added to five of the six cells and the five cells were then tilled and watered into the soil. Approximately 20 CY of oil-contaminated soil was removed to a depth of 15 to 20 feet bgs and mixed with surface soil in a one-to-one ratio. The soil mixture was then spread onto each of the cells at varying depths ranging from 3 to 6 inches and tilled into the surface and mixing was performed between two and six times daily over the course of five days to determine the optimal mixing frequency.

Results of the test indicated that the treatment process was more effective with more frequent mixing; the plots mixed six times per day had the greatest reduction in TPH concentrations (from 3,200 to 1,300 mg/kg), compared with reductions in a plot that was mixed twice daily (from 840 to 770 mg/kg).

2.5.6 Documents Detailing Land Farming Activities (Jaykim, Jack K. Bryant & Associates, 1987-1989)

The Revised Excavation Management Plan for Oil Operators, Inc. North Site (Jaykim, October 1987) noted that Planned land farming procedures to be accomplished in a grid pattern across the Site were described with an expected timeframe for completion of eleven months. Other activities to occur concurrently with the land farming included odor and dust control and groundwater monitoring.

The Oil Operators, Inc. Rule 1150 Permit No. 157742 (Jack K. Bryant & Associates [JB], April 1989) letter requested an extension of the Rule 1150 permit due to the time required to process 100,000 CY of material containing 20,000 mg/kg or more of oil. The permit would again be extended if the material encountered had an absolute vapor pressure below 36 millimeters of mercury (mmHg).

2.5.7 Letter Detailing the Results of Post-Excavation Soil Sampling (JB, August 1989)

The letter provided analytical results for 14 soil samples collected during excavation activities that occurred in August 1989. The purpose of the soil sampling was reportedly to determine the amount of total recoverable petroleum hydrocarbons (TRPH) in soil at the Site; to analyze one sample for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, and pH; and to determine the potential for bioremediation of the soil. Concentrations of TRPH ranged from 16 to 92,000 parts per million (ppm) with higher concentration samples located near the center of the Site. In the singular sample analyzed for VOCs, SVOCs, pesticides, PCBs, metals, and pH, detections included 7.5 mg/kg of ethylbenzene, 3 mg/kg of benzene, 540 mg/kg of lead, and 44 mg/kg of arsenic.

2.5.8 Preliminary Assessment (Ecology and Environment, Inc., 1990)

According to the Preliminary Assessment, the California Department of Health Services collected soil samples in October 1989. Analytical results exceeding reported regulatory standards included arsenic (44 mg/kg), naphthalene (8,700 micrograms per kilogram [µg/kg]), and TPH (95,000 ppm). Detailed analytical results, tables, and figures were absent from the report.

2.5.9 Documentation Regarding Groundwater Monitoring Activities (JB, RWQCB; 1987-1997)

A letter dated May 5, 1987 from the Los Angeles RWQCB (LARWQCB) to Oil Operators provided approval for waste discharge requirements and included a requirement for monthly groundwater elevation measurement and quarterly groundwater monitoring. Subsequently, in letters dated November 7, 1989 and October 24, 1990, the previous quarterly groundwater monitoring requirement was altered to be annual groundwater monitoring as results reportedly did not show variations from previous tests. The actual groundwater monitoring report data was not made available to Roux for review.

2.5.10 Groundwater Monitoring Report for Oil Operators North Site (JB, February 1996)

This report presented the results of the groundwater sampling event that occurred in January 1996. Samples were collected from wells MW-2, MW-3 and MW-4. The depth to groundwater in the wells ranged from 39.3 feet bgs (MW-4) to 50.6 feet bgs (MW-2). The following results were provided by LFR in the RI:

- The pH ranged from 6.45 to 6.65 units;
- Concentrations of total dissolved solids (TDS) ranged from 2,690,000 µg/L to 10,800,000 µg/L;
- TRPH was detected in well MW-2 at 1,400 µg/L;
- TPH was not detected in any of the monitoring wells;
- Ethylbenzene and total xylenes were detected in MW-3 at concentrations of 0.9 µg/L and 2.4 µg/L, respectively, toluene was detected in monitoring well MW-4 at a concentration of 0.5 µg/L; and

- Lead, chromium, and nickel were not detected in any of the monitoring wells; zinc was detected at concentrations ranging from 20 µg/L (MW-3) to 120 µg/L (MW-2) and copper was detected at concentrations ranging from 74 µg/L (MW-4) to 80 µg/L (MW-2).

2.5.11 Annual Groundwater Monitoring Report 1996 for Oil Operators North Site (JB, March 1997)

This report presented the results of the groundwater sampling event that occurred in January 1996. Samples were collected from wells MW-2, MW-3 and MW-4. The depth to groundwater in the wells ranged from 42.43 feet bgs (MW-4) to 61.95 feet bgs (MW-2). The Site-wide increase in groundwater depths was attributed to earthmoving activities at the Site. The following results were provided by LFR in the RI:

- The pH ranged from 6.34 to 6.78 units;
- TDS concentrations ranged from 2,030,000 to 11,800,000 µg/L;
- TRPH and TPH were not detected in any of the wells;
- Benzene was detected in two wells, MW-2 and MW-3, at concentrations of 0.6 µg/L and 88 µg/L, respectively; toluene, ethylbenzene, and xylenes were detected in well MW-3 at concentrations ranging from 1.6 µg/L to 15 µg/L; and
- Zinc was detected at concentrations ranging from 100 µg/L (MW-4) to 200 µg/L (MW-2); lead was detected at concentrations ranging from 130 µg/L (MW-4) to 280 µg/L (MW-3); and nickel was detected in MW-3 at a concentration of 65 µg/L.

Land farming operations reportedly ceased due to public complaints received by the SCAQMD; however, the date of these complaints is unknown.

A Voluntary Cleanup Program (VCP) application for the Oil Operators facility was approved by the DTSC on December 20, 2005. A Data Characterization Report was submitted to the DTSC to describe current and historical investigation and remediation activities in 2006. The DTSC challenged the report on the grounds that the Oil Operators facility had not been fully characterized and that further investigation was needed prior to the development of a remedial investigation workplan. In response to DTSC comments, a historical review of the facility was submitted in March 2007 which included the review of historical aerial photographs, topographic maps, and DOGGR records. The DTSC approved a remedial investigation workplan in September 2007.

2.5.12 Regional Degradation of Groundwater Quality (LFR, 2009)

In March 2009, LFR conducted groundwater monitoring. TDS in groundwater were 1,000 mg/L in MW-5, 2,000 mg/L in MW-6, 6,200 mg/L in MW-3, and 7,800 mg/L in MW-7, which indicated that concentrations of TDS in groundwater increased in the hydraulically downgradient direction. No clear trend regarding chloride concentrations was observed. According to LFR, it was unknown whether the elevated TDS concentrations were due to natural processes or historical operations on the Site or in the Site vicinity. LFR stated that “the Gaspur aquifer has historically been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond Carson Street (located north of the Site) toward the crest of the Newport-Inglewood uplift.” According to LFR, groundwater enters the Site classified as slightly saline (1,000 to 3,000 mg/L), and

exits the Site classified as moderately saline (3,000 to 10,000 mg/L), with even higher levels of TDS and chloride detected in the Gaspur aquifer south of the Site. Based on the groundwater monitoring data, LFR concluded that Site groundwater conditions did not appear to differ significantly from the regional groundwater quality. On this basis, LFR further concluded that groundwater in the area is degraded from numerous and complex interactions of nature as well as historical activities; the Site was likely part of this but did not appear to be the sole or even primary cause of groundwater degradation. Due to the regional groundwater degradation issue, LFR stated that remedial action within the context of the Gaspur aquifer would be highly costly and likely ineffective.

2.5.13 Remedial Investigation Activities (LFR, 2009)

LFR conducted soil investigation activities at the Site between November 2003 and December 2007. Refer to Appendix A for the LFR report and a complete discussion of investigation results. A summary of the remedial investigation results and associated screening levels used by LFR is provided below.

Soil

A summary of the soil sampling results is provided below.

- Petroleum hydrocarbons were the primary contaminant found at the Site, with longer carbon chains predominant. Both extractable and volatile hydrocarbon concentrations were near or below the screening levels established by LFR using the Massachusetts Department of Environmental Protection (MA DEP) approach to evaluate potential hazard from exposure for low quality groundwater.

- When compared with the MA DEP screening levels, only the TPH concentration detected in one sample (B7A-40; 7,850 mg/kg) was considered a potential hazard. However, based on the depth below ground surface, this concentration was determined to be unlikely to pose a threat to any receptors.

- Analytical results for VOCs collected in soil samples by LFR in 2003 and in 2007 indicated that VOCs were not present at levels above United States Environmental Protection Agency (USEPA) industrial preliminary remediation goals (iPRGs) in the sump samples collected.

- SVOC exceedances of iPRGs were one benzo(a)pyrene exceedance at 50 feet bgs (boring B7), and two naphthalene exceedances at 30 and 50 feet bgs (boring B7A). Based on the depth below ground surface, these concentrations were not identified by LFR as a threat to any receptors.

- Metals of concern identified at the Site were arsenic (up to 28.6 mg/kg, exceeding typical California background concentrations) and lead. Lead concentrations were exceeded for disposal purposes; however, a deionized water evaluation suggested no significant water quality threat and levels were below the iPRG.

- No PCBs or organochlorine pesticides were detected at concentrations above iPRGs.

Soil Vapor

Tetrachloroethene (PCE), trichloroethene (TCE), and benzene were detected at concentrations above California Human Health Screening Levels (CHHSLs). Detectable PCE concentrations ranged from 5.3 µg/L

to 9.1 µg/L, and TCE concentrations ranged from 1.8 µg/L to 2.0 µg/L. Benzene was detected at concentrations up to 0.33 µg/L. A preliminary Johnson and Ettinger evaluation performed by LFR indicated "insignificant concerns" for these compounds. No supporting risk evaluation documentation were provided by LFR.

Methane was detected at concentrations up to 30%, with 2 samples (out of 26) containing methane between the LEL and the upper explosive limit (UEL), i.e. within the explosive range, during LFR's investigation. In prior investigations, methane concentrations reportedly ranged from 12.1% to 83.6%. LFR stated that methane would require consideration and potential mitigation during design and construction activities.

Groundwater

Historically, total petroleum hydrocarbon-carbon chain (TPH-cc), VOCs, and SVOCs were not detected above their respective maximum contaminant levels (MCLs). Due to the regional degradation of groundwater quality from historic oil production activities (TDS impacts), both on-Site and in the Site vicinity, the Site groundwater conditions were determined by LFR to be generally consistent with limited concerns. In prior investigations lead was observed in groundwater. However, analysis performed by LFR found no significant impacts. Arsenic, barium, and mercury were detected at concentrations that exceeded their respective MCLs.

2.5.14 Final Remediation Investigation for Former Oil Operators North Site (June 15, 2009)

The DTSC issued a letter to LFR dated June 15, 2009 regarding the RI. The letter stated that the DTSC reviewed the final RI report dated May 27, 2007 and that the project was ready for a Feasibility Study (FS) as well as a Human Health and Ecological Risk Assessment (HHRA) workplan.

3. Subsurface Field Investigation in 2019

3.1 Investigation Objectives

Roux conducted a supplemental investigation from August 12 through 22 of 2019 at the Site to fill in data gaps pertaining to the characterization of the cover soil due to its relevance to the proposed development; further characterize the existing cover soil; address recognized environmental conditions (RECs) identified as part of the Phase I ESA; and confirm whether current Site soil vapor and groundwater conditions remain consistent with those observed during previous on-Site investigations, in particular those discussed in the RI (LFR, 2009). As such, the primary objectives of the subsurface investigation included the following:

- Characterize existing cover soils (upper 5 to 17 feet bgs) and confirm thickness of cover soils over impacted materials;
- Confirm whether Site conditions are similar to those documented in the 2009 LFR RI report for soil vapor and groundwater;
- Establish and confirm Site contaminants of potential concern (COPCs) in soil, soil vapor, and groundwater; and
- Locate and identify the known on-Site abandoned oil wells.

3.2 Pre-field Activities

3.2.1 Health and Safety

Prior to the start of field activities, Roux prepared a Site-specific Health and Safety Plan (HASP) to protect and inform workers. In addition to containing information regarding Roux's standard safety practices, the HASP describes potential hazards relating to Site activities and provides the locations and contact information of nearby emergency services. Following a daily safety tailgate meeting, field workers, including on-Site Roux Associates personnel and subcontractor employees, acknowledged their familiarity with applicable safety procedures and indicated their responsibility to follow the guidelines established by the HASP by signing the HASP. Personnel working in the exclusion zone were Occupational Safety and Health Administration (OSHA) trained, consistent with federal regulation 29 CRF 1910.120. The HASP is included as Appendix B.

3.2.2 Utility Clearance and Geophysical Investigation

Roux marked the proposed boring locations with white paint along and notified Underground Service Alert of Southern California at least three business days prior to the start of intrusive field activities (Ticket #A192180825).

Additionally, to assess the locations of buried utilities (i.e. natural gas, electric, water, sewer, telephone, fiber optic, etc.) or obstructions, a private geophysical services and utility locating firm, Subsurface Surveys Associates, Inc. (Subsurface Surveys) of Carlsbad, California, was contracted to perform a geophysical survey and to clear the proposed boring locations prior to drilling. Subsurface Surveys conducted a geophysical survey on August 8 and 9, 2019, using a variety of tools, including EM61, M-Scope, ground penetrating radar (GPR), magnetic gradiometer, and line locator. Locations of the borings were logged in the field using a handheld Trimble Geo Global Positional System (GPS) unit.

As part of the survey, Subsurface Surveys also used geophysical techniques to locate the former oil wells in the Site vicinity, under Roux's oversight. Subsurface Surveys was successful in locating all 11 oil wells shown on DOGGR's website. Based on the survey, Roux Associates determined that only five (5) of the former oil wells are located on the Site, as shown on Figure 2.

3.2.3 Permitting

Prior to commencing drilling, a boring permit (Permit # 2668) was obtained from the City of Long Beach. A copy of the permit is included as Appendix C.

3.3 Field Activities

3.3.1 Boring Advancement

Under the direction of Roux, Strongarm Environmental Services, Inc. (Strongarm) of Norwalk, California (C-57 License # 766463), advanced forty-one (41) soil borings to collect soil samples and five (5) borings to determine the thickness of the existing cover soil in the locations shown on Figure 4 and summarized in Table 1.

Borings were located in a grid pattern across the Site to provide full Site coverage, as shown in Figure 4. Each boring location was hand augered to 2 feet bgs to clear for potential subsurface utilities. Based on the proposed total depth of the borehole and subsurface conditions, the boring was advanced to the total depth using either a hand auger or a Direct Push Technology (DPT) rig. Borehole advancement at a given location was stopped if impacted soil was encountered at a shallower depth than anticipated. Fifteen (15) of the 46 soil boring locations were converted to single or dual-nested soil vapor probes following soil sampling.

Soil samples were field screened using a photoionization detector (PID). Each borehole was continuously logged for lithological characterization by a licensed California Professional Geologist and observations were recorded in boring logs, included as Appendix D. When encountered, the depth of the impacted soils was recorded as part of determining the existing soil cover thickness.

3.3.2 Soil Sampling and Analysis

Soil was sampled at the depths ranging from 0 to 17 feet bgs as summarized in Table 1. The DPT rig used 4-foot acetate sleeves to collect soil. Samples shallower than 2-feet bgs were collected via slide hammer and 6-inch acetate sleeve. Soil collected for VOC analysis was sampled using USEPA Method 5035 TerraCore sampling kits, directly from the acetate sleeve. For the remaining analytes, soil from the hang auger bucket or acetate sleeves was homogenized in Ziploc® bags before being transferred to appropriate laboratory-provided sampling containers for laboratory analysis. A total of 142 soil samples (130 primary and 12 duplicate samples) were collected from 41 borings.

Soil samples were labeled based on their boring number and sampling depth (i.e. SB-4-SS-1 was a soil sample collected at boring SB-4 located at 1-foot bgs).

After sample collection, soil samples were placed on ice and transported under strict chain-of-custody protocol to Enthalpy Analytical (Enthalpy) of Orange, California, a California certified laboratory. Enthalpy analyzed soil samples (primary, duplicate) for the following constituents:

- 142 samples (130 primary, 12 duplicate) analyzed for TPH-cc using USEPA Method 8015B;

- 142 samples (130 primary, 12 duplicate) analyzed for California Assessment Manual (CAM) 17 Metals using USEPA Method 6010B;
- 142 samples (130 primary, 12 duplicate) analyzed for mercury using USEPA Method 7471A;
- 25 randomly selected sample locations (22 primary, 3 duplicate) were analyzed for PCBs using USEPA Method 8082;
- 25 randomly selected sample locations (22 primary, 3 duplicate) were analyzed for VOCs by USEPA Method 8260B;
- 25 randomly selected sample locations (22 primary, 3 duplicate) were analyzed for SVOCs by USEPA Method 8270C;
- 37 randomly selected sample locations (34 primary, 3 duplicate) were analyzed for organochlorine pesticides (OCPs) using USEPA Method 8081; and
- 7 sample locations (6 primary, 1 duplicate) along the northern Site boundary were analyzed for herbicides by USEPA Method 8151A.

Table 1 provides a summary of sampling and analysis performed at each of the borings. The sampling and analysis plan was based on historic Site use, historic investigations, and features along the Site boundary.

3.3.3 Soil Vapor Probe Installation, Soil Vapor Sampling, and Analysis

Strongarm, with oversight from Roux Associates, installed 24 soil vapor probes in 15 single or dual nested locations as shown on Figure 4. The single probe locations were completed between 3 to 5 feet bgs and the dual-nested probes completed at 5 and 10 feet bgs. Soil vapor locations were selected to cover the entire Site footprint, with a focus on areas under the proposed building footprint.

The soil vapor probes consisted of an expendable 1-inch filter stone probe tip affixed to ¼-inch Nylaflow® tubing. The probes were constructed by placing of 6-inches of coarse sand into the bottom of the borehole. The tip and tubing were then lowered into the borehole through a tremie pipe for support. An additional 6-inches of sand was then placed in the borehole via tremie to create an approximately 1-foot sand-pack interval around the vapor tip. Approximately 6-inches of dry granular bentonite was placed on top of the sand pack, followed by hydrated bentonite grout to the surface or to the overlying probe sand pack. The tubing was labeled with depth of placement and capped using a vapor-tight Swagelok valve set to the "off" position. The soil vapor probes were installed in accordance with the Advisory Active Soil Gas Investigations (Soil Gas Advisory) (DTSC, LA-RWQCB, SF-RWQCB, 2015).

Soil vapor samples were labeled based on their boring number and sampling depth (e.g., SB-3-5 was a soil vapor sample collected at boring SB-3 located at 5-feet bgs).

After installation of soil vapor probes, a minimum 48-hour equilibration period was observed prior to sampling the vapor probes, consistent with the guidelines presented in the Soil Gas Advisory.

Twenty-four (24) soil vapor samples were collected by H&P Mobile Geochemistry (H&P) of Carlsbad, California under oversight of Roux from the 15 single and dual-nested soil vapor probes from August 20,

2019 through August 22, 2019. Prior to purging or sampling, a shut-in test was performed to confirm that the above-ground lines and three-way valves were properly sealed at each location. As a secondary test, a leak check compound, 1,1-Difluoroethane (1,1-DFA) was introduced in the sample vicinity during sampling and was included among the list of analytes for the soil vapor samples. In accordance with the Soil Gas Advisory, three purge volumes were extracted from the tubing and sand pack prior to sampling. Following collection, H&P analyzed the soil vapor samples for VOCs by USEPA Method TO-15 using an on-Site mobile laboratory. Samples were also collected in Tedlar bags for same day analysis of methane by USEPA Method TO-3 in H&P's California-certified fixed laboratory.

3.3.4 Groundwater Sampling and Analysis

Roux attempted to locate and sample the four groundwater monitoring wells (MW-3, MW-5, MW-6, and MW-7) that were last referenced in the RI. However, MW-3 was found to be obstructed inside the casing and did not have a well cap or well-box cover in place so it was not sampled, and Roux was unable to locate MW-5 and MW-6 by field scouting or by geophysical techniques. Groundwater monitoring well MW-7 was located and sampled (water was gauged at approximately 49 feet bgs).

After gauging, the groundwater monitoring well MW-7 was purged and sampled with an adjustable rate, positive displacement pump at a rate that limited drawdown to within the limits of the USEPA guidance. Monitoring well MW-7 was purged a minimum of three well casing volumes. During purging, water quality field parameters (pH, temperature, electrical conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity) were collected via a flow-through cell calibrated to manufacturer specifications, and then recorded (Appendix E). In accordance with USEPA guidance, once stability criteria were met, groundwater samples were collected directly from the pump's discharge line.

To gather additional groundwater data, three borings were advanced via DPT to maximum total depths of 62-feet bgs and grab groundwater samples were collected by exposing a steel slotted screen. A ¼-inch Nylaflow tubing fitted with a steel check valve was lowered into the screened portion of the boring. the check valve was actuated by slowly raising and lowering the assembly. The tubing was brought to the surface and groundwater was emptied into sampling containers.

All four groundwater samples were collected into clean laboratory supplied bottles, labeled, and placed on ice for transportation under strict chain-of-custody protocol to the analytical laboratory. All groundwater samples were analyzed for the following:

- TPH-cc by USEPA Method 8015B;
- VOCs by USEPA Method 8260B;
- SVOCs by USEPA Method 8270C;
- Title 22 metals by USEPA Method 6010B/7471A;
- pH and temperature using Method SM 4500-H+B;
- TDS using Method SM 2510-C;
- Total alkalinity, bicarbonate (HCO_3), carbonate (CO_3), and hydroxide (OH) using Method SM 2320-B;
- Specific conductance using Method SM 2510-B; and

- Chloride, nitrate and sulfate by USEPA Method 300.0.

3.3.5 Borehole Abandonment

Boreholes were backfilled using hydrated bentonite as specified in the City of Long Beach boring permit. Following sampling, each of the soil vapor probes were abandoned by pulling the tubing and filling any void space with hydrated bentonite. Borings were patched to match the existing grade.

3.3.6 Field Sampling Quality Control

Field quality assurance and quality control (QA/QC) samples were collected during the investigation to assess whether reported concentrations of chemicals identified through analytical testing were of acceptable quality, as follows:

- **Field Duplicates:** Duplicate soil samples were collected for at least 10% of analyzed samples for QA/QC. Duplicate samples were collected and stored in the same manner as the primary samples. The duplicate sample results are shown beneath the primary soil sample results in Tables 2 through 8.

- **Equipment Blank:** Two equipment blanks were collected by running deionized water over and through the steel groundwater sampling screen at the end of the field days after the equipment underwent the decontamination procedures explained in Section 3.3.7. The equipment blanks were analyzed for VOCs using USEPA Method 8260B.

- **Trip Blank:** Trip blank samples were provided by the laboratory and transported with the samples. Three trip blank samples were analyzed for VOCs using USEPA Method 8260B.

3.3.7 Equipment Decontamination

Reusable sampling equipment was decontaminated using a triple rinse with distilled water and Alconox between each boring location. New disposable gloves were worn when handling clean sampling equipment. Soil vapor sampling equipment was not re-used between sampling locations or depth intervals.

3.3.8 Investigation-Derived Waste

Investigation-derived waste (IDW) materials generated from soil cuttings and decontamination activities were contained in three 5-gallon drums (two drums of soil cuttings, one drum of decontamination water) and temporarily stored on Site, pending profiling and off-Site disposal.

On September 6, 2019, separate composite samples were collected from the liquid and solid drums for laboratory analysis to characterize the IDW prior to disposal. The samples were submitted to Enthalpy and analyzed for the following:

- TPH-cc by USEPA Method 8015M;
- VOCs by USEPA Method 8260B; and
- Title 22 metals by USEPA Method 6010B/7471A.

Based on the analytical results, the liquid and solid IDW were characterized and will be handled as non-hazardous waste. American Integrated Services, Inc. (AIS) of Long Beach, California will remove the IDW from the Site for disposal in accordance with federal, state, and local regulations.

3.3.9 Ambient Air Monitoring

As specified in the HASP, ambient air monitoring within the work zone was conducted during intrusive work at each boring for VOCs using a PID, and methane, carbon monoxide, oxygen and LEL using a QRAE3 four-gas meter.

Monitoring equipment was calibrated, zeroed, and/or bump tested at the beginning of each work day in accordance with equipment manufacturer specifications. Equipment calibration records were maintained in Roux personnel's field notebooks. Roux's ambient air monitoring field logs are included in Appendix E.

4. Results and Discussion – Site and COPC Characterization

This Section presents the findings of the investigation, including lithologic observations and analytical results for soil, soil vapor and groundwater. A discussion of the results and how the findings are interpreted in consideration of the investigation objectives also is presented. Results for detected analytes in soil are presented in Tables 2 through 8, soil vapor in Table 9 and groundwater in Tables 10 through 13. The complete analytical laboratory reports are included in Appendix F.

4.1 Existing Soil Cover Thickness

Cover soil is generally classified as a dry to moist silt with fine grained sand with little to no indication of contaminant impact via field observation (odor, texture, PID reading). Two disparate cover soil/impacted soil interfaces were observed. In a majority of borings, cover soils as described previously sharply transitioned over three to six inches to a black, wet silt with a very strong crude petroleum odor and PID readings much greater than those of the cover soils. In a limited number of borings (less than 5), a gray, silty sand transition zone was observed with moderate odor and PID readings.

Based on the observations made during soil borings, the existing soil cover thickness varies between approximately 1 foot to greater than 17 feet, as shown in Figure 5. The variation in soil cover thickness is generally consistent with the overall topography of the Site that was likely created as part of the golf learning facility. Roux used the recent topographic map from Truxaw's survey in 2019 and the depths of cover thicknesses to generate an interpreted top of impacted soil elevation map as shown on Figure 6. A seen in the figure, the elevation of the top of impacted soil is relatively flat. This information will be used in developing the grading plan for the proposed development to avoid penetrating or exposing the impacted soil during grading to the extent possible.

4.2 Soil Cover Sample Results

A total of 142 (130 primary and 12 duplicates) soil samples were collected from nominal depths ranging from 0 to 17 feet bgs and analyzed for various constituents as summarized in Table 1. Due to the lack of data for the existing cover soil from previous investigations and the possible earth-moving that may have occurred over time, only the data generated from this investigation is discussed below.

4.2.1 TPH-cc

A total of 142 soil samples (130 primary and 12 duplicates) were collected and analyzed for TPH-cc by USEPA Method 8015B, with cumulative values listed for carbon ranges C6 to C12 corresponding to gasoline range, C13 to C22 corresponding to diesel range, and C23 to C44 corresponding to motor oil range. Sample depths ranged from surface samples to 15-feet bgs, and results were compared to the San Francisco Regional Water Quality Control Board (SFRWQCB) construction worker shallow and deep soil exposure scenario screening level. The SFRWQCB Environmental Screening Levels (ESLs) contain the only screening levels for TPH in a construction worker exposure scenario.

- One of 142 soil samples had a detection of TPH in the gasoline range that exceeded laboratory reporting limits. Sample SB-36-SS-5 had a reported TPH C6-C12 concentration of 220 mg/kg, which was less than the SFRWQCB construction worker screening level of 1,800 mg/kg.

- 37 of 142 soil samples had detections of TPH in the diesel range that exceeded laboratory reporting limits. Of those, three samples had reported TPH C13-C22 concentrations that exceeded the SFRWQCB construction worker screening level of 1,100 mg/kg; namely, SB-2-SS-4 at 2,200 mg/kg, SB-24-SS-9 at 2,000 mg/kg, and SB-36-SS-5 at 1,200 mg/kg.

- 102 of 142 soil samples had detections of TPH in the motor oil range above laboratory reporting limits. TPH C23-C44 concentrations were reported to range between 10 mg/kg and 7,400 mg/kg, which were all below the SFRWQCB construction worker screening level of 54,000 mg/kg.

TPH in soil analytical results are summarized in Table 2 and Figure 7, and full laboratory reports are included in Appendix F.

4.2.2 Metals

A total of 142 soil samples (130 primary and 12 duplicates) were collected and analyzed for Title 22 Metals by USEPA Method 6010B/7471A and compared to USEPA Regional Screening Levels (RSLs) for industrial soil as well as the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 screening levels for industrial soil, when a level was established. Fifteen (15) metals were detected above their reporting limits in one or more of the analyzed soil samples. The following metals exceeded their corresponding screening levels:

- Arsenic was detected in 138 of 142 samples above laboratory reporting limits at concentrations ranging between 1.25 mg/kg and 53.4 mg/kg, as summarized in Figure 8. Roux developed a site-specific action level for arsenic in soil in accordance with DTSC methodology described in DTSC's *Arsenic Strategies Determination of Arsenic Remediation Development of Arsenic Cleanup Goals* (DTSC, 2009). Based on the analysis that is presented in Appendix G, a Site-specific action level of 17 mg/kg was developed for arsenic in soil. Eight (8) of the 142 samples exceeded the site-specific action level of 17 mg/kg.
- Lead was detected above laboratory reporting limits in 142 of 142 samples, ranging between 3.09 mg/kg and 2,260 mg/kg. Sample SB-38-SS-1 had a reported lead concentration of 2,260 mg/kg, which exceeded the USEPA RSL for industrial soil of 800 mg/kg and the DTSC Note 3 screening level for commercial/industrial soil of 320 mg/kg, as shown in Figure 7. Additionally, sample SB-45-SS-0 had a reported lead concentration of 784 mg/kg, which exceeded the DTSC Note 3 commercial/industrial screening level.

Metals concentrations in soil samples are summarized in Table 3 and full laboratory reports are included in Appendix F.

4.2.3 PCBs

A total of 25 soil samples (22 primary and 3 duplicates), collected at depths between 2 and10 feet bgs were analyzed for PCBs by USEPA Method 8082. None of the samples had reported PCB concentrations above laboratory reporting limits. PCB results in soil samples are summarized in Table 4 and full laboratory reports are included in Appendix F.

4.2.4 VOCs

A total of 25 soil samples (22 primary and 3 duplicates), collected at depths between 2 and 10 feet bgs were analyzed for VOCs by USEPA Method 5035/8260B and compared to USEPA RSLs for industrial soil as well

as DTSC HERO Note 3 screening levels for commercial/industrial soil, when a level was established. Only five (5) VOCs, namely acetone, benzene, bromoform, tert-butyl alcohol (TBA) and toluene were reported above their respective laboratory reporting limits in one or more soil samples. All other VOC constituents were below their respective laboratory reporting limits as summarized in Table 5. The full laboratory reports are included in Appendix F.

4.2.5 SVOCs

A total of 25 soil samples (22 primary and 3 duplicates), collected at depths ranging between 2 and 10 feet bgs, were analyzed for SVOCs by USEPA Method 8270C. None of the samples contained concentrations of SVOCs detectable above laboratory reporting limits. SVOC results in soil samples are summarized in Table 6 and full laboratory reports are included in Appendix F.

4.2.6 Organochlorine Pesticides

A total of 37 soil samples (34 primary and 3 duplicates), collected from the surface (6-inches) to 2 feet bgs, were analyzed for OCPs by USEPA Method 8081. 4,4-DDT was reported in three samples at concentrations greater than laboratory reporting limits; SB-31-SS-0 (5.4 µg/kg), SB-33-SS-0 (11 µg/kg) and SB-46-SS-0 (15 µg/kg). All of the 4,4-DDT concentrations were below the USEPA RSL for industrial soil of 8,500 µg/kg and DTSC HERO Note 3 commercial/industrial screening level of 7,100 µg/kg. OCP results in soil samples are summarized in Table 7 and full laboratory reports are included in Appendix F.

4.2.7 Chlorinated Herbicides

A total of 7 soil samples (6 primary and 1 duplicate), collected from the surface to 2 feet bgs, were analyzed for chlorinated herbicides by USEPA Method 8151A. None of the samples had reported concentrations of chlorinated herbicides above laboratory reporting limits. Chlorinated herbicide results in soil samples are summarized in Table 8 and full laboratory reports are included in Appendix F.

4.3 Soil Vapor Sample Results

A total of 27 soil vapor samples (24 primary and 3 replicates) were collected from 15 individual sampling locations at depths of 3, 5 and/or 10 feet bgs, as shown in Figure 4. Depth of individual sampling ports depended directly on the depth to impacted materials.

4.3.1 VOCs

The 27 soil vapor samples (24 primary and 3 replicates) were analyzed for VOCs by USEPA Method TO-15 using an on-Site mobile laboratory operated by H&P. The results of the soil vapor analyses are presented in Table 9 where they are compared to USEPA RSLs for industrial ambient air and DTSC HERO Note 3 screening levels for commercial/industrial indoor air, with an attenuation factor of 0.03 applied. Nine (9) VOCs were detected in one or more soil vapor samples. Of these, only benzene exceeded its corresponding screening level at three locations (SB-12-10, SB-21-5, and SB-43-10), as shown on Figure 9. The laboratory results are provided in Appendix F and summarized below (in decreasing frequency of occurrence) along with a comparison to the results presented in RI (LFR, 2009).

- 2-butanone (Methyl Ethyl Ketone [MEK]) was detected in 15 of 27 soil vapor samples at concentrations ranging from 63 micrograms per cubic meter (µg/m^3) to 360 µg/m^3, below the USEPA

RSL for industrial air of 733,333 µg/m^3. Previous soil vapor samples had reported concentrations of 2-butanone of slightly lower magnitude, ranging from 20 to 90 µg/m^3 (LFR, 2009).

- Chloromethane was detected above laboratory reporting limits in 5 of 27 samples at concentrations ranging from 22 µg/m^3 to 69 µg/m^3, below the calculated USEPA RSL for industrial air of 13,000 with a 0.03 attenuation factor applied. Previous soil vapor samples had reported concentrations of chloromethane of similar magnitude, ranging from 10 to 20 µg/m^3 (LFR, 2009).

- Benzene was detected above laboratory reporting limits in 3 of 27 samples, SB-12-10 at 24 µg/m^3, SB-21-5 at 1,000 µg/m^3, and SB-43-10 at 21 µg/m^3, one of which is above the USEPA RSL for industrial air of 53 µg/m^3 and all three of which are above the DTSC HERO Note 3 commercial/industrial air screening level of 14 µg/m^3. Previous soil vapor samples had similar reported concentrations of benzene between 20 and 330 µg/m^3 (LFR, 2009).

- Carbon disulfide was detected above laboratory reporting limits in 1 of 27 samples, SB-43-10 at 260 µg/m^3, below the calculated USEPA RSL for industrial air of 103,333 with a 0.03 attenuation factor applied. Previous soil vapor samples had reported concentrations of carbon disulfide of slightly lower magnitude, ranging from 20 to 80 µg/m^3 (LFR, 2009).

- Ethylbenzene was detected above laboratory reporting limits in 1 of 27 samples, SB-21-5 at 59 µg/m^3, below the calculated USEPA RSL for industrial air of 163 with a 0.03 attenuation factor applied. Previous soil vapor samples had reported concentrations of ethylbenzene of similar magnitude, ranging from 10 to 130 µg/m^3 (LFR, 2009).

- M,p-xylenes were detected above laboratory reporting limits in 1 of 27 samples, SB-21-5 at 67 µg/m^3, below the calculated USEPA RSL for industrial air of 14,667 with a 0.03 attenuation factor applied. Previous soil vapor samples had reported concentrations of m,p-xylenes of slightly higher magnitude, ranging from 10 to 1,300 µg/m^3 (LFR, 2009).

- O-xylenes was detected above laboratory reporting limits in 1 of 27 samples, SB-43-10 at 29 µg/m^3, below the calculated USEPA RSL for industrial air of 14,667 with a 0.03 attenuation factor applied. Previous soil vapor samples had reported concentrations of o-xylenes of similar magnitude, ranging from 10 to 140 µg/m^3 (LFR, 2009).

- PCE was detected above laboratory reporting limits in 1 of 27 samples, SB-32-5 at 49 µg/m^3, below the calculated USEPA RSL for industrial air of 1,567 and the calculated DTSC HERO Note 3 commercial/industrial air screening level of 66.67 µg/m^3 both with a 0.03 attenuation factor applied. Previous soil vapor samples had reported concentrations of PCE of higher magnitude, ranging from 30 to 8,400 µg/m^3 (LFR, 2009).

- Toluene was detected above laboratory reporting limits in 1 of 27 samples, SB-21-5 at 71 µg/m^3, below the calculated USEPA RSL for industrial air of 733,333 and the calculated DTSC HERO Note 3 commercial/industrial air screening level of 43,333 µg/m^3 both with a 0.03 attenuation factor applied. Previous soil vapor samples had reported concentrations of toluene of higher magnitude, ranging from 40 to 1,600 µg/m^3 (LFR, 2009).

1,1-difluoroethane was used as a leak check compound and was detected above laboratory reporting limits in 8 of 27 samples at concentrations less than 10 times the reporting limit of 27 µg/m^3.

4.3.2 Methane

Methane was detected in nine (9) of 27 soil vapor samples ranging from 7.87 ug/L to 26,241 ug/L (12 parts per million by volume [ppmv] to 40,000 ppmv). In general, the distribution and methane concentrations were significantly lower than those reported in the RI report (12 ppmv to 300,000 ppmv) (LFR, 2009).

4.4 Groundwater Results

A total of four groundwater samples, one from monitoring well MW-7 and three grab samples, were collected. The bottom of well MW-7 was tagged at 60.5 feet bgs and top of water was gauged at 49.65 feet bgs; a 2-inch Grundfos pump was set at 55 feet bgs. The three grab sample locations were drilled to depths of between 60 and 62 feet bgs. Groundwater sampling locations and select results are presented in Figure 10.

4.4.1 Metals

Four groundwater samples were analyzed for Title 22 Metals by USEPA Method 6010B/7470A and compared to USEPA MCLs and historical monitoring data. Metals results in groundwater samples are summarized in Table 10 and full laboratory reports are included in Appendix F.

- Arsenic was detected in two of four samples, MW-7 at 478 µg/L and GS-2-60 at 31 µg/L, both above the MCL of 10 µg/L. The most recent sampling result at MW-7 was in March 2008 and arsenic was detected at 420 µg/L (LFR, 2009).

- Barium was detected in all four samples, ranging in concentration from 102 µg/L to 1,420 µg/L, below the MCL of 2,000 µg/L. The most recent sampling result at MW-7 was in March 2008 and Barium was detected at 1,700 µg/L (LFR, 2009).

- Copper was detected in MW-7 at 18 µg/L, below the MCL of 15 µg/L. Previous sampling rounds at MW-7 did not detect copper above a reporting limit of 50 µg/L (LFR, 2009).

- Lead was detected in MW-7 at 24 µg/L, below the MCL of 1,300 µg/L. Previous sampling rounds at MW-7 also detected lead at a concentration of 24 µg/L in March 2008 (LFR, 2009).

- Molybdenum was detected in all four samples, ranging in concentration from 57 µg/L to 174 µg/L. There is no MCL established for molybdenum. The concentration detected in MW-7 was 57 µg/L, and the most recent sampling result at MW-7 in March 2008 did not detect molybdenum above the laboratory reporting limit of 50 µg/L (LFR, 2009).

- Antimony, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc, and Mercury were not reported above laboratory reporting limits.

4.4.2 TPH

Four groundwater samples were analyzed for TPH-carbon chain by USEPA Method 8015B and reported as cumulative values for carbon chain species ranges from C6 to C12 (gasoline range), C13 to C22 (diesel range), and C23 to C44 (motor oil range) and compared with historical monitoring data. TPH results in groundwater samples are summarized in Table 11 and full laboratory reports are included in Appendix F.

- TPH in the gasoline range was reported in two of four groundwater samples, ranging from 0.063 µg/L in GS-3-60 to 0.91 µg/L in GS-1-62. Previous groundwater monitoring samples had reported TPH concentrations in the gasoline range ranging from 50 to 380 µg/L.

- TPH in the diesel range was reported in all four groundwater samples, ranging from 0.32 µg/L to 1.9 µg/L. The concentration detected in MW-7, 1.9 µg/L, was similar to the most recent historical detection from March 2008 of 2.3 µg/L.

- TPH in the motor oil range was reported above laboratory reporting limits in one of four groundwater samples, GS-3-60, at a concentration of 0.31 µg/L. Previous groundwater monitoring samples onsite did not detect TPH in the motor oil range.

4.4.3 VOCs

Four groundwater samples were analyzed for VOCs by USEPA Method 8260B and compared to USEPA MCLs and historical monitoring data. VOC results in soil samples are summarized in Table 12 and full laboratory reports are included in Appendix F.

- Benzene was reported above laboratory reporting limits in two of four groundwater samples, at 6 µg/L in GS-3-60 and 11 µg/L in GS-1-62. Both concentrations are above the MCL of 1 µg/L. Previous groundwater monitoring samples onsite contained similar benzene concentrations ranging from 0.6 to 88 µg/L.

- Ethylbenzene was reported above laboratory reporting limits in one of four groundwater samples, at 11 µg/L in GS-1-62, below the MCL of 300 µg/L. Previous groundwater monitoring samples onsite contained similar ethylbenzene concentrations ranging from 0.6 to 88 µg/L.

- TBA was reported above laboratory reporting limits in one of four groundwater samples, at 32 µg/L in MW-7. Historical groundwater sampling at MW-7 did not include analysis for TBA, and there is no MCL established.

- Xylenes were reported above laboratory reporting limits in one of four groundwater samples, at 6.1 µg/L in GS-1-62, below the MCL of 1,780 µg/L. Previous groundwater monitoring samples onsite contained similar xylenes concentrations ranging from 2.4 to 10 µg/L.

- All other VOCs, including toluene, were not reported in any groundwater samples above laboratory reporting limits.

4.4.4 Geochemical Parameters

Four groundwater samples were analyzed for various geochemical parameters, including pH, TDS, total alkalinity as $CaCO_3$, bicarbonate (HCO_3), carbonate (CO_3), hydroxide (OH), specific conductance (EC), chloride, nitrate as NO_3, and sulfate.

Groundwater geochemical parameter results are summarized in Table 13 and full laboratory reports are included in Appendix F.

- TDS results ranged from 2,470 mg/L to 8,770 mg/L. These concentrations were similar to historical sample results, which ranged from 900 mg/L to 10,800 mg/L (LFR, 2009). These TDS concentrations

exceed the drinking water source exception of 3,000 mg/L as defined by State Water Board Resolution No. 88-63.

- Chloride results ranged from 778 mg/L to 4,640 mg/L. These concentrations were similar to historical sample results, which ranged from 240 mg/L to 3,270 mg/L (LFR, 2009).

In general, the groundwater geochemical parameter concentrations were consistent with those recorded during previous sampling events at the Site, as summarized in Table 12 and the RI report (LFR, 2009).

4.5 Laboratory Quality Control

Laboratory quality control (QC) samples included matrix spikes and matrix spike duplicates (MS/MSD) to provide information to assess the precision and accuracy of the analysis of the target parameters within the environmental media collected at the Site. The MS portion of the sample is an aliquot of a sample that is spiked (by the laboratory) with a known concentration of the target analyte(s), which provides a measure of the method accuracy. The MSD portion of the sample is a laboratory split sample of the MS and is used to evaluate the precision of the analysis. The QC sample results are included in the tables and laboratory results presented in Appendix F.

5. Conceptual Site Model and Summary of Site Characterization

This conceptual site model (CSM) summary provides a description of current Site conditions, including the Site's geologic and hydrogeologic settings; COPCs, sources and distribution; and the potential risks COPCs pose to identified on-Site and off-Site receptors. The CSM presented in this section compiles information presented in the reports summarized in Section 2.0 and work conducted by Roux as part of the subsurface investigation. The presentation of these materials is consistent with the Best Management Practices (BMPs) described by the USEPA in Environmental Cleanup Best Management Practices: Effective Use of the Project Life Cycle Conceptual Site Model (CSM Guidance) (USEPA, 2011).

5.1 Site Description

Based on Roux's review of historical sources and previous reports, the Site was undeveloped until at least 1896. By 1926 the Site was occupied by Oil Operators, as an oil brine water treatment facility and the majority of the Site was used as a treatment sump/pond. Oil brine was pumped to sumps on the Oil Operators facility and water was allowed to evaporate from the brine or seep into the subsurface below the sumps, leaving behind a sludge. Following evaporation, the remaining sludge was left in the sumps or dumped elsewhere. Evaporation operations ceased at the Site in the mid-1950s. Active oil wells were located on the Site from at least 1951 through 1964. Based on information obtained from DOGGR, the known oil wells were abandoned over time, including the five wells that remain on-Site. In the 1970s a partial cleanup/treatment of the Site was conducted. The partial cleanup included removal, treatment, and replacement of a portion of the sump materials. However, detailed records describing the cleanup activities were not available for review. Remnants of the former on-Site sumps were present on the Site until approximately 1989, by which time the Site was apparently vacated. The Site was developed as a golf learning facility between 1996 and 1998. The golf learning facility ceased operations in 2016, and the structures associated with the driving range were removed in 2017. The Site has been vacant since.

Due to the Site's prior use as a golf learning facility, the Site is currently graded with a high elevation of approximately 72.3 feet amsl near the northern boundary and an elevation of approximately 47.6 feet amsl along the southern boundary; an elevation difference of almost 25 feet across the Site in the north-south direction.

5.2 Geology

Soil beneath the Site consists of sand, silt, and clay of variable thicknesses. The soil is underlain by a thin veneer of Recent alluvium, alluvial sediments of the Late Pleistocene-age Lakewood Formation, and sediments of the Early Pleistocene-age San Pedro Formation. The thickness of the sedimentary section underlying this area is approximately 12,000 feet (Dames & Moore 1988). The Site is located within the active Long Beach Oil Field. According to agency records and recent investigations, five oil wells are located on the Site.

According to an interview with Site owner, Mark Pender, soil was imported to fill the on-Site oil sumps in or around the 1950s and the fill may have originated from a nearby CalTrans freeway project. Subsequently, according to Mr. Pender, approximately 80,000 cubic yards of sandy soil was imported from dredging

operations at the Los Angeles River. Finally, another site owner, Steve Sukut, indicated that additional fill material was imported to the Site to facilitate grading for the golf learning facility (Roux, 2019).

5.3 Hydrogeology

The Bellflower aquitard immediately underlies the Site at approximately 5 to 50 feet bgs. Identified aquifers beneath the Site in order of increasing depth are the Lakewood Formation (which contains the Gaspur and Gage aquifers) and the San Pedro Formation (which contains the Lynwood, Silverado, and Sunnyside aquifers).

The Gaspur aquifer is present beneath the Site from approximately 50 to 70 feet bgs as sand and gravel. Shallow groundwater was encountered at 8 feet bgs in one boring located in the central portion of the Site during 1986 soil sampling activities; however, the presence of shallow groundwater was presumed to be a localized perched condition. During December 2007 monitoring activities, the depth to groundwater beneath the Site ranged from approximately 32.6 to 49.3 feet bgs, with a shallow gradient flowing in a southerly direction. The groundwater encountered during the December 2007 monitoring activities was believed to be the Gaspur aquifer (LFR, 2009).

The Gage aquifer has a base at approximately 180 feet bgs and has been found to be approximately 35 feet thick in the vicinity of the Site. Deposits in the Gage aquifer reportedly vary from silty sand to minor gravel. Groundwater in both aquifers of the Lakewood Formation has been reported to be of inferior chemical quality (LFR, 2009).

The lower Pleistocene San Pedro Formation unconformably underlies the Lakewood Formation and contains numerous aquifers of varying quality. The Lynwood aquifer has a base at approximately 600 feet bgs and is approximately 400 feet in thickness. According to data from the WRD, the shallowest contact with the Lynwood aquifer in the Site vicinity was approximately 280 feet bgs (WRD, 2018). The Silverado aquifer joins the Lynwood aquifer at approximately 600 feet bgs and continues to over 1,000 feet bgs. The deep Silverado aquifer is the only significant water-producing zone; the City of Long Beach obtains groundwater from more than 1,000 feet bgs within it (LFR, 2009).

Although groundwater underlying the Site is considered of beneficial use by the RWQCB, regional groundwater quality is generally poor due to salt water intrusion and industrial waste disposal. Particularly in the vicinity of the Site, historic oil and gas production activities have contributed to poor groundwater quality. No active drinking water production wells were identified within one mile of the Site (LFR, 2009).

5.4 Sump Materials / Impacted Soils

Based on a geotechnical investigation in 1983 the following four zones were identified in the RI report (LFR, 2009):

Zone 1: Stiff clay and sandy clay soil with occasional sand near the ground surface; relatively high to moderate oil content; "appeared to have been treated and recompacted."

Zone 2: Firm to soft clay and silt; moderate to low oil content; may have been lightly treated and replaced; very compressible.

Zone 3: Very soft clay; untreated and uncompacted; water saturated; highly compressible. Zone 3 materials reached as deep as 30 feet bgs in some locations at the Site. The deepest area appeared to be in the central portion of the Site.

Zone 4: Natural soil with some moderately compacted sump material near the top.

Based on a geotechnical investigation conducted by GEOFON in 1986, the total volume sump material at the Site, including unprocessed, moderately processed, and lightly processed sump material was estimated to be 390,000 to 490,000 CY, of which an estimated 80,000 to 100,000 CY was unprocessed sump material. The sump materials were described as primarily "mud similar to clayey soils, mixed with highly variable amounts of salty water (brine) and oily wastes." Two areas with the greatest amount of sump material were described as follows:

- Approximately 75,000 CY of sump material was distributed throughout a rectangular area approximately 450 feet long, 300 feet wide, and 15 feet thick in the central portion of the Site; and

- Approximately 7,000 CY of sump material was distributed throughout a triangular area approximately 7 to 10 feet thick in the northern corner of the Site.

The primary area of occurrence of soft, unprocessed sump material was found at the base of the sump, approximately 20 to 30 feet bgs.

The Site was regraded, and cover soil was placed over the *Zone 1* soil to form the contours of the former golf learning facility. LFR delineated the lateral and vertical extents of the sump materials, cross sections for which can be found in the RI report (LFR, 2009) included in Appendix A. Based on regional and Site vicinity groundwater quality, LFR concluded the existing impacted materials do not appear to have significantly affected groundwater quality.

5.5 Reasonably Anticipated Foreseeable Uses - Proposed Development

Artesia, the prospective purchaser of the Site plans to develop the Site for an industrial use. As shown on Figure 3, the conceptual development site plan currently includes a three-story industrial self-storage building with a footprint area of approximately 49,000 square feet and a total gross floor area of approximately 148,000 square feet. A smaller 2,000 square foot structure for a car wash and mechanical room may also be located on-Site. A majority of the remaining portion of the Site will be paved to provide RV parking for up to 578 vehicles.

The grading plan is in progress and yet to be finalized, but in general, the Site will be regraded and flattened to optimize project design and functionality. The Site will be connected to the main North Pacific Place road via a paved access road.

5.6 Contaminants of Potential Concern

5.6.1 Former Sump Materials / Impacted Soils

Based on the analysis of 23 soil samples from seven borings collected by LFR between 10 and 50 feet bgs in November 2003, the following COPCs were identified in the soils (assumed to be sump materials):

COPC	Frequency of Detection
Petroleum - Gasoline	4/9
TPH (C12 C28)	8/23
TPH (C28 -C40)	8/23
Arsenic	4/7
Barium	7/7
Cadmium	1/7
Chromium	6/7
Cobalt	7/7
Copper	7/7
Lead	7/7
Molybdenum	2/7
Nickel	7/7
Vanadium	7/7
Zinc	7/7
Mercury	21/130
Acetone	1/22
Benzene	1/22
Ethylbenzene	1/22
Toluene	1/22
Total Xylenes	1/22
1-Methylnapthalene	3/10
2-Methylnapthalene	3/10
Benzo(a)pyrene	1/10
Fluorene	2/10
Naphthalene	3/10
Phenanthrene	3/10

5.6.2 Soil

Based on the results of the cover soil samples collected by Roux during the most recent subsurface investigation (2019), the following COPCs were identified in the cover soils:

COPC	Frequency of Detection
Petroleum - Gasoline	1/130
Petroleum - Diesel	36/130
Petroleum - Motor Oil	96/130
Antimony	3/130
Arsenic	126/130
Barium	130/130
Cadmium	116/130
Chromium, Total	130/130
Cobalt	130/130
Copper	130/130
Lead	130/130
Molybdenum	5/130
Nickel	130/130
Selenium	2/130
Thallium (Carbonate)	6/130
Vanadium	130/130
Zinc	130/130
Mercury	21/130
Acetone	1/22
Benzene	1/22
Bromoform	1/22
TBA	1/22
Toluene	1/22
4,4'-DDT	3/34

5.6.3 Soil Vapor

Based on the results of the soil vapor samples collected by Roux during the most recent subsurface investigation, the following COPCs were identified in the soil vapor:

COPC	Frequency of Detection
Methyl Ethyl Ketone (2-butanone)	12/24
Benzene	3/24
Carbon Disulfide	1/24
Chloromethane	5/24
Ethylbenzene	1/24
Xylene, (m,p)	1/24
Xylene, o-	1/24
Tetrachloroethene	1/24
Toluene	1/24
Methane	9/24

5.6.4 Groundwater

Based on the groundwater monitoring conducted in the Site vicinity between 1996 and 2008 (LFR, 2009) and groundwater samples collected by Roux in 2019, groundwater COPCs include:

- TPH (C6 to C12) and TPH (C13 to 22);
- Metals including arsenic, barium, beryllium, cadmium, copper, lead, mercury, molybdenum, zinc;
- VOCs including benzene, ethylbenzene, TBA, toluene and xylenes; and
- Chloride.

Elevated concentrations of total dissolved solids high specific conductivity have been observed in the groundwater underlying the Site. LFR did a comprehensive evaluation of the groundwater quality in 2008 and concluded that Site groundwater conditions did not appear to differ significantly from the regional groundwater quality. On this basis, LFR further concluded that groundwater in the area is degraded from numerous and complex interactions of nature as well as historical activities; and that the Site was likely part of these interactions but did not appear to be the sole or even primary cause of groundwater degradation on or off Site (LFR, 2009). The LFR Summary of Groundwater Conditions document is provided in Appendix A.

5.7 Exposure Pathways

5.7.1 Soil Pathway

The Site is generally unpaved and flat with the exception of a slope in the northern portion of the Site. Prior to the 2000s, the site was capped with up to 10 feet of fill. Future redevelopment plans at the Site entail regrading of the fill soils above the impacted sump materials. Post-grading will flatten the Site and maintain a minimum of two feet of soil cover in addition to paving over majority of the soil and construction of a building or buildings on southern portion of the Site, which will entail disruption of subsurface soil. Therefore, the soil pathway is considered a complete exposure pathway, which will be mitigated as part of the Site development (Section 8). Exposure to soil by future commercial workers is evaluated in the risk evaluation summarized in Section 6 and presented in Appendix H.

5.7.2 Indoor Air Pathway

VOCs and methane have been detected in soil vapor samples collected at the Site. Therefore, the indoor air pathway is considered a complete exposure pathway, which will be mitigated as part of the Site development (Section 8). Inhalation of indoor air by future commercial workers is evaluated in the risk evaluation summarized in Section 6 and presented in Appendix H.

5.7.3 Groundwater / Surface Pathway

The groundwater pathway is not considered a complete exposure pathway because it assumed the groundwater will not be used for drinking water purposes. In July of 2008, a petition for no groundwater remediation was submitted to DTSC that was based on data consistent with the following considerations; data generated by Roux shows that groundwater quality was found to be consistent with that reported in the RI report (LFR, 2009). In general, regional water quality is poor due to salt water intrusion and industrial waste disposal in areas of Site. The historic oil and gas production in the area and on-Site contributed to poor water quality. No active drinking water production wells exists within one mile of the Site (LFR, 2009). Therefore, exposure to impacted surface water is not a complete exposure pathway at the Site and is not considered in the risk evaluation.

5.8 Data Gaps

Sump Materials/Impacted Soils

Based on information summarized in the RI report (LFR, 2009) the sump materials/impacted soils have been delineated, both laterally and vertically as a result of several on-Site investigations, including LFR's extensive investigation in 2007.

Cover Soils

Roux conducted an extensive investigation of the existing cover soil in preparation of anticipated mass grading of the Site as part of the proposed development. Roux collected and analyzed 130 primary samples from 41 borings throughout the Site. With the exception of a few areas with elevated concentrations of lead, arsenic and TPH, most of the existing cover soils were found environmentally suitable for use during regrading.

Soil Vapor

28 soil vapor samples were collected by LFR in 2007 and 27 soil vapor samples were collected by Roux in 2019 throughout the Site. Current soil vapor concentrations were found to be slightly higher for benzene, but significantly lower for methane as compared to those reported by LFR.

Groundwater

Groundwater monitoring has been conducted on-Site and in the Site vicinity intermittently between 1996 and 2008. Roux collected groundwater samples from the existing monitoring well MW-7 and three additional grab samples. Concentrations of COPCs and geochemical parameters in groundwater were found to be consistent with those observed in the past.

5.8.1 Recommendations

Based on the discussion above and in the preceding sections, Roux believes that the Site conditions are well understood and the COPCs and impacts adequately identified and characterized. Roux does not recommend additional on-Site investigations.

6. Screening Level Human Health Risk Evaluation

A Screening Level Human Health Risk Evaluation (Screening Risk Evaluation) was prepared by Roux to determine if COPCs at the Site pose unacceptable risk to current/future construction workers or future on-Site industrial/commercial workers. The results of the risk evaluation will be used and to make decisions whether mitigation and/or remediation will be warranted for the planned industrial development of the Site to be protective of human health. The full Screening Risk Evaluation, including assumptions and calculations is presented in Appendix H. This section summarizes the methodology and conclusions used for the Screening Risk Evaluation.

Default exposure parameters from the DTSC and USEPA were utilized to represent a Reasonable Maximum Exposure (RME) scenario. An RME scenario is the highest exposure that is reasonably expected to occur at a Site. Pursuant to the DTSC's Preliminary Endangerment Assessment Guidance Manual (DTSC, 2015), the risk evaluation consists of an abbreviated evaluation of four components, as summarized below:

6.1 Evaluation of Exposure Pathways

Exposure to chemicals may occur via dermal contact, ingestion, or inhalation of COPCs present in soil or air at the Site. As previously discussed, the future intended use of the Site is for commercial/industrial purposes. Although residences are located off-Site to the north, off-Site residential receptors were not quantitatively evaluated in this Screening Risk Evaluation but will be evaluated post-development and included in the Response Plan implementation report. Following the implementation of the Response Plan, additional data will be collected (confirmation sampling, and soil vapor sampling). This additional data will be used to quantitively evaluate offsite receptors and ensure that no further response action or mitigating measures are necessary. Based on the proposed use of the Site, construction workers and future commercial/industrial workers were quantitatively evaluated in the risk evaluation, as summarized below:

Primary Source	Secondary Source	Exposure Media	Exposure Route	Receptor
Historical on-site Releases	Impacted soil	Soil	Ingestion, dermal contact, inhalation of particles and volatile chemicals in ambient air	●Construction Worker; ●Future Commercial/Industrial Worker
		Indoor Air	Inhalation	●Future Commercial/Industrial Worker

6.2 Evaluation of Exposure to COPCs and Exposure Point Concentrations

This evaluation identifies contaminants found in media at the Site and determines appropriate exposure point concentrations (EPCs) for COPCs. Chemicals detected in each evaluated media were considered COPCs in the risk evaluation. Soil analytical data and soil vapor data collected by Roux in 2019 were utilized in the risk evaluation to evaluate the soil and air indoor air pathways, as these data are most representative of existing Site conditions. Because sampling investigations conducted in 2009 focused on the characterization

of the underlying waste, this previous data was not evaluated in this risk evaluation. A full list of the COPCs identified in the risk evaluation are listed in Appendix H.

6.3 Evaluation of Chemical Toxicity

Evaluation of chemical toxicity involves an assessment of the potential adverse effects of the COPCs and compiles non-carcinogenic and carcinogenic toxicity values for use in numerical risk estimates. The toxicity assessment describes the quantitative relationship between the extent of exposure to a contaminant and the increased likelihood and/or severity of adverse effects. Toxicity values are incorporated in the screening levels utilized in the risk evaluations.

6.4 Risk Characterization

The risk characterization integrates the results of the hazard assessment to provide a quantitative estimation of non-carcinogenic and carcinogenic risks. Arsenic and lead were evaluated separately and therefore were not included in the screening level evaluation.

Receptor	Incremental Lifetime Cancer Risk	Hazard Index
Target Threshold	*1E-04 to 1E-06*	*1.0*
Commercial/Industrial Worker	6.9E-06	5.6E-01
Construction Worker	5.1E-07	2.4E+00

Values are displayed in scientific notation (e.g. 1E-04 is equivalent to 1 x 10^{-4} or 0.0001).

As shown in the table above, the Screening Risk Evaluation found that cumulative risk to a future industrial worker or current construction worker is within the acceptable cancer target range. The cumulative risk to a future industrial worker also does not exceed the acceptable non-cancer target risk threshold of 1; however, the cumulative risk to a current construction worker exceeds the non-cancer target threshold. Although the non-cancer target risk estimates exceeded the target threshold of 1 for the construction worker scenario, none of the soil EPCs exceeded applicable 2019 SFRWQCB ESLs. The non-cancer risk estimate was not driven by a single compound, but multiple (thallium, cobalt, and others). Moreover, none of the COPCs associated with historical Site operations (e.g.TPH) contributed significantly to the non-cancer risk estimate.

As mentioned above, arsenic and lead were evaluated separately. A Site-specific action level of 17 mg/kg was developed for arsenic using statistical methods prescribed by DTSC. A technical memorandum with details of the statistical analysis is provided in Appendix G. Locations with arsenic concentrations that exceed 17 mg/kg are considered potential areas of elevated concentrations (AECs) and may be handled separately during grading activities, in accordance with a DTSC-approved soil management plan (SMP); these may include fugitive dust control measures, stockpiling protocols, and other best management practices.

For lead, DTSC's modified USEPA Adult Lead Model (ALM) was used to evaluate construction worker and future commercial/industrial worker exposure to lead (DTSC, 2011). ProUCL was used to determine the 95% upper concentration level (UCL) of the mean concentration of lead at the Site as an input to the ALM model.

One sample, SB-31-SS-1 is considered a potential AEC (lead concentration of 2,260 mg/kg) and was removed from the ProUCL calculations. As an AEC, soils from location SB-31-SS-1 will be handled separately during grading activities in accordance with a DTSC-approved SMP, which may include fugitive dust control measures, stockpiling protocols, and other best management practices. Following removal of the lead AEC, the ALM model predicts that the probability that adult exposure to lead at the Site in the planned commercial/industrial use scenario results in fetal blood lead levels exceeding 1 microgram per deciliter (µg/dL) is 0.0049%, less than the 5% threshold as established in DTSC guidance (DTSC, 2011).

7. Summary and Conclusions

The Site has been the subject of several investigations since 1983 the results of which were presented in the RI report prepared by LFR in 2009 (Appendix A). Roux conducted a subsurface investigation during August 2019 to fill in data gaps relevant to the proposed development and to further characterize the existing cover soil and confirm that the current soil vapor and groundwater conditions were consistent with those observed during previous on-Site investigations, in particular those discussed in the RI (LFR, 2009). In additional Roux conducted a Screening Risk Evaluation to provide a conservative evaluation of the potential risk due to COPCs detected in the subsurface at the Site.

Based on the results of the on-Site investigations and the Screening Risk Evaluation, and in consideration of the future industrial development, Roux concludes the following:

7.1 Existing Sump Materials / Impacted Soil

- The existing sump materials and impacted soils have been adequately delineated and characterized during past investigations and as a result of Roux's subsurface investigation.

- Based on regional and Site vicinity groundwater quality the Site's existing impacted materials do not appear to have significantly affected groundwater quality.

7.2 Cover Soil

- Cover soils have been adequately characterized and the approximate thickness determined over the entire Site (Figure 5). Based on the thickness of the existing cover, the Site could be graded and flattened without penetrating the top of the impacted soil.

- Based on the cover soil characterization, lead, arsenic and TPH concentrations exceeded their corresponding screening levels/action levels in 10 localized areas. Roux considers these 10 locations as AECs (Figure 11).

- Based on the characterization, the cover soil, excluding the AECs, appears to be environmentally suitable for use as a future soil cap.

7.3 Soil Vapor

- Soil vapor has been adequately characterized and current concentrations are consistent with and generally lower than those reported in the RI (LFR, 2009). Elevated concentrations of benzene and methane were detected in soil vapor at nine locations on-Site (Figure 9).

7.4 Groundwater

- The recent groundwater sample results indicate that although impacted, the current groundwater quality is consistent with that observed in 2008 and 2009. Roux concurs with LFR's conclusion that Site groundwater conditions do not appear to differ significantly from the regional groundwater quality, that *"groundwater in the area is degraded from numerous and complex interactions of nature as well as historical man-caused activities that date back numerous decades",* and that the Site was likely part of these interactions but does not appear to be the sole or even primary cause of groundwater degradation.

- Based on current and historical groundwater data, Roux does not anticipate any active groundwater remediation at this time.

7.5 Future Risk to Receptors

- As summarized in the table below, the estimated incremental lifetime cancer risks for on-Site commercial/industrial workers and construction workers at the Site were conservatively estimated to be 6.9E-06 and 5.1E-06, respectively. Both the estimated cancer risks fall within the acceptable range of 1E-04 and 1E-06.

- The cumulative risk to a future industrial worker or current construction worker is within the acceptable cancer target range. The cumulative risk to a future industrial worker also does not exceed the acceptable non-cancer target risk threshold of 1; however, the cumulative risk to a current construction worker exceeds the non-cancer target threshold. Although the non-cancer target risk estimates exceeded the target threshold of 1 for the construction worker scenario, none of the soil EPCs exceeded applicable 2019 SFRWQCB ESLs. The non-cancer risk estimate was not driven by a single compound, but multiple (thallium, cobalt, and others). Moreover, none of the COPCs associated with historical Site operations (e.g.TPH) contributed significantly to the non-cancer risk estimate.

Receptor	Incremental Lifetime Cancer Risk	Hazard Index
Target Threshold	*1E-04 to 1E-06*	*1.0*
Commercial/Industrial Worker	6.9E-06	5.6E-01
Construction Worker	5.1E-07	2.4E+00

7.6 Recommendations

Roux recommends preparation of a Response Plan that will outline mitigation measures, engineering controls, future operation and monitoring (O&M) activities, and administrative controls to allow for commercial/industrial development of the Site.

8. References

American Society for Testing Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13).

California Department of Water Resources Bulletin 118, Update 2003 and Interim Update 2016

DTSC, *Final Remediation Investigation for Former Oil Operators North Site*, June 15, 2009

DTSC, 2011. User's Guide to Leadspread 8 and Recommendations for Evaluation of Lead Exposures in Adults. Human and Ecological Risk Office. September 2011. https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/01/LeadSpread8_UserGuide.pdf

DTSC, LA-RWQCB, SF-RWQCB. Advisory Active Soil Gas Investigations. July 2015.

DTSC. 2015. Preliminary Endangerment Assessment Guidance Manual: A guidance manual for evaluating hazardous substance release sites: dated October 2015.

EDR, *The EDR Radius Map™ Report with GeoCheck®*, July 26, 2019.

EDR, *The EDR Aerial Photo Decade Package*, July 26, 2019.

EDR, *EDR Historical Topo Map Report*, July 25, 2019.

EDR, *Certified Sanborn Map Report*, July 26, 2019.

EDR, *The EDR-City Directory Abstract*, August 1, 2019.

Roux Associates, Inc. Phase I Environmental Site Assessment. August 2019.

LFR Inc, *Summary of Groundwater Conditions, Request for Clarification of Expectations of Groundwater Considerations for the RI and FS for the Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California*, July 9, 2008.

LFR Inc, *Final Remedial Investigation Report: Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California*, May 27, 2009.

United States Geological Survey. Long Beach, California 7.5-minute quadrangle topographic map. 2012.

TABLES

1. Summary of Sampling and Analysis
2. Total Petroleum Hydrocarbons (TPH) in Soil
3. Metals in Soil
4. Polychlorinated Biphenyls (PCBs) in Soil
5. Volatile Organic Compounds (VOCs) in Soil
6. Semi-Volatile Organic Compounds (SVOCs) in Soil
7. Organochlorine Pesticides (OCPs) in Soil
8. Chlorinated Herbicides in Soil
9. VOCs and Methane in Soil Vapor
10. Metals in Groundwater
11. TPH in Groundwater
12. Detected VOCs in Groundwater
13. Geochemical Parameters in Groundwater

Table 1
Summary of Sampling and Analysis
3701 N. Pacific Place, Long Beach, California

Boring ID # (SB-#-depth)	Approximate Sampling Depth (feet bgs)	Number of Samples	Title 22 Metals	TPH-cc	VOCs	SVOCs	PCBs	Organochlorine Pesticides	Herbicides	SV Probes
1	1, 4, 8, 13	4	X	X						
2	1, 4, 6	3	X	X	4	4	4			
3	0, 2, 5, 7, 10	5	X	X	5	5	5	0, 2	0, 2	5, 10
4	0, 2, 5, 10, 14	5	X	X				0, 2		
5	0, 1, 4, 8, 15	5	X	X	8	8	8	0, 1		
6	1, 5, 9, 12	4	X	X	9	9	9			5, 10
7	1, 6, 10, 15	4	X	X						5, 10
8	0, 2, 4, 8, 13	5	X	X	2, 8	2, 8	2, 8	0, 2		
9	2, 5, 8, 14	4	X	X						
10	0, 2, 4, 7	4	X	X				0, 2	0, 2	
11	2, 5, 10, 15	4	X	X	10	10	10			
12	1, 5, 8, 12	4	X	X						5, 10
13	0, 2, 4, 7, 14	5	X	X	4	4	4	0, 2		
14	1, 3, 8, 10	4	X	X	8	8	8			
15	3, 6, 9, 12	4	X	X	3	3	3			5, 10
16	0, 2, 4, 7	4	X	X	2,7	2,7	2,7	0, 2		
17	2, 5, 8, 11	4	X	X	2, 8	2, 8	2, 8			
18	1, 4, 8, 13	4	X	X	8	8	8			5, 10
19	0, 2	2	X	X				0, 2		
20	1, 5, 9	3	X	X						
21	0, 2, 4	3	X	X	2	2	2	0, 2		5
22	1, 3, 7, 9	4	X	X						
23	0, 2, 6	3	X	X				0, 2		
24	1, 5, 9	3	X	X	5	5	5			5
25	0, 2, 5, 8	4	X	X	5	5	5	0, 2		5
26	1	1	X	X						
27	1, 3	2	X	X						3
28	2	1	X	X						
29	2, 4	2	X	X						3
30	0, 2	2	X	X				0, 2		
31	0, 2	2	X	X	2	2	2	0, 2		
32	2, 6, 8, 14	4	X	X	6	6	6			5, 10
33	0, 2, 4	3	X	X				0, 2		
34	1	1	X	X						
35	2, 7, 10, 15	4	X	X	2	2	2			5, 10
36	1, 5	2	X	X	5	5	5			5
37	1	1	X	X						
38	1	1	X	X						
39	No Soil Samples	0								
40	No Soil Samples	0								
41	No Soil Samples	0								
42	No Soil Samples	0								
43	No Soil Samples	0								5, 10
44	0, 2	2	X	X				0, 2	0, 2	
45	0, 2	2	X	X				0, 2		
46	0, 2	2	X	X				0, 2		
PRIMARY SAMPLES		**130**	**130**	**130**	**22**	**22**	**22**	**34**	**6**	**26**
DUPLICATE SAMPLES		**12**	**12**	**12**	**2**	**2**	**2**	**3**	**1**	**1**
TOTAL SAMPLES		**142**	**142**	**142**	**24**	**24**	**24**	**37**	**7**	**27**

Notes:
Borings SB-39 through SB-43 were advanced to determine soil cover thickness. No samples collected from these borings.
X denotes samples at all corresponding depths analyzed for this constituent.

Table 2
Total Petroleum Hydrocarbons (TPH) in Soil (USEPA Method 8015B)
3701 N. Pacific Place, Long Beach, California

		TPH (C6 to C12)	TPH (C13 to C22)	TPH (C23 to C44)
SFRWQCB Soil Screening Level		**1,800**	**1,100**	**54,000**
Sample ID	**Depth (ft bgs)**	mg/kg	mg/kg	mg/kg
SB-1-SS-1	1	<50	<50	**110**
SB-1-SS-4	4	<10	<10	**50**
SB-1-SS-4 (DUP)	*4*	*<20*	*<20*	**69**
SB-1-SS-8	8	<50	<50	**250**
SB-1-SS-13	13	<10	<10	**56**
SB-2-SS-1	1	<10	<10	**26**
SB-2-SS-4	4	<500	**2,200**	**7,400**
SB-2-SS-6	6	<20	**170**	**620**
SB-3-SS-0	0	<10	<10	**120**
SB-3-SS-2	2	<20	**32**	**160**
SB-3-SS-5	5	<20	<20	**86**
SB-3-SS-5 (DUP)	*5*	*<20*	*<20*	**65**
SB-3-SS-7	7	<10	**77**	**92**
SB-3-SS-10	10	<10	<10	<10
SB-4-SS-0	0	<10	**240**	**320**
SB-4-SS-2	2	<10	**420**	**270**
SB-4-SS-5	5	<10	**88**	**92**
SB-4-SS-10	10	<10	**16**	**25**
SB-4-SS-14	14	<10	**29**	**40**
SB-5-SS-0	0	<10	<10	**26**
SB-5-SS-1	1	<10	<10	<10
SB-5-SS-4	4	<10	<10	**23**
SB-5-SS-8	8	<10	<10	**24**
SB-5-SS-15	15	<10	<10	**34**
SB-6-SS-1	1	<10	<10	**28**
SB-6-SS-5	5	<10	<10	<10
SB-6-SS-9	9	<10	<10	<10
SB-6-SS-12	12	<10	<10	<10
SB-7-SS-1	1	<10	<10	<10
SB-7-SS-6	6	<10	**24**	**65**
SB-7-SS-10	10	<10	**19**	**67**
SB-7-SS-15	15	<20	**35**	**120**
SB-8-SS-0	0	<10	<10	**16**
SB-8-SS-2	2	<10	<10	**22**
SB-8-SS-4	4	<10	<10	**57**
SB-8-SS-8	8	<10	<10	**10**
SB-8-SS-13	13	<10	**11**	**83**
SB-9-SS-2	2	<20	<20	**76**
SB-9-SS-5	5	<20	<20	**130**
SB-9-SS-8	8	<20	<20	**140**
SB-9-SS-14	14	<10	<10	<10
SB-10-SS-0	0	<10	<10	**18**
SB-10-SS-2	2	<10	<10	**28**

Table 2
Total Petroleum Hydrocarbons (TPH) in Soil (USEPA Method 8015B)
3701 N. Pacific Place, Long Beach, California

		TPH (C6 to C12)	TPH (C13 to C22)	TPH (C23 to C44)
SFRWQCB Soil Screening Level		**1,800**	**1,100**	**54,000**
Sample ID	**Depth (ft bgs)**	mg/kg	mg/kg	mg/kg
SB-10-SS-4	4	<10	<10	<10
SB-10-SS-7	7	<10	<10	**29**
SB-11-SS-2	2	<10	<10	**14**
SB-11-SS-5	5	<10	<10	**34**
SB-11-SS-10	10	<10	<10	**13**
SB-11-SS-15	15	<10	<10	**42**
SB-12-SS-1	1	<10	<10	<10
SB-12-SS-5	5	<10	<10	**65**
SB-12-SS-8	8	<10	<10	**22**
SB-12-SS-8 (DUP)	*8*	*<10*	*<10*	*<10*
SB-12-SS-12	12	<10	<10	**20**
SB-13-SS-0	0	<20	<20	**99**
SB-13-SS-2	2	<10	<10	**21**
SB-13-SS-4	4	<10	<10	**24**
SB-13-SS-7	7	<20	<20	**110**
SB-13-SS-14	14	<20	<20	**150**
SB-14-SS-1	1	<10	<10	**39**
SB-14-SS-3	3	<10	<10	**54**
SB-14-SS-8	8	<10	<10	**33**
SB-14-SS-10	10	<10	<10	**24**
SB-15-SS-3	3	<10	<10	<10
SB-15-SS-6	6	<10	<10	<10
SB-15-SS-6 (DUP)	*6*	*<10*	**390**	**470**
SB-15-SS-9	9	<10	<10	<10
SB-15-SS-12	12	<10	<10	<10
SB-16-SS-0	0	<10	<10	<10
SB-16-SS-2	2	<10	<10	<10
SB-16-SS-4	4	<10	<10	<10
SB-16-SS-7	7	<10	<10	<10
SB-16-SS-7 (DUP)	*7*	*<10*	*<10*	*<10*
SB-17-SS-2	2	<10	<10	<10
SB-17-SS-5	5	<10	<10	<10
SB-17-SS-8	8	<10	<10	<10
SB-17-SS-8 (DUP)	*8*	*<10*	*<10*	*<10*
SB-17-SS-11	11	<50	<50	**130**
SB-18-SS-1	1	<10	**10**	**11**
SB-18-SS-4	4	<10	<10	<10
SB-18-SS-8	8	<10	<10	<10
SB-18-SS-13	13	<10	<10	<10
SB-19-SS-0	0	<10	<10	**76**
SB-19-SS-2	2	<100	**130**	**390**
SB-20-SS-1	1	<10	<10	**15**
SB-20-SS-5	5	<10	**59**	**44**

Table 2
Total Petroleum Hydrocarbons (TPH) in Soil (USEPA Method 8015B)
3701 N. Pacific Place, Long Beach, California

		TPH (C6 to C12)	TPH (C13 to C22)	TPH (C23 to C44)
SFRWQCB Soil Screening Level		**1,800**	**1,100**	**54,000**
Sample ID	**Depth (ft bgs)**	mg/kg	mg/kg	mg/kg
SB-20-SS-5 (DUP)	*5*	*<10*	**75**	**49**
SB-20-SS-9	9	<10	<10	<10
SB-21-SS-0	0	<10	<10	<10
SB-21-SS-2	2	<10	<10	<10
SB-21-SS-4	4	<100	<100	**550**
SB-22-SS-1	1	<10	<10	<10
SB-22-SS-3	3	<10	<10	<10
SB-22-SS-7	7	<20	<20	**37**
SB-22-SS-9	9	<10	<10	**19**
SB-23-SS-0	0	<10	**10**	**24**
SB-23-SS-2	2	<10	<10	**27**
SB-23-SS-6	6	<10	<10	**21**
SB-24-SS-1	1	<10	<10	<10
SB-24-SS-5	5	<10	<10	<10
SB-24-SS-9	9	<500	**2,000**	**3,600**
SB-25-SS-0	0	<10	<10	<10
SB-25-SS-2	2	<20	<20	**26**
SB-25-SS-5	5	<10	<10	<10
SB-25-SS-8	8	<10	**11**	**30**
SB-26-SS-1	1	<10	<10	<10
SB-27-SS-1	1	<10	<10	<10
SB-27-SS-3	3	<20	<20	**57**
SB-28-SS-2	2	<100	**160**	**430**
SB-29-SS-2	2	<10	<10	**20**
SB-29-SS-4	4	<100	<100	**190**
SB-29-SS-4 (DUP)	*4*	*<500*	*<500*	**1,600**
SB-30-SS-0	0	<10	<10	<10
SB-30-SS-0 (DUP)	*0*	*<20*	*<20*	**140**
SB-30-SS-2	2	<20	**90**	**250**
SB-31-SS-0	0	<10	**23**	**190**
SB-31-SS-2	2	<100	**510**	**1,500**
SB-32-SS-2	2	<20	**59**	**340**
SB-32-SS-6	6	<10	<10	**41**
SB-32-SS-8	8	<10	<10	**18**
SB-32-SS-14	14	<10	<10	**37**
SB-32-SS-14 (DUP)	*14*	*<10*	*<10*	**36**
SB-33-SS-0	0	<200	**390**	**1,500**
SB-33-SS-2	2	<500	<500	**790**
SB-33-SS-4	4	<500	<500	**1,500**
SB-34-SS-1	1	<100	<100	**360**
SB-35-SS-2	2	<10	**32**	**83**
SB-35-SS-7	7	<10	**21**	**62**
SB-35-SS-10	10	<10	<10	**17**

Table 2
Total Petroleum Hydrocarbons (TPH) in Soil (USEPA Method 8015B)
3701 N. Pacific Place, Long Beach, California

		TPH (C6 to C12)	TPH (C13 to C22)	TPH (C23 to C44)
SFRWQCB Soil Screening Level		**1,800**	**1,100**	**54,000**
Sample ID	**Depth (ft bgs)**	mg/kg	mg/kg	mg/kg
SB-35-SS-15	15	<10	<10	<10
SB-36-SS-1	1	<10	<10	**28**
SB-36-SS-5	5	**220**	**1,200**	**920**
SB-37-SS-1	1	<20	**46**	**180**
SB-38-SS-1	1	<20	**61**	**200**
SB-44-SS-0	0	<10	<10	**140**
SB-44-SS-2	2	<10	<10	**29**
SB-44-SS-2 (DUP)	*2*	*<10*	**12**	**57**
SB-45-SS-0	0	<100	**140**	**390**
SB-45-SS-2	2	<10	**16**	**72**
SB-45-SS-2 (DUP)	*2*	*<10*	*<10*	*<10*
SB-46-SS-0	0	<20	**32**	**220**
SB-46-SS-2	2	<20	**28**	**140**

Note:
SFRWQCB Soil Screening Level = San Francisco Regional Water Quality Control Board Construction Worker Shallow and Deep Soil Exposure Scenario (Any Land Use) screening level (ESL Workbook Interim Final, Table S-1, Updated 1/2019)
Highlight indicates concentration exceeding screening level
Italics indicates duplicate sample
Bold indicates concentration detected above laboratory reporting limits
Bgs - Below ground surface
NS indicates no screening level

Table 3
Metals in Soil (USEPA Method 6010B/7471A)
3701 N. Pacific Place, Long Beach, California

		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
USEPA Industrial Soil RSL		**470**	**3**	**220,000**	**2300**	**980**	**NS**	**350**	**47,000**	**800**	**5,800**	**22,000**	**5,800**	**5,800**	**12**	**5,800**	**350,000**	**46**
DTSC Commercial/Industrial Soil SL		**NS**	**0.36**	**NS**	**230**	**780**	**NS**	**NS**	**NS**	**320**	**NS**	**11,000**	**NS**	**NS**	**NS**	**NS**	**NS**	**4.4**
Sample ID	**Depth (ft bgs)**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-1-SS-1	1	<3	**53.4**	**107**	<0.5	**1.21**	**21.2**	**9.1**	**24.1**	**49**	<1	**11.8**	<3	<0.5	**3.54**	**30.7**	**168**	<0.14
SB-1-SS-4	4	<3	**15.6**	**78.6**	<0.5	**1.41**	**21.2**	**5.78**	**29.1**	**171**	<1	**12.6**	<3	<0.5	<3	**27.6**	**104**	<0.14
SB-1-SS-4 (DUP)	*4*	<3	**9.66**	**109**	<0.5	**0.92**	**20.6**	**8.97**	**34**	**90.4**	<1	**14.1**	<3	<0.5	<3	**33.1**	**93**	<0.14
SB-1-SS-8	8	<3	**10.2**	**149**	<0.5	**0.8**	**26.7**	**12.3**	**27.6**	**20.6**	<1	**17**	<3	<0.5	<3	**47**	**74.8**	<0.14
SB-1-SS-13	13	<3	**6.52**	**152**	<0.5	**0.66**	**26.6**	**12.2**	**24.2**	**21.4**	<1	**16.3**	<3	<0.5	<3	**44.3**	**61**	**0.16**
SB-2-SS-1	1	<3	**7.21**	**182**	<0.5	**0.71**	**27.7**	**13.8**	**27.3**	**33**	<1	**19.8**	<3	<0.5	<3	**46.4**	**89**	<0.14
SB-2-SS-4	4	<3	**37.4**	**1,670**	<0.5	**1.38**	**38.1**	**11.2**	**51**	**304**	<1	**33.3**	<3	<0.5	<3	**41.4**	**147**	**0.6**
SB-2-SS-6	6	<3	**4.4**	**220**	<0.5	<0.5	**19.6**	**4.4**	**14**	**20.8**	<1	**10.6**	<3	<0.5	<3	**28.1**	**40.8**	<0.14
SB-3-SS-0	0	<3	**6.94**	**191**	<0.5	**0.69**	**25.2**	**12.4**	**29.7**	**34.1**	<1	**18.4**	<3	<0.5	<3	**45**	**83.7**	**0.15**
SB-3-SS-2	2	<3	**9.9**	**316**	<0.5	**0.68**	**28.2**	**13.3**	**35.3**	**39.5**	<1	**21.5**	<3	<0.5	<3	**52.7**	**97.7**	<0.14
SB-3-SS-5	5	<3	**8**	**220**	<0.5	**0.98**	**35**	**15.7**	**33.8**	**16.2**	<1	**24.3**	<3	<0.5	<3	**57.5**	**76.8**	<0.14
SB-3-SS-5 (DUP)	*5*	<3	**4.81**	**160**	<0.5	**0.83**	**26.2**	**11.8**	**25**	**11.6**	<1	**16**	<3	<0.5	<3	**44.8**	**54.5**	<0.14
SB-3-SS-7	7	<3	**5.8**	**187**	<0.5	**0.7**	**26**	**10.9**	**26.2**	**35.7**	<1	**16.9**	<3	<0.5	<3	**43.6**	**81.1**	<0.14
SB-3-SS-10	10	<3	**4.98**	**158**	<0.5	**0.57**	**25.6**	**13.7**	**26.5**	**11.2**	<1	**17**	<3	<0.5	<3	**45.5**	**58**	<0.14
SB-4-SS-0	0	<3	**18.1**	**444**	<0.5	**0.66**	**24.3**	**10.2**	**31.6**	**70.2**	<1	**17.2**	<3	<0.5	<3	**38.9**	**89.1**	<0.14
SB-4-SS-2	2	<3	**5.78**	**172**	<0.5	**0.51**	**27**	**15.3**	**22.8**	**10.2**	<1	**19.6**	<3	<0.5	<3	**48.2**	**52.7**	<0.14
SB-4-SS-5	5	<3	**7.76**	**160**	<0.5	<0.5	**25.3**	**11.8**	**20.8**	**8.19**	<1	**17**	<3	<0.5	<3	**41.7**	**47.7**	<0.14
SB-4-SS-10	10	<3	**7.48**	**136**	<0.5	<0.5	**21**	**10.5**	**20.1**	**8.15**	<1	**13.6**	<3	<0.5	<3	**36.9**	**39.9**	<0.14
SB-4-SS-14	14	<3	**10.9**	**140**	<0.5	**0.7**	**27.9**	**14.5**	**22.2**	**7.6**	<1	**21.5**	<3	<0.5	<3	**45.6**	**50.9**	<0.14
SB-5-SS-0	0	<3	**13.9**	**250**	<0.5	**0.86**	**35.8**	**15.3**	**41.2**	**19.3**	<1	**23.7**	<3	<0.5	<3	**62.3**	**86.5**	<0.14
SB-5-SS-1	1	<3	**11.2**	**194**	<0.5	**0.6**	**28.4**	**12.7**	**31.6**	**15.1**	<1	**19.7**	<3	<0.5	<3	**47.9**	**66.7**	<0.14
SB-5-SS-4	4	<3	**5.73**	**182**	<0.5	**0.78**	**24.9**	**11.9**	**31.3**	**53.6**	<1	**16.9**	<3	<0.5	<3	**45.2**	**108**	<0.14
SB-5-SS-8	8	<3	**4.58**	**236**	<0.5	**1.37**	**31**	**12.5**	**29.3**	**10.3**	<1	**22.6**	<3	<0.5	<3	**58.1**	**66.4**	<0.14
SB-5-SS-15	15	<3	**3.66**	**103**	<0.5	<0.5	**16.5**	**8.66**	**16.7**	**6.75**	<1	**11.5**	<3	<0.5	<3	**32.7**	**42.1**	<0.14
SB-6-SS-1	1	<3	**8.24**	**219**	<0.5	**0.64**	**30.4**	**15.7**	**37.9**	**10.4**	<1	**22.9**	<3	<0.5	<3	**50.6**	**66.9**	<0.14
SB-6-SS-5	5	<3	**2.7**	**114**	<0.5	**0.76**	**27.4**	**12.8**	**23.5**	**9.81**	<1	**16.8**	<3	<0.5	<3	**51.6**	**64.8**	<0.14
SB-6-SS-9	9	<3	**12.6**	**206**	<0.5	**0.6**	**28.1**	**14**	**31.4**	**10.3**	**1.55**	**19.8**	<3	<0.5	<3	**53**	**58.2**	<0.14
SB-6-SS-12	12	<3	**8.63**	**152**	<0.5	**0.52**	**25.9**	**12.6**	**27.8**	**12.4**	<1	**17.5**	<3	<0.5	<3	**45.4**	**58.3**	<0.14
SB-7-SS-1	1	<3	**13.3**	**211**	<0.5	**0.6**	**29.2**	**13.8**	**32.8**	**14.8**	<1	**20.4**	<3	<0.5	<3	**51.9**	**59.9**	<0.14
SB-7-SS-6	6	<3	**9.65**	**182**	<0.5	**0.59**	**26.4**	**11.8**	**22.7**	**34.5**	<1	**17**	<3	<0.5	<3	**41.8**	**84.3**	**0.2**
SB-7-SS-10	10	<3	<1	**132**	<0.5	**0.83**	**25.1**	**8.94**	**19.3**	**6.96**	<1	**16.5**	<3	<0.5	<3	**45.9**	**43.5**	<0.14
SB-7-SS-15	15	<3	**4.38**	**201**	<0.5	**0.63**	**26.6**	**11.1**	**27.2**	**26.8**	<1	**16.8**	<3	<0.5	<3	**36.8**	**74**	<0.14
SB-8-SS-0	0	<3	**11.4**	**286**	<0.5	**1.31**	**38.8**	**16.5**	**42.3**	**30.7**	<1	**26.7**	<3	<0.5	<3	**66.2**	**106**	<0.14
SB-8-SS-2	2	<3	**3.98**	**245**	<0.5	**1.06**	**30.5**	**14**	**46.6**	**72.9**	<1	**20.2**	<3	<0.5	<3	**53**	**179**	**0.35**
SB-8-SS-4	4	**3**	**8.08**	**309**	<0.5	**1.29**	**34.4**	**15.8**	**48.1**	**50.7**	<1	**23.5**	<3	<0.5	**3.46**	**54.6**	**156**	<0.14
SB-8-SS-8	8	<3	**17.4**	**340**	<0.5	**0.78**	**35.2**	**15.4**	**39.8**	**13.6**	<1	**24.4**	<3	<0.5	<3	**56.2**	**66.5**	<0.14
SB-8-SS-13	13	<3	**23.2**	**292**	<0.5	**0.8**	**34.2**	**15.6**	**42.6**	**11.8**	<1	**25.5**	<3	<0.5	<3	**58.8**	**64**	<0.14
SB-9-SS-2	2	<3	<1	**145**	<0.5	**0.53**	**21.5**	**11.7**	**24.4**	**10.3**	<1	**15.2**	<3	<0.5	<3	**41.1**	**59.4**	**0.27**
SB-9-SS-5	5	<3	**7.2**	**249**	<0.5	**0.83**	**29.9**	**14.3**	**37.2**	**65.6**	<1	**20.5**	<3	<0.5	<3	**48.6**	**132**	<0.14
SB-9-SS-8	8	<3	**4.11**	**126**	<0.5	<0.5	**18.8**	**10**	**21**	**24**	<1	**15**	<3	<0.5	<3	**36.9**	**60.1**	**0.14**
SB-9-SS-14	14	<3	**4.7**	**142**	<0.5	**0.62**	**26.1**	**12.9**	**26.8**	**7.38**	<1	**18.1**	<3	<0.5	<3	**42.2**	**58.6**	<0.14
SB-10-SS-0	0	<3	**2.78**	**103**	<0.5	<0.5	**15.1**	**7.08**	**16**	**11.3**	<1	**10.3**	<3	<0.5	<3	**28.7**	**43.5**	<0.14
SB-10-SS-2	2	<3	**2.13**	**120**	<0.5	<0.5	**18.6**	**9.67**	**20.2**	**9**	<1	**13.3**	<3	<0.5	<3	**35.6**	**42.2**	<0.14

Table 3
Metals in Soil (USEPA Method 6010B/7471A)
3701 N. Pacific Place, Long Beach, California

		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
USEPA Industrial Soil RSL		**470**	**3**	**220,000**	**2300**	**980**	**NS**	**350**	**47,000**	**800**	**5,800**	**22,000**	**5,800**	**5,800**	**12**	**5,800**	**350,000**	**46**
DTSC Commercial/Industrial Soil SL		**NS**	**0.36**	**NS**	**230**	**780**	**NS**	**NS**	**NS**	**320**	**NS**	**11,000**	**NS**	**NS**	**NS**	**NS**	**NS**	**4.4**
Sample ID	**Depth (ft bgs)**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-10-SS-4	4	<3	**7.37**	**135**	<0.5	**0.51**	**26.2**	**12.5**	**26.2**	**8.27**	<1	**17.2**	<3	<0.5	<3	**42.3**	**50.8**	<0.14
SB-10-SS-7	7	<3	**5.96**	**372**	<0.5	**1**	**31.2**	**11.3**	**29.3**	**11.7**	<1	**25.4**	<3	<0.5	<3	**65.6**	**60.1**	<0.14
SB-11-SS-2	2	<3	**5.24**	**131**	<0.5	**0.53**	**23.6**	**11.1**	**23.6**	**9.89**	<1	**15.2**	**3.27**	<0.5	<3	**38.1**	**51.7**	<0.14
SB-11-SS-5	5	<3	**8.76**	**155**	<0.5	**1.04**	**28.3**	**12.8**	**28.6**	**10.4**	<1	**20.1**	<3	<0.5	**3.43**	**47**	**60.2**	<0.14
SB-11-SS-10	10	<3	**4.79**	**177**	<0.5	**0.88**	**28.2**	**17.3**	**30.2**	**9.3**	<1	**22.5**	<3	<0.5	<3	**49.5**	**60.4**	<0.14
SB-11-SS-15	15	<3	**8.47**	**240**	<0.5	**1.37**	**38**	**19.7**	**44.8**	**12.7**	<1	**30.4**	<3	<0.5	<3	**75.6**	**94.3**	<0.14
SB-12-SS-1	1	<3	**1.89**	**30.2**	<0.5	<0.5	**8.97**	**4.11**	**4.06**	**4.14**	<1	**5.49**	<3	<0.5	<3	**17.3**	**19**	<0.14
SB-12-SS-5	5	<3	<1	**63.8**	<0.5	<0.5	**17.4**	**7.92**	**11.3**	**7.2**	<1	**11.3**	<3	<0.5	<3	**27.5**	**36.4**	<0.14
SB-12-SS-8	8	<3	**2.57**	**150**	<0.5	**0.63**	**28.3**	**14.4**	**14.7**	**6.38**	<1	**14.7**	<3	<0.5	<3	**40**	**43.4**	<0.14
SB-12-SS-8 (DUP)	*8*	<3	**3.38**	**25.2**	<0.5	<0.5	**8.66**	**3.82**	**3.36**	**4.26**	<1	**5.3**	<3	<0.5	<3	**15.6**	**15.1**	<0.14
SB-12-SS-12	12	<3	**3.9**	**164**	<0.5	**0.79**	**34.7**	**13.2**	**23**	**8.74**	<1	**19.1**	<3	<0.5	<3	**47.9**	**61.9**	<0.14
SB-13-SS-0	0	<3	**3.47**	**131**	<0.5	**0.58**	**26.2**	**11.9**	**20.2**	**13.1**	<1	**17.3**	<3	<0.5	<3	**40.1**	**56.4**	**0.14**
SB-13-SS-2	2	<3	**9.88**	**254**	<0.5	**0.77**	**32.3**	**15.2**	**37.2**	**11.7**	<1	**23.2**	<3	<0.5	<3	**56.7**	**62.4**	<0.14
SB-13-SS-4	4	<3	**12.6**	**271**	<0.5	**0.94**	**32.6**	**16.6**	**37.2**	**12.4**	<1	**26.6**	<3	<0.5	<3	**59.7**	**72.4**	<0.14
SB-13-SS-7	7	<3	**9.26**	**190**	<0.5	**0.72**	**34.8**	**14.1**	**36.5**	**22.1**	<1	**23.6**	<3	<0.5	<3	**53**	**61.7**	<0.14
SB-13-SS-14	14	<3	**2.83**	**173**	<0.5	**0.71**	**25.4**	**13.8**	**28.5**	**7.9**	<1	**17.6**	<3	<0.5	<3	**47.4**	**56.6**	<0.14
SB-14-SS-1	1	<3	**3.04**	**120**	<0.5	**0.54**	**26.8**	**12.4**	**21**	**16.3**	<1	**18.4**	<3	<0.5	<3	**43.3**	**55.4**	<0.14
SB-14-SS-3	3	<3	**2.77**	**120**	<0.5	**0.64**	**26.6**	**12.6**	**20**	**15.2**	<1	**17.9**	<3	<0.5	<3	**45.4**	**57.2**	<0.14
SB-14-SS-8	8	<3	**4.88**	**100**	<0.5	**0.61**	**32.9**	**14.8**	**24.1**	**8.7**	<1	**21.4**	<3	<0.5	<3	**52.5**	**56.6**	<0.14
SB-14-SS-10	10	<3	**2.09**	**111**	<0.5	**0.55**	**24.8**	**11.8**	**16.4**	**6.45**	<1	**17.1**	<3	<0.5	<3	**41.8**	**50.1**	<0.14
SB-15-SS-3	3	<3	**4.99**	**137**	<0.5	**0.5**	**18.6**	**8.69**	**16.6**	**6.8**	<1	**12.8**	**3.31**	<0.5	<3	**34.5**	**46.1**	<0.14
SB-15-SS-6	6	<3	**1.61**	**115**	<0.5	**1.12**	**31**	**15.2**	**30.3**	**9.91**	<1	**23.1**	<3	<0.5	<3	**51.3**	**70.2**	<0.14
SB-15-SS-6 (DUP)	*6*	<3	**3.08**	**102**	<0.5	**0.83**	**29.9**	**12.8**	**27**	**8.37**	<1	**19.7**	<3	<0.5	<3	**54.2**	**59.3**	<0.14
SB-15-SS-9	9	<3	**4.03**	**134**	<0.5	**1.18**	**34**	**14.8**	**36.1**	**9.45**	<1	**24.2**	<3	<0.5	<3	**64.7**	**74**	<0.14
SB-15-SS-12	12	<3	**2.74**	**97.1**	<0.5	**0.6**	**24.8**	**8.99**	**20.2**	**6.74**	<1	**15.3**	<3	<0.5	<3	**37.4**	**47.6**	<0.14
SB-16-SS-0	0	<3	**2.6**	**223**	<0.5	**0.82**	**28.3**	**12.5**	**28.8**	**18.3**	<1	**18.2**	<3	<0.5	<3	**52**	**74.2**	<0.14
SB-16-SS-2	2	<3	**5.46**	**169**	<0.5	**1.04**	**29.2**	**14.1**	**28.4**	**8.81**	<1	**20.3**	<3	<0.5	<3	**53.7**	**65.3**	<0.14
SB-16-SS-4	4	<3	<1	**124**	<0.5	**0.65**	**27.3**	**11.2**	**15**	**6.37**	<1	**17**	<3	<0.5	<3	**39.3**	**43.6**	<0.14
SB-16-SS-7	7	<3	**4.36**	**126**	<0.5	**0.82**	**32**	**13.7**	**24.9**	**7.2**	<1	**22.8**	<3	<0.5	<3	**53.1**	**61.3**	<0.14
SB-16-SS-7 (DUP)	*7*	<3	**2.31**	**138**	<0.5	**0.98**	**35.8**	**16**	**28.1**	**8.02**	<1	**25.3**	<3	<0.5	<3	**62.4**	**68.5**	<0.14
SB-17-SS-2	2	<3	**7.51**	**178**	<0.5	**0.56**	**28.7**	**13.2**	**29.7**	**10.6**	<1	**19.8**	<3	<0.5	<3	**46.7**	**52.3**	<0.14
SB-17-SS-5	5	<3	**14.8**	**220**	<0.5	**0.67**	**43**	**19.7**	**44.8**	**14.2**	<1	**28.9**	<3	<0.5	<3	**69.3**	**69.5**	<0.14
SB-17-SS-8	8	<3	**2.02**	**145**	<0.5	**0.62**	**25**	**11.7**	**23.6**	**8.2**	<1	**15.9**	<3	<0.5	<3	**45.5**	**52.4**	<0.14
SB-17-SS-8 (DUP)	*8*	<3	**3.66**	**150**	<0.5	**0.74**	**30.9**	**14.3**	**27.3**	**8.44**	<1	**20**	<3	<0.5	<3	**53.3**	**61**	<0.14
SB-17-SS-11	11	<3	**1.25**	**125**	<0.5	**1.02**	**23.8**	**12.6**	**31.6**	**16**	<1	**19.3**	<3	<0.5	<3	**44.1**	**63.3**	<0.14
SB-18-SS-1	1	<3	**10.9**	**212**	<0.5	**0.79**	**31.2**	**14.5**	**37.6**	**19.6**	<1	**21.6**	<3	<0.5	<3	**54.2**	**77.4**	<0.14
SB-18-SS-4	4	<3	**4.17**	**127**	<0.5	**0.75**	**25.7**	**11.9**	**25.6**	**20**	<1	**16.9**	<3	<0.5	<3	**42**	**59.5**	<0.14
SB-18-SS-8	8	<3	**4.14**	**142**	<0.5	**0.6**	**24.6**	**12.1**	**24.7**	**16.7**	<1	**16.5**	<3	<0.5	<3	**39.9**	**55.9**	<0.14
SB-18-SS-13	13	<3	**5.34**	**160**	<0.5	**0.89**	**30.9**	**11.2**	**28.6**	**19.7**	<1	**18**	<3	<0.5	<3	**40**	**68.1**	<0.14
SB-19-SS-0	0	<3	**4.56**	**241**	<0.5	**1.31**	**29.4**	**11.5**	**28.4**	**23.7**	<1	**21**	<3	<0.5	**3.3**	**49.9**	**83.1**	<0.14
SB-19-SS-2	2	<3	**9.72**	**396**	<0.5	**0.82**	**27.6**	**11.4**	**31.2**	**111**	<1	**20**	<3	<0.5	<3	**39.1**	**84.2**	**0.15**
SB-20-SS-1	1	<3	**4.99**	**179**	<0.5	**0.83**	**28.2**	**13**	**29.5**	**46.1**	<1	**20.5**	<3	<0.5	<3	**47.6**	**80.2**	<0.14
SB-20-SS-5	5	<3	**10.1**	**270**	<0.5	**0.89**	**34.9**	**16.3**	**39.9**	**16.9**	<1	**25.7**	<3	<0.5	<3	**63.2**	**77.2**	<0.14

Table 3
Metals in Soil (USEPA Method 6010B/7471A)
3701 N. Pacific Place, Long Beach, California

		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
USEPA Industrial Soil RSL		**470**	**3**	**220,000**	**2300**	**980**	**NS**	**350**	**47,000**	**800**	**5,800**	**22,000**	**5,800**	**5,800**	**12**	**5,800**	**350,000**	**46**
DTSC Commercial/Industrial Soil SL		**NS**	**0.36**	**NS**	**230**	**780**	**NS**	**NS**	**NS**	**320**	**NS**	**11,000**	**NS**	**NS**	**NS**	**NS**	**NS**	**4.4**
Sample ID	**Depth (ft bgs)**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-20-SS-5 (DUP)	*5*	<3	**4.05**	**81.6**	<0.5	<0.5	**15.1**	**6.54**	**10.9**	**5.95**	<1	**9.35**	<3	<0.5	<3	**30.5**	**27**	<0.14
SB-20-SS-9	9	<3	**4.06**	**185**	<0.5	**1.14**	**32.6**	**15.3**	**35.8**	**10**	<1	**23.1**	<3	<0.5	<3	**64.7**	**72.7**	<0.14
SB-21-SS-0	0	<3	**12.4**	**558**	<0.5	**1.97**	**42.7**	**16.3**	**44.4**	**21**	<1	**35**	<3	<0.5	<3	**92.7**	**87.4**	<0.14
SB-21-SS-2	2	<3	**16**	**425**	<0.5	**1.38**	**42.7**	**17.1**	**46.2**	**15.4**	<1	**32.6**	<3	<0.5	<3	**79.1**	**80.4**	<0.14
SB-21-SS-4	4	**4.76**	**13.7**	**90.4**	<0.5	**1.44**	**440**	**10.9**	**147**	**50.8**	**37.7**	**117**	<3	<0.5	<3	**103**	**237**	<0.14
SB-22-SS-1	1	<3	**18.9**	**299**	<0.5	**0.91**	**41.8**	**18.5**	**51.3**	**13.2**	<1	**28.5**	<3	<0.5	<3	**71.2**	**76.2**	<0.14
SB-22-SS-3	3	<3	**29.9**	**496**	<0.5	**1.05**	**41.1**	**25.2**	**58.4**	**21.1**	<1	**34.4**	<3	<0.5	<3	**83.2**	**80**	<0.14
SB-22-SS-7	7	<3	**5.08**	**150**	<0.5	**0.54**	**29**	**11.4**	**22.2**	**15**	<1	**17.5**	<3	<0.5	<3	**41.9**	**57.7**	<0.14
SB-22-SS-9	9	<3	**2.06**	**138**	<0.5	**0.5**	**26.2**	**12**	**17**	**11.4**	<1	**15.7**	<3	<0.5	<3	**40.1**	**49.3**	<0.14
SB-23-SS-0	0	<3	**5.3**	**190**	<0.5	**0.84**	**30**	**13.6**	**29.9**	**17.5**	<1	**20.4**	<3	<0.5	<3	**53.7**	**109**	<0.14
SB-23-SS-2	2	<3	**2.64**	**192**	<0.5	**0.61**	**31.4**	**13.9**	**21.1**	**12.4**	<1	**19**	<3	<0.5	<3	**48.1**	**65.6**	<0.14
SB-23-SS-6	6	<3	**3.37**	**144**	<0.5	**0.58**	**28.6**	**11.9**	**19.9**	**16.4**	<1	**17.5**	<3	<0.5	<3	**45.4**	**62.2**	<0.14
SB-24-SS-1	1	<3	**5.93**	**159**	<0.5	**0.61**	**28.9**	**12.9**	**26.5**	**16.1**	<1	**19.3**	<3	<0.5	<3	**49.3**	**69.8**	<0.14
SB-24-SS-5	5	<3	**12.5**	**347**	<0.5	**1.69**	**41.2**	**16.2**	**46.4**	**13.7**	<1	**32.6**	<3	<0.5	<3	**80.4**	**77.8**	<0.14
SB-24-SS-9	9	<3	**14.7**	**604**	<0.5	**0.87**	**26.8**	**9.34**	**28.6**	**192**	<1	**24.5**	<3	<0.5	<3	**35.7**	**99.7**	**0.48**
SB-25-SS-0	0	<3	**2.62**	**103**	<0.5	**0.63**	**15.5**	**7.03**	**20**	**15.7**	<1	**10.4**	<3	<0.5	<3	**23.4**	**70.5**	<0.14
SB-25-SS-2	2	<3	**7.12**	**174**	<0.5	**1.04**	**33.9**	**15.6**	**35.2**	**14.7**	<1	**22.9**	<3	<0.5	<3	**60.5**	**79**	<0.14
SB-25-SS-5	5	<3	**1.8**	**108**	<0.5	**0.7**	**24.5**	**13**	**22.2**	**7.98**	<1	**16.3**	<3	<0.5	<3	**40.9**	**61.7**	<0.14
SB-25-SS-8	8	<3	**4.32**	**193**	<0.5	**1.08**	**36.1**	**13.7**	**33**	**9.07**	<1	**23.7**	<3	<0.5	<3	**69.2**	**69.1**	<0.14
SB-26-SS-1	1	<3	**9.7**	**388**	<0.5	**1.03**	**33.6**	**15.5**	**41.1**	**18.3**	<1	**27.1**	<3	<0.5	<3	**65.6**	**82.9**	<0.14
SB-27-SS-1	1	<3	**16.1**	**252**	<0.5	**0.88**	**36.1**	**17.6**	**44.9**	**16.1**	<1	**26.4**	<3	<0.5	<3	**65**	**76.6**	<0.14
SB-27-SS-3	3	<3	**12.8**	**205**	<0.5	**0.71**	**29.4**	**14**	**35.2**	**13.4**	<1	**22.3**	<3	<0.5	<3	**51.1**	**59.1**	<0.14
SB-28-SS-2	2	<3	**6.21**	**182**	<0.5	**0.65**	**27.9**	**15.2**	**26.4**	**41.5**	<1	**19.5**	<3	<0.5	<3	**40.9**	**92.5**	<0.14
SB-29-SS-2	2	<3	**4.43**	**175**	<0.5	**0.85**	**30**	**12.2**	**27.2**	**12.5**	<1	**20**	<3	<0.5	<3	**50.1**	**61.6**	<0.14
SB-29-SS-4	4	<3	**5.19**	**145**	<0.5	**0.55**	**22.5**	**9.32**	**23.3**	**59.4**	<1	**14.4**	<3	<0.5	<3	**37.8**	**61.4**	<0.14
SB-29-SS-4 (DUP)	*4*	<3	**6.13**	**234**	<0.5	**0.8**	**28.4**	**12.6**	**42.4**	**117**	<1	**21.2**	<3	<0.5	<3	**44.9**	**118**	<0.14
SB-30-SS-0	0	<3	**3.48**	**95.1**	<0.5	**0.56**	**15.7**	**7.09**	**17.1**	**16.7**	<1	**9.47**	<3	<0.5	<3	**28.8**	**60.6**	<0.14
SB-30-SS-0 (DUP)	*0*	<3	**2.2**	**111**	<0.5	<0.5	**15.8**	**7.43**	**21.9**	**22.3**	<1	**11.2**	<3	<0.5	<3	**26.3**	**66.7**	<0.14
SB-30-SS-2	2	<3	**1.68**	**144**	<0.5	<0.5	**19.9**	**9.8**	**22.3**	**20.6**	<1	**14.5**	<3	<0.5	<3	**30.7**	**51.6**	<0.14
SB-31-SS-0	0	<3	**11.9**	**286**	<0.5	**0.92**	**37.9**	**13.6**	**105**	**76.9**	<1	**23.3**	<3	<0.5	<3	**53.4**	**134**	**0.18**
SB-31-SS-2	2	<3	**19.2**	**382**	<0.5	**0.87**	**30.9**	**11.4**	**48.8**	**154**	<1	**20.7**	<3	<0.5	<3	**44.2**	**128**	**0.29**
SB-32-SS-2	2	<3	**8.71**	**271**	<0.5	**0.96**	**34.8**	**11.8**	**197**	**147**	<1	**23.5**	<3	<0.5	<3	**48.2**	**269**	**0.2**
SB-32-SS-6	6	<3	**4.01**	**149**	<0.5	**0.65**	**22.6**	**11**	**274**	**138**	<1	**21**	<3	<0.5	<3	**41.1**	**430**	<0.14
SB-32-SS-8	8	<3	**5.81**	**128**	<0.5	**0.66**	**28.7**	**11.8**	**32.4**	**9.24**	<1	**18.4**	<3	<0.5	<3	**43.8**	**51**	<0.14
SB-32-SS-14	14	<3	**5.85**	**90.4**	<0.5	<0.5	**15.5**	**7.51**	**15.1**	**8.86**	<1	**10.6**	<3	<0.5	<3	**30.5**	**34.9**	<0.14
SB-32-SS-14 (DUP)	*14*	<3	**6.27**	**111**	<0.5	<0.5	**18.6**	**7.8**	**35.6**	**27.4**	<1	**11.7**	<3	<0.5	<3	**31.8**	**66.5**	<0.14
SB-33-SS-0	0	<3	**8.04**	**338**	<0.5	**0.85**	**28.7**	**11.4**	**39.6**	**92**	<1	**20.5**	<3	<0.5	<3	**42.9**	**123**	**0.15**
SB-33-SS-2	2	<3	**11.7**	**442**	<0.5	**1.52**	**32.2**	**11.8**	**174**	**265**	<1	**23.7**	<3	<0.5	**4.05**	**44.9**	**401**	**0.16**
SB-33-SS-4	4	<3	**6.34**	**75.2**	<0.5	<0.5	**8.12**	**3.77**	**10.7**	**13.3**	<1	**11.6**	<3	<0.5	<3	**20**	**31.8**	<0.14
SB-34-SS-1	1	<3	**9.72**	**244**	<0.5	**0.88**	**35.5**	**13**	**42**	**50.5**	<1	**20**	<3	<0.5	<3	**50.4**	**107**	**0.25**
SB-35-SS-2	2	<3	**9.38**	**184**	<0.5	**0.9**	**38**	**13.6**	**26.6**	**25.5**	<1	**20.1**	<3	<0.5	<3	**45.1**	**113**	<0.14
SB-35-SS-7	7	<3	**10.4**	**194**	<0.5	**0.73**	**28.2**	**12.3**	**33.3**	**44**	<1	**18.3**	<3	<0.5	<3	**41.4**	**95.8**	<0.14
SB-35-SS-10	10	<3	**5.15**	**63.7**	<0.5	<0.5	**9.73**	**5.27**	**9.24**	**3.09**	<1	**7.3**	<3	<0.5	<3	**19**	**19.9**	<0.14

Table 3
Metals in Soil (USEPA Method 6010B/7471A)
3701 N. Pacific Place, Long Beach, California

		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
USEPA Industrial Soil RSL		**470**	**3**	**220,000**	**2300**	**980**	**NS**	**350**	**47,000**	**800**	**5,800**	**22,000**	**5,800**	**5,800**	**12**	**5,800**	**350,000**	**46**
DTSC Commercial/Industrial Soil SL		**NS**	**0.36**	**NS**	**230**	**780**	**NS**	**NS**	**NS**	**320**	**NS**	**11,000**	**NS**	**NS**	**NS**	**NS**	**NS**	**4.4**
Sample ID	**Depth (ft bgs)**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-35-SS-15	15	<3	**3.18**	**96.2**	<0.5	**0.52**	**19.9**	**10.1**	**14.9**	**5.01**	<1	**13.4**	<3	<0.5	**3.82**	**37.5**	**33.3**	<0.14
SB-36-SS-1	1	<3	**10.3**	**286**	<0.5	**0.87**	**32.8**	**15.6**	**40.2**	**26.6**	<1	**23.3**	<3	<0.5	<3	**61.9**	**99.3**	<0.14
SB-36-SS-5	5	<3	**4.66**	**138**	<0.5	**3.84**	**30.1**	**10.4**	**113**	**108**	**1.4**	**21.3**	<3	<0.5	<3	**48.3**	**8,990**	<0.14
SB-37-SS-1	1	<3	**6.91**	**188**	<0.5	**1.16**	**31.8**	**14.6**	**34.4**	**17**	<1	**20.7**	<3	<0.5	<3	**53.4**	**68.2**	<0.14
SB-38-SS-1	1	**15.2**	**4.82**	**228**	<0.5	**8.65**	**88.4**	**6.29**	**120**	**2,260**	**10.5**	**44**	<3	<0.5	<3	**25.8**	**2,600**	**0.16**
SB-44-SS-0	0	<3	**9.04**	**174**	<0.5	**0.64**	**28.4**	**12.7**	**33.4**	**16**	**1.01**	**19.1**	<3	<0.5	<3	**46**	**80.2**	<0.14
SB-44-SS-2	2	<3	**17**	**247**	<0.5	**0.83**	**38.1**	**17.3**	**47.6**	**14.1**	<1	**27.1**	<3	<0.5	<3	**66.1**	**74.3**	<0.14
SB-44-SS-2 (DUP)	*2*	<3	**14.5**	**286**	<0.5	**0.75**	**34.6**	**16.7**	**46**	**24.6**	<1	**25.3**	<3	<0.5	<3	**61.9**	**72.6**	**0.16**
SB-45-SS-0	0	<3	**8.33**	**301**	<0.5	**0.71**	**19.2**	**10.9**	**28**	**784**	<1	**16.7**	<3	<0.5	<3	**38.2**	**138**	**0.15**
SB-45-SS-2	2	<3	**8.43**	**135**	<0.5	**0.63**	**22.7**	**12.7**	**25.7**	**15**	<1	**14.6**	<3	<0.5	<3	**46.6**	**40.2**	<0.14
SB-45-SS-2 (DUP)	*2*	<3	**11.6**	**137**	<0.5	**0.56**	**28.9**	**13**	**25.5**	**7.35**	<1	**19.2**	<3	<0.5	<3	**47.9**	**49.8**	<0.14
SB-46-SS-0	0	<3	**9.77**	**245**	<0.5	**1.06**	**38.8**	**12.4**	**38.9**	**71.6**	<1	**21.5**	<3	<0.5	<3	**44.3**	**137**	**0.38**
SB-46-SS-2	2	<3	**8.78**	**272**	<0.5	**1.2**	**178**	**216**	**40.3**	**79.8**	<1	**23.9**	<3	<0.5	<3	**53.8**	**140**	**0.27**

Note:
USEPA RSL = United States Environmental Protection Agency Regional Screening Level for industrial soil (updated 4/2019)
DTSC SL = California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO)Human Health Risk Assessment (HHRA) Note 3 Screening Level for industrial soil (updated 4/2019)
Denotes value exceeds site specific action level for arsenic in soil which was developed as 17 mg/kg (Roux 2019).
Denotes value exceeds RSL
Italics indicates duplicate sample
Bold indicates concentration detected above laboratory reporting limits
Bgs - Below ground surface
NS indicates no screening level

Table 4
Polychlorinated Biphenyls (PCBs) in Soil (USEPA 8082)
3701 N. Pacific Place, Long Beach, Carson, California

		PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	PCB-1262	PCB-1268
USEPA Industrial Soil RSL		**27,000**	**830**	**720**	**950**	**950**	**970**	**990**	**NS**	**NS**
DTSC Commercial/Industrial Soil SL		**17,000**	**530**	**490**	**580**	**580**	**590**	**600**	**NS**	**NS**
Sample ID	**Depth (ft bgs)**	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-1-SS-4	4	<500	<500	<500	<500	<500	<500	<500	<500	<500
SB-3-SS-5	5	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-3-SS-5 (DUP)	5	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-5-SS-8	8	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-6-SS-9	9	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-8-SS-2	2	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-8-SS-8	8	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-11-SS-10	10	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-13-SS-4	4	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-14-SS-8	8	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-15-SS-3	3	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-16-SS-2	2	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-16-SS-7	7	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-16-SS-7 (DUP)	7	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-17-SS-2	2	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-17-SS-8	8	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-17-SS-8 (DUP)	8	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-18-SS-8	8	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-21-SS-2	2	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-24-SS-5	5	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-25-SS-5	5	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-31-SS-2	2	<100	<100	<100	<100	<100	<100	<100	<100	<100
SB-32-SS-6	6	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-35-SS-2	2	<50	<50	<50	<50	<50	<50	<50	<50	<50
SB-36-SS-5	5	<100	<100	<100	<100	<100	<100	<100	<100	<100

Note:
USEPA RSL = United States Environmental Protection Agency Regional Screening Level for industrial soil (updated 4/2019)
DTSC SL = California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO)Human Health Risk Assessment (HHRA) Note 3 Screening Level for industrial soil (updated 4/2019)
Highlight indicates concentration exceeding screening level
Italics indicates duplicate sample
Bgs - Below ground surface
NS indicates no screening level

Table 5

Volatile Organic Compounds (VOCs) in Soil (USEPA 8260B)

3701 N. Pacific Place, Long Beach, California

		Acetone	Benzene	Bromoform	Ethylbenzene	t-Butyl alcohol (TBA)	Toluene	Xylenes (Total)	All Other VOCs
USEPA Industrial Soil RSL		**670,000,000**	**5,100**	**86,000**	**25,000**	**NS**	**47,000,000**	**2,500,000**	**varies**
DTSC Commercial/Industrial Soil SL		**NS**	**1,400**	**86,000**	**NS**	**NS**	**5,300,000**	**NS**	**varies**
Sample ID	**Depth (ft bgs)**	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-1-SS-4	4	**160**	<6	<6	<6	<11	<6	<6	ND
SB-3-SS-5	5	<100	**7**	<5	<5	**14**	**6**	<5	ND
SB-3-SS-5 (DUP)	5	<100	<5	<5	<5	<10	<5	<5	ND
SB-5-SS-8	8	<120	<6	<6	<6	<12	<6	<6	ND
SB-6-SS-9	9	<90	<5	<5	<5	<9	<5	<5	ND
SB-8-SS-2	2	<140	<7	<7	<7	<14	<7	<7	ND
SB-8-SS-8	8	<70	<4	<4	<4	<7	<4	<4	ND
SB-11-SS-10	10	<70	<4	<4	<4	<7	<4	<4	ND
SB-13-SS-4	4	<90	<5	<5	<5	<9	<5	<5	ND
SB-14-SS-8	8	<70	<4	**9**	<4	<7	<4	<4	ND
SB-15-SS-3	3	<80	<4	<4	<4	<8	<4	<4	ND
SB-16-SS-2	2	<110	<6	<6	<6	<11	<6	<6	ND
SB-16-SS-7	7	<90	<5	<5	<5	<9	<5	<5	ND
SB-16-SS-7 (DUP)	7	<90	<5	<5	<5	<9	<5	<5	ND
SB-17-SS-2	2	<150	<8	<8	<8	<15	<8	<8	ND
SB-17-SS-8	8	<80	<4	<4	<4	<8	<4	<4	ND
SB-17-SS-8 (DUP)	8	<90	<5	<5	<5	<9	<5	<5	ND
SB-18-SS-8	8	<100	<5	<5	<5	<10	<5	<5	ND
SB-21-SS-2	2	<100	<5	<5	<5	<10	<5	<5	ND
SB-24-SS-5	5	<90	<5	<5	<5	<9	<5	<5	ND
SB-25-SS-5	5	<60	<3	<3	<3	<6	<3	<3	ND
SB-31-SS-2	2	<110	<6	<6	<6	<11	<6	<6	ND
SB-32-SS-6	6	<90	<5	<5	<5	<9	<5	<5	ND
SB-35-SS-2	2	<130	<7	<7	<7	<13	<7	<7	ND
SB-36-SS-5	5	<90	<5	<5	<5	<9	<5	<5	ND

Note:

USEPA RSL = United States Environmental Protection Agency Regional Screening Level for industrial soil (updated 4/2019)

DTSC SL = California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO)Human Healt Assessment (HHRA) Note 3 Screening Level for industrial soil (updated 4/2019)

Highlight indicates concentration exceeding screening level

Italics indicates duplicate sample

Bgs - Below ground surface

ND = not detected

NS indicates no screening level

Table 6
Semi-Volatile Organic Compounds (SVOCs) in Soil (USEPA 8270C)
3701 N. Pacific Place, Long Beach, California

		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
USEPA Industrial Soil RSL		**73,000**	**3,000,000**	**45,000,000**	**NS**	**38,100,000**	**21,000**	**2,100**	**21,000**	**NS**	**210,000**	**2,100,000**	**2,100**	**30,000,000**	**30,000,000**	**2,100**	**1,700**	**NS**	**23,000,000**
DTSC Commercial/Industrial Soil SL		**30,000**	**1,300,000**	**23,000,000**	**NS**	**130,000,000**	**12,000**	**1,300**	**13,000**	**NS**	**130,000**	**1,300,000**	**310**	**18,000,000**	**17,000,000**	**13,000**	**6,500**	**NS**	**13,000,000**
Sample ID	**Depth (ft bgs)**	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-1-SS-4	4	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<6	<50,000	<50,000
SB-3-SS-5	5	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<5	<50,000	<50,000
SB-3-SS-5 (DUP)	5	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<12,500	<5	<12,500	<12,500
SB-5-SS-8	8	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<6	<5,000	<5,000
SB-6-SS-9	9	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<5	<1,250	<1,250
SB-8-SS-2	2	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<7	<2,500	<2,500
SB-8-SS-8	8	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000	<4	<5,000	<5,000
SB-11-SS-10	10	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<4	<1,250	<1,250
SB-13-SS-4	4	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<5	<1,250	<1,250
SB-14-SS-8	8	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<4	<25,000	<25,000
SB-15-SS-3	3	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<4	<2,500	<2,500
SB-16-SS-2	2	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<6	<250	<250
SB-16-SS-7	7	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<5	<250	<250
SB-16-SS-7 (DUP)	7	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<5	<250	<250
SB-17-SS-2	2	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<8	<2,500	<2,500
SB-17-SS-8	8	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<4	<1,250	<1,250
SB-17-SS-8 (DUP)	8	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<5	<1,250	<1,250
SB-18-SS-8	8	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<5	<1,250	<1,250
SB-21-SS-2	2	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<5	<1,250	<1,250
SB-24-SS-5	5	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<5	<1,250	<1,250
SB-25-SS-5	5	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<2,500	<3	<2,500	<2,500
SB-31-SS-2	2	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<6	<50,000	<50,000
SB-32-SS-6	6	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<1,250	<5	<1,250	<1,250
SB-35-SS-2	2	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<7	<25,000	<25,000
SB-36-SS-5	5	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<50,000	<5	<50,000	<50,000

Note:
USEPA RSL = United States Environmental Protection Agency Regional Screening Level for industrial soil (updated 4/2019)
DTSC SL = California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO)Human Health Risk Assessment (HHRA) Note 3 Screening Level for industrial soil (updated 4/2019)
Highlight indicates concentration exceeding screening level
Italics indicates duplicate sample
Bgs - Below ground surface
NS indicates no screening level

Table 7
Organochlorine Pesticides (OCPs) in Soil (USEPA 8081)
3701 N. Pacific Place, Long Beach, California

		4,4'-DDD	4,4'-DDE	4,4'-DDT	a-BHC	Aldrin	b-BHC	Chlordane (technical)	d-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin Ketone	Heptachlor	Heptachlor epoxide	Lindane (Gamma-BHC)	Methoxychlor	Toxaphene
USEPA Industrial Soil RSL		**9,600**	**9,300**	**8,500**	**360**	**180**	**1,300**	**7,700**	**NS**	**140**	**7,000,000**	**NS**	**4,900,000**	**250,000**	**NS**	**NS**	**630**	**330**	**2,500**	**4,100,000**	**2,100**
DTSC Commercial/Industrial Soil SL		**6,200**	**9,300**	**7,100**	**NS**	**180**	**NS**	**6,100**	**NS**	**93**	**6,300,000**	**NS**	**NS**	**160,000**	**NS**	**NS**	**630**	**330**	**NS**	**2,600,000**	**1,200**
Sample ID	**Depth (ft bgs)**	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-3-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-3-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-4-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-4-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-5-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-5-SS-1	1	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-8-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-8-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-10-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-10-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-13-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-13-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-16-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-16-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-19-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-19-SS-2	2	<10	<10	<10	<10	<10	<10	<100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<20	<200
SB-21-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-21-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-23-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-23-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-25-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-25-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-30-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-30-SS-0 (DUP)	0	<10	<10	<10	<10	<10	<10	<100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<20	<200
SB-30-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-31-SS-0	0	<5	<5	**5.4**	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-31-SS-2	2	<10	<10	<10	<10	<10	<10	<100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<20	<200
SB-33-SS-0	0	<5	<5	**11**	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-33-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-44-SS-0	0	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-44-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-44-SS-2 (DUP)	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-45-SS-0	0	<10	<10	<10	<10	<10	<10	<100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<20	<200
SB-45-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-45-SS-2 (DUP)	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-46-SS-0	0	<5	<5	**15**	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100
SB-46-SS-2	2	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100

Note:
USEPA RSL = United States Environmental Protection Agency Regional Screening Level for industrial soil (updated 4/2019)
DTSC SL = California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO)Human Health Risk Assessment (HHRA) Note 3 Screening Level for industrial soil (updated 4/2019)
Highlight indicates concentration exceeding screening level
Italics indicates duplicate sample
Bgs - Below ground surface
NS indicates no screening level

Table 8
Chlorinated Herbicides in Soil (USEPA 8151A)
3701 N. Pacific Place, Long Beach, California

		2,4-D	2,4-DB	Dalapon	Dicamba	Dichloroprop	Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	MCPA	MCPP	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	2,4,5-TP	Acifluorfen	Bentazon	Chloramben	3,5-Dichlorobenzoic acid	4-Nitrophenol	Pentachlorophenol (PCP)	Picloram	DCPA diacid
USEPA Industrial Soil RSL		**9,600,000**	**25,000,000**	**25,000,000**	**25,000,000**	**NS**	**820,000**	**410,000**	**820,000**	**8,200,000**	**6,600,000**	**NS**	**25,000,000**	**12,000,000**	**NS**	**NS**	**4,000**	**57,000,000**	**NS**
DTSC Commercial/Industrial Soil SL		**7,300,000**	**16,000,000**	**1,900,000**	**16,000,000**	**NS**	**530,000**	**260,000**	**530,000**	**5,300,000**	**4,200,000**	**NS**	**1,600,000**	**7,900,000**	**NS**	**NS**	**2,000**	**37,000,000**	**NS**
Sample ID	**Depth (ft bgs)**	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-3-SS-0	0	<10	<10	<20	<10	<10	<20	<2,000	<2,000	<10	<10	<20	<10	<10	<10	<10	<10	<10	<20
SB-3-SS-2	2	<10	<10	<20	<10	<10	<20	<2,000	<2,000	<10	<10	<20	<10	<10	<10	<10	<10	<10	<20
SB-10-SS-0	0	<10	<10	<20	<10	<10	<20	<2,000	<2,000	<10	<10	<20	<10	<10	<10	<10	<10	<10	<20
SB-10-SS-2	2	<10	<10	<20	<10	<10	<20	<2,000	<2,000	<10	<10	<20	<10	<10	<10	<10	<10	<10	<20
SB-44-SS-0	0	<10	<10	<20	<10	<10	<20	<2,000	<2,000	<10	<10	<20	<10	<10	<10	<10	<10	<10	<20
SB-44-SS-2	2	<10	<10	<20	<10	<10	<20	<2,000	<2,000	<10	<10	<20	<10	<10	<10	<10	<10	<10	<20
SB-44-SS-2 (DUP)	2	<10	<10	<20	<10	<10	<20	<2,000	<2,000	<10	<10	<20	<10	<10	<10	<10	<10	<10	<20

Note:
USEPA RSL = United States Environmental Protection Agency Regional Screening Level for industrial soil (updated 4/2019)
DTSC SL = California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO)Human Health Risk Assessment (HHRA) Note 3 Screening Level for industrial soil (updated 4/2019)
Highlight indicates concentration exceeding screening level
Italics indicates duplicate sample
Bgs - Below ground surface
NS indicates no screening level

Table 9
VOCs and Methane in Soil Vapor (USEPA Method TO-15 and TO-3)
3701 North Pacific Place, Long Beach, CA 90806

Sample Name			2-Butanone (MEK)	1,1-Difluoroethane (LCC)	1,2-Dichloroethane	Benzene	Carbon Disulfide	Chloromethane	Ethylbenzene	m,p-Xylene	O-Xylene	Tetrachloroethene	Toluene	Methane
Industrial USEPA RSL		**Date**	**733,333**	**6,000,000**	**15.67**	**53**	**103,333**	**13,000**	**163**	**14,667**	**14,667**	**1567**	**733,333**	NA
Industrial/Commercial DTSC SL			NA	NA	NA	**14**	NA	NA	NA	NA	NA	**66.67**	**43,333**	NA
Method			TO-15 SCAN											TO-3
Unit	**Depth (bgs)**		ug/m3											µg/L
SB-3-5	5	8/21/2019	**110**	**30**	<21	<16	<32	**34**	<22	<44	<22	<34	<38	<6.56
SB-3-5REP	5	8/21/2019	**170**	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-3-10	10	8/21/2019	<60	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	**39.36**
SB-6-5	5	8/21/2019	**140**	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-6-10	10	8/21/2019	<60	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-7-5	5	8/21/2019	**190**	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-7-10	10	8/21/2019	<60	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	**24.93**
SB-12-5	5	8/21/2019	**81**	**50**	<21	<16	<32	**22**	<22	<44	<22	<34	<38	**426**
SB-12-10	10	8/21/2019	<60	<27	<21	**24**	<32	<21	<22	<44	<22	<34	<38	**26,241**
SB-15-5	5	8/20/2019	<60	**160**	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-15-10	10	8/20/2019	<60	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	**124**
SB-18-5	5	8/22/2019	**310**	**180**	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-18-5REP	5	8/22/2019	**220**	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-18-10	10	8/22/2019	**290**	**39**	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-21-5	5	8/20/2019	<60	<27	<21	**1000**	<32	**69**	**59**	**67**	<22	<34	**71**	NA
SB-24-5	5	8/21/2019	<60	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	**9.18**
SB-25-5	5	8/20/2019	**360**	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-25-5REP	5	8/20/2019	**200**	<27	<21	<16	<32	**45**	<22	<44	<22	<34	<38	<6.56
SB-27-3	3	8/20/2019	<60	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	**918**
SB-29-3	3	8/20/2019	**63**	**97**	<21	<16	<32	<21	<22	<44	<22	<34	<38	**22.31**
SB-32-5	5	8/20/2019	**170**	<27	<21	<16	<32	<21	<22	<44	<22	**49**	<38	<6.56
SB-32-10	10	8/20/2019	**130**	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-35-5	5	8/20/2019	**77**	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-35-10	10	8/20/2019	<60	<27	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56
SB-36-5	5	8/20/2019	**240**	<27	<21	<16	<32	**43**	<22	<44	<22	<34	<38	<6.56
SB-43-10	10	8/22/2019	<60	**45**	<21	**21**	**260**	<21	<22	<44	**29**	<34	<38	**7.87**
SB-43-5	5	8/22/2019	<60	**31**	<21	<16	<32	<21	<22	<44	<22	<34	<38	<6.56

ug/m3 = micrograms per cubic meter
Industrial USEPA RSL = USEPA Regional Screening Level for industrial soil, updated April, 2019.
Industrial/Commercial DTSC SL = DTSC Human And Ecological Risk Office (HERO) Note Number 3, dated April 2019.
Bold indicates a concentration greater than the laboratory reporting limit.
<X = Analyte not detected at or above the laboratory reporting limit
Orange shading indicates a concentration that exceeds both USEPA RSLs and DTSC SLs
Grey shading indicates a concentration that exceeds DTSC SLs only
Only detected analytes are presented here. For full list of analytes, see laboratory report.
Screening levels calculated using an attenuation factor of 0.03
LLC = leak detection compound.

Table 10
Metals in Groundwater (USEPA 6010B/7470A)
3701 N. Pacific Place, Long Beach, California

		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
MCL		**6**	**10**	**1,000**	**4**	**5**	**50**	**NS**	**1,300**	**15**	**NS**	**NS**	**50**	**NS**	**2**	**NS**	**NS**	**2**
Sample ID	**Date Sampled**	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Monitoring Well																		
MW-2	1/10/1996	- -	- -	- -	- -	- -	ND	- -	80	ND	- -	ND	- -	- -	- -	- -	**120**	- -
	2/17/1997	- -	- -	- -	- -	- -	ND	- -	ND	**210**	- -	ND	- -	- -	- -	- -	**200**	- -
MW-3	1/10/1996	- -	- -	- -	- -	- -	ND	- -	**75**	ND	- -	ND	- -	- -	- -	- -	**20**	- -
	2/17/1997	- -	- -	- -	- -	- -	ND	- -	ND	**280**	- -	**65**	- -	- -	- -	- -	**130**	- -
	12/19/2003	<100	**72 J**	**150**	<50	<50	<50	<50	<50	<50	**24 J**	<50	<250	**84 J**	<100	<100	**12 J**	**4.8**
	5/19/2004	<15	**15**	**290**	<3	<5	<10	<50	<50	<10	<50	<50	<25	<50	<10	<40	**66**	**160**
	12/18/2006	<50	**7.8**	**140**	<50	<50	<50	<50	**400**	<1.4	<50	<50	<50	**62**	<50	<50	<50	**0.82**
	12/3/2007	<50	<20	<50	<50	**29**	<50	<50	<50	<8.6	<50	<50	<50	<50	<50	<50	<50	**0.74**
	3/25/2008	<10	<20	**50**	<4.1	<1.9	<50	<50	<50	<8.6	<50	<50	<50	<50	<14	<50	<50	**2**
MW-4	1/10/1996	- -	- -	- -	- -	- -	ND	- -	**74**	ND	- -	ND	- -	- -	- -	- -	**40**	- -
	2/17/1997	- -	- -	- -	- -	- -	ND	- -	ND	**130**	- -	ND	- -	- -	- -	- -	**100**	- -
MW-5	5/19/2004	<15	<10	**97**	<3	<5	<10	<50	<50	**16**	<50	<50	<25	<50	<10	<40	**140**	<0.5
	12/18/2006	<50	**12**	**100**	<50	<50	<50	<50	**55**	<1.4	<50	<50	<50	<50	<50	<50	<50	<0.5
	12/3/2007	<50	<20	<50	<50	<1.8	<50	<50	<50	<8.6	<50	<50	<50	<50	<50	<50	<50	<0.5
	3/25/2008	<10	<20	**120**	<4.1	<1.9	<50	<50	<50	<8.6	<50	<50	<50	<50	<14	<50	<50	<0.5
MW-6	5/19/2004	**22**	<10	**180**	<3	<5	<10	<50	<50	<10	<50	<50	**52**	<50	<10	**59**	**180**	**12**
	12/18/2006	<50	**12**	**100**	<50	<50	<50	<50	**140**	<1.4	<50	<50	<50	<50	<50	<50	<50	**7.3**
	12/3/2007	<50	<20	<50	<50	**3.9**	<50	<50	<50	<8.6	<50	<50	<50	<50	<50	<50	<50	**5.6**
	3/25/2008	<10	<20	**110**	<4.1	<1.9	<50	<50	<50	<8.6	<50	<50	<50	<50	<14	<50	<50	**7**
MW-7	12/3/2007	<50	**210**	**1,100**	<50	<1.9	<50	<50	<50	<8.6	<50	<50	<50	<50	<50	<50	<50	<0.5
	3/25/2008	<10	**420**	**1,700**	<4.1	<1.9	<50	<50	<50	**24**	<50	<50	<50	<50	<14	<50	**74**	<0.5
	8/14/2019	<40	**478**	**1,420**	<5	<5	<10	<5	**18**	**24**	**57**	<20	<30	<5	<50	<5	<50	<0.4
Groundwater Grab Sample																		
GS-1-62	8/22/2019	<200	<50	**204**	<25	<25	<50	<25	<50	<50	**146**	<100	<150	<25	<250	<25	<250	<0.4
GS-2-60	8/20/2019	<40	**31**	**537**	<5	<5	<10	<5	<10	<10	**57**	<20	<30	<5	<50	<5	<50	<0.4
GS-3-60	8/22/2019	<200	<50	**102**	<25	<25	<50	<25	<50	<50	**174**	<100	<150	<25	<250	<25	<250	<0.4

Notes
Historic data obtained from LFR Summary of GW Conditions report (2008).
MCL - Maximum Contaminant Level
Highlight indicates concentration exceeds maximum contaminant level (MCL)
Metals analyzed using USEPA 6010B for Roux 2019 sampling.
ND = non-detect
J = deteceted below the standard reporting limit, the resulted is an estimated concentration (LFR, 22008).
- - = not available
NS indicates no screening level

Table 11
TPH in Groundwater
3701 N. Pacific Place, Long Beach, California

Sample ID	Date Sampled	TPH (C6 to C12)	TPH (C13 to C22)	TPH (C23 to C44)
		mg/L	mg/L	mg/L
Groundwater Monitoring Well				
MW-2	1/10/1996	ND for TPH and **1.4** for TRPH		
	2/17/1997	ND for TPH and TRPH		
MW-3	1/10/1996	ND for TPH and TRPH		
	2/17/1997	ND for TPH and TRPH		
	12/19/2003	<0.1	<0.1	<0.1
	5/19/2004	<0.1	<0.1	<0.1
	12/18/2006	**0.13**	<0.05	<0.1
	12/3/2007	<0.5	<0.5	<0.5
	2/25/2008	<0.5	<0.5	<0.5
MW-4	1/101996	ND for TPH and TRPH		
	2/17/1997	ND for TPH and TRPH		
MW-5	5/19/2004	<0.1	<0.1	<0.1
	12/18/2006	0.05	<0.05	<0.1
	12/3/2007	<0.5	<0.5	<0.5
	2/25/2008	<0.5	<0.5	<0.5
MW-6	5/19/2004	<0.1	<0.1	<0.1
	12/18/2006	**0.38**	<0.05	<0.1
	12/3/2007	<0.5	<0.5	<0.5
	2/25/2008	**0.93**	<0.5	<0.5
MW-7	12/3/2007	<0.5	**1.1**	<0.5
	3/25/2008	<0.5	**2.3**	<0.5
	8/14/2019	<50	**1.9**	<2
Groundwater Grab Sample				
GS-1-62	8/22/2019	**0.91**	**0.36**	<0.3
GS-2-60	8/20/2019	<0.05	**0.32**	<0.3
GS-3-60	8/22/2019	**0.063**	**0.52**	**0.31**

Notes:
Historic data obtained from LFR Summary of GW Conditions report (2008).
TPH analyzed using EPA Method 8015B
Historical samples before 2019 were analyzed for carbon chains C6-C12,
C12-C28, and C28-C40
Samples during the 1996 and 1997 events were only analyzed for total petroleum hydrocarbon range (TPH)
and total recoverable petroleum hydrocarbon range (TRPH).
ND = non-detect

Table 12
Detected VOCs in Groundwater
3701 N. Pacific Place, Long Beach, California

		Benzene	Ethylbenzene	t-Butyl alcohol (TBA)	Toluene	Xylenes (Total)
	MCL	**1**	**300**	**NS**	**150**	**1,780**
Sample ID	**Date Sampled**	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Monitoring Well						
MW-2	1/10/1996	ND	ND	- -	ND	ND
	2/17/1997	**0.6**	ND	- -	ND	ND
MW-3	1/10/1996	ND	ND	- -	**0.9**	**2.4**
	2/17/1997	**88**	**1.6**	- -	**15**	**10**
	12/19/2003	<0.5	<0.5	- -	<0.5	<0.5
	5/19/2004	<0.5	<0.5	- -	<0.5	<0.5
	12/18/2006	<0.5	<0.5	- -	<0.5	<0.5
	12/3/2007	<0.5	<0.5	- -	<0.5	<0.5
	3/25/2008	<0.5	<0.5	- -	<0.5	<0.5
MW-4	1/10/1996	<0.5	**0.5**	- -	<0.5	<0.5
	2/17/1997	<0.5	<0.5	- -	<0.5	<0.5
MW-5	5/19/2004	<0.5	<0.5	- -	<0.5	<0.5
	12/18/2006	<0.5	<0.5	- -	<0.5	<0.5
	12/3/2007	<0.5	<0.5	- -	<0.5	<0.5
	3/25/2008	<0.5	<0.5	- -	<0.5	<0.5
MW-6	5/19/2004	<0.5	<0.5	- -	<0.5	<0.5
	12/18/2006	<0.5	<0.5	- -	<0.5	<0.5
	12/3/2007	<0.5	<0.5	- -	<0.5	<0.5
	3/25/2008	<0.5	<0.5	- -	<0.5	<0.5
MW-7	12/3/2007	<0.5	<0.5	- -	<0.5	<0.5
	3/25/2008	<0.5	<0.5	- -	<0.5	<0.5
	8/14/2019	<1	<5	**32**	<5	<5
Groundwater Grab Sample						
GS-1-62	8/22/2019	**11**	**11**	<10	<5	**6.1**
GS-2-60	8/20/2019	<1	<5	<10	<5	<5
GS-3-60	8/22/2019	**6**	<5	<10	<5	<5

Notes
Historic data obtained from LFR Summary of GW Conditions report (2008).
MCL - Maximum Contaminant Level
Highlight indicates concentration exceeds maximum contaminant level (MCL)
VOCs analyzed using USEPA 8260B for Roux 2019 sampling.
ND = non-detect
NS indicates no MCL
- - = not available

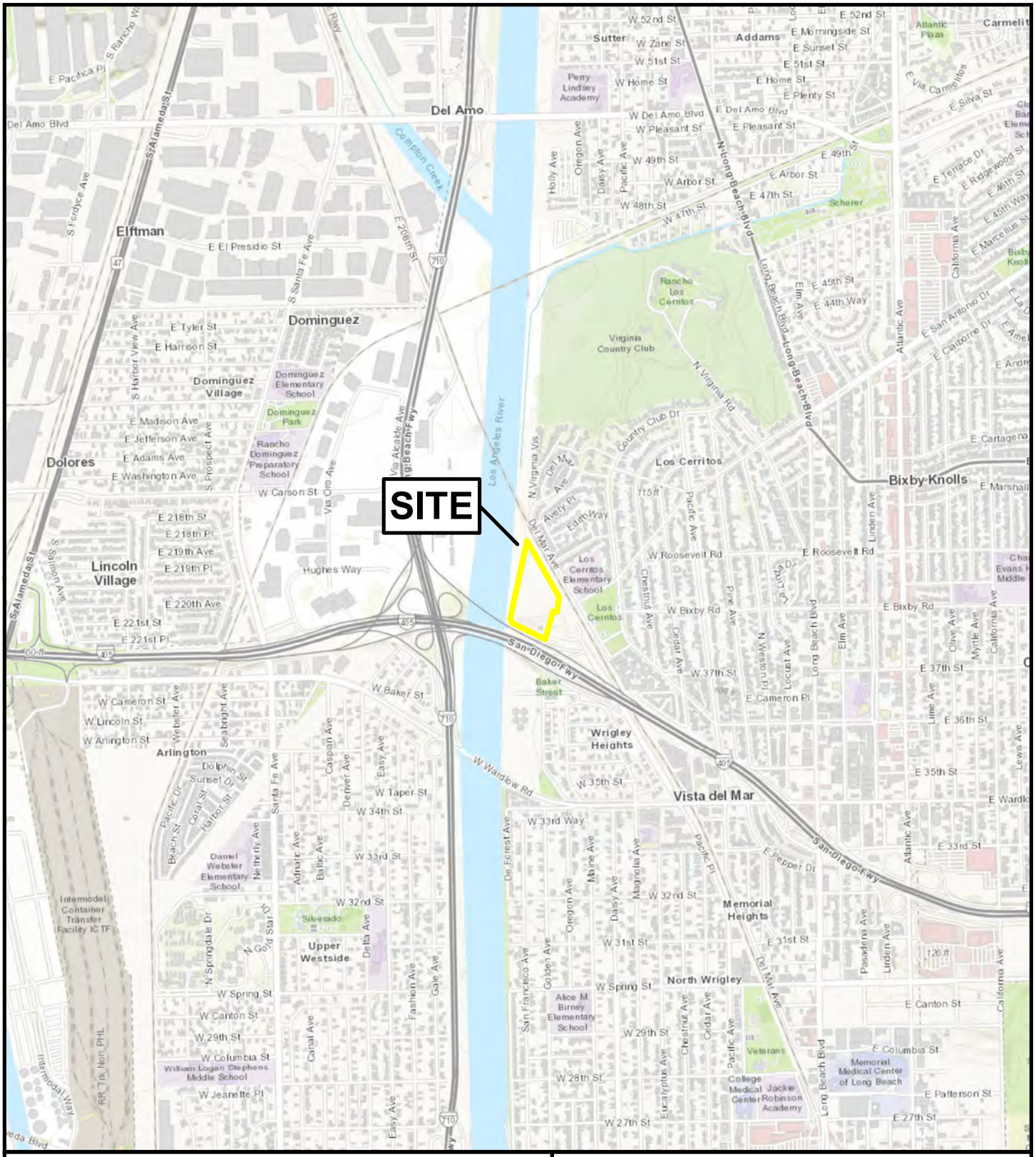
Table 13
Geochemical Parameters in Groundwater
3701 N. Pacific Place, Long Beach, California

Sample ID	Date Sampled	pH	Total Dissolved Solids (TDS)	Total Alkalinity (as CaCO3)	Bicarbonate (HCO3)	Carbonate (CO3)	Hydroxide (OH)	Specific Conductance (EC)	Chloride	Nitrate, as NO3	Sulfate
	EPA Method	**150.1**		**310.1**				**SM2510B**	**300.0**	**300.0**	**300.0**
	Units	pH Units	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	mg/L	mg/L
Groundwater Monitoring Well											
MW-2	1/10/1996	**6.46**	**10,800**	--	--	--	--	--	--	--	--
	2/17/1997	**6.76**	**8,560**	--	--	--	--	--	--	--	--
MW-3	1/101996	**6.45**	**8,970**	--	--	--	--	--	--	--	--
	2/17/1997	**6.34**	**11,800**	--	--	--	--	--	--	--	--
	12/18/2006	**6.4**	**4,710**	**590**	--	--	--	**7,740**	**3,270**	**1.74**	**107**
	2/25/2008	--	**6,200**	--	--	--	--	--	--	--	--
MW-4	1/101996	**6.65**	**2,690**	--	--	--	--	--	--	--	--
	2/17/1997	**6.78**	**2,030**	--	--	--	--	--	--	--	--
MW-5	12/18/2006	**6.9**	**900**	**520**	--	--	--	**1,700**	**240**	<0.5	**92.7**
	2/25/2008	--	**1,000**	--	--	--	--	--	--	--	--
MW-6	12/18/2006	**6.8**	**2,090**	540	--	--	--	**3,660**	**1,100**	**40.1**	**102**
	2/25/2008	--	**2,100**	--	--	--	--	--	--	--	--
MW-7	3/25/2008	--	**7,800**	--	--	--	--	--	--	--	--
	8/14/2019	**6.65**	**8,970**	**1,200**	**1,400**	<50	<50	**14,400**	**4,640**	<0.44	**2.22**
Groundwater Grab Sample											
GS-1-62	8/22/2019	**7.13**	**2,470**	**560**	**680**	<50	<50	**3,950**	**778**	**0.58**	**271**
GS-2-60	8/20/2019	**6.65**	**3,490**	**8,770**	**1,100**	<50	<50	**3,490**	**1,720**	**0.75**	**76.6**
GS-3-60	8/22/2019	**7.07**	**3,220**	**1,000**	**1,300**	<50	<50	**5,160**	**991**	**0.44**	**296**

Notes:
Historic data obtained from LFR Summary of GW Conditions report (2008).
< indicates not detcted above laboratory reporting limit indicated.
umhos/cm = microsiemens per centimeter
CaCO3 = calcium carbonate
- - = not available

FIGURES

1. Site Location Map
2. Existing Site Plan
3. Conceptual Development Site Plan
4. Site Plan with Supplemental Investigation Locations
5. Soil Cover Thickness Isopach
6. Interpreted Impacted Soil Surface Elevations
7. Soil Results – TPH and Lead Exceedances
8. Soil Results – Arsenic
9. Soil Vapor Results – Methane and Benzene
10. Select Groundwater Results
11. Areas of Elevated Concentrations (AECs) in Soil



LOCATION OF DETAIL

CA

2,000 0 2,000 Feet

N

Title:

SITE LOCATION MAP

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

Prepared For:

ARTESIA ACQUISITION COMPANY, LLC

ROUX

Compiled by: TSW	Date: 8/12/2019	FIGURE	
Prepared by: TSW	Scale: 1:24,000	1	
Project Mgr: JP	Office: LA		
File No: F(AP)	Project: 3370.0001L000		

S:\Clients\3370.0001L000 InSite Group Long Beach MHE\09Graphics\GIS\Figure 1 - Site Location Map.mxd

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\023_3370.0001L_SITE PLAN EXISTING.DWG



LEGEND

- PROJECT BOUNDARY
- MONITORING WELL LOCATION
- OIL WELL LOCATION

150' 0 150'

Title:

EXISTING SITE PLAN

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

Prepared for

ARTESIA ACQUISITION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	2
Project Mgr: J.P.	Project: 3370.0001L000	
File: 023_3370.0001L_SITE PLAN EXISTING.DWG		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\024_3370.0001L_CONCEPTUAL DEVELOPMENT SITE PLAN.DWG

BUILDING AREA	
PROPOSED BUILDING (GROSS SQUARE FOOTAGE)	
OFFICE:	900 S.F.
1ST FLOOR STORAGE:	47,688 S.F.
2ND FLOOR STORAGE:	48,588 S.F.
3RD FLOOR STORAGE:	48,588 S.F.
SUBTOTAL:	145,764 S.F.
RV STORAGE PARKING	
COVERED RV PARKING:	173 SP
REGULAR RV PARKING:	405 SP
TOTAL:	578 SP

RESIDENCES

ELEMENTARY SCHOOL

PACIFIC ELECTRIC RAILROAD

R.V. PARKING

CAR WASH

3-STORY SELF-STORAGE

NORTH PACIFIC PLACE

LOS ANGELES RIVER

SAN DIEGO FREEWAY

LEGEND

PROJECT BOUNDARY

150' 0 150'

Title:

CONCEPTUAL DEVELOPMENT SITE PLAN

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

Prepared for

ARTESIA ACQUISITION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	3
Project Mgr: J.P.	Project: 3370.0001L000	
File: 024_3370.0001L_CONCEPTUAL DEVELOPMENT SITE PLAN.DWG		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\014_3370.0001L_SITE PLAN.DWG



LEGEND

- PROJECT BOUNDARY
- GRAB SAMPLE LOCATION
- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- SOIL VAPOR LOCATION
- OIL WELL LOCATION

150' 0 150'

Title:

SITE PLAN WITH SUPPLEMENTAL INVESTIGATION LOCATIONS

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

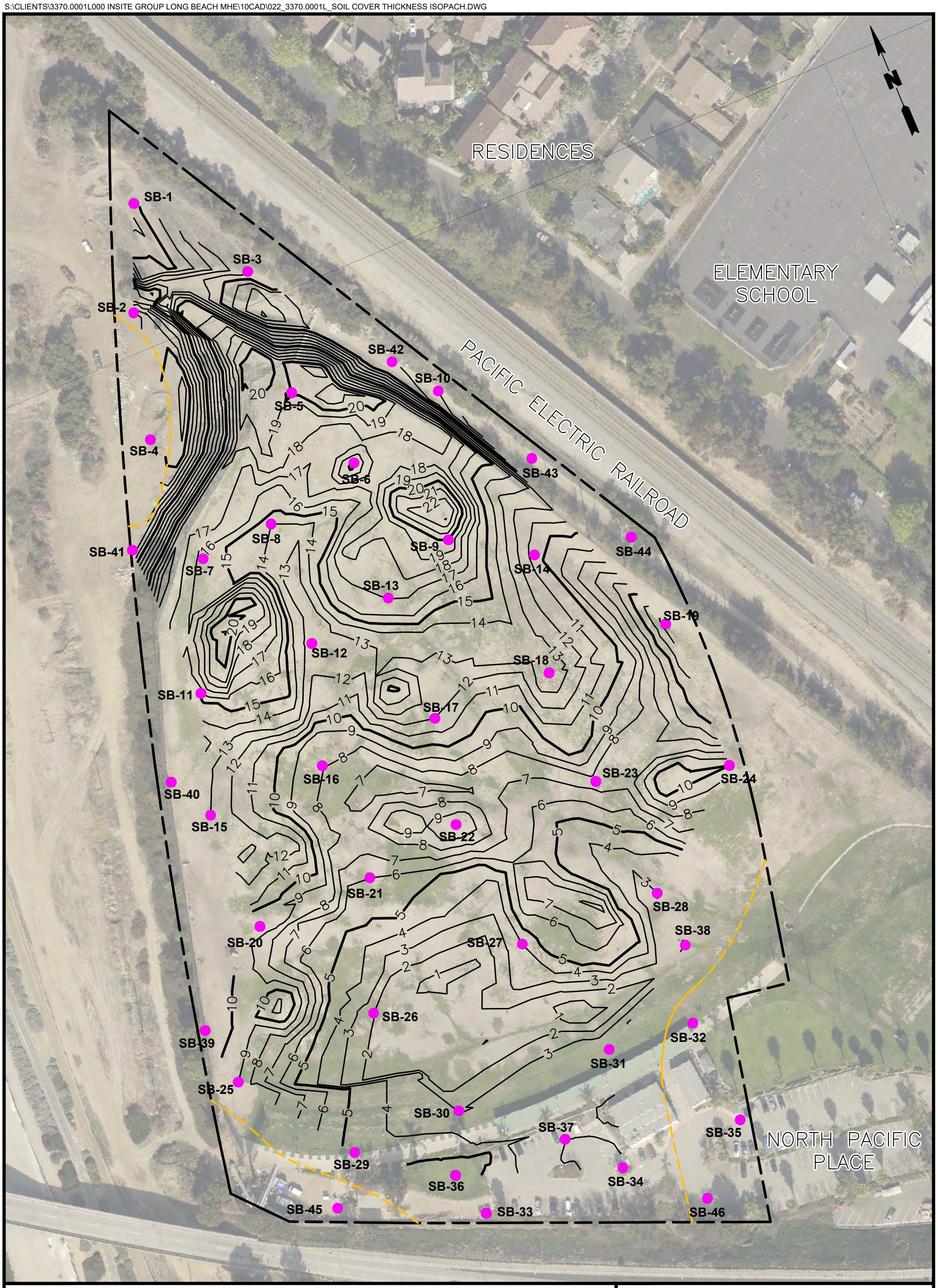
Prepared for

ARTESIA ACQUISITION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	4
Project Mgr: J.P.	Project: 3370.0001L000	
File: 014_3370.0001L_SITE PLAN.DWG		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\022_3370.0001L_SOIL COVER THICKNESS ISOPACH.DWG



LEGEND

- PROJECT BOUNDARY
- BORING LOCATION
- APPROX. EXTENT OF IMPACTED SOIL (DASHED, WHERE ASSUMED)

NOTE:
1. SOIL COVER THICKNESS SURFACE CREATED USING THE TOPOGRAPHY FROM TRUXAW AND OBSERVED IMPACTED SOIL DEPTHS.

100' 0 100'

Title:

SOIL COVER THICKNESS ISOPACH

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

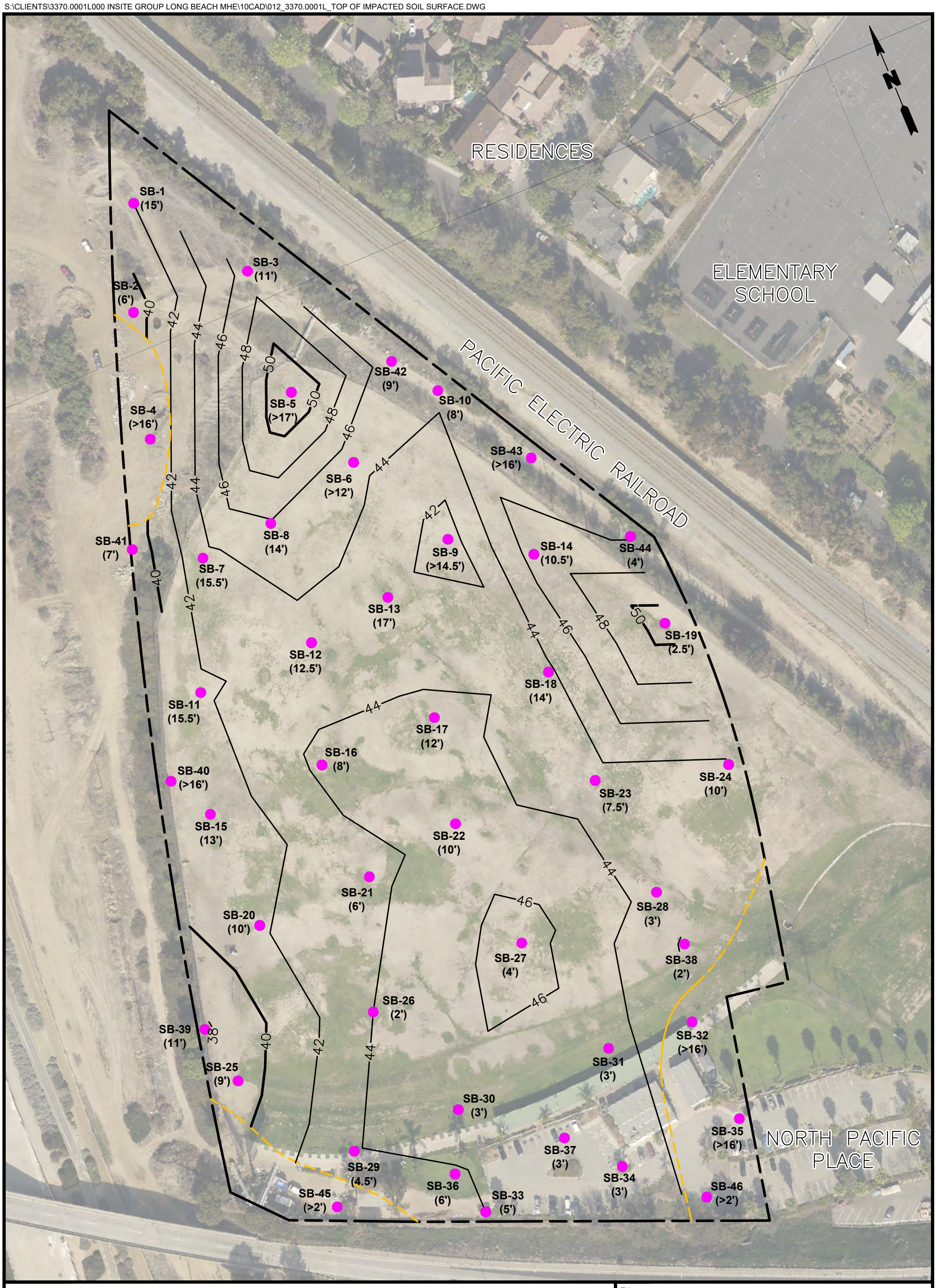
Prepared for

ARTESIA ACQUISITION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	5
Project Mgr: J.P.	Project: 3370.0001L000	
File: 022_3370.0001L_SOIL COVER THICKNESS ISOPACH.DWG		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\012_3370.0001L_TOP OF IMPACTED SOIL SURFACE.DWG



LEGEND

- PROJECT BOUNDARY
- BORING LOCATION
- (2') IMPACTED SOIL DEPTH
- APPROX. EXTENT OF IMPACTED SOIL (DASHED, WHERE ASSUMED)

NOTE:
1. TOP OF IMPACTED SOIL SURFACE CREATED BASED ON SURVEYED SOIL BORING ELEVATIONS AND IMPACTED SOIL DEPTH.
2. IMPACTED SOIL DEPTH FOR SOIL BORINGS; SB–5, SB–6, SB–9; WERE ASSUMED BASED ON ADJACENT BORINGS.

100' 0 100'

Title:

INTERPRETED IMPACTED SOIL SURFACE ELEVATIONS

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

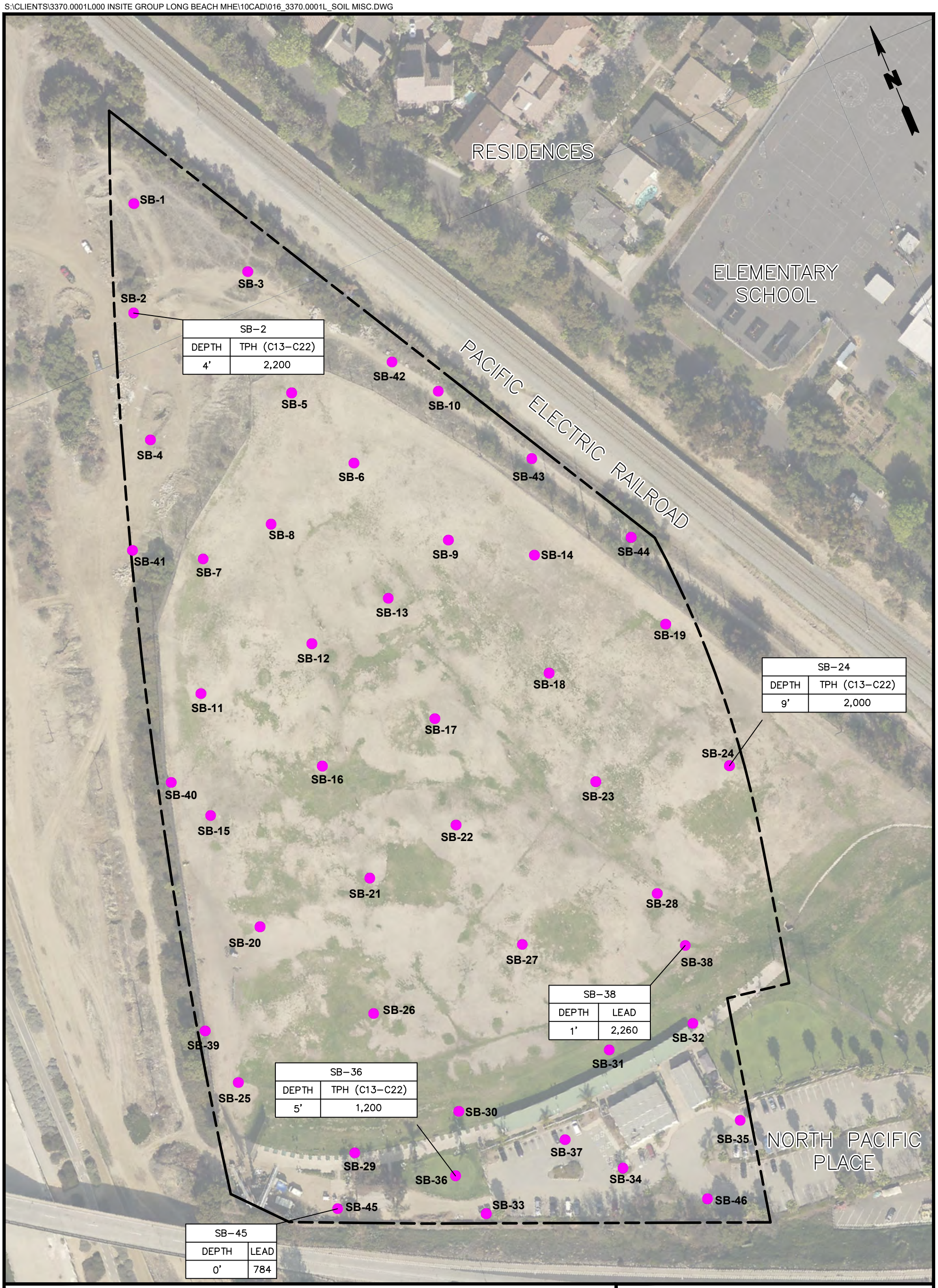
Prepared for

ARTESIA ACQUISITION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	6
Project Mgr: J.P.	Project: 3370.0001L000	
File: 012_3370.0001L_TOP OF IMPACTED SOIL SURFACE.DWG		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\016_3370.0001L_SOIL MISC.DWG



LEGEND

PROJECT BOUNDARY

BORING LOCATION

NOTE:

1. FIGURE INCLUDES DETECTIONS ABOVE SFRWQCB SOIL SL, USEPA INDUSTRIAL SOIL RSLs, AND/OR DTSC COMMERCIAL/INDUSTRIAL SOIL SLs.
2. CONCENTRATIONS ARE IN MILLIGRAMS PER KILOGRAM (MG/KG)
3. BGS = BELOW GROUND SURFACE

100’ 0 100’

Title:

SOIL RESULTS - TPH AND LEAD EXCEEDANCES

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

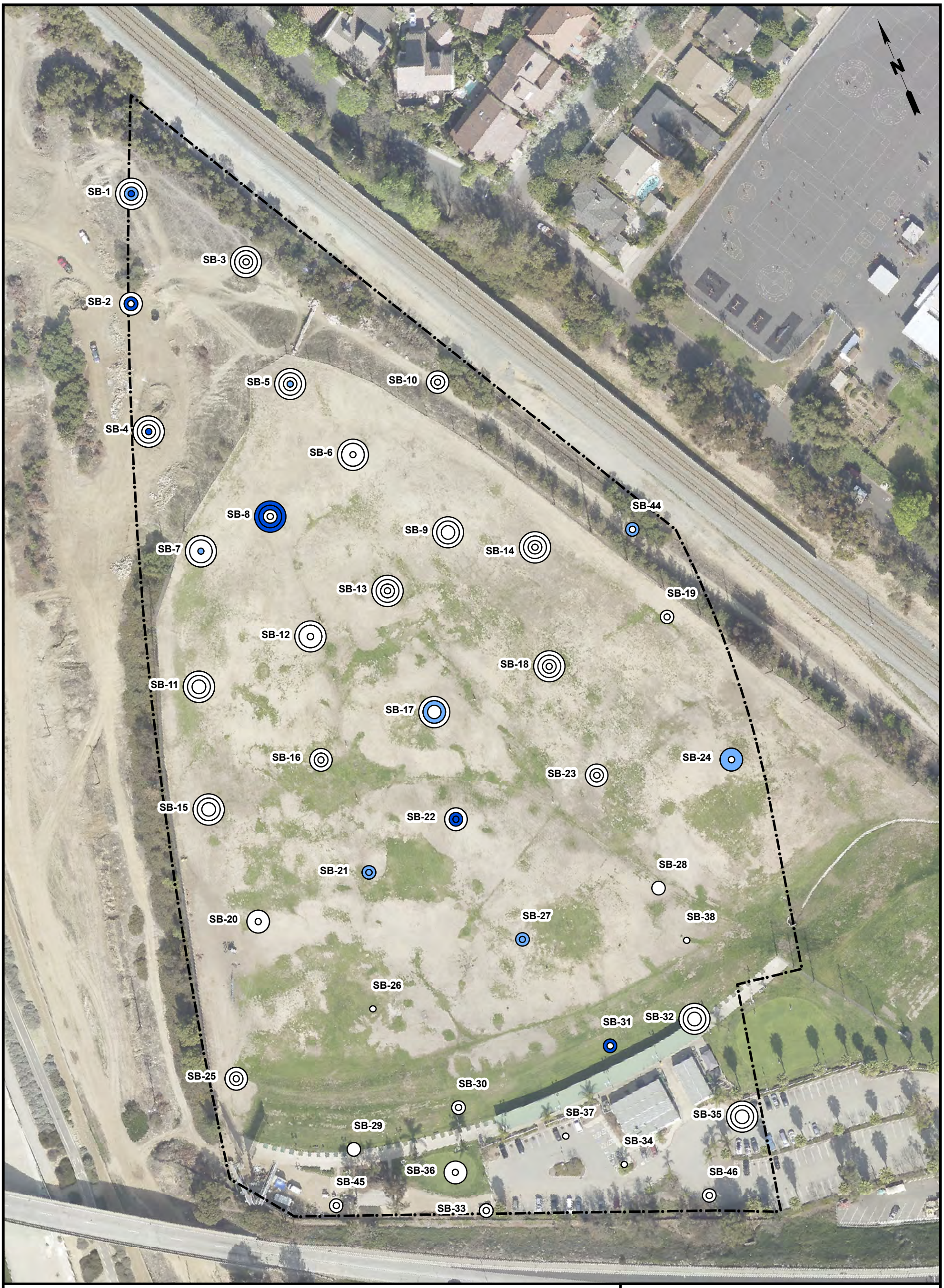
Prepared for

ARTESIA ACQUISTION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	7
Project Mgr: J.P.	Project: 3370.0001L000	
File: 016_3370.0001L_SOIL MISC.DWG		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\09GRAPHICS\GIS\FIGURE 8 - ARSENIC.MXD



LEGEND

Depth (ft)

- 0 - 1 ft
- 2 - 4 ft
- 5 - 9 ft
- 10 - 16 ft

Arsenic (mg/kg)

- x < 12
- 12 < x < 17
- 17 < x

Site Boundary

100 0 100’

Title:

SOIL RESULTS - ARSENIC

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

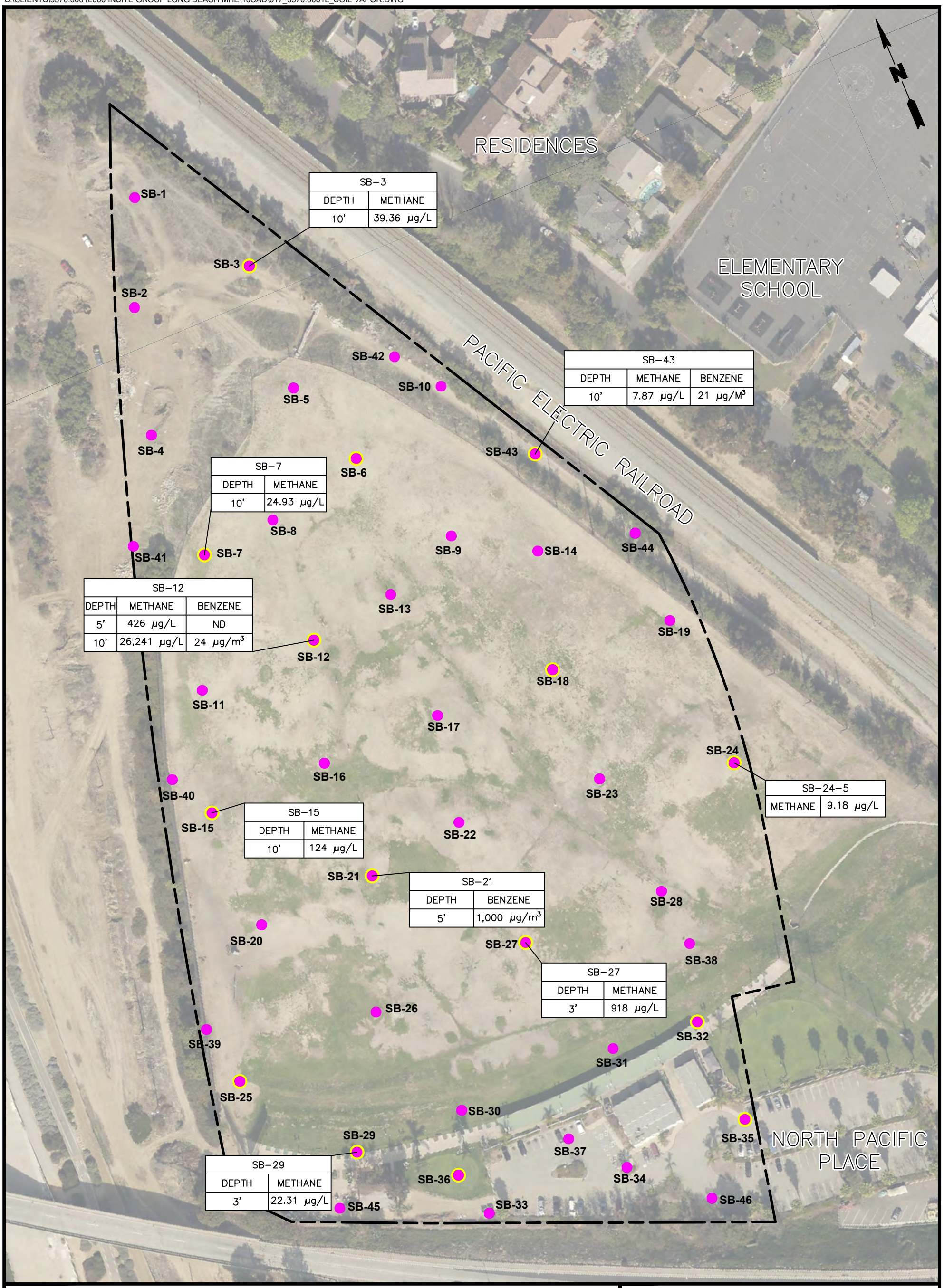
Prepared for:

ARTESIA ACQUISITION COMPANY, LLC

ROUX

Compiled by: H.H.	Date: 10/11/19	FIGURE
Prepared by: H.H.	Scale: AS SHOWN	8
Project Mgr: J.P.	Project: 3370.0001L000	
File: Figure 8 - Arsenic.mxd		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\017_3370.0001L_SOIL VAPOR.DWG



LEGEND

- PROJECT BOUNDARY
- BORING LOCATION
- SOIL VAPOR LOCATION

NOTE:

1. FIGURE INCLUDES BENZENE DETECTIONS ABOVE USEPA INDUSTRIAL RSLs AND/OR DTSC INDUSTRIAL/COMMERCIAL SLs AND METHANE DETECTIONS ABOVE LABORATORY REPORTING LIMITS. NO OTHER VOCs WERE DETECTED.
2. ND = NOT DETECTED ABOVE LABORATORY REPORTING LIMITS
3. µg/m^3 = MICROGRAMS PER CUBIC METER
4. µg/L = MICROGRAMS PER LITER

100' 0 100'

Title:

SOIL VAPOR RESULTS - METHANE AND BENZENE

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

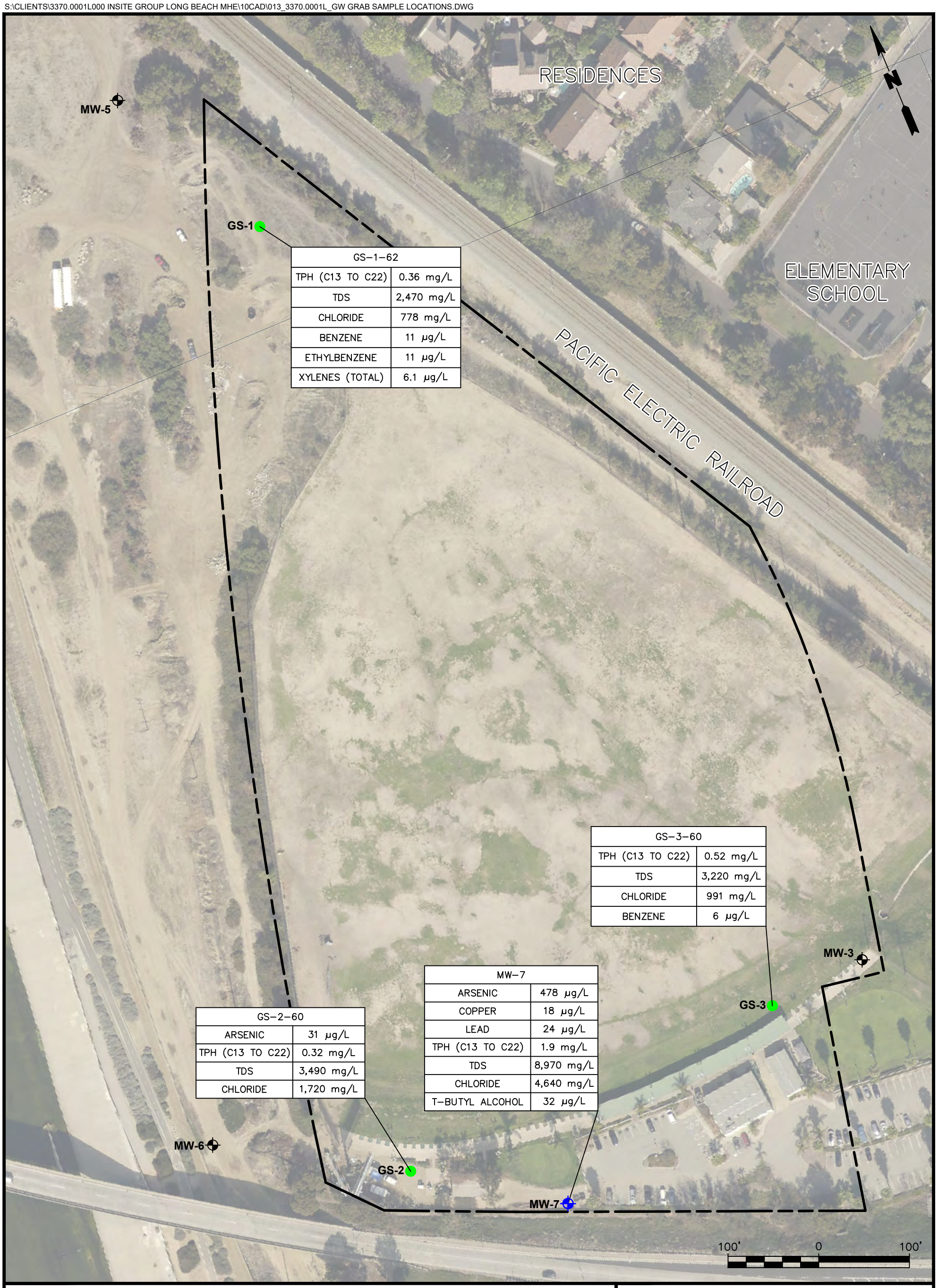
Prepared for

ARTESIA ACQUISITION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	9
Project Mgr: J.P.	Project: 3370.0001L000	
File: 017_3370.0001L_SOIL VAPOR.DWG		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\013_3370.0001L_GW GRAB SAMPLE LOCATIONS.DWG



LEGEND

- PROJECT BOUNDARY
- GRAB SAMPLE LOCATION
- MONITORING WELL LOCATION
- MONITORING WELL LOCATION – UNABLE TO BE SAMPLED
- GS-2-60 — BORING IDENTIFICATION
- DEPTH OF SAMPLE (FEET BGS)

NOTE:

1. FIGURE INCLUDES ARSENIC, COPPER, LEAD AND BENZENE DETECTIONS ABOVE MCLs AND TPH (C13 TO C22), ETHYLBENZENE, T–BUTYL ALCOHOL, XYLENES AND CHLORIDE CONCENTRATIONS DETECTIONS ABOVE LABORATORY REPORTING LIMITS.
2. MW–3, MW–5, MW–6 COULD NOT BE SAMPLED.
3. MW–5 AND MW–6 LOCATIONS ARE APPROXIMATE.
4. mg/L = MILLIGRAMS PER LITER
5. µg/L = MICROGRAMS PER LITER

Title:

SELECT GROUNDWATER RESULTS

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

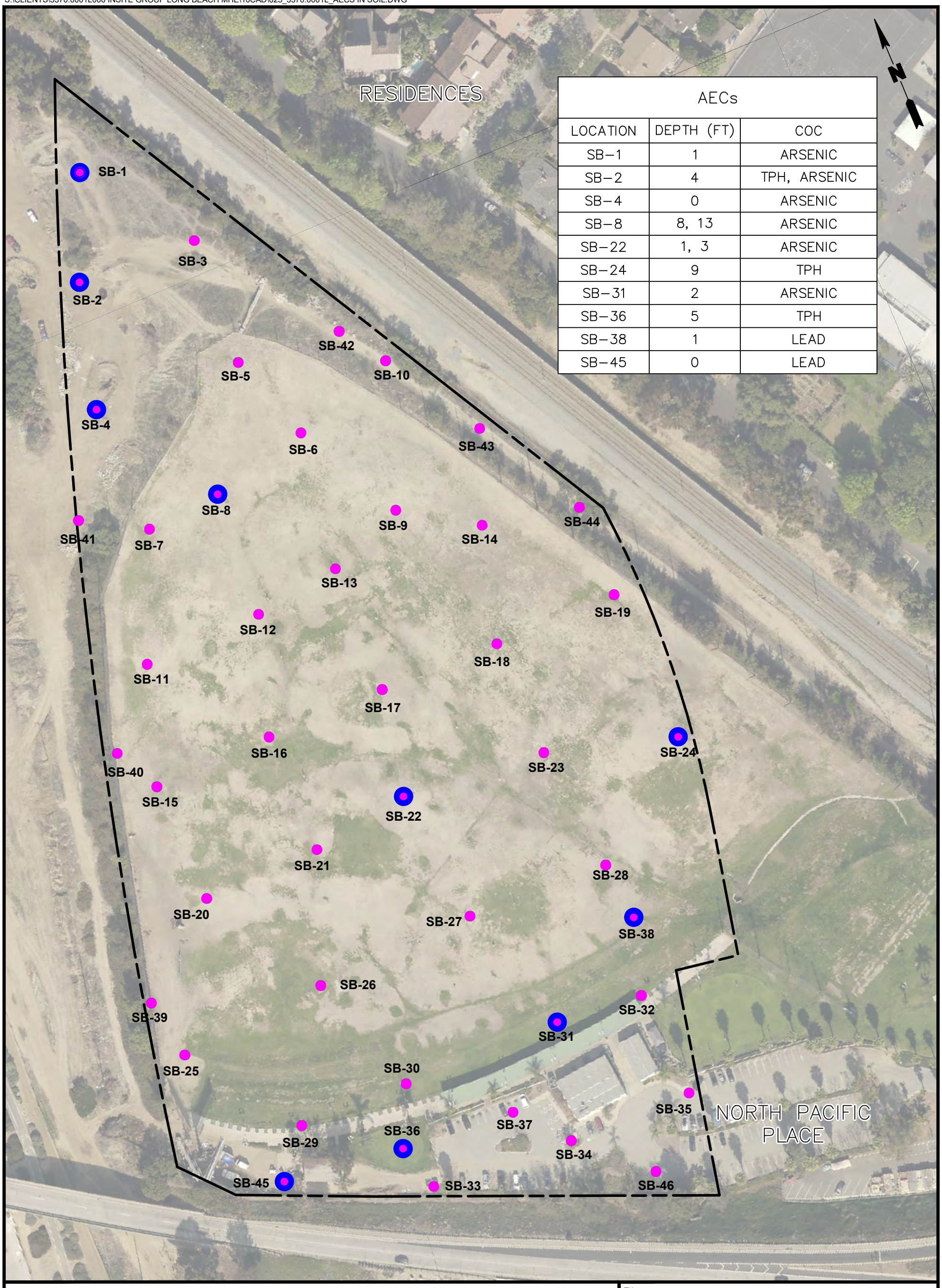
Prepared for

ARTESIA ACQUISTION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	10
Project Mgr: J.P.	Project: 3370.0001L000	
File: 013_3370.0001L_GW GRAB SAMPLE LOCATIONS.DWG		

S:\CLIENTS\3370.0001L000 INSITE GROUP LONG BEACH MHE\10CAD\025_3370.0001L_AECS IN SOIL.DWG



AECs		
LOCATION	DEPTH (FT)	COC
SB-1	1	ARSENIC
SB-2	4	TPH, ARSENIC
SB-4	0	ARSENIC
SB-8	8, 13	ARSENIC
SB-22	1, 3	ARSENIC
SB-24	9	TPH
SB-31	2	ARSENIC
SB-36	5	TPH
SB-38	1	LEAD
SB-45	0	LEAD

LEGEND

PROJECT BOUNDARY

SOIL BORING LOCATION

AECs

NOTE:
1. AECs = AREAS OF ELEVATED CONCENTRATIONS

150' 0 150'

Title:

AREAS OF ELEVATED CONCENTRATIONS (AECs) IN SOIL

3701 NORTH PACIFIC PLACE
LONG BEACH, CALIFORNIA 90806

Prepared for

ARTESIA AQUISITION COMPANY, LLC

ROUX

Compiled by: A.T.	Date: 10OCT2019	FIGURE
Prepared by: A.T.	Scale: AS SHOWN	11
Project Mgr: J.P.	Project: 3370.0001L000	
File: 025_3370.0001L_AECS IN SOIL.DWG		

APPENDICES

A. LFR Reports
B. Health and Safety Plan (HASP)
C. Soil Boring Permit
D. Boring Logs
E. Field Records
F. Laboratory Data Reports
G. Technical Memo for Development of Soil Arsenic Action Level
H. Screening Level Human Health Risk Evaluation

APPENDIX A

LFR Reports

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

July 9, 2008 002-10231-04

Mr. Greg Holmes
California Department of Toxic Substances Control
5796 Corporate Ave
Cypress, California 90603

Subject: Summary of Groundwater Conditions, Request for Clarification of Expectations of Groundwater Consideration for the RI and FS for the Former Oil Operators North Site (Long Beach Industrial Park) 3701 Pacific Place, Long Beach, California

Dear Mr. Holmes:

On behalf of CRG Properties Ltd. (CRG), LFR Inc. (LFR) has prepared this summary of groundwater conditions at the former Oil Operators, Inc. (OOI) North Site located at 3701 Pacific Place, Long Beach, California ("the Site"). Based on our June 4, 2008 meeting, it was decided that LFR would prepare this summary for the joint consideration of DTSC and the Los Angeles Regional Water Quality Control Board. At your discretion, a meeting was discussed for a brief presentation of data by LFR for both agencies. The primary purpose of this effort is to gain insight and direction on the overall intent of Cal-EPA to pursue groundwater issues at the Site. Since our last meeting, we have found additional data that further reinforce our overall interpretation of the region's salt impacted groundwater. References are attached as Appendix A.

SITE BACKGROUND

The approximately 18-acre Site (Figure 1) was formerly owned by OOI, a non-profit cooperative organization that functioned as a central brine water treatment facility serving member oil companies (AEMC, 1991). Beginning in 1926, oil brine (drilling mud and other waste materials generated from oil production operations) was pumped to sumps on the OOI property, of which the Site was the northernmost portion. Most of the Site was utilized as a treatment sump. After the water evaporated or infiltrated the aquifer from the sumps, the remaining sludge was either drummed or left in the treatment sumps. The site was divided into two portions referred to as the north site (Site) that we are writing about and have interest in, and the south site with the construction of the 405 freeway. We understand that the south site is being remediated in cooperation with the City of Long Beach. When a water treatment plant, including evaporation ponds, was built on the south site in the mid-1950s, evaporation activities ceased at the Site sumps.

A partial cleanup/treatment operation was conducted at the Site in the 1970s, which involved the removal, treatment, and replacement of a portion of the sump materials (ETC, 1984). However, detailed records of the treatment operation are not available.

714.444.0111 m
714.444.0117 f
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324
Offices Nationwide
www.lfr.com

Additional investigations were conducted in the 1980s, culminating in a land farming operation that was begun in 1989 (AEMC, 1991) under the direction of the RWQCB. Details of the investigations conducted at this time are included in Section 2.1 of the RI. The land farming operation was halted when public complaints were received by the South Coast Air Quality Management District (SCAQMD).

Under the direction of the RWQCB and in connection to the land farming effort, a groundwater monitoring program for the Site and southern adjacent property was implemented in 1987, according to Monitoring and Reporting Program No. 6775 for OOI (Land Treatment File No. 86-66). According to records available to LFR, annual monitoring at three groundwater wells (MW-2, MW-3, and MW-4) was ongoing as of 1997 (OOI, 1997).

The Site was capped with an unengineered fill, and is currently being used as a golf learning center. Improvements include a paved parking lot, several structures, and a large grassy area.

On behalf of CRG, LFR submitted a Voluntary Cleanup Program (VCP) application for the Site to the DTSC on March 24, 2005. Approval of the VCP application was granted on December 20, 2005.

LFR prepared a Characterization Data Report dated April 4, 2006 to describe current and historical investigation and remediation activities at the Site. In a letter dated July 12, 2006, the DTSC raised numerous issues that needed to be addressed as a remedial investigation prior to approval of the report. In general, the DTSC believed that data gaps existed, that the Site had not been fully characterized, and that the Characterization Data Report should be used in conjunction with further research and investigation to develop a remedial investigation workplan. The DTSC also made 19 specific comments to the Characterization Data Report. The DTSC's Human and Ecological Risk Division (HERD) also provided comments to the Characterization Data Report in a memorandum dated July 5, 2006.

LFR's responses to DTSC comments, along with an historical review of the Site, were submitted on March 12, 2007. The historical review included historical aerial photographs, topographic maps, and a review of California Department of Oil, Gas, and Geothermal Resources records.

On August 29, 2007, in conjunction with various meetings and other communications, LFR submitted a remedial investigation workplan for the Site that was subsequently approved by the DTSC on September 6, 2007. LFR submitted a Remedial Investigation Report for the Site to the DTSC on March 4, 2008. As part of the investigation, groundwater samples were collected from four on-site groundwater monitoring wells in December 2007 and analyzed for total petroleum hydrocarbons with carbon chain identification (TPH-cc) by EPA Method 8015 Modified, volatile organic compounds (VOCs) by EPA Method 8260B, Title 22 metals by EPA Method 6010, and semivolatile organic compounds (SVOCs) by EPA Method 8270C.

In March 2008, LFR collected groundwater samples from the four on-site monitoring wells for TPH-cc, VOCs, Title 22 metals, SVOCs, and for total dissolved solids (TDS).

HYDROGEOLOGY

The Site lies within the southern portion of the Coastal Plain of Los Angeles County, which gently slopes down to the south-southwest. The Site is located within the West Coast Basin, although it is adjacent to the boundary of the Central and West Coast Basins. The Los Angeles River is located along the western boundary of the Site and flows southward, where it discharges into the Pacific Ocean at San Pedro Bay. The Site is located along the Newport Inglewood Fault Zone (NIFZ), which forms the boundary between the Central and West Coast subbasins and acts as partial barrier to groundwater movement in the area. The NIFZ offsets, thins, and folds many of the aquifers. Due to the proximity of the Site to the NIFZ, aquifer depths, thicknesses, and potential for interconnections may vary significantly across the Site.

Named aquifers beneath the Site in order of increasing depth are the Gaspur, Gage, Lynwood, Silverado, and Sunnyside (California Department of Water Resources [CDWR] 1961). The Lakewood Formation contains the Gaspur and Gage aquifers, and the lower aquifers are in the San Pedro Formation.

The Bellflower aquitard immediately underlies the Site at approximately 5 to 50 feet bgs. Shallow groundwater was encountered at 8 feet bgs at one boring location (GB-4) during soil sampling activities in 1986. This was believed to be a localized perched condition because native sands at greater depths were not saturated and no other borings on site encountered perched groundwater.

The uppermost portion of the Lakewood Formation is designated as the Gaspur aquifer, which is present beneath the Site from approximately 50 to 70 feet bgs as sand and gravel. The Gaspur aquifer is believed to be the water-bearing zone encountered during the well installation by LFR and subsequently sampled and analyzed. On December 16, 2007, groundwater was found beneath the Site from 32.6 to 49.32 feet bgs, with a shallow gradient flowing in a southerly direction.

In the vicinity of the subject property, the Gage aquifer has a base at approximately 180 feet bgs and is approximately 35 feet thick. Deposits in this aquifer vary from silty sand to minor gravel (CDWR, 1961). Groundwater in both aquifers of the Lakewood Formation has been reported to be of inferior chemical quality as a result of elevated salt content from salt water intrusion.

The lower Pleistocene San Pedro Formation unconformably underlies the Lakewood Formation and is known to contain numerous aquifers of varying quality; however, the deep Silverado aquifer is the only significant water-producing zone. The Lynwood aquifer has a base at approximately 600 feet bgs and is approximately 400 feet in thickness. In this location, the Silverado aquifer joins the Lynwood aquifer at approximately 600 feet bgs and continues to over 1,000 feet bgs. The City of Long Beach obtains groundwater from more than 1,000 feet bgs within the Silverado aquifer.

Groundwater beneath the Site is considered of beneficial use by the RWQCB (AEMC, 1991). However, the regional groundwater is highly degraded due to salt water intrusion and industrial waste disposal (EMCON, 1981). The Site lies within an area of poor groundwater quality, at least in part due to historical oil and gas production activities in the site vicinity (Jaykim, 1986). Salts released during the production of oil appear to have degraded the regional groundwater to be non-potable, with TDS concentrations exceeding State Water Resources Control Board (SWRCB) Resolution 88-63 of 3,000 mg/L.

According to the hydrologic records maintained by the County of Los Angeles Department of Public Works (LADPW), groundwater well 896E is located approximately 0.5 mile north and upgradient of the Site. The well is inactive, and the last depth to water measurement was recorded at 81.2 feet bgs on May 6, 1996. Groundwater well 897KK, located approximately 50 feet southwest and cross-gradient of the Site, was destroyed in 1999. The last depth to water measurement was recorded at 50.4 feet bgs on April 19, 1995. Another groundwater well, 906D, is located approximately 0.75 mile northeast and cross-gradient of the Site at the Virginia Country Club. The groundwater is listed has having no reported use, and the most recent depth to groundwater was recorded at 112.5 feet bgs on June 16, 2007. Approximately 1 mile north and upgradient of the Site are two active wells, 906A and 906E. The listed usage for 906A is domestic and stock supply; 906E is used for irrigation. The most recent depth to water measurement for 906A was 69.1 feet bgs on April 30, 2006. The most recent depth to water measurement for 906E was 70.7 feet bgs on October 19, 2005 (LADPW, 2008).

So, while some local wells exist and are used for monitoring and agriculture uses, to our knowledge none are used for potable purposes.

GROUNDWATER MONITORING AT THE SITE BY OTHERS (1987 – 1997)

In a letter from the RWQCB to OOI dated May 5, 1987, approval was given for waste discharge requirements (Order No. 87-54) for the Oil Operators land treatment at the Site (File No. 86-66), effective April 27, 1987. This included a requirement for monthly groundwater elevation measurement and quarterly groundwater quality monitoring. LFR has reviewed the following documents relating to groundwater monitoring at the Site:

- **Letters dated November 7, 1989 and October 24, 1990** requesting that quarterly groundwater monitoring as required by RWQCB Order No. 87-54 be changed to annual monitoring, as monitoring results did not show variations from previous test results.

- **1995 Groundwater Monitoring Report for Oil Operators North Site dated February 1, 1996, prepared by Jack K. Bryant Engineers (JB)**. This was an annual report that presented the results of monitoring and sampling of wells MW-2, MW-3, and MW-4 that took place on January 10, 1996 (well locations are shown on

Figure 2). Groundwater elevations at the time ranged from 39.3 feet bgs (MW-4) to 50.6 feet bgs (MW-2). Analytical results included the following:

- The pH of the monitoring wells ranged from 6.45 to 6.65 units.
- Concentrations of TDS ranged from 2,690 milligrams per liter (mg/l) (MW-4) to 10,800 mg/l (MW-2).
- TRPH was detected in well MW-2 at a concentration of 1,400 µg/l.
- TPH was not detected in any of the monitoring wells.
- Ethylbenzene and total xylenes were detected in MW-3 at concentrations of 0.9 µg/l and 2.4 µg/l, respectively. Toluene was detected in monitoring well MW-4 at a concentration of 0.5 µg/l.
- Lead, chromium, and nickel were not detected in any of the monitoring wells. Zinc was detected at concentrations ranging from 20 µg/l (MW-3) to 120 µg/l (MW-2). Copper was detected at concentrations ranging from 74 µg/l (MW-4) to 80 µg/l (MW-2).

- **RWQCB File Number 86-66, Annual Groundwater Monitoring Report 1996, for Oil Operators North Site, Pacific Place, Long Beach, CA dated March 17, 1997, prepared by JB.** Monitoring and sampling of wells MW-2, MW-3, and MW-4 took place on February 17, 18, and 19, 1997. The following results were reported:

  - Groundwater depths ranged from 42.43 feet bgs (MW-4) to 61.95 feet bgs (MW-2). Increases in groundwater depth were attributed to grading and other earthmoving activities at the Site.
  - The pH ranged between 6.34 and 6.78.
  - TDS concentrations ranged from 2,030 to 11,800 mg/l.
  - TRPH and TPH were not detected in any of the wells.
  - Benzene was detected in two wells (MW-2 and MW-3) at concentrations of 0.6 and 88 µg/l, respectively. Toluene, ethylbenzene, and xylenes were detected in well MW-3 at concentrations ranging from 1.6 to 15 µg/l.
  - Zinc was detected at concentrations ranging from 100 µg/l (MW-4) to 200 µg/l (MW-2); lead was detected at concentrations ranging from 130 µg/l (MW-4) to 280 µg/l (MW-3); and nickel was detected in MW-3 at a concentration of 65 µg/l.

No other quarterly or annual groundwater monitoring reports were available for review. It is unclear whether additional groundwater sampling was conducted at the Site. LFR believes that the monitoring was associated with the land farming efforts, and as they had stopped, so did the monitoring.

GROUNDWATER MONITORING AT THE SITE BY LFR

November 2003 and May 2004

Under the direction of and in cooperation with the DTSC, analytical results collected from MW-3 in November 2003 and from MW-3, MW-5, and MW-6 in May 2004 are included in Tables 1 through 5 and summarized below.

Metals were analyzed using EPA Method 6010B and 7470A. Nine metals were detected above laboratory reporting limits:

- Antimony (22 µg/l at MW-6)
- Arsenic (72 µg/l and 15 µg/l in MW-3 in November 2003 and May 2004, respectively)
- Barium (ranging from 97 µg/l [MW-5] to 290 µg/l [MW-3])
- Lead (16 µg/l in MW-5)
- Mercury (4.8 and 160 µg/l in MW-3 in November 2003 and May 2004, respectively, and 12 µg/l in MW-6)
- Molybdenum (24 µg/l in MW-3)
- Selenium (52 µg/l in MW-6)
- Silver (84 µg/l in MW-3)
- Vanadium (59 µg/l in MW-6)

California MCLs (per CCR Title 22, September 12, 2003) were exceeded for five of these metals:

- Antimony at 22 µg/l in MW-6 exceeded the MCL of 6 µg/l
- Arsenic at 72 µg/l and 15 µg/l in MW-3 in 2003 and 2004 exceeded the MCL of 10 µg/l
- Mercury at 12 µg/l in MW-6 and at 4.8 µg/l and 160 µg/l in MW-3 exceeded the MCL of 2 µg/l
- Lead at 16 µg/l in MW-5 exceeded the MCL of 15 µg/l
- Selenium at 52 µg/l in MW-6 exceeded the MCL of 50 µg/l
- Vanadium, an unregulated chemical requiring monitoring, and detected at 59 µg/l in MW-6, exceeded its action level of 50 µg/l

TPH was not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

VOCs were not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

SVOCs were not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

December 2006

Analytical results collected from MW-3, MW-5, and MW-6 in December 2006 are included in Tables 1 through 5 and summarized below.

Metals were analyzed using EPA Methods 6010B and 7470A. Seven metals were detected at concentrations above laboratory reporting limits:

- barium (ranging from 100 µg/l [MW-5 and MW-6] to 140 µg/l [MW-3])
- calcium (ranging from 3,200 µg/l [MW-5] to 5,200 µg/l [MW-3])
- copper (ranging from 55 µg/l [MW-5] to 400 µg/l [MW-3])
- magnesium (ranging from 750 µg/l [MW-5] to 2,100 µg/l [MW-3])
- mercury (0.82 µg/l in MW-3 and 7.3 µg/l in MW-6)
- silver (62 µg/l in MW-3)
- sodium (ranging from 5,100 µg/l [MW-5] to 24,000 µg/l [MW-3]).

Arsenic was detected above the laboratory method detection limit (MDL) in MW-3 at 7.8 µg/l and at 12 µg/l in both MW-5 and MW-6.

California MCLs (per CCR Title 22, September 12, 2003) were exceeded for mercury (7.3 µg/l in MW-6); the MCL for mercury is listed at 2 µg/l.

TPH was not detected at concentrations above laboratory reporting limits in the groundwater samples collected at the Site, with the exception of TPH gasoline range organics (C_6-C_{12}). Concentrations of TPH (C_6-C_{12}) ranged from 0.05 µg/l in MW-5 to 0.38 µg/l in MW-6.

VOCs were not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

SVOCs were not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

EC was detected at concentrations ranging from 1,700 microsiemens per centimeter (µs/cm) to 7,740 µs/cm. California Secondary MCLs – recommended ranges (per CCR Title 22, September 12, 2003) were exceeded for EC (1,700 µs/cm in MW-5, 3,660 µs/cm in MW-6, and 7,740 µs/cm in MW-3); the recommended secondary MCL for EC is listed as 900 µs/cm.

California Secondary MCLs – recommended ranges were exceeded for chloride (1,100 mg/l in MW-6 and 3,270 mg/l in MW-3); the recommended secondary MCL for chloride is listed as 250 mg/l.

Detected TDS concentrations ranged from 900 mg/l in MW-5 to 4,710 mg/l in MW-3.

December 2007

Analytical results for groundwater samples collected from MW-3, MW-5, MW-6, and MW-7 in December 2007 are discussed below. Groundwater analytical results are summarized in Tables 1 through 5 and shown on Figure 21.

Three metals were detected at concentrations above laboratory reporting limits:

- barium (ranging from 86 µg/l and 100 µg/l in MW-5 and MW-6, respectively, to 1,100 µg/l in MW-7)
- mercury (0.74 µg/l in MW-3 and 5.6 µg/l in MW-6)

  arsenic (210 µg/l in MW-7)

Cadmium was detected at 29 µg/l in Well MW-3 which is above the method detection limit [MDL] but below the laboratory reporting limit of 50 µg/l. The MCL for cadmium is 5 µg/l.

California MCLs (per CCR Title 22, June 27, 2007) were exceeded for mercury and barium. Mercury was detected in MW-6 at a concentration of 5.6 µg/l; the MCL for mercury is 2 µg/l. Barium was detected in MW-7 at a concentration of 1,100 µg/l; the MCL for barium is 1,000 mg/l. Analytical results for metals are summarized in Table 1.

TPH was not detected at concentrations above laboratory reporting limits in the groundwater samples collected at the Site, with the exception of TPHd. TPHd was detected in MW-7 at a concentration of 1.1 mg/l. A summary of historical TPH analytical results is provided in Table 2.

No VOCs or SVOCs were detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site. Historical summaries of the analytical results for VOCs and SVOCs are shown in Tables 3 and 4, respectively.

March 2008

On June 6, 2008, LFR submitted the Groundwater Monitoring Report for the First Quarter 2008 to the DTSC. Groundwater samples were collected from four groundwater monitoring wells on March 25, 2008 and analyzed for TPH-cc, VOCs, Title 22 metals, SVOCs and TDS analyses.

Analytical results for groundwater samples collected from MW-3, MW-5, MW-6, and MW-7 in March 2008 are discussed below. Groundwater analytical results are summarized in Tables 1 through 5, and shown on Figure 3.

Four metals were detected at concentrations above the laboratory reporting limits. Lead was detected above the method detection limits [MDL] but below the laboratory reporting limit:

- arsenic (420 µg/l in MW-7); concentration of arsenic has doubled when compared to the previous sampling event
- barium (ranging from 50 µg/l to 120 µg/l in MW-3, MW-5 and MW-6, and 1,700 µg/l in MW-7); there is a general increasing trend in barium concentrations from all wells when compared to the previous sampling events
- lead (24 µg/l [MDL result]in MW-7); lead was detected for the first time in MW-7
- mercury (2 µg/l in MW-3 and 7 µg/l in MW-6); concentrations were slightly greater than the previous sampling event, but exhibited a general decreasing trend over the past five years of sampling activities
- zinc (74 µg/l in MW-7); concentrations were well below MCL.

ANALYTICAL RESULTS FOR CHLORIDE AND TDS IN GROUNDWATER SAMPLES COLLECTED AT THE OIL OPERATOR'S SOUTH SITE LOCATED AT 712 WEST BAKER STREET (1987 – 1988)

The analytical results for chloride and TDS concentrations detected in groundwater samples collected from monitoring wells at the OOI South Site are presented below and shown on Figure 2.

Chloride

March 1987 - Chlorides were detected at 2,830 mg/L (MW-3), 17,000 mg/L (JK-1), and 11,700 mg/L (MW-4).

July 1987 - Chlorides were detected at 2,600 mg/L (MW-3), 10,400 mg/L (JK-1), and 15,700 mg/L (MW-4).

September 1987 - Chlorides were detected at 5,290 mg/L (MW-3), 18,170 mg/L (JK-1), and 30,690 mg/L (MW-4).

December 1987 - Chlorides were detected at 2,450 mg/L (MW-3), 9,080 mg/L (JK-1), and 17,180 mg/L (MW-4).

February 1988 – Chlorides were detected at 2,720 mg/L (MW-3), 10,400 mg/L (JK-1), and 16,600 mg/L (MW-4).

January 1996 – Chloride was detected in MW-1 at 3,090 mg/L, MW-2 at 1,380 mg/L, MW-3 at 1,540 mg/L, and in MW-4 at 1,970 mg/L.

TDS

March 1987 - TDS was detected at 5,550 mg/L (MW-3), 29,300 mg/L (JK-1), and 21,000 mg/L (MW-4).

July 1987 - TDS was detected at 5,190 mg/L (MW-3), 17,000 mg/L (JK-1), and 27,600 mg/L (MW-4).
September 1987 - TDS was detected at 6,020 mg/L (MW-3), 18,540 mg/L (JK-1), and 29,830 mg/L (MW-4).

December 1987 - TDS was detected at 1,500 mg/L (MW-3), 5,100 mg/L (JK-1), and 23,000 mg/L (MW-4).

February 1988 – TDS was detected at 5,760 mg/L (MW-3), 19,000 mg/L (JK-1), and 30,000 mg/L (MW-4).

January 1996 – TDS was detected in MW-1 at 9,250 mg/L, MW-2 at 4,270 mg/L, MW-3 at 3,790 mg/L, and in MW-4 at 4,360 mg/L.

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS (LADPW) DOMINGUEZ GAP CHLORIDE CONCENTRATIONS

Analytical results collected form LADPW groundwater observations wells to monitor chloride concentrations in the Dominguez Gap are summarized below and are presented in Table 6 and shown on Figure 4.

In a well approximately 0.8 mile south of the Site (29J’54), chloride levels measured in 2005, 2006, and 2008 ranged from 680 to 775 mg/L in samples collected at an elevation of 56 feet amsl or 79.6 feet below the ground surface.

In a well approximately 2.5 miles south of the Site (28B’82), chloride levels measured in 2008 were at 2,000 mg/L in a sample collected at an elevation of -65 feet amsl or 75.4 feet below the ground surface.

In a well located at Burnett Street and Fashion Avenue (28K’62), chloride was measured in 2008 at 430 mg/L approximately 0.36 mile to the southwest , chloride levels increase to 5,600 mg/L.

In a well (27R’64) approximately 3 miles SSW of the site, chloride levels were measured at 18, 800 mg/L in February 2008.

Approximately 2 ¼ miles SSW of the Site, chloride was measured at 5,600 mg/L (28C'49).

At the Site, chloride levels increase from 240 mg/L in MW-5 to 3,270 mg/L over a ¼ mile stretch.

DTSC COMMENTS TO REMEDIAL INVESTIGATION REPORT

LFR submitted a Remedial Investigation Report for the Site to the DTSC on March 4, 2008. DTSC reviewed the report and provided comments in a letter dated April 23, 2008. The Geological Services Unit (GSU) was concerned that the waste material at the Site contributes to groundwater degradation. The GSU comments in regards to groundwater are presented below.

Comment #2: GSU is concerned that waste is in contact with groundwater at the site and will continue to degrade groundwater for the foreseeable future. The contractor should propose to address this condition.

Comment #4: GSU does not concur that regional groundwater degradation can account for the groundwater contamination at the Site. There is clear evidence of onsite releases of arsenic, barium, mercury, and total dissolved solids. There is, in addition, a credible threat to groundwater from TPH, VOCs, and SVOCs originating at the site. The contractor should include these analytes as contaminants of concern at the site

Comment #5: GSU does not concur that increased TDS at the site is likely to be a result of seawater intrusion. The site was used to handle brine, which is a far more likely source of the TDS. The degradation of groundwater by TDS is a concern at the site.

Comment #8: GSU points out that the water sample taken at MW-3 in February 2008, downgradient of the former main sumps, contained 29 µg/L of cadmium. The MCL for cadmium is 5 µg/L. The contractor should discuss this observation.

CONCLUSIONS

In January 1996, concentrations of TDS ranged from 2,690 mg/l (MW-4) to 10,800 mg/l (MW-2). In 2006, TDS ranged from 900 mg/l (MW-5) to 4,710 mg/l (MW-3). Although TDS appears to have increased across the Site, historically the Gaspur aquifer has been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond the Site. In addition, numerous salt sources may have existed as part of the historical oil production in the area.

Metals in groundwater for MW-7 are generally consistent with the metals detected in December 2007. The federal MCL was exceeded for arsenic. California MCLs (per CCR Title 22, June 27, 2007) were exceeded for barium, lead and mercury. MW-7 had a concentration of arsenic at 420

µg/l; the federal MCL for arsenic is 10 µg/l. Barium was detected at a concentration of 1,700 µg/l in MW-7; the MCL for barium is 1,000 µg/l. Mercury was detected at concentrations of 2 µg/l and 7 µg/l in MW-3 and MW-6 respectively; the MCL for mercury is 2 µg/l. Lead was detected at a concentration of 24 µg/l using the MDL in MW-7; the MCL for lead is 15 µg/l. Historical analytical results for metals are summarized in Table 2 and first quarter 2008 analytical results are shown on Figure 3. During this round of sampling, cadmium was not detected below the MDL of 1.9 µg/l in any of the samples. Cadmium was not detected above the laboratory detection limit of 50 µg/l in the water sample collected from MW-3 in December 2007; however, it was above the MDL at 29 µg/l of cadmium. The MCL for cadmium is 5 µg/l.

TPH-cc was not detected at concentrations above laboratory reporting limits in the groundwater samples collected from MW-3 and MW-5.

TPHg (total petroleum hydrocarbon as gasoline, C6-C12) was detected in MW-6 at a concentration of 0.93 mg/l. TPHd (total petroleum hydrocarbon as diesel, C12-C28) was detected in MW-7 at a concentration of 2.3 mg/l. A summary of historical TPH analytical results is provided in Table 3.

No VOCs or SVOCs were detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site. Historical summaries of the analytical results for VOCs and SVOCs are shown in Tables 4 and 5, respectively.

TDS was measured at 1,000 mg/l and 2,000 mg/l in MW-5 and MW-6, respectively. Higher concentrations of TDS were measured in MW-3 and MW-7 with 6,200 mg/l and 7,800 mg/l, respectively. Historical summaries of the results for TDS and other geochemical parameters are shown in Table 5. Elevated measurements of TDS at the Site indicated inferior quality of groundwater in the shallow aquifer, not suitable for drinking water use. Concentrations of TDS in the groundwater increase in the downgradient direction. It is unknown whether the elevated concentrations are due to natural processes or human activity. However, the Gaspur aquifer has historically been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond Carson Street (located north of the Site) toward the crest of the Newport-Inglewood uplift (Poland 1959). Based on the concentrations of TDS detected during this sampling event, groundwater enters the Site classified as slightly saline water (1,000 to 3,000 mg/l), and exits the Site classified as moderately saline (3,000 to 10,000 mg/l).

Higher levels of TDS and chloride than those found at the Site have been detected in the Gaspur aquifer south of the Site. As observed on Figures 2 and 4, there is no clear regional trend to the groundwater chloride concentrations.

Historically, TPHcc, VOCs, and SVOCs in groundwater samples have either not been detected or are well below MCLs. Given the regional area's degraded surficial aquifers from historical oil production, while some degradation was observed at the Site, the conditions appear to be in general accordance with the regional degradation of groundwater quality. Lead has been historically observed, but recent analyses find no significant impact. Arsenic, barium, and

mercury slightly exceed the MCL. TDS appears to increase from potential historical Site activities, but regional degradation limits these concerns.

Given the above, LFR believes the following provide reasonable conclusions:

1. Groundwater in the area is degraded from numerous and complex interactions of nature as well as historical man-caused activities that date back numerous decades. The Site is likely part of this, but does not appear to be the sole or even primary cause of water degradation.

2. Remedial consideration of historical Site activities would be highly problematic within this environment, and would do little to remedy potential historical discharges within the context of the regions degraded groundwater. Salt is not easily remedied, and pump and treat options would pose highly costly challenges and could exacerbate the regional condition.

As a result of these observations, we request some agency concurrence with these opinions in order to consider if the Brownfield effort continues to be viable at this Site.

If you have any questions, please contact either Tony Marino or Charlie Robinson at (714) 444-0111.

Sincerely,

Tony Marino, P.G.
P.G. # 8304
Senior Associate Geologist

Charles E. Robinson, P.E.
P.E. # C-035368
Vice President/Principal Engineer

cc: Mr. Steve Sukut, CRG Properties, Inc.
Mr. David Armitage, Urban Partners LLC
Mr. John Gunn, Urban Partners LLC
Mr. Peter Nyquist, Weston Benshoof Rochefort Pubalcava JacCusish

Attachments:

Appendix A: References
Table 1: Summary of Groundwater Samples Analyzed for Metals

Table 2: Summary of Groundwater Samples Analyzed for Total Petroleum Hydrocarbons Chain Range (TPHcc) and Total Recoverable Petroleum Hydrocarbons (TRPH)
Table 3: Summary of Groundwater Samples Analyzed for Volatile Organic Compounds (VOCs)
Table 4: Summary of Groundwater Samples Analyzed for Semi Volatile Organic Compounds (SVOCs)
Table 5: Summary of Groundwater Samples Analyzed for TDS and other Geochemical Parameters
Table 6: Dominguez Gap Barrier Project – Chloride Concentrations from Observation Wells in the Gaspur Aquifer since the Year 2003
Figure 1: Vicinity Map
Figure 2: Former Oil Operators North and South Sites Showing TDS and Chloride Concentrations (1996-2008)
Figure 3: Site Map Showing Analytical Results in Groundwater, Mach 25, 2008
Figure 4: Dominguez Gap Barrier Project – Chloride Concentrations from Observation Wells in the Gaspur Aquifer since the Year 2003

TABLES

Table 1
Summary of Groundwater Samples Analyzed for Metals
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	Antimony EPA 6010B µg/L	Arsenic EPA 6010B µg/L	Barium EPA 6010B µg/L	Beryllium EPA 6010B µg/L	Cadmium EPA 6010B µg/L	Calcium EPA 6010B µg/L	Chromium EPA 6010B µg/L	Cobalt EPA 6010B µg/L	Copper EPA 6010B µg/L	Lead EPA 6010B µg/L	Magnesium EPA 6010B µg/L	Mercury EPA 7470A µg/L	Molybdenum EPA 6010B µg/L	Nickel EPA 6010B µg/L	Selenium EPA 6010B µg/L	Silver EPA 6010B µg/L	Sodium EPA 6010B µg/L	Thallium EPA 6010B µg/L	Vanadium EPA 6010B µg/L	Zinc EPA 6010B µg/L
MW-3	01/10/96	STS	--	--	--	--	--	--	--	ND	--	**75**	ND	--	--	--	ND	--	--	--	--	--	**20**
	2/17-19/97	STS	--	--	--	--	--	--	--	ND	--	ND	**280**	**--**	--	--	**65**	--	--	--	--	--	**130**
	12/19/03	SunStar	T301367-01	<100	**72 J**	**150**	<50	<50	--	<50	<50	<50	<50	--	**4.8**	**24 J**	<50	<250	84 J	--	<100	<100	12 J
	05/19/04	SunStar	T400513-01	<15	**15**	**290**	<3	<5	--	<10	<50	<50	<10	--	**160**	<50	<50	<25	<50	--	<10	<40	**66**
	12/18/06	SunStar	T601731-01	<50	**7.8**	**140**	<50	<50	**5,200**	<50	<50	**400**	<1.4	**2,100**	**0.82**	<50	<50	<50	**62**	**24,000**	<50	<50	<50
	12/03/07	SunStar	T701575-02	<50	<20	<50	<50	**29**	--	<50	<50	<50	<8.6	--	**0.74**	<50	<50	<50	<50	--	<50	<50	<50
	03/25/2008	SunStar	T800396-02	<10	<20	**50**	<4.1	<1.9	--	<50	<50	<50	<8.6	--	**2**	<50	<50	<50	<50	--	<14	<50	<50
MW-5	05/19/04	STS	T400513-02	<15	<10	**97**	<3	<5	--	<10	<50	<50	**16**	**--**	<0.5	<50	<50	<25	<50	--	<10	<40	**140**
	12/18/06	SunStar	T601731-02	<50	**12**	**100**	<50	<50	**3,200**	<50	<50	**55**	<1.4	**750**	<0.5	<50	<50	<50	<50	**5,100**	<50	<50	<50
	12/3/2007	SunStar	T701575-04	<50	<20	<50	<50	<1.8	--	<50	<50	<50	<8.6	--	<0.5	<50	<50	<50	<50	--	<50	<50	<50
	03/25/2008	SunStar	T800396-05	<10	<20	**120**	<4.1	<1.9	--	<50	<50	<50	<8.6	--	<0.5	<50	<50	<50	<50	--	<14	<50	<50
MW-6	05/19/04	STS	T400513-03	**22**	<10	**180**	<3	<5	--	<10	<50	<50	<10	--	**12**	<50	<50	**52**	<50	--	<10	**59**	**180**
	12/18/06	SunStar	T601731-03	<50	**12**	**100**	<50	<50	**4,100**	<50	<50	**140**	<1.4	**1,200**	**7.3**	<50	<50	<50	<50	**12,000**	<50	<50	<50
	12/03/07	SunStar	T701575-05	<50	<20	<50	<50	**3.9**	--	<50	<50	<50	<8.6	--	**5.6**	<50	<50	<50	<50	--	<50	<50	<50
	03/25/2008	SunStar	T800396-03	<10	<20	**110**	<4.1	<1.9	--	<50	<50	<50	<8.6	--	**7**	<50	<50	<50	<50	--	<14	<50	<50
MW-7	12/03/07	SunStar	T701575-06	<50	**210**	**1,100**	<50	<1.9	--	<50	<50	<50	<8.6	--	<0.5	<50	<50	<50	<50	--	<50	<50	<50
	03/25/2008	SunStar	T800396-04	<10	**420**	**1,700**	<4.1	<1.9	--	<50	<50	<50	**24**	--	<0.5	<50	<50	<50	<50	--	<14	<50	**74**
The following wells have not been located since the 1997 sampling event																							
MW-2	01/10/96	STS	--	--	--	**--**	--	--	--	ND	--	80	ND	--	--	--	ND	--	--	--	--	--	120
	2/17-19/97	STS	--	--	--	**--**	--	--	--	ND	--	ND	**210**	**--**	--	--	ND	--	--	--	--	--	200
MW-4	01/10/96	STS	--	--	--	**--**	--	--	--	ND	--	74	ND	--	**--**	--	ND	--	--	--	--	--	40
	2/17-19/97	STS	--	--	--	**--**	--	--	--	ND	--	ND	**130**	**--**	**--**	--	ND	--	--	--	--	--	100
MCLs				**6**	**10**	**1,000**	**4**	**5**	**--**	**50**	**--**	**1,000***	**15**	**--**	**2**	**--**	**100**	**50**	**100***	**--**	**2**	**50****	**5,000**

µg/L = micrograms per liter
< = Not detected above laboratory reporting limit indicated, except for antimony, arsenic, beryllium, cadmium, lead and thallium where the method detection limit (MDL) is shown for sampling date 3/25/2008; arsenic, cadmium and lead for sampling date 12/03/2007
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
MCLs = Maximum Contaminant Levels
-- = Not available
* = Secondary MCL
** = Action Level (AL) for unregulated chemical requiring monitoring.
J = Detected below the standard reporting limit; the result is an estimated concentration.
Note - Groundwater analysis from 2004 has a lower method detection limit.

QA/QC KLL

Table 2
Summary of Groundwater Samples Analyzed for Total Petroleum Hydrocarbon Chain range (TPHcc) and Total Recoverable Petroleum Hydrocarbons (TRPH)
3701 Pacific Place, Long Beach, CA
Former Oil Operators North Site
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	C6-C12 EPA 8015M mg/l	C12-C28 EPA 8015M mg/l	C28-C40 EPA 8015M mg/l	TPH EPA 8015M mg/l	TRPH EPA 8015M mg/l
MW-3	01/10/96	STS	--	--	--	--	ND	ND
	2/17-19/97	STS	--		--	--	ND	ND
	12/19/03	SunStar	T301367-01	<0.1	<0.1	<0.1	--	--
	05/19/04	SunStar	T400513-01	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	T601731-01	**0.13**	<0.05	<0.1	--	--
	12/03/07	SunStar	T701575-02	<0.5	<0.5	<0.5	--	--
	03/25/2008	SunStar	T800396-02	<0.5	<0.5	<0.5	--	--
MW-5	05/19/04	SunStar	T400513-02	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	T601731-02	**0.05**	<0.05	<0.1	--	--
	12/03/07	SunStar	T701575-04	<0.5	<0.5	<0.5	--	--
	03/25/08	SunStar	T800396-05	<0.5	<0.5	<0.5	--	--
MW-6	05/19/04	SunStar	T400513-03	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	T601731-03	**0.38**	<0.05	<0.1	--	--
	12/03/07	SunStar	T701575-05	<0.5	<0.5	<0.5	--	--
	03/25/08	SunStar	T800396-03	**0.93**	<0.5	<0.5	--	--
MW-7	12/03/07	SunStar	T701575-06	<0.5	**1.1**	<0.5	--	--
	03/25/08	SunStar	T800396-04	<0.5	**2.3**	<0.5	--	--
The folllowing wells have not been located since the 1997 sampling event								
MW-2	01/10/96	STS	--	--	--	--	ND	**1.4**
	2/17-19/97	STS	--	--	--	--	ND	ND
MW-4	01/10/96	STS	--	--	--	--	ND	ND
	2/17-19/97	STS	--	--	--	--	ND	ND

< = Not detected above laboratory reporting limit indicated.
ID = Identification
mg/l = milligrams per liter
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
-- = Not Available
ND = Not detected above laboratory reporting limit (reporting limits from previous investigations are not available)

QA/QC KLL

Table 3
Summary of Groundwater Samples Analyzed for
Volatile Organic Compounds (VOCs)
3701 Pacific Place, Long Beach, CA
CRG Properties
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	Benzene EPA 8260B µg/L	Toluene EPA 8260B µg/L	Ethylbenzene EPA 8260B µg/L	Xylenes EPA 8260B µg/L
MW-3	01/10/96	STS	--	ND	ND	0.9	2.4
	2/17-19/97	STS	--	**88**	1.6	15	10
	12/19/03	SunStar	T301367-01	<0.5	<0.5	<0.5	<1.5
	05/19/04	SunStar	T400513-01	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	T601731-01	<0.5	<0.5	<0.5	<1.5
	12/03/07	SunStar	T701575-02	<0.5	<0.5	<0.5	<0.5
	03/25/08	SunStar	T800396-02	<0.5	<0.5	<0.5	<0.5
MW-5	05/19/04	SunStar	T400513-02	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	T601731-02	<0.5	<0.5	<0.5	<1.5
	12/03/07	SunStar	T701575-04	<0.5	<0.5	<0.5	<0.5
	03/25/08	SunStar	T800396-05	<0.5	<0.5	<0.5	<0.5
MW-6	05/19/04	SunStar	T400513-03	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	T601731-03	<0.5	<0.5	<0.5	<1.5
	12/03/07	SunStar	T701575-05	<0.5	<0.5	<0.5	<0.5
	03/25/08	SunStar	T800396-03	<0.5	<0.5	<0.5	<0.5
MW-7	12/03/07	SunStar	T701575-06	<0.5	<0.5	<0.5	<0.5
	03/25/08	SunStar	T800396-04	<0.5	<0.5	<0.5	<0.5

The folllowing wells have not been located since the 1997 sampling event

MW-2	01/10/96	STS	--	ND	ND	ND	ND
	2/17-19/97	STS	--	0.6	ND	ND	ND
MW-4	01/10/96	STS	--	ND	0.5	ND	ND
	2/17-19/97	STS	--	ND	ND	ND	ND
MCLs				**1**	**150**	**300**	**1,750**

Note: See laboratory reports for a complete list of compounds analyzed.
ID = Identification
µg/L = micrograms per liter
< = Not detected above laboratory reporting limit indicated.
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
ND = Non-detect.
-- = Not Available.
MCLs = Maximum Contamination Levels

QA/QC KLL

Table 4
Summary of Groundwater Samples Analyzed for
Semi Volatile Organic Compounds (SVOCs)
CRG
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	All Analytes EPA 8270C µg/L
MW-3	05/19/04	SunStar	T400513-01	ND
	12/18/06	SunStar	T601731-01	ND
	12/03/07	SunStar	T701575-02	ND
	03/25/08	SunStar	T800396-02	ND
MW-5	05/19/04	SunStar	T400513-02	ND
	12/18/06	SunStar	T601731-02	ND
	12/03/07	SunStar	T701575-02	ND
	03/25/08	SunStar	T800396-05	ND
MW-6	05/19/04	SunStar	T400513-03	ND
	12/18/06	SunStar	T601731-03	ND
	12/03/07	SunStar	T701575-02	ND
	03/25/08	SunStar	T800396-03	ND
MW-7	03/25/08	SunStar	T800396-04	ND

ID = Identification
µg/L = micrograms per liter
SunStar = SunStar Laboratories Inc., Tustin, CA.
ND = Non-detect.
Note: See laboratory reports for a complete list of compounds analyzed.

QA/QC KLL

Table 5
Summary of Groundwater Samples Analyzed for
TDS and other Geochemical Parameters
CRG Properties
3701 Pacific Place, Long Beach, CA
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	Specific Conductance (EC) SM2510b mod. umhos/cm	Alkalinity as CaCO3 EPA 310.1 mg/l	Chloride EPA 300.0 mg/l	Nitrate as NO3 EPA 300.0 mg/l	pH EPA 150.1 pH Units	Sulfate as SO4 EPA 300.0 mg/l	Total Dissolved Solids (TDS) mg/l
MW-3	01/10/96	STS	--	--	--	--	--	**6.45**	--	**8,970**
	2/17-19/97	STS	--	--	--	--	--	**6.34**	--	**11,800**
	12/18/06	Sunstar	T601731-01	**7,740**	**590**	**3,270**	**1.74**	**6.4**	**107**	**4,710***
	03/25/08	SunStar	T800396-02	--	--	--	--	--	--	**6,200**
MW-5	12/18/06	Sunstar	T601731-02	**1,700**	**520**	**240**	<0.5	**6.9**	**92.7**	**900***
	03/25/08	SunStar	T800396-05	--	--	--	--	--	--	**1,000**
MW-6	12/18/06	Sunstar	T601731-03	**3,660**	**540**	**1,100**	**40.1**	**6.8**	**102**	**2,090***
	03/25/08	Sunstar		--	--	--	--	--	--	**2,100**
MW-7	03/25/08	SunStar	T800396-03	--	--	--	--	--	--	**7,800**
The following wells have not been located since the 1997 sampling event										
MW-2	01/10/96	STS	--	--	--	--	--	**6.46**	--	**10,800**
	2/17-19/97	STS	--	--	--	--	--	**6.76**	--	**8,560**
MW-4	01/10/96	STS	--	--	--	--	--	**6.65**	--	**2,690**
	2/17-19/97	STS	--	--	--	--	--	**6.78**	--	**2,030**

< = Not detected above laboratory reporting limit indicated.
umhos/cm = microsiemens per centimeter
mg/l = milligrams per liter
STS = Southland Technical Services, Inc., Montebello, CA.
SunStar = SunStar Laboratories Inc., Tustin, CA.
* = TDS analytical results provided by SunStar and communicated by electronic mail
CaCO3 = calcuim carbonate
NO3 = nitrate
SO4 = sulfate
-- = Not Available

QA/QC KLL

Dominguez Gap Barrier Project
Chloride concentrations from observation wells in the gaspur aquifer since the year 2003

PROJECT NUMBER	FCD NUMBER	DATE	AQUIFER	REFERENCE ELEVATION (ft)	ELEVATION 1 (ft)	CHLORIDE 1 (mg/L)	ELEVATION 2 (ft)	CHLORIDE 2 (mg/L)	ELEVATION 2 (ft)	CHLORIDE 3 (mg/L)
26BC	351AF	20070620	GASPUR	13.40	-42	90				
26N'15	361J	20080213	(GASPUR(200))	4.20	-149	12,100				
26TY	361S	20040310	(GASPUR(200))	18.00	-100	3,700	-123	3,750	-145	9,900
26TY	361S	20041110	(GASPUR(200))	18.00	-100	190	-123	480	-145	10,000
26TY	361S	20061003	(GASPUR(200))	18.00	-100	145	-123	205	-145	10,900
26TY	361S	20070424	(GASPUR(200))	18.00	-100	258	-123	6,050	-145	12,000
26TY	361T	20040209	(GASPUR(200))	18.00	-30	4,850	-50	13,500		
26TY	361T	20041110	(GASPUR(200))	18.00	-30	9,300	-50	14,500		
26TY	361T	20061003	(GASPUR(200))	18.00	-30	13,200	-50	15,200		
26TY	361T	20070424	(GASPUR(200))	18.00	-30	9,600	-50	17,100		
26W'19	361Z	20050801	GASPUR	5.90	-104	13,300	-134	15,250		
26W'19	361Z	20060327	GASPUR	5.90	-104	12,600	-134	16,700		
26W'19	361Z	20080213	GASPUR	5.90	-104	12,600	-134	16,800		
26YA	362AS	20070620	GASPUR	16.00	-94	102				
27BF	361W	20040309	GASPUR	13.70	-56	2,175	-81	1,950	-106	3,475
27BF	361W	20041123	GASPUR	13.70	-56	1,850	-81	2,050	-106	6,400
27BF	361W	20050906	GASPUR	13.70	-56	2,000	-81	2,000	-106	6,700
27BF	361W	20060327	GASPUR	13.70	-56	2,200	-81	2,375	-106	8,950
27BF	361W	20061108	GASPUR	13.70	-56	2,350	-81	4,650	-106	9,400
27BF	361W	20070425	GASPUR	13.70	-56	2,200	-81	5,100	-106	2,900
27J'19	371J	20070817	GASPUR	8.30	-79	11,100	-102	11,500	-125	11,400
27J'19	371J	20080212	GASPUR	8.30	-79	10,600	-102	7,750	-125	12,600
27J'20	371E	20050901	GASPUR	8.50	-130	11,450				
27JM	360AD	20070621	GASPUR	17.30	-68	123	-93	148		
27K' 3	370H	20080225	GASPUR	12.80	-102	2,500				
27MT	370V	20040322	(GASPUR(200))	14.20	-86	1,175	-121	2,000	-161	2,300
27MT	370V	20050314	(GASPUR(200))	14.20	-86	1,400	-121	2,450	-161	2,550
27MT	370V	20050804	(GASPUR(200))	14.20	-86	2,050	-121	3,100	-161	3,100
27MT	370V	20060327	(GASPUR(200))	14.20	-86	3,950	-121	5,000	-161	4,750
27MT	370V	20061108	(GASPUR(200))	14.20	-86	3,850	-121	2,850	-161	1,450
27MT	370V	20070426	(GASPUR(200))	14.20	-86	2,350	-121	520	-161	1,550
27R'14	370X	20080226	GASPUR	10.30	-110	90	-130	4,900		
27R'14	370Y	20080226	GASPUR	10.30	-60	75	-80	2,900		
27R'64	381L	20080214	GASPUR	5.80	-104	18,800				
27TW	370AL	20070620	(GASPUR-200)	17.30	-108	135				
27W'54	380T	20050829	GASPUR	7.70	-126	17,550				
27W'54	380T	20060330	GASPUR	7.70	-126	12,300				
27W'54	380T	20080214	GASPUR	7.70	-126	15,300				
27YC	879XX	20040309	GASPUR	14.90	-65	4,050				
27YC	879XX	20041130	GASPUR	14.90	-65	4,500				
27YC	879XX	20050804	GASPUR	14.90	-65	5,650				
27YC	879XX	20060329	GASPUR	14.90	-65	3,050				
27YC	879XX	20061109	GASPUR	14.90	-65	5,100				
27YC	879XX	20070426	GASPUR	14.90	-65	5,500				
27Z'20	370AH	20080221	(GASPUR(200))	10.70	-59	1,800	-114	2,300	-174	8,800
28B'82	390S	20080219	GASPUR	10.40	-65	2,000	-115	3,300	-165	16,800
28C'17	370AA	20080225	GASPUR	13.40	-62	300	-82	510	-102	4,650
28C'49	380R	20050829	GASPUR	12.30	-98	5,400				
28C'49	380R	20060330	GASPUR	12.30	-98	4,700				
28C'49	380R	20080221	GASPUR	12.30	-98	5,600				
28K'27	889Q	20080227	(GASPUR-200)	19.60	-109	4,450				
28K'62	899N	20080220	GASPUR	15.20	-53	430	-85	310	-118	5,000
28N'48	889W	20050726	(GASPUR-200)	17.50	-49	900	-85	2,000	-119	5,900
28N'48	889W	20060405	(GASPUR-200)	17.50	-49	850	-85	830	-119	3,600
28N'48	889W	20080226	(GASPUR-200)	17.50	-49	825	-85	1,100	-119	3,950
28R 7	879X	20040322	(GASPUR-200)	17.10	-31	3,800				
28R 7	879X	20050308	(GASPUR-200)	17.10	-31	2,600				
28R 7	879X	20061107	(GASPUR-200)	17.10	-31	450				
28R 7	879X	20070403	(GASPUR-200)	17.10	-31	430				
28W'88	909L	20080219	GASPUR	16.80	-33	588				
28Z'32	888V	20050815	GASPUR	20.00	-65	610	-90	1,190		
28Z'32	888V	20060419	GASPUR	20.00	-65	68	-90	1,050		
28Z'32	888V	20080228	GASPUR	20.00	-65	185	-90	150		
28ZZ1	878BK	20070619	GASPUR	21.86	-78	160				
28ZZ1	878BK	20080311	GASPUR	21.86	-78	10				
29A14	888BD	20080306	GASPUR	22.50	-98	180				
29A4B	888AV	20070618	GASPUR	20.50	-336	60				
29A4B	888AV	20080304	GASPUR	20.50	-336	70				
29A'69	898W	20050816	GASPUR	20.30	-60	800				
29A'69	898W	20060501	GASPUR	20.30	-60	810				
29A'69	898W	20080305	GASPUR	20.30	-60	800				
29D13	868LL	20080310	GASPUR	16.40	-379	90				
29J'54	898X	20050816	GASPUR	23.60	-56	680	-76	2,150		
29J'54	898X	20060427	GASPUR	23.60	-56	690	-76	2,000		
29J'54	898X	20080228	GASPUR	23.60	-56	775	-76	1,950		
29W'23	889T	20050823	GASPUR	24.70	-34	270	-50	235	-75	265
29W'23	889T	20060410	GASPUR	24.70	-34	320	-50	300	-75	440
29W'23	889T	20080306	GASPUR	24.70	-34	58	-50	280	-75	240

FIGURES



CRG Property

McDonald Property

Tookey Property

Site

0 2000 ft

Vicinity Map

CRG Properties, Former Oil Operators North Site,
Long Beach, CA - 002-10231-03

LFR

Figure 1

CM: K:\Data\Graphics\10000\10231\03\10231-03 VicinityMap.ai

MW-5	Arsenic	Barium	Cadmium	Lead	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
3/25/2008	<20	120	<1.9	<8.6	<0.5	<50	ND	ND	<0.5	<0.5	<0.5
MCLs	**10***	**1,000**	**5**	**15**	**2**	**--**	**--**	**--**	**--**	**--**	**--**

MW-6	Arsenic	Barium	Cadmium	Lead	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
3/25/2008	<20	110	<1.9	<8.6	7	<50	ND	ND	0.93	<0.5	<0.5
MCLs	**10***	**1,000**	**5**	**15**	**2**	**--**	**--**	**--**	**--**	**--**	**--**

MW-7	Arsenic	Barium	Cadmium	Lead	Mercury	zinc	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
3/25/2008	420	1700	<1.9	24	<0.5	74	<50	ND	ND	<0.5	2.3	<0.5
MCLs	**10***	**1,000**	**5**	**15**	**2**	**5,000**	**--**	**--**	**--**	**--**	**--**	**--**

MW-3	Arsenic	Barium	Cadmium	Lead	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
3/25/2008	<20	50	<1.9	<8.6	2	<50	ND	ND	<0.5	<0.5	<0.5
MCLs	**10***	**1,000**	**5**	**15**	**2**	**--**	**--**	**--**	**--**	**--**	**--**

MW-5
MW-4
MW-6
MW-2
MW-7
MW-3

LOS ANGELES RIVER
METRO BLU
DEL MAR AVENUE
LOS CERRITOS PARK
405

EXPLANATION

- MW-3 — Groundwater Monitoring Well
- MW-2 — Former Groundwater Monitoring Well (JB, 1995)
- Property Boundary
- Railroad Tracks
- VOCs — Volatile Organic Compounds
- SVOCs — Semi-Volatile Organic Compounds
- TPH — Total Petroleum Hydrocarbons
- TPHg — Gasoline Range Organics
- TPHd — Diesel Range Organics
- TPHmo — Motor Oil Range Organics
- * — Federal MCL for Arsenic (USEPA, January 2006)
- MCL — Maximum Contaminant Levels
- µg/L — micrograms per liter
- < — less than
- ND — not detected above laboratory reporting limits

Red denotes concentrations greater than MCL

0 160 FEET

Site Map Showing Analytical Results in Groundwater, March 25, 2008

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 3

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-March08.dwg [All] 4/30/08 10:40am jdloving XREFS: [Map137.dwg

APPENDIX A

REFERENCES

REFERENCES

American Environmental Management Corporation (AEMC), 1991, Draft Site Review for Oil Operators, Inc. June 26.

_____, 1991, Subsurface Characterization Report of the Southern Portion of Oil Operators, Inc. prepared for Sukut Construction, December 12.

Batman, E., P.E., Los Angeles County Department of Public Works, Water Resources Division, Dominguez Gap Barrier Project, 2008.

California Department of Water Resources (CDWR), 1961. Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology. June

Earth Technology Corporation, 1984, Oil Sump Site Development Supplemental Investigation, San Diego Freeway and Pacific Place, Long Beach, California, January.

Jack K. Bryant Engineers, 1996, 1995 Groundwater Monitoring Report for Oil Operators North Site. February 1.

_____, 1997, RWQCB File Number 86-66, Annual Groundwater Monitoring Report 1996, for Oil Operators North Site, Pacific Place, Long Beach, CA. March 17.

Jaykim Engineers, Inc, 1988, Annual Monitoring Report, Land Treatment Operation, Oil Operators, Inc., January 29.

Los Angeles County Department of Public Works, 2008. http://dpw.lacounty.gov/

Oil Operators Incorporated, (OOI), Long Beach – North Side (File #86-066; CI 6775) and South Side (File #86-065; CI 6751) Plan for Project Completion. April 12.

Poland, J.F. et al. Ground Water Investigation along the Rio Hondo and Lower Los Angles Rivers, Los Angeles County, California - Progress Report No. 1. USGS Open File Report. January, 1946.

Poland, J.F., and Sinnott, A. Hydrology of the Long Beach – Santa Ana Area, California. USGS Water Supply Paper 1471. 1959.

APPENDIX F

Boring Logs Prepared by LFR

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, brown, dry, 85% silt, 15% fine to medium grained sand, non-plastic.	B1-5'	21	60
10		-same.	B1-10'	16	160
15		**SILTY SAND (SM)**, brown, moist, 80% fine grained sand, 20% silt.	B1-15'	19	60
20		**POORLY GRADED SAND (SP)**, light brown, moist, 95% fine grained sand, 5% silt.	B1-20'	45	80
25		-same.	B1-25'	34	120
30		-90% fine grained sand, 10% silt.	B1-30'	42	60
35		Continued			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B1

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
		SILTY SAND (SM), light brown, moist, 60% fine grained sand, 40% silt.	B1-35'	67	220
40		**POORLY GRADED SAND (SP)**, brown moist, 80% fine grained sand, 20% silt.	B1-40'	76	80
45			B1-45'	98	60
50		**SILT (ML)**, brown, moist, non-plastic. Bottom of boring at 50 feet bgs.	B1-50'	48	120

EXPLANATION

Clay

Silt

Sand

Gravel

Interval Sampled
Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B1 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, olive brown, moist, trace plant material, non-plastic.	B2-5'	21	160
10		-dark brown.	B2-10'	45	1180
15		-olive brown.	B2-15'	92	1020
20		**POORLY GRADED SAND (SP)**, olive, moist, 90% fine grained sand, 10% fines.	B2-20'	82	800
25		-same.	B2-25'	73	400
30		**SILTY SAND (SM)**, olive, moist, 80% fine grained sand, 20% silt.	B2-30'	83	1860
35	Continued				

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

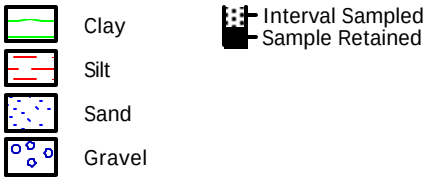
Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B2

LITHOLOGY			SAMPLING DATA			
Depth, feet	Graphic Log	Visual Description Continued		Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		-75% fine grained sand, 25% silt.		B2-35'	50-4"	180
40		-same.		B2-40'	45	640
45		-same.		B2-45'	82	1860
50		-same.		B2-50'	50-5"	180
		Bottom of boring at 50 feet bgs.				



Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B2 (CONTINUED)

	LITHOLOGY		SAMPLING DATA		
Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
5		**SILT (ML)**, tan, dry, trace plant material, 90% silt, 10% fine to coarse grained sand.	B3-5'	35	40
10		-dark brown, hydrocarbon odor.	B3-10'	25	3080
15		-black, oil seeps.	B3-15'	25	1560
20		**FAT CLAY (CH)**, olive, moist, medium to high plasticity.	B3-20'	21	780
25		**SILT (ML)**, light brown, moist, low plasticity.	B3-25'	39	540
30		-non-plastic.	B3-30'	28	110
35		Continued			

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B3

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
		SILTY SAND (SM), gray, moist, 70% fine grained sand, 30% silt.	B3-35'	56	860
40		-olive.	B3-40'	73	280
45		-same.	B3-45'	69	1240
50		-same.	B3-50'	80	1820
		Bottom of boring at 50 feet bgs.			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B3 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, light brown, moist, non-plastic.	B4-5'	10	220
10		-same.	B4-10'	18	640
15		-same.	B4-15'	20	80
20		-olive.	B4-20'	27	140
25		-same.	B4-25'	21	640
30		-same.	B4-30'	19	280
35		Continued			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

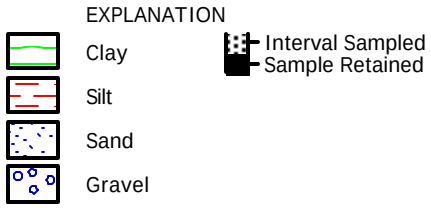
Date boring drilled: 11/22/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B4

LITHOLOGY			SAMPLING DATA		
Depth, feet	Graphic Log	Visual Description Continued	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		-same.	B4-35'	33	160
40		-wet.	B4-40'	35	460
45		**SILTY SAND (SM)**, olive, moist, 60% fine grained sand, 40% silt.	B4-45'	58	780
50		**POORLY GRADED SAND (SP)**, olive, moist, 100% fine grained sand. Bottom of boring at 50 feet bgs.	B4-50'	72	220



Date boring drilled: 11/22/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B4 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, brown, dry, non-plastic, 90% silt, 10% fine to medium grained sand, trace plant material.	B5-5'	16	20
10		**LEAN CLAY (CL)**, brown, moist, low plasticity to non-plastic.	B5-10'	12	40
15		-dark brown, low plasticity, hydrocarbon odor.	B5-15'	18	4000
20		**SILT WITH SAND (ML)**, brown, moist, 75% silt, 25% fine to medium grained sand, non-plastic.	B5-20'	17	260
25		**SILTY SAND (SM)**, light brown, moist, 75% fine grained sand, 25% silt.	B5-25'	35	3640
30		**SILT (ML)**, olive, moist, non-plastic.	B5-30'	33	260
35	Continued				

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B5

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY	**SAMPLING DATA**		
		SANDY SILT (ML), olive, moist, 70% silt, 30% fine grained sand.	B5-35'	41	140
		SILTY SAND (SM), olive, moist, 70% fine grained sand, 25% silt.			
40			B5-40'	58	5660
45		-65% fine grained sand, 35% silt.	B5-45'	60	780
50		-same.	B5-50'	45	660
		Bottom of boring at 50 feet bgs.			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B5 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILTY SAND (SM)**, light brown, moist, 60% fine grained sand, 40% silt.	B6-5'	11	100
10		-same.	B6-10'	30	380
15		**SILT (ML)**, dark brown, moist, low plasticity, hydrocarbon stain and odor.	B6-15'	20	1280
20		-non-plastic.	B6-20'	22	460
25		-same.	B6-25'	28	760
30		**SILTY SAND (SM)**, olive gray, moist, 70% fine grained sand, 30% silt.	B6-30'	39	4720
35		Continued			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

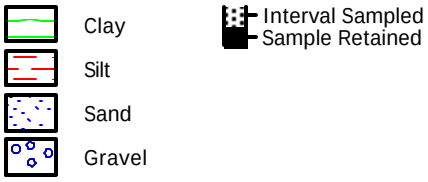
Date boring drilled: 11/22/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B6

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
		SILT (ML), olive brown, moist, non-plastic.	B6-35'	43	340
40		-brown, low plasticity.	B6-40'	31	860
45		-olive brown, non-plastic.	B6-45'	40	460
		SILTY SAND (SM), dark olive gray, moist, 60% fine grained sand, 40% silt.			
50		Bottom of boring at 50 feet bgs.	B6-50'	59	40



Date boring drilled: 11/22/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B6 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, brown, dry, non-plastic, 90% silt, 10% fine grained sand, plant material.	B7-5'	7	100
10		-same.	B7-10'	14	120
15		-light brown, moist, non-plastic.	B7-15'	11	240
20		-same.	B7-20'	16	260
25		-85% silt, 15% fine to medium grained sand.	B7-25'	8	540
30		-olive, wet.	B7-30'	8	360
35		Continued			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B7

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		-black, moist, low plasticity, hydrocarbon odor and staining.	B7-35'	16	5260
40		**ELASTIC SILT (MH)**, black, moist, low to medium plasticity, hydrocarbon odor and staining.	B7-40'	14	3540
45		-same.	B7-45'	15	1840
			B7-50'	20	3280
50		-same. Bottom of boring at 50 feet bgs.			

EXPLANATION

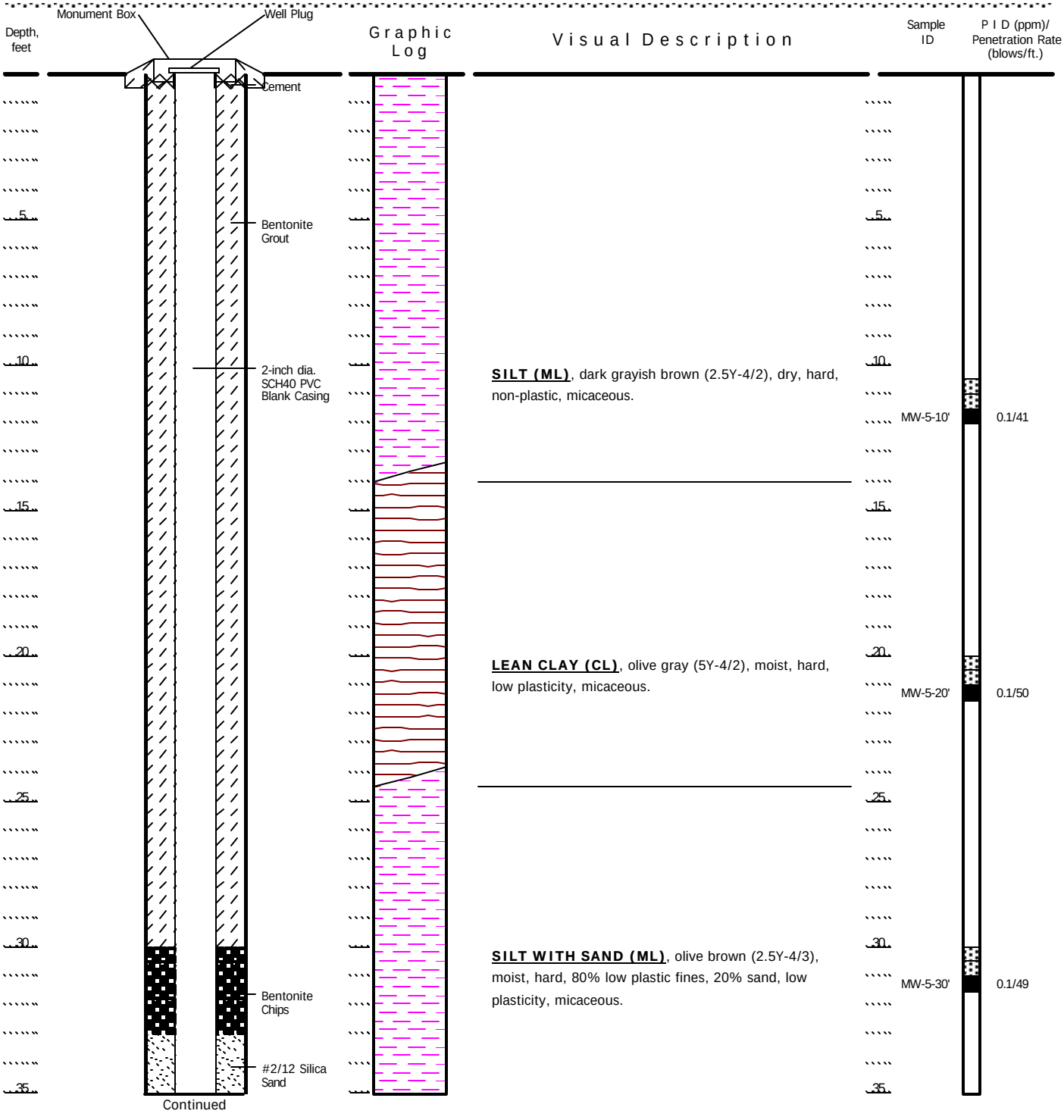
- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B7 (CONTINUED)

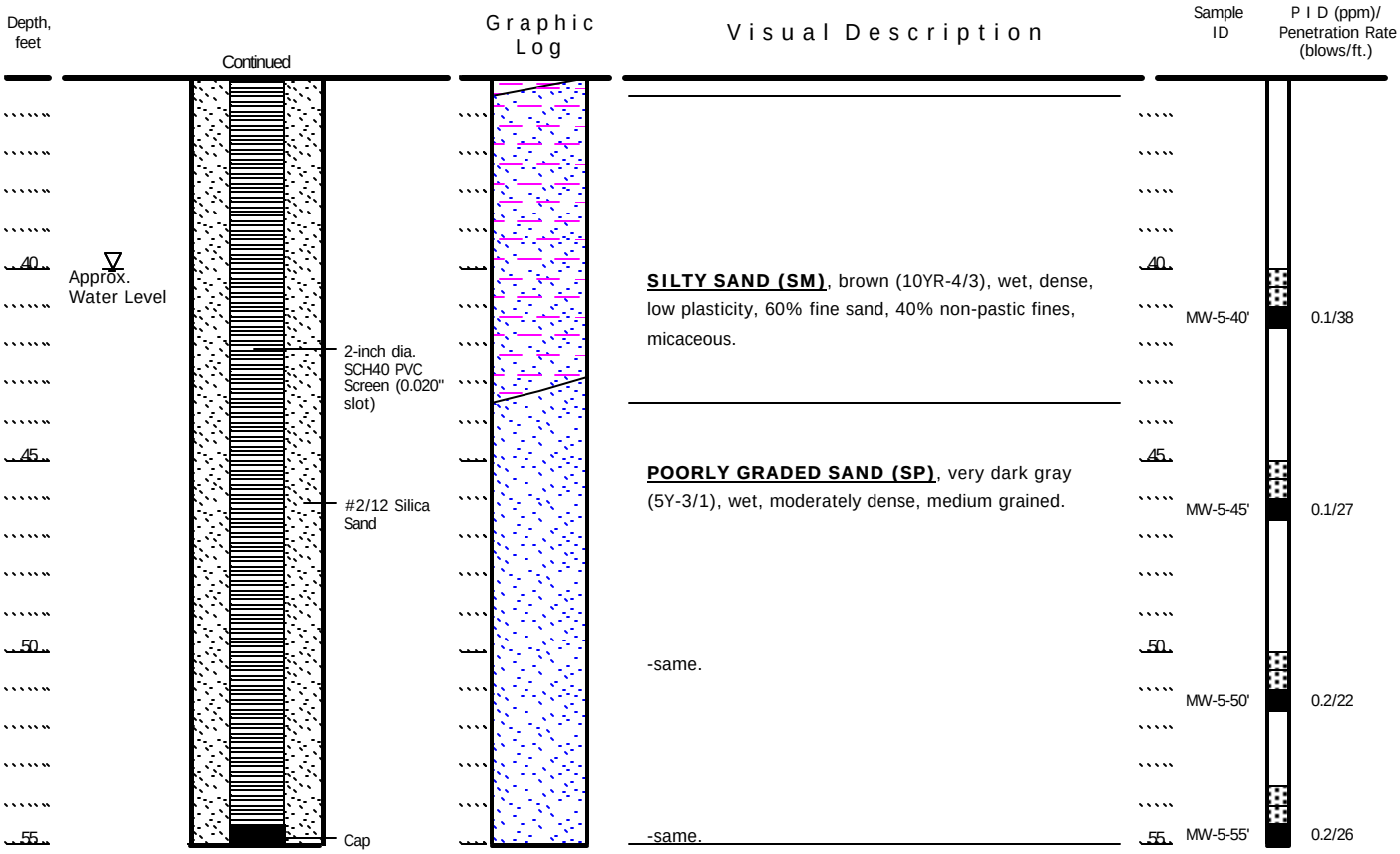


Date well drilled: 5/6/04

LFR Field Staff: Charlotte Berghoffer/Sonia Cisneros

Approved by:

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-5



EXPLANATION

Clay

Silt

Sand

Gravel

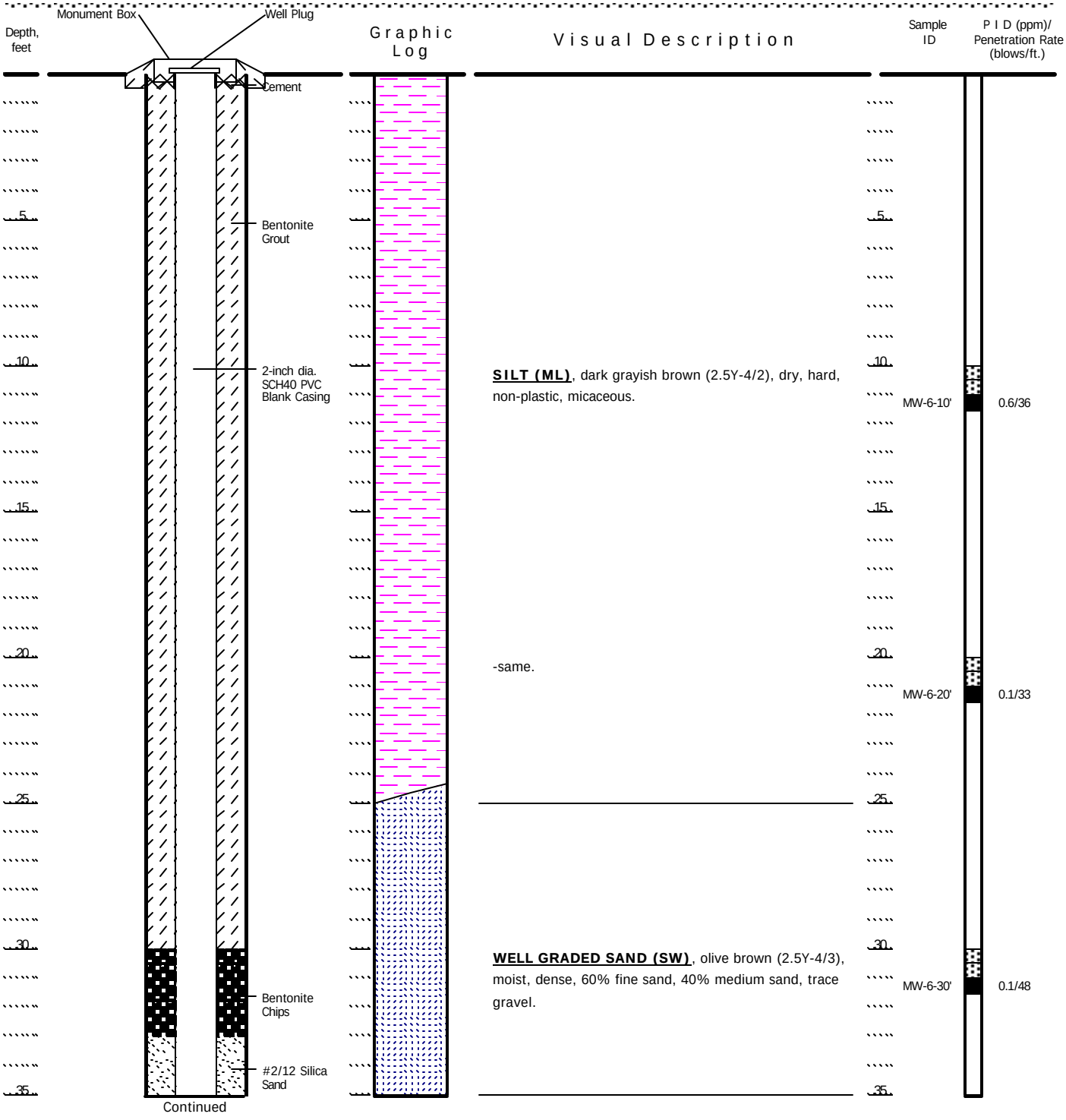
Interval Sampled
Sample Retained

Date well drilled: 5/6/04

LFR Field Staff: Charlotte Berghoffer/Sonia Cisneros

Approved by:

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-5 (CONTINUED)



EXPLANATION

Clay

Silt

Sand

Gravel

Interval Sampled
Sample Retained

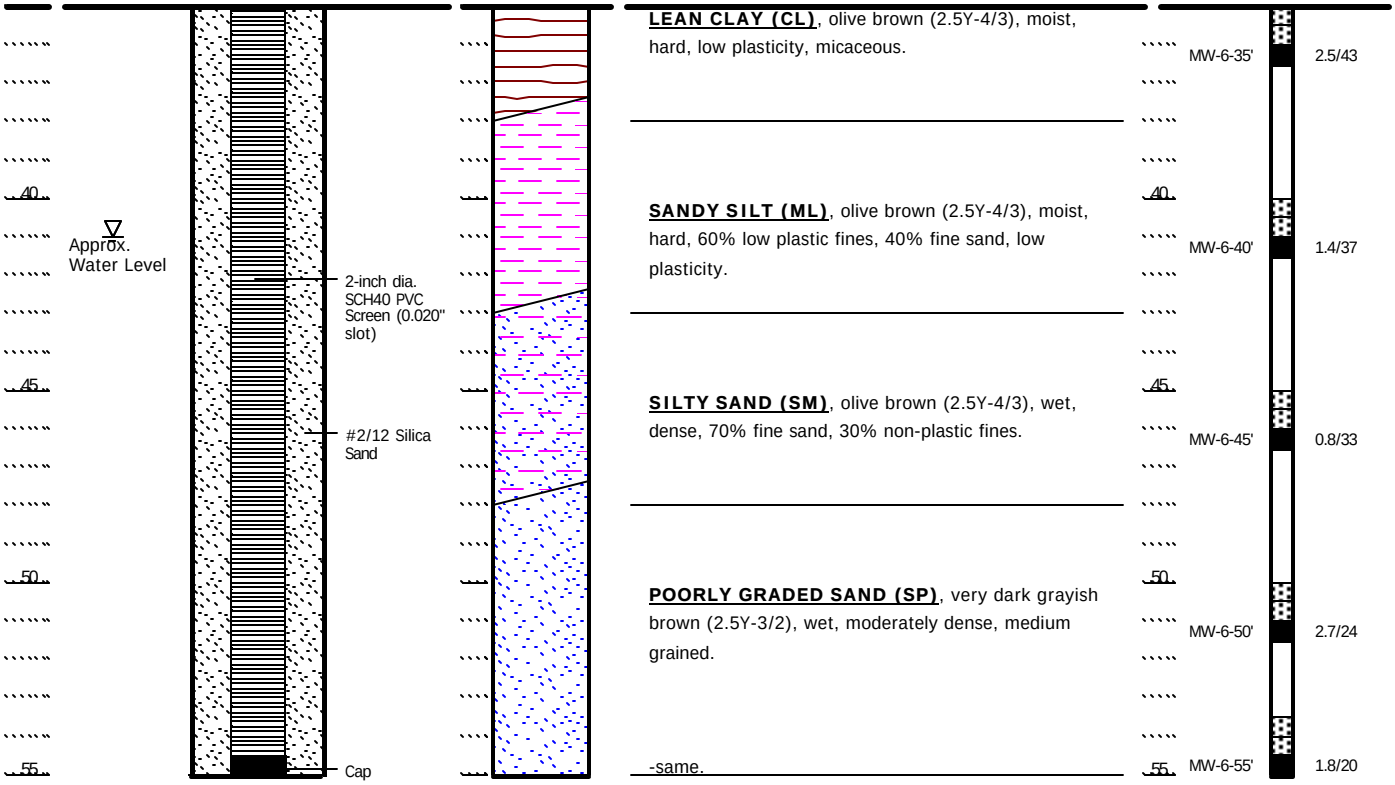
Date well drilled: 5/6/04

LFR Field Staff: Charlotte Berghoffer/Sonia Cisneros

Approved by:

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-6

WELL CONSTRUCTION	LITHOLOGY	SAMPLING DATA



Bottom of boring at 55 feet bgs.
Bottom of well at 55 feet bgs.

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date well drilled: 5/6/04
LFR Field Staff: Charlotte Berghoffer/Sonia Cisneros
Approved by:

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-6 (CONTINUED)

APPENDIX G

Field Data Sheets and CPT Report

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-01

Page 1 of 3

Project Name: CRG Properties

Date: 12/18/06

Project Location: Long Beach, CA

Day: (M) T W Th F S S

Site Conditions/Weather: Clear, cool

LFR Staff: DPB/JJO

Comments: Needs well cap, although may not fit due to proximity to lid. No bolts

SAMPLING METHOD

- [ ] Centrifugal Pump
- [x] Submersible Pump
- [ ] Hand Bail
- [ ] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW 3

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested: See COC

Number and Types of Bottle Used: 6 VOA, 4 plastic

Method of shipment: Sun Star (lab name)

- [ ] Courier
- [x] Hand Deliver

Well Number: MW 3

Depth of Water: 47.77

Well Depth: 85.60

Height of Water Column: 37.83

Volume in Well: (gallons) 24.58

3 Well Volumes: (gallons) 73.74

Well Diameter:

- [ ] 2" (0.16 gallon / feet)
- [x] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 30.26/55.34

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
07:30		0		58.1	6.88	8.69		clear, no odor, no sheen
07:35		25		51.4	6.89	~~7.54~~ 6.61 DPB		" " " " "
07:40		50		51.7	6.88	6.67		" " " " "
07:48		75		51.9	6.88	6.71		" " " " "
						~~6.55~~ DPB		

Inlet Depth: _____

Reviewed by: _____ Signed: _____ Date: _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002 - 10231-01

Project Name: CLG Properties

Project Location: Long Beach

Site Conditions/Weather: clear, cool

Page 2 of 3

Date: 12/18/06

Day: M T W Th F S S

LFR Staff: DEB / JJO

Comments :

SAMPLING METHOD

- [ ] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Hand Bail
- [x] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW 5

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested: See C.O.C.

Number and Types of Bottle Used: 6 VOA, 4 plastic

Method of shipment: SunStar (lab name)

- [ ] Courier
- [x] Hand Deliver

Well Number: MW 5

Depth of Water: 32.14

Well Depth: 55.55

Height of Water Column: 23.41

Volume in Well: (gallons) 3.75

3 Well Volumes: (gallons) 11.24

Well Diameter:

- [x] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 18.73 / 36.82

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0905		0		63.0	7.21	2.47		rusty, no odor, no sheen
0912		4		60.9	7.19	2.35		rusty
0918		8		62.6	7.18	2.19		
0920		12		62.4	7.20	2.18		clear, no odor, no sheen

Inlet Depth: _____

Reviewed by: _____ Signed: _____ Date: _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002 · 10231 · 01

Project Name: CRG Properties

Project Location: Long Beach, CA

Site Conditions/Weather: Clear, cool

Page 3 of 3

Date: 12/18/06

Day: (M) T W Th F S S

LFR Staff: DAB / JJO

Comments :

SAMPLING METHOD

- [ ] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Hand Bail
- [x] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: _____

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested: See C.O.C.

Number and Types of Bottle Used: 6 VOA, 1 plastic

Method of shipment: SunStar (lab name)

- [ ] Courier
- [x] Hand Deliver

Well Number: MW6

Depth of Water: 28.43

Well Depth: 54.85'

Height of Water Column: 26.42

Volume in Well: (gallons) 4.22

3 Well Volumes: (gallons) 12.68

Well Diameter:

- [x] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area	
Height of water column =	
Depth to water =	
80% DTW	21.14 / 33.71'

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0950	28	0		66.2	7.13	3.94		clear, no odor, no sheen
1000		4		67.9	7.02	4.75		" " " " "
1010		8		69.2	6.97	4.90		" " " " "
1020		12		66.7	6.98	4.72		" " " " "

Inlet Depth: _____

Reviewed by: _____ Signed: _____ Date: _____

Water-Level Measurements

LFR LEVINE•FRICKE

Project Number: 002-10231-01

Project Name: CRG Properties

Project Location: Long Beach

Site Conditions/Weather: clear, cool

Comments :

Page 1 of 1

Date: 12/18/06

Day: (M) T W Th F S S

LFR Staff: DPB / JJO

Well Number	Time	Depth Measurements (feet below measuring point)			Product Thickness (feet)	Comments (Elevation, Condition Of Well Box, Etc.)
		Casing Depth	Depth to Product	Depth to Water		
MW3	0720	85.60	~~nd~~ 0	47.77	0	Needs cap, bolts
after bail	0750	"	0	49.13	0	
MW5	0900	55.55	0	32.14	0	
after bail	0930	"	0	35.29	0	
MW6	0945	54.85	0	28.43	0	
after bail	1030	"	0	31.68	0	

Reviewed by: _____ Signed: _____ Date: _____

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	[illegible]		[illegible]	010339

5. Generator's Name and Mailing Address

[illegible]
[illegible]
[illegible], CA [illegible]

Generator's Site Address (if different than mailing address)

3701 Pacific Place
Long Beach, CA [illegible]

Generator's Phone: [illegible]

6. Transporter 1 Company Name: [illegible]

U.S. EPA ID Number: CAR000146330

7. Transporter 2 Company Name:

U.S. EPA ID Number:

8. Designated Facility Name and Site Address

Crosby & Overton
2810 W. 11th Street
Long Beach, CA 90813

U.S. EPA ID Number: CAD078400018

Facility's Phone: 562-432-5445

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non-Hazardous waste liquid	2	[illegible]	110	G	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

Where appropriate PPE when handling. Weights or volumes are approximate
Pm#27001 21 Profile #27578

2 drums

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: [illegible] Shannon | Signature | Month: 1 | Day: 5 | Year: 07

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ron Briggs | Signature | Month: 1 | Day: 5 | Year: 07

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

H-135

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Tarred Chatterjee | Signature: Tarred Chatterjee | Month: 01 | Day: 08 | Year: 07

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 002-10231-00 Page 1 of 1

Project Name: CRG PROPERTIES Date: 11/19/03

Project Location: LONG BEACH, CA GOLF CEMENTING CONTRACTOR Day: M T (W) Th F S S

Site Conditions/Weather: CLEAR SKY, DRY, COOL LFR Staff: ROC

Job Description: SITE TONING

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
GOLDACH	DW	0620	0730	TONE 9 W LOCATIONS

EQUIPMENT NOTES FOR CB

Owner	Item	Comments
	- CHRISTINE B. WILL BE COMING ALONG W THE BACK GATE @ RIG OFFICE	
	- SPRINKLERS WILL BE FLAGGED	
	- ACCESS TO SITE MUST UTILIZE ACCESS ROAD	

VISITORS	Comments

Time	Activities
0530	LEAVE OFFICE FOR SITE
0600	ARRIVE @ SITE.
0620	MEET GOLDACH
0630-0730	MARK LOCATIONS, WITH # AND PINK FLAG. LOCATION @ FURTHEST NORTHERN LOCATION IS NOT FULLY STRAIGHT CAPABLE TO DRILL. ITS FENCED IN, NO ACCESS, ON A HILL.
07:30-8:30	MEASURE LOCATIONS WITH WHEEL, MARK STAKES WITH ASSOCIATING #'S.
0-830	LEAVE SITE
09:00	RETURN TO OFFICE, PUT EQUIPMENT BACK.

continue on reverse as needed

Reviewed by: _____ Signed: _____ Date: _____

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 002-10231-00 /002 **Page** 1 of 1

Project Name: CRG PROPERTIES **Date:** 11-20-03

Project Location: LONG BEACH **Day:** M T W (Th) F S S

Site Conditions/Weather: NIGHT **LFR Staff:** CLB

Job Description: SOIL BORINGS

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
BC2	MIKE	1000	0545	
	RUDY	1000	0545	
	JUAN	1130	0545	

EQUIPMENT

Owner	Item	Comments

VISITORS	Commenta

Time	Activities
0730	Left for site. Stopped by office for paperwork, equipment
0900	Arrived site. Tailgate onsite. Drove site with groundskeeper & checked locations. Chris Mardi Arrive site, Begg driving arrive site
1130	Juan arrives site. (Driller for Rx.) Will set up over B-2; see log for details
0200	Moved to B3; see log for details
0335	Moved to B5; see log for details
0545	Offsite w/ drillers

continue on reverse as needed

Reviewed by: _____ **Signed:** _____ **Date:** _____

Tim Chris 925 949 5775

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 052-10231-00/002

Page 1 of 1

Project Name: CRG PROPERTIES

Date: 11-21-03/11-22-03

Project Location: LONG BEACH CA

Day: M T W Th F S S

Site Conditions/Weather: COLD

LFR Staff: CAB

Job Description: SOIL BORINGS

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
BC²	Juan	2000		
	Rudy	2000		
	Mike	2000		

EQUIPMENT

Owner	Item	Comments

VISITORS	Comments

Time	Activities
2000	Arrive site w/ BC². Will drill B1 - see log for details
2215	Moving to B7 - see log for details
0030	Set up over B6 - see log for details
0140	Set up over B4 - see log for details
0345	Offsite w/ drillers.

continue on reverse as needed

Reviewed by: _____ Signed: _____ Date: _____

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T301254

Client: LFR

Address: 3150 BRISTOL ST 250 COSTA MESA CA 92626

Phone: 714-444-0111 Fax: 714-444-0117

Project Manager: DENNIS WILLD

Date: 11-21-03 Page: 1 Of 2

Project Name: 002-10231-00 / 002 ← CLG PROPERTIES

Collector: CLD Client Project #:

Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260 B	EPA 8270	EPA 418.1	EPA 8015M (gasoline) - C6	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA 8082 PCBs	EPA 6010 MOTALS	EPA 8015M CAMPBELL CHAIN	Laboratory ID #	* HOLD *	Comments	Total # of containers
B2-5	11-21-03	0035	SOIL														01	X		1
B2-10	11-21-03	0040															02	X		
B2-15	11-21-03	0045															03	X		
B2-20	11-21-03	0055															04	X		
B2-25	11-21-03	0100															05	X		
B2-30	11-21-03	0105					[redacted]			[redacted]							06	X		
B2-35	11-21-03	0110															07	X		
B2-40	11-21-03	0115															08	X		
B2-45	11-21-03	0120															09	X		↓
B2-50	11-21-03	0125		5035			X	X		[redacted]				X	X	X	10			3
B3-5		0225															11	X		1
B3-10		0227					[redacted]			[redacted]							12	X		
B3-15		0230															13	X		
B3-20		0235															14	X		
B3-25	↓	0240	↓														15	X		↓

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
[signature]	11-21-03 / 1550	[signature]	11/21 03 1550
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 17

Chain of Custody seals Y/N/NA: (NA)

Seals intact? Y/N/NA: (NA)

Received good condition/cold: 3°c

Turn around time: STD

Notes

Sample disposal Instructions Disposal @ $2.00 each ___ Return to client ___ Pickup ___

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T 301254

Client: LFR
Address: 3150 Bristol ST 250 Costa Mesa CA 92626
Phone: 714-444-0111 Fax: 714-444-0117
Project Manager: Derrick Wilkes

Date: 11-21-03 Page: 2 of 2
Project Name: 007-10231-00/007 CRG PROPERTIES
Collector: CAB Client Project #:
Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260	EPA 8270	EPA 418.1	EPA 8015M (carbon chain)	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA Lead Metals	Soil Lead	Laboratory ID #	Preservative # HOLD *	Comments	Total # of containers
B3-30	11-21-03	0850	Soil													16	X		1
B3-35		0855														17	X		
B3-40		0905														18	X		
B3-45		0910														19	X		
B3-50		0915		6035			X	X		X				X	X	20			3
B5-5		0955														21	X		1
B5-10		0400														22	X		
B5-15		0402					■			■						23	X		
B5-20		0405														24	X		
B5-25		0410														25	X		
B5-30		0415														26	X		
B5-35		0420														27	X		
B5-40		0430														28	X		
B5-45		0435					■			■						29	X		
B5-50	↓	0440	↓	6035			X	X		X				X	X	30			3

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	11-21-03 1550		11-21-03 1550
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 19
Chain of Custody seals Y/N/NA: N
Seals intact? Y/N/NA: N
Received good condition/cold: 3°

Turn around time: STD

Notes

Sample disposal Instructions. Disposal @ $2.00 each ___ Return to client ___ Pickup ___

Joint

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T30 1260

Client: LFR
Address: 3160 Bristol St 250 Costa Mesa CA 92626
Phone: 714-444-0111 Fax: 714-444-0117
Project Manager: Derrick Willis

Date: 11-22-03 Page: 1 Of 3
Project Name: CRB Properties
Collector: CLB Client Project #: 002-10731-01 / 002
Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260B	EPA 8270	EPA 418.1	EPA 8015M (CA LUFT CHAIN)	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA 6010 METALS	EPA 8260 PLUS	HOLD	Laboratory ID #	Preservative	Comments	Total # of containers
B2-50	11-21-03	0925	SOIL				X	X		X				X	X					1
B3-50		0305					X	X		X				X	X					1
B5-50		0940		[redacted]			X	X		X				X	X					1
B1-5	11-24-03	2040														X				
B1-10		2042														X				
B1-15		2045														X				
B1-20		2050														X				
B1-25		2055														X				
B1-30		2100														X				
B1-35	[redacted]	2105					[redacted]			[redacted]						X				
B1-40		2110														X				
B1-45		2115														X				
B1-50		2120		500X			X	X		X				X	X			3		1
B7-5		2145														X		1		1
B7-10		2150														X		1		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	11-24-03 / 0925		11-24-03 9:25
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 11°C

Turn around time: STD

Notes

Sample disposal instructions Disposal @ $2 00 each ___ Return to client ___ Pickup ___

[redacted] Analytical

SUN STAR T301260

[redacted]

CHAIN OF CUSTODY FORM

Client Name/Address:	P.O. #: 002-10231-00/002
LPC 3150 BRISTOL ST 250 COSTA MESA CA 92627	Project: CMG PROPERTIES
Project Manager/Phone Number: DERRICK WILLS	**Phone Number:** 714-444-0141
Sampler: CLB	**Fax Number:** 714-444-0117

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation TIME	8260B	8270D	Carbon Chain 8015M	LUFT Metals 6010	8082 PCBs		HOLD			Special Instructions
B7 - 15	Soil		1	11-21-03	2255							X			
B7 - 20					2300							X			
B7 - 25					2305							X			
B7 - 30					2315							X			
B7 - 35					2320	[redacted]		[redacted]				X			
B7 - 40					2330							X			
B7 - 45					2340							X			
B7 - 50			4		2350	X	X	X	X	X					
B6 - 5			1	11-22-03	0045							X			
B6 - 10					0048							X			
B6 - 15					0050							X			
B6 - 20					0055							X			
B6 - 25					0057							X			
B6 - 30					0100	[redacted]		[redacted]				X			
B6 - 35					0105							X			

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	11-24-03 0925	[signature]	11-24-03 9:15
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal X
Sample Integrity: (Check)
Intact _____ On Ice: _____

[redacted]

SUNSTAR (T301260)

Pg 3 of 3

CHAIN OF CUSTODY FORM

Client Name/Address:	P.O. #: 002-10231/00/002
LFR 3150 Bristol St 260 Costa Mesa CA 92626	Project: CRG Properties
Project Manager/Phone Number:	**Phone Number:**
Derrick Wood	714-444-014
Sampler:	**Fax Number:**
CLB	714-444-0157

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	~~Preservation~~ TIME	8260 B	8270	CAM 17 8015M	6010 METALS	8082 PCBs	HOLD	Special Instructions
B6 - 40	Soil		1	11-22-03	0110						X	
B6 - 45	↑		1	↑	0115						X	
B6 - 60	↑	5035	4	↑	0120	X	X	X	X	X		
B4 - 5	↑	↑	1	↑	↑						X	
B4 - 10	↑	↑	↑	↑	↑	[redacted]		[redacted]			X	
B4 - 15	↑	↑	↑	↑	↑						X	
B4 - 20	↑	↑	↑	↑	↑						X	
B4 - 25	↑	↑	↑	↑	↑						X	
B4 - 30	↑	↑	↑	↑	↑						X	
B4 - 35	↑	↑	↑	↑	↑						X	
B4 - 40	↑	↑	↑	↑	↑						X	
B4 - 45	↑	↑	↓	↑	↑						X	
B4 - 50	↓	5035	4	↓	↑	X	X	X	X	X		

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	11-24-03/0925	[signature]	11-24-03 0925
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal X
Sample Integrity: (Check)
Intact _____ On Ice:

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 002-10231-00.003 Page 1 of

Project Name: CRB Properties Date: 5/6/04

Project Location: LB Golf Learning Ctr. Day: M T W (Th) F S S

Site Conditions/Weather: no adverse LFR Staff: CKB SCO

Job Description: well installation

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
LFR	Sonia, Charlotte	0545		
BC	Mike, Diego, Daniel	0700		
Goldak		0600	0630	

EQUIPMENT

Owner	Item	Comments
Equip Co	W. level meter, D.I.D	

VISITORS	Comments

Time	Activities
0545 ~~0600~~	Arrive onsite. Set ups.
0845	Finished drilling first well. Now pouring sand and grout.
1005	Mobilization to next location.
1015	Began drilling.
1130	Installing well.
1230	Well installation & monument complete. Cleaning up.
1315	Offsite

continue on reverse as needed

Reviewed by: Signed: Date:

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 062-10231-4 Page 1 of 1

Project Name: CRB Properties Date: 5/11/04

Project Location: Long Beach Day: M T W Th F S S

Site Conditions/Weather: no odor LFR Staff: CRB SCD

Comments: well development - Surge w/ block for 15 min.

SAMPLING METHOD

- ☐ Centrifugal Pump
- ☐ Submersible Pump
- ☐ Hand Bail
- ☐ Disposable Bailer
- ☐ Teflon Bailer
- ☑ Metal bailer (other)

Sample Number: N/A

- ☐ FB:
- ☐ DUP:

Analysis Requested: N/A

Number and Types of Bottle Used:

Method of shipment: N/A (lab name)

- ☐ Courier
- ☐ Hand Deliver

Well Number: MW-6

Depth of Water: 35.84

Well Depth: 55.0

Height of Water Column: 19.16

Volume in Well: (gallons) 3.1

3 Well Volumes: (gallons) 9.2

Well Diameter:

- ☒ 2" (0.16 gallon / feet)
- ☐ 4" (0.65 gallon/ feet)
- ☐ 5" (1.02 gallon/ feet)
- ☐ 6" (1.47 gallon/ feet)

Calculation Area	
Height of water column =	19.16
Depth to water =	35.84
80% DTW	

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °C	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
1114	35.84	10		22.8	5.20	6.61	999	
1130		20 15		22.5	5.24	6.23	272	
1147		~~30~~ 20		22.1	5.31	6.12	248	
1205		~~40~~ 25		22.2	5.35	6.21	79	
1215		30		~~22.2~~	5.38	~~6.14~~	180	
1221		40		22.1	5.38	6.35	250	
1230		50		22.0	5.40	6.32	260	
1235	35.92	55		21.5	5.36	6.32	254	

Inlet Depth:

Reviewed by: Signed: Date:

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 002-10231-00 **Page** 1 of 1

Project Name: CRG Properties **Date:** 5/11/04

Project Location: Long Beach **Day:** M T W Th F S S

Site Conditions/Weather: no adverse **LFR Staff:** CXB SCO

Job Description: well development

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
LFR	Charlotte, Sonia	0645	1300	
J&H	Robert	0700	1310	

EQUIPMENT

Owner	Item	Comments
Equipco	U-10	

VISITORS	Comments

Time	Activities
0648	Arrive onsite. Set up.
0700	J&H on site. Setup.
0915	Take break.
0930	Back to work. Continue purging.
1020	Finish developing MW-5. Never cleared up totally after approx. 10 well volumes. Mobilize to mw-6.
1055	Begin purging MW-6.
1110	Finish purging. Setup & begin purging
1240	Finished purging MW-6. Cleaning up.
1300	offsite

continue on reverse as needed

Reviewed by: _____ **Signed:** _____ **Date:** _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 022-10231-00 Page 1 of 1

Project Name: CRG Properties Date: 5/11/04

Project Location: Long Beach Day: M (T) W Th F S S

Site Conditions/Weather: no advise LFR Staff: CKD SCD

Comments: well development. Surge well for 15 min. Use metal bailer - no pump.

SAMPLING METHOD

- ☐ Centrifugal Pump
- ☐ Submersible Pump
- ☐ Hand Bail
- ☐ Dispossble Bailer
- ☐ Teflon Bailer
- ☒ metal bailer (3.5 gal per bailer) (other)

Sample Number: NA

- ☐ FB:
- ☐ DUP:

Anslysis Requested

NA

Number and Types of Bottle Used

Method of shipment

N/A (lab name)

- ☐ Courier
- ☐ Hand Deliver

Well Number: MW-5

Depth of Water: ~~Surface~~

Well Depth: 55.0

Height of Water Column: 55.0

Volume In Well: (gallons) 8.8

3 Well Volumes: (gallons) 26.4

Well Diameter:

- ☒ 2" (0.16 gallon / feet)
- ☐ 4" (0.65 gallon/ feet)
- ☐ 5" (1.02 gallon/ feet)
- ☐ 6" (1.47 gallon/ feet)

Calculation Area

Height of water column =

Depth to water =

80% DTW

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F °C	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0740	0.0	0		~~21.~~				Silty. don't collect reading.
0754		10.0		21.6	5.27	2.15	108	
0803		15.0		21.2	5.32	~~1.62~~ 2.01	108	
0814		20.0		21.1	5.36	2.09	108	
0827		~~20~~ 25.0		21.6	5.37	2.05	~10	
0846		450.0		21.5	5.39	2.10	~~999~~ 10	
0906		50.0		21.5	5.39	2.08	999	
0938		60.0		21.6	5.44	2.02	88	
1006		75.0		21.8	5.44	2.00	87	
1043	36.8	90.0		21.5	5.~~40~~	1.99	87	have purged 9 well volumes. Not getting any clearer.

Inlet Depth: N/A

Reviewed by: Signed: Date:

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-00 Page 1 of 3

Project Name: CRG Properties Date: 05/19/04

Project Location: Long Beach, CA Day: M T (W) Th F S S

Site Conditions/Weather: Clear LFR Staff: JZG

Comments: Needs well cap although may not fit due to proximity to well.

SAMPLING METHOD

- [X] Centrifugal Pump
- [ ] Submersible Pump
- [X] Hand Bail
- [X] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW-3-051904

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested

See C.O.C.

Number and Types of Bottle Used

6 VOA
2 1-Liter Amber
1 Plastic

Method of shipment

Sunstar (lab name)

- [ ] Courier
- [X] Hand Deliver

Well Number: MW-3
Depth of Water: 55.64
Well Depth: 77.60
Height of Water Column: 21.96
Volume in Well: (gallons) 14.3
3 Well Volumes: (gallons) 42.9

Well Diameter:

- [ ] 2" (0.16 gallon / feet)
- [X] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area

Height of water column =
Depth to water =

80% DTW 60.03

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
7:40		0		23.2	6.63	14.6	12	
		15		23.4	6.75	14.0	24	
		30		23.1	6.79	14.2	11	
		45		23.1	6.70	14.6	3	
8:20	56.56	Sample						

Inlet Depth: 72.6

Reviewed by: _____ Signed: _____ Date: _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-00

Page 1 of 3

Project Name: CRG Properties

Date: 05/19/04

Project Location: Long Beach, CA

Day: M T (W) Th F S S

Site Conditions/Weather: Clear

LFR Staff: JZG

Comments : None

SAMPLING METHOD

- [X] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Hand Bail
- [X] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW-5-051904

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested

See C.O.C

Number and Types of Bottle Used

6 - VOA
2 - 1-liter Amber
1 - Plastic

Method of shipment: ~~Del Mar~~ Sunstar (lab name)

- [ ] Courier
- [X] Hand Deliver

Well Number: MW-5
Depth of Water: 36.79
Well Depth: 55.00
Height of Water Column: 18.21
Volume in Well: (gallons) 3
3 Well Volumes: (gallons) 9

Well Diameter:

- [X] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 40.43

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
9:41		0		26.3	7.47	2.3	53	
		3		25.6	7.47	1.8	17	
		6		22.4	7.46	2.0	6	
		9		22.3	7.47	2.0	4	
10:00	38.46	Sample						

Inlet Depth: Not 50.'

Reviewed by: _____ Signed: _____ Date: _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-K0231-00 Page 3 of 3

Project Name: CRG Properties Date: 05/19/04

Project Location: Long Beach, CA Day: M T W Th F S S

Site Conditions/Weather: Clear LFR Staff: JZG

Comments : None

SAMPLING METHOD

- [X] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Hand Bail
- [X] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW-6-051904

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested: See C.O.C

Number and Types of Bottle Used: 6 - VOA; 2 - 1-Liter Amber; 1 - Plastic

Method of shipment: SunStar (lab name)

- [ ] Courier
- [X] Hand Deliver

Well Number: MW-6

Depth of Water: 35.96

Well Depth: 55.00

Height of Water Column: 19.04

Volume in Well: (gallons) 3

3 Well Volumes: (gallons) 9

Well Diameter:

- [X] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 39.77

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
10:51		0		27.0	7.21	6.5	99	
		3		24.3	7.18	6.7	80	
		6		23.6	7.16	6.7	41	
		9		23.5	7.17	6.7	32	
11:10	37.02	Sample						

Inlet Depth: 50

Reviewed by: _____ Signed: _____ Date: _____

CHAIN OF CUSTODY - ANALYSES REQUEST FORM

Project No.: 002-10231-(X)	**Date:** 05/19/04
Project Name: CRG Acquisitions	**Project Location:** Long Beach, CA
Sampler (Signature):	**Samplers:** JZG

Serial No.: Nº 02- 11821

Item No.	SAMPLE ID (Example: Sample type - Location - Sample depth (if applicable) - Date; MW - 01 - - 010100; SB - 01 - 05 - 010100)	Sample Type	No. of Containers	Lab Sample No.	Date Sampled	Time	ANALYSES: TPHcc 8015M	VOC 8260	SVOC 8270	PCB's 8082	Metals 6010/7000	Turnaround Time: Standard	Expedited:	HOLD	REMARKS
1	MW-3-051904	Groundwater	9		5/19/04	08:20	X	X	X	X	X		X			Report +
2	MW-5-051904	↓	↓		↑	10:00	↓	↓	↓	↓	↓		↓			Invoice to
3	MW-6-051904	↓	↓		↓	11:10	↓	↓	↓	↓	↓		↓			Derrick Wills
4																
5																
6																
7																
8																
9																
10																

Received By: (Signature)	Date: 5/19/04	Time: 4:20pm	Received By: (Signature)	Date: 5/20/04	Time: 14:00
Received By: (Signature)	Date:	Time:	Received By: (Signature)	Date:	Time:
Received By: (Signature)	Date:	Time:	Received By: (Signature)	Date:	Time:
Method of Shipment:			Lab Comments:		

Sample Collector:

LFR LEVINE • FRICKE
3150 Bristol Street, Suite 250
Costa Mesa, California 92626
(714) 444-0111 • fax (714) 444-0117
www.LFR.com

LAB REPORT No.

Analytical Laboratory:

CITY OF LONG BEACH

DEPARTMENT OF HEALTH & HUMAN SERVICES

2525 Grand Avenue Long Beach, CA 90815-1765 (562) 570-4134 FAX (562) 570-4038

WELL PERMIT

Permit # 0991

Date: May 5, 2004

All work must be completed in accordance with Water Well Bulletin 74-81 and 74-90

Site Address:	3701 Pacific Place
Owner:	CRG Properties, Inc.
Owner Address:	Santa Ana, Ca
Consulting Firm:	LFR
Consulting Firm Address:	3150 Bristol St. Ste 250
Drilling Company:	BC2 Environmental
Drilling Company Address:	1835 E. Dawn Way Ste. B
Method of Construction/Destruction:	see attached
Number of Wells/Borings:	2 constructions

This permit valid for one year from date above

Steven Nakauchi, REHS IV
Cross-Connection/Water Program

CITY OF LONG BEACH

DEPARTMENT OF HEALTH & HUMAN SERVICES

2525 Grand Avenue Long Beach, CA 90815-1765 (562) 570-4134 FAX (562) 570-4038

0991

APPLICATION FOR WELL PERMIT

Date: 5/ 3/04

Type of Permit: (check)

☒ New Well Construction
☐ Destruction

Type of Well: (check)

☒ Monitoring (2)
☐ Cathodic
☐ Private Domestic
☐ Public Domestic
☐ Irrigation
☐ Soil Boring
☐ Vapor Extraction
☐ Other

Well Owner Name: CRA Properties, Inc.
Address: 4010 Chandler Ave.
City: Santa Ana, CA
Phone: 714-460-1031

Site Address 3701 Pacific Place
Site Map ☒ Site plan attached

Consulting Firm: LFR
Address: 3150 Bristol St. Ste. 250
City: Costa Mesa, CA
Phone: 714-444-0111

Drilling Company: BC² Environmental
Address: 1835 E. Dawn Way Ste. B
City: Fullerton, CA
Phone: 714 449-2990

Construction/Destruction Method
Type of casing, method of sealing, etc.
(Use additional sheet or attachments)

2" schedule 40 PVC casing, 0.020" slot screen, 25' screen, #2/12 silica sand extends 3' above slotted casing, hydrated bentonite chips 3' above sand pack, grout to surface, locking well monument, concrete.

Proposed Start Date:

5/6/04

To be done in accordance with Water Well Bulletin 74-81 & 74-90

I hereby agree to comply in every respect will all regulations of the Long Beach Department of Health and Human Services and with all ordinances and laws of the City of Long Beach and of the State of California pertaining to well construction, reconstruction and destruction. Upon completion of well and within ten days thereafter, I will furnish the Long Beach Department of Health and Human Services with a complete log of the well, giving date drilled, depth of well, all perforations in casing, and any other data deemed necessary by other City agencies.

Applicants Signature: Charlotte A Bushoffer
Print Name: Charlotte A Bushoffer

Disposition of Application: (For Office Use Only)

☒ Approved with Conditions
☐ Denied

Date: 5-5-04

If denied or approved with conditions, report reason or conditions here:

Approved By

Final Remedial Investigation Report
Former Oil Operators North Site
3701 Pacific Place
Long Beach, California

May 27, 2009
002-10231-063

Prepared For
CRG Properties, Ltd.
4010 W. Chandler Avenue
Santa Ana, California 92704

Prepared By
LFR Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626

LFR an ARCADIS company

LFR an ARCADIS company

May 27, 2009 002-10231-06

Mr. Greg Holmes, Unit Chief
California Department of Toxic Substances Control
Southern California Cleanup Operations
5796 Corporate Avenue
Cypress, California 90630-4732

Subject: Final Remedial Investigation Report, Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California

Dear Mr. Holmes:

LFR Inc. (LFR) has prepared the attached Final Remedial Investigation Report to document and present the results of investigation activities at the former Oil Operators, Inc. North facility located at 3701 Pacific Place, Long Beach, California ("the Site"). LFR previously completed and submitted a Revised Data Characterization Report for the Site, which included our responses to the California Department of Toxic Substances Control's (DTSC) comments dated March 12, 2007. Data gaps identified by that report have been addressed by this remedial investigation, and we believe the project is now ready for a Feasibility Study.

If you have any questions regarding the material presented in this report, please contact the undersigned at 714-444-0111.

Sincerely,

Melissa C. Schuetz

Melissa C. Schuetz
Senior Associate Geologist

Attachments

714.444.0111 m
714.444.0117 f
www.lfr.com
3150 Bristol Street, Suite 250
Costa Mesa, California 92626
Offices Nationwide

CONTENTS

1.0 INTRODUCTION....1

2.0 BACKGROUND....2

2.1 Previous Site Investigations....3

2.1.1 Oil Sump Site Development Feasibility Study (August 25, 1983) and Oil Sump Site Development, Supplemental Investigation (January 1984)....3

2.1.2 Geotechnical Investigation....4

2.1.3 Site Characterization Study....5

2.1.4 Test Plot at Oil Operators North Site....7

2.1.5 Land Farming Activities....7

2.1.6 Results of Post-Excavation Soil Sampling....8

2.1.7 Groundwater Monitoring Reports....8

3.0 GEOLOGY....10

4.0 HYDROLOGY....10

4.1 Regional Degradation of Groundwater Quality from TDS and Chloride Concentrations....12

5.0 REMEDIAL INVESTIGATION ACTIVITIES....13

5.1 Pre-Field Activities....13

5.2 Soil Sampling....14

5.3 Groundwater Monitoring Well Installation....15

5.4 Groundwater Sampling....16

6.0 REMEDIAL INVESTIGATION RESULTS....16

6.1 Soil Sampling and Analysis....16

6.2 Groundwater Elevation and Flow Direction....17

6.3 Groundwater Sampling – November 2003 and May 2004....18

6.4 Groundwater Sampling – December 2006....19

7.0 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES 20
7.1 Pre-Field Activities 20
7.2 Soil Gas Sampling 20
7.3 Soil Sampling 21
7.4 Groundwater Monitoring Well Installation, Development, and Survey 23
7.5 Groundwater Sampling 23

8.0 ADDITIONAL REMEDIAL INVESTIGATION RESULTS 23
8.1 Soil Gas Sampling and Analysis 23
8.1.1 VOCs 24
8.1.2 Methane 24
8.1.3 Oxygen, Carbon Dioxide, and Hydrogen Sulfide 25
8.2 Soil Sampling and Analysis 25
8.2.1 Total Petroleum Hydrocarbons as Gasoline 25
8.2.2 Total Petroleum Hydrocarbons as Diesel 25
8.2.3 Total Petroleum Hydrocarbons as Motor Oil 26
8.2.4 SPLP TPHcc 26
8.2.5 MA DEP EPH 26
8.2.6 MA DEP VPH 26
8.2.7 VOCs 27
8.2.8 SVOCs 28
8.2.9 Metals 28
8.2.10 PCBs 30
8.2.11 Organochlorine Pesticides 31
8.2.12 pH 31
8.3 Groundwater Elevation and Flow Direction 31
8.4 Groundwater Sampling – December 2007 31
8.5 Quality Assurance/Quality Control 32

9.0 SUMMARY 33
9.1 Soil 33
9.2 VOCs in Soil Gas 35

9.3 Methane 35
9.4 Groundwater 36

10.0 CONCLUSIONS 37
10.1 Soil 37
10.2 Soil Gas 38
10.3 Methane 39
10.4 Groundwater 39

11.0 REFERENCES 40

12.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS 43

TABLES

1 Summary of Soil Samples Analyzed for Metals
2 Summary of Soil Samples Analyzed for Total Petroleum Hydrocarbons Carbon Chain Range (TPHcc)
3 Summary of Soil Samples Analyzed for Polychlorinated Biphenyls (PCBs)
4 Summary of Soil Samples Analyzed for Volatile Organic Compounds (VOCs)
5 Summary of Soil Samples Analyzed for Semi-Volatile Organic Compounds (SVOCs)
6 Summary of Groundwater Samples Analyzed for Metals
7 Summary of Groundwater Samples Analyzed for TPHcc and TRPH
8 Summary of Groundwater Samples Analyzed for VOCs
9 Summary of Groundwater Samples Analyzed for SVOCs
10 Summary of Groundwater Samples Analyzed for Specific Conductance, pH, Anions, and Inorganics
11 Groundwater Elevations
12 Summary of Soil Gas Samples Analyzed for VOCs Using EPA Method 8260B
13 Summary of Soil Gas Samples Analyzed for VOCs Using EPA Method TO-15
14 Summary of Soil Gas Samples Analyzed for Methane
15 Summary of Soil Samples Analyzed for TPH in Borings B6A, B7A, and MW-7
16 Summary of Selected Soil Samples Analyzed using MADEP EPH and VPH Methodologies in Boring B7A
17 Summary of Soil Samples Analyzed for VOCs in Borings B6A, B7A, and MW-7

18 Summary of Soil Samples Analyzed for SVOCs in Borings B6A, B7A, and MW-7

19 Summary of Soil Samples Collected in the Fill and Analyzed for Metals

20 Summary of Soil Samples Analyzed for Metals in Borings B6A, B7A, and MW-7

21 Summary of Soil Samples Collected in the Fill and Analyzed for PCBs

22 Summary of Soil Samples Analyzed for PCBs in Borings B6A and B7A

23 Summary of Soil Samples Collected in the Fill and Analyzed for Organochlorine Pesticides

24 Summary of Groundwater Samples Analyzed for Metals – December 3, 2007

FIGURES

1 Vicinity Map

2 Site Map

3 Sampling Locations, Previous Investigations

4 Subsurface Profile No. 1

5 Subsurface Profile No. 2

6 Subsurface Profile No. 3

7 Isopach Map of Sump Materials

8 Site Map Showing Previous Analytical Results for TPH in Soil, 2003

9 Site Map Showing Previous Analytical Results for VOCs in Soil, 2003

10 Site Map Showing Previous Analytical Results for SVOCs in Soil, 2003

11 Site Map Showing Previous Analytical Results for Metals in Groundwater, 1996–2006

12 Site Map Showing VOC Concentrations in Soil Gas Using EPA Method 8260B, November 12–14, 2007

13 Site Map Showing VOC Concentrations in Soil Gas Using EPA Method TO-15, November 14, 2007

14 Site Map Showing Methane Concentrations in Soil Gas at 5 Feet bgs, November 12–15, 2007

15 Site Map Showing Methane Concentrations in Soil Gas at 10 Feet bgs, November 12–15, 2007

16 Site Map Showing TPH Concentrations in Soil for Borings B6A, B7A, and MW-7

17 Site Map Showing VOC Concentrations in Soil for Borings B6A, B7A, and MW-7

18 Site Map Showing SVOC Concentrations in Soil for Borings B6A, B7A, and MW-7

19 Site Map Showing Metal Concentrations in Soil for Borings B6A, B7A, and MW-7

20 Groundwater Elevation and Flow Direction, December 3, 2007

21 Site Map Showing Analytical Results in Groundwater, December 3, 2007

APPENDICES

A DTSC Correspondence dated July 5 and July 12, 2006

B Response to DTSC Comments on the Characterization Data Report, March 12, 2007

C Historical Review

D Reports of Previous Investigations

E Summary of Groundwater Conditions

F Boring Logs Prepared by LFR

G Field Data Sheets and CPT Report

H Laboratory Reports Prepared for LFR

I Remedial Investigation Workplan and DTSC Approval Letter

J Summary of Background Metals Concentrations

K Boring Logs – Additional Remedial Investigation

L Well Permit, Field Reports, Non-Hazardous Waste Manifest, and Survey Data

M EST Soil Gas Installation and Monitoring Forms – Additional Remedial Investigation

N Laboratory Reports and Chain-of-Custody Documentation – Additional Remedial Investigation

O Response to DTSC Comments – LFR Letter Dated October 10, 2008

P Response to LFR Letter – DTSC Letter Dated December 18, 2008

1.0 INTRODUCTION

On behalf of CRG Properties, Ltd. (CRG), LFR Inc. (LFR) is submitting this Remedial Investigation (RI) Report to document investigation activities at the former Oil Operators, Inc. (Oil Operators) North facility located at 3701 Pacific Place, Long Beach, California ("the Site"; Figure 1). LFR previously completed and submitted a Revised Data Characterization Report for the Site, which included our responses to the California Department of Toxic Substances Control's (DTSC) comments dated March 12, 2007. Data gaps identified from that investigation have been addressed by efforts to complete this RI.

The Site is a Brownfield development, with CRG and its development partners aspiring to develop the property with a one- or two-story warehouse-type building, parking facility or combination of these uses. As such, in cooperation with DTSC, requirements for this RI and other related regulatory efforts have been streamlined to effect decisions for this more directed purpose. Since this is a voluntary action and CRG knows what it desires, the related efforts are directed, with less strict adherence to the National Contingency Plan or similar State directives. CRG entered into the Voluntary Cleanup Agreement on December 20, 2005, and desires DTSC and other agency approvals to effect development of this parcel in the near future.

The Site is currently occupied by the Long Beach Golf Learning Center, which consists of a golf driving range, practice putting and chipping areas, a snack bar, a golf shop, a maintenance building, and a paved parking lot. The approximately 18-acre Site consists of three contiguous properties: Portion 1 is owned by CRG Properties, Ltd., and is designated by Los Angeles County Assessor Parcel Numbers (APNs) 7140-014-019 and 7140-014-020; Portion 2 is owned by John B. McDonald/Family J.B. McDonald and is designated by APNs 7140-014-021, 7140-014-022, 7140-014-023, and 7140-014-027; Portion 3 is owned by Victor R. Tookey and Evelyn M. Tookey, and is designated by APN 7140-014-025. Portion 1 is roughly triangular-shaped. Portion 2 is irregularly shaped and is situated east of Portion 1. Portion 3 is situated in the south central portion of the Site.

The Site is located in a mixed residential and industrial area of Long Beach. The subject property is bounded on the east by the Metro Blue Line (a light rail transit system), followed by a residential development and Los Cerritos Park (a City of Long Beach public park); on the south by Interstate 405; and on the west by the Los Angeles River flood control channel (Figure 2).

In accordance with the DTSC-approved work plan dated August 29, 2007, the primary objectives of this investigation were to:

- Collect additional on-site soil samples for laboratory analysis to complete site characterization.

- In accordance with DTSC comments, collect soil gas samples from the overlying fill and submit for laboratory analysis to provide information for an assessment of potential risks.
- In accordance with DTSC comments, collect soil samples for laboratory analysis to provide aromatic and aliphatic fractions from petroleum hydrocarbon-affected soils using the Massachusetts Department of Environmental Protection (MA DEP) approach to evaluate potential hazard from exposure to total petroleum hydrocarbon (TPH) compounds.
- In accordance with DTSC comments, collect soil samples for laboratory analysis to characterize the fill material.
- In accordance with DTSC comments, obtain off-site data to determine background concentrations for metals in the site vicinity.
- In accordance with DTSC comments, install an additional groundwater monitoring well.
- In accordance with DTSC comments, collect groundwater samples for laboratory analysis.
- Prepare a RI report summarizing the investigation results to poise the project for Feasibility Study (FS) completion.

2.0 BACKGROUND

The Site was formerly owned by Oil Operators, a non-profit cooperative organization that functioned as a central brine water treatment facility serving member oil companies (AEMC 1991). Beginning in 1926, oil brine (drilling mud and other waste materials generated from oil production operations) was pumped to sumps on the Oil Operators property, of which the Site was the northernmost portion. Most of the Site was utilized as a treatment sump. After the water had evaporated or infiltrated the aquifer from the sumps, the remaining sludge was either drummed or left in the treatment sumps. When a water treatment plant, including evaporation ponds, was built south of the Site in the mid-1950s, evaporation activities at the Site sumps ceased.

A partial cleanup/treatment operation was conducted at the Site in the 1970s, which involved the removal, treatment, and replacement of a portion of the sump materials (ETC 1984). However, detailed records of the treatment operation are not available.

Additional investigations were conducted in the 1980s, culminating in a land farming operation that was begun in 1989 (AEMC 1991). Details of the investigations conducted at this time are included in Section 2.1. The land farming operation was halted when public complaints were received by the South Coast Air Quality Management District (SCAQMD).

A groundwater monitoring program for the Site and southern adjacent property was implemented in 1987, according to Monitoring and Reporting Program No. 6775 for

Oil Operators (Land Treatment File No. 86-66). According to records available to LFR, annual monitoring at three groundwater wells (MW-2, MW-3, and MW-4) was ongoing as of 1997 (Oil Operators 1997).

Currently, the Site is being utilized as a golf learning center. Improvements include a paved parking lot, several structures, and a large grassy area.

On behalf of CRG, LFR submitted a Voluntary Cleanup Program (VCP) application for the Site to the DTSC on March 24, 2005. Approval of the VCP application was granted on December 20, 2005.

LFR prepared a Characterization Data Report dated April 4, 2006 to describe current and historical investigation and remediation activities at the Site. In a letter dated July 12, 2006, the DTSC raised numerous issues that needed to be addressed as a remedial investigation prior to approval of the report. In general, the DTSC believed that data gaps existed, that the Site had not been fully characterized, and that the Characterization Data Report should be used in conjunction with further research and investigation to develop a remedial investigation workplan. The DTSC also made 19 specific comments to the Characterization Data Report. The DTSC's Human and Ecological Risk Division (HERD) also provided comments to the Characterization Data Report in a memorandum dated July 5, 2006. Copies of the memorandum and the letter dated July 12, 2006 are attached as Appendix A.

LFR's responses to DTSC comments, along with an historical review of the Site, were submitted on March 12, 2007. The historical review included historical aerial photographs, topographic maps, and a review of California Department of Oil, Gas, and Geothermal Resources (DOGGR) records. The response to comments is attached as Appendix B, and the historical review is included as Appendix C.

On August 29, 2007, in conjunction with various meetings and other communications, LFR submitted a remedial investigation workplan for the Site that was subsequently approved by the DTSC on September 6, 2007.

2.1 Previous Site Investigations

The results of previous environmental investigations known by LFR to have been conducted at the Site are summarized below. Copies of the reports are included in Appendix D of this report.

2.1.1 Oil Sump Site Development Feasibility Study (August 25, 1983) and Oil Sump Site Development, Supplemental Investigation (January 1984)

Earth Technology Corporation (ETC) conducted two preliminary geotechnical investigations to assess the feasibility of supporting light industrial structures on the sump materials. Sixteen electronic cone penetrometer tests (CPTs) were performed for the two investigations; the CPT locations (C1 through C16) are shown on Figure 3.

The results of these two studies indicated that the majority of sump materials were too compressible to directly support shallow foundations. If foundations were to be placed on these materials, differential foundation settlement would likely be excessive.

Three cross-section maps (Subsurface Profiles No. 1, 2, and 3) were prepared using the information obtained from the CPT tests. These cross-sections are presented as Figures 4, 5, and 6, respectively, with profile locations shown on Figure 3. Four zones are identified in the cross-sections. According to the 1984 Supplemental Investigation, Zones 1 through 3 were considered to be stiff to very soft sump materials with the following characteristics:

- Zone 1 – Stiff clay and sandy clay soil with occasional sand near the ground surface; relatively high to moderate oil content; "appears to have been treated and recompacted."
- Zone 2 – Firm to soft clay and silt; moderate to low oil content; may have been lightly treated and replaced; very compressible.
- Zone 3 – Very soft clay; untreated and uncompacted; water saturated; highly compressible.

Zone 3 materials reached as deep as 30 feet below ground surface (bgs) in some locations at the Site. The deepest area appears to be in the central portion of the property, mimicking somewhat the triangular shape of the Site itself. Zone 4, beneath the other zones, was believed to be possibly natural soil with some moderately compacted sump material near the top.

2.1.2 Geotechnical Investigation

GEOFON, Inc. (GEOFON) performed a geotechnical investigation to provide an evaluation of subsurface conditions at the Site in relation to the design and construction of a proposed business park development. This undated report appears to be the same document referred to in a 1986 Site Characterization Study (see Section 2.1.3). The investigation included drilling 12 borings (identified as B-1 through B-12 in the report and as GB-1 through GB-12 on Figure 3) to obtain soil samples for laboratory testing, visually classify soil types, ascertain the level of soil contamination, and confirm the depth of sump materials. Data from the previous geotechnical studies (see Section 2.1.1) were also incorporated in the preparation of the report.

Based on the results of the investigation, the greatest amount of sump materials (approximately 75,000 cubic yards [yd^3]) was found to be distributed in a zone approximately 450 feet long, 300 feet wide, and 15 feet thick in the south-central portion of the Site. Another large triangular-shaped body of unprocessed sump material (approximately 7,000 yd^3 and 7 to 10 feet thick) occurs in the northernmost corner of the Site. The very soft, unprocessed sump materials were found to be at the base of the sump (below 24 to 34 feet above mean sea level [msl], approximately 20 to 30 feet bgs). Together with other smaller pockets of unprocessed sump material, the total volume of unprocessed sump material at the Site was estimated to be 80,000 to

100,000 yd^3. Combined with lightly and moderately processed sump materials, the total volume of all sump fills was estimated at between 390,000 and 490,000 yd^3.

Sump materials were found to consist primarily of mud similar to clayey soils, mixed with highly variable amounts of salty water (brine) and oily wastes. Shallow groundwater was encountered at 8 feet bgs in one boring (GB-4). This was believed to be a localized perched condition because native sands at greater depths were not saturated and no other borings encountered perched groundwater.

GEOFON concluded that surface conditions at the time were not suitable for supporting structures on shallow foundations. The sump materials have highly variable engineering properties and are too compressible for supporting structures or fills. They would be suitable, however, once moisture-conditioned and compacted.

An isopach map of the sump material is presented as Figure 7.

2.1.3 Site Characterization Study

Jaykim Engineers, Inc. (Jaykim) and GEOFON conducted a Site Characterization Study for Statewide Investors, Incorporated, in October 1986. Twelve borings were drilled, and soil samples were collected from the borings for geophysical properties and chemical analysis. The borings were subsequently converted to gas monitoring probes, and gas pressures and lower explosive limit (LEL) levels were monitored. These boring locations are labeled as GB-1 through GB-12 on Figure 3, and are the same borings referred to in the GEOFON report (see Section 2.1.2).

Soil Results

The soil at the Site was characterized into six types, based on physical characteristics:

- Type 1 – low to medium oil content in a dark silty or sandy clay
- Type 2 – medium to high oil content, with some samples showing liquid oil, in a black, silty to sandy clay
- Type 3 – extremely high oil content in a toothpaste-like consistency
- Type 4 – very low oil content in a dry blue clay
- Type 5 – very low oil content in a dry gray sand
- Type 6 – none to very low oil content in a brown silty sand

Analytical results included concentrations of TPH ranging from no detection (Type 6) to 75,800 milligrams per kilogram (mg/kg; Type 3) and lead up to 444 mg/kg (Type 3). Benzene and xylenes were detected at concentrations up to 3.0 mg/kg (Type 3) and 28 mg/kg (Type 2), respectively. Tables and figures are not available for this report; therefore, the location and distribution of contaminants is not known.

Other Soil Results

Four soil samples were taken with a backhoe on April 28, 1986 and submitted for chemical analysis (the sample identifications and sampler were not identified). Analytical results were summarized as follows:

- low levels of xylenes (93 mg/kg average)
- other volatile organic hydrocarbons averaged 11,158 mg/kg
- non-volatiles averaged 130,200 mg/kg
- organic lead averaged 3.21 mg/kg

Appendix B of the Site Characterization Study, which provided details of analytical results, is missing from the report.

According to a Preliminary Assessment by Ecology and Environment, Inc. (EEI), the California Department of Health Services (DHS) collected soil samples from the Site in October 1989 (EEI 1990). Tables and figures are not available for this report; therefore, the location and distribution of contaminants is not known. Analytical results exceeding their respective guidance levels were as follows:

- Analytical results for metals resulted in elevated concentrations of arsenic (44 mg/kg).
- Analytical results for volatile organic compounds (VOCs) resulted in elevated concentrations of naphthalene (8,700 micrograms per kilogram [μg/kg]).
- TPH was reportedly detected at concentrations as high as 95,000 parts per million (ppm).

Vapor Probe Results

Gas analyses included field testing for lower explosive concentrations and probe pressures, and laboratory testing for "major gases" (in two probes, "GC/halogenated compounds and BTX"). The laboratory results were missing from LFR's copy of the report. Methane concentrations reportedly ranged from 12.1 to 83.6 percent (locations unknown).

Groundwater Results

A groundwater sample was obtained from a perched water layer at 8 feet bgs in boring GB-4 performed by GEOFON in 1986. Analytical results reportedly identified concentrations of TPH at 26,000 micrograms per liter (μg/l), zinc at 18,000 μg/l, and lead at 16,000 μg/l.

According to a Preliminary Assessment by EEI (1990), perched groundwater samples were collected from the Site by Jaykim in 1988. The text, tables, and figures for this

report are not available; therefore, the location and distribution of contaminants is not known. Analytical results reportedly identified concentrations of lead at 16 milligrams per liter (mg/l), chromium at 5.5 mg/l, and copper at 7.3 mg/l.

The executive summary of the report states: "…the volume of fill material to be reprocessed is approximately 400,000 to 500,000 cubic yards. About 2/3 of this fill material has been previously processed and has a relatively low oil content and soil-like properties. This material can be removed, replaced, and compacted with relative ease. The remaining 1/3 of fill material has a high oil content and variable consistency. This portion will be mixed with clean fill dirt, replaced, and compacted" (Jaykim 1986).

2.1.4 Test Plot at Oil Operators North Site

In a letter to the DTSC dated May 27, 1988, Jaykim informed the agency that operations for a test plot at the Site were to commence on May 31, 1988. Notification to the Regional Water Quality Control Board (RWQCB) was also provided in a letter dated June 6, 1988.

A letter report to Mr. J. T. Liu at the RWQCB dated July 18, 1988, written by Jaykim, described the operation of the test plot to demonstrate the feasibility of soil bioremediation at the Site. Beginning on May 31, 1988, the test plot area was cleared and leveled. Soil vapor readings within 3 inches of the soil surface were taken with a combustible vapor detector during clearing operations. Six "cells" approximately 8 feet wide by 50 feet long were staked out and rototilled, after which ammonium nitrate and phosphate were applied to the cells and tilled into the soil.

On June 3, 1988, composite soil samples were taken from each cell. Oil-utilizing bacteria and warm water were added to five of the cells, and were then tilled and watered into the soil. On June 6, approximately 20 yd^3 of oil-contaminated soil was removed to a depth of 15 to 20 feet bgs and mixed with surface soil in a one-to-one ratio. The mixture was then spread onto each of the cells at varying depths ranging from 3 to 6 inches and tilled into the surface. Mixing of the cells was performed between two and six times daily on five days between June 3 and June 13, 1988.

Results of the test indicated that the treatment process worked most effectively with more mixing, as the plots mixed six times per day showed the greatest reduction in petroleum contamination (TPH concentrations reduced from 3,200 to 1,300 mg/kg between June 6 and June 13, 1988, compared with reductions from 840 to 770 mg/kg for a plot that was mixed twice daily).

2.1.5 Land Farming Activities

The following documents present information relating to the land farming activities that were initiated at the Site:

- *Revised Excavation Management Plan for Oil Operators, Inc. North Site,* by Jaykim. Submitted to the SCAQMD on October 21, 1987, the document presented plans for managing air quality and public safety concerns during Site remediation. Land farming procedures were described and a timeframe for completion of the project was given (approximately 11 months). The land farming activities were to be accomplished in a grid pattern across the Site. The control of odor and dust during the project was to be through maintenance of adequate moisture and aeration in the soil, and application of odor-suppressing foam if necessary. Groundwater monitoring was also planned.
- *Rule 1150 Excavation Permit* dated February 11, 1988. In a letter from the SCAQMD to Oil Operators, approval of the permit was granted subject to 34 conditions stipulated in the approval letter.
- *Revisions to the Rule 1150 Excavation Permit for Landfarming the North Site* by Jaykim, dated January 22, 1988. This letter to Oil Operators presented changes to the Rule 1150 Excavation Permit that would be incorporated prior to approval by the SCAQMD.
- *Oil Operators, Inc. Rule 1150 Permit No. 157742* by Jack K. Bryant & Associates (JB) dated April 19, 1989. This letter to the SCAQMD requested an extension of the Rule 1150 permit for the period of time required to process 100,000 yd^3 of material containing 20,000 mg/kg or greater of oil. At that time the permit would again be extended, provided that the material encountered had an absolute vapor pressure below 36 millimeters of mercury.

2.1.6 Results of Post-Excavation Soil Sampling

A letter report from JB to CRG dated August 30, 1989, provided analytical results for 14 soil samples collected during excavation activities that occurred on August 1, August 14, August 17, and August 18, 1989. Boring locations are designated as E-1 through E-11, E(S1), and E(S2) on Figure 3. It appears that the purpose of the soil sampling was to determine the amount of total recoverable petroleum hydrocarbons (TRPH) in soil at the Site; to analyze one sample for VOCs, semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, and pH; and to determine the suitability of the soil for bioremediation. Concentrations of TRPH ranged from 16 to 92,000 ppm. Samples with the highest concentrations (E1, E2, E7, E9, and E10) were closer to the center of the Site. The sample which was analyzed more extensively showed VOC detections that included 7.5 mg/kg of ethylbenzene and 3 mg/kg of benzene. Lead and arsenic were detected at concentrations of 540 mg/kg and 44 mg/kg, respectively.

2.1.7 Groundwater Monitoring Reports

In a letter from the RWQCB to Oil Operators dated May 5, 1987, approval was given for waste discharge requirements (Order No. 87-54) for the Oil Operators land treatment at the Site (File No. 86-66), effective April 27, 1987. This included a requirement for monthly groundwater elevation measurement and quarterly

groundwater quality monitoring. LFR has reviewed the following documents relating to groundwater monitoring at the Site (also located in Appendix D):

- *Letters dated November 7, 1989 and October 24, 1990* requesting that quarterly groundwater monitoring as required by RWQCB Order No. 87-54 be changed to annual monitoring, since monitoring results did not show variations from previous test results.
- *1995 Groundwater Monitoring Report for Oil Operators North Site dated February 1, 1996.* This annual report prepared by JB presents the results of monitoring and sampling of wells MW-2, MW-3, and MW-4 that took place on January 10, 1996 (well locations are shown on Figure 3). Groundwater elevations at the time ranged from 39.3 feet bgs (MW-4) to 50.6 feet bgs (MW-2). Analytical results included the following:
  - The pH of the monitoring wells ranged from 6.45 to 6.65 units.
  - Concentrations of Total Dissolved Solids (TDS) ranged from 2,690,000 μg/l (MW-4) to 10,800,000 μg/l (MW-2).
  - TRPH was detected in well MW-2 at a concentration of 1,400 μg/l.
  - TPH was not detected in any of the monitoring wells.
  - Ethylbenzene and total xylenes were detected in MW-3 at concentrations of 0.9 μg/l and 2.4 μg/l, respectively. Toluene was detected in monitoring well MW-4 at a concentration of 0.5 μg/l.
  - Lead, chromium, and nickel were not detected in any of the monitoring wells. Zinc was detected at concentrations ranging from 20 μg/l (MW-3) to 120 μg/l (MW-2). Copper was detected at concentrations ranging from 74 μg/l (MW-4) to 80 μg/l (MW-2).
- *RWQCB File Number 86-66, Annual Groundwater Monitoring Report 1996 for Oil Operators North Site, Pacific Place, Long Beach, CA dated March 17, 1997,* prepared by JB. Monitoring and sampling of wells MW-2, MW-3, and MW-4 took place on February 17, 18, and 19, 1997. The following results were reported:
  - Groundwater depths ranged from 42.43 feet bgs (MW-4) to 61.95 feet bgs (MW-2). Increases in groundwater depth were attributed to grading and other earthmoving activities at the Site.
  - The pH ranged between 6.34 and 6.78.
  - TDS concentrations ranged from 2,030,000 to 11,800,000 μg/l.
  - TRPH and TPH were not detected in any of the wells.
  - Benzene was detected in two wells, MW-2 and MW-3, at concentrations of 0.6 μg/l and 88 μg/l, respectively. Toluene, ethylbenzene, and xylenes were detected in well MW-3 at concentrations ranging from 1.6 μg/l to 15 μg/l.
  - Zinc was detected at concentrations ranging from 100 μg/l (MW-4) to 200 μg/l (MW-2); lead was detected at concentrations ranging from 130 μg/l (MW-4) to

280 μg/l (MW-3); and nickel was detected in MW-3 at a concentration of 65 μg/l.

No other quarterly or annual groundwater monitoring reports were available for review. It is unclear whether additional groundwater sampling was conducted at the Site.

3.0 GEOLOGY

The subject property is located within a transition area of the Peninsular Ranges and Transverse Range geomorphic provinces. The major geologic feature in the site vicinity is the Newport-Inglewood Fault Zone (NIFZ), which traverses the Site in a northwest-southeast direction. The term fault "zone" is used to emphasize the occurrence of a series of interconnected fault planes, rather than a single defining fault plane. Tertiary and younger sediments are structurally folded and deformed along the NIFZ. The Long Beach Anticline is expressed at Signal Hill and is composed of Middle Miocene through Pleistocene and Holocene sediments resting unconformably on the Late Cretaceous to Late Jurassic Catalina Schist.

Based on previous investigations by LFR and others, soil beneath the Site consists of variable thicknesses of sand, silt, and clay. The soil is underlain by a thin veneer of Recent alluvium, alluvial sediments of the Late Pleistocene-age Lakewood Formation, and sediments of the Early Pleistocene-age San Pedro Formation. The thickness of the sedimentary section underlying this area is approximately 12,000 feet (Dames & Moore 1988). The Site is located within the active Long Beach Oil Field. According to DOGGR, 17 oil wells are located on the Site. Additional information regarding these oil wells is provided in the historical review (Appendix C).

4.0 HYDROLOGY

The Site lies within the southern portion of the Coastal Plain of Los Angeles County, which gently slopes down to the south-southwest. The Site is located within the West Coast Basin, although it is adjacent to the boundary of the Central and West Coast Basins. The Los Angeles River is located along the western boundary of the Site and flows southward, where it discharges into the Pacific Ocean at San Pedro Bay. The Site is located along the NIFZ, which forms the boundary between the Central and West Coast subbasins and acts as partial barrier to groundwater movement in the area. The NIFZ offsets, thins, and folds many of the aquifers. Due to the proximity of the Site to the NIFZ, aquifer depths, thicknesses, and potential for interconnections may vary significantly across the Site.

Named aquifers beneath the Site in order of increasing depth are the Gaspur, Gage, Lynwood, Silverado, and Sunnyside (California Department of Water Resources

[CDWR] 1961). The Lakewood Formation contains the Gaspur and Gage aquifers, and the lower aquifers are in the San Pedro Formation.

The Bellflower aquitard immediately underlies the Site at approximately 5 to 50 feet bgs. Shallow groundwater was encountered at 8 feet bgs at one boring location (GB-4) during soil sampling activities in 1986. This was believed to be a localized perched condition because native sands at greater depths were not saturated and no other on-site borings encountered perched groundwater.

The uppermost portion of the Lakewood Formation is designated as the Gaspur aquifer, which is present beneath the Site from approximately 50 to 70 feet bgs as sand and gravel. The Gaspur aquifer is believed to be the water-bearing zone encountered during the well installation by LFR and subsequently sampled and analyzed. On December 16, 2007, groundwater was found beneath the Site from 32.6 to 49.32 feet bgs, with a shallow gradient flowing in a southerly direction.

In the vicinity of the subject property, the Gage aquifer has a base at approximately 180 feet bgs and is approximately 35 feet thick. Deposits in this aquifer vary from silty sand to minor gravel (CDWR 1961). Groundwater in both aquifers of the Lakewood Formation has been reported to be of inferior chemical quality.

The lower Pleistocene San Pedro Formation unconformably underlies the Lakewood Formation and is known to contain numerous aquifers of varying quality; however, the deep Silverado aquifer is the only significant water-producing zone. The Lynwood aquifer has a base at approximately 600 feet bgs and is approximately 400 feet in thickness. In this location, the Silverado aquifer joins the Lynwood aquifer at approximately 600 feet bgs and continues to over 1,000 feet bgs. The City of Long Beach obtains groundwater from more than 1,000 feet bgs within the Silverado aquifer.

Groundwater beneath the Site is considered of beneficial use by the RWQCB (AEMC 1991). However, the regional groundwater is highly degraded due to salt water intrusion and industrial waste disposal (EMCON 1981). The Site lies within an area of poor groundwater quality due to historic oil and gas production activities in the site vicinity (Jaykim 1986). Salts released during the production of oil appear to have degraded the regional groundwater to be non-potable, with TDS concentrations exceeding State Water Resources Control Board (SWRCB) Resolution 88-63 of 3,000 mg/l.

According to the hydrologic records maintained by the County of Los Angeles Department of Public Works (LAPDW), groundwater well 896E is located approximately 0.5 mile north and upgradient of the Site. The well is inactive, and the last depth to water measurement was recorded at 81.2 feet bgs on May 6, 1996. Groundwater well 897KK, located approximately 50 feet southwest and cross-gradient of the Site, was destroyed in 1999. The last depth to water measurement was recorded at 50.4 feet bgs on April 19, 1995. Another groundwater well, 906D, is located approximately 0.75 mile northeast and cross-gradient of the Site at the Virginia Country Club. The groundwater is listed has having no reported use, and the most

recent depth to groundwater was recorded at 112.5 feet bgs on June 16, 2007. Approximately 1 mile north and upgradient of the Site are two active wells, 906A and 906E. The listed usage for 906A is domestic and stock supply; 906E is used for irrigation. The most recent depth to water measurement for 906A was 69.1 feet bgs on April 30, 2006. The most recent depth to water measurement for 906E was 70.7 feet bgs on October 19, 2005 (LADPW 2008).

In summary, while some local wells exist and are used for monitoring and agriculture purposes, none are used as a source of potable water.

4.1 Regional Degradation of Groundwater Quality from TDS and Chloride Concentrations

On July 9, 2008, LFR submitted a document titled "Summary of Groundwater Conditions" to the DTSC. This document was prepared at the request of DTSC and the RWQCB, and provided additional data supporting the overall interpretation that the region's salt-impacted groundwater originates from numerous and complex historic sources. Additional data included analytical results for chloride and TDS concentrations detected in groundwater samples collected from monitoring wells at the former Oil Operator's South Site and chloride concentrations detected in LADPW groundwater observations wells in the Dominguez Gap. A copy of LFR's "Summary of Groundwater Conditions" is provided as Appendix E. LFR's conclusions regarding regional degradation of groundwater quality from TDS and chloride concentrations are summarized below.

In March 2008, TDS was measured at concentrations of 1,000 mg/l and 2,000 mg/l in on-site wells MW-5 and MW-6, respectively. Higher concentrations of TDS were measured in MW-3 and MW-7 (6,200 mg/l and 7,800 mg/l, respectively). Elevated measurements of TDS at the Site indicated inferior quality of groundwater in the shallow aquifer, not suitable for use as drinking water. Concentrations of TDS in the groundwater increase in the downgradient direction. It is unknown whether the elevated concentrations are due to natural processes or human activity. However, the Gaspur aquifer has historically been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond Carson Street (located north of the Site) toward the crest of the Newport-Inglewood uplift (Poland 1959). Based on the concentrations of TDS detected during this sampling event, groundwater enters the Site classified as slightly saline (1,000 to 3,000 mg/l), and exits the Site classified as moderately saline (3,000 to 10,000 mg/l).

Higher levels of TDS and chloride than those found at the Site have been detected in the Gaspur aquifer south of the Site. As presented on figures in the document titled "Summary of Groundwater Conditions" (Appendix E), there does not appear to be any obvious or clear regional trend to the chloride concentrations detected in groundwater.

While some degradation was observed at the Site, the conditions appear to be in general accordance with the regional degradation of groundwater quality, given the

region's degraded surficial aquifers resulting from historical oil production operations. TDS appears to have increased from potential historical Site activities; however, given the broader regional degradation, these concerns become more limited.

Based on the additional data provided, LFR believes the following are reasonable conclusions:

1. Groundwater in the area is degraded from numerous and complex interactions of nature as well as historical man-caused activities that date back numerous decades. The Site is likely part of this, but does not appear to be the sole or even primary cause of groundwater degradation.

2. Remedial consideration of historical Site activities would be highly problematic within this environment, and would do little to remedy potential historical discharges within the context of the region's degraded groundwater. Salt is not easily remedied, and pump and treat options would pose highly costly challenges and could exacerbate the regional condition.

5.0 REMEDIAL INVESTIGATION ACTIVITIES

LFR initiated soil investigation activities at the Site on November 21, 2003 to delineate the lateral and vertical extent of impacted soil and sump material and to provide data on the type and concentration of contaminants in the impacted areas. At this time, an inspection of the Site was conducted to locate and identify any existing groundwater monitoring wells present on the property. Well MW-3 was the only well located on the Site. This well was sampled as described in the following section. In addition, two additional wells were subsequently installed and sampled.

The installation of two monitoring wells (MW-5 and MW-6) on May 6, 2004 was designed to characterize in greater detail the type and concentration of chemical constituents in soil and groundwater at the Site. Lithologic and well construction logs for drilling activities are presented in Appendix E. Soil and groundwater samples were collected and logged by LFR personnel using the protocols described in Appendix F. Field activities associated with this phase of investigation at the Site, including mobilization, pre-field activities, geophysical survey for utility clearance, soil sampling, groundwater sampling, and concrete sampling, are described below.

5.1 Pre-Field Activities

Prior to initiating fieldwork, LFR coordinated with subcontractors and arranged for access to the Site and the neighboring property where sampling was to be conducted. LFR prepared a site-specific Health and Safety Plan (HSP) dated May 5, 2004 to be used in the field by LFR personnel during well installation and boring activities at the Site, as required by 29 Code of Federal Regulations (CFR) 1910.120. The well permit is located in Appendix F.

Each proposed boring location was cleared for the presence of underground utilities, and Underground Service Alert (USA) was notified a minimum of 48 hours in advance of drilling activities to ensure that new soil borings and monitoring wells were not located where they could damage underground utilities.

5.2 Soil Sampling

Soil sampling was conducted on November 21, 2003 to evaluate and provide additional information on the extent of impacted soil at the Site. LFR advanced seven borings (B1 through B7) via hollow-stem auger and two borings (CPT1 and CPT2) via CPT. The seven HSA borings (see Figure 3) were advanced to 50 feet bgs. Soil samples were collected every 5 feet for lithologic description and photoionization detector (PID) readings with a 2.0-inch modified California split-spoon sampler lined with 6-inch stainless steel rings. In addition, soil samples were preserved in volatile organic analysis (VOA) vials with methanol and sodium bisulfate in accordance with EPA Method 5035. The bottom sample from each of the seven borings was analyzed for VOCs, SVOCs, PCBs, TPH with carbon chain distinction (TPHcc), and metals. Additional samples were collected based on PID readings, staining, and lithology, and analyzed for VOCs and TPHcc. Upon review of the analytical results, additional samples were analyzed to help evaluate the vertical extent of impacted soil. The following table presents soil sample identifications, analytical methods, and sampling rationale.

Sample ID	Analytical Method	Sampling Rationale
B1 through B7 at 50 feet bgs	EPA Methods 8260B (VOCs), 8270 (SVOCs), 8015M (TPHcc), 6010 (metals), and 8082 (PCBs)	Bottom sample from each boring was analyzed to evaluate the vertical extent of impacted soil.
B1 and B7 at 35 feet bgs; B2 and B6 at 30 feet bgs; B3 and B4 at 10 feet bgs; and B5 at 15 feet bgs	EPA Methods 8260B (VOCs) and 8015M (TPHcc)	Analyzed for VOCs and TPHcc, based on PID readings, staining, and lithology.
B3 at 25, 30, and 45 feet bgs; B4 at 15 and 20 feet bgs; and B5 at 20, 25, 40, and 45 feet bgs	EPA Methods 8260B (VOCs) and 8015M (TPHcc and TPH gasoline range)	Analyzed to evaluate the vertical extent of impacted soil, based on previous analytical results.

Two CPT borings were advanced by Gregg In Situ, Inc. (Gregg) in November 2003 to characterize the soil beneath the Site (Gregg 2003). The locations of the CPT borings are illustrated on Figure 3. The borings were advanced to 80 feet bgs in both locations. Predominantly silts, clayey silts, and sandy silts were found in CPT-1 to 52 feet bgs, with layers of cemented sand and stiff sand found from 19 to 22 feet bgs and from 35 to 42 feet bgs. Below 52 feet bgs, stiff fine-grained sand, cemented sand, and silty

sand predominate. In CPT-2, silt, sandy silt, clay, and clayey silt predominate to 42 feet bgs. Below that, layers of silty sand, cemented sand, silt, silty sand, and sandy silt are found. A thick layer of sand is located between 67 and 76 feet bgs.

Borings B1 through B7 were all advanced to 50 feet bgs. Soil lithology in these borings was predominantly silt and silty sand, with some clay lenses found in B5 between 10 and 15 feet bgs and in B3 at 20 feet bgs. Sand was also found at depths of 20 to 30 feet bgs and 40 to 45 feet bgs in boring B1, and at 20 to 25 feet bgs in boring B2.

The boring logs for B1 through B7 are located in Appendix E. A copy of the CPT report is located in Attachment F.

5.3 Groundwater Monitoring Well Installation

As previously discussed, a site inspection revealed the location of only one of the previously existing wells (MW-3).

Two new monitoring wells, MW-5 and MW-6, were installed at the Site on May 6, 2004, using a hollow-stem auger rig. MW-5 was installed north of the Site, near the reported location of MW-4, and MW-6 was installed west of the Site, near the reported location of MW-2. The purpose of adding the two wells was to be able to monitor groundwater flow and direction, and to evaluate groundwater quality at the perimeter of the Site.

Wells MW-5 and MW-6 were constructed of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) well casing with 20 feet of 0.020-inch screened casing. Fifteen feet of screened casing was placed below the groundwater surface, with the remaining 5 feet above the groundwater surface. The wells were advanced to approximately 55 feet bgs.

Wells MW-5 and MW-6 were developed on May 11, 2004. Development consisted of surging for 15 minutes, followed by purging with a 3.5-gallon metal bailer of significantly more than three well volumes of groundwater to obtain clear groundwater for sampling. Wells MW-3, MW-5, and MW-6 were developed and sampled on May 19, 2004. Following surging, at least three well volumes of groundwater were purged prior to obtaining the groundwater samples.

Following the collection of all groundwater samples, LFR subcontracted a California-licensed surveyor to conduct a well survey at the Site to establish horizontal control, top of casing (TOC), and ground surface elevations referenced to msl at the monitoring well locations. Depth to groundwater was 40 feet bgs and 41 feet bgs in wells MW-5 and MW-6, respectively. A summary of the well survey data is included in Appendix F.

Monitoring well locations are presented on Figure 3. Well logs are located in Appendix E.

5.4 Groundwater Sampling

During the investigation on December 19, 2003, a sample was obtained from existing groundwater monitoring well MW-3 for analysis of TPHcc, VOCs, and metals. The groundwater sample was submitted to SunStar in Tustin, California, following proper chain-of-custody protocol. On May 19, 2004, samples were obtained from groundwater monitoring wells MW-3, MW-5, and MW-6 and submitted to SunStar for analysis of TPHcc, VOCs, and metals. On December 18, 2006, samples were collected from groundwater monitoring wells MW-3, MW-5, and MW-6 and submitted to SunStar for analysis of TPHcc, VOCs, SVOCs, metals, specific conductance (EC), pH, anions, and inorganics. Sampling procedures and field reports are located in Appendix F.

6.0 REMEDIAL INVESTIGATION RESULTS

6.1 Soil Sampling and Analysis

Analytical results for soil samples collected in November 2003 are summarized below:

- The deepest samples from each boring were analyzed for metals using EPA Method 6010B (Table 1). Arsenic, barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, and zinc were detected at concentrations above laboratory reporting limits in at least one of the borings. Analytical results were below the U.S. Environmental Protection Agency's (USEPA) industrial preliminary remediation goals (iPRGs) for all metals, with the following exception: Arsenic was detected at concentrations ranging from 5.8 to 24 mg/kg in borings B1, B2, B3, B5, and B7; the iPRG for arsenic is 0.25 mg/kg. Arsenic is a naturally occurring trace metal that has been found in California soils at concentrations ranging between 0.6 and 11.0 mg/kg (Kearney 1996) and in native U.S. alluvial soils at concentrations ranging from 2.1 to 22 mg/kg (Kabata-Pendias and Pendias 1984). Arsenic concentrations in all the samples where it was detected exceeded the iPRG, and in three locations (B1, B3, and B7) the concentrations exceeded expected background levels for California soils.
- Soil samples were analyzed for TPHcc using EPA Method 8015M. TPH was not detected in samples from borings B1, B2, and B6. Gasoline-range hydrocarbons (TPHg) were only detected in borings B3 and B4, located in the center of the Site, at concentrations ranging from 0.680 mg/kg (B4-20) to 53.0 mg/kg (B3-30). TPH (C_{12}-C_{40}) was detected at depths ranging from 10 to 30 feet bgs in B3, at 10 feet bgs in B4, at 15 and 20 feet bgs in B5, and between 30 and 50 feet bgs in B7. TPH (C_{12}-C_{28}) was detected at concentrations ranging from 350 mg/kg (B3-25) to 20,000 mg/kg (B3-10 and B7-50). TPH (C_{28}-C_{40}) was detected at concentrations ranging from 280 mg/kg (B3-25) to 22,000 mg/kg (B3-10 and B7-50). TPH was detected at depths between 10 and 30 feet bgs in these borings, with the exception of B7, where TPH was detected at 35 and 50 feet bgs. Analytical results for TPH are summarized in Table 2 and shown on Figure 8.

- PCBs were not detected at concentrations above the laboratory reporting limit in any boring (Table 3).
- The deepest soil samples and those soil samples that exhibited elevated TPH concentrations were analyzed for VOCs using EPA Method 8260B. VOCs were detected in borings B3, B5, and B7 (see Table 4 and Figure 9). Benzene was detected at concentrations up to 580 μg/kg (B7-50). Ethylbenzene and toluene were detected at concentrations up to 290 μg/kg (ethylbenzene at B3-30). Total xylenes were detected at concentrations up to 607 μg/kg (B7-50). None of the VOC concentrations exceeded iPRGs for those compounds. The VOCs were detected in samples collected between 10 and 30 feet bgs in B3 and B5, and in the 35- and 50-foot samples from B7.
- Soil samples were analyzed for SVOCs using EPA Method 8270C. SVOCs were detected in borings B3 at 10 feet bgs, B5 at 15 feet bgs, and B7 at 50 feet bgs (see Table 5 and Figure 10). The highest concentrations of SVOCs detected in soil samples collected at the Site are summarized below:
  - 1-methylnaphthalene at 9,300 μg/kg in B3-10
  - 2-methylnaphthalene at 6,400 μg/kg in B3-10
  - benzo(a)pyrene at 400 μg/kg in B7-50, above the iPRG of 210 μg/kg
  - fluorine at 1,500 μg/kg in B3-10
  - naphthalene at 3,600 μg/kg in B7-50
  - phenanthrene at 2,200 μg/kg in B3-10 and B7-50

The iPRGs for SVOCs were not exceeded for those compounds that have iPRGs, with the exception of benzo(a)pyrene in sample B7-50. The iPRG for benzo(a)pyrene is 210 μg/kg.

6.2 Groundwater Elevation and Flow Direction

Hall & Foreman, Inc. surveyed well elevations at the Site on September 9, 2004. Elevation measurements were made from a notch on the north side of each casing; the same location is used to measure depth to groundwater. The elevation of each well is documented on Table 11.

Depth to groundwater was measured at wells MW-3, MW-5, and MW-6 on December 18, 2006. Depths to groundwater ranged from 28.43 feet (MW-6) to 47.77 feet (MW-3) below TOC (Table 11).

The depth to groundwater and the elevation for each well were used to calculate the elevation of the potentiometric surface beneath the Site. Groundwater flow was determined to be generally south with a relatively flat gradient at approximately 0.3 foot of drop for every 100 feet of distance flowed (or 0.003 ft/ft).

6.3 Groundwater Sampling – November 2003 and May 2004

Analytical results for groundwater samples collected from well MW-3 in November 2003 and from MW-3, MW-5, and MW-6 in May 2004 are included in Tables 6 through 9 and summarized below.

Metals were analyzed using EPA Method 6010B and 7470A. Nine metals were detected at concentrations above their respective laboratory reporting limits, as summarized below:

- antimony (22 μg/l at MW-6)
- arsenic (72 μg/l and 15 μg/l in MW-3 in November 2003 and May 2004, respectively)
- barium (ranging from 97 μg/l in MW-5 to 290 μg/l in MW-3)
- lead (16 μg/l in MW-5)
- mercury (4.8 μg/l and 160 μg/l in MW-3 in November 2003 and May 2004, respectively, and 12 μg/l in MW-6)
- molybdenum (24 μg/l in MW-3)
- selenium (52 μg/l in MW-6)
- silver (84 μg/l in MW-3)
- vanadium (59 μg/l in MW-6)

California maximum contaminant levels (MCLs) (per California Code of Regulations [CCR] Title 22, September 12, 2003) were exceeded for five of these metals:

- antimony at 22 μg/l in MW-6 (exceeded the MCL of 6 μg/l)
- arsenic at 72 μg/l and 15 μg/l in MW-3 in 2003 and 2004, respectively (exceeded the MCL of 10 μg/l)
- mercury at 12 μg/l in MW-6, and at 4.8 μg/l and 160 μg/l in MW-3 (exceeded the MCL of 2 μg/l)
- lead at 16 μg/l in MW-5 (exceeded the MCL of 15 μg/l)
- selenium at 52 μg/l in MW-6 (exceeded the MCL of 50 μg/l)

Vanadium, an unregulated chemical requiring monitoring, was detected in MW-6 at a concentration of 59 μg/l. The action level for vanadium is 50 μg/l.

TPH, VOCs, and SVOCs were not detected at concentrations above their respective laboratory reporting limits in any of the groundwater samples collected from MW-3 in November 2003 and from MW-3, MW-5, and MW-6 in May 2004.

Laboratory reports and chain-of-custody forms are included in Appendix G.

6.4 Groundwater Sampling – December 2006

Analytical results for groundwater samples collected from MW-3, MW-5, and MW-6 in December 2006 are included in Tables 6 through 10 and summarized below.

Metals were analyzed using EPA Methods 6010B and 7470A. Seven metals were detected at concentrations above their respective laboratory reporting limits, as summarized below:

- barium (ranging from 100 µg/l [MW-5 and MW-6] to 140 µg/l [MW-3])
- calcium (ranging from 3,200 µg/l [MW-5] to 5,200 µg/l [MW-3])
- copper (ranging from 55 µg/l [MW-5] to 400 µg/l [MW-3])
- magnesium (ranging from 750 µg/l [MW-5] to 2,100 µg/l [MW-3])
- mercury (0.82 µg/l in MW-3 and 7.3 µg/l in MW-6)
- silver (62 µg/l in MW-3)
- sodium (ranging from 5,100 µg/l [MW-5] to 24,000 µg/l [MW-3]).

Arsenic was detected at concentrations above the laboratory method detection limit (MDL) in MW-3 (7.8 µg/l), MW-5 (12 µg/l), and MW-6 (12 µg/l).

Mercury was detected in MW-6 at a concentration of 7.3 µg/l. The California MCL for mercury (per CCR Title 22, September 12, 2003) is listed at 2 µg/l.

TPH was analyzed using EPA Method 8015M. TPH was not detected at concentrations above laboratory reporting limits in the groundwater samples collected from MW-3, MW-5, and MW-6 in December 2006, with the exception of TPH gasoline range organics (C_6-C_{12}). Concentrations of TPH (C_6-C_{12}) ranged from 0.05 µg/l in MW-5 to 0.38 µg/l in MW-6.

VOCs were analyzed using EPA Method 8260B. VOCs were not detected at concentrations above their respective laboratory reporting limits in any of the groundwater samples collected from MW-3, MW-5, and MW-6 in December 2006.

SVOCs were analyzed using EPA Method 8270C. SVOCs were not detected at concentrations above their respective laboratory reporting limits in any of the groundwater samples collected from MW-3, MW-5, and MW-6 in December 2006.

EC was detected at concentrations ranging from 1,700 microsiemens per centimeter (µs/cm) to 7,740 µs/cm. California Secondary MCLs – recommended ranges (per CCR Title 22, September 12, 2003) were exceeded for EC (1,700 µs/cm in MW-5, 3,660 µs/cm in MW-6, and 7,740 µs/cm in MW-3). The recommended secondary MCL for EC is listed as 900 µs/cm.

California Secondary MCLs – recommended ranges were exceeded for chloride (1,100 mg/l in MW-6 and 3,270 mg/l in MW-3). The recommended secondary MCL for chloride is listed as 250 mg/l.

Detected TDS concentrations ranged from 900 mg/l in MW-5 to 4,710 mg/l in MW-3.

7.0 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES

Field activities at the Site were performed from October 26 through December 6, 2007. The scope of work for this additional investigation was conducted in accordance with LFR's Remedial Investigation Workplan dated August 29, 2007 (LFR 2007a). Copies of the workplan and DTSC's approval letter are provided in Appendix H.

LFR initiated remedial investigation activities at the Site on October 26, 2007 with the installation of one additional groundwater monitoring well (MW-7). Soil gas and soil sampling were performed on November 12, November 13, and November 14, 2007. Groundwater monitoring and sampling of the four monitoring wells was conducted on December 6, 2007. Lithologic and well construction logs for the drilling activities are presented in Appendix J. Soil and groundwater samples were collected and logged by LFR personnel using the protocols described in the Quality Assurance Control Plan (QAPP; LFR 2007a). Field activities associated with the most recent phase of investigation at the Site (including mobilization, pre-field activities, utility clearance, and soil, soil gas, and groundwater sampling) are described below. The QAPP is included in Appendix H.

7.1 Pre-Field Activities

Prior to initiating fieldwork, LFR coordinated with subcontractors and site personnel for access to areas of the Site where sampling was to be conducted. LFR prepared a site-specific HSP dated July 22, 2007 to be used in the field by LFR personnel during well installation and sampling activities at the Site, as required by 29 CFR 1910.120. A copy of the HSP was provided to the DTSC. Each proposed boring location was cleared for the presence of underground utilities, and USA was notified a minimum of 48 hours in advance of drilling activities to ensure that borings were not located where they could damage underground utilities.

7.2 Soil Gas Sampling

On November 12 and 13, 2007, Environmental Support Technologies, Inc. (EST), under LFR supervision, advanced 17 borings (SG1 through SG16 and SG8A) using a direct-push drill-rig with a 1-inch diameter hollow tube and 4-foot acetate sleeves fitted into the hollow tube. The borings were advanced to a maximum depth of 10 feet bgs. The objective was to collect soil gas samples in the fill overlying the sump material for laboratory analysis.

Prior to sample collection, the borings were advanced to observe the depth of the fill. At two locations (SG4 and SG8) sump material was observed at a depth of 5 feet bgs. No soil gas samples were collected at these locations. At SG5, SG7, SG8A, and SG16, sump material was found at approximately 10 feet bgs, so a soil gas sample was collected only at the 5-foot depth at these locations.

The overlying fill was observed to consist primarily of silt that ranged from sandy silt to clayey silt.

Soil gas sampling was conducted in general accordance with the QAPP on November 12, November 13, and November 14, 2007. Teflon tubing was placed in the borings at the target sample depths and labeled accordingly. Soil gas samples were collected by EST personnel using a syringe and directly injected into the analytical instrument in their California-certified on-site mobile laboratory for VOC analysis using EPA Method 8260B. The volume for the gas-tight soil-gas syringe samples used was approximately 10 milliliters. The first five dead volumes of gas were discarded to flush the sample tubing and filled with in situ soil gas. Prior to sample collection, a purge volume test was performed at the first sample location to determine the appropriate purge volume.

An additional purge volume test was conducted on November 14, 2007 after VOC concentrations above the laboratory detection limits were detected in soil gas samples collected at SG9 and SG13. Twenty percent of the soil gas samples were subsequently resampled and reanalyzed according to DTSC guidelines.

Soil gas samples were also collected in Tedlar bags at each sampling location and depth for on-site analysis for oxygen, carbon dioxide, hydrogen sulfide, and methane using a Landtec Gem™ 2000 Plus landfill gas monitor and analyzer. Soil gas samples were collected in Tedlar bags for off-site analysis for methane using EPA Method 8015m at the EST laboratory in Irvine, California.

In addition, EST collected six soil gas samples in Summa canisters on November 14, 2007. These soil gas samples were analyzed for VOCs using EPA Method TO-15 by Ace Laboratories, Inc. (Ace) in Thousand Oaks, California.

7.3 Soil Sampling

Soil sampling was conducted on October 26 and November 13, 2007 to evaluate and provide additional information on the extent of impacted soil at the Site. Soil samples for VOC analysis were preserved in VOA vials with methanol and sodium bisulfate in accordance with EPA Method 5035.

On October 26, 2007, under LFR's supervision, Gregg Drilling and Testing (GD&T) drilled a borehole and installed groundwater monitoring well MW-7. Soil samples were collected every 5 feet for lithologic description and PID readings. Three select samples were analyzed for VOCs, SVOCs, TPHcc, and metals. Soil samples were submitted to

SunStar in Tustin, California, following proper chain-of-custody protocol. Field reports are located in Appendix J.

On November 13, 2007, under LFR's supervision, EST advanced two borings (B6A and B7A) in the vicinity of previously drilled borings B-6 and B-7 using a direct-push drill-rig with a 1½-inch diameter hollow tube and 4-foot acetate sleeves fitted into the hollow tube. Boring B6A was advanced to 25 feet bgs, and soil samples were collected at depths of 15, 20, and 25 feet bgs. Boring B7A was advanced to 50 feet bgs, and soil samples were collected at depths of 5, 10, 20, 30, 40, and 50 feet bgs. Soil lithology in these borings consisted predominantly of silt and sandy silt, with some clayey silt. Oily sludge material was found at approximately 10 and 15 feet bgs in borings B7A and B6A, respectively. At 50 feet bgs in boring B7A, the soil was observed to be dark brown sandy silt with oil staining. Boring logs are located in Appendix J.

Soil samples were analyzed for Title 22 metals, VOCs, SVOCs, PCBs, and TPHcc to assess the vertical extent of impacted soil. Based on total metal concentrations for lead and barium, which exceeded 10 times their respective soluble threshold limit concentration (STLC), a Waste Extraction Test (WET) was performed. Two samples were additionally analyzed for pH using EPA Method 9045 and lead using the WET analysis with deionized water to simulate actual pH conditions at the Site.

The three worst-case TPH samples from these borings (B7A-30, B7A-40, and B7A-50) were selected for additional analysis utilizing the Synthetic Precipitation Leaching Procedure (SPLP) with EPA Method 1312/8015, and for the volatile (VPH) and extractable (EPH) fractions of petroleum hydrocarbon mixtures using the MA DEP approach for assessing potential hazard from TPH exposure.

The extraction fluid for the SPLP is an aqueous solution (of sulfuric and nitric acids) intended to simulate rain water. Consequently, the SPLP would provide a more conservative evaluation than deionized water, and evaluate the buffering capacity of Site materials from the effects from acid rain. The VPH and EPH are reported according to categories of aliphatic chain lengths and aromatic carbon numbers.

Soil samples were collected at six locations at depths of approximately 0.5 foot, 5 feet, and 10 feet from the fill material that was placed over the sump. Soil samples were analyzed for California Assessment Manual (CAM) 17 metals using EPA Method 6010B/7471A, organochlorine pesticides using EPA Method 8081A, PCBs using EPA Method 8082, and SVOCs using EPA Method 8082.

Soil samples were submitted to Associated Laboratories (Associated) in Orange, California, following proper chain-of-custody protocol. Field data reports are located in Appendix K.

On January 10, 2008, five drums of non-hazardous soil were transported offsite to TPST Soil Recyclers of CA by American Integrated Services (AIS). The manifest is located in Appendix K.

LFR used a hand auger to advance soil borings at 10 locations along Del Mar Avenue. Soil samples collected from these borings were analyzed for Title 22 metals to establish background metals concentrations for the site vicinity. Soil samples were submitted to SunStar in Tustin, California, following proper chain-of-custody protocol.

7.4 Groundwater Monitoring Well Installation, Development, and Survey

On October 26, 2007 a new groundwater monitoring well (MW-7) was installed on the southern portion of the Site using a hollow-stem auger rig. The purpose of adding the new well was to be able to monitor groundwater flow and direction, and to evaluate groundwater quality downgradient from the Site. A copy of the City of Long Beach well permit is attached in Appendix K.

Well MW-7 was constructed of 2-inch diameter Schedule 40 PVC well casing with 15 feet of 0.020-inch screened casing. MW-7 was advanced to approximately 60 feet bgs, with 10 feet of screened casing placed below the groundwater surface and the remaining 5 feet above the groundwater surface. The well log is located in Appendix J.

Well MW-7 was developed on November 6, 2007. Development consisted of surging for 15 minutes, followed by purging with a 3.5-gallon metal bailer. Significantly more than three well volumes of groundwater were purged from the well to obtain clear groundwater for sampling.

LFR contracted Kelsurveys, a California-licensed surveyor, to conduct a well survey at the Site to establish horizontal control, TOC, and ground surface elevations referenced to msl at the monitoring well locations. Well locations are shown on Figure 11. Well survey data are included in Appendix K.

7.5 Groundwater Sampling

On December 6, 2007, one water sample was obtained from each of the four groundwater monitoring wells for analysis of TPHcc using EPA Method 8015B, VOCs, SVOCs, and metals. The groundwater samples were submitted to SunStar following proper chain-of-custody protocol. On January 10, 2008, three drums of non-hazardous waste liquid were transported offsite to Crosby & Overton in Long Beach, California, by AIS. The non-hazardous waste manifest is located in Appendix K.

8.0 ADDITIONAL REMEDIAL INVESTIGATION RESULTS

8.1 Soil Gas Sampling and Analysis

Analytical results for soil vapor samples collected at the Site are discussed below and summarized on Tables 12 through 14. Soil gas probe installation and monitoring forms from EST are provided in Appendix L.

8.1.1 VOCs

Using the EST on-site mobile laboratory, four VOCs were detected in the 28 samples analyzed using EPA Method 8260B. Tetrachloroethene (PCE) was detected in 12 samples at concentrations ranging from 5.3 µg/l to 9.1 µg/l. The highest concentration was detected in sample SG13-5 collected at a depth of 5 feet bgs. The detected PCE concentrations exceeded the California Human Health Screening Level (CHHSL) of 0.603 µg/l for shallow soil gas for commercial/industrial land use. Toluene was detected in five of the samples at concentrations ranging from 1.5 µg/l to 1.6 µg/l. Trichloroethene (TCE) was detected in 12 samples at concentrations ranging from 1.2 µg/l to 2.0 µg/l. These TCE concentrations exceeded the CHHSL of 1.77 µg/l. Meta- and para-xylenes (m,p-xylenes) were detected in five samples at concentrations ranging from 1.2 µg/l to 1.3 µg/l. Analytical results for VOCs using EPA Method 8260B are summarized in Table 12 and shown on Figure 12.

Twenty VOCs were detected in the six soil gas samples collected in Summa canisters and analyzed by Ace using EPA Method TO-15. PCE was detected in two of the samples at concentrations of 0.03 µg/l and 0.13 µg/l. Toluene was detected in all six samples at concentrations ranging from 0.04 µg/l to 0.35 µg/l. TCE was detected in two of the samples at concentrations of 0.01 µg/l and 0.02 µg/l. M,p-xylenes were detected in all six samples at concentrations ranging from 0.02 µg/l to 0.47 µg/l. O-xylenes were detected in five samples at concentrations ranging from 0.01 µg/l to 0.14 µg/l. Ethylbenzene was detected in four of the samples at concentrations ranging from 0.01 µg/l to 0.13 µg/l. Benzene was detected in five of the samples at concentrations ranging from 0.02 µg/l to 0.33 µg/l. Only two concentrations of benzene exceeded the CHHSL for benzene (0.122 µg/l). Analytical results for VOCs using EPA Method TO-15 are summarized in Table 13 and shown on Figure 13.

8.1.2 Methane

A Landtec GEM 2000 Plus field gas monitor and analyzer (Landtec) was used to measure methane concentrations in 32 soil gas samples at the Site on November 12 through November 14, 2007. At 5 feet bgs, detected methane concentrations ranged from 1,000 parts per million by volume (ppmv) to 104,000 ppmv. Three concentrations were detected within the explosive range. At 10 feet bgs, detected methane concentrations ranged from 12 ppmv to 196,000 ppmv. The highest concentration (19.6% by volume) was detected at the SG-11 location at a depth of 10 feet bgs. Soil gas probe installation and monitoring forms from EST showing the methane results are attached as Appendix L.

Methane concentrations were detected in 26 soil gas samples collected on November 14, 2007 and analyzed at EST's stationary laboratory. At 5 feet bgs, detected methane concentrations ranged from 12 ppmv to 180,000 ppmv. At 10 feet bgs, detected methane concentrations ranged from 27 ppmv to 300,000 ppmv. The highest concentration (30% by volume) was detected at the SG-11 location at a depth of 10 feet bgs. Four methane concentrations exceeded the upper explosive limit (UEL) of

15% per volume of air or 150,000 ppmv. Two concentrations were within the explosive limit, at 7.2% and 15%. All the other samples were below the LEL of 5%.

Analytical results for methane are summarized in Table 14. The analytical results for methane at 5 and 10 feet bgs are shown on Figures 14 and 15, respectively. Laboratory reports are included in Appendix M.

8.1.3 Oxygen, Carbon Dioxide, and Hydrogen Sulfide

The Landtec was used to collect oxygen, carbon dioxide, and hydrogen sulfide field measurements at the Site on November 12 through November 14, 2007. Field measurements are summarized below, and soil gas probe installation and monitoring forms from EST showing the soil gas results are provided in Appendix L.

At 5 feet bgs, oxygen concentrations ranged from 0.8% at SG-11 to 19.1% at SG-7. At 10 feet bgs, oxygen concentrations ranged from 0.6% at SG-11 to 15.5% at SG-10.

At 5 feet bgs, carbon dioxide concentrations ranged from 1.1% at SG-7 to 14.6% at SG-11. At 10 feet bgs, carbon dioxide concentrations ranged from 2.3% at SG-13 to 19.3% at SG-6.

Hydrogen sulfide was not detected in the any of the samples collected at depths of 5 and 10 feet bgs.

8.2 Soil Sampling and Analysis

8.2.1 Total Petroleum Hydrocarbons as Gasoline

TPHg (C_6-C_{10}) was not detected in any of the samples collected from boring B7A, with one exception. The sample collected from B7A at 10 feet bgs exhibited a TPHg concentration of 5.0 mg/kg.

TPHg was not detected at concentrations above the laboratory reporting limits in the three samples analyzed from borings B6A and MW-7.

8.2.2 Total Petroleum Hydrocarbons as Diesel

In boring B7A, detectable concentrations of total petroleum hydrocarbons as diesel (TPHd [C_{10}-C_{22}]) ranged from 16 mg/kg to 4,070 mg/kg. The highest concentration was detected at a depth of 40 feet bgs. TPHd was not detected at 5 and 20 feet bgs.

TPHd was not detected at concentrations above the laboratory reporting limits in the three samples analyzed from borings B6A and MW-7.

8.2.3 Total Petroleum Hydrocarbons as Motor Oil

In boring B7A, detectable concentrations of total petroleum hydrocarbons as motor oil (TPHmo [C_{22}-C_{36}]) ranged from 24 mg/kg to 8,970 mg/kg. The highest concentration was detected at a depth of 40 feet bgs. The TPHmo concentrations detected in B7A ranged from 30 to 50 feet bgs, and were above the RWQCB's soil screening level (SSL) of 1,000 mg/kg, where the distance is 20 to 150 feet above a drinking water aquifer (RWQCB 1996).

In boring B6A, TPHmo concentrations ranged from 42 mg/kg to 526 mg/kg, with the highest concentration detected in the 25-foot sample. In boring MW-7, TPHmo (C_{29}-C_{40}) was detected only in the 25-foot sample at a concentration of 55 mg/kg.

Analytical results for TPH are summarized in Table 15 and shown on Figure 16.

8.2.4 SPLP TPHcc

TPH in the C_6-C_{10} range using the SPLP were not detected above the laboratory detection limit in the three samples analyzed. C_{10}-C_{22} ranged from 4.0 mg/kg to 18 mg/kg, and C_{22}-C_{36} ranged from 3.6 mg/kg to 22 mg/kg. The highest concentrations were detected in B7A-50. Analytical results for SPLP TPHcc are summarized in Table 15 and shown on Figure 16.

8.2.5 MA DEP EPH

Aliphatic hydrocarbons C_9-C_{18} ranged from 2,210 mg/kg in B7A-50 to 5,290 mg/kg in B7A-40. Aliphatic hydrocarbons C_{19}-C_{36} ranged from 3,390 mg/kg in B7A-50 to 7,850 mg/kg in B7A-40. Aromatic hydrocarbons C_{11}-C_{22} ranged from 2,960 mg/kg in B7A-50 to 6,580 mg/kg in B7A-40. When compared with the MA DEP screening level of 5,000 mg/kg, only the TPH concentration detected in sample B7A-40 (7,850 mg/kg) would be considered a potential hazard or pose a threat to human health or the environment at the Site.

8.2.6 MA DEP VPH

Aliphatic hydrocarbons C_5-C_8 ranged from 54 mg/kg in B7A-40 to 102 mg/kg in B7A-30. Aliphatic hydrocarbons C_9-C_{12} ranged from 140 mg/kg in B7A-50 to 322 mg/kg in B7A-30. Aromatic hydrocarbons C_9-C_{10} ranged from 82 mg/kg in B7A-50 to 176 mg/kg in B7A-30. These TPH concentrations were evaluated using the MA DEP screening level of 500 mg/kg. None of these TPH concentrations would be considered a potential hazard or pose a threat to human health or the environment at the Site.

Analytical results for MA DEP EPH/VPH are summarized in Table 16 and shown on Figure 16.

8.2.7 VOCs

No VOCs were detected in the three samples collected from boring B6A or from the three samples collected from MW-7.

Thirteen VOCs (acetone, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene, n-butylbenzene, n-propylbenzene, naphthalene, p-isopropyltoluene, sec-butylbenzene, toluene, and total xylenes) were detected in samples collected from boring B7A, as summarized below:

- Acetone (58 µg/kg) was the only VOC detected in the 10-foot sample collected from B7A. No VOCs were detected above the laboratory detection limit in the 20-foot sample from B7A.
- Benzene and toluene were only detected in the 30-foot sample at concentrations of 824 µg/kg and 307 µg/kg, respectively.
- 1,3,5-Trimethylbenzene was detected in the 30- and 40-foot samples (B7A-30 and B7A-40) at concentrations of 3,120 µg/kg and 2,240 µg/kg, respectively.
- 1,2,4-Trimethylbenzene was only detected in the 50-foot sample (B7A-50) at a concentration of 10,000 µg/kg.
- Ethylbenzene concentrations ranged from 944 µg/kg in B7A-30 to 2,960 µg/kg in B7A-30.
- Isopropylbenzene concentrations ranged from 782 µg/kg in B7A-40 to 2,080 µg/kg in B7A-50.
- N-butylbenzene concentrations ranged from 994 µg/kg in B7A-40 to 1,400 µg/kg in B7A-30.
- N-propylbenzene concentrations ranged from 1,170 µg/kg in B7A-40 to 2,560 µg/kg in B7A-30.
- Naphthalene concentrations ranged from 5,980 µg/kg in B7A-50 to 8,310 µg/kg in B7A-30.
- P-isopropyltoluene concentrations ranged from 1,330 µg/kg in B7A-30 to 1,680 µg/kg in B7A-40.
- Sec-butylbenzene concentrations ranged from 1,110 µg/kg in B7A-40 to 1,640 µg/kg in B7A-30.
- Total xylenes concentrations ranged from 677 µg/kg in B7A-50 to 8,210 µg/kg in B7A-30.

VOC analytical results for these three borings are summarized in Table 17 and shown on Figure 17.

8.2.8 SVOCs

No SVOCs were detected in the 18 samples collected from the fill material at depths of 0.5, 5, and 10 feet bgs; in the 3 samples collected from boring B6A at depths of 15, 20, and 25 feet bgs; and in the 3 samples collected from MW-7 at depths of 15, 25, and 35 feet bgs. No SVOCs were detected in the samples collected in boring B7A at depths of 5, 10, and 15 feet bgs.

Three SVOCs (2-methylnaphthalene, 4-methylphenol, and naphthalene) were detected in boring B7A, as summarized below:

- 2-methylnaphthalene concentrations ranged from 26,000 μg/kg in B7A-50 to 34,700 μg/kg in B7A-30.
- 4-methylphenol was detected in B7A-30 and B7A-40 at concentrations of 3,680 μg/kg and 6,150 μg/kg, respectively.
- Naphthalene was detected in B7A-30 and B7A-50 at concentrations of 8,450 μg/kg and 7,540 μg/kg, respectively. Both concentrations of naphthalene exceed the California-modified iPRG of 4,200 μg/kg.

Analytical results for SVOCs from these three borings are summarized in Table 18 and shown on Figure 18.

8.2.9 Metals

Metals results are discussed in the following sections. Analytical results for metals detected in the fill are summarized in Table 19. Analytical results for metals detected in borings 6A, 7A, and MW-7 are summarized in Table 20 and shown on Figure 19.

Arsenic

Arsenic concentrations detected in the 18 samples collected from the fill ranged from 1.71 mg/kg to 13.7 mg/kg, with an average concentration of 6.55 mg/kg. These arsenic concentrations are within the range and below the average background arsenic concentration of 7.15 mg/kg. Arsenic concentrations in the six samples collected from boring B7A ranged from less than 1.0 mg/kg to 28.6 mg/kg in B7A-30, with an average concentration of 13.74 mg/kg. These arsenic concentrations are above the range and above the average background arsenic concentration of 7.15 mg/kg. Arsenic concentrations in the samples collected from boring B6A ranged from 2.34 mg/kg to 8.86 mg/kg. These arsenic concentrations are within the range and below the average background arsenic concentration of 7.15 mg/kg.

Barium

Barium concentrations detected in the samples collected from the fill ranged from 74 mg/kg to 382 mg/kg, with an average concentration of approximately 183 mg/kg.

These barium concentrations are above the range and slightly above the average background barium concentration of 157.5 mg/kg.

Barium concentrations in the four samples from boring B6A ranged from 113 mg/kg to 249 mg/kg. These barium concentrations are above the range and above the average background barium concentration of 157.5 mg/kg, but below the iPRG of 67,000 mg/kg.

In boring B7A, barium concentrations ranged from 152 mg/kg in B7-20 to 1,600 mg/kg in B7A-40. These barium concentrations are above the range and above the average background barium concentration of 157.5 mg/kg. Two samples from B7A (B7A-30 and B7A-40) exceeded 10 times the STLC for barium. The soluble barium concentrations in B7A-30 and B7A-40 were 35.4 mg/l and 40.7 mg/l, respectively.

Lead

Lead concentrations detected in the samples collected from the fill ranged from 5.13 mg/kg to 86 mg/kg in SB9-10, with an average concentration of 19.7 mg/kg. These lead concentrations are above the range and above the average background lead concentration of 7.15 mg/kg. Soluble lead was detected in SB9-10 at a concentration of 3.22 mg/l.

Lead concentrations in the three samples from boring B6A ranged from 5.2 mg/kg to 10.8 mg/kg, with an average concentration of 7.48 mg/kg. These lead concentrations are within the range and below the average background lead concentration of 7.15 mg/kg.

In boring B7A, lead concentrations ranged from 7.05 mg/kg in B7-20 to 376 mg/kg in B7A-30, with an average concentration of 128.77 mg/kg. These lead concentrations are above the range and above the average background lead concentration of 7.15 mg/kg, and below the iPRG of 800 mg/kg.

Three samples from B7A (B7A-10, B7A-30, and B7A-40) exceeded 10 times the STLC for lead. The soluble lead concentration in B7A-10 was 2.58 mg/l. The soluble lead concentrations in B7A-30 and B7A-40 were 8.54 mg/l and 12.5 mg/l, respectively.

Mercury

No mercury concentrations were detected above the laboratory detection limit in 15 of the 18 samples collected from the fill material. Mercury was detected in three samples, at concentrations ranging from 0.14 mg/kg in SG9-10 to 1.69 mg/kg in SG2-0.5.

Mercury was not detected in any of the samples collected from B6A. Mercury was detected in two of the samples collected from B7A (B7A-30 and B7A-40) at concentrations of 0.59 mg/l and 0.46 mg/l, respectively. These mercury concentrations

are above the range and above the average background mercury concentration of 0.13 mg/kg, and below the iPRG of 310 mg/kg.

Background Metals Concentrations

In a letter dated July 5, 2006, HERD recommended that background soil samples be collected, if feasible, from the same parent materials as found on the Site and analyzed for concentrations of metals to compare to on-site concentrations. Since the Site consists of sump material and imported fill, it is unlikely that background soil samples could be collected from the same parent material. This area has also experienced significant urbanization and industrial use.

LFR collected 10 shallow soil samples along Del Mar Avenue for Title 22 metals analysis that were planned to be used to determine background metals concentrations. However, LFR does not consider these samples to be indicative of background levels, because lead was detected above the laboratory detection limit in 9 of the 10 samples, at concentrations ranging from 47 mg/kg to 230 mg/kg. The average lead concentration in the 10 samples was 72.7 mg/kg. The soil has apparently been impacted from the adjacent street traffic and/or the Metro Blue Line. LFR will compare analytical results for the on-site soil samples with the background metals concentrations provided by the DTSC, as discussed below.

The DTSC provided background metals concentrations from a school site in Long Beach, California. Arsenic concentrations in the four background samples ranged from 5.3 mg/kg to 11 mg/kg, with an average concentration of 7.15 mg/kg. Barium concentrations ranged from 140 mg/kg to 170 mg/kg, with an average concentration of 157.5 mg/kg. Lead concentrations ranged from 5.6 mg/kg to 11 mg/kg, with an average concentration of 7.15 mg/kg. Mercury was detected in two of the samples, at concentrations of 0.10 mg/kg and 0.16 mg/kg, with an average concentration of 0.13 mg/kg. A copy of the summary table for all 17 metals is attached as Appendix I.

8.2.10 PCBs

No PCBs were detected in 17 of the 18 samples collected from the fill material. In sample SG9-10, PCB-1248 and PCB-1260 were detected at concentrations of 0.13 mg/kg and 0.038 mg/kg, respectively.

No concentrations of PCBs detected in samples from the fill material were greater than the iPRG of 0.74 mg/kg (EPA 2004).

No PCBs were detected in the three samples collected from B6A. PCBs were detected in three samples from boring B7A (B7A-30, B7A-40, and B7A-50). Concentrations of PCB-1248 ranged from 0.19 mg/kg in B7A-50 to 0.42 mg/kg in B7A-40. Concentrations of PCB-1260 ranged from 0.046 mg/kg in B7A-50 to 0.12 mg/kg in B7A-40.

Analytical results for PCBs detected in the fill are summarized in Table 21. Analytical results for PCBs detected in borings 6A, 7A, and MW-7 are summarized in Table 22.

8.2.11 Organochlorine Pesticides

Organochlorine pesticides detected in the fill include chlordane, dieldrin, and 4,4-dichlorodiphenyltrichloroethylene (4,4-DDE), as summarized below:

- Chlordane was detected in samples SG13-5 and SG3-10 at concentrations of 0.041 mg/kg and 0.035 mg/kg, respectively.
- Dieldrin was detected in SG2-10 at a concentration of 0.013 mg/kg.
- 4,4-DDE was detected in SG14-0.5 at a concentration of 0.007 mg/kg.

Analytical results for organochlorine pesticides in the fill are summarized in Table 23.

8.2.12 pH

In B7A-30 and B7A-40, pH was measured at 7.82 and 7.79, respectively.

8.3 Groundwater Elevation and Flow Direction

Kelsurveys surveyed the well elevations at the Site on November 6, 2007. Elevation measurements were made from a notch on the north side of each casing; the same location is used to measure depth to groundwater. The elevation of each well is shown on Table 11.

Depth to groundwater was measured at wells MW-3, MW-5, MW-6, and MW-7 on December 3, 2007. Depths to groundwater ranged from 29.56 feet (MW-6) to 49.32 feet (MW-7) below TOC (Table 11).

The depth to groundwater and the elevation for each well were used to calculate the elevation of the potentiometric surface beneath the Site. A map showing horizontal groundwater flow, generally to the south-southeast, is included as Figure 20. The gradient of the potentiometric surface beneath the Site is relatively flat, at approximately 0.64 foot of drop for every 100 feet of distance flowed (or 0.0064 ft/ft).

Groundwater levels have decreased approximately 0.46 foot in MW-5 to 1.16 feet in MW-3 since the previous measurements in December 2006.

8.4 Groundwater Sampling – December 2007

Analytical results for groundwater samples collected from MW-3, MW-5, MW-6, and MW-7 in December 2007 are discussed below. Groundwater analytical results are summarized in Tables 6 through 10 and 11, and shown on Figure 21.

Three metals were detected at concentrations above laboratory reporting limits:

- barium (at concentrations ranging from 86 μg/l and 100 μg/l in MW-5 and MW-6, respectively, to 1,100 μg/l in MW-7)
- mercury (at concentrations of 0.74 μg/l in MW-3 and 5.6 μg/l in MW-6)
- arsenic (at a concentration of 210 μg/l in MW-7)

California MCLs (per CCR Title 22, June 27, 2007) were exceeded for mercury and barium. Mercury was detected in MW-6 at a concentration of 5.6 μg/l; the MCL for mercury is 2 μg/l. Barium was detected in MW-7 at a concentration of 1,100 μg/l; the MCL for barium is 1,000 mg/l. Analytical results for metals are summarized in Table 11 and shown on Figure 21.

TPH was not detected at concentrations above laboratory reporting limits in the groundwater samples collected at the Site, with one exception: TPHd was detected in MW-7 at a concentration of 1.1 mg/l. A summary of historical TPH analytical results is provided in Table 7.

No VOCs or SVOCs were detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site. Historical summaries of the analytical results for VOCs and SVOCs are shown in Tables 8 and 9, respectively.

8.5 Quality Assurance/Quality Control

One duplicate sample was collected during the groundwater monitoring event. Sample DUP-1 was collected as a duplicate from well MW-7. Analytical results for the duplicate sample were generally consistent with results for the primary sample.

Three duplicate soil samples were collected during the soil investigation. Sample SG3-10-Dup was collected as a duplicate of SG3-10; sample SG9-5-Dup was collected as a duplicate of SG9-5; and sample B6A-20-Dup was collected as a duplicate of B6A-20. Analytical results for the duplicate samples were generally consistent with results for the primary samples, with two exceptions:

- In sample SG3-10, chlordane was detected at a concentration of 0.035 mg/kg, which is slightly above the detection limit of 0.025 mg/kg. In the duplicate sample, chlordane was not detected above the laboratory reporting limit.
- In sample SG9-5, DDE and dichlorodiphenyldichloroethane (DDD) were not detected at concentrations above their respective laboratory reporting limits of 0.005 mg/kg and 0.004 mg/kg. In the duplicate samples, DDE and DDD were reported at concentrations of 0.011 mg/kg and 0.006 mg/kg, respectively, which are both slightly above the detection limits.

Two equipment blanks were collected, one during the soil sampling and the other during the groundwater sampling event. Analytical results for the equipment blanks

indicated that there was no cross-contamination of sampling equipment during the sampling activities.

One field blank was collected during the soil sampling. Analytical results for the field blank indicated that there was no cross-contamination from the deionized water that was used to wash sampling equipment during equipment cleaning activities.

9.0 SUMMARY

9.1 Soil

Petroleum hydrocarbons are the predominant contaminant found at the Site, with longer carbon chains predominant. Both extractable and volatile hydrocarbon criteria are near or below the screening levels established using the MA DEP approach for low quality groundwater.

Soils beneath the Site contain significant levels of TPH. The extent of the impacted soil is illustrated on an isopach map developed using historical data (predominantly the ETC cross-sections, as shown on Figures 4 through 6) and data collected by LFR as presented in this report (Figure 7). The isopach map shows that the areas of deepest impact are in two locations in the central and northern portions of the CRG property (the northernmost part of the Site). The largest area extends from LFR boring B3 northward to GEOFON boring GB10, and extends vertically to at least 30 feet bgs. The second area, located north of the first area, is centered around LFR borings B7 and CPT2, and extends vertically to approximately 50 feet bgs. Analysis of soil samples collected in November 2003 indicated that lower-range carbon chain concentrations (C_{12}-C_{28}) ranged from 350 mg/kg to 20,000 mg/kg, and higher-range carbon chain concentrations (C_{28}-C_{40}) ranged from 280 mg/kg to 22,000 mg/kg. Gasoline-range hydrocarbons, tested in three locations at the Site (B3, B4, and B5), were found at concentrations ranging from 0.680 mg/kg to 53 mg/kg.

TPH-impacted soil, as detected in soil samples collected in October and November 2007, consists predominantly of TPHd and TPHmo. In boring B7A, detectable concentrations of TPHd ranged from 16 mg/kg to 4,070 mg/kg, with the highest concentration detected at a depth of 40 feet bgs. TPHd was not detected at depths of 5 and 20 feet bgs. In boring B7A, detectable concentrations of TPHmo ranged from 24 mg/kg to 8,970 mg/kg, with the highest concentration detected at a depth of 40 feet bgs.

No TPHg, TPHd, and TPHmo were detected at concentrations above the RWQCB SSL applicable to the Site.

Using the MA DEP EPH fractions of petroleum hydrocarbon mixtures on the three worst-case samples (B7A-30, B7A-40, and B7A-50) yielded the following results:

- Aliphatic hydrocarbons C_9-C_{18} ranged from 2,210 mg/kg in B7A-50 to 5,290 mg/kg in B7A-40.
- Aliphatic hydrocarbons C_{19}-C_{36} ranged from 3,390 mg/kg in B7A-50 to 7,850 mg/kg in B7A-40.
- Aromatic hydrocarbons C_{11}-C_{22} ranged from 2,960 mg/kg in B7A-50 to 6,580 mg/kg in B7A-40.
- Aliphatic hydrocarbons C_5-C_8 ranged from 54 mg/kg in B7A-40 to 102 mg/kg in B7A-30.
- Aliphatic hydrocarbons C_9-C_{12} ranged from 140 mg/kg in B7A-50 to 322 mg/kg in B7A-30.
- Aromatic hydrocarbons C_9-C_{10} ranged from 82 mg/kg in B7A-50 to 176 mg/kg in B7A-30.

When compared with the MA DEP screening levels, only the TPH concentration of 7,850 mg/kg detected in sample B7A-40 would be considered a potential hazard. Based on the depth below ground surface, this concentration is not likely to pose a threat to any receptors.

Using the SPLP to simulate actual Site conditions, TPH in the C_6-C_{10} range were not detected at concentrations above the laboratory detection limit in the three samples analyzed. C_{10}-C_{22} ranged from 4.0 mg/kg to 18 mg/kg, and C_{22}-C_{36} ranged from 3.6 mg/kg to 22 mg/kg. The highest concentrations were detected in B7A-50.

Analytical results for metals in soil samples were below the EPA iPRGs for all metals, with the exception of arsenic, which was detected in borings B1, B2, B3, B5, and B7 at concentrations ranging from 5.8 mg/kg to 24 mg/kg. The iPRG for arsenic is 0.25 mg/kg. Arsenic is a naturally occurring trace metal that has been found in California soils at concentrations ranging between 0.6 mg/kg and 11.0 mg/kg (Kearney 1996). Concentrations of arsenic in all the samples where it was detected exceeded the iPRG, and in three locations (B1, B3, and B7) the concentrations also exceeded expected background levels for southern California soils.

VOCs detected in soil samples were below iPRGs. Benzene, ethylbenzene, toluene, and total xylenes were detected at concentrations above laboratory reporting limits, but none of these VOC concentrations exceeded iPRGs for those compounds.

PCBs and pesticides were detected at concentrations below iPRGs. SVOC analyses found only a few PRG exceedances, with one benzo (a) pyrene exceedance at 50 feet bgs, and two naphthalene exceedances at depth. The iPRGs for SVOCs were not exceeded for those compounds that have iPRGs, with the exception of benzo(a)pyrene in sample B7-50. The iPRG for benzo(a)pyrene is 210 μg/kg.

9.2 VOCs in Soil Gas

PCE, TCE, and benzene were detected slightly above CHHSL concentrations, with a preliminary Johnson and Ettinger evaluation finding insignificant concerns for these compounds.

Four VOCs were detected in the 28 samples analyzed using EPA Method 8260B. PCE was detected in 12 samples at concentrations ranging from 5.3 µg/l to 9.1 µg/l. The highest concentration was detected in sample SG13-5 at 5 feet bgs. Toluene was detected in five samples at concentrations ranging from 1.5 µg/l to 1.6 µg/l. TCE was detected in 12 samples at concentrations ranging from 1.2 µg/l to 2.0 µg/l. M,p-xylenes were detected in five samples at concentrations ranging from 1.2 µg/l to 1.3 µg/l. The PCE concentrations in 12 samples exceeded the CHHSL of 0.603 µg/l for shallow soil gas for commercial/industrial land use. The TCE concentrations in seven samples exceeded the CHHSL of 1.77 µg/l.

Twenty VOCs were detected in six soil gas samples using EPA Method TO-15. PCE was detected in two of the samples at concentrations of 0.03 µg/l and 0.13 µg/l. Toluene was detected in all six samples at concentrations ranging from 0.04 µg/l to 0.35 µg/l. TCE was detected in two samples at concentrations of 0.01 µg/l and 0.02 µg/l. M,p-xylenes were detected in all six samples at concentrations ranging from 0.02 µg/l to 0.47 µg/l. O-xylenes were detected in five samples at concentrations ranging from 0.01 µg/l to 0.14 µg/l. Ethylbenzene was detected in four samples at concentrations ranging from 0.01 µg/l to 0.13 µg/l. Benzene was detected in five samples at concentrations ranging from 0.02 µg/l to 0.33 µg/l. The only VOC concentrations that exceeded the CHHSL were two concentrations of benzene. The CHHSL for benzene is 0.122 µg/l.

9.3 Methane

The presence of methane will require consideration and potential mitigation during subsequent design and construction.

Using a field gas monitor and analyzer on 32 soil gas samples, detected methane concentrations ranged from 1,000 ppmv to 104,000 ppmv at 5 feet bgs and from 12 ppmv to 196,000 ppmv at 10 feet bgs. The highest concentration (19.6% by volume) was detected at the SG-11 location at a depth of 10 feet bgs.

Methane concentrations were detected in 26 soil gas samples analyzed at the laboratory. At 5 feet bgs, detected methane concentrations ranged from 12 ppmv to 180,000 ppmv. At 10 feet bgs, detected methane concentrations ranged from 27 ppmv to 300,000 ppmv. The highest concentration (30% by volume of air) was detected at the SG-11 location at a depth of 10 feet bgs. Four methane concentrations exceeded the UEL of 15% per volume of air or 150,000 ppmv. Two concentrations were within the explosive limit, at 7.2% and 15%. Methane concentrations in all the other samples were below the LEL of 5%.

9.4 Groundwater

Given the regional area's degraded surficial aquifers from historic oil production, the conditions observed at the Site appear to be in general accordance with the regional degradation of groundwater quality. Lead has been historically observed, but recent analyses find no significant impact. Detected concentrations of arsenic, barium, and mercury slightly exceeded their respective MCLs. TDS appears to have increased from potential historic Site activities, but regional degradation of groundwater quality limits these concerns.

Seven metals were detected at concentrations above laboratory reporting limits in groundwater samples collected during the sampling event in December 2006, including barium, calcium, copper, magnesium, mercury, silver, and sodium. The California MCL (per CCR Title 22, September 12, 2003) was exceeded for mercury (7.3 μg/l in MW-3).

TPH was not detected at concentrations above laboratory reporting limits in the groundwater samples collected at the Site, with the exception of TPH gasoline range organics (C_6-C_{12}). Concentrations of TPH (C_6-C_{12}) ranged from 0.05 μg/l in MW-5 to 0.38 μg/l in MW-6.

VOCs and SVOCs were not detected at concentrations above laboratory detection limits in any of the groundwater samples collected at the Site during the December 2006 sampling event.

California Secondary MCLs – recommended ranges (per CCR Title 22, September 12, 2003) for EC were exceeded in MW-5 (1,700 μs/cm), MW-6 (3,660 μs/cm), and MW-3 (7,740 μs/cm). The secondary MCL recommended range for EC is listed as 900 μs/cm.

California Secondary MCLs – recommended ranges for chloride were exceeded in MW-6 (1,100 mg/l) and MW-3 (3,270 mg/l). The secondary MCL recommended range for chloride is listed as 250 mg/l.

Concentrations of TDS and EC in the groundwater increase in the downgradient direction. It is unknown whether the elevated concentrations are due to natural processes or human activity. However, the Gaspur aquifer has historically been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond Carson Street (located north of the Site) toward the crest of the Newport-Inglewood uplift (Poland 1959). Based on the concentrations of TDS detected during the latest sampling event, groundwater enters the Site classified as slightly saline, and exits the Site classified as moderately saline.

Three metals were detected at concentrations above laboratory reporting limits in groundwater samples collected during the sampling event in December 2007, including barium, arsenic, and mercury. California MCLs were exceeded for barium (1,100 μg/l

in MW-7) and mercury (5.6 µg/l in MW-6). The detected arsenic concentration (210 µg/l) is above the federal MCL for arsenic of 10 µg/l.

TPH was not detected at concentrations above laboratory reporting limits in the groundwater samples collected at the Site, with one exception. TPHd was detected in MW-7 at a concentration of 1.1 mg/l.

VOCs and SVOCs were not detected at concentrations above laboratory detection limits in any of the groundwater samples collected at the Site during the December 2007 sampling event.

10.0 CONCLUSIONS

10.1 Soil

In November 2003 and May 2004, LFR advanced soil borings, installed two additional groundwater monitoring wells, and performed soil and groundwater sampling at the Site. Additional groundwater sampling was performed in December 2006. In response to DTSC comments, LFR implemented additional investigation activities in November 2007. LFR advanced soil borings, installed one additional groundwater monitoring well, and performed soil gas, soil, and groundwater sampling at the Site. Groundwater sampling was performed in December 2007. The objective of the soil gas, soil, and groundwater sampling activities was to further characterize the extent of impacted soil and groundwater in order to continue the process of site remediation.

Petroleum hydrocarbons are the predominant contaminant found at the Site, with longer carbon chains predominant. Both extractable and volatile hydrocarbon criteria are near or below the screening levels established using the MA DEP approach for low quality groundwater. The areas of deepest impact are in two locations in the central and northern portions of the CRG property.

Analytical results for TPH in soil samples collected by LFR in 2003 indicated TPHd and TPHmo exceeded SSLs at depths ranging from 10 to 50 feet bgs in borings located in the central and northern portions of the Site. Analytical results in 2007 confirmed TPHd was present at concentrations above the SSL in boring B7A from 30 to 50 feet bgs.

When compared with the MA DEP screening levels, only the TPH concentration detected in sample B7A-40 (7,850 mg/kg) would be considered a potential hazard. Based on the depth below ground surface, this concentration is not likely to pose a threat to any receptors.

Analytical results for VOCs collected in soil samples by LFR in 2003 indicated VOCs were not present at levels above iPRGs. Analytical results in 2007 confirmed that

VOCs were not present above the iPRGs in the sump samples collected from the three borings drilled on the Site in November 2007.

SVOC analyses found only a few PRG exceedances, with one benzo (a) pyrene exceedance at 50 feet bgs, and two naphthalene exceedances at depth. Analytical results for SVOCs collected in soil samples by LFR in 2003 indicated that benzo(a)pyrene at a depth of 50 feet bgs in boring B7 was the only SVOC that exceeded the iPRG. Analytical results in 2007 found that the only SVOC to exceed the iPRG was naphthalene at 30 and 50 feet bgs in boring B7A. Based on the depth below ground surface, these concentrations would not likely pose a threat to any receptors.

The only metals of concern identified at the Site are arsenic (concentrations slightly above typical California background levels to as high as 28.6 mg/kg) and lead (STLC concentrations exceeded for disposal purposes; however, a deionized water evaluation suggested no significant water quality threat).

Analytical results for soil samples collected by LFR in 2003 were below iPRGs for all metals, with one exception. Arsenic was detected at 50 feet bgs in borings B1, B2, B3, B5, and B7 at concentrations ranging from 5.8 mg/kg to 24 mg/kg. Analytical results for soil samples collected in 2007 confirmed that arsenic concentrations were present above the iPRG in samples collected from fill material and from sump material. In the fill, two samples collected at 0.5 feet bgs exhibited arsenic concentrations of 11.5 mg/kg and 13.7 mg/kg, which were greater than the highest background arsenic concentration of 11 mg/kg. Only two arsenic concentrations detected in samples collected from the sump material were greater than the highest background concentration. Arsenic was detected at concentrations of 28.6 mg/kg and 28.5 mg/kg at depths of 30 and 40 feet bgs, respectively, in boring B7.

Concentrations of lead above the iPRG of 800 mg/kg were not detected in either LFR investigation. Soluble concentrations of lead above the STLC that would be considered hazardous if excavated and disposed of offsite were detected in boring B7 at depths of 30 and 40 feet bgs. However, an STLC extraction using deionized water indicated that soluble lead is less than 5 mg/l and would be considered acceptable to leave in place.

No PCBs or organochlorine pesticides have been detected at concentrations above iPRGs during LFR's investigations.

10.2 Soil Gas

PCE, TCE, and benzene were detected at concentrations slightly above CHHSLs, with a preliminary Johnson and Ettinger evaluation finding insignificant concerns for these compounds.

Analytical results of soil gas samples collected in the fill and analyzed for VOCs using EPA Method 8260B indicated only PCE and TCE were detected at concentrations greater than the CHHSLs. Detectable PCE concentrations ranged from 5.3 μg/l to

9.1 µg/l, and TCE concentrations ranged from 1.8 µg/l to 2.0 µg/l. Using EPA Method TO-15, benzene was the only VOC that exceeded the CHHSL. Benzene was detected at concentrations of 0.20 µg/l and 0.33 µg/l, which are only slightly above the CHHSL of 0.122 µg/l.

A preliminary screening based on the Johnson and Ettinger soil gas screening model was conducted for the highest concentrations of benzene, PCE, and TCE. The risk for commercial usage of the Site was calculated for benzene at 9.6×10^{-7}. For PCE and TCE the risk was calculated to be 5.1×10^{-6} and 3.9×10^{-7}, respectively. Only PCE was calculated to be above the target risk criteria of 1×10^{-6}.

10.3 Methane

The presence of methane will require consideration and potential mitigation during subsequent design and construction.

Methane was detected at concentrations up to 30%, concentrations within the LEL, and concentrations greater than the UEL during LFR's investigation. These concentrations corroborate the methane concentrations detected in a previous investigation by others, where methane concentrations ranged from 12.1% to 83.6%.

10.4 Groundwater

Historically, TPHcc, VOCs, and SVOCs have either not been detected in groundwater samples or were detected at concentrations well below their respective MCLs. Given the regional area's degraded surficial aquifers from historic oil production, while some degradation was observed at the Site, the conditions appear to be in general accordance with the regional degradation of groundwater quality. Lead has been historically observed, but recent analyses find no significant impact. Arsenic, barium, and mercury were detected at concentrations that slightly exceed the MCLs. TDS appears to have increased from potential historic Site activities, but regional degradation limits these concerns.

Lead was detected at concentrations above the MCL of 15 µg/l in groundwater samples collected from three of the groundwater wells in 1994 and 1997, including upgradient well MW-4. In 2004, lead was detected at 16 µg/L in MW-5 (the replacement upgradient well for MW-4). In subsequent sampling, lead has not been detected in groundwater samples.

Arsenic was previously detected in MW-3, MW-5, and MW-6 at concentrations ranging from 7.8 µg/l to 15 µg/l. In 2003, an estimated arsenic concentration of 72 µg/l was reported in MW-3. In recently installed MW-7, arsenic was detected at a concentration of 210 µg/l, which is greater than the Federal MCL of 10 µg/l.

Barium has historically not been detected above the MCL in any of the wells. In recently installed MW-7, barium was detected at a concentration of 1,100 μg/l, which is slightly above the MCL of 1,000 μg/l.

Mercury has historically been detected in MW-3 and MW-6 at concentrations ranging from 0.82 μg/l to 160 μg/l. In December 2007, mercury was detected in two of the wells (MW-3 and MW-7) at concentrations of 0.74 μg/l and 5.6 μg/l, respectively. The MCL for mercury is 2 μg/l.

In January 1996, TDS concentrations ranged from 2,690 mg/l (MW-4) to 10,800 mg/l (MW-2). In 2006, TDS concentrations ranged from 900 mg/l (MW-5) to 4,710 mg/l (MW-3). Although TDS increased across the Site, historically the Gaspur aquifer has been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond the Site.

Groundwater in the region is degraded from numerous and complex interactions of nature as well as historical man-caused activities that date back numerous decades. The Site apparently also contributed to the regional degradation, but does not appear to be the sole or even the primary cause of groundwater degradation.

Remedial consideration of historical Site activities would be highly problematic within this environment, and would do little to remedy potential historical discharges within the context of the region's degraded groundwater. Salt is not easily remedied, and pump and treat options would pose highly costly challenges and could exacerbate the regional condition.

LFR presented these conclusions to the DTSC and RWQCB on July 23, 2008 in a meeting to discuss groundwater issues. The understandings reached with the DTSC and RWQCB are summarized in LFR's letter dated October 10, 2008 (attached as Appendix O). The DTSC accepted LFR's responses in their letter dated October 10, 2008 (attached as Appendix P).

11.0 REFERENCES

American Environmental Management Corporation (AEMC). 1991, Draft Site Review for Oil Operators, Inc. June 26.

———. 1991. Subsurface Characterization Report of the Southern Portion of Oil Operators, Inc. prepared for Sukut Construction. December 12.

California Regional Water Quality Control Board (RWQCB). 1987. Letter from Mr. J.E. Ross to Mr. Elton Oliver, Oil Operators, Inc. re: Waste Discharge Order No. 87-54 (with attachment). May 5.

Dames & Moore. 1988. Final Report Preliminary Site Characterization Long Beach Auto Mall for the Redevelopment Agency, City of Long Beach, Long Beach, California.

Earth Technology Corporation. 1984. Oil Sump Site Development Supplemental Investigation, San Diego Freeway and Pacific Place, Long Beach, California. January.

Ecology and Environment, Inc. (EEI). 1990. Preliminary Assessment, Oil Operators, Inc., Long Beach, California, prepared for M.V. Cummings, EPA Region 9 Site Assessment Manager. July 30.

EMCON Associates. 1981, Hydrologic Investigation Industrial Waste Transfer Station, Long Beach, California, prepared for Chemical Waste Management, Inc. February.

GEOFON, Inc. and Jaykim Engineers. 1986. Site Characterization Study. October.

———. Date unknown. Geotechnical Investigation for Proposed State Wide Business Park.

Gregg In Situ, Inc. 2003. Presentation of Cone Penetration Test Data, Long Beach Golf Learning Center, Long Beach, California. November 24.

Jack K. Bryant & Associates. (Bryant). 1989a. Letter from Jack K. Bryant to Mr. Robert R. Pease, South Coast Air Quality Management District, re: Oil Operators, Inc. Rule 1150 Permit No. 157742. April 19.

———. 1989b, Results of Post Excavation Soil Sampling. August 30.

Jack K. Bryant Engineers. 1996. 1995 Groundwater Monitoring Report for Oil Operators North Site. February 1.

———. 1997. RWQCB File Number 86-66, Annual Groundwater Monitoring Report 1996, for Oil Operators North Site, Pacific Place, Long Beach, CA. March 17.

Jaykim Engineers, Inc. (Jaykim). 1986. Hydrogeologic and Soils Report for the Closure of Basins 4, 5, and 14 at Oil Operators, Inc., prepared for Oil Operators, Inc. October.

———. 1988. Addendum to Proposal for Environmental Services Related to the Clean-up of Oil Operators North Site. April 7.

———. 1988a. Letter from Mr. Todd Brody to Mr. Elton Oliver, Oil Operators, Inc. re: Revisions to the Rule 1150 Excavation Permit for Landfarming the North Site. January 22.

———. 1988b. Results of Test Plot at Oil Operators North Site. July 18.

———. 1988c. Letter from Mr. Todd Brody to Mr. Fred Tornatore, State Department of Health Services, re: Bioremediation of Crude Oil Contaminated Soil (with attachment). May 27.

———. 1988d. Letter to Mr. Jim Ross, California Regional Water Quality Control Board re: 72-Hour Notice to Proceed with Landfarming Activities at Oil Operators North Site in Long Beach. June 6.

Kabata-Pendias, A. and H. Pendias. 1984. Trace elements in soils and plants. CRC Press, Inc., Boca Raton, Florida.

Kearney. 1996. Background Concentrations of Trace and Major Elements in California Soils.

Los Angeles County Department of Public Works (LADPW). 2008. Water Resources Division-Hydrologic Records, information provided by Jasmine Sancedo to A. Marino. February 13.

LFR Inc. (LFR). 2007a. Revised Data Characterization Report, Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California. March 12.

———. 2007b. Submittal of Response to DTSC Comments to the Characterization Data Report, Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California. March 12.

———. 2007. Remedial Investigation Workplan, Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California. August 29.

Oil Operators Incorporated (Oil Operators). 1990a. Oil Operators Incorporated, Long Beach – North Side (File #86-066; CI 6775) and South Side (File #86-065; CI 6751) Plan for Project Completion. April 12.

———. 1990b. Letter to Mr. Juan Gonzales, California Regional Water Quality Control Board. October 24.

Pender Properties, Inc. 1989. Letter to Mr. Jim Ross, California Regional Water Quality Control Board. November 7.

Poland, J.F. and A. Sinnot. 1959. Hydrology of the Long Beach-Santa Ana Area, California. USGS Water Supply Paper 1471.

South Coast Air Quality Management District (SCAQMD). 1988. Letter from Mr. Mohsen Nazemi to Mr. Elton Oliver, Oil Operators, Inc. re: Rule 1150 Excavation Permit. February 11.

12.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

All information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by the undersigned of LFR Inc.

May 27, 2009

Charles E. Robinson, P.E. Date
Vice President/Principal Engineer
California Professional Civil Engineer #C-035368



TABLES

Table 1
Summary of Soil Samples Analyzed for Metals
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Sample Depth (ft bgs)	Date Sampled	Lab	Lab ID	Antimony EPA 6010B mg/kg	Arsenic EPA 6010B mg/kg	Barium EPA 6010B mg/kg	Beryllium EPA 6010B mg/kg	Cadmium EPA 6010B mg/kg	Chromium EPA 6010B mg/kg	Cobalt EPA 6010B mg/kg	Copper EPA 6010B mg/kg	Lead EPA 6010B mg/kg	Mercury EPA 7471A mg/kg	Molybdenum EPA 6010B mg/kg	Nickel EPA 6010B mg/kg	Selenium EPA 6010B mg/kg	Silver EPA 6010B mg/kg	Thallium EPA 6010B mg/kg	Vanadium EPA 6010B mg/kg	Zinc EPA 6010B mg/kg
B1-50	50	11/21/03	SunStar	T301260-13	<3	14	140	<1	2.0	22	9.2	21	10	<0.1	1.0	18	<5	<2	<2	31	60
B2-50	50	11/21/03	SunStar	T301260-01	<3	5.8	35	<1	<2	3.8	5.2	15	3.5	<0.1	<1	7.6	<5	<2	<2	12	32
B3-50	50	11/21/03	SunStar	T301260-02	<3	12	59	<1	<2	9.9	7.7	21	4.1	<0.1	<1	17	<5	<2	<2	17	48
B4-50	50	11/22/03	SunStar	T301260-43	<3	<5	38	<1	<2	<2	5.2	8.7	3.6	<0.1	<1	7.0	<5	<2	<2	11	36
B5-50	50	11/21/03	SunStar	T301260-03	<3	8.4	62	<1	<2	13	9.6	23	6.2	<0.1	<1	19	<5	<2	<2	29	65
B6-50	50	11/22/03	SunStar	T301260-33	<3	<5	77	<1	<2	13	9.1	16	4.3	<0.1	<1	13	<5	<2	<2	32	45
B7-50	50	11/21/03	SunStar	T301260-23	<3	24	340	<1	<2	29	8.5	54	350	<0.1	1.6	32	<5	<2	<2	22	210
iPRGs					**410**	**0.25***	**67,000**	**1,900**	**450**	**100,000**	**1,900**	**41,000**	**800**	**310**	**5,100**	**20,000**	**5,100**	**5,100**	**67**	**1000**	**100,000**

ID = Identification
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
< = Not detected above laboratory reporting limit indicated.
SunStar = SunStar Laboratories Inc., Tustin, CA.
iPRG = Preliminary Residential Goals for Industrial Sites
* = California-modified PRG

QA/QC

Table 2
Summary of Soil Samples Analyzed for Total Petroleum Hydrocarbon Chain Range (TPHcc)
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Sample Depth (ft bgs)	Date Sampled	Lab	Lab ID	C6-C12 EPA 8015M mg/kg	C12-C28 EPA 8015M mg/kg	C28-C40 EPA 8015M mg/kg	Gasoline Range Hydrocarbons EPA 8015M µg/kg
B1-35	35	11/21/03	SunStar	T301260-10	<10	<10	<10	--
B1-50	50	11/21/03	SunStar	T301260-13	<10	<10	<10	--
B2-30	30	11/21/03	SunStar	T301254-06	<10	<10	<10	--
B2-50	50	11/21/03	SunStar	T301260-01	<10	<10	<10	--
B3-10	10	11/21/03	SunStar	T301254-12	<10	20,000	22,000	--
B3-25	25	11/21/03	SunStar	T301254-15	--	350	280	4,900
B3-30	30	11/21/03	SunStar	T301254-16	--	14,000	11,000	53,000
B3-45	45	11/21/03	SunStar	T301254-19	--	<10	<10	<500
B3-50	50	11/21/03	SunStar	T301260-02	<10	<10	<10	--
B4-10	10	11/22/03	SunStar	T301260-35	<10	8,400	22,000	--
B4-15	15	11/22/03	SunStar	T301260-36	--	<10	<10	<500
B4-20	20	11/22/03	SunStar	T301260-37	--	<10	<10	680
B4-50	50	11/22/03	SunStar	T301260-43	<10	<10	<10	--
B5-15	15	11/21/03	SunStar	T301254-23	<10	17,000	20,000	--
B5-20	20	11/21/03	SunStar	T301254-24	--	12,000	11,000	7,300
B5-25	25	11/21/03	SunStar	T301254-25	--	<10	<10	<500
B5-40	40	11/21/03	SunStar	T301254-28	--	<10	<10	<500
B5-45	45	11/21/03	SunStar	T301254-29	--	<10	<10	<500
B5-50	50	11/21/03	SunStar	T301260-03	<10	<10	<10	--
B6-30	30	11/22/03	SunStar	T301260-29	<10	<10	<10	--
B6-50	50	11/22/03	SunStar	T301260-33	<10	<10	<10	--
B7-35	35	11/21/03	SunStar	T301260-20	<10	15,000	20,000	--
B7-50	50	11/21/03	SunStar	T301260-23	<10	20,000	22,000	--

ID = Identification
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
< = Not detected above laboratory reporting limit indicated.
SunStar = SunStar Laboratories Inc., Tustin, CA.
-- = Not analyzed.

QA/QC

Table 3
Summary of Soil Samples Analyzed for Polychlorinated Biphenyls (PCBs)
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Sample Depth (ft bgs)	Date Sampled	Lab	Lab ID	PCB-1016 EPA 8082 µg/kg	PCB-1221 EPA 8082 µg/kg	PCB-1232 EPA 8082 µg/kg	PCB-1242 EPA 8082 µg/kg	PCB-1248 EPA 8082 µg/kg	PCB-1254 EPA 8082 µg/kg	PCB-1260 EPA 8082 µg/kg
B1-50	50	11/21/03	SunStar	T301260-13	<10	<10	<10	<10	<10	<10	<10
B2-50	50	11/21/03	SunStar	T301260-01	<10	<10	<10	<10	<10	<10	<10
B3-50	50	11/21/03	SunStar	T301260-02	<10	<10	<10	<10	<10	<10	<10
B4-50	50	11/22/03	SunStar	T301260-43	<10	<10	<10	<10	<10	<10	<10
B5-50	50	11/21/03	SunStar	T301260-03	<10	<10	<10	<10	<10	<10	<10
B6-50	50	11/22/03	SunStar	T301260-33	<10	<10	<10	<10	<10	<10	<10
B7-50	50	11/21/03	SunStar	T301260-23	<10	<10	<10	<10	<10	<10	<10

ID = Identification
ft bgs = feet below ground surface
µg/kg = micrograms per kilogram
< = Not detected above laboratory reporting limit indicated.
SunStar = SunStar Laboratories Inc., Tustin, CA.

QA/QC AM

Table 4
Summary of Soil Samples Analyzed for Volatile Organic Compounds (VOCs)
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Sample Depth (ft bgs)	Date Sampled	Lab	Lab ID	1,2,4-Trimethylbenzene EPA 8260B µg/kg	1,3,5-Trimethylbenzene EPA 8260B µg/kg	Benzene EPA 8260B µg/kg	Ethylbenzene EPA 8260B µg/kg	Isopropylbenzene EPA 8260B µg/kg	m,p-Xylene EPA 8260B µg/kg	Naphthalene EPA 8260B µg/kg	n-Butylbenzene EPA 8260B µg/kg	n-Propylbenzene EPA 8260B µg/kg	o-Xylene EPA 8260B µg/kg	p-Isopropyltoluene EPA 8260B µg/kg	sec-Butylbenzene EPA 8260B µg/kg	Toluene EPA 8260B µg/kg
B1-35	35	11/21/03	SunStar	T301260-10	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B1-50	50	11/21/03	SunStar	T301260-13	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B2-30	30	11/21/03	SunStar	T301254-06	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B2-50	50	11/21/03	SunStar	T301254-10	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B3-10	10	11/21/03	SunStar	T301254-12	210	60	63	52	22	180	140	25	36	81	34	<2	45
B3-25	25	11/21/03	SunStar	T301254-15	3.1	<2	4.4	38	19	4.8	<2	8.1	31	<2	3.3	11	<2
B3-30	30	11/21/03	SunStar	T301254-16	62	<2	51	290	130	7.2	360	41	190	10	49	75	<2
B3-45	45	11/21/03	SunStar	T301254-19	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B3-50	50	11/21/03	SunStar	T301254-20	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B4-10	10	11/22/03	SunStar	T301260-35	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B4-50	50	11/22/03	SunStar	T301260-43	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B5-15	15	11/21/03	SunStar	T301254-23	130	35	10	24	13	42	130	10	17	22	18	11	7.3
B5-20	20	11/21/03	SunStar	T301254-24	94	21	21	16	7.8	58	73	8.2	13	27	13	7.7	8.0
B5-25	25	11/21/03	SunStar	T301254-25	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B5-40	40	11/21/03	SunStar	T301254-28	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B5-45	45	11/21/03	SunStar	T301254-29	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B5-50	50	11/21/03	SunStar	T301254-30	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B6-30	30	11/22/03	SunStar	T301260-29	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B6-50	50	11/22/03	SunStar	T301260-33	<2	<2	<2	<2	<2	<4	<2	<2	<2	<2	<2	<2	<2
B7-35	35	11/21/03	SunStar	T301260-20	120	27	40	29	11	140	110	6.7	15	47	12	7.2	19
B7-50	50	11/21/03	SunStar	T301260-23	360	92	580	160	37	520	150	<2	64	87	49	30	28
iPRGs					**170,000**	**70,000**	**1,400**	**400,000**	**--**	**420,000**	**4200***	**240,000**	**240,000**	**420,000**	**--**	**220,000**	**520,000**

Note: VOCs are shown for detected compounds only. See laboratory reports for a complete list of compounds analyzed.
ID = Identification
ft bgs = feet below ground surface
µg/kg = micrograms per kilogram
< = Not detected above laboratory reporting limit indicated.
SunStar = SunStar Laboratories Inc., Tustin, CA.
iPRG = Preliminary Residential Goals for Industrial Sites
* = California-modified PRG
-- = Not available

QA/QC

Table 5
Summary of Soil Samples Analyzed for Semi-Volatile Organic Compounds (SVOCs)
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Sample Depth (ft bgs)	Date Sampled	Lab	Lab ID	1-Methylnaphthalene EPA 8270C µg/kg	2-Methylnaphthalene EPA 8270C µg/kg	Benzo (a) pyrene EPA 8270C µg/kg	Fluorene EPA 8270C µg/kg	Naphthalene EPA 8270C µg/kg	Phenanthrene EPA 8270C µg/kg
B1-50	50	11/21/03	SunStar	T301260-13	<300	<300	<300	<300	<300	<300
B2-50	50	11/21/03	SunStar	T301260-01	<300	<300	<300	<300	<300	<300
B3-10	10	11/21/03	SunStar	T301254-12	9,300	6,400	<300	1,500	1,600	2,200
B3-50	50	11/21/03	SunStar	T301260-02	<300	<300	<300	<300	<300	<300
B4-10	10	11/22/03	SunStar	T301260-35	<300	<300	<300	<300	<300	<300
B4-50	50	11/22/03	SunStar	T301260-43	<300	<300	<300	<300	<300	<300
B5-15	15	11/21/03	SunStar	T301254-23	6,300	4,900	<300	1,300	1,100	1,800
B5-50	50	11/21/03	SunStar	T301260-03	<300	<300	<300	<300	<300	<300
B6-50	50	11/22/03	SunStar	T301260-33	<300	<300	<300	<300	<300	<300
B7-50	50	11/21/03	SunStar	T301260-23	8,700	5,300	400	<300	3,600	2,200
iPRGs					--	--	**210**	**26,000,000**	**190,000**	--

Note: SVOCs are shown for detected compounds only. See laboratory
ID = Identification
ft bgs = feet below ground surface
µg/kg = micrograms per kilogram
< = Not detected above laboratory reporting limit indicated.
SunStar = SunStar Laboratories Inc., Tustin, CA.
reports for a complete list of compounds analyzed.
iPRG = Preliminary Residential Goals for Industrial Sites
-- = Not Available

QA/QC AM

Table 6
Summary of Groundwater Samples Analyzed for Metals
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	Antimony EPA 6010B µg/L	Arsenic EPA 6010B µg/L	Barium EPA 6010B µg/L	Beryllium EPA 6010B µg/L	Cadmium EPA 6010B µg/L	Calcium EPA 6010B µg/L	Chromium EPA 6010B µg/L	Cobalt EPA 6010B µg/L	Copper EPA 6010B µg/L	Lead EPA 6010B µg/L	Magnesium EPA 6010B µg/L	Mercury EPA 7470A µg/L	Molybdenum EPA 6010B µg/L	Nickel EPA 6010B µg/L	Selenium EPA 6010B µg/L	Silver EPA 6010B µg/L	Sodium EPA 6010B µg/L	Thallium EPA 6010B µg/L	Vanadium EPA 6010B µg/L	Zinc EPA 6010B µg/L
MW-3	01/10/96	STS	--	--	--	--	--	--	--	ND	--	75	ND	--	--	--	ND	--	--	--	--	--	20
	2/17-19/97	STS	--	--	--	--	--	--	--	ND	--	ND	280	--	--	--	65	--	--	--	--	--	130
	12/19/03	SunStar	T301367-01	<100	72 J	150	<50	<50	--	<50	<50	<50	<50	--	4.8	24 J	<50	<250	84 J	--	<100	<100	12 J
	05/19/04	SunStar	T400513-01	<15	15	290	<3	<5	--	<10	<50	<50	<10	--	160	<50	<50	<25	<50	--	<10	<40	66
	12/18/06	SunStar	T601731-01	<50	7.8	140	<50	<50	5,200	<50	<50	400	<1.4	2,100	0.82	<50	<50	<50	62	24,000	<50	<50	<50
	12/03/07	SunStar	T701575-02	<50	<20	<50	<50	<50	--	<50	<50	<50	<8.6	--	0.74	<50	<50	<50	<50	--	<50	<50	<50
MW-5	05/19/04	STS	T400513-02	<15	<10	97	<3	<5	--	<10	<50	<50	16	--	<0.5	<50	<50	<25	<50	--	<10	<40	140
	12/18/06	SunStar	T601731-02	<50	12	100	<50	<50	3,200	<50	<50	55	<1.4	750	<0.5	<50	<50	<50	<50	5,100	<50	<50	<50
	12/3/2007	SunStar	T701575-04	<50	<20	<50	<50	<50	--	<50	<50	<50	<8.6	--	<0.5	<50	<50	<50	<50	--	<50	<50	<50
MW-6	05/19/04	STS	T400513-03	22	<10	180	<3	<5	--	<10	<50	<50	<10	--	12	<50	<50	52	<50	--	<10	59	180
	12/18/06	SunStar	T601731-03	<50	12	100	<50	<50	4,100	<50	<50	140	<1.4	1,200	7.3	<50	<50	<50	<50	12,000	<50	<50	<50
	12/03/07	SunStar	T701575-05	<50	<20	<50	<50	<50	--	<50	<50	<50	<8.6	--	5.6	<50	<50	<50	<50	--	<50	<50	<50
MW-7	12/03/07	SunStar	T701575-06	<50	210	1,100	<50	<50	--	<50	<50	<50	<8.6	--	<0.5	<50	<50	<50	<50	--	<50	<50	<50
The following wells have not been located since the 1997 sampling event																							
MW-2	01/10/96	STS	--	--	--	--	--	--	--	ND	--	80	ND	--	--	--	ND	--	--	--	--	--	120
	2/17-19/97	STS	--	--	--	--	--	--	--	ND	--	ND	210	--	--	--	ND	--	--	--	--	--	200
MW-4	01/10/96	STS	--	--	--	--	--	--	--	ND	--	74	ND	--	--	--	ND	--	--	--	--	--	40
	2/17-19/97	STS	--	--	--	--	--	--	--	ND	--	ND	130	--	--	--	ND	--	--	--	--	--	100
MCLs				**6**	**10**	**1,000**	**4**	**5**	**--**	**50**	**--**	**1,000***	**15**	**--**	**2**	**--**	**100**	**50**	**100***	**--**	**2**	**50****	**5,000**

µg/L = micrograms per liter
< = Not detected above laboratory reporting limit indicated, except for arsenic and lead where the method detection limit (MDL) is shown.
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
MCLs = Maximum Contaminant Levels
-- = Not available
* = Secondary MCL
** = Action Level (AL) for unregulated chemical requiring monitoring.
J = Detected below the standard reporting limit; the result is an estimated concentration.
Note - Groundwater analysis from 2004 has a lower method detection limit.

OA/QC

Table 7

Summary of Groundwater Samples Analyzed for TPHcc and TRPH
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Date Sampled	Laboratory	C6-C12 EPA 8015M mg/l	C13-C28 EPA 8015M mg/l	C29-C40 EPA 8015M mg/l	TPH EPA 8015M mg/l	TRPH EPA 8015M mg/l
MW-3	01/10/96	STS	--	--	--	ND	ND
	2/17-19/97	STS		--	--	ND	ND
	12/19/03	SunStar	<0.1	<0.1	<0.1	--	--
	05/19/04	SunStar	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	**0.13**	<0.05	<0.1	--	--
	12/03/07	SunStar	<0.50	<0.50	<0.50	--	--
MW-5	05/19/04	SunStar	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	**0.05**	<0.50	<0.50	--	--
	12/03/07	SunStar	<0.50	<0.50	<0.50	--	--
MW-6	05/19/04	SunStar	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	**0.38**	<0.05	<0.1	--	--
	12/03/07	SunStar	<0.50	<0.50	0.50	--	--
MW-7	12/03/07	SunStar	<0.50	**1.1**	<0.50	--	--
The folllowing wells have not been located since the 1997 sampling event							
MW-2	01/10/96	STS	--	--	--	ND	1.4
	2/17-19/97	STS	--	--	--	ND	ND
MW-4	01/10/96	STS	--	--	--	ND	ND
	2/17-19/97	STS	--	--	--	ND	ND

Notes:
TPHcc = Total petroleum hydrocarbons with carbon chain identification
TRPH = Total recoverable petroleum hydrocarbons
< = Not detected above laboratory reporting limit indicated.
ID = Identification
mg/l = milligrams per liter
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
-- = Not Available
ND = Not detected above laboratory reporting limit (reporting limits from previous investigations are not available)

QA/QC

Table 8
Summary of Groundwater Samples Analyzed for VOCs
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Date Sampled	Laboratory	Benzene EPA 8260B µg/L	Toluene EPA 8260B µg/L	Ethylbenzene EPA 8260B µg/L	Xylenes EPA 8260B µg/L
MW-3	01/10/96	STS	ND	ND	0.9	2.4
	2/17-19/97	STS	**88**	**1.6**	**15**	**10**
	12/19/03	SunStar	<0.5	<0.5	<0.5	<1.5
	05/19/04	SunStar	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	<0.5	<0.5	<0.5	<1.5
	12/3/2007	SunStar	<0.5	<0.5	<0.5	<1.5
MW-5	05/19/04	SunStar	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	<0.5	<0.5	<0.5	<1.5
	12/03/07	SunStar	<0.5	<0.5	<0.5	<1.5
MW-6	05/19/04	SunStar	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	<0.5	<0.5	<0.5	<1.5
	12/03/07	SunStar	<0.5	<0.5	<0.5	<1.5
MW-7	12/03/07	SunStar	<0.5	**0.95**	<0.5	<1.5
The folllowing wells have not been located since the 1997 sampling event						
MW-2	01/10/96	STS	ND	ND	ND	ND
	2/17-19/97	STS	0.6	ND	ND	ND
MW-4	01/10/96	STS	ND	0.5	ND	ND
	2/17-19/97	STS	ND	ND	ND	ND
MCLs			**1**	**150**	**300**	**1,750**

Note: See laboratory reports for a complete list of compounds analyzed.
VOCs = Volatile Organic Compounds
ID = Identification
µg/L = micrograms per liter
< = Not detected above laboratory reporting limit indicated.
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
ND = Non-detect.
-- = Not Available.
MCLs = Maximum Contamination Levels

QA/QC

Table 9
Summary of Groundwater Samples Analyzed for SVOCs
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Date Sampled	Lab	All Analytes EPA 8270C µg/L
MW-3	05/19/04	SunStar	ND
	12/18/06	SunStar	ND
	12/3/07	SunStar	ND
MW-5	05/19/04	SunStar	ND
	12/18/06	SunStar	ND
	12/3/07	SunStar	ND
MW-6	05/19/04	SunStar	ND
	12/18/06	SunStar	ND
	12/3/07	SunStar	ND
MW-7	12/3/07	SunStar	ND

ID = Identification
SVOCs = Semi-volatile organic compounds
µg/L = micrograms per liter
SunStar = SunStar Laboratories Inc., Tustin, CA.
ND = Non-detect.
Note: See laboratory reports for a complete list of compounds analyzed.

QA/QC

Table 10
Summary of Groundwater Samples Analyzed for
Specific Conductance, pH, Anions, and Inorganics
CRG Properties
3701 Pacific Place, Long Beach, CA
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	Specific Conductance (EC) SM2510b mod. umhos/cm	Alkalinity as CaCO3 EPA 310.1 mg/l	Chloride EPA 300.0 mg/l	Nitrate as NO3 EPA 300.0 mg/l	pH EPA 150.1 pH Units	Sulfate as SO4 EPA 300.0 mg/l	Total Dissolved Solids (TDS) mg/l
MW-3	01/10/96	STS	--	--	--	--	--	**6.45**	--	**8,970**
	2/17-19/97	STS	--	--	--	--	--	**6.34**	--	**11,800**
	12/18/06	Sunstar	T601731-01	**7,740**	**590**	**3,270**	**1.74**	**6.4**	**107**	**4,710***
MW-5	12/18/06	Sunstar	T601731-02	**1,700**	**520**	**240**	<0.5	**6.9**	**92.7**	**900***
MW-6	12/18/06	Sunstar	T601731-03	**3,660**	**540**	**1,100**	**40.1**	**6.8**	**102**	**2,090***
The following wells have not been located since the 1997 sampling event										
MW-2	01/10/96	STS	--	--	--	--	--	**6.46**	--	**10,800**
	2/17-19/97	STS	--	--	--	--	--	**6.76**	--	**8,560**
MW-4	01/10/96	STS	--	--	--	--	--	**6.65**	--	**2,690**
	2/17-19/97	STS	--	--	--	--	--	**6.78**	--	**2,030**

< = Not detected above laboratory reporting limit indicated.
umhos/cm = microsiemens per centimeter
mg/l = milligrams per liter
STS = Southland Technical Services, Inc., Montebello, CA.
SunStar = SunStar Laboratories Inc., Tustin, CA.
* = TDS analytical results provided by SunStar and communicated by electronic mail - provided in Appendix D
CaCO3 = calcuim carbonate
NO3 = nitrate
SO4 = sulfate
-- = Not Available

QA/QC

Table 11
Groundwater Elevations
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Measurement Date	Top of Casing Elevation (ft msl)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
MW-3	01/10/96	41.70	47.90	-6.20
	02/17-19/97	45.11	53.54	-8.43
	12/18/2006	48.28	47.77	0.51
	12/3/2007	50.925	48.93	2.00
MW-5	12/18/2006	34.19	32.14	2.05
	12/3/2007	36.903	32.60	4.30
MW-6	12/18/2006	28.97	28.43	0.54
	12/3/2007	32.041	29.56	2.48
MW-7	12/3/2007	51.300	49.32	1.98
The following wells have not been located since the 1997 sampling event				
MW-2	01/10/96	42.96	50.6	-7.64
	02/17-19/97	55.62	61.95	-6.33
MW-4	01/10/96	37.86	39.3	-1.44
	02/17-19/97	41.42	42.43	-1.01

ft msl = feet above mean sea level
ft bgs = feet below ground surface
The well locations were surveyed on November 11, 2007 with NGVD 1988

QA/QC_____

Table 12
Summary of Soil Gas Samples Analyzed for VOCs Using EPA Method 8260B
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

Analyte					meta- and para-Xylenes	Tetrachloroethene	Toluene	Trichloroethene
Sample ID	**Sample Depth (ft bgs)**	**Date Sampled**	**Laboratory**	**Lab ID**	ug/l	ug/l	ug/l	ug/l
SG1-5	5	11/13/2007	EST	4K72002-03	<1	<1	<1	<1
SG1-10	10	11/13/2007	EST	4K72002-04	<1	<1	<1	<1
SG2-5	5	11/13/2007	EST	4K72002-10	<1	<1	<1	<1
		11/14/2007	EST	3K71401-11	<1	7.6	<1	1.7
SG2-10	10	11/13/2007	EST	4K72002-11	<1	<1	<1	<1
		11/14/2007	EST	3K71401-12	<1	6.8	<1	1.7
SG3-5	5	11/13/2007	EST	4K72002-07	<1	<1	<1	<1
		11/14/2007	EST	3K71401-09	<1	8.3	<1	1.8
SG3-10	10	11/13/2007	EST	4K72002-08	<1	<1	<1	<1
		11/14/2007	EST	3K71401-10	<1	5.6	<1	1.1
SG5-5	5	11/13/2007	EST	4K72002-15	<1	<1	<1	<1
		11/14/2007	EST	3K71401-08	<1	8.4	<1	1.9
SG6-5	5	11/13/2007	EST	4K72002-01	<1	<1	<1	<1
SG6-10	10	11/13/2007	EST	4K72002-02	<1	<1	<1	<1
SG7-5	5	11/12/2007	EST	4K72001-05	<1	<1	<1	<1
SG8A-5	5	11/14/2007	EST	3K71401-01	1.3	5.6	1.5	2.0
SG9-5	5	11/14/2007	EST	3K71401-02	1.3	5.4	1.5	2.0
SG9-10	10	11/14/2007	EST	3K71401-03	1.2	5.3	1.6	1.5
SG10-5	5	11/12/2007	EST	4K72001-06	<1	<1	<1	<1
SG10-10	10	11/12/2007	EST	4K72001-07	<1	<1	<1	<1
SG11-10	10	11/12/2007	EST	4K72001-09	<1	<1	<1	<1
SG11-5	5	11/12/2007	EST	4K72001-08	<1	<1	<1	<1
SG12-5	5	11/12/2007	EST	4K72001-04	<1	<1	<1	<1
SG12-10 (1PV)	10	11/12/2007	EST	4K72001-01	<1	<1	<1	<1
SG12-10 (3PV)	10	11/12/2007	EST	4K72001-02	<1	<1	<1	<1
		11/12/2007	EST	4K72001-03	<1	<1	<1	<1
SG13-5	5	11/14/2007	EST	3K71401-04	1.2	7.1	1.5	1.8
SG13-5 (1PV)	5	11/14/2007	EST	3K71401-06	<1	8.1	<1	1.9
SG13-5 (7PV)	5	11/14/2007	EST	3K71401-07	<1	7.0	<1	1.9
SG13-10	10	11/14/2007	EST	3K71401-05	1.2	6.2	1.6	1.2
SG14-5	5	11/13/2007	EST	4K72002-12	<1	<1	<1	<1
SG14-10	10	11/13/2007	EST	4K72002-13	<1	<1	<1	<1
SG15-5	5	11/12/2007	EST	4K72001-10	<1	<1	<1	<1
		11/12/2007	EST	4K72001-11	<1	<1	<1	<1
SG16-5	5	11/13/2007	EST	4K72002-14	<1	<1	<1	<1
CHHSLS					8.87E+06	0.603	3.78E+05	1.77

Notes:
VOCs = Volatile organic compounds
ID = Identification
< = Not detected above laboratory reporting limit indicated
µg/l = Micrograms per liter
ft bgs = Feet below ground surface.
EST = Environmental Support Technologies, Inc.
PV = Purge volume
QA/QC AM
Only concentration detected above the laboratory limits are shown. See laboratory report for complete analytical results.
CHHSLS = California Human Health Screening Levels for Shallow Soil Gas for Commercial/Industrial Land Use (OEHHA, 2005)
Red denotes concentration above respective CHHSL.

Table 13
Summary of Soil Gas Samples Analyzed for VOCs using EPA Method TO-15
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Analyte				Chloromethane	Acetone	Carbon Disulfide	2-Butanone	Hexane	Chloroform	Benzene	Cyclohexane	2,2,4-Trimethylpentane	Heptane	Trichloroethene	Toluene	2-Hexanone	Tetrachloroethene	Ethylbenzene	m,p-Xylenes	o-Xylene	4-Ethyltoluene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
Units:				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**																				
SG3-5	5	11/14/2007	Ace	<0.01	0.17	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
SG8A-5	5	11/14/2007	Ace	0.02	0.03	0.08	0.07	1.6	0.03	0.33	1.4	0.03	0.30	0.01	0.35	<0.01	0.03	0.13	0.47	0.14	0.05	0.04	0.13
SG9-5	5	11/14/2007	Ace	<0.01	0.06	<0.01	<0.01	<0.01	0.04	0.02	<0.01	0.02	<0.01	<0.01	0.14	<0.01	0.13	0.02	0.10	0.03	<0.01	<0.01	0.02
SG9-10	10	11/14/2007	Ace	0.01	0.02	<0.01	0.06	6.8 E	0.05	0.20	2.9	0.08	0.20	0.02	0.19	<0.01	<0.01	0.03	0.09	0.03	<0.01	0.01	0.02
SG13-5	5	11/14/2007	Ace	<0.01	0.12	0.02	0.09	0.05	<0.01	0.02	<0.01	0.01	0.01	<0.01	0.12	0.01	<0.01	0.01	0.04	0.01	<0.01	<0.01	<0.01
SG13-10	10	11/14/2007	Ace	<0.01	0.09	0.06	0.02	0.21	<0.01	0.04	0.02	0.04	0.03	<0.01	0.11	<0.01	<0.01	<0.01	0.03	0.01	<0.01	<0.01	0.01
Trip Blank	--	11/14/2007	Ace	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHHSLS				--	--	--	--	--	--	0.122	--	--	--	1.77	3.78E+05	--	0.603	--	8.87E+06	8.79E+06	--	--	--

Notes:
VOCs = Volatile organic compounds
ID = Identification
ft bgs = Feet below ground surface.
< = Not detected above laboratory reporting limit indicated
Ace = Ace Laboratories Inc.
Only concentration detected above the laboratory limits are shown.
See laboratory reports for complete analytical results.
E = Estimated Result. The concentration exceeded, the linear calibration of the instrument.
µg/l = Micrograms per liter
CHHSLS = California Human Health Screening Levels for Shallow Soil Gas for Commercial/Industrial Land Use (OEHHA, 2005)
Red denotes concentration above respective CHHSL.
-- = Not applicable

QA/QC

Table 14
Summary of Soil Gas Samples Analyzed for Methane
3201 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

				ANALYTE	Methane
				METHOD NAME	EPA-8015M
				UNITS	ppmv
Sample ID	**Sample Depth (ft bgs)**	**Date**	**Lab**	**Lab ID**	
SG1-5	5	11/14/2007	EST	2K71402-13	**1,600**
SG1-10	10	11/14/2007	EST	2K71402-14	**32**
SG2-5	5	11/14/2007	EST	2K71402-11	<10
SG2-10	10	11/14/2007	EST	2K71402-12	**36**
SG3-5	5	11/14/2007	EST	2K71402-16	**21**
SG3-10	10	11/14/2007	EST	2K71402-17	<10
SG5-5	5	11/14/2007	EST	2K71402-26	**170,000**
SG6-5	5	11/14/2007	EST	2K71402-03	**110**
SG6-10	10	11/14/2007	EST	2K71402-04	<10
SG7-5	5	11/14/2007	EST	2K71402-20	**32,000**
SG8A-5	5	11/14/2007	EST	2K71402-25	**150,000**
SG9-5	5	11/14/2007	EST	2K71402-21	**490**
SG9-10	10	11/14/2007	EST	2K71402-22	**72,000**
SG10-5	5	11/14/2007	EST	2K71402-09	**1,400**
SG10-10	10	11/14/2007	EST	2K71402-10	**27**
SG11-5	5	11/14/2007	EST	2K71402-07	**180,000**
SG11-10	10	11/14/2007	EST	2K71402-08	**300,000**
SG12-5	5	11/14/2007	EST	2K71402-01	**1,900**
SG12-10	10	11/14/2007	EST	2K71402-02	**160,000**
SG13-5	5	11/14/2007	EST	2K71402-18	<10
SG13-10	10	11/14/2007	EST	2K71402-19	**560**
SG14-5	5	11/14/2007	EST	2K71402-05	**12**
SG14-10	10	11/14/2007	EST	2K71402-06	<10
SG15-5	5	11/14/2007	EST	2K71402-23	<10
SG15-10	10	11/14/2007	EST	2K71402-24	<10
SG16-5	5	11/14/2007	EST	2K71402-15	**3,300**
LEL					**50,000**
UEL					**150,000**

Notes:
ID = Identification
QA/QC_____
ft bgs = Feet below ground surface.
< = Not detected above laboratory reporting limit indicated
EST = Environmental Support Technologies, Inc.
ppmv = Parts per million per volume
LEL = Lower explosive limit
UEL = Upper explosive limit
Red denotes methane concentration within the explosive range.
Blue denotes methane concentration above the UEL.

Table 15
Summary of Soil Samples Analyzed for TPH in Borings B6A, B7A and MW-7
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

			Analyte	TPHg		TPHd		TPHmo	
			Method	1312/8015 *	8015	1312/8015*	8015	1312/8015*	8015
			units	mg/l	mg/kg	mg/l	mg/kg	mg/l	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**						
B6A-15	15	11/13/2007	AL	--	<3	--	<3	--	**42**
B6A-20	20	11/13/2007	AL	--	<3	--	<3	--	**68**
B6A-25	25	11/13/2007	AL	--	<15	--	<15	--	**526**
B7A-5	5	11/13/2007	AL	--	<3	--	<3	--	**24**
B7A-10	10	11/13/2007	AL	--	**5**	--	**16**	--	**203**
B7A-20	20	11/13/2007	AL	--	<3	--	<3	--	**149**
B7A-30	30	11/13/2007	AL	<4	<1200	**8**	**2,700**	**7**	**4,740**
B7A-40	40	11/13/2007	AL	<2	<1200	**4**	**4,070**	**3.6**	**8,970**
B7A-50	50	11/13/2007	AL	<4	<1200	**18**	**2,580**	**22**	**4,400**
MW-7-15	15	10/25/2007	SS	--	<10	--	<10	--	<10
MW-7-25	25	10/25/2007	SS	--	<10	--	<10	--	**55**
MW-7-35	35	10/25/2007	SS	--	<10	--	<10	--	<10

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
mg/kg = Milligrams per kilograms
mg/l = Milligrams per liter
See laboratory reports for complete analytical results, carbon chain data is slightly different for each lab.
* = Method 1312/8015 for Synthetic Precipitation Leaching Procedure
-- = Not Analyzed
TPHg = Total petroleum hydrocarbon as gasoline
TPHd = Total petroleum hydrocarbon as diesel
TPHmo = Total petroleum hydrocarbon as motor oil
Red denotes concentration exceeds 1,000 mg/kg, the maximum soil screening level for TPHd 20-150 feet above a drinking water aquifer (CRWQCB, 1996)

AL = Associated Laboratories
SS = SunStar Laboratories, Inc.

QA/QC

Table 16
Summary of Selected Soil Samples Analyzed
using MA DEP EPH and VPH Methodologies in Boring B7A
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

			Analyte	(1) C09-C18 Aliphatic Hydrocarbons	(1) C5-C8 Unadj. Aliphatic Hydrocarbons	(2) C19-C36 Aliphatic Hydrocarbons	(2) C9-C12 Unadj. Aliphatic Hydrocarbons	(3) C11-C22 Aromatic Hydrocarbons	(3) C9-C10 Aromatic Hydrocarbons
			Methods	MA-EPH	MA-VPH	MA-EPH	MA-VPH	MA-EPH	MA-VPH
			Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**						
B7A-30	30	11/13/2007	AL	**2,500**	**102**	**3,530**	**322**	**4,020**	**176**
B7A-40	40	11/13/2007	AL	**5,290**	**54**	**7,850**	**152**	**6,580**	**106**
B7A-50	50	11/13/2007	AL	**2,210**	**84.9**	**3,390**	**140**	**2,960**	**82**

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
AL = Associated Laboratories
mg/kg = Milligrams per kilograms
-- = Not Analyzed
MA DEP = Massachusetts Department of Environmental Protection
EPH = Extractable petroleum hydrocarbons
VPH = Volatile petroleum hydrocarbons

QA/QC

Table 17
Summary of Soil Samples Analyzed for VOCs in Borings B6A, B7A and MW-7
3701 Pacific Place, Long Beach, CA
CRG Properties
LFR 002-10231-03

			Analyte	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Benzene	Ethyl benzene	Isopropylbenzene (Cumene)	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Toluene	Xylenes, total
			Method	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B
			Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**													
B6A-15	15	11/13/2007	AL	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B6A-20	20	11/13/2007	AL	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B6A-25	25	11/13/2007	AL	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B7A-5	5	11/13/2007	AL	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B7A-10	10	11/13/2007	AL	<5	<5	**58**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B7A-20	20	11/13/2007	AL	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B7A-30	30	11/13/2007	AL	**13,500**	**3,120**	<2500	**824**	**2,960**	**1,680**	**8,310**	**1,400**	**2,560**	**1,330**	**1,640**	<250	**8,210**
B7A-40	40	11/13/2007	AL	**7,780**	**2,240**	<2500	<250	**944**	**782**	**6,150**	**994**	**1,170**	**1,680**	**1,110**	**307**	**5,490**
B7A-50	50	11/13/2007	AL	**10,000**	<250	<2500	<250	**2,080**	**1,330**	**5,980**	**1,050**	**2,080**	**1,660**	**1,140**	<250	**677**
MW-7-15	15	10/25/2007	SS	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-7-25	25	10/25/2007	SS	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-7-35	35	10/25/2007	SS	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:
VOCs = Volatile organic compounds
ID = Identification
< = Not detected above laboratory reporting limit indicated
See laboratory reports for complete analytical results, only detected concentrations are included
AL = Associated Laboratories
SS = SunStar Laboratories, Inc.
ug/kg = Micrograms per kilograms
-- = Not Analyzed
Red denotes naphthalene concentration is greater than EPA region 9 "CAL-Modified"preliminary remediation goal for industrial soil of 4,200 ug/kg (EPA, 2004)

QA/QC

Table 18
Summary of Soil Samples Analyzed for SVOCs
in Borings B6A, B7A and MW-7
3701 Pacific Place, Long Beach, CA
CRG Properties
LFR 002-10231-03

				Analyte	2-Methylnaphthalene	4-Methylphenol	Naphthalene
				Method	8270C	8270C	8270C
				Units	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**				
B6A-15	15	11/13/2007	AL		<3000	<5000	<3000
B6A-20	20	11/13/2007	AL		<3000	<5000	<3000
B6A-25	25	11/13/2007	AL		<3000	<5000	<3000
B7A-40	40	11/13/2007	AL		**26,300**	**6,150**	<3000
B7A-10	10	11/13/2007	AL		<3000	<5000	<3000
B7A-20	20	11/13/2007	AL		<3000	<5000	<3000
B7A-30	30	11/13/2007	AL		**34,700**	**3,680**	**8,450**
B7A-5	5	11/13/2007	AL		<3000	<5000	<3000
B7A-50	50	11/13/2007	AL		**26,000**	<5000	**7,540**
MW-7-15	15	10/25/2007	SS		<300	<1000	<300
MW-7-25	25	10/25/2007	SS		<300	<1000	<300
MW-7-35	35	10/25/2007	SS		<300	<1000	<300
iPRG					NL	3.E+06	4,200

Notes:
SVOCs = Semi-volatile organic compounds
ID = Identification
< = Not detected above laboratory reporting limit indicated
AL = Associated Laboratories
SS = SunStar Laboratories, Inc.
ug/kg = Micrograms per kilograms
iPRG = EPA Region 9 preliminary remediation goal for industrial soil
NL = Not listed
Red indicates concentration exceeds iPRG

QA/QC

Table 19
Summary of Soil Samples Collected in the Fill and Analyzed for Metals
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

			Analyte	Arsenic	Barium	Beryllium	Cadmium	Copper	Lead	Lead, STLC	Mercury	Nickel	Vanadium	Zinc	Chromium	Cobalt	Molybdenum
			Method	6010B	6010B	6010B	6010B	6010B	6010B	6010/STLC	7471A	6010B	6010B	6010B	6010B	6010B	6010B
			Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**														
SG2-0.5	0.5	11/13/2007	AL	3.4	109	<0.5	<0.5	16.3	5.85	--	1.69	15.2	29.9	48.5	18.2	8.93	1.29
SG2-5	5	11/13/2007	AL	4.66	117	0.644	<0.5	17.8	9.28	--	<0.14	16.7	38.3	56.4	21.2	10.8	<1
SG2-10	10	11/13/2007	AL	4.07	99.1	0.582	<0.5	15	5.13	--	<0.14	14.1	36.4	45.4	19	8.89	<1
SG3-0.5	0.5	11/13/2007	AL	7.09	170	0.912	0.677	22.5	19	--	<0.14	21.5	57.8	103	27.3	14.6	1.52
SG3-5	5	11/13/2007	AL	10.1	211	0.807	0.593	40.6	34.3	--	0.21	21.9	48.3	96.4	29.2	13.1	<1
SG3-10	10	11/13/2007	AL	1.71	74	0.625	<0.5	10.3	5.23	--	<0.14	11	31.6	91.2	18.1	8.06	<1
SG9-0.5	0.5	11/13/2007	AL	5.66	197	0.844	0.533	29.9	32.5	--	<0.14	20.8	50.5	107	27.2	14.5	<1
SG9-5	5	11/13/2007	AL	4.73	142	0.843	0.608	21.9	8.93	--	<0.14	19.2	48.4	61.3	24.3	15.1	<1
SG9-10	10	11/13/2007	AL	10.1	267	<0.5	<0.5	10.8	86	3.22	0.14	28.1	19.8	117	20.3	4.82	<1
SG13-0.5	0.5	11/13/2007	AL	11.5	382	0.942	1.16	33.5	14.1	--	<0.14	29.6	67.2	78.5	35.9	13.8	<1
SG13-5	5	11/13/2007	AL	7.61	266	1.04	0.754	35.7	15.3	--	<0.14	26	62.9	84.6	32.9	16.1	<1
SG13-10	10	11/13/2007	AL	4.28	122	0.961	0.629	26.3	6.95	--	<0.14	21.1	50.7	69.3	30.8	13	<1
SG14-0.5	0.5	11/13/2007	AL	13.7	280	1.1	0.586	37.9	15.2	--	<0.14	27.4	62.8	85	35	17.1	<1
SG14-5	5	11/13/2007	AL	5.96	224	0.743	0.971	30.1	49	--	<0.14	19.9	46.6	320	23.7	12.6	<1
SG14-10	10	11/13/2007	AL	4.37	197	0.928	<0.5	36.6	9.07	--	<0.14	23.6	59.1	70.3	30.8	16.7	<1
SG15-0.5	0.5	11/13/2007	AL	7.64	203	0.87	0.556	29.9	44	--	<0.14	20.8	51.4	97.9	27.7	14.5	1.45
SG15-5	5	11/13/2007	AL	4.62	168	0.779	<0.5	25.9	13.2	--	<0.14	18.5	47.1	77.2	25	13.6	<1
SG15-10	10	11/13/2007	AL	6.8	176	0.75	<0.5	26.4	6.91	--	<0.14	19.1	46.3	66.3	25.2	13.4	<1
iPRGs				0.25*	67,00	1,900	450	41,000	800		310	20,000	1,000	100,000	100,000	1900	5,100

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
AL = Associated Laboratories
See laboratory reports for complete analytical results, only detected concentrations are included
mg/kg = Milligrams per kilograms
mg/l = Milligrams per liter
STLC = Soluble Threshold Limit Concentration
* = California -modified iPRG
iPRG = US EPA Region 9 preliminary remediation goal for industrial soil
Green indicates concentration exceeds iPRG
Background arsenic concentrations range from 5.3 to 11 mg/kg

QA/QC

Table 20
Summary of Soil Samples Analyzed for Metals in Borings B6A, B7A and MW-7
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

			Analyte	Arsenic	Barium	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead	Lead	Molybdenum	Nickel	Vanadium	Zinc	Mercury
			Method	6010B	6010B	6010 STLC	6010B	6010B	6010B	6010B	6010B	6010B	6010 STLC	6010 STLC/DI	6010B	6010B	6010B	6010B	7471A
			Units	mg/kg	mg/kg	mg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/l	mg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**																
B6A-15	15	11/13/2007	AL	8.86	161		0.977	0.531	32.8	15.8	32.8	6.45			<1	25.7	62	75.6	<0.14
B6A-20	20	11/13/2007	AL	3.51	154		0.809	0.798	35.3	13.3	21.9	10.8			1.19	22.5	56.8	65.8	<0.14
B6A-25	25	11/13/2007	AL	2.34	113		0.89	0.597	30.9	11.4	19.4	5.2			<1	16.9	43.6	66.2	<0.14
B7A-5	5	11/13/2007	AL	9.19	194		1.01	0.504	34.6	17.1	37.9	11.9			1.11	26.6	55.7	79.2	<0.14
B7A-10	10	11/13/2007	AL	6.84	427		0.663	0.518	30.3	10.8	35.1	61.3	2.58		<1	18.6	38.9	131	<0.14
B7A-20	20	11/13/2007	AL	<1	152		0.978	<0.5	29.6	15.6	27.4	7.05			<1	22.9	58.8	65.9	<0.14
B7A-30	30	11/13/2007	AL	28.6	1,560	35.4	0.622	1.09	39.2	12.1	59.9	376	8.54	<5	1.58	33.5	45.8	174	0.59
B7A-40	40	11/13/2007	AL	28.5	1,600	40.7	0.571	1.04	37.9	11.4	48.8	309	12.5	<5	1.47	33.3	42.5	157	0.46
B7A-50	50	11/13/2007	AL	8.33	258		0.909	<0.5	30.2	13.7	25	7.35			<1	27.2	50.3	59.4	<0.14
MW-7-15	15	10/25/2007	SS	6.4	140		<1	<2	18	9.7	10	<3			<1	14	34	18	<0.1
MW-7-25	25	10/25/2007	SS	<5	130		<1	<2	26	11	16	9.1			<1	18	51	26	<0.1
MW-7-35	35	10/25/2007	SS	<5	53		<1	<2	12	7.3	17	<3			<1	9.3	23	12	<0.1
iPRGs				0.25*	67,000		1,900	450	100,000	1,900	41,000	800			5,100	20,000	1,000	100,000	310

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
AL = Associated Laboratories
SS = SunStar Laboratories, Inc.
Only concentrations detected above the laboratory reporting limits are shown. See laboratory report for all analytes.
mg/kg = Miligrams per kilograms
mg/l = milligrams per liter
STLC = Soluble Threshold Limit Concentration
STLC/DI = Soluble concentration using deionized water
Red denotes soluble concentration exceeds STLC
* = California -modified iPRG
iPRG = US EPA Region 9 preliminary remediation goal for industrial soil
Green indicates concentration exceeds iPRG
Background arsenic concentrations range from 5.3 to 11 mg/kg

QA/QC

Table 21
Summary of Soil Samples Collected in the Fill and Analyzed for PCBS
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

			Analyte	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
			Method	8082	8082	8082	8082	8082	8082	8082
			Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**							
SG2-0.5	0.5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG2-5	5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG2-10	10	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG3-0.5	0.5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG3-5	5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG3-10	10	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG9-0.5	0.5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG9-5	5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG9-10	10	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	**0.13**	<0.03	**0.038**
SG13-0.5	0.5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG13-5	5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG13-10	10	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG14-0.5	0.5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG14-5	5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG14-10	10	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG15-0.5	0.5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG15-5	5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
SG15-10	10	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03

Notes:
PCBs = Polychlorinated Biphenyls
ID = Identification
< = Not detected above laboratory reporting limit indicated
AL = Associated Laboratories
mg/kg = Milligrams per kilograms

QA/QC

Table 22
Summary of Soil Samples Analyzed for PCBs in Borings B6A and B7A
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

			Analyte	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
			Method	8082	8082	8082	8082	8082	8082	8082
			Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**							
B6A-15	15	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
B6A-20	20	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
B6A-25	25	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
B7A-5	5	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
B7A-10	10	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
B7A-20	20	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	<0.08	<0.03	<0.03
B7A-30	30	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	**0.41**	<0.03	**0.11**
B7A-40	40	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	**0.42**	<0.03	**0.12**
B7A-50	50	11/13/2007	AL	<0.03	<0.06	<0.05	<0.05	**0.19**	<0.03	**0.046**

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
AL = Associated Laboratories
mg/kg = Milligrams per kilogram
PCBs = Polychlorinated biphenyls

QA/QC

Table 23
Summary of Soil Samples Collected in the Fill and Analyzed for Organochlorine Pesticides
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

			Analyte	Chlordane	Dieldrin	4,4-DDE
			Method	8081A	8081A	8081A
			Units	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**	**Laboratory**			
SG2-0.5	5	11/13/2007	AL	<0.025	<0.003	<0.004
SG2-5	5	11/13/2007	AL	<0.025	<0.003	<0.004
SG2-10	10	11/13/2007	AL	<0.025	**0.013**	<0.004
SG3-0.5	0.5	11/13/2007	AL	<0.025	<0.003	<0.004
SG3-5	5	11/13/2007	AL	<0.025	<0.003	<0.004
SG3-10	10	11/13/2007	AL	**0.035**	<0.003	<0.004
SG9-0.5	0.5	11/13/2007	AL	<0.025	<0.003	<0.004
SG9-5	5	11/13/2007	AL	<0.025	<0.003	<0.004
SG9-10	10	11/13/2007	AL	<0.025	<0.003	<0.004
SG13-0.5	0.5	11/13/2007	AL	<0.025	<0.003	<0.004
SG13-5	5	11/13/2007	AL	**0.041**	<0.003	<0.004
SG13-10	10	11/13/2007	AL	<0.025	<0.003	<0.004
SG14-0.5	0.5	11/13/2007	AL	<0.025	<0.003	**0.007**
SG14-5	5	11/13/2007	AL	<0.025	<0.003	<0.004
SG14-10	10	11/13/2007	AL	<0.025	<0.003	<0.004
SG15-0.5	0.5	11/13/2007	AL	<0.025	<0.003	<0.004
SG15-5	5	11/13/2007	AL	<0.025	<0.003	<0.004
SG15-10	10	11/13/2007	AL	<0.025	<0.003	<0.004

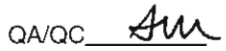
Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
AL = Associated Laboratories
See laboratory reports for complete analytical results, only detected concentrations are included
mg/kg = Milligrams per kilograms

QA/QC

Table 24
Summary of Groundwater Samples Analyzed for Metals
December 3, 2007
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
LFR 002-10231-03

		Analyte Method Units	Arsenic 6010B ug/l	Barium 6010B ug/l	Lead 6010B ug/l	Mercury 6010B ug/l
Sample ID	**Date Sampled**	**Laboratory**				
MW-3	12/03/2007	SS	<20	**29**	<8.6	**0.74**
MW-5	12/03/2007	SS	<20	**86**	<8.6	<0.5
MW-6	12/03/2007	SS	<20	**100**	<8.6	**5.6**
MW-7	12/03/2007	SS	**210**	**1,100**	<8.6	<0.5
MCL			10	1,000	15	2

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated, except for arsenic and lead where the method detection limit (MDL) is shown.
SS = SunStar Laboratories, Inc.
Only concentrations detected above the laboratory reporting limits are shown.
See laboratory report for all analytes.
ug/l = Micrograms per liter

QA/QC 

FIGURES



CRG Property

McDonald Property

Tookey Property

Site

0 2000 ft

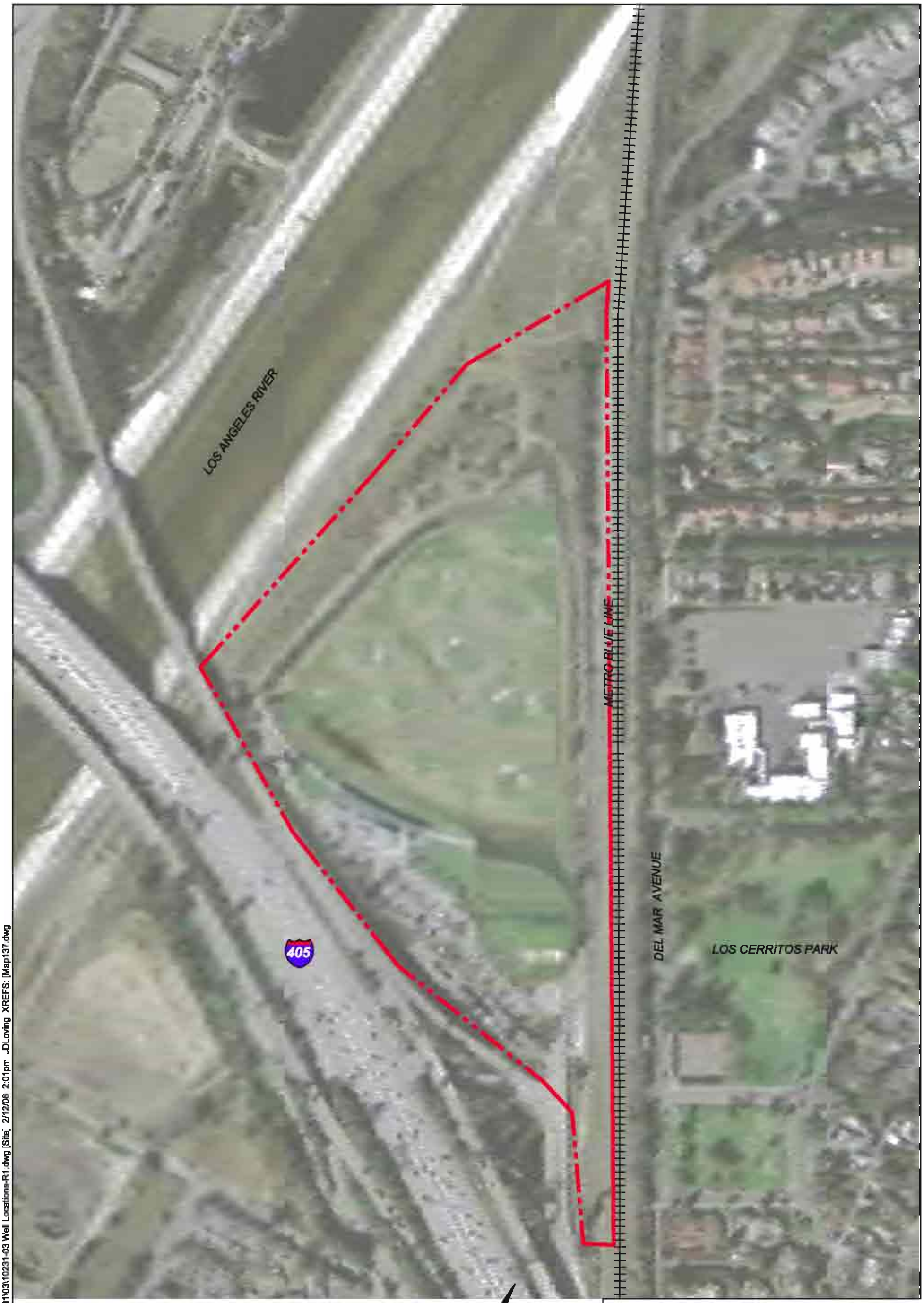
Vicinity Map

CRG Properties, Former Oil Operators North Site,
Long Beach, CA - 002-10231-03

LFR

Figure 1

CM: K:\Data\Graphics\10000\10231\03\10231-03 VicinityMap.ai



EXPLANATION

Property Boundary

Railroad Tracks

0 220 FEET

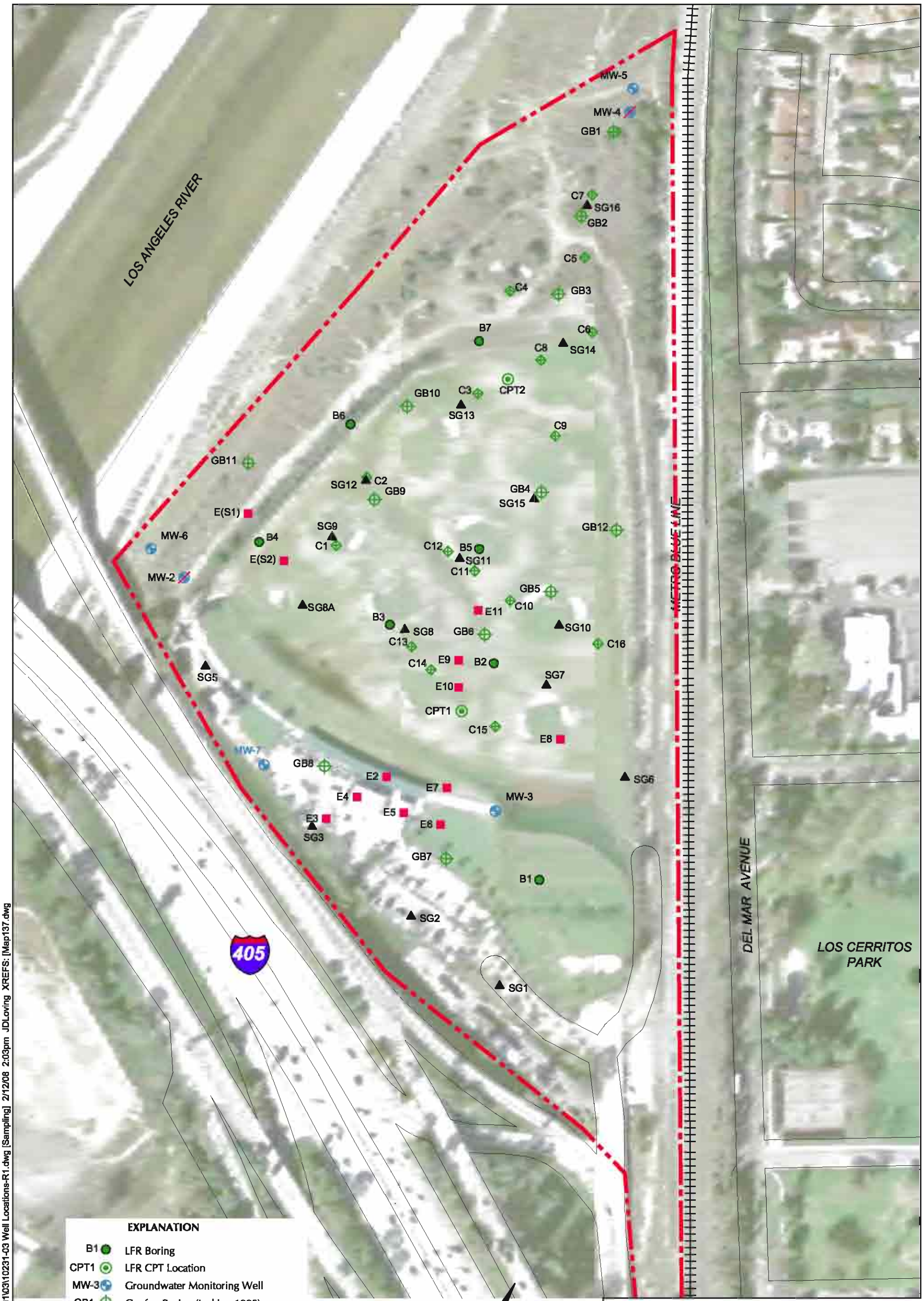
Site Plan

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 2

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [Site] 2/12/08 2:01pm JDLoving XREFS: [Map137.dwg



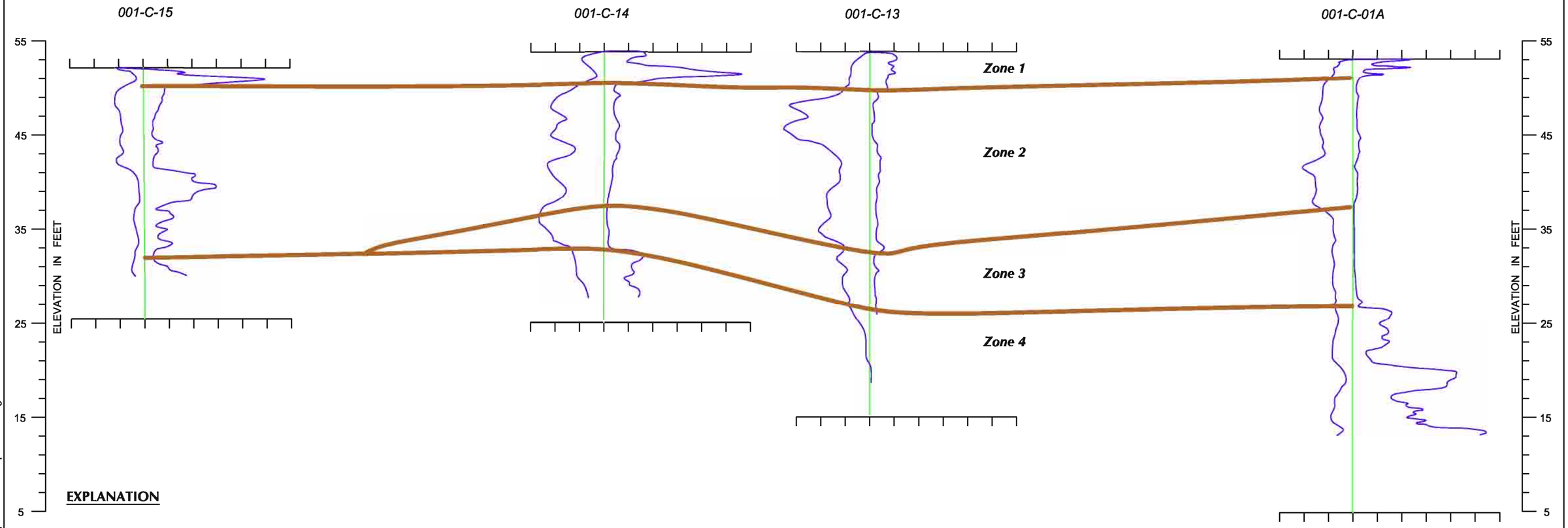
CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [Sampling] 2/12/08 2:03pm JDLoving XREFS: [Map137.dwg

Sampling Locations
Previous Investigations

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 3



EXPLANATION

001-C-15 BORING ID

FRICTION RATIO (%) | CONE RESISTANCE (TSF)

15 10 5 0 25 50 75 100 125 150

Zone 1 **- Sump Material - Moderately Compact, Firm**
Zone 2 **- Sump Material- Lightly Compact, Soft, Compressible**
Zone 3 **- Sump Material - Very Soft, Highly Compressible**
Zone 4 **- Possible Natural Soil - Moderately Compact**

SOURCE: The Earth Technology Corporation, Sump Site Supplimental Study, Figure 3

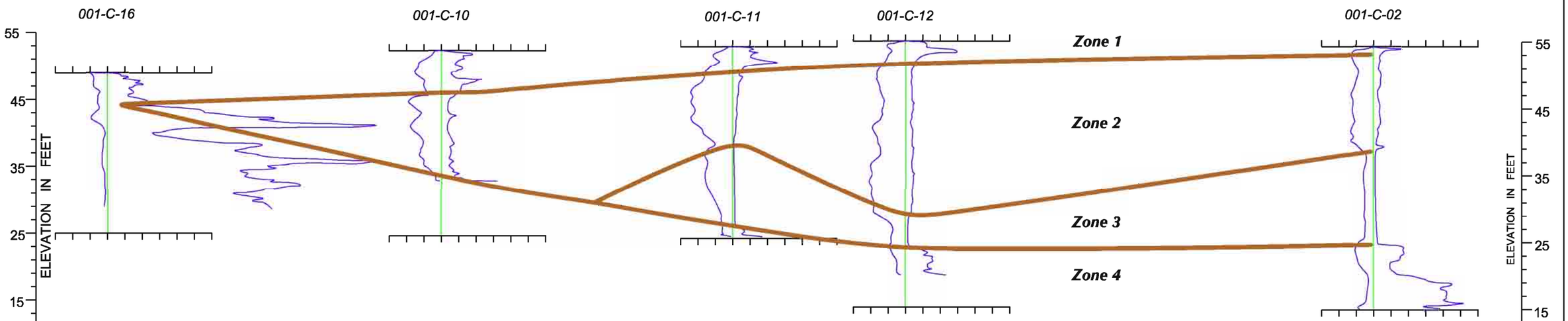
K:\Data\Graphics\10000\10231\10231-03_Xsections.dwg [Profile1] 2/12/08 12:52pm JDLoving XREFS:

Subsurface Profile No. 1

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

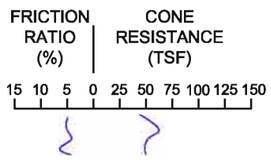
LFR

Figure 4



EXPLANATION

001-C-16 BORING ID



EXPLANATION

Zone 1 **- Sump Material - Moderately Compact, Firm**
Zone 2 **- Sump Material- Lightly Compact, Soft, Compressible**
Zone 3 **- Sump Material - Very Soft, Highly Compressible**
Zone 4 **- Possible Natural Soil - Moderately Compact**

SOURCE: The Earth Technology Corporation, Sump Site Supplimental Study, Figure 4

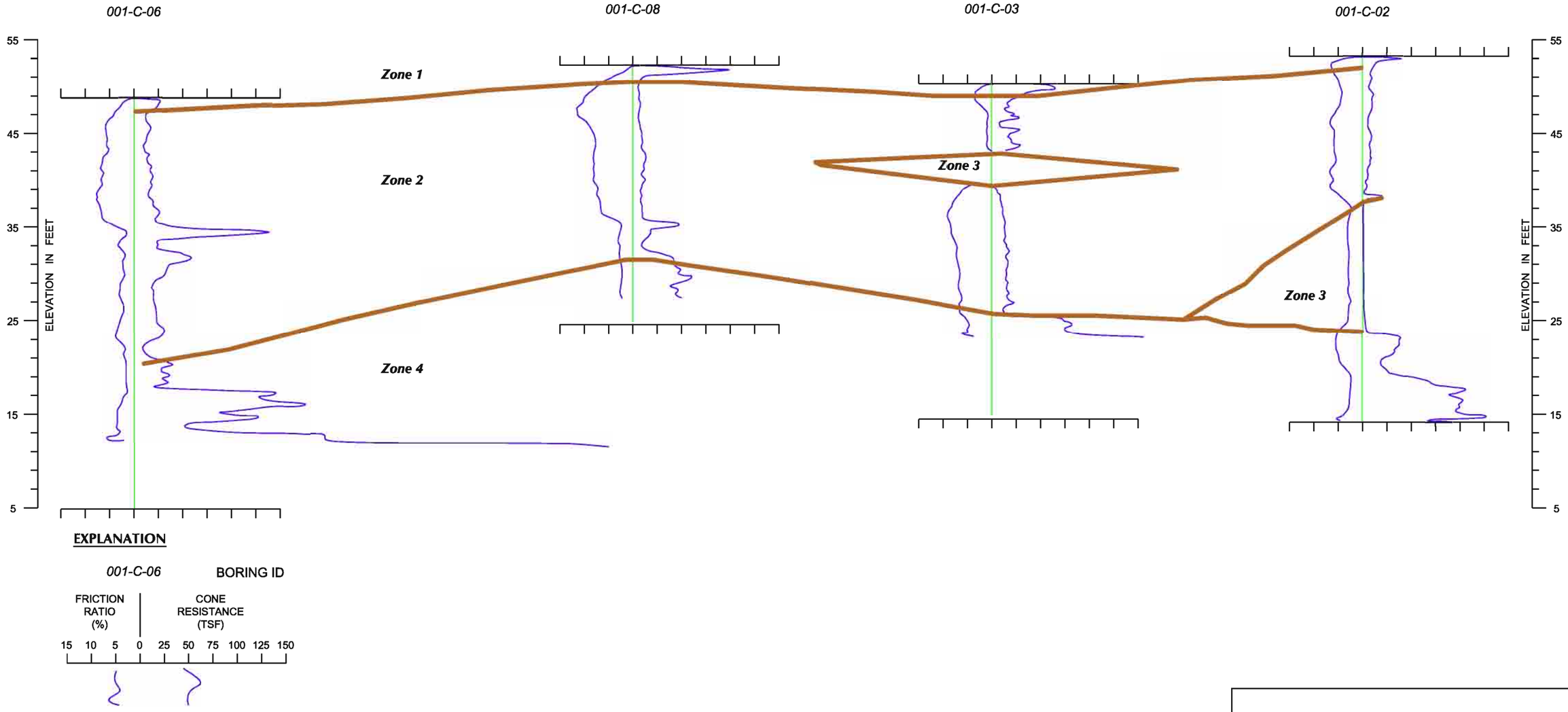
Subsurface Profile No. 2

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 5

K:\Data\Graphics\10000\10231\10231-03_Xsections.dwg [Profile2] 2/12/08 12:52pm JDLoving XREFS:



EXPLANATION

Zone 1 **- Sump Material - Moderately Compact, Firm**
Zone 2 **- Sump Material- Lightly Compact, Soft, Compressible**
Zone 3 **- Sump Material - Very Soft, Highly Compressible**
Zone 4 **- Possible Natural Soil - Moderately Compact**

SOURCE: The Earth Technology Corporation, Sump Site Supplimental Study, Figure 5

Subsurface Profile No. 3

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 6

K:\Data\Graphics\10000\10231\10231-03_Xsections.dwg [Profile3] 2/12/08 12:53pm JDLoving XREFS:



CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [isopach] 2/12/08 2:06pm JDLoving XREFS: [Map137.dwg

Isopach Map of Sump Material

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 7

SSLs	500	500	1,000	10,000
	Gas	C6-12	C12-28	C28-40
30'	NA	<10	15,000	20,000
50'	NA	<10	20,000	22,000

SSLs	500	500	1,000	10,000
	Gas	C6-12	C12-28	C28-40
15'	NA	<10	17,000	20,000
20'	7.3	NA	12,000	11,000
25'	<500	NA	<10	<10
40'	<500	NA	<10	<10
45'	<500	NA	<10	<10
50'	NA	<10	<10	<10

SSLs	500	500	1,000	10,000
	Gas	C6-12	C12-28	C28-40
30'	NA	<10	<10	<10
50'	NA	<10	<10	<10

SSLs	500	500	1,000	10,000
	Gas	C6-12	C12-28	C28-40
10'	NA	<10	8,400	20,000
15'	<500	NA	<10	<10
20'	0.680	NA	<10	<10
50'	NA	<10	<10	<10

SSLs	500	500	1,000	10,000
	Gas	C6-12	C12-28	C28-40
10'	NA	<10	20,000	22,000
25'	4.9	NA	350	280
30'	53.0	NA	14,000	11,000
45'	<500	NA	<10	<10
50'	NA	<10	<10	<10

SSLs	500	500	1,000	10,000
	Gas	C6-12	C12-28	C28-40
35'	NA	<10	<10	<10
50'	NA	<10	<10	<10

LOS ANGELES RIVER

METRO BLUE LINE

DEL MAR AV

LOS CERRITOS PARK

405

MW-5 MW-4 MW-6 MW-2 MW-3

GB1 GB2 GB3 GB4 GB5 GB6 GB7 GB8 GB9 GB10 GB11 GB12

B1 B2 B3 B4 B5 B6 B7

C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16

CPT1 CPT2

E(S1) E(S2) E1 E2 E3 E4 E5 E6 E7 E8 E9 E10 E11

EXPLANATION

- B1 — LFR Boring
- CPT1 — LFR CPT Location
- MW-3 — Groundwater Monitoring Well
- GB1 — Geofon Boring (Jaykim, 1998)
- E1 — Excavation Sample Location (JB, 1989)
- C1 — ETC CPT Location (ETC, 1983)
- MW-2 — Former Groundwater Monitoring Well (JB, 1995)
- Property Boundary
- Railroad Tracks

- Gas - TPH quantified as gasoline range
- C6-C12 - TPH quantified as C6-C12 carbon range
- C12-C28 - TPH quantified as C12-C28 carbon range
- C28-C40 - TPH quantified as C28-C40 carbon range
- NA - Not Analyzed
- SSLs - Soil Screening Levels* (CRWQCB Interim Site Assessment and Clean-up Guide Book)
- * - Groundwater 20' - 150' bgs

Red denotes concentrations greater than SSL

All results are in milligrams per kilogram (mg/kg)

0 160 FEET

Analytical results are from LFR samples collected in 2003.

Site Map Showing Previous Analytical Results for TPH in Soil, 2003

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 8

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [TPH] 2/12/08 2:08pm JDLoving XREFS: [Map137.dwg

	1,2,4-TMB	1,3,5-TMB	B	T	E	I	X	N	n-Bb	n-Pb	p-Ipt	s-Bb
35'	120	27	40	19	29	11	187	110	6.7	15	12	7.2
50'	360	92	580	28	160	37	607	150	ND	64	49	30

	All VOCs
30'	ND
50'	ND

	All VOCs
10'	ND
50'	ND

	All VOCs
30'	ND
50'	ND

	All VOCs
35'	ND
50'	ND

	1,2,4-TMB	1,3,5-TMB	B	T	E	I	X	N	n-Bb	n-Pb	p-Ipt	s-Bb
15'	130	35	10	7.3	24	13	64	130	10	17	18	11
20'	94	21	21	8.0	18	7.8	85	73	8.2	13	13	7.7
25'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
40'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
45'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
50'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

	1,2,4-TMB	1,3,5-TMB	B	T	E	I	X	N	n-Bb	n-Pb	p-Ipt	s-Bb
10'	210	80	63	45	52	22	202	140	25	25	34	ND
25'	3.1	ND	4.4	ND	38	19	4.8	ND	8.1	8.1	3.3	11
30'	62	ND	51	ND	290	130	17.2	360	41	41	49	75
45'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
50'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LOS ANGELES RIVER

METRO BLUE LINE

AVENUE

405

MW-5, MW-4, GB1, C7, GB2, C5, C4, GB3, C6, B7, C8, CPT2, C3, GB10, B6, C9, GB11, C2, GB9, GB4, E(S1), GB12, MW-6, B4, C1, C12, B5, E(S2), C11, MW-2, GB5, C10, E11, B3, GB6, C13, C16, C14, E9, B2, E10, CPT1, C15, E8, GB8, E2, E7, E4, MW-3, E3, E5, E6, GB7, B1

VOCs - Volatile Organic Compounds
1,2,4-TMB - 1,2,4-Trimethylbenzene
1,3,5-TMB - 1,3,5-Trimethylbenzene
B - Benzene
T - Toluene
E - Ethylbenzene
I - Isopropylbenzene
X - o,m, and p-Xylene
N - Naphthalene
n-Bb - n-Butylbenzene
n-Pb - n-Propylbenzene
p-Ipt - p-Isopropyltoluene
s-Bb - sec-Butylbenzene
ND - Not detected (detection limit varies)

All results are in micrograms per kilogram (µg/kg)

EXPLANATION

- B1 - LFR Boring
- CPT1 - LFR CPT Location
- MW-3 - Groundwater Monitoring Well
- GB1 - Geofon Boring (Jaykim, 1998)
- E1 - Excavation Sample Location (JB, 1989)
- C1 - ETC CPT Location (ETC, 1983)
- MW-2 - Former Groundwater Monitoring Well (JB, 1995)
- Property Boundary
- Railroad Tracks

0 160 FEET

Analytical Results are from LFR Soil Samples Collected in 2003

Site Map Showing Previous Analytical Results for VOCs in Soil, 2003

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 9

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [VOCs] 2/12/08 2:16pm JDLoving XREFS: [Map137.dwg

	1-MethylN	2-MethylN	Benzo(a)p	N	Phen
50'	8,700	5,300	400	3,600	2,200

	All SVOCs
50'	<300

	1-MethylN	2-MethylN	Fluorene	N	Phen
10'	6,300	4,900	1,300	1,100	1,600
50'	<300	<300	<300	<300	<300

	All SVOCs
10'	<300
50'	<300

	All SVOCs
50'	<300

	All SVOCs
50'	<300

	1-MethylN	2-MethylN	Fluorene	N	Phen
10'	9,300	6,400	1,500	1,600	2,200
50'	<300	<300	<300	<300	<300

LOS ANGELES RIVER

METRO BLUE LINE

DEL MAR AVE

LOS CERRITOS PARK

405

MW-5, MW-4, MW-6, MW-2, MW-3

GB1, GB2, GB3, GB4, GB5, GB6, GB7, GB8, GB9, GB10, GB11, GB12

B1, B2, B3, B4, B5, B6, B7

C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16

E(S1), E(S2), E1, E2, E3, E4, E5, E6, E7, E8, E9, E10, E11

CPT1, CPT2

SVOCs - Semi-Volatile Organic Compounds
1-MethylN - 1- Methylnapthalene
2-MethylN - 2- Methylnapthalene
Benzo(a)p - Benzo (a) pyrene
Fluorene - Fluorene
N - Naphthalene
Phen - Phenanthrene
Red denotes concentrations exceed listed PRG (2004) for industrial soil
SVOCs for detected compunds only
All results are in milligrams per kilograms (mg/kg)

EXPLANATION

- B1 — LFR Boring
- CPT1 — LFR CPT Location
- MW-3 — Groundwater Monitoring Well
- GB1 — Geofon Boring (Jaykim, 1998)
- E1 — Excavation Sample Location (JB, 1989)
- C1 — ETC CPT Location (ETC, 1983)
- MW-2 — Former Groundwater Monitoring Well (JB, 1995)
- Property Boundary
- Railroad Tracks

0 160 FEET

Analytical Results are from LFR Soil Samples Collected in 2003

Site Map Showing Previous Analytical Results for SVOCs in Soil, 2003

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 10

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [SVOCs] 2/12/08 2:16pm JDLoving XREFS: [Map137.dwg

MW-5	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Lead	Magnesium	Mercury	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
05/19/04	<15	<10	97	<3	<5	--	<10	<50	<50	16	--	<0.5	<50	<50	<25	<50	--	<10	<40	140
12/18/06	<50	<50	100	<50	<50	3,200	<50	<50	55	<50	750	<0.5	<50	<50	<50	<50	5,100	<50	<50	<50
MCLs	**6**	**10**	**1,000**	**4**	**5**	**--**	**50**	**--**	**1,000***	**15**	**--**	**2**	**--**	**100**	**50**	**100***	**--**	**2**	**50****	**5,000**

MW-4	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Lead	Magnesium	Mercury	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
01/10/96	--	--	--	--	--	--	ND	--	74	ND	--	--	--	ND	--	--	--	--	--	40
2/17-19/97	--	--	--	--	--	--	ND	--	ND	130	--	--	--	ND	--	--	--	--	--	100
MCLs	**6**	**10**	**1,000**	**4**	**5**	**--**	**50**	**--**	**1,000***	**15**	**--**	**2**	**--**	**100**	**50**	**100***	**--**	**2**	**50****	**5,000**

MW-6	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Lead	Magnesium	Mercury	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
05/19/04	22	<10	180	<3	<5	--	<10	<50	<50	<10	--	12	<50	<50	52	<50	--	<10	59	180
12/18/06	<50	<50	100	<50	<50	4,100	<50	<50	140	<50	1,200	7.3	<50	<50	<50	<50	12,000	<50	<50	<50
MCLs	**6**	**10**	**1,000**	**4**	**5**	**--**	**50**	**--**	**1,000***	**15**	**--**	**2**	**--**	**100**	**50**	**100***	**--**	**2**	**50****	**5,000**

MW-2	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Lead	Magnesium	Mercury	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
01/10/96	--	--	--	--	--	--	ND	--	80	ND	--	--	--	ND	--	--	--	--	--	120
2/17-19/97	--	--	--	--	--	--	ND	--	ND	210	--	--	--	ND	--	--	--	--	--	200
MCLs	**6**	**10**	**1,000**	**4**	**5**	**--**	**50**	**--**	**1,000***	**15**	**--**	**2**	**--**	**100**	**50**	**100***	**--**	**2**	**50****	**5,000**

MW-3	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Lead	Magnesium	Mercury	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
01/10/96	--	--	--	--	--	--	ND	--	75	ND	--	--	--	ND	--	--	--	--	--	20
2/17-19/97	--	--	--	--	--	--	ND	--	ND	280	--	--	--	65	--	--	--	--	--	130
12/19/03	<100	72 J	150	<50	<50	--	<50	<50	<50	<50	--	4.8	24 J	<50	<250	84 J	--	<100	<100	12 J
05/19/04	<15	15	290	<3	<5	--	<10	<50	<50	<10	--	160	<50	<50	<25	<50	--	<10	<40	66
12/18/06	<50	<50	140	<50	<50	5,200	<50	<50	400	<50	2,100	0.82	<50	<50	<50	62	24,000	<50	<50	<50
MCLs	**6**	**10**	**1,000**	**4**	**5**	**--**	**50**	**--**	**1,000***	**15**	**--**	**2**	**--**	**100**	**50**	**100***	**--**	**2**	**50****	**5,000**

LOS ANGELES RIVER

MW-5

MW-4

MW-6

MW-2

MW-3

405

METRO

DEL MAR AVENUE

LOS CERRITOS PARK

EXPLANATION

MW-3	Groundwater Monitoring Well
MW-2	Former Groundwater Monitoring Well (JB, 1995)
	Property Boundary
	Railroad Tracks
µg/L	micrograms per liter
MCLs	Maximum Contaminant Levels
*	Secondary MCL
**	Action level for unregulated chemical requiring monitoring

Red denotes concentrations exceed listed MCL
Blue denotes positive result

0 160 FEET

Analytical Results as Reported by Jack K. Bryant Engineers in 1996 and 1997 and and LFR in 2004 and 2006.

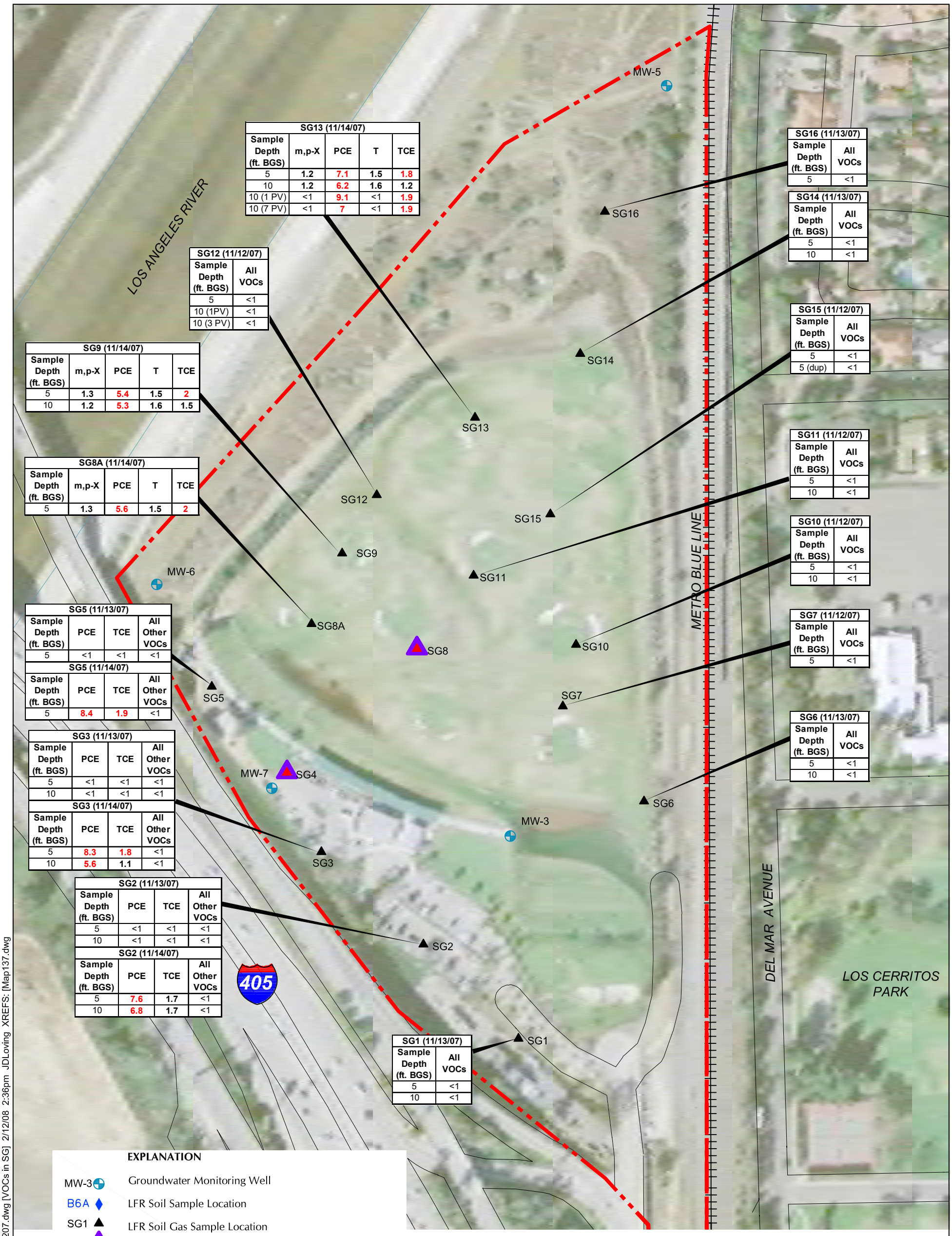
Site Map Showing Concentrations of Metals in Groundwater, 1996-2006

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 11

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [metals] 2/12/08 2:27pm JDLoving XREFS: [Map137.dwg



SG13 (11/14/07)				
Sample Depth (ft. BGS)	m,p-X	PCE	T	TCE
5	1.2	7.1	1.5	1.8
10	1.2	6.2	1.6	1.2
10 (1 PV)	<1	9.1	<1	1.9
10 (7 PV)	<1	7	<1	1.9

SG16 (11/13/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1

SG14 (11/13/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1
10	<1

SG12 (11/12/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1
10 (1PV)	<1
10 (3 PV)	<1

SG15 (11/12/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1
5 (dup)	<1

SG9 (11/14/07)				
Sample Depth (ft. BGS)	m,p-X	PCE	T	TCE
5	1.3	5.4	1.5	2
10	1.2	5.3	1.6	1.5

SG11 (11/12/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1
10	<1

SG8A (11/14/07)				
Sample Depth (ft. BGS)	m,p-X	PCE	T	TCE
5	1.3	5.6	1.5	2

SG10 (11/12/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1
10	<1

SG5 (11/13/07)			
Sample Depth (ft. BGS)	PCE	TCE	All Other VOCs
5	<1	<1	<1

SG7 (11/12/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1

SG5 (11/14/07)			
Sample Depth (ft. BGS)	PCE	TCE	All Other VOCs
5	8.4	1.9	<1

SG6 (11/13/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1
10	<1

SG3 (11/13/07)			
Sample Depth (ft. BGS)	PCE	TCE	All Other VOCs
5	<1	<1	<1
10	<1	<1	<1

SG3 (11/14/07)			
Sample Depth (ft. BGS)	PCE	TCE	All Other VOCs
5	8.3	1.8	<1
10	5.6	1.1	<1

SG2 (11/13/07)			
Sample Depth (ft. BGS)	PCE	TCE	All Other VOCs
5	<1	<1	<1
10	<1	<1	<1

SG2 (11/14/07)			
Sample Depth (ft. BGS)	PCE	TCE	All Other VOCs
5	7.6	1.7	<1
10	6.8	1.7	<1

SG1 (11/13/07)	
Sample Depth (ft. BGS)	All VOCs
5	<1
10	<1

EXPLANATION

- MW-3 — Groundwater Monitoring Well
- B6A — LFR Soil Sample Location
- SG1 — LFR Soil Gas Sample Location
- SG4 — Location Not Sampled Because Fill is Less Than 5 Feet BGS
- BGS — Below Ground Surface
- TCE — Trichloroethene
- T — Toluene
- PCE — Tetrachloroethene
- m,p-X — m,p-Xylenes
- PV — Purge Volume
- Property Boundary
- Railroad Tracks

0 160 FEET

All results reported in micrograms per liter
VOCs-Volatile Organic Compounds
Only detected VOC Concentrations are shown.
See EST laboratory report for other analyzed VOCs.

Red denotes concentrations above respective CHHSL

Site Map Showing VOCs Concentrations in Soil Gas Using EPA Method 8260B, November 12-14, 2007

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 12

CM: K:\Data\Graphics\10000\10231\10231 Well Locations 1207.dwg [VOCs in SG] 2/12/08 2:36pm JDLoving XREFS: [Map137.dwg

SG9 (11/14/07)										
Sample Depth (ft. BGS)	CM	A	CD	2-B	Hex	C	B	Cy	2,2,4-TMP	H
5	<0.01	**0.06**	<0.01	<0.01	<0.01	**0.04**	**0.02**	<0.01	**0.02**	<0.01
10	**0.01**	**0.02**	<0.01	**0.06**	**6.8 E**	**0.05**	**0.20**	**2.86**	**0.08**	**0.20**

SG9 (Continued) (11/14/07)										
Sample Depth (ft. BGS)	TCE	T	2-H	PCE	E	m,p-X	o-X	4-ET	1,3,5-TMB	1,2,4-TMB
5	<0.01	**0.14**	<0.01	**0.13**	**0.02**	**0.10**	**0.03**	<0.01	<0.01	**0.02**
10	**0.02**	**0.19**	<0.01	<0.01	**0.03**	**0.09**	**0.03**	<0.01	**0.01**	**0.02**

SG8A (11/14/07)										
Sample Depth (ft. BGS)	CM	A	CD	2-B	Hex	C	B	Cy	2,2,4-TMP	H
5	**0.02**	**0.03**	**0.08**	**0.07**	**1.59**	**0.03**	**0.33**	**1.39**	**0.03**	**0.3**

SG8A (Continued) (11/14/07)										
Sample Depth (ft. BGS)	TCE	T	2-H	PCE	E	m,p-X	o-X	4-ET	1,3,5-TMB	1,2,4-TMB
5	**0.01**	**0.035**	<0.01	**0.03**	**0.13**	**0.47**	**0.14**	**0.05**	**0.04**	**0.13**

SG13 (11/14/07)										
Sample Depth (ft. BGS)	CM	A	CD	2-B	Hex	C	B	Cy	2,2,4-TMP	H
5	<0.01	**0.12**	**0.02**	**0.09**	**0.05**	<0.01	**0.02**	**0.01**	**0.01**	<0.01
10	<0.01	**0.09**	**0.06**	**0.02**	**0.21**	<0.01	**0.04**	**0.02**	**0.04**	**0.03**

SG13 (Continued) (11/14/07)										
Sample Depth (ft. BGS)	TCE	T	2-H	PCE	E	m,p-X	o-X	4-ET	1,3,5-TMB	1,2,4-TMB
5	<0.01	**0.12**	**0.01**	<0.01	**0.01**	**0.04**	**0.01**	<0.01	<0.01	<0.01
10	<0.01	**0.11**	<0.01	<0.01	<0.01	**0.03**	**0.01**	<0.01	<0.01	**0.01**

SG3 (11/14/07)					
Sample Depth (ft. BGS)	A	2-B	T	m,p-X	All Other VOCs
5	0.17	0.02	0.04	0.02	<0.01

LOS ANGELES RIVER

METRO BLUE LINE

DEL MAR AVENUE

LOS CERRITOS PARK

405

MW-5 MW-6 MW-7 MW-3

SG16 NS, SG14 NS, SG13, SG12 NS, SG15 NS, SG9, SG11 NS, SG8A, SG10 NS, SG5 NS, SG7 NS, SG6 NS, SG3, SG2 NS, SG1 NS

0 160 FEET

EXPLANATION

MW-3	Groundwater Monitoring Well
B6A	LFR Soil Sample Location
SG1	LFR Soil Gas Sample Location
BGS	Below Ground Surface
NS	Not Sampled
CM	Chloromethane
A	Acetone
CD	Carbon Disulfide
2-B	2-Butanone
Hex	Hexane
C	Chloroform
B	Benzene
Cy	Cyclohexane
2,2,4-TMP	2,2,4-Trimethylpentane
H	Heptane
TCE	Trichloroethene
T	Toluene
2-H	2-Hexanone
PCE	Tetrachloroethene
E	Ethylbenzene
m,p-X	m,p-Xylenes
o-X	o-Xylene
4-ET	4-Ethyltoluene
1,3,5-TMB	1,3,5-Trimethylbenzene
1,2,4-TMB	1,2,4-Trimethylbenzene
VOCs	Volatile Organic Compounds
	Property Boundary
	Railroad Tracks

All results reported in micrograms per liter.
Only detected VOC Concentrations are shown. See ACE laboratory report for other analyzed VOCs.
Red denotes concentrations above respective CHHSL

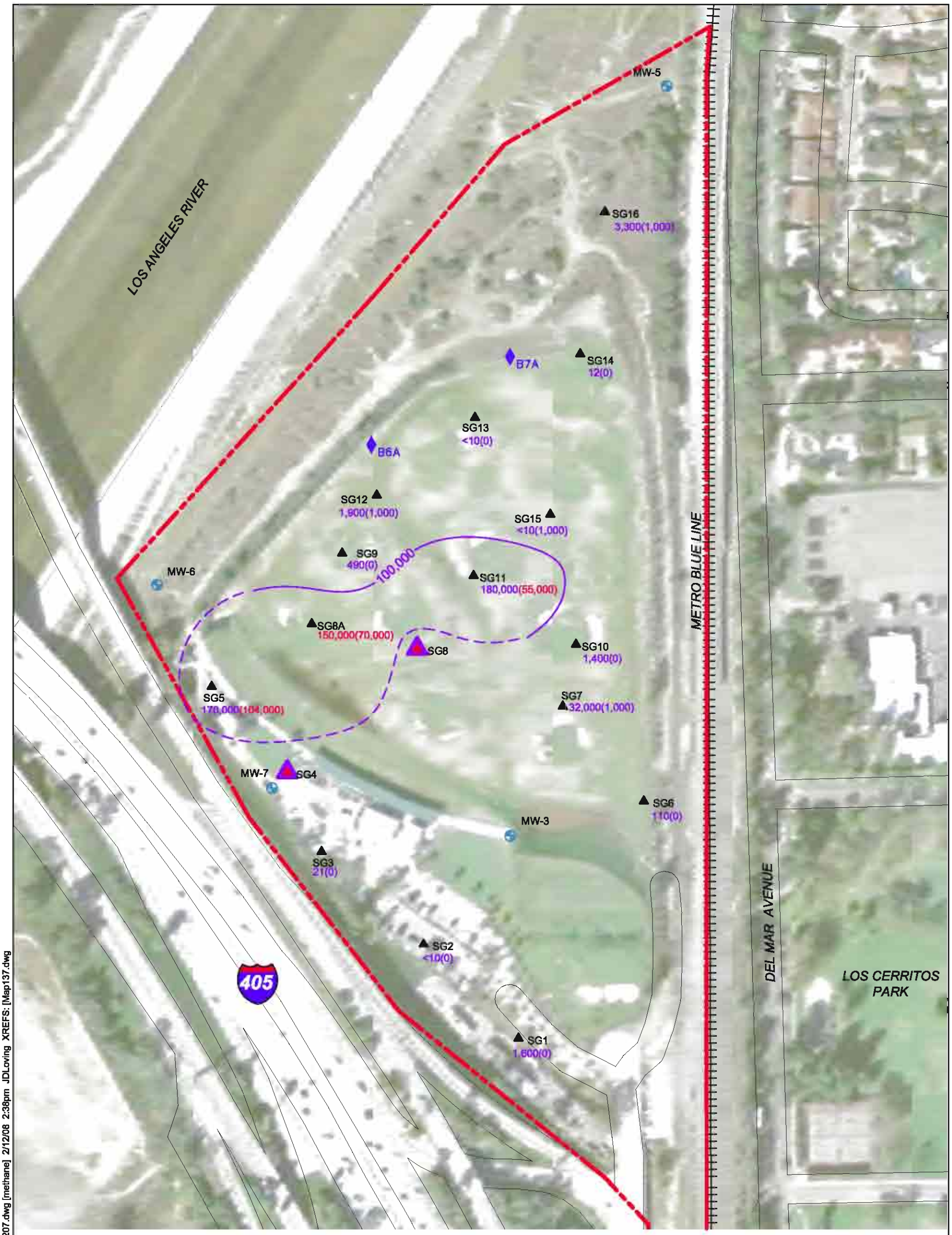
Site Map Showing VOCs Concentrations in Soil Gas Using EPA Method TO-15, November 14, 2007

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 13

CM: K:\Data\Graphics\10000\10231\10231 Well Locations 1207.dwg [VOCs in SG (2)] 2/12/08 2:37pm JDLoving XREFS: [Map137.dwg



EXPLANATION

- MW-3 — Groundwater Monitoring Well
- B6A — LFR Soil Sample Location
- SG1 — LFR Soil Gas Sample Location
- SG4 — Location Not Sampled Because Fill is Less Than 5 Feet BGS
- BGS — Below Ground Surface
- 180,000(55,000) — Methane Concentration using a field gas monitor (Landtec GEM 2000 Plus); Methane Concentration using EPA Method 8015M
- 100,000 — Isocontour for Methane, dashed where inferred
- Property Boundary
- Railroad Tracks

180,000 - Blue denotes concentration above upper explosive limit

150,000 - Red denotes concentration within explosive range

Note: All results reported in parts per million per volume

0 160 FEET

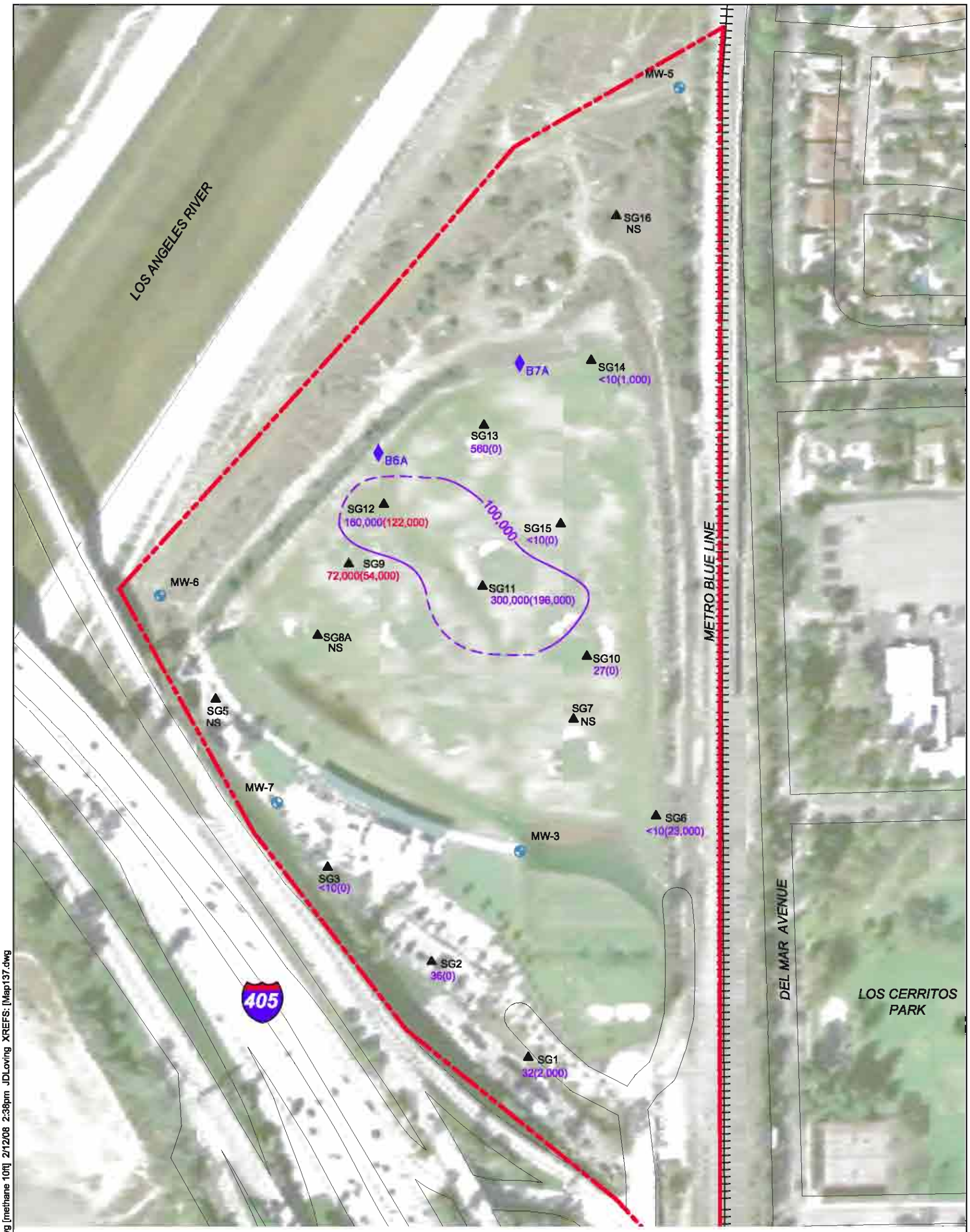
Site Map Showing Methane Concentrations in Soil Gas at 5 feet BGS, November 12-15, 2007

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 14

CM: K:\Data\Graphics\10000\10231\10231 Well Locations 1207.dwg [methane] 2/12/08 2:38pm JDLoving XREFS: [Map137.dwg



EXPLANATION

MW-3	Groundwater Monitoring Well
B6A	LFR Soil Sample Location
SG1	LFR Soil Gas Sample Location
BGS	Below Ground Surface
NS	Not Sampled Because Fill is Less Than 10 Feet BGS
160,000(122,000)	Methane Concentration using a field gas monitor (Landtec GEM 2000 Plus) / Methane Concentration using EPA Method 8015M
100,000	Isocontour for Methane, dashed where inferred
	Property Boundary
	Railroad Tracks

300,000 - Blue denotes concentration above upper explosive limit

72,000 - Red denotes concentration within explosive range

Note: All results reported in parts per million per volume

0 160 FEET

Site Map Showing Methane Concentrations in Soil Gas at 10 feet BGS, November 12-15, 2007

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 15

CM: K:\Data\Graphics\10000\10231\10231 Well Locations 1207.dwg [methane 10ft] 2/12/08 2:38pm JDLoving XREFS: [Map137.dwg

SSLs			500		1,000		10,000	
		Analyte	TPHg		TPHd		TPHmo	
		Method	1312/8015 *	8015	1312/8015*	8015	1312/8015*	8015
		units	mg/l	mg/kg	mg/l	mg/kg	mg/l	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**						
B7A-5	5	11/13/2007	--	<3	--	<3	--	**24**
B7A-10	10	11/13/2007	--	**5**	--	**16**	--	**203**
B7A-20	20	11/13/2007	--	<3	--	<3	--	**149**
B7A-30	30	11/13/2007	<4	<1200	**8**	**2,700**	**7**	**4,740**
B7A-40	40	11/13/2007	<2	<1200	**4**	**4,070**	**3.6**	**8,970**
B7A-50	50	11/13/2007	<4	<1200	**18**	**2,580**	**22**	**4,400**

			(1) C09-C18 Aliphatic Hydrocarbons	(1) C5-C8 Unadj. Aliphatic Hydrocarbons	(2) C19-C36 Aliphatic Hydrocarbons	(2) C9-C12 Unadj. Aliphatic Hydrocarbons	(3) C11-C22 Aromatic Hydrocarbons	(3) C9-C10 Aromatic Hydrocarbons
		Analyte						
		Methods	MA-EPH	MA-VPH	MA-EPH	MA-VPH	MA-EPH	MA-VPH
		Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Sample ID	**Sample Depth**	**Date Sampled**						
B7A-30	30	11/13/2007	**2,500**	**102**	**3,530**	**322**	**4,020**	**176**
B7A-40	40	11/13/2007	**5,290**	**54**	**7,850**	**152**	**6,580**	**106**
B7A-50	50	11/13/2007	**2,210**	**85**	**3,390**	**140**	**2,960**	**82**

SSLs			500		1,000		10,000	
		Analyte	TPHg		TPHd		TPHmo	
		Method	1312/8015 *	8015	1312/8015*	8015	1312/8015*	8015
		units	mg/l	mg/kg	mg/l	mg/kg	mg/l	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**						
B6A-15	15	11/13/2007	--	<3	--	<3	--	**42**
B6A-20	20	11/13/2007	--	<3	--	<3	--	**68**
B6A-25	25	11/13/2007	--	<15	--	<15	--	**526**

SSLs			500		1,000		10,000	
		Analyte	TPHg		TPHd		TPHmo	
		Method	1312/8015 *	8015	1312/8015*	8015	1312/8015*	8015
		units	mg/l	mg/kg	mg/l	mg/kg	mg/l	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**						
MW-7-15	15	10/25/2007	--	<10	--	<10	--	<10
MW-7-25	25	10/25/2007	--	<10	--	<10	--	**55**
MW-7-35	35	10/25/2007	--	<10	--	<10	--	<10

MW-5
SG16
B7A
SG14
SG13
B6A
SG12
SG15
SG9
MW-6
SG11
SG8A
SG8
SG10
SG5
SG7
MW-7
SG6
MW-3
SG3
SG2
405
SG1
METRO BLUE LINE
DEL MAR
DEL MAR AVENUE
LOS CERRITOS PARK

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
See laboratory reports for complete analytical results, carbon chain data is slightly different for each lab.
mg/kg = Milligrams per kilograms
mg/l = Milligrams per liter
* = Method 1312/8015 for Synthetic Precipitation Leaching Procedure
-- = Not Analyzed
TPHg = Total Petroleum hydrocarbon as gasoline
TPHd = Total Petroleum hydrocarbon as diesel
TPHmo = Total Petroleum hydrocarbon as motor oil
SSLs = Soil Screening Levels (CRWQCB, 1996)
MA DEP = Massachusetts Department of Environmental Protection
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
Red denotes concentration exceeds SSL

EXPLANATION

- MW-3 — Groundwater Monitoring Well
- B6A — Soil Boring Location
- SG1 — Soil Gas Sample Location
- Property Boundary
- Railroad Tracks

0 160 FEET

Site Map Showing TPH Concentrations in Soil For Borings B6A, B7A and MW-7

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 16

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [tph b6a b7a mw-7] 2/12/08 2:42pm JDLoving XREFS: [Map137.dwg

Sample ID	Sample Depth	Date Sampled	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Benzene	Ethyl benzene	Isopropylbenzene (Cumene)	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Toluene	Xylenes, total
Analyte			8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B
Method			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Units															
B6A-15	15	11/13/2007	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B6A-20	20	11/13/2007	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B6A-25	25	11/13/2007	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Sample ID	Sample Depth	Date Sampled	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Benzene	Ethyl benzene	Isopropylbenzene (Cumene)	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Toluene	Xylenes, total
Analyte			8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B
Method			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Units															
B7A-5	5	11/13/2007	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B7A-10	10	11/13/2007	<5	<5	**58**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B7A-20	20	11/13/2007	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B7A-30	30	11/13/2007	**13,500**	**3,120**	<2500	**824**	**2,960**	**1,680**	**8,310**	**1,400**	**2,560**	**1,330**	**1,640**	<250	**8,210**
B7A-40	40	11/13/2007	**7,780**	**2,240**	<2500	<250	**944**	**782**	**6,150**	**994**	**1,170**	**1,680**	**1,110**	**307**	**5,490**
B7A-50	50	11/13/2007	**10,000**	<250	<2500	<250	**2,080**	**1,330**	**5,980**	**1,050**	**2,080**	**1,660**	**1,140**	<250	**677**

Sample ID	Sample Depth	Date Sampled	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Benzene	Ethyl benzene	Isopropylbenzene (Cumene)	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Toluene	Xylenes, total
Analyte			8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B
Method			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Units															
MW-7-15	15	10/25/2007	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-7-25	25	10/25/2007	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-7-35	35	10/25/2007	<5	<5	--	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
See laboratory reports for complete analytical results, only detected concentrations are included
ug/kg = Micrograms per kilograms
-- = Not Analyzed

EXPLANATION

- MW-3 Groundwater Monitoring Well
- B6A Soil Boring Location
- SG1 Soil Gas Sample Location
- Property Boundary
- Railroad Tracks

0 160 FEET

Site Map Showing VOC Concentrations in Soil For Borings B6A, B7A and MW-7

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 17

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [voc b6a b7a mw-7] 2/12/08 2:43pm JDLoving XREFS: [Map137.dwg

		Analyte	2-Methylnaphthalene	4-Methylphenol	Naphthalene
		Method	8270C	8270C	8270C
		Units	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Depth**	**Date Sampled**			
B7A-10	10	11/13/2007	<3000	<5000	<3000
B7A-20	20	11/13/2007	<3000	<5000	<3000
B7A-30	30	11/13/2007	**34,700**	**3,680**	**8,450**
B7A-40	40	11/13/2007	**26,300**	**6,150**	<3000
B7A-50	50	11/13/2007	**26,000**	<5000	**7,540**

		Analyte	2-Methylnaphthalene	4-Methylphenol	Naphthalene
		Method	8270C	8270C	8270C
		Units	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Depth**	**Date Sampled**			
B6A-5	5	11/13/2007	<3000	<5000	<3000
B6A-15	15	11/13/2007	<3000	<5000	<3000
B6A-20	20	11/13/2007	<3000	<5000	<3000
B6A-25	25	11/13/2007	<3000	<5000	<3000

		Analyte	2-Methylnaphthalene	4-Methylphenol	Naphthalene
		Method	8270C	8270C	8270C
		Units	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Depth**	**Date Sampled**			
MW-7-15	15	10/25/2007	<300	<1,000	<300
MW-7-25	25	10/25/2007	<300	<1,000	<300
MW-7-35	35	10/25/2007	<300	<1,000	<300

Notes:
ID = Identification
< = Not detected above laboratory reporting limit indicated
ug/kg = Micrograms per kilograms

EXPLANATION

- MW-3 — Groundwater Monitoring Well
- B6A — Soil Boring Location
- SG1 — Soil Gas Sample Location
- Property Boundary
- Railroad Tracks

Red denotes concentrations exceeds EPA Preliminary Remediation Goals for commercial/industrial land use

0 160 FEET

Site Map Showing SVOC Concentrations in Soil From Borings B6A, B7A and MW-7

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 18

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [svoc b6a b7a mw-7] 2/12/08 2:43pm JDLoving XREFS: [Map137.dwg

Analyte	Arsenic	Barium	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead	Lead	Molybdenum	Nickel	Vanadium	Zinc	Mercury
Method	6010B	6010B	6010 STLC	6010B	6010B	6010B	6010B	6010B	6010B	6010 STLC	6010 STLC/DI	6010B	6010B	6010B	6010B	7471A
Units	mg/kg	mg/kg	mg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/l	mg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**														
B7A-5	5	11/13/2007	**9.19**	**194**		**1.01**	**0.504**	**34.6**	**17.1**	**37.9**	**11.9**			**1.11**	**26.6**	**55.7**	**79.2**	<0.14
B7A-10	10	11/13/2007	**6.84**	**427**		**0.663**	**0.518**	**30.3**	**10.8**	**35.1**	**61.3**	**2.58**		<1	**18.6**	**38.9**	**131**	<0.14
B7A-20	20	11/13/2007	<1	**152**		**0.978**	<0.5	**29.6**	**15.6**	**27.4**	**7.05**			<1	**22.9**	**58.8**	**65.9**	<0.14
B7A-30	30	11/13/2007	**28.6**	**1,560**	**35.4**	**0.622**	**1.09**	**39.2**	**12.1**	**59.9**	**376**	**8.54**	<5	**1.58**	**33.5**	**45.8**	**174**	**0.59**
B7A-40	40	11/13/2007	**28.5**	**1,600**	**40.7**	**0.571**	**1.04**	**37.9**	**11.4**	**48.8**	**309**	**12.5**	<5	**1.47**	**33.3**	**42.5**	**157**	**0.46**
B7A-50	50	11/13/2007	**8.33**	**258**		**0.909**	<0.5	**30.2**	**13.7**	**25**	**7.35**			<1	**27.2**	**50.3**	**59.4**	<0.14

Analyte	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium
Method	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**											
B6A-15	15	11/13/2007	**8.86**	**161**	**0.977**	**0.531**	**32.8**	**15.8**	**32.8**	**6.45**	<1	**25.7**	<1	<0.5	<1
B6A-20	20	11/13/2007	**3.51**	**154**	**0.809**	**0.798**	**35.3**	**13.3**	**21.9**	**10.8**	**1.19**	**22.5**	<1	<0.5	<1
B6A-25	25	11/13/2007	**2.34**	**113**	**0.89**	**0.597**	**30.9**	**11.4**	**19.4**	**5.2**	<1	**16.9**	<1	<0.5	<1

Analyte	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium
Method	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B	6010B
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Depth**	**Date Sampled**											
MW-7-15	15	10/25/2007	**6.4**	**140**	<1	<2	**18**	**9.7**	**10**	<3	<1	**14**	<5	<2	<2
MW-7-25	25	10/25/2007	<5	**130**	<1	<2	**26**	**11**	**16**	**9.1**	<1	**18**	<5	<2	<2
MW-7-35	35	10/25/2007	<5	**53**	<1	<2	**12**	**7.3**	**17**	<3	<1	**9.3**	<5	<2	<2

MW-5
B7A
SG14
B6A
SG13
SG11
SG8A
SG8
SG10
SG5
SG7
MW-7
SG6
MW-3
SG3
SG2
405
SG1
METRO BLUE LINE
DEL MAR AVENUE
LOS CERRITOS PARK

NOTES:
ID = Identification
< = Not detected above laboratory reporting limit indicated
Only concentrations detected above the laboratory reporting limits are shown. See laboratory report for all analytes.
mg/kg = Miligrams per kilograms
mg/l = milligrams per liter
STLC = Soluble Threshold Limit Concentration
STLC/DI = Soluble concentration using deionized water

EXPLANATION

- MW-3 — Groundwater Monitoring Well
- B6A — Soil Boring Location
- SG1 — Soil Gas Sample Location
- Property Boundary
- Railroad Tracks

Red denotes concentrations exceeds Soluble Threshhold Limit Concentration

0 160 FEET

Site Map Showing Metals Concentrations in Soil From Borings B6A, B7A and MW-7

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 19

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R1.dwg [metals b6a b7a mw-7] 3/5/08 5:00pm JDLoving XREFS: [Map137.dwg

MW-5
4.30
LOS ANGELES RIVER
4.0
3.6
3.0
MW-6
2.48
2.5
MW-7
1.98
MW-3
2.00
METRO BLUE LINE
DEL MAR AVENUE
LOS CERRITOS
PARK
405

EXPLANATION

- MW-3 — Groundwater Monitoring Well
- 2.00 — Groundwater Elevation (ft above MSL)
- Groundwater Flow Contour (dashed where inferred)
- Groundwater Flow Direction
- Property Boundary
- Railroad Tracks

0 160 FEET

Groundwater Elevation and Flow Direction, December 3, 2007

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 20

CM: K:\Data\Graphics\10000\10231\10231 Well Locations 1207.dwg [gw] 2/12/08 2:39pm JDLoving XREFS: [Map137.dwg

MW-5	Barium	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
12/03/07	86	<0.5	<50	ND	ND	<0.5	<0.5	<0.5
MCLs	**1,000**	**2**	--	--	--	--	--	--

MW-6	Barium	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
12/03/07	100	**5.6**	<50	ND	ND	<0.5	<0.5	<0.5
MCLs	**1,000**	**2**	--	--	--	--	--	--

MW-7	Arsenic	Barium	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
12/03/07	**210**	**1,100**	<0.5	<50	ND	ND	<0.5	1.1	<0.5
MCLs	**10***	**1,000**	**2**	--	--	--	--	--	--

MW-3	Arsenic	Barium	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
12/03/07	<50	<50	0.74	<50	ND	ND	<0.5	<0.5	<0.5
MCLs	**10***	**1,000**	**2**	--	--	--	--	--	--

LOS ANGELES RIVER

METRO BLUE LINE

DEL MAR AVENUE

LOS CERRITOS PARK

405

MW-5

MW-4

MW-6

MW-2

MW-7

MW-3

EXPLANATION

MW-3	Groundwater Monitoring Well
MW-2	Former Groundwater Monitoring Well (JB, 1995)
	Property Boundary
	Railroad Tracks
VOCs	Volatile Organic Compounds
SVOCs	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
TPHg	Gasoline Range Organics
TPHd	Diesel Range Organics
TPHmo	Motor Oil Range Organics
*	Federal MCL for Arsenic (USEPA, January 2006)
MCL	Maximum Contaminant Levels
µg/L	micrograms per liter
<	less than
ND	not detected above laboratory reporting limits

Red denotes concentrations greater than MCL

0 160 FEET

Site Map Showing Analytical Results in Groundwater, December 3, 2007

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 21

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-R2.dwg [All] 2/12/08 2:47pm JDLoving XREFS: [Map137.dwg

APPENDIX A

DTSC Correspondence
dated July 5 and July 12, 2006

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

July 12, 2006

Mr. Charles Robinson
Levine Fricke
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324

LONG BEACH INDUSTRIAL FORMER OIL OPERATORS NORTH SITE -
SITE CHARACTERIZATION REPORT COMMENTS

Dear Mr. Robinson:

The Department of Toxic Substances Control (DTSC) has reviewed the Characterization Data Report dated April 4, 2006 for the Long Beach Industrial Former Oil Operators North Site. Based on our review, we have developed the following comments:

General Comment

In general, data gaps exist, which need to be addressed prior to approval of the Report. We believe the Site has not been fully characterized and that the Characterization Data Report should be used in conjunction with further research and investigation to develop a Remedial Investigation Workplan.

Specific Comments

1. Historical and current operations and conditions should be detailed in the text and supported by historical aerial photographs or topographic maps.

2. Boring logs are hard to find.

3. Sample depths should be included in tables.

4. Section 5.0: Background sampling data is necessary. If a point referenced in Kearny (1996) is close to the Site, then you might be able to use background values for arsenic.

Printed on Recycled Paper

5. A Health and Safety Plan should be included.

6. Copies of associated documentation, including annual groundwater sampling, should be included.

7. In sampling point B-7 benzo(a)pyrene was detected at 400 mg/kg at 50 feet below ground surface (bgs). Additional characterization is necessary and naphthalene should also be included.

8. In sampling point B-6 at 15 feet bgs hydrocarbon odors and staining were noted on the boring logs; this sample was not analyzed. Additional characterization is needed.

9. In sampling point B-7 at 40 feet bgs hydrocarbon odors and staining were noted on the boring logs; this sample was not analyzed. Additional characterization is needed. Samples B7 at 35 ft and B7 at 50 ft bgs were analyzed.

10. The vertical extent of contamination has not been defined. There should be a clean interval of at least 10 feet.

11. In MW-3, mercury was detected at 160 ug/L (the MCL is 2 ug/L). The source of the mercury in the soil needs to be determined.

12. The text in section 4.2 and Table 10 is inconsistent. Depth to groundwater and groundwater flow direction are unclear.

13. Identify areas where water may collect in the soil based on topography and/or site conditions. Saturated soil could inhibit soil gas sampling and water may tend to collect above the groundwater table or perched groundwater due to the soil composition.

14. Define where perched groundwater was found.

15. Additional groundwater monitoring wells are needed. At a minimum, one up gradient well for background conditions and one down gradient well need to be installed.

16. Aquifer information should be included and the underlying aquifer(s), characteristics, and uses identified. DTSC can provide guidance manuals.

17. Raw lab data and chains of custody from previous investigations should be included or, if not available, so stated.

18. Old wells (MW1, MW2, and MW 4) need to be relocated and properly abandoned. A geophysical survey might be needed to locate the wells.

19. The source of the fill material needs to be determined and fill areas sampled.

Comments from DTSC's Human and Ecological Risk Division are attached.

We would like to schedule a meeting to discuss DTSC's comments and to develop a strategy to move forward with the Site. If you have any questions, please contact me at (714) 484-5461, or Mr. Joseph Kaslowski, Project Manager, at (714) 484-5471.

Sincerely,

Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch – Cypress Office

Enclosure

cc: Mr. Myron Sukut
Chairman of the Board
Sukut Construction, Inc.
4010 West Chandler
Santa Ana, California 92704-5202

Ms. Onamia Chun
Geological Services Unit – Cypress

Ms. Fran Collier
Human and Ecological Risk Division
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826-3200

Linda S. Adams,
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

DRAFT
M E M O R A N D U M
July 5, 2006

TO: Joseph Kaslowski
Project Manager
Site Mitigation and Brownfields Reuse Program
Cypress Office

From: Fran Collier, M.S.
Associate Toxicologist
Human and Ecological Risk Division

Date:

SUBJECT: Characterization Data Report, Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California

PCA: 12050 **Site Code:** 401282 **WP:** 11

The Human and Ecological Risk Division (HERD) has reviewed the Characterization Data Report (CDR), Former Oil Operators North Site (FOONS), 3701 Pacific Place, Long Beach, California prepared by Levine and Fricke (LFR) and dated April 4, 2006.

Background:

The FOONS is an 18 acre site located in a mixed commercial, industrial and residential area. The site was used from 1926 until the mid 1950's for disposal of off-shore drilling oil and brine waste. The waste was deposited in unlined evaporation ponds. When water evaporated, waste sludge was either left in place or drummed for disposal. The site is currently used as a golf learning center with a paved parking area, several structures and a large grassy area.

In the 1970's some of the sump materials were removed and treated. Additional investigations occurred in the 1980's that culminated in a land farming operation that began in 1989. This operation was halted due to public complaints. Four ground water monitoring wells were installed and annual monitoring was conducted from 1987 until 1997. A geotechnical study was done in 1984 to assess the feasibility of constructing

light industrial structures on the sump material. The report concluded that the materials were too compressible to directly support shallow foundations. The report estimated that the total volume of all sump fills was between 390,000 and 400,000 cubic yards. In 1986, 12 borings were installed to evaluate soil physical properties. Soil samples were also collected for chemical analysis. Significant concentrations of volatile organics (VOC) and total petroleum hydrocarbons (TPH) were detected. These soil borings were converted to vapor monitoring probes. Laboratory results from this historical investigation are not available for VOCs, however methane concentrations were reported that ranged from 12.1 to 83.6 percent.

Ground water monitoring wells were installed at four locations. Ground water elevations ranged from 39.3 feet (ft) below ground surface (bgs) to 61.95 ft bgs between 1995 and 1996 monitoring events.

LFR conducted soil sampling and ground water investigations starting in 2003 to delineate the lateral and vertical extent of impacted soil and sump material and to provide data on the type and concentration of contaminants in the impacted areas. Only the former MW3 ground water monitoring well could be located. In 2004, LFR installed two new monitoring wells, MW5 and MW6, located near the estimated locations of MW4 and MW2, respectively.

LFR advanced seven borings to 50 ft bgs. Soil samples were collected at 5 foot intervals. The bottom sample from each boring was analyzed for VOCs, semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCB) and TPH with carbon chain distinction. Additional samples were analyzed based on PID, staining, lithology and results from the bottom samples. Two additional borings were advanced to 80 ft bgs for cone penetrometer testing of the materials. Soil sample results were compared to United States Environmental Protection Agency (USEPA) Region IX industrial preliminary remediation goals (iPRG). Background samples were not collected. Only arsenic concentrations exceeded the iPRG and regional background levels as described in the Kearny Report. PCBs were not detected above the laboratory detection limit of 10 ug/kg. Various VOCs and SVOCs were detected in the soil samples including:

- Benzene was detected up to 580 ug/kg.
- Naphthalene was detected upto 3,600 ug/kg, and
- Benzo-a-pyrene was detected up to 400 ug/kg.

Ground water sample results showed concentrations of antimony, arsenic, mercury, lead, selenium and vanadium exceeded regulatory thresholds or action levels. TPH, VOCs and SVOCs were not detected above laboratory detection levels.

Documents Reviewed

HERD reviewed the Characterization Data Report, Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California prepared by Levine and Fricke (LFR) and dated April 4, 2006.

Scope of Review

HERD has reviewed this report with emphasis on site characterization information for use in assessing potential risk and hazard to human health and the environment. Mr. Kaslowski requested that HERD review the CDR to identify potential work needed to complete site characterization and assess risk to human health and the environment for a potential future commercial and industrial land use. Mr. Kaslowski indicated that a scoping meeting will be held to discuss future needs for the site. This memo is intended to provide preliminary comments for this scoping meeting. Grammatical or typographical errors contained in the CDR that do not affect the evaluation have not been noted.

General Comments

1. HERD recommends that LFR submit a risk assessment work plan to evaluate potential risk and hazard to people and ecological organisms that could be exposed to contaminants at the site once site characterization is complete. The CDR does not include recommendations for further site characterization, assessment of potential risk and hazard to human health or ecological receptors, or investigating remedial alternatives. Typically, once a site is characterized, a baseline risk assessment for unrestricted use is conducted to determine if remedial measures are needed and to use in comparing potential risk reduction from implementation of various remedial alternatives. This information can also be used to assess potential risk and hazard to potential on site and off site receptors during implementation of the selected remedial remedy. Based on existing data, concentrations of contaminants in soil and sump materials indicate that a risk assessment should be conducted once site characterization is complete.

2. The CDR indicates that significant volumes of soils and sump materials at the site are not suitable for construction of light industrial structures. At this time it is unclear whether the property owner intends to excavate these materials. If these materials will be excavated, treated and returned to the excavated areas for compaction to meet engineering requirements, HERD recommends that a post remedial risk assessment be conducted in addition to the baseline risk assessment.

3. Because soil gas sampling has not been conducted, and significant concentrations of VOCs were detected in the soil matrix, HERD recommends that a soil gas investigation be conducted. The investigation should identify VOCs and their respective concentration distributions throughout the soil and sump materials at the site. This information is needed for evaluating potential risk to human health from potential migration of VOCs to indoor air. Because of the high levels of methane detected in a previous investigation, HERD recommends that soil gas samples also be evaluated for methane concentrations. To facilitate this investigation, HERD

recommends that a soil gas sampling work plan be prepared for DTSC approval prior to conducting the field work.

4. HERD recommends that if feasible, background soil samples be collected from the same parent materials as found on the site and analyzed for concentrations of metals to compare to on site concentrations.

5. HERD recommends that a risk assessment work plan be submitted that follows the USEPA Risk Assessment Guidance documents using California Office of Environmental Health Hazard Assessment exposure values and toxicity values when available. In addition, HERD recommends that, at a minimum, the risk assessment work plan include using the following specific approaches:

- To evaluate potential risk from exposure to soil vapor intrustion to indoor air, use the Johnson and Ettinger Vapor Intrusion model as adapted for California available on the DTSC web site at http://www.dtsc.ca.gov/AssessingRisk/JE_Models.cfm

- To evaluate potential risk from exposure to fugitive dust HERD recommends using the particulate Emission Factor approach described in the USEPA "Soil Screening Guidance: Technical Background" document EPA/540/R-95/128 July 1996 for evaluating fugitive dust exposure. The document is available on USEPA's web site at http://www.epa.gov/superfund/resources/soil/introtbd.htm.

- HERD recommends using the USEPA adult lead model pregnant worker scenario for evaluating the commercial/industrial worker exposure as described in the "Recommendations of the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil", dated January 2003 (USEPA publication EPA-540-R-03-001 found at www.epa.gov/superfund/programs/lead/products/adultpb.pdf HERD recommends using the default exposure parameters specified in the document.

- For evaluate potential hazard from exposure to lead for unrestricted land use, HERD recommends using LeadSpread 7 as developed by OEHHA and available at http://www.dtsc.ca.gov/AssessingRisk/leadspread.cfm

- To evaluate potential hazard from exposure to TPH compounds, HERD recommends using the Massachusetts Department of Environmental Protection approach for assessing hazard from TPH exposure with the following toxicity criteria:

Exposure Route	Carbon Range	HERD (proposed) (mg/kg/day)
Oral	**Aliphatic**	
	C_5-C_8	0.04
	C_9-C_{18}	0.1
	C_{19}-C_{32}	2.0
	$C_{>16}$-C_{35}	2.0
	Aromatic	
	C_6-C_8	Evaluate each COPC (i.e. BTEX)
	C_9-C_{16}	0.03
	C_{17}-C_{32}	0.03
	C_9-C_{32}	0.03
Inhalation	**Aliphatic**	
	C_5-C_8	0.06
	C_9-C_{18}	0.3
	C_{19}-C_{32}	
	Aromatic	
	C_6-C_8	Evaluate each COPC (i.e., BTEX)
	C_9-C_{16}	0.006
	C_{17}-C_{32}	

- To identify the metal contaminants of potential concern in soil, compare on site metals concentrations to site specific background metals concentrations in soil using the following tiered approach Using an appropriate data set from similar soil types and sampling depths:

  A) Compare the highest site concentration with the highest background concentration. If the site concentration is equal to or less than the background, the metal may be eliminated as a chemical of potential concern (COPC). If the onsite maximum is greater than the background maximum, go to B).

  B) Compare the site and background arithmetic mean concentrations. If the means are comparable, and if the highest site concentration is below the concentration associated with unacceptable risk or hazard, the metal may be eliminated as a COPC. If the site mean is greater than the maximum background, go to C).

C) Two approaches may be used, depending on the size of the background data set.

i) If the background data set is of sufficient size, statistically evaluate the overlap of the background and onsite distributions to determine if they come from the same population. If they do, and if the highest site concentration is below the concentration associated with unacceptable risk or hazard, the metal may be eliminated as a COPC. If not, include the metal as a COPC in the risk evaluation. See HERD 1997 guidance.

ii) If the background data set is limited (n=4), the onsite data can be evaluated statistically using probability plots to determine if one or more populations are present. If only one population is present, and if the highest site concentration is below the concentration associated with unacceptable risk or hazard, the metal may be eliminated as a COPC. If there are two or more populations present, then include the metal as a COPC.

- For ecological risk, use the screening level checklist approach as a first step. The checklish and screening approach can be found at http://www.dtsc.ca.gov/AssessingRisk/eco.cfm

Conclusions and Recommendations

HERD concurs that a scoping meeting be helpful to discuss further site characterization needs and approaches to use in assessing risk. HERD recommends that a site characterization work plan be prepared following this meeting that addresses collecting soil gas samples as well as other sampling needs to fill site characterization data gaps identified at the scoping meeting. Following completion of site characterization, HERD recommends that a risk assessment work plan be prepared and submitted for DTSC approval prior to conducting the risk assessment.

The recommendations made in this document are site specific and should not be construed as a policy decision applicable to other sites. If you have any questions regarding the above comments, please feel free to contact me at (916) 255-6431 or by e-mail at fcollier @dtsc.ca. gov.

Reviewed by: Gerald A. Pollock, Ph.D.
Senior Toxicologist, HERD

cc: Onamia Chun, Geologic Services

Cypress Office

APPENDIX B

Response to DTSC Comments on the Characterization Data Report March 12, 2007

March 12, 2007 002-10231-01

Ms. Loni Adams
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

Subject: Submittal of Response to DTSC Comments to the Characterization Data Report, Revised Characterization Data Report, Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California

Dear Ms. Adams:

On behalf of CRG Properties, LFR Inc. (LFR) is pleased to submit the following response to comments to LFR's Characterization Data Report and a Revised Characterization Data Report for the subject Site. LFR had developed a Remedial Investigation Workplan and is being transmitted in conjunction with this submittal.

LFR prepared a Characterization Data Report dated April 4, 2006 to describe current and historical investigation and remediation activities at the Site. In a letter dated July 12, 2006, the Department of Toxic Substances Control (DTSC) raised numerous issues that needed to be addressed prior to approval of the report. In general, the DTSC believed that data gaps exist, that the Site has not been fully characterized, and that the Characterization Data Report should be used in conjunction with further research and investigation to develop a Remedial Investigation Workplan.

The DTSC also made nineteen specific comments to the Characterization Data Report. A copy of the July 12 letter is attached in Appendix A of the Revised Characterization Data Report. The DTSC's Human and Ecological Risk Division (HERD) also provided comments to the Characterization Data Report in a memorandum dated July 5, 2006. A copy of the memorandum is also attached in Appendix A.

RESPONSE TO COMMENTS

July 12, 2006 DTSC Comments

Each specific comment by the DTSC is printed below in italics followed by the LFR response.

1. *Historical and current operations and conditions should be detailed in text and supported by historical aerial photographs or topographic maps.*

   A Historical Review of the Site including historical aerial photographs and topographic maps has been prepared as a separate document. A copy of the Historical Review is attached as Appendix B in the Revised Characterization Data Report. A current Site description has been included in the Revised Characterization Data Report.

2. *Boring Logs are hard to find.*

   Soil boring and well construction logs prepared by LFR are attached as a separate appendix (Appendix D) in the Revised Characterization Data Report. Cone penetrometer test results from 1983 and probe logs from 1986 are included in Appendix C: Reports of Previous Investigations in the Revised Characterization Data Report.

3. *Sample depths should be included in tables.*

   Tables 1 through 5 have been revised and the sample depths have been included in the Revised Characterization Data Report.

4. *Section 5.0: Background sampling data is necessary. If a point referenced in Kearney (1966) is close to the Site, then you might be able to use background values for arsenic.*

   LFR has proposed the collection of ten soil samples in the Site vicinity to establish background concentrations for arsenic and other metals. Details of the background sampling are included in the Remedial Investigation Workplan.

5. *A Health and Safety Plan should be included.*

   A site-specific Health and Safety Plan has been prepared. A copy has been attached in the Remedial Investigation Workplan.

6. *Copies of associated documentation, including annual groundwater sampling, should be included.*

   LFR conducted groundwater sampling at the Site in May 2004 and December 2006. Field data sheets, non-hazardous waste data forms, and sampling protocols are included in

Appendix E in the Revised Characterization Data Report. Groundwater monitoring reports and associated documentation from January 1996 and February 1997 sampling events conducted by Jack K. Bryant Engineers are included in Appendix C: Reports of Previous Investigations in the Revised Characterization Data Report.

7. *In sampling point B-7 benzo(a)pyrene was detected at 400 mg/kg at 50 feet below ground surface (bgs). Additional characterization is necessary and naphthalene should also be included.*

   LFR will drill a boring in the vicinity of boring B-7, samples will be collected at depths of 5, 10, 20, 30, and 40 feet bgs and analyzed for arsenic, lead, mercury, SVOCs, and TPH to characterize the subsurface soil. Previous sampling indicated concentrations of arsenic and lead at concentrations of 24 and 350 mg/kg, respectively, at a depth of 50 feet bgs. Based on previous soil sampling in this area, the total metal concentrations for lead and arsenic exceeded ten times their respective soluble threshold limit concentration (STLC). If a sample exceeds ten times their respective STLC, soil samples will be analyzed with the waste extraction test using deionized water and simulated rain water to determine the soluble metal concentration. Details of the sampling program are included in the Remedial Investigation Workplan.

8. *In sampling point B-6 at 15 feet bgs hydrocarbon odors and staining were noted on the boring logs; this sample was not analyzed. Additional characterization is needed.*

   LFR will drill soil borings in the vicinity of boring B-6. At this location, samples will be collected for TPH using EPA method 8015M to a depth of 25 feet bgs. Details of the sampling program are included in the Remedial Investigation Workplan.

9. *In sampling point B-7 at 40 feet bgs hydrocarbon odors and staining were noted on the boring logs; this sample was not analyzed. Additional characterization is needed. Samples B7 at 35 feet and B7 at 50 feet bgs were analyzed.*

   LFR will drill a boring in the vicinity of boring B-7, samples will be collected at depths of 5, 10, 20, 30, and 40 feet bgs and analyzed for TPH as well as arsenic, lead, mercury and SVOCs to characterize the subsurface soil (see response to Comment #7). Details of the sampling program are included in the Remedial Investigation Workplan.

10. *The vertical extent of contamination has not been defined. There should be a clean interval of at least 10 feet.*

    December 2006 depth to groundwater beneath the site ranged from approximately 28 to 48 feet bgs. Impacted soil extends to a depth of 50 feet in some areas based on samples analyzed from LFR boring B7. In the other LFR borings, a 10-foot clean interval was found with the

exception of B3 where at least a 5-foot clean interval was found, where the base of the sump is approximately 30 feet bgs in this area. Since impacted material is found below the ground water surface, it would be impractical to define the vertical extent. These materials were placed well before any land disposal criteria existed, making the 10' criteria less relevant. Current evaluations contained in the work plan are to evaluate if the material pose a significant threat or impact to water quality, or to human health, in accordance with exemptions for engineered alternatives to the 10' criteria.

11. *In MW-3, mercury was detected at 160 µg/L (the MCL is 2 µg/L). The source of the mercury in the soil needs to be determined. In the December 2006 sampling, mercury was detected in MW-3 at 7.3 µg/L.*

    Mercury was commonly used in oil field operations as it was used in meters. It is possible that some mercury may have been included in the material placed into the sump. In the December 2006 groundwater sampling, mercury was detected in MW-3 at a concentration 0.82 µg/L, below the MCL.

12. *The text in section 4.2 and Table 10 is inconsistent. Depth to groundwater and groundwater flow direction is unclear.*

    In the Characterization Data Report, the depths to groundwater measurements were incorrect in the text in section 4.2. Table 10 contained the correct depth to groundwater measurements. The depth to groundwater measured in May 2004 ranged from 35.96 feet bgs in MW-6 to 55.64 bgs in MW-3. In the most recent groundwater data collected in December 2006, groundwater ranged from 28.43 bgs in MW-6 bgs to 47.77 feet bgs in MW-3. The groundwater flow direction was determined to be to the south.

13. *Identify areas where water may collect in the soil based on topography and/or site conditions. Saturated soil could inhibit soil gas sampling and water may tend to collect above the groundwater table or perched groundwater due to soil composition.*

    There is a topographically low area along the eastern portion of the Site in front of the grass tees of the driving range (east of MW-3). There is a storm drain here that collects runoff. The storm drain is connected to the Los Angeles River. According to Pat Nutter, General Manager of the Long Beach Golf Learning Center, storm water accumulates in this area.

    Shallow groundwater was found at 8 feet bgs during the 1986 GEOFON geotechnical investigation in one boring (B-4). This was believed to be a localized perched condition because native sands at greater depths were not saturated. This perched groundwater was sampled and the analytical results are included in the Revised Characterization Data Report. Zone 3 was described as water saturated in the Earth Technology 1984 Supplemental Investigation. Zone 3 materials reached as deep as 30 feet bgs in some locations at the Site. The deepest area appears to be in the central portion of the property. No other perched conditions were noted in other investigations on the Site.

14. *Define where perched groundwater was found.*

In 1986, groundwater was found at a depth of 8 feet bgs in boring B-4 and was believed a localized perched condition, because native sands at greater depths were not saturated and no other borings encountered perched groundwater. This boring is located in the center portion of the Site in an area where the base of the sump is approximately 20 feet bgs. No other areas of perched groundwater were noted in other investigations on the Site.

Additional groundwater monitoring wells are needed. At a minimum, one up gradient well for background conditions and one down gradient well need to be installed.

Existing well MW-5 is currently located in an upgradient location (upgradient of the sump). Although an additional well could be installed upgradient of well MW-5, it appears that MW-5 provides data on background conditions. LFR has proposed in the Remedial Investigation Workplan that a downgradient well (proposed well MW-7) be installed southwest of existing well MW-3 in the parking area of the Long Beach Golf Learning Center. The projected location is shown on Figure 3 of the Remedial Investigation Workplan.

15. *Aquifer information should be included and the underlying aquifer(s), characteristics, and uses identified. DTSC can provide guidance manuals.*

A description of the Geology and Hydrogeology in the Site vicinity has been included in the Revised Data Characterization Report.

16. *Raw lab data and chains of custody from previous investigations should be included, or if not available, so stated.*

Laboratory reports and chains of custody from previous annual groundwater sampling conducted by Jack K. Bryant Engineers in January 1996 and February 1997 are included in Appendix A: Reports of Previous Investigations in the Revised Characterization Data Report. These are the only laboratory reports that were available for review by LFR.

Laboratory reports and chains of custody from groundwater sampling conducted by LFR in 2004 and 2006 are included in Appendix E.

17. *Old wells (MW1, MW2, and MW4) need to be replaced and properly abandoned. A geophysical survey might be needed to locate these wells.*

Prior to site grading, these three wells will be located either by geophysical survey and/or backhoe excavation and be properly abandoned.

18. *The source of the fill material needs to be determined and fill areas sampled.*

According to the property owner, fill material was imported and placed in the upper 10 feet across the Site as a cover over the sump material. Three soil samples will be collected in the upper 10 feet across the Site and analyzed for CAM 17 metals using EPA method 6010B/7471A, organochlorine pesticides using EPA method 8081A, polychlorinated biphenyls using EPA method 8082, and semi-volatile organic compounds using EPA method 8082 as described in the Remedial Investigation Work Plan.

July 5, 2006 DTSC Human and Ecological Risk Division Comments

There were five general comments. The five general comments are summarized below in italics followed by LFR's response.

1. *HERD recommends that LFR submit a risk assessment work plan to evaluate potential risk and hazard to people and ecological organisms that could be exposed to contaminants at the site once site characterization is complete.*

   Once site characterization is complete, LFR will prepare a risk and exposure assessment work plan to the DTSC for approval.

2. *If significant volumes of soils and sump materials will be excavated, treated and returned to the excavated areas for compaction to meet engineering requirements, HERD recommends that a post remedial risk assessment be conducted in addition to the baseline risk assessment.*

   Once the approach to remediate the site has determined, LFR will prepare a post remedial exposure assessment work plan for DTSC approval.

3. *Since significant concentrations of VOCs were detected in the soil matrix, HERD recommended that a soil gas investigation be conducted. The investigation should identify VOCs and their respective concentration distributions throughout the soil and sump materials at the site. This information is needed for evaluating potential risk to human health from potential migration of VOCs to indoor air. Because of the high levels of methane detected in a previous investigation, HERD recommends that soil gas samples also be evaluated for methane concentrations. To facilitate this investigation, HERD recommends that a soil gas sampling work plan be prepared for DTSC approval prior to conducting field work.*

   LFR has included a soil gas sampling work plan in the Remedial Investigation Work Plan. LFR is proposing that soil gas samples be collected at multiple depths at fifteen locations on the Site. Samples will be analyzed for VOCs and methane. Details of the soil gas sampling work plan are in the Remedial Investigation Workplan.

   Any necessary mitigation measures would be incorporated into the design of the proposed development to control potential migration of methane and VOCs.

4. *HERD recommends that if feasible, background soil samples be collected from the same parent materials as found on the site and analyzed for concentrations of metals to compare with on site concentrations.*

   In the Remedial Investigation Work Plan prepared by LFR, background soil samples will be collected at a city park and along the street to the east of the Site and analyzed for metals. This area has experienced significant urbanization and industrial use. Given this, native materials are more difficult to identify. Although it is unlikely that these background soil samples will be collected from the same parent material as found on the Site, given that the Site consists of sump material and imported fill, but at least site concentrations can be compared with local soils.

5. *HERD recommends that a risk assessment work plan be submitted that follows the USEPA Risk Assessment Guidance documents using California Office of Environmental Health Hazard Assessment exposure values and toxicity values when available. In addition, HERD recommends that a minimum, the risk assessment work plan include the using specific approaches. These approaches are detailed in the attached memorandum.*

   Once site characterization is complete, LFR will prepare an exposure assessment for DTSC approval prior to conducting field work.

If you have any questions, please contact either Tony Marino or Charlie Robinson at (714) 444-0111.

Sincerely,

Tony Marino
Senior Associate Geologist

Charles E. Robinson, P.E.
P.E. # C-035368
Vice President/Principal Engineer

cc: Mr. Steve Sukut, CRG Properties, Inc.
Mr. Mark Pender, CRG Properties, Ltd.

Attachments

APPENDIX C

Historical Review

March 7, 2007 002-10231-01

Mr. Steve Sukut
Sukut Development, Inc.
4010 West Chandler Avenue
Santa Ana, California 92704

Subject: Historical Review of CRG Properties Former Oil Operators' North Site, Long Beach, California

Dear Mr. Sukut:

On behalf of CRG Properties (CRG), LFR Inc. (LFR) has prepared this letter report to transmit the results of a historical review for the former Oil Operators' North Site, located at 3701 Pacific Place, Long Beach, California ("the Site"). Figures 1 and 2, attached, illustrate the Site location and layout.

Historical aerial photographs and historical USGS topographical maps provided by Environmental Data Resources, Inc. (EDR) were examined to identify former land use in the Site and vicinity. In addition, LFR reviewed State of California, Department of Conservation, Division of Oil, Gas & Geothermal Resources (DOGGR) records in Cypress, California. Copies of selected DOGGR well records are included in Appendix A. The following sections provide details of the review of those documents.

Aerial Photographs

Aerial photographs dated 1928, 1947, 1956, 1968, 1976, 1989, 1994, and 2002 were obtained from EDR. The photographs consisted of low-altitude, black-and-white and color photographs. Brief descriptions of the Site and vicinity, as observed in the aerial photographs, are included below.

1928

Sumps are present at the Site and to the immediate south (Figure 3a). The sumps appear to be bounded by dirt roads. Several small structures on the northwest portion of the Site, adjacent to the largest sump, are probably associated with the sumps. The Los Angeles River is adjacent to the Site on the west, in a natural state including a meandering stream bed and stream deposits. A rail line that trends northwest-southeast forms the eastern

714.444.0111 m
714.444.0117 f
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324
Offices Nationwide
www.lfr.com

Site boundary. A second rail line extends through the center of the Site, joining with the first rail line at the northeast portion of the Site. The eastern portion of the Site between the rail lines appears undeveloped, with the exception of a few dirt roads crisscrossing the area.

North of the Site, the vicinity is undeveloped. Improved roads have been constructed east of the Site. Some housing is present there; a housing development appears to be in progress. One large round structure, possibly a water tank, is adjacent to this development. Property to the southeast of the Site appears to be undeveloped, with the exception of a few structures that may be associated with on-Site and off-Site sumps. West of the Site, beyond the Los Angeles River, is another rail line trending north-south; beyond that, land appears to be either undeveloped or agricultural.

1947

The Site appears to be relatively unchanged from the 1928 photograph (Figure 3b), with some exceptions. Two additional sumps appear to have been added on the western portion of the Site. Also, additional structures have appeared on the eastern portion of the Site. It is not clear if these structures are residences or related to the Site. Finally, the rail line running through the center of the Site appears to have been removed.

The Los Angeles River appears to have been channeled (possibly with levees) north of the Site. The rail lines east and west of the Site are still present. East, southeast, and southwest of the Site, residential development has increased significantly. The large structure (possible water tank) adjacent to the residential development is no longer present. West of the Site beyond the rail line, the land appears to be agricultural.

1956

The Site appears as in the 1947 photograph (Figure 3c), with the following exceptions. On the eastern portion of the Site, the structures are no longer present. Two small round structures, possibly oil storage tanks, are still present in this area. On the north and northwest Site boundary and on the eastern and southeastern portions of the Site, numerous drilling rigs are present. An area previously used as a sump on the western Site boundary does not appear to be used for that purpose any longer.

Immediately west of the Site, the Los Angeles River has been transformed into concrete channels. Beyond the river, the rail line has been removed. Multi-lane roadways are now present west of the Site (I-710) and southwest of the Site (Wardlow Road).

Commercial/industrial development has filled in the space between the sumps (on-Site and off) and the housing development to the southeast of the Site. East of the Site across the rail line, housing development has filled in, and a multi-building complex (Los Cerritos School) has been constructed. South of the Site, one of the sumps has been replaced by one circular skimming tank. Other structures on the western side of the off-

Site sumps are present, and may be associated with the water treatment plant that was reportedly built in this area.

1968

The Site sumps appear to be either drying out or not as deep as previously, as they are no longer very dark as in previous photographs (Figure 3d). Drilling rigs appear only in the southeastern corner of the Site. The Site has been separated from the southern sumps by a multi-lane roadway (I-405). An access road from westbound I-405 to northbound I-710 is at the southern Site boundary. The rail line still forms the eastern Site boundary. Additional housing development has taken place north of the Site, beyond the rail line. No significant changes have taken place east of the Site. South of the Site, four additional circular skimming tanks are located in the sump area. Again, the sumps themselves do not appear as before, but may be either drying out or shallower. West of the Site, between the Los Angeles River channel and I-710, some commercial/industrial development appears to be in progress.

1976

The Site appears to be essentially as it was in the 1968 photograph, except that the darker area in the northwestern portion of the Site has shrunk in size (Figure 3e). Northeast of the Site, beyond the rail line, additional housing has been developed, as well as an apartment/condo complex to the southeast. A golf course is located north of the residential housing. No changes are apparent to the south or west, with the exception that one of the southern sumps appears to be dry and vacant. The development between I-405 and the Los Angeles River first observed in the 1968 photograph appears to include a flood control basin.

1989

The Site appears to have been left to develop natural vegetation, which appears sparse (Figure 3f). No structures appear to remain on the Site, with the possible exception of the southeastern corner. Due to the quality of the photograph, it is difficult to determine what is present in that location. The Site vicinity appears as it did in the 1976 photograph, except that the previous farmlands west of I-710 appear to be developing, in part.

1994 - 2002

The northern portion of the Site appears to have been graded (Figures 3g and 3h). The southeastern portion of the Site appears as in the 1989 photograph, with some structures present (more clearly seen in this photograph). No changes appear to the north, east, or south; west of the Site, beyond I-710, the area has been developed with what appears to be very large industrial buildings.

In the 2002 photograph, the Site vicinity is the same as in the 1994 photograph. The Site, however, has been developed into what appears to be putting greens with sand traps, and associated structures and parking on the southern portion.

Topographic Maps

Topographic maps dated 1902, 1930, 1947, 1951, 1964, 1972, and 1981 were reviewed by LFR.

1902

The USGS 15-Minute Series Downey Quadrangle for 1902 (Figure 4a) shows the Site as vacant land at the base of a rise approximately 75 feet high and sloping southwest toward the Site (the Site appears to be at an elevation of approximately 25 feet above mean sea level [msl]). The Los Angeles River is located adjacent to the Site on the west. Scattered residences are located in Watson Crossing, to the southwest, and Signal Hill, to the southeast. The Southern Pacific rail line passes to the west of the Site, running north-south. The San Pedro rail line passes to the east of the Site, also running north-south. Scattered light-duty roads cross the area, leading to various communities, the largest of which is Long Beach, approximately 3.5 miles south-southeast of the Site. Marshy areas lie scattered to the northeast, southeast, and south-southwest of the Site, including a large tidal marsh west of Long Beach. The Pacific Ocean lies south of the Site, beyond the marsh and Long Beach.

1947

The USGS 15-Minute Series Downey Quadrangle for 1947 (Figure 4b) shows the Site containing an unimproved road on the northwestern portion. Several wells (not water) are located on or adjacent to the southern portion of the Site. The Site is bounded to the east by the Pacific Electric rail line. A rail line runs through the center of the Site before joining up with the Pacific Electric line. To the west, the Los Angeles River appears to have been channeled along its length on this map.

Beyond the Los Angeles River, a spur of the Union Pacific runs along the river, joining up with the main line north of the Site. No features appear to adjacent to the southern portion of the Site, with the exception of the abovementioned wells and one tank. Further south and adjacent to the eastern Site boundary beyond the rail line, residential development has occurred. A school is located east of the Site. Residential development is also increasing northwest, west, and southwest of the Site across the river. Power lines are located across the river from the Site, running north-south. A large well field and associated tanks lies southeast of the Site, beyond the residential development.

1951

The USGS 7.5-Minute Series Long Beach Vicinity Quadrangle for 1951 shows the Site with oil sumps on the northwestern portion and to the south of the Site (Figure 4c). Three wells (not water) are visible in the central portion of the Site. The rail line is gone. In the Site vicinity, residential development has approached the Site south of the southeastern corner and to the southwest, across the Los Angeles River. Southeast of the

Site, some residential development has given way to well (not water) development, although scattered houses appear to remain. Virginia Country Club appears northeast of the Site, beyond the residential development. The Long Beach Freeway follows the Los Angeles River on the west side of the river. A military reservation, with rail yard, is located beyond the residential developments west and southwest of the Site.

1964

The USGS 7.5-Minute Series Long Beach Quadrangle for 1964 (Figure 4d) shows the Site unchanged from 1951, with the exception of a light duty road running along the eastern and southern Site boundaries, and several non-water wells added to the northwestern Site boundary. South of the Site, oil sumps appear to have been removed. A number of tanks, including a water tower, are located where one of the southern sumps once appeared. East of the Site, across the rail line, residential development has encroached on the well fields. South of the Site, the San Diego Freeway (I-405) crosses from east to west. An entrance ramp to the northbound Long Beach Freeway (I-710) forms most of the southern Site boundary. The military reservation west of the Site has been replaced by a drag strip. Residential development has increased to the west.

1972 - 1981

The USGS 7.5-Minute Series Long Beach Quadrangles for 1964, photorevised in 1972 (Figure 4e) and 1981 (Figure 4f), show no significant changes to the Site from the 1964 map. The Site vicinity also exhibits little change, with the following exceptions. Residential development has increased north of the Site across the rail line. Northwest of the Site, beyond I-710 and the Dominguez residential development, industrial development has begun by 1972, and has rapidly increased by 1981.

DOGGR Information

According to the California Department of Conservation's Division of Oil, Gas, and Geothermal Resources (DOGGR) District 1 map (dated July 6, 2006) for the Long Beach Oil Field (Map #137), the following wells are located at the Site:

- One plugged and abandoned dry hole (Sun Exploration & Production Co. "NWBLU" 8-5;
- Five plugged and abandoned oil wells ("NWLBU" 5-1, 6-1, 6-2, 8-1, 8-2);
- One idle oil well ("NWBLU" 9-6); and
- Ten completed oil wells ("NWBLU" 5-2, 5-3, 5-4, 8-3, 8-4, 8-7, 9-2, 9-3, 9-4, and 9-5).

An excerpt of the DOGGR map showing Site well locations is included in Appendix A along with copies of selected records obtained from the DOGGR office in Cypress, California. A site plan showing the approximate oil well locations is attached as Figure 5.

Reports of Well Plugging and Abandonment

The following five wells were plugged and abandoned between 1993 and 1997: NWBLU' 5-1, 6-1, 6-2, 8-1, and 8-2. The Reports of Well Plugging and Abandonment are included in Appendix A. "NWLBU' 8-5 was abandoned in 1981. According to DOGGR records the well never produced and was never injected. The Report of Well Abandonment is included in Appendix A.

Reports of Property and Well Transfer

Ownership of the one idle oil well and the ten completed oil wells were transferred from Pacific Energy Resources to C.R.G. Properties, Ltd. on July 26, 2000. The Reports of Property and Well Transfer are included in Appendix A.

Reports of Cancellation

Notices to abandon wells "NWBLU' 5-2, 5-3, 5-4 in 1996 were canceled by the DOGGR in 2005 because the work will not be done. Copies of the Report of Cancellation are included in Appendix A.

Conclusions

On-Site

Based on a review of historical aerial photographs and topographic maps, the Site was vacant land in the early 1900's, but by 1928 had been developed into a sump, located on the northwestern portion of the Site. A rail line ran in a north-south direction through the center of the Site from at least 1928, but was gone by 1947. In 1947, the sump area had increased to incorporate the entire western portion of the Site.

By 1951, the Site contains a number of wells, presumably oil or gas wells. The numbers of these wells increase until at least 1964. According to DOGGR, the following wells are located at the Site:

- One plugged and abandoned dry hole (Sun Exploration & Production Co. "NWBLU' 8-5;
- Five plugged and abandoned oil wells ("NWLBU' 5-1, 6-1, 6-2, 8-1, 8-2);
- One idle oil well ("NWBLU' 9-6); and
- Ten completed oil wells ("NWBLU' 5-2, 5-3, 5-4, 8-3, 8-4, 8-7, 9-2, 9-3, 9-4, and 9-5).

By 1968, the on-Site sump areas have shrunk in depth, and by 1976 these areas have also shrunk in lateral extent. By 1989, the Site appears to have been left to develop natural vegetation, although it is sparse. A golf facility has been developed on the Site by 2002, with associated buildings and parking areas on the southern portion.

Off-Site

The immediate Site vicinity was undeveloped until at least 1928, when sumps apparently associated with the on-Site sumps appear. These off-Site sumps appear to have been in operation until at least 1956, when they began to be replaced by skimming tanks. A water tower was also constructed on the former southern sump property. By 1976, one of the southern sumps appears to be dry and vacant.

Improved and light-duty roads cross the vicinity, with some housing development in progress by 1928 to the east of the Site. Rail lines pass to the east and west of the Site; the eastern rail line is adjacent to the Site boundary. The Los Angeles River is located adjacent to the western Site boundary. It has been channeled by 1947 and concreted by 1956. Power lines are located west of the Site across the river, running north-south with the river. The Long Beach Freeway (I-710) was in place by 1951 (west of the Site across the river), and the San Diego Freeway (I-405) was in place by 1964. Residential development to the east, southeast, south, and southwest approached the Site and was essentially complete by 1976. Industrial development northwest of the Site, beyond the Long Beach Freeway, was in progress by 1972 and developed into its present configuration by 1994.

Attachments: Figures
Appendix A: DOGGR Information

FIGURES



CRG Property

McDonald Property

Site

0 2000 ft

Vicinity Map

CRG Properties, Former Oil Operators North Site,
Long Beach, CA - 002-10231-01

LFR

Figure 1

CM: K:\Data\Graphics\10000\10231\10231Vicinity Map2.ai



CRG Property

McDonald Property

Site

0 475 ft

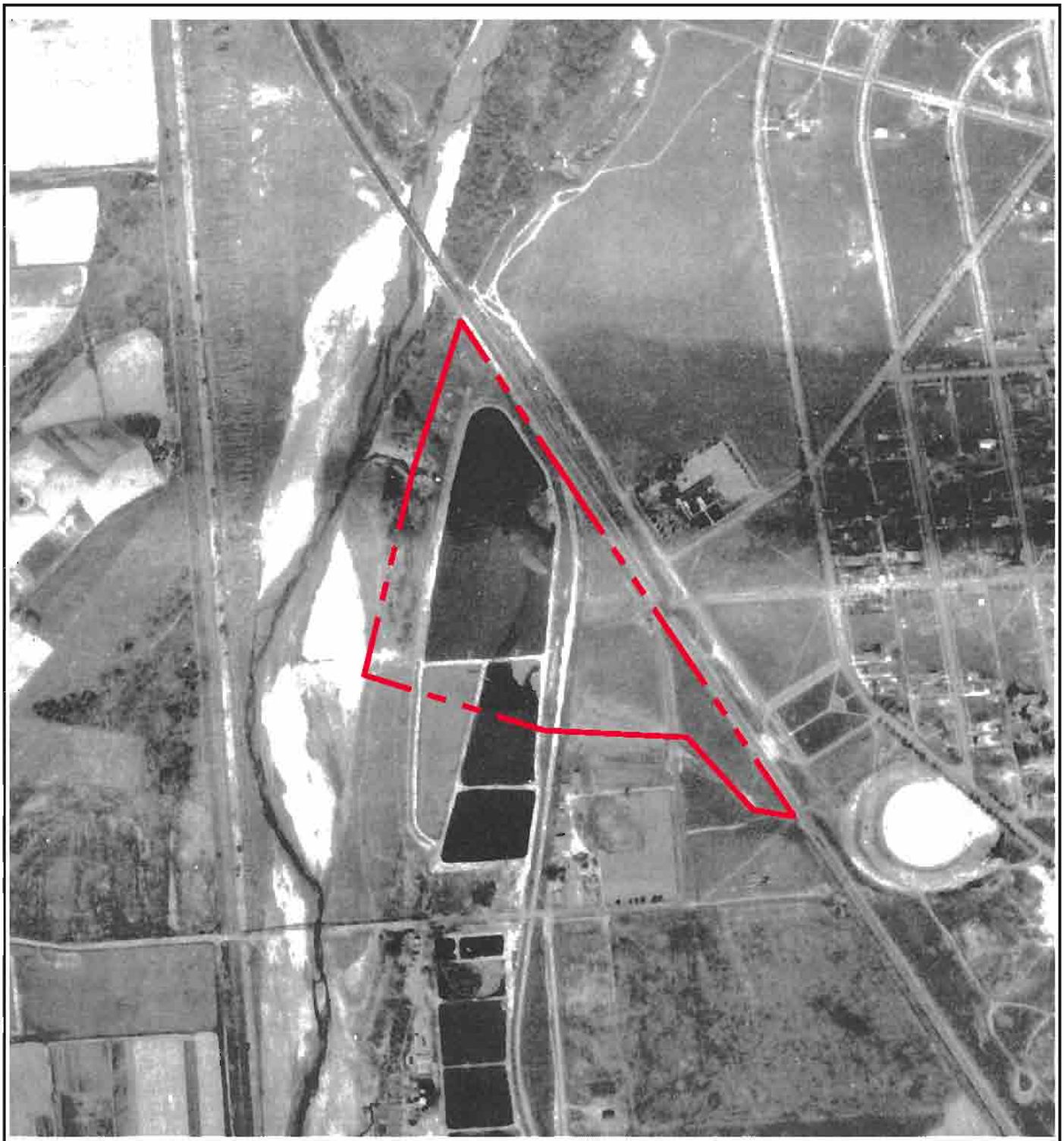
Site Map

CRG Properties, Former Oil Operators North Site,
Long Beach, CA - 002-10231-00

LFR

Figure 2

10231SiteAerial1.ai



Site Boundary

N

0 500 ft

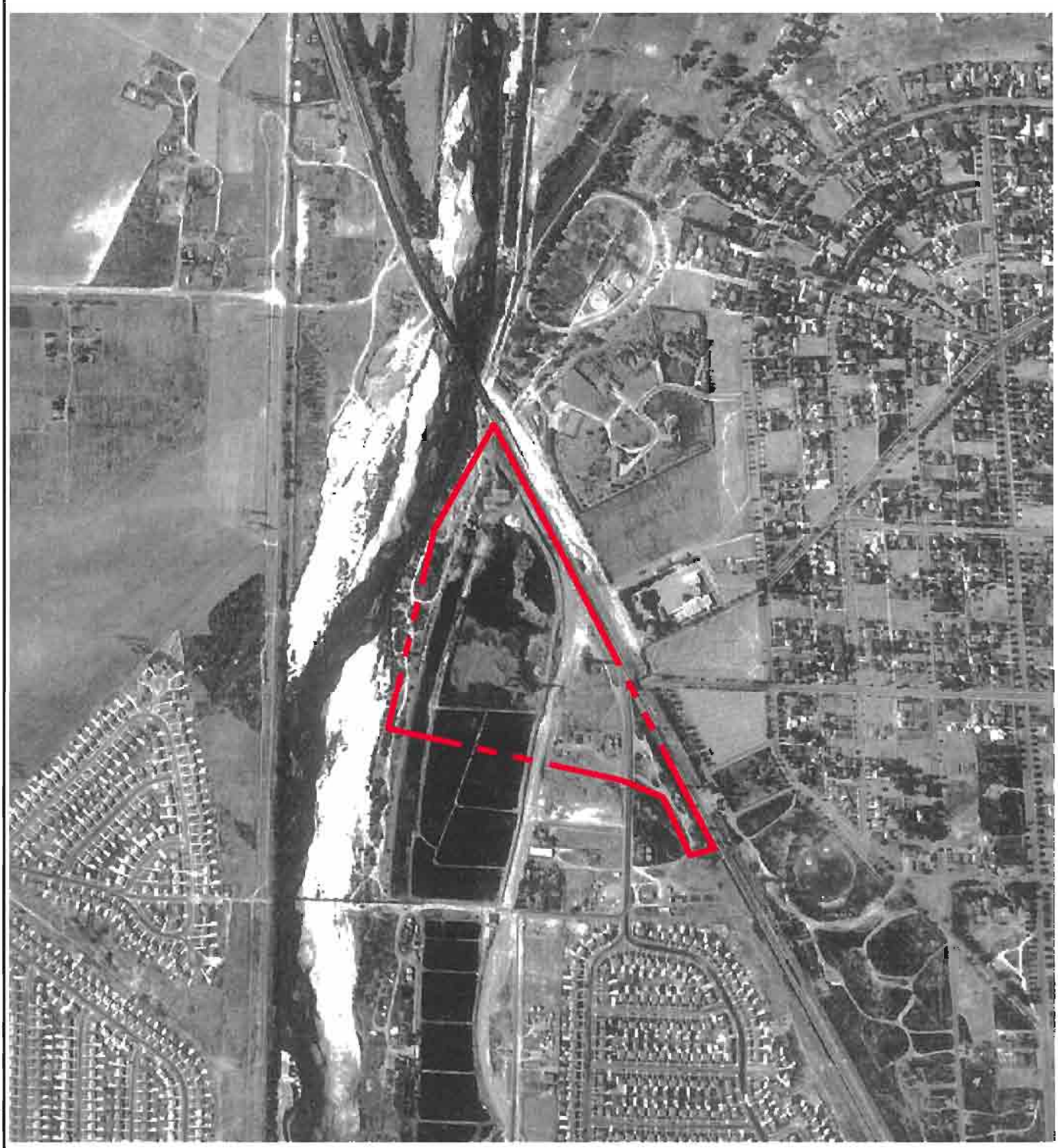
Aerial Photograph
1928

002-10231-00

LFR

Figure 3a

K:\Data\Graphics\100000\10231\10231 Historical Topo_Aerial.dwg [A1928] 5/23/06 9:44am BARobita XREFS:



Site Boundary

N

0 666 ft

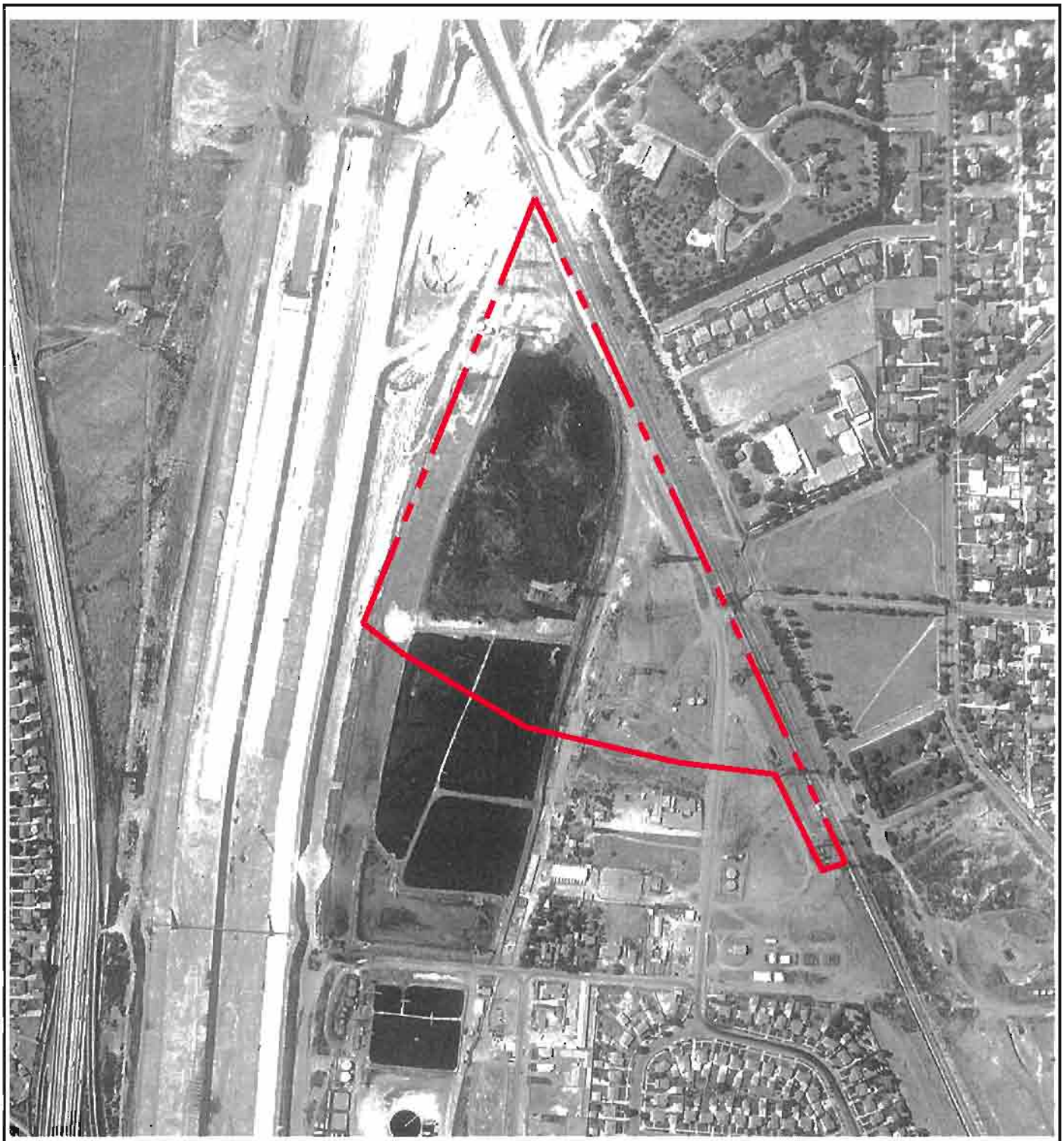
Aerial Photograph
1947

002-10231-00

LFR

Figure 3b

K:\Data\Graphics\10000\10231\10231 Historical Topo_Aerial.dwg [A1947] 5/23/08 9:45am BARobita XREFS:



Site Boundary

N

0 400 ft

Aerial Photograph
1956

002-10231-00

LFR

Figure 3c

K:\Data\Graphics\100000\10231\10231 Historical Topo_Aerial.dwg [A1956] 5/23/08 9:45am BARobita XREFS:



Site Boundary

N

0 480 ft

Aerial Photograph
1968

002-10231-00

LFR

Figure 3d

K:\Data\Graphics\10000\10231\10231 Historical Topo_Aerial.dwg [A1968] 5/23/06 9:48am BARobita XREFS:



Site Boundary

N

0 666 ft

Aerial Photograph
1976

002-10231-00

LFR

Figure 3e

K:\Data\Graphics\100000\10231\10231 Historical Topo_Aerial.dwg [A1978] 5/23/08 9:48am BARobita XREFS:



Site Boundary

N

0 666 ft

Aerial Photograph
1989

002-10231-00

LFR

Figure 3f

K:\Data\Graphics\100000\10231\10231 Historical Topo_Aerial.dwg [A1989] 5/23/06 9:47am BARobita XREFS:



Site Boundary

N

0 666 ft

Aerial Photograph
1994

002-10231-00

LFR

Figure 3g

K:\Data\Graphics\100000\10231\10231 Historical Topo_Aerial.dwg [a1994] 5/23/06 9:47am BARobita XREFS:



Site Boundary

N

0 666 ft

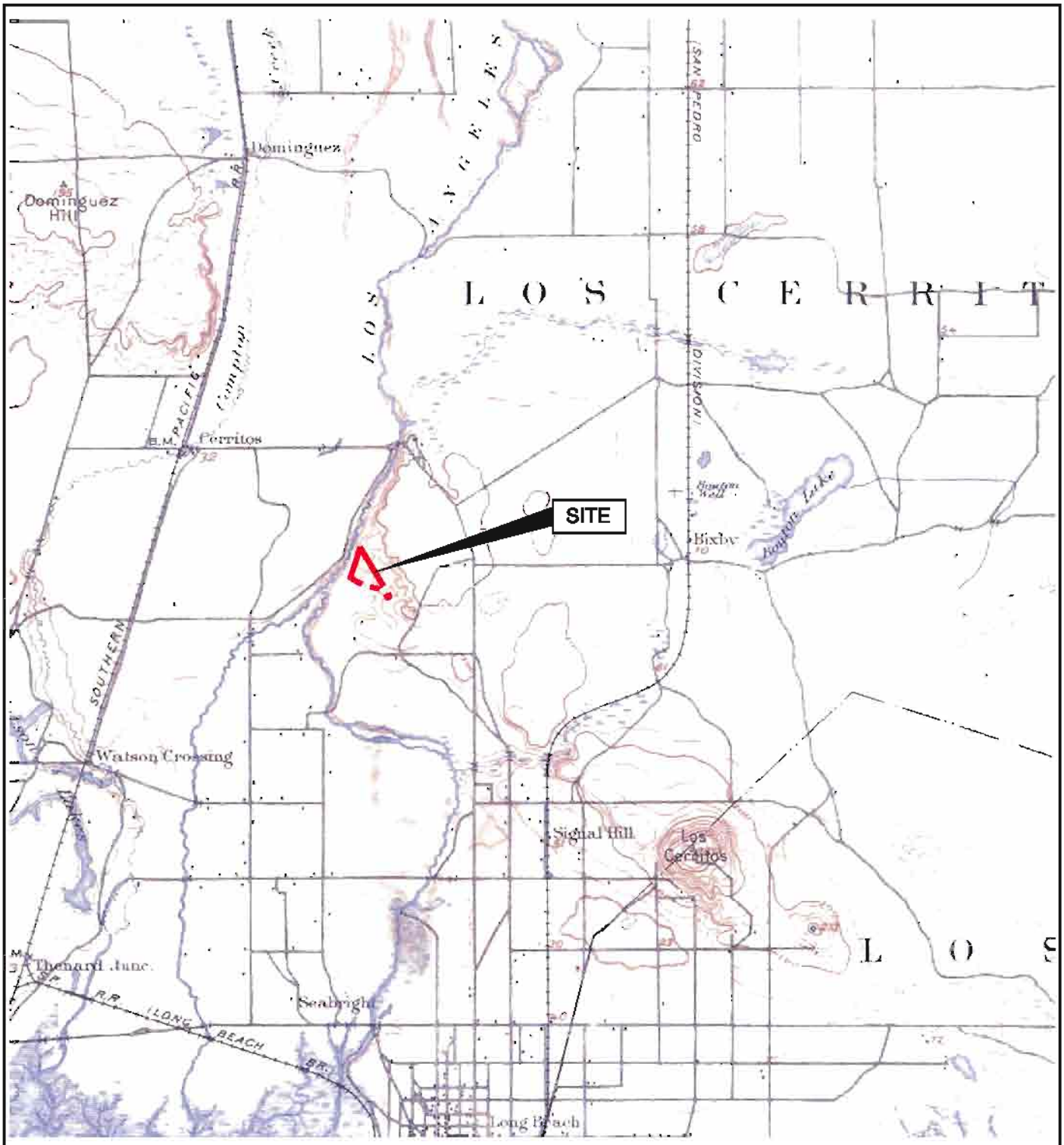
Aerial Photograph
2002

002-10231-00

LFR

Figure 3h

K:\Data\Graphics\100000\10231\10231 Historical Topo_Aerial.dwg [A2002] 5/23/08 9:48am BARobita XREFS:





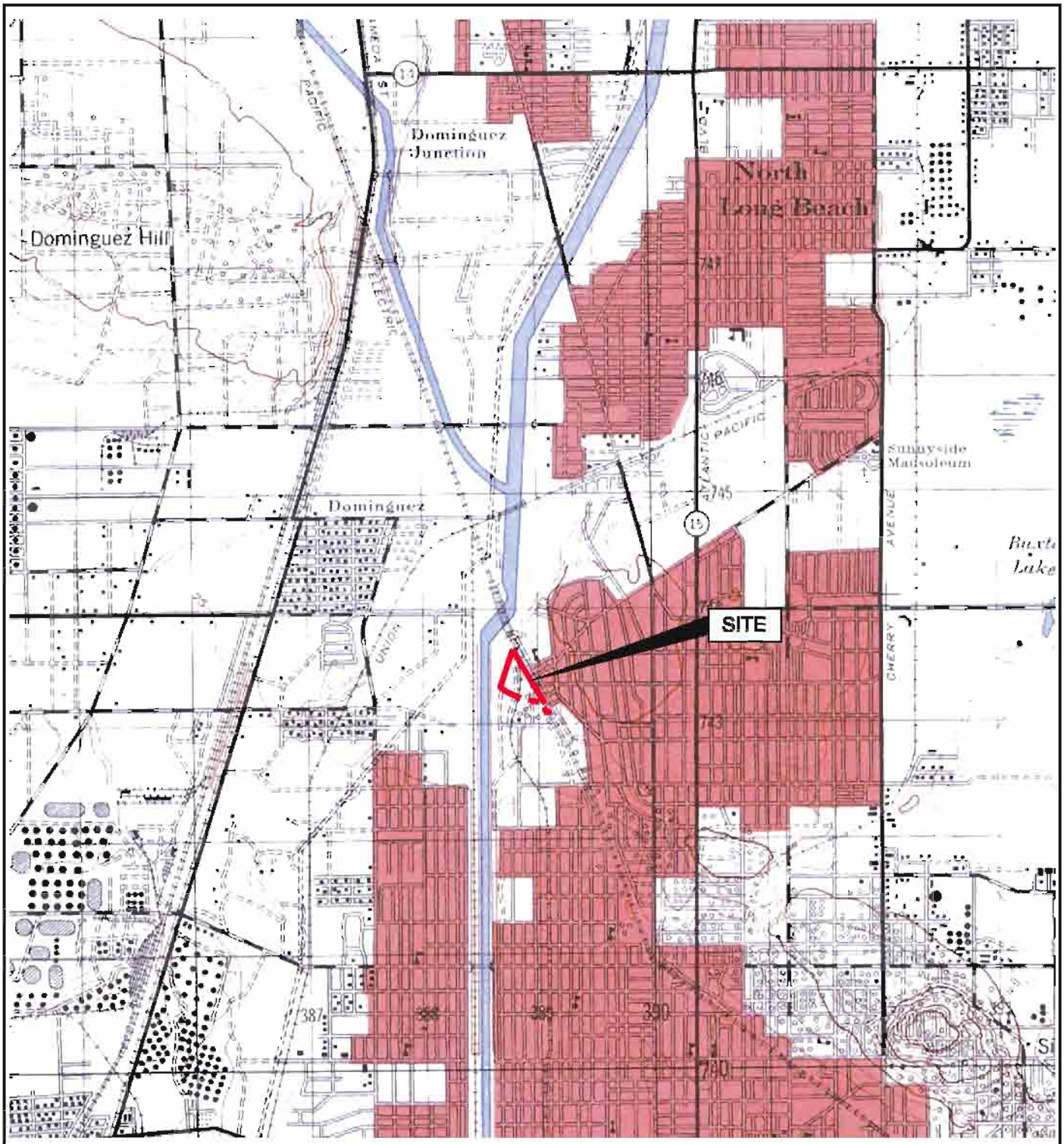
Historical Topo
1902

002-10231-00

LFR

Figure 4a

K:\Data\Graphics\10000\10231\10231 Historical Topo_Aerial.dwg [T1902] 5/23/06 9:48am BARobita XREFS:



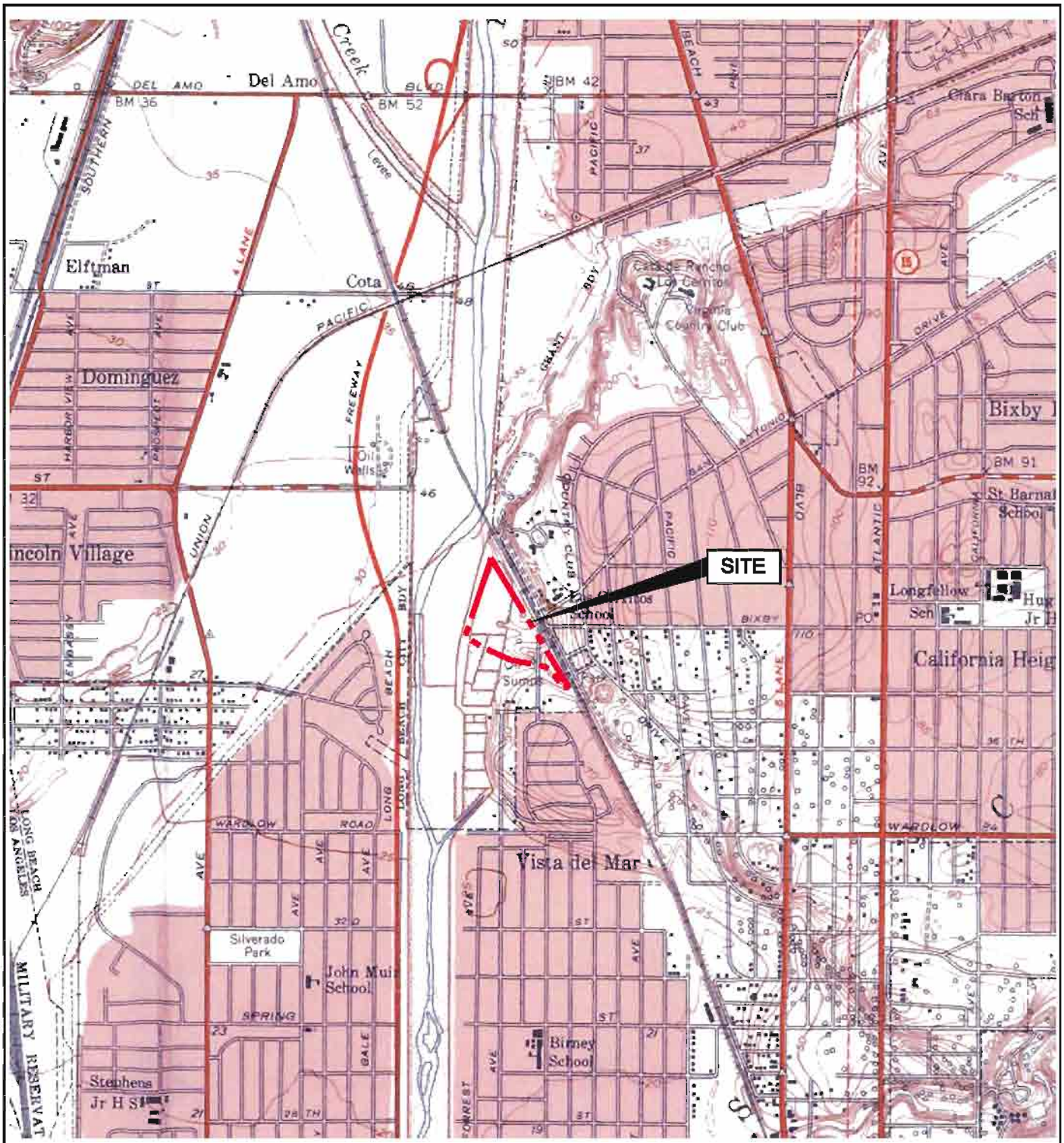
Historical Topo
1947

002-10231-00

LFR

Figure 4b

K:\Data\Graphics\10000\10231\10231 Historical Topo_Aerial.dwg [T1947] 5/23/06 9:49am BARobita XREFS:



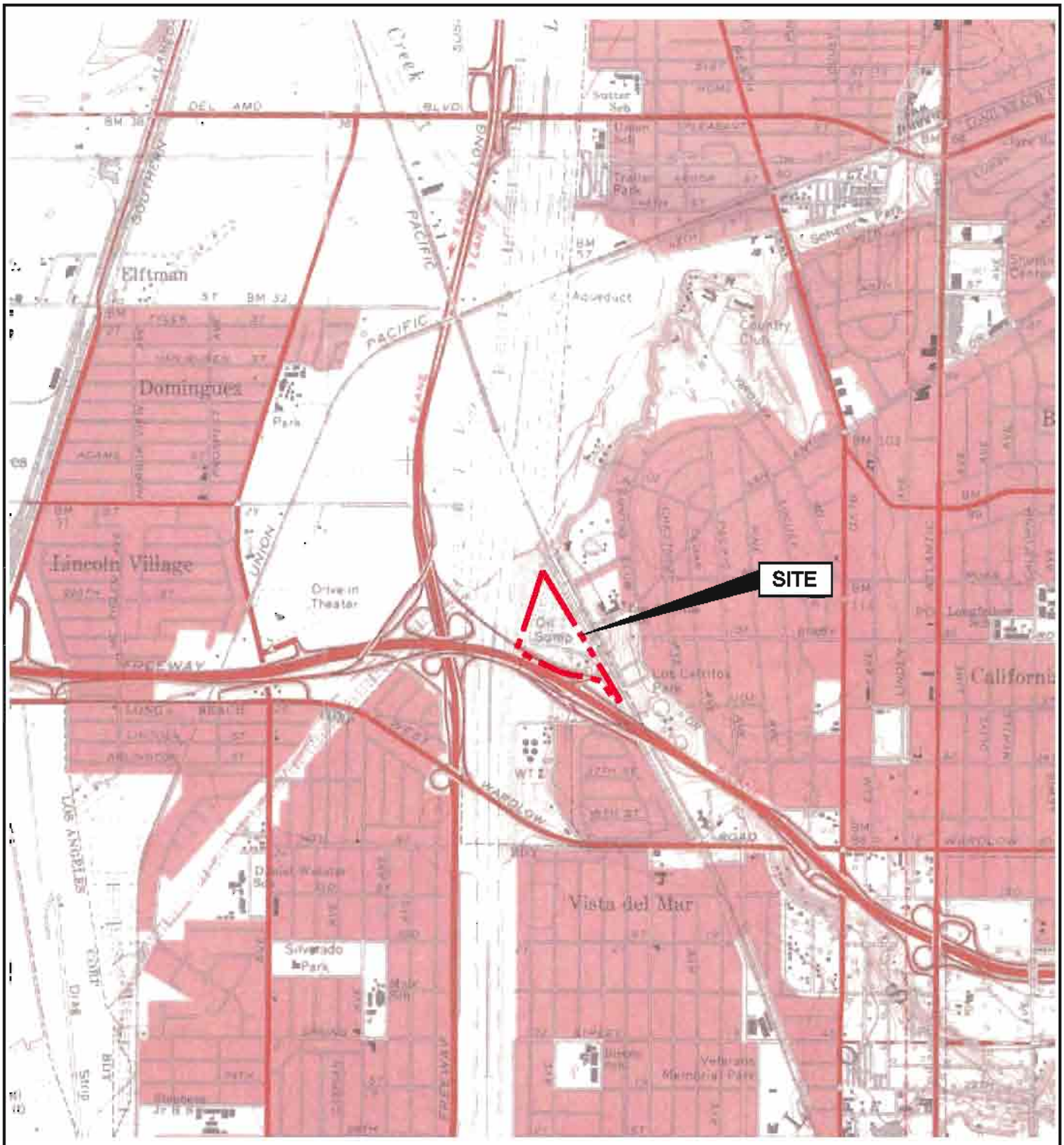
Historical Topo
1951

002-10231-00

LFR

Figure 4c

K:\Data\Graphics\100000\10231\10231 Historical Topo_Aerial.dwg [T1951] 5/23/06 9:49am BARobita XREFS:



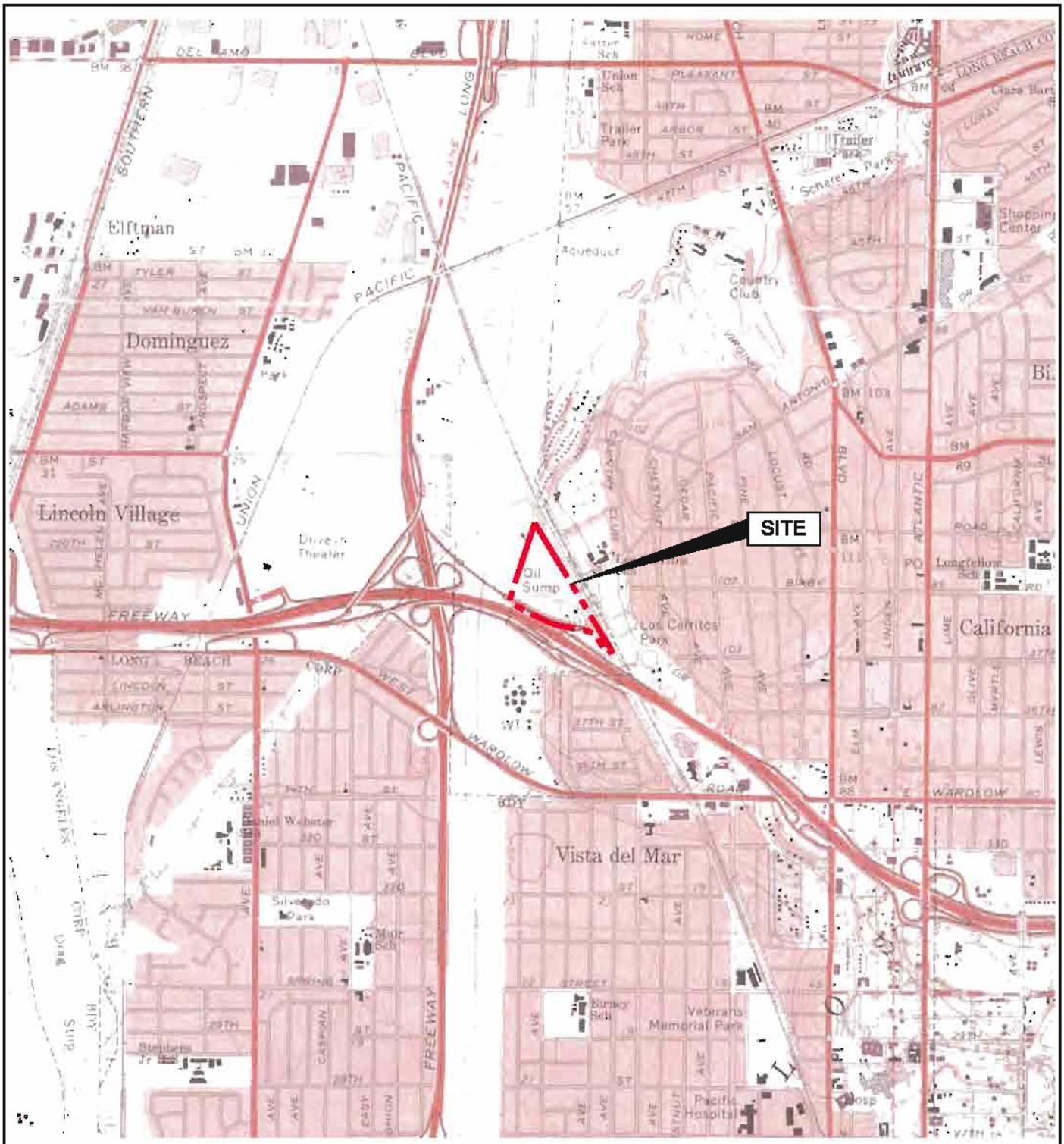
Historical Topo
1964

002-10231-00

LFR

Figure 4d

K:\Data\Graphics\100000\10231\10231 Historical Topo_Aerial.dwg [T1964] 5/23/06 9:50am BARobita XREFS:



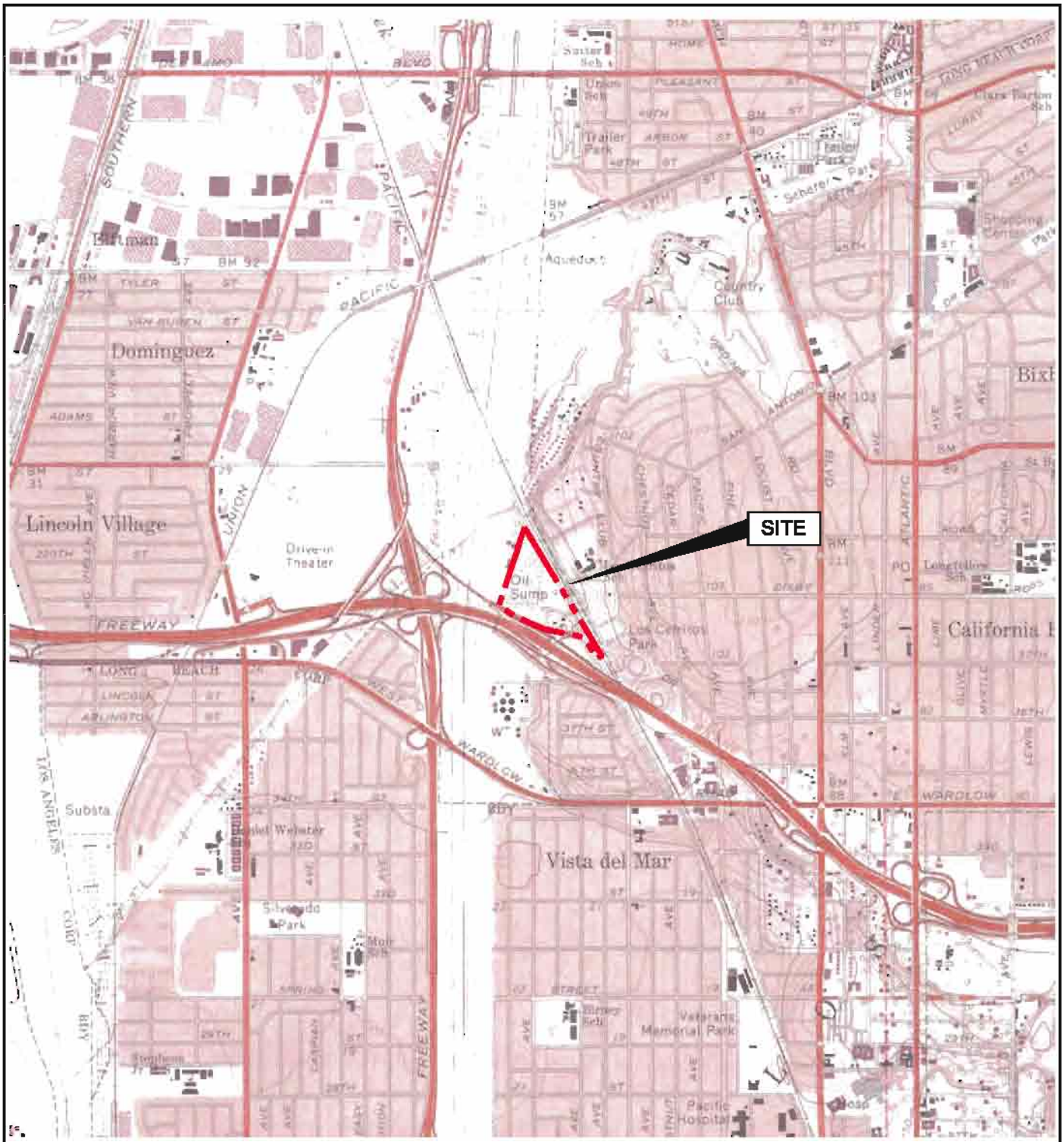
Historical Topo
1972

002-10231-00

LFR

Figure 4e

K:\Data\Graphics\10000\10231\10231 Historical Topo_Aerial.dwg [T 1972] 5/23/08 9:51am BARobita XREFS:



Historical Topo
1981

002-10231-00

LFR

Figure 4f

K:\Data\Graphics\10000\10231\10231 Historical Topo_Aerial.dwg [T1981] 5/23/06 9:51am BARobita XREFS:



Site Plan Showing
Oil Well Locations

CRF Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-00

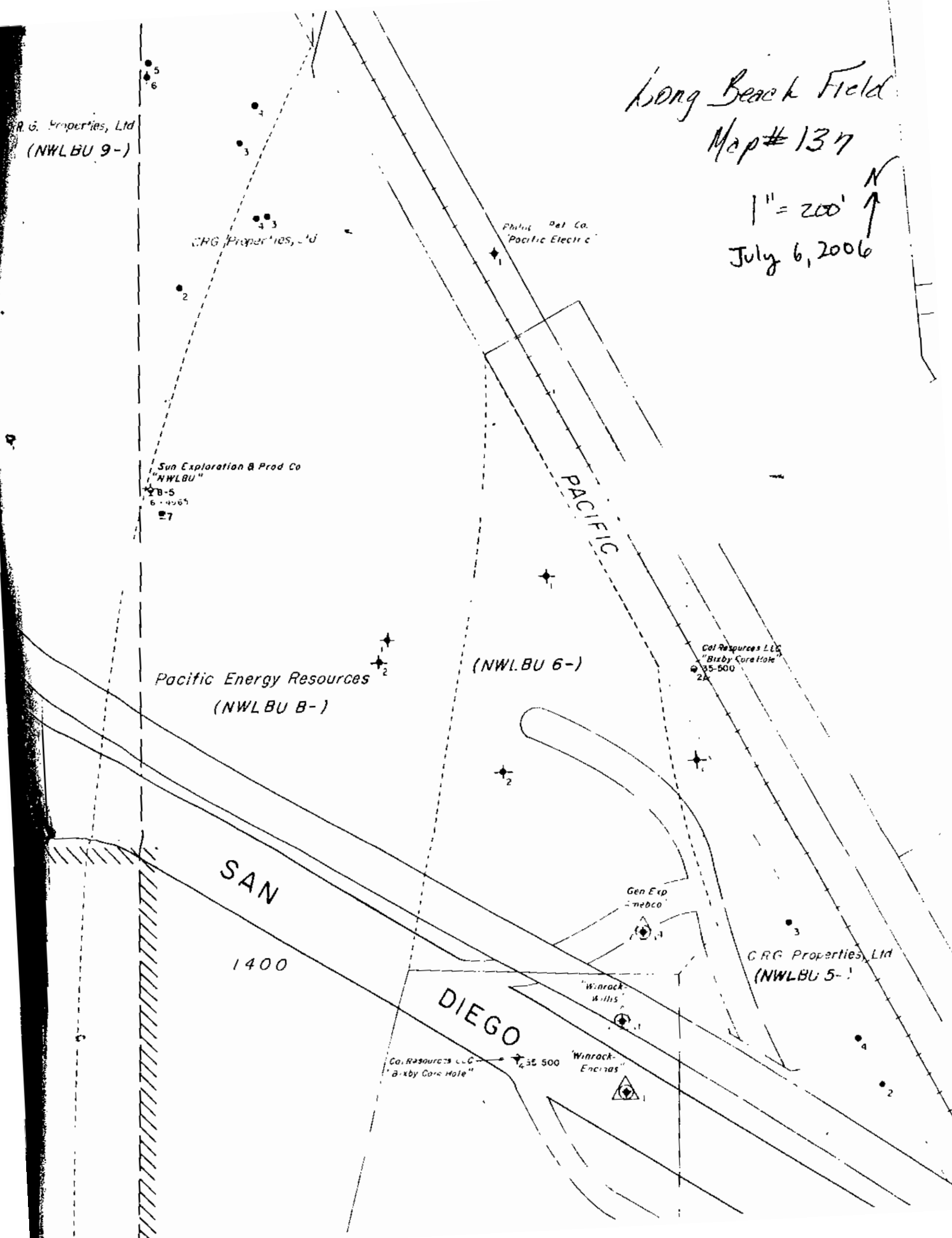
LFR

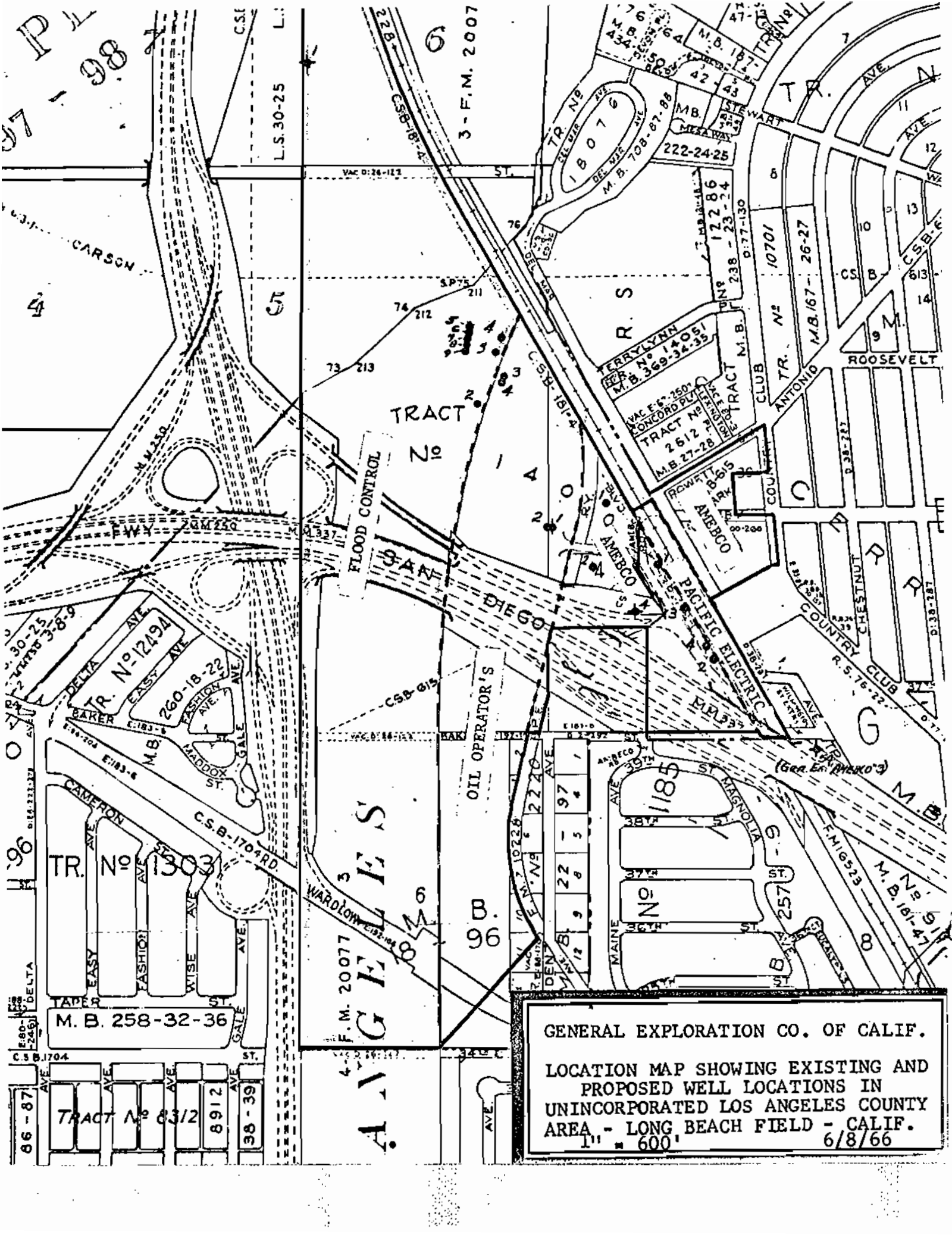
Figure 5

CM: K:\Data\Graphics\10000\10231\10231 Well Locations.dwg [Layout1] 3/7/07 10:52am JDLoving XREFS: [Map137.dwg

APPENDIX A

DOGGR INFORMATION


Long Beach Field
Map # 137
1" = 200'
N
July 6, 2006
R.G. Properties, Ltd
(NWLBU 9-)
CRG Properties, Ltd
Phillips Pet Co.
"Pacific Electric"
Sun Exploration & Prod Co
"NWLBU"
B-5
PACIFIC
Pacific Energy Resources
(NWLBU 8-)
(NWLBU 6-)
Cal Resources LLC
"Bixby Core Hole"
35-500
SAN
1400
DIEGO
Gen Exp
Emebco
CRG Properties, Ltd
(NWLBU 5-)
"Winrock"
Wells
"Winrock"
Encinas
Cal Resources LLC
"Bixby Core Hole"
35 500


GENERAL EXPLORATION CO. OF CALIF.
LOCATION MAP SHOWING EXISTING AND PROPOSED WELL LOCATIONS IN UNINCORPORATED LOS ANGELES COUNTY AREA - LONG BEACH FIELD - CALIF.
1" = 600'
6/8/66
TRACT No 14
TRACT No 1303
TRACT No 8312
SAN DIEGO
FLOOD CONTROL
OIL OPERATOR'S
PACIFIC ELECTRIC
AMEBCO
CARSON
ROOSEVELT
CHESTNUT
COUNTRY CLUB
CAMERON
WARDLOW
M. B. 258-32-36
3-F.M. 2007
F.M. 20077
L.S.30-25
TERRYLYNN
TRACT No 12612
TRACT No 10701
TRACT No 12286
TRACT No 14051
TR. No 1249A
TR. No 1303
TR. No 1185
TR. No 1076
TR. No 1047
TR. No 1022
TR. No 1023
TR. No 1076
TR. No 1047
TR. No 1022
TR. No 1023
TR. No 1185
TR. No 1249A
TR. No 1303

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF PROPERTY AND WELL TRANSFER

Field or County		District
Long Beach		District 1 (Cypress, California)
Former owner		Date
Pacific Energy Res.	P0252	July 26, 2000

Well Name	API Number	Section Township Range
"Nwlbu" 5-2	037-00397	Sec. 13-4S-13W
"Nwlbu" 5-3	037-09796	Sec. 13-4S-13W
"Nwlbu" 5-4	037-09797	Sec. 13-4S-13W
"Nwlbu" 8-3	037-06496	Sec. 13-4S-13W
"Nwlbu" 8-4	037-06415	Sec. 13-4S-13W
"Nwlbu" 8-7	037-22512	Sec. 13-4S-13W
"Nwlbu" 9-2	037-13525	Sec. 13-4S-13W
"Nwlbu" 9-3	037-09791	Sec. 13-4S-13W
"Nwlbu" 9-4	037-00392	Sec. 13-4S-13W
"Nwlbu" 9-5	037-00142	Sec. 13-4S-13W
"Nwlbu" 9-6	037-00393	Sec. 13-4S-13W

Description of the land upon which the well (s) is (are) located.
See above

Date of transfer	New owner		Type of organization
May 9, 2000		C.R.G. Properties, Ltd. C0250	Corp./Ltd.
	Address:	15332 Antioch Street, Suite 338 Pacific Palisades, CA 90272	Telephone (310) 808-9071

Reported by	OG34A received 6/2/2000 signed by both parties
Confirmed by	Same as above
New operator new status PA	Designation of Agent Mark Pender
Old operator new status PA	Remarks See operator file for C.R.G. Properties, Ltd. for details

OPERATOR STATUS ABBREVIATIONS

PA – Producing Active

NPA- No potential, Active

PI- Potential Inactive

NPI-No potential, Inactive

Ab-Abandoned or No More Wells

cc: Update; Envir Dsk; File
Conservation Committee
Harold W. Bertholf, Inc.
LA County Assessor
Sacramento EDP
Cypress EDP

Deputy Supervisor
R. K. Baker

Signature
Floyd M. Leeson
Operations Engineer

FORM AND RECORD CHECK LIST

Form or Record	Initials	Date	Form or Record	Initials	Date
Form OGD121	N/A		Map and Book		
Operator Card			Notice cancellations	N/A	
Well Records	SR	7/27/2000	Bond Status BB/FML	SR	7/26/2000
Log Records	SR	7/31/2000	EDP	SR	7/27/2000
Production Repts	N/A		Data Base	SR	7/27/2000

OGD156 12-2-98 Cypress

SUBMIT LOG IN DUPLICATE

FILL THIS BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PAPER ONLY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Sun Oil Co

LOG OF OIL OR GAS WELL

Operator Union Oil Company of California Field Long Beach

Well No. Oil Operators #4 NWLBU #8-4 Sec. 18 T. 4-S R. 13-W S.B. B. & M.

Location 345' S.E.'ly along the prolongation of the center line of San Antonio Drive from its intersection with the center line of Riverside Drive, thence N.E.'ly at right angles 855'. Elevation 53.88

In compliance with the provisions of Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date 8-21-38 Signed Henry L. Doherty

(Engineer or Geologist) (Superintendent) (President, Secretary or Agent)

Title DISTRICT ENGINEER

Reference to file of data

Cards	Forms 114	Forms 121
		✓

Commenced drilling January 1, 1938 Completed drilling Drilling tools ~~CABLE~~ Rotary

Total depth 4408 Plugged depth

Junk

GEOLOGICAL MARKERS	DEPTH
Wilbur Shale	3586-3665
Alamitos Shale	3784-3948
H	3971
I	4005
J	4206
K	4348

Commenced producing 8-20-38 (date) Flowing/~~gas lift~~/pumping (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	30	21.2	7.8			
Production after 16 days	15	21.7	16.5			

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Casing landed in	Number of Sacks of Cement	Depth of Cementi if through perforat
13-3/8	757	Surface	45.97#	New	Seamless	Slip-joint	17"	350	
8-5/8	4005	"	32# & 36#	New & Used	"	O	12¼"	400	
6-5/8	4408	3845	20#	New	"	O	7-5/8 U.R. 8½	185	4344

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
6-5/8	4348 ft.	4408 ft.	120 mesh	16	6	Kobe
	ft.	ft.	Reperf. 4348-4399 - 60	holes L. & W. gun		
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

Electrical Log Depths Schlumberger from 757 to 4408 (Attach Copy of Log)

FORM 501. (REV 2-53 20M)
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD Union Oil Company of California COMPANY Long Beach

Sec. 13, T. 4-S, R. 13-W, S.B. B. & M. Well No. Oil Operators #4

FORMATIONS PENETRATED BY WELL

Henry E Winter

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
0	170	170	Surface clay
170	364	194	Sand and gravel
364	388	24	Sand and clay
388	713	325	Hard sand
713	760	47	Shale
760	1577	817	Shale and streaks of sand
1577	1883	306	Hard sand
1883	2775	892	Shale and streaks of sand
2775	2963	88	Sand
2963	2990	127	Shale and streaks of sand
2990	3112	122	Sand and streaks of shale
3112	3114	2	Shell
3114	3193	79	Sand and streaks of shale
3193	3195	2	Shell
3195	3230	35	Shale and streaks of sand
3230	3231	1	Shell
3231	3371	140	Shale and streaks of sand
3371	3372	1	Shell
3372	3525	153	Shale and sand
3525	3530	5	Hard sand
3530	3560	30	Shale and sand
3560	3644	84	Sand and streaks of shale
3644	3730	86	Shale and streaks of sand
3730	3880	150	Hard sand
3880	3951	71	Shale and streaks of sand
3951	3953	2	Shell
3953	4015	62	Shale and streaks of sand (See Core Record)
4015	4408	393	Shale and sand (See Core Record)

FORM 105. 24758 9-35 10M
(CALIFORNIA STATE PRINTING OFFICE)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Notice of Intention to Drill New Well

This notice must be given before drilling begins

037-06496

General Exploration Co. Santa Fe Springs Cal. Oct. 28, 1937

MR. E. HUGUENIN

Deputy State Oil and Gas Supervisor

Los Angeles, Cal. PI-31535

DEAR SIR:

"Oil Operators" 3

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well No. Oil Operators #3, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M., Long Beach Oil Field Los Angeles County. C&B

Lease consists of 982 feet N.W. 'ly along the center line of the Pacific Electric Railway Right of Way from the center line of Bixby Road projected and thence 271 feet south~~-~~ ~~-~~ ~~-~~

O&G News

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS
Notice of Intention to Drill New Well

C.E.Q.A. INFORMATION			
EXEMPT ☐ CLASS____	NEG. DEC. ☒ S.C.H. NO. 64-77	E.I.R. ☐ S.C.H. NO.____	DOCUMENT NOT REQUIRED BY LOCAL JURISDICTION ☐
See Reverse Side			



In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to commence drilling well NW LONG BEACH UNIT #8-7, API No. 037-22512 (Assigned by Division),

Sec. 13, T. 4S, R. 13W, SB B. & M., Long Beach Field, Los Angeles County.

Legal description of mineral-right lease, consisting of 149 acres, is as follows: (Attach map or plat to scale)

see attached

Do mineral and surface leases coincide? Yes____ No X If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of well 487 feet North (Direction) ~~along section/property line~~ (Cross out one) and 779 feet West (Direction)

at right angles to said line from the ~~corner of section/property~~ (Cross out one) ____ or

intersection of centerline of San Antonio Drive & Del Mar Avenue

Is this a critical well according to the definition on the reverse side of this form? Yes ☐ No ☒

If well is to be directionally drilled, show proposed coordinates (from surface location) at total depth: 463 feet North (Direction) and 100 feet West (Direction)

Elevation of ground above sea level 45.5 feet.

All depth measurements taken from top of Kelly Bushing (Derrick Floor, Rotary Table, or Kelly Bushing) that is +10 feet above ground.

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES API	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS	CALCULATED FILL BEHIND CASING
13 3/8"	54.5#	K-55; BT & C	Surface	1100'	1100'	1528 CF=200% to surf
9 5/8"	36#	K-55; ST & C	Surface	2900'	2900'	705 CF=125% to 13 3/8" shoe
7"	26#	K-55; ST & C	2700'	5900'	5900'	1473 CF=125% to 9 5/8" shoe

(A complete drilling program is preferred and may be submitted in lieu of the above program.)

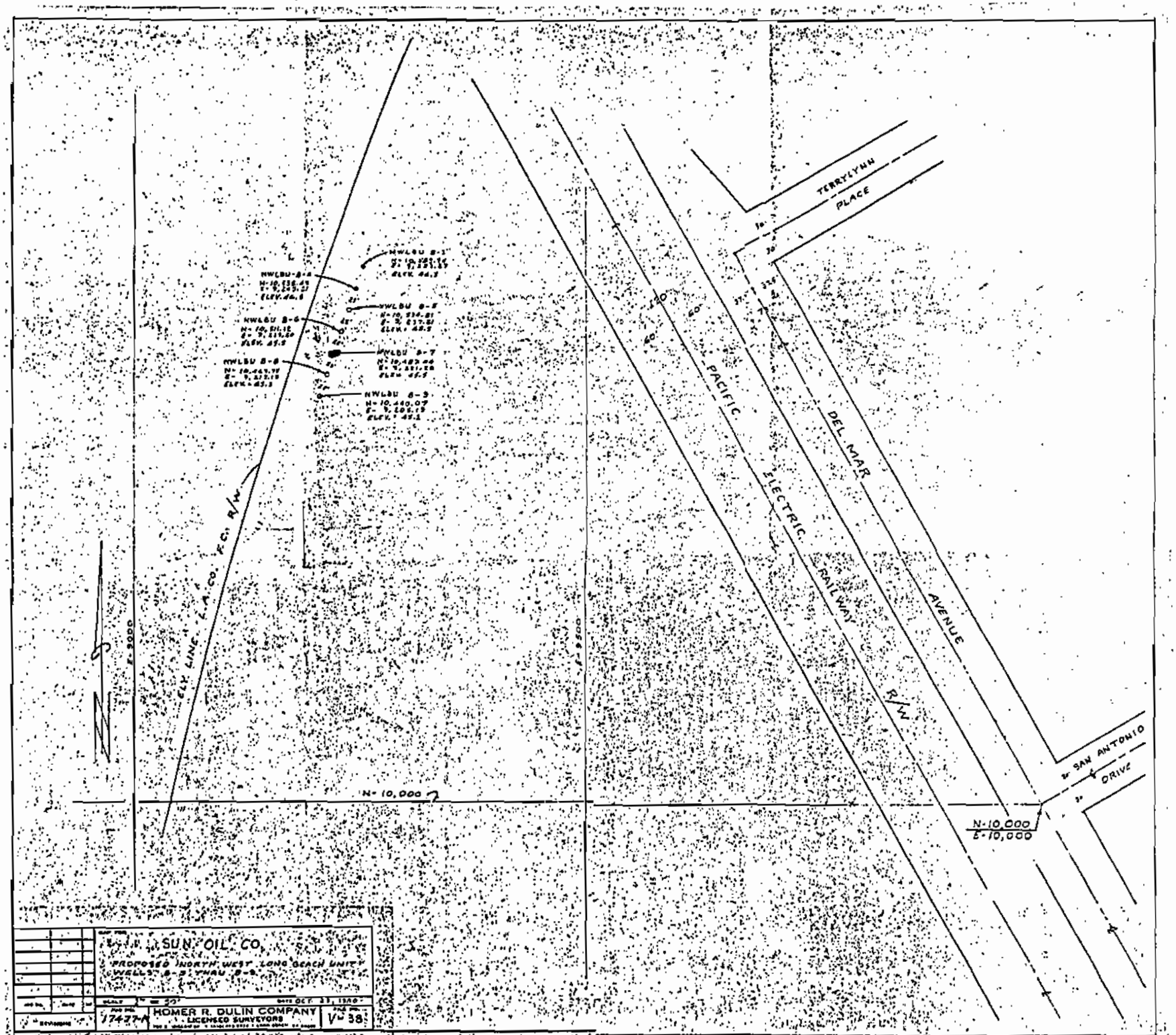
Intended zone(s) of completion Lower Alamitos @ 3946' TVD; Brown @ 4626' TVD; Marine @ 5196' TVD; Pressure = 800 PSI (Name, depth, and expected pressure) Estimated total depth 5826' TVD

It is understood that if changes in this plan become necessary we are to notify you immediately.

Name of Operator	Type of Organization (Corporation, Partnership, Individual, etc.)	
SUN OIL COMPANY (DELAWARE)	CORPORATION	
Address	City	Zip Code
P O BOX 55060	VALENCIA, CA	91355
Telephone Number / Name of Person Filing Notice	Signature	Date
805/257-6200 L. B. Carroll, Jr.	L B Carroll Jr.	8/20/81

This notice and indemnity or cash bond shall be filed, and approval given, before drilling begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

OG105 (7-78-GS81-3M)


TERRYLYNN PLACE
DEL MAR AVENUE
PACIFIC ELECTRIC RAILWAY R/W
ELY LINE L.A. CO. FC. R/W
SAN ANTONIO DRIVE
N-10,000
E-10,000
N-10,000
E-9,500
E-9,500
NWLBU B-1
NWLBU B-2
NWLBU B-3
NWLBU B-4
NWLBU B-5
NWLBU B-6
NWLBU B-7
SUN OIL CO.
PROPOSED NORTH WEST LONG BEACH UNIT
WELLS B-1 THRU B-7
HOMER R. DULIN COMPANY
LICENSED SURVEYORS
17427-A
V-38

629 South Hill Street,
Los Angeles, California,
August 12, 1940

Hilldon Oil Company,
1195 Subway Terminal Building,
417 South Hill St.,
Los Angeles, Calif.

Gentlemen:

This will acknowledge receipt of and thank you for your letter of August 9, 1940, correcting the location of well No. "Flood Control" 4, Sec. 13, T. 4 S., R. 13 W., S. B. B. & M., Long Beach field, to read as follows:

"The well is located from intersection of center line of San Antonio Drive and Northeast boundary of the Pacific Electric right-of-way, 1043' northwesterly parallel to said boundary, and 251' southwesterly at right angles thereto."

Our records have been corrected accordingly.

Yours truly,

Deputy Supervisor

EJC:G
cc- Mr. R. D. Bush (2)

Long Beach

Book
8-13-40
SAR

20 CMR

The Resources Agency of California
Department of Conservation
DIVISION OF OIL AND GAS

WELL STATUS INQUIRY

Long Beach ,Calif.

July 7, 1992

CARDS	BOND	FORMS 114	FORMS 181
	BB 7/22/92	7-22-1992	7-22-1992

To: Joe D. Rose
PETRO RESOURCES, INC.
4200 Easton Dr., Suite 16
Bekrsfield, Ca 93309

In a notice dated 4-7 19 87, you propose to Redrill well NWLBU 9-3 (037-09791-02)
Sec. 13, T. 4S, R. 13W, S.B. B. & M., Long Beach field

Please indicate below, conditions or intentions regarding this proposed work and return the completed form to this office within 10 days.

M. G. MEFFERD
State Oil and Gas Supervisor

KMC:gah

By Kenneth M. Carlson
Operations Engineer

____ **PROPOSED WORK HAS BEEN DONE. (If you check this space, please file the required well records on this work in duplicate within 60 days after work was completed.*)**

____ **PROPOSED WORK IS IN PROGRESS AND SHOULD BE COMPLETED ABOUT** _____ **19** ____.

X **PROPOSED WORK HAS NOT BEEN DONE, BUT WE STILL INTEND TO DO THE WORK.****

____ **SUPPLEMENTARY NOTICE (Form OG123) ATTACHED.**

X **PLEASE CONSIDER THIS FORM AS A SUPPLEMENTARY NOTICE.**

____ **WE DO NOT INTEND TO DO THE PROPOSED WORK. Please cancel our notice to** _____ **, dated** _____ **19** ____.

CANCELLED 4/3/94 OPR

____ **OTHER:** _____

Still Evaluating Drilling Results of 4-6

Joe D Rose
(Signature)

July 20, 1992
(Name and title)

*Division 3 of the Public Resources Code states in part:
Section 3215, ...Well records shall be filed 60 days after completion or suspension of proposed work.

**Section 3203, ...If operations have not commenced within one year of receipt of the notice, the notice will be considered canceled. (To prevent cancelation, file a Supplementary Notice with the division.)

OGD3 (5/90/GSR1/2M)

FORM 105. 45230 6-37 10M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
FEB 8 1938
LOS ANGELES, CALIFORNIA

Notice of Intention to Drill New Well

This notice must be given and surety bond filed before drilling begins

037-13525

General Exploration Co. Los Angeles Calif. January 31, 1938

DIVISION OF OIL AND GAS

Los Angeles Calif.

"Flood Control" 2

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well No. Flood Control #2, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M., Long Beach Field, Los Angeles County.

Lease consists of 99.33 acres

The well is ..... feet N. or S., and ..... feet E. or W. from .....
(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the ~~ground~~ derrick floor above sea level is about 48 feet.

We estimate that the first productive oil or gas sand should be encountered at a depth of about 4000 feet.

We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
13"	45#	New - C	700	Cem.
9"	45#	New - C	4000	"
6-5/8"	26#	New - C	4100	Landed

Well is to be drilled with ~~rotary~~ cable tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

Address 412 A. G. Bartlett Bldg

Telephone number MUtual 2156

Hilldon Oil Company
(Name of Operator)

By C. F. Willis Agent

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

Book.
2-2-38
SAR.

20
SAR

FORM 111. 46011 6-37 20M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-31974

Los Angeles, Calif. February 3, 19 36

Mr. O. G. Willis,

Los Angeles, Calif.

Agent for HILLDON OIL COMPANY

121

Dear Sir:

Your proposal to drill Well No. "FLOOD CONTROL" 2,

Section 13, T. 4S., R. 13W., S. B. B. & M., Long Beach Field, Los Angeles County,

dated Jan. 31, 19 36, received Feb. 2, 19 36, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The well is 605.1 feet from the center line of San Antonio Drive northwesterly along the northeast line of the Pacific Electric Right of Way (Long Beach City Boundary) and 523.3 feet southwesterly from and measured normal to said line. (This point is 284.1 feet southerly from Hilldon #Flood Control 1 on a line 40 feet westerly from and parallel to the 1 degree curve forming the East boundary of the Flood Control Channel.)
The elevation of the derrick floor above sea level is about 46 feet.
We estimate that the first productive oil or gas sand should be encountered at a depth of about 4000 feet."

PROPOSAL:

"We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
13"	45#	New - C	700	Cem.
9"	45#	New - C	4000	"
6-5/8"	26#	New - C	4100	Landed

Well is to be drilled with rotary tools.
It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. (a) Mud fluid consistent with good drilling practice shall be used in the drilling of the well and the column of mud fluid shall be maintained at all times to the surface, particularly while pulling the drill pipe.
   (b) Adequate blow-out prevention equipment shall be provided and ready for operation at all times.
2. Any hole to be sidetracked in any oil zone shall be completely filled with cement, if possible.
3. This division shall be notified to examine cores and/or electrical log before running the 9" casing.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) The cementing of the 13" casing.
   (b) A test of the effectiveness of the 9" shut-off.

cc- Long Beach
WJQ:G

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenmeier Deputy

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF WELL PLUGGING AND ABANDONMENT

Long Beach, California

March 9, 1993

Joe D. Rose, Agent
PETRO RESOURCES, INC.
4200 Easton Dr., Suite 16
BAKERSFIELD CA 93309

Your report of the plugging and abandonment of well **NWLBU 8-1**, A.P.I. No. **037-09792**, Section **13**, **T. 4S**, R. **13W**, S.B. B.& M., **Long Beach** Field, **Los Angeles** County, dated **10-6-92**, received **10-7-92**, has been examined in conjunction with operations witnessed and records filed in this office. We have determined that all of the requirements of this Division have been fulfilled.

NOTE: Surface plugging completed on **7-3-92.**

William F. Guerard, Jr.
Acting State Oil and Gas Supervisor

By T.C. Manuel
For R. K. Baker, *Deputy Supervisor*

KMCdf

cc: Update
Conservation Committee
L.A. County Assessor
L.A. County Fire Prevention Bureau
Don Callow, City of Signal Hill

00159

DNM 101.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator UNION OIL COMPANY OF CALIFORNIA Field LONG BEACH

Well No. OIL OPRATORS #1 Sec. 13, T. 4 S, R 13W, SB B. & M.

FORMATIONS PENETRATED BY WELL

Henry C Winter

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
0	40	40			Surface clay
40	254	214			Clay and sand.
254	592	338			Sand and boulders
592	730	138			Sand
730	984	254			Shale and streaks of sand.
984	990	6			Hard sand.
990	1349	359			Shale and streaks of hard sand.
1349	3083	1734			Shale and streaks of sand.
3083	3087	4			Hard sand.
3087	3106	19			Shale and streaks of sand.
3106	3108	2			Shell
3108	3251	143			Shale and streaks of sand.
3251	3253	2			Hard sand.
3253	3398	145			Shale and streaks of sand.
3398	3399	1			Hard shell
3399	3442	43			Shale and streaks of sand.
3442	3445	3			Shell
3445	3459	14			Sand.
3459	3478	19			Shale and sand.
3478	3480	2			Shell
3480	3487	7			Hard sand.
3487	3498	11			Sand and shale
3498	3500	2			Hard sand
3500	3614	114			Shale and streaks of sand.
3614	3636	22			Hard sand.
3636	3800	164			Shale and streaks of sand.
3800	3911	111			Hard sand.
3911	3914	3			Shell
3914	3928	14			Medium hard sand and shale
3928	3930	2			Shell
3930	4010	80			Shale
4010	4040	30			Sand (See core record)
4040	4044	4			Shell ✓
4044	4051	7			Sand.
4051	4053	2			Shell
4053	4155	102			Shale and sand. ✓

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Long Beach, California

May 22, 1997

Steve Graner, President
NORTH SIDE OIL CORP.
P.O. BOX 16007
LONG BEACH, CA 90807

Your report of the plugging and abandonment of well **Pacific Energy Resouces/NWLBU 5-1**, A.P.I. No. **037-09795**, Section **13**, T. **4S**, R. **13W**, S.B. B.& M., **Long Beach** Field, **Los Angeles** County, dated **04-27-97**, received **05-12-97**, has been examined in conjunction with operations witnessed and records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and the filing of well records.

NOTES:
1. Surface plugging completed on **02-12-97**.
2. Surface inspection made and approved **02-13-97**.

William F. Guerard, Jr.
State Oil and Gas Supervisor

By T.C. Manuel
For R. K. Baker, *Deputy Supervisor*

DEC:gah

NO BOND REQUIRED

cc: Update
L.A. County Assessor
L.A. County Fire Prevention Bureau
L.B. Dept. Building & Planning
Dept. Oil Properties
Gary Jones, City of Signal Hill
Pacific Energy Resources

OG159

SUBMIT LOG IN DUPLICATE

FILL IN BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PA ONLY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL

Operator Hilldon Oil Company Field Long Beach

Well No. Pool #1 Sec. 18, T. 4-S, R. 12-W, S.B. B. & M.

Location: From intersection of Center Line of San Antonio Drive and East Boundary of Pacific Electric Right-of-Way (Long Beach City Boundary) 338.5' Southeasterly along said boundary, thence 144.48' Southwesterly at right angles thereto.

D June 22, 1938

Robin Willis (Engineer or Geologist) C. C. Winslow (Superintendent) Title (President, Secretary or Agent)

Commenced drilling 3-21-38 Completed drilling 4-23-38 Drilling tools Rotary

Total depth 4100 Plugged depth

Junk

GEOLOGICAL MARKERS

DEPTH

Reference				Forms	
Map	Model	Log	Cards		121

Commenced producing 4-25-38 (date) Flowing/~~Pumping~~ (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Flowing Initial production	992	24.0	0.5	425	80-100	80-490
On Compressor Production after 30 days	516	24.1	0.1	255	90	400

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Casing landed in	Number of Sacks of Cement	Depth of Cement if through perforat
13"	679	0	45#	New	Seamless	C	19"	350	
9"	4001	0	45#	New	Seamless	C	12"	450	
6-5/8"	4100	3975	28#	New	Seamless	D	7-7/8"	-	

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
6-5/8"	4100 ft.	4057) ft.	5/16" round	20	1-1/2"	Drilled
"	4032 ft.	4001) ft.				
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

Electrical Log Depths 2000 - 3960 (Attach Copy of Log)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Long Beach, California

November 27, 1996

Steve Graner, President
NORTH SIDE OIL CORPORATION
P. O. Box 16007
LONG BEACH CA 90807

Your report of the plugging and abandonment of well Pacific Energy Resources/NWLBU 6-1, A.P.I. No. 037-09788, Section 13, T. 4S, R. 13W, S.B. B.& M., Long Beach Field, Los Angeles County, dated November 1996, received November 22, 1996, has been examined in conjunction with operations witnessed and records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, end the filing of well records.

NOTES:
1. Surface plugging completed on 10-21-96.
2. Surface inspection made and approved 11-26-96.

William F. Guerard, Jr.
State Oil and Gas Supervisor

By T.R.C. Manuel
For R. K. Baker, *Deputy Supervisor*

DEC:df

NO BOND REQUIRED

cc: Update
L.A. County Assessor
L.A. County Fire Prevention Bureau
Gary Jones, City of Signal Hill
Pacific Energy Resources

OG159

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Long Beach, California

November 27, 1996

Steve Graner, President
NORTH SIDE OIL CORPORATION
P. O. Box 16007
LONG BEACH CA 90807

Your report of the plugging and abandonment of well **Pacific Energy Resources/NWLBU 6-2**, A.P.I. No. **037-09789**, Section **13**, T. **4S**, R. **13W**, S.B. B.& M., **Long Beach** Field, **Los Angeles** County, dated **November 1996**, received **November 22, 1996**, has been examined in conjunction with operations witnessed and records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and the filing of well records.

NOTES:
1. Surface plugging completed on **10-21-96.**
2. Surface inspection made and approved **11-26-96.**

William F. Guerard, Jr.
State Oil and Gas Supervisor

By T. R. C. Monroe
For R. K. Baker, *Deputy Supervisor*

DEC:df

NO BOND REQUIRED

cc: Update
L.A. County Assessor
L.A. County Fire Prevention Bureau
Gary Jones, City of Signal Hill
Pacific Energy Resources

00159

FORM 105. 6018 8-35 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOS ANGELES, CALIFORNIA

037-09789

Notice of Intention to Drill New Well

This notice must be given before drilling begins

GENERAL Exploration Co.

Long Beach Cal. Aug. 21 1937

MR. E. Huguenin

Deputy State Oil and Gas Supervisor

Los Angeles Cal.

DEAR SIR:

"Amebco" 2

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well No. "Amelia M.E.Bixby Company"2, Sec. 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Oil Field Los Angeles County.

Lease consists of ~~475' S.W. ly from c/l Delmar Ave at rtl Ls. and 3001 S. from c/l Bixby Rd. produced~~

The well is ~~feet~~ N. or S., and ~~feet~~ E. or W. from

(Give location in distance from section corners or other corners of legal subdivision) ~~See correct location on~~ Reverse side this sheet.

The elevation of the derrick floor above sea level is 45 feet.

See location as given in correction letter 12-20-37

We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	New or Second Hand	Depth	Landed or Cemented
13"	45	New	700	Cem.
9"	45	New	4000	Cem.
6-5/8	26	New	4050	Landed

Well is to be drilled with rotary / cable tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

We estimate that the first productive oil or gas sand should be encountered at a depth of about 4000 feet, more or less.

Respectfully yours

Address

Hilldon Oil Company
(Name of Company or Operator)

Telephone number

By C. C. Winslow
Supt.

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

W. C.
S.A.R.

Wildcat
Book
S.A.R.
8/24/37.

DIVISION OF OIL AND GAS
RECEIVED
JUL 5 1966
INGLEWOOD, CALIFORNIA

AN 100

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator General Exploration Co. of California Well No. "Amebco" 2

Sec. 13, T. 4S, R. 13W, S.B. B. & M. Long Beach Field Los Angeles County.

Location 192' southeasterly on northeast boundary of Pacific Electric right-of-way from center line of San Antonio Drive and (Give location from property or section corner, or street center lines) thence 450' southwesterly at right angle. Elevation of ground above sea level 47 feet.

All depth measurements taken from top of original Kelly Bushing (Derrick Floor, Rotary Table or Kelly Bushing) which is 5 feet above ground.

In compliance with Sec. 3215, of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date May 27, 1966 Signed R. S. Ballantyne, Jr.

R. S. Ballantyne, Jr. (Engineer or Geologist) C. C. Winslow (Superintendent) Title Vice President (President, Secretary or Agent)

Commenced drilling May 7, 1966

Completed drilling May 13, 1966

Total depth 4802 Plugged depth 4622

Junk None

Sidetracked casing: 9" 3051'-4087' (c)
6-5/8" 4027'-4408' (c)
5" 4393'-4525'

Commenced producing May 25, 1966 (Date) Flowing/~~gas lift~~/pumping (Cross out unnecessary words)

GEOLOGICAL MARKERS	DEPTH
I point	4052'
K point	4350'
M point	4529'
Top Brown shale	4704'

Geologic age at total depth: Pliocene

Name of producing zone Alamitos

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	148	23.8	3.4	60	20#	180#
Production after 30 days	98	23.8	1.0	30	10-40#	220#

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cemen if through perfora
13"	678	0	45#	New	Seamless	C	19"	364	
9"	3020	0	45#	New	Seamless	C	12"	450	
5½"	4801	2949	15.5&17#	New	Seamless	J-55	7-7/8"	350	4768

PERFORATED CASING
(Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

5½": 4343' (squeezed); 4344' (W.S.O.); 4629' (squeezed); 4768' (cementing holes)-each four 1/2" jet holes per foot.

5½": 4353'-4358'; 4364'-4404'; 4415'-4455'; 4477'-4507'; and 4532'-4592'-four 1/2" jet holes per foot

101
SUPERIOR STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator Hillidon Oil Company Field Long Beach

Well No. Amelia M. E. Bixby #2 Sec. 13, T. 4 S., R. 13 W., S.B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
0	56	56	Drilled		Surface
56	327	271			Sand and clay
327	458	131			Sand and gravel
458	607	149			Sand and hard sand
607	661	54			Hard sand
661	678	17			Shale
678	725	47			No record
725	1097	372			Sandy shale
1097	1117	20			Tough shale
1117	1337	220			Sandy shale
1337	1462	125			Shale and sandy shale
1462	1510	48			Sand
1510	1757	247			Shale and sandy shale, streaks sand
1757	1850	93			Sandy shale
1850	1880	30			Hard sand
1880	1911	31			Sand, streaks of shale
1911	1981	70			Sandy shale
1981	2006	25			Tough shale
2006	2110	104			Sandy shale
2110	2133	23			Tough shale
2133	2188	55			Sandy shale
2188	2250	62			Tough shale
2250	2310	60			Sandy shale
2310	2360	50			Sand, strsaks of shale
2360	2385	25			Hard sand, Gas and oil showing 2360-2385
2385	2434	49			Shale
2434	2523	89			Tough shale, streaks of sand
2523	2545	22			Tough shale
2545	2617	72			Sand, streaks of shale
2617	2669	52			Sandy shale
2669	2781	12			Sand, streaks of shale
2781	2822	41			Sandy shale
2822	2900	78			Tough shale
2900	2992	92			Sandy shale
2992	2995	3			Shell
2995	3085	90			Sand, streaks of shale
3085	3173	88			Sandy shale, streaks hard sand
3173	3220	47			Tough shale
3220	3236	16			Sandy shale
3236	3256	20	Cored		Core #1
3240					Shell
3256	3276	20			Core #2
3276	3338	62	Drilled		Sandy, streaks of sandy shale
3338	3366	28			Sandy shale, streaks hard sand

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF WELL ABANDONMENT

Long Beach, California

October 7, 1981

L. R. Carroll, Jr., Agent
SUN OIL COMPANY
P. O. Box 55060
Valencia, CA 91355

Your report of abandonment of well NWLBU 8-5
(Name and number)

A.P.I. No. 037-22295, Section 13, T. 4S, R. 13W, S. B. B. & M.,

Long Beach field, Los Angeles County,

dated 9-2-81, received 9-4-81, has been examined in conjunction with records filed in this office, and we have determined that all of the requirements of this Division have been fulfilled.

HO:dh

cc: Update
Los Angeles County Planning Comm.
Fire Prevention Bureau
L. A. County Assessor
Dept. of Bldg. & Safety
Fire Dept.
Conservation Committee
Blanket Bond

M. G. MEFFERD
State Oil and Gas Supervisor

By Hermanys Delany
Deputy Supervisor
For R. A. YBARRA

OG159 (10/80/8M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

API No. 037-22295

WELL SUMMARY REPORT

Operator	Well				
SUN OIL COMPANY (Delaware)	NWLBU #8-5				
Field	**County**	**Sec.**	**T.**	**R.**	**B.&M.**
Long Beach	Los Angeles	13	4 S	13 W	SB

Location (Give surface location from property or section corner, street center line and/or California coordinates)
534.81' N & 762.8' W frm intersection of C/L of San Antonio Dr. & Del Mar Ave.

Elevation of ground above sea level
45.5

Commenced drilling (date)
7/30/81

Completed ~~(drlg)~~ P&A
8/20/81

Commenced producing (date)
N/A

☐ Flowing ☐ Pumping
☐ Gas lift

Name of producing zone(s)
Lower Alamitos

Total depth

(1st hole)	(2nd)	(3rd)
4965'		

Present effective depth
N/A

Junk
None

Depth measurements taken from top of:
☐ Derrick Floor ☐ Rotary Table ☒ Kelly Bushing
Which is ± 10 feet above ground

GEOLOGICAL MARKERS	DEPTH
N/A	

Formation and age at total depth
Brown

	Clean Oil (bbl per day)	Gravity Clean Oil	Percent Water including emulsion	Gas (Mcf per day)	Tubing Pressure	Casing Pressure
Initial Production	N/A					
Production After 30 days						

CASING RECORD (Present Hole)

Size of Casing (API)	Top of Casing	Depth of Shoe	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementing (if through perforations)
13 3/8"	Surface	662'	48#	K-55	New	17½"	903 Sacks Cl "G" cmt.	-

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

None

Was the well directionally drilled? If yes, show coordinates at total depth
☒ Yes ☐ No 415' N & 115' W

Electrical log depths
N/A

Other surveys
N/A

In compliance with Sec. 3215, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Name	Title	
L.B. Carroll, Jr.	District Engineer	
Address P.O. Box 55060	**City** Valencia	**Zip Code** 91355
Telephone Number 805-257-6200	**Signature** L.B. Carroll Jr by JHG	**Date** 9/3/81

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

06 Dry

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin.

FOR DIVISION USE ONLY			
CARDS	BOND	FORMS 114	FORMS 121
8-31-81	Blanket	9-24-81 CP	8-24-81 CP

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon Well No. NWLBU #8-5, API No. 037-22295, Sec. 13, T. 4S, R. 13W, SB B. & M., Long Beach Field, Los Angeles County, commencing work on August 20, 19 81.

The present condition of the well is:

1. Total depth: 4965' (8 3/4" Hole)

2. Complete casing record, including plugs and perforations:

13 3/8", 48#,H-40, ST&C csg shoe @ 662'; cmtd w/903 CF CL 'G' cmt w/2% $CaCl_2$ 13 3/8" csg parted @ 540';4" DP Fish from 638' to 4790'

3. Last produced Never Produced (Date) (Oil, B/D) (Gas, Mcf/D) (Water, B/D)

or

4. Last injected Never Injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure)

Additional data for dry hole (show depths)

Well never logged or tested - stuck drill pipe

5. Oil or gas shows

N/A

6. Stratigraphic markers:

N/A

7. Formation and age at total depth: N/A

8. Base of fresh water sands: N/A

The proposed work is as follows:

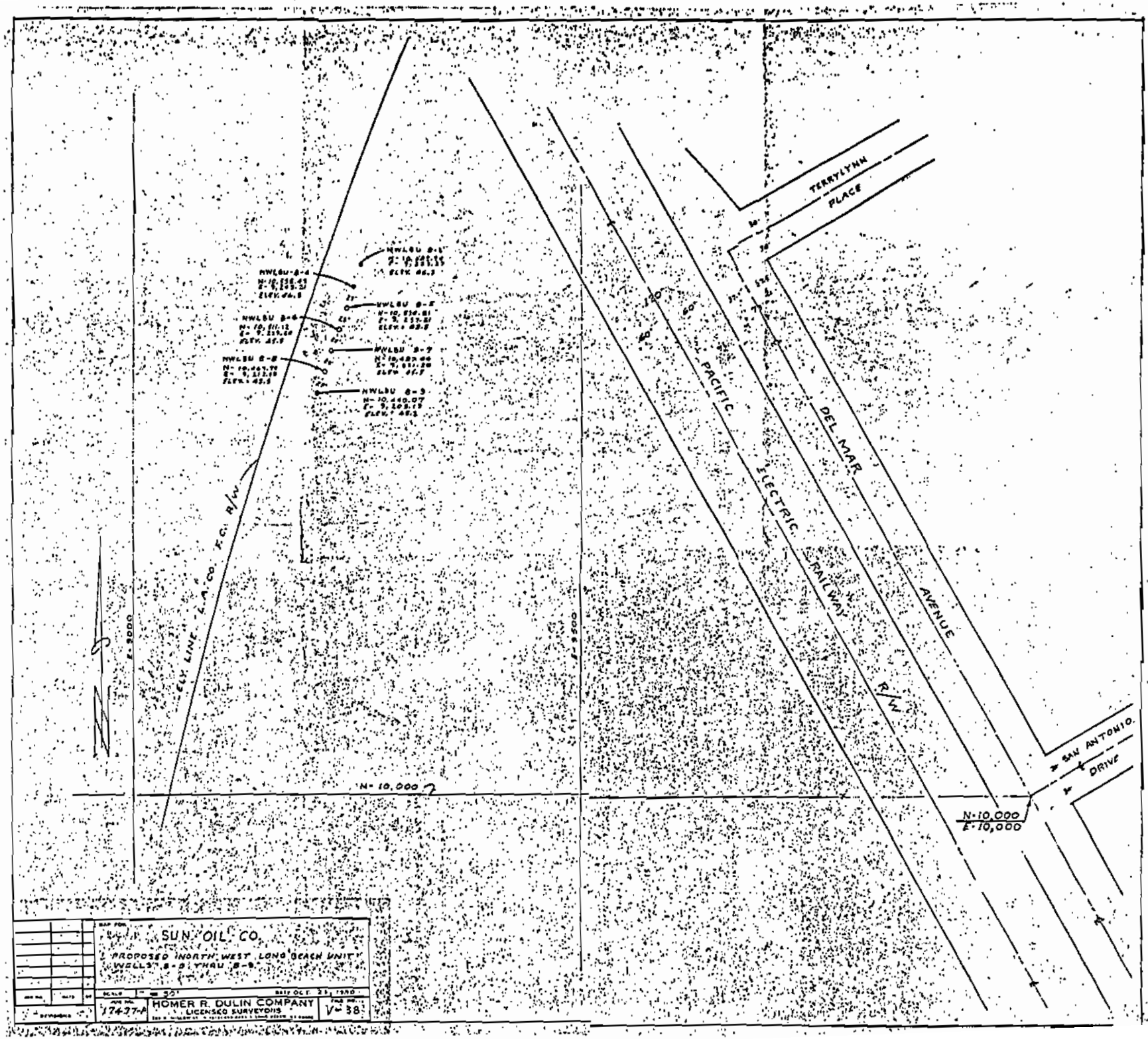
(1) RIH w/4" D P open-ended to 540'
(2) Spot 300 sx of CL 'G' cmt w/0.25% Thix-set 'A', 0.25% Thix-set 'B', 25#/sx Gilsonite, ¼#/sx Flocele, & 2% $CaCl_2$
(3) Tag TOC @ 440' or higher
(4) Spot column of 68PCF fresh water-gel mud to 100' from surface
(5) Spot additional cement plug from 100' to surface
(6) Cut off 13 3/8" casing
(7) RDMO
(8) Restore surface to original conditions

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address 25322 West Rye Canyon Road (Street)
Valencia (City) California (State) 91355 (Zip)
Telephone Number (805) 257-6200

Sun Production Company (Name of Operator)
By [signature] (Name) L.B. CARROLL, JR. 8-20-81 (Date)
Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

OG108 (12-73-GSR1-15M)


TERRYLYNN PLACE
DEL MAR AVENUE
SAN ANTONIO DRIVE
PACIFIC ELECTRIC RAILWAY R/W
E.L.Y. LINE - L.A. CO. F.C. R/W
NWLSU 8-1
NWLSU 8-2
NWLSU 8-3
NWLSU 8-4
NWLSU 8-5
NWLSU 8-6
N-10,000
E-10,000
E-9000
E-9000
N-10,000
60'
60'
SUN OIL CO.
PROPOSED NORTH WEST LONG BEACH UNIT
WELLS 8-1 THRU 8-6
SCALE 1" = 50'
DATE OCT. 23, 1950
JOB NO. 17427-A
HOMER R. DULIN COMPANY
LICENSED SURVEYORS
FILE NO. V-38

12/3/57
COPY
Original returned to
our San Francisco
office.

SHELL OIL COMPANY
Higgins Building
2nd & Main Streets
Los Angeles

DIVISION OF OIL AND GAS
RECEIVED
NOV 16 1935
San Francisco, California

November 15, 1935

Mr. R. D. Bush
State Oil an d Gas Supervisor
Ferry Building
San Francisco, California

See letters on "Bixby Core Hole" 1, API 037-25192, Long Beach /-

Dear Sir

This is in reply to your letter of November 8th asking for the location of six shallow core holes drilled in the Los Cerritos area, Long Beach. The locations are as follows:

Bixby #1	1440' N. and 1240' E.
Bixby 2A	2785' N. and 505' E.
Bixby 3	350' N. and 1283' E.
Bixby 4	2085' N. and 208' E.
Bixby 5	768' N. and 320' E.
Bixby 6	3035' N. and 990' E.

These coordinates are from the intersection of the center lines of Wardlow Road and Golden Avenue. This intersection is approximately 2120 feet west of the intersection of the center line of Wardlow Road and the west track of the Pacific Electric Railway.

Very truly yours,

SHELL OIL COMPANY

By (Signed) L. M. Clark

LMC/mmf

cc: Dr. E. F. Davis
Shell Oil Company
Los Angeles, California

RESOURCE AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF CANCELLATION

Cypress, California
August 11, 2005

Mark Pender, Agent
C.R.G. PROPERTIES, LTD.
11718 Barrington Court #804
Los Angeles, CA 90049

In accordance with **an expiration of the notice of intention** the following change pertaining to your well **"Nwlbu" 5-2**, API. No. **037-00397**, **Long Beach** Field, **Los Angeles** County, Sec. **13**, T. **4S**, R. **13W**, S.B. B. & M., is being made in our records:

Your notice to **abandon** dated **9/12/96**, and our report No. P **196-1133**, issued in answer thereto, are hereby **cancelled** inasmuch as the work will not be done. If you have an individual bond on file covering this notice, it will be returned. No request for such return is necessary.

Hal Bopp
State Oil and Gas Supervisor

By Chris McCullough
Associate Engineer

CM:vb

cc: Update

Cancellation * Correction	Date/Initial
Well File	8/12/05 VR
Bond	—
Paradox	OK @
Well Stat	N/A @ 9/13/05
Mapping	—

OG165 3-17-99

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

04/05

WELL STATUS INQUIRY

Cypress, California
December 4, 2003

P# 104-0222

FOR DIVISION USE ONLY		
	FORMS	
BOND	OGD114	OGD121
BVB	—	4/2/04

Mark Pender, Agent
C.R.G. Properties, Ltd.
15332 Antioch Street
Pacific Palisades CA 90272

In a notice dated **2/2/01**, you propose to **abandon** well **"Nwlbu" 5-2**, API No. **037-00397**, Sec. **13**, T. **4S**, R. **13W**, **S.B.** B. & M., **Long Beach** Field, **Los Angeles** County.

Please indicate below, conditions or intentions regarding this proposed work and return the completed form to this office within 10 days.

Hal Bopp
State Oil and Gas Supervisor

By _____
David Sanchez, *Operations Engineer*

DS:vb

☐ **PROPOSED WORK HAS BEEN DONE. (If you check this space, please file the required well records on this work in duplicate within 60 days after work was completed.*)**

☐ **PROPOSED WORK IS IN PROGRESS AND SHOULD BE COMPLETE ABOUT_____. (Date of completion.)**

☒ **PROPOSED WORK HAS NOT BEEN DONE, BUT WE STILL INTEND TO DO THE WORK.****

☐ **SUPPLEMENTARY NOTICE (Form OG123) ATTACHED.**

waiting to solve our environmental issues

☑ **PLEASE CONSIDER THIS FORM AS A SUPPLEMENTARY NOTICE.**

CANCELLED
AUG 12 2005

☐ **WE DO NOT INTEND TO DO THE PROPOSED WORK. Please cancel our notice to _____ (date).**

☐ **OTHER:** _____

Mark Pender 3/29/04
(Signature) *Date*

MARK PENDER - Manager
(Name and Title)

310-8089071

* **Division 3 of the Public Resources Code states in part:**
Section 3215, ...Well records shall be filed 60 days after completion or suspension of proposed work.

** **Section 3203, ...If operations have not commenced within one year of receipt of the notice, the notice will be considered cancelled. (To prevent cancellation, file a Supplementary Notice with the division.)**

...ion 108. 45250 6-37 10M.
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL AND GAS
RECEIVED
MAR 21 1938
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Notice of Intention to Drill New Well

This notice must be given and surety bond filed before drilling begins

037-00397

General Exploration Co.

Los Angeles Calif. March 18 1938

DIVISION OF OIL AND GAS

Los Angeles Calif.

"Pool" 2

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well No. Pool #2, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M., Long Beach Field, Los Angeles County.

From the inter-Section of the center line of San Antonio Drive with the Easterly Right-of-Way line of the Pacific Electric Railway Company which is the Long Beach City boundary; thence Southeasterly along said Easterly Right-of-Way line a distance of 975'; thence Southwesterly at right angles to said Easterly Right-of-Way line a distance of 140' to the center of the well. S.H.R.

...gas sand should be encountered at a depth of about ..... feet.

We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
13"	45#	Seamless C	700	Cemented
9"	45#	" "	4000	"
6-5/8"	26#	" "	4100	Landed

Well is to be drilled with ~~rotary~~ ~~XXXXX~~ tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

Address 412 A. G. Bartlett Building
215 West Seventh Street
Los Angeles, California
Telephone number MU-2156

HILLDON OIL COMPANY
(Name of Operator)
By C. G. Willis
C. G. Willis, Agent

...Address ...

NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

Maps	Name		Cards	Forms 121
20 (*) Will be supplied later.				✓ ✓

Book. 3-23-38 S.H.R.

S.H.R.

RESOURCE AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF CANCELLATION

Cypress, California
August 12, 2005

Craig C. Barto, Agent
SIGNAL HILL PETROLEUM, INC.
2901 Orange Avenue
Signal Hill, CA 90755

In accordance with **an expiration of the notice of intention** the following change pertaining to your well **"Nwlbu" 5-3**, API. No. **037-09796, Long Beach** Field, **Los Angeles** County, Sec. **13**, T. **4S**, R. **13W**, S.B. B. & M., is being made in our records:

Your notice to **abandon** dated **9/12/96,** and our report No. P **196-1135,** issued in answer thereto, are hereby **cancelled** inasmuch as the work will not be done. If you have an individual bond on file covering this notice, it will be returned. No request for such return is necessary.

Hal Bopp
State Oil and Gas Supervisor

By Chris McCullough
Associate Engineer

CM:vb

cc: Update

Cancellation * Correction	Date/Initial
Well File	8/19/05 ✓
Bond	—
Paradox	8/12/05 ✓
Well Stat1	N/A (el) 8/12/05
Mapping	N/A

OG165 3-17-99

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

WELL STATUS INQUIRY

OG|D6

Cypress, California
December 4, 2003

P# 104-0223

FOR DIVISION USE ONLY		
	FORMS	
BOND	OGD114	OGD121
BLVD	—	4/2/04

Mark Pender, Agent
C.R.G. Properties, Ltd.
15332 Antioch Street
Pacific Palisades CA 90272

In a notice dated **3/6/01**, you propose to **abandon** well **"Nwlbu" 5-3**, API No. **037-09796**, Sec. **13**, T. **4S**, R. **13W**, **S.B.** B. & M., **Long Beach** Field, **Los Angeles** County.

Please indicate below, conditions or intentions regarding this proposed work and return the completed form to this office within 10 days.

Hal Bopp
State Oil and Gas Supervisor

By
David Sanchez, *Operations Engineer*

DS:vb

☐ **PROPOSED WORK HAS BEEN DONE. (If you check this space, please file the required well records on this work in duplicate within 60 days after work was completed.*)**

☐ **PROPOSED WORK IS IN PROGRESS AND SHOULD BE COMPLETE ABOUT_____. (Date of completion.)**

☒ **PROPOSED WORK HAS NOT BEEN DONE, BUT WE STILL INTEND TO DO THE WORK.****

- ☐ **SUPPLEMENTARY NOTICE (Form OG123) ATTACHED.**
- ☑ **PLEASE CONSIDER THIS FORM AS A SUPPLEMENTARY NOTICE.**

CANCELLED
AUG 1 9 2005

☐ **WE DO NOT INTEND TO DO THE PROPOSED WORK. Please cancel our notice to _____ dated _____.**

☐ **OTHER:** _____

Mark Pender 3/29/04
(Signature) *Date*

MARK PENDER — MANAGER
(Name and Title)

* Division 3 of the Public Resources Code states in part:
Section 3215, ...Well records shall be filed 60 days after completion or suspension of proposed work.

** Section 3203, ...If operations have not commenced within one year of receipt of the notice, the notice will be considered cancelled. (To prevent cancellation, file a Supplementary Notice with the division.)

FORM 105. 45230 6-37 10M.
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL AND GAS
RECEIVED
APR 29 1938
LOS ANGELES, CALIF.

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Notice of Intention to Drill New Well

037-09796

This notice must be given and surety bond filed before drilling begins

General Exploration Co.

Los Angeles, Calif. April 26, 1938

DIVISION OF OIL AND GAS

Los Angeles, Calif.

"Pool" 3

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well No. Pool #3, Sec. 13, T. 4 S, S.H.R. R. 13-W, S. B. B. & M., Long Beach Field, Los Angeles County.

Lease consists of

The well is located feet N. or S., and feet E. or W. from
(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the derrick floor above sea level is approx. 55 feet.

We estimate that the first productive oil or gas sand should be encountered at a depth of about 4050 feet.

We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
13"	45#	New - C	700	Cemented
9"	45#	" "	4050	"
6-5/8"	26#	" "	4150	Landed

Well is to be drilled with rotary tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

Address 215 W. 7th Street, Los Angeles

Hilldon Oil Company
(Name of Operator)

Telephone number MU-2156

By C. P. Wilhelm Agent

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

Reference to this oil well

20				
S.H.R.				

Book
4-29-38
S.H.R.

From Center Line of San Antonio Drive and Easterly boundary of Pacific Electric right of way (Long Beach City boundary) south east along said boundary 660.5 feet, thence southwesterly at right angles 145 feet.

RESOURCE AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF CANCELLATION

Cypress, California
August 11, 2005

Mark Pender, Agent
C.R.G. PROPERTIES, LTD.
11718 Barrington Court #804
Los Angeles, CA 90049

In accordance with **an expiration of the notice of intention** the following change pertaining to your well **"Nwlbu" 5-4**, API. No. **037-09797**, **Long Beach** Field, **Los Angeles** County, Sec. **13**, T. 4S, R. 13W, S.B. B. & M., is being made in our records:

Your notice to **abandon** dated **9/12/96**, and our report No. P **196-1134**, issued in answer thereto, are hereby **cancelled** inasmuch as the work will not be done. If you have an individual bond on file covering this notice, it will be returned. No request for such return is necessary.

Hal Bopp
State Oil and Gas Supervisor

By Chris McCullough
Associate Engineer

CM:vb

cc: Update

Cancellation * Correction	Date/Initial
Well File	8/12/05 cm
Bond	—
Paradox	OK
Well Stat1	N/A 8/19/05
Mapping	—

OG165 3-17-99

06 | 05

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

WELL STATUS INQUIRY

Cypress, California
December 4, 2003

P# 104-0221

FOR DIVISION USE ONLY		
	FORMS	
BOND	OGD114	OGD121
PB 4/2/04	—	4/2/04

Mark Pender, Agent
C.R.G. Properties, Ltd.
15332 Antioch Street
Pacific Palisades CA 90272

In a notice dated **3/6/01**, you propose to **abandon** well **"Nwlbu" 5-4**, API No. **037-09797**, Sec. **13**, T. **4S**, R. **13W**, **S.B. B. & M.**, **Long Beach** Field, **Los Angeles** County.

Please indicate below, conditions or intentions regarding this proposed work and return the completed form to this office within 10 days.

Hal Bopp
State Oil and Gas Supervisor

By [signature]
David Sanchez, *Operations Engineer*

DS:vb

☐ **PROPOSED WORK HAS BEEN DONE. (If you check this space, please file the required well records on this work in duplicate within 60 days after work was completed.*)**

☐ **PROPOSED WORK IS IN PROGRESS AND SHOULD BE COMPLETE ABOUT_____. (Date of completion.)**

☒ **PROPOSED WORK HAS NOT BEEN DONE, BUT WE STILL INTEND TO DO THE WORK.****

- ☐ **SUPPLEMENTARY NOTICE (Form OG123) ATTACHED.**
- ☑ **PLEASE CONSIDER THIS FORM AS A SUPPLEMENTARY NOTICE.**

☐ **WE DO NOT INTEND TO DO THE PROPOSED WORK. Please cancel our notice to _____ dated _____.**

CANCELLED
AUG 12 2005

☐ **OTHER:** _____

[signature] 3/29/04
(Signature) *Date*

MARK PENDER – MANAGER
(Name and Title)

---

* **Division 3 of the Public Resources Code states in part:**
Section 3215, ...Well records shall be filed 60 days after completion or suspension of proposed work.

** **Section 3203, ...If operations have not commenced within one year of receipt of the notice, the notice will be considered cancelled. (To prevent cancellation, file a Supplementary Notice with the division.)**

4021 2-38 20M STATE PRINTING OFFICE

SUBMIT LOG IN DUPLICATE

FILL THIS BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PAPER ONLY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
JAN 24 1939
LOS ANGELES, CALIFORNIA

LOG OF OIL OR GAS WELL

Operator Hilldon Oil Company Field Long Beach

Well No. Pool 4 Sec. 13, T. -4-S, R. -13-W, S. B. B. & M.

Location _____ Elevation of derrick floor ~~ground~~ above sea level 59' (corrected) feet.

In compliance with the provisions of Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date January 23, 1939 Signed Hilldon Oil Company

Robin Willis (Engineer or Geologist) C. C. Winslow (Superintendent) Title C. C. Winslow (President, ~~Secretary or Agent~~)

Commenced drilling 7/29/38 Completed drilling 9/4/38 Drilling tools ~~cable~~ Rotary

Total depth 4495 Plugged depth _____ GEOL~~OGICAL MARKERS~~ DEPTH

Junk _____

901.47' southerly along easterly line of Pacific Electric right of way from the intersection of center line of San Antonio Drive, thence westerly 138.00' at right angles.

Commenced producing 9/6/38 (date) ~~Flowing/gas lift~~/pumping (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Sept. 10th Initial production	142	23.4	0.8	264		
Oct. 10th Production after 30 days	87	"	0.3	97		

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Casing landed in	Number of Sacks of Cement	Depth of Cementing if through perforation
13"				New	Seamless	C	19"	350	
?/									
8-5/8"	3963	0	36#	"	"	C		550	
	4386	3963	36.7#	"	"	D	12"		
6-5/8"	4495	4361.5	26#	"	"	D	7-5/8"		

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
6-5/8	4495 ft.	4395 ft.	3/16" Round	20	1½"	Drilled
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

Electrical Log Depths 2000' - 4386' (Attach Copy of Log)

OGM 100

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

(Sun Oil Co.)

SUBMIT IN DUPLICATE

Operator General Exploration Company of California Well No. "Flood Control" 6

Sec. 13, T. 4-S, R. 13-W, S.B. B. & M. Long Beach Field Los Angeles County.

Location 1155' NWly along NEly boundary of P.E. R/W from C/L San Antonio Drive and 407' SWly at R/A
(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 30.5 feet.

All depth measurements taken from top of Kelly Bushing which is 12.5 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

In compliance with Sec. 3215, of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date December 20, 1966 Signed R. S. Ballantyne, Jr.

R. S. Ballantyne, Jr. (Engineer or Geologist) Lloyd Stander (Superintendent) Title R. S. Ballantyne, Jr., Vice President (President, Secretary or Agent)

Commenced drilling 11/5/66

Completed drilling 11/18/66

Total depth 4391' Plugged depth 4345'

Junk None

GEOLOGICAL MARKERS	DEPTH
I point	4169'

Geologic age at total depth: Pliocene

Commenced producing 11/22/66 (Date) Flowing/~~gas lift/pumping~~ (Cross out unnecessary words) Name of producing zone H-I (Alamitos)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	350	24.2°	0.1%	130	150	Pkr.
Pumping Production after 30 days	222	24.3°	0.5%	64	30	420

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementi if through perforat
10-3/4"	722'	0	40.5#	New	Smls.	H-40	15"	360	
7"	4391'	0	20# & 23#	New	Smls.	J-55 & N-80	9-7/8"	200	

PERFORATED CASING
(Size, top, bottom, perforated intervals, size and spacing of perforation and method)

7": 4165'-4166', 1/2", 4 holes, jet.

7": 4172'-4207', 1/2", 4 hpf, jet

DIVISION OF OIL AND GAS
RECEIVED
DEC 22 1966
INGLEWOOD, CALIFORNIA

Electrical Log Depths 722'-4373' (Attach Copy of Log)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF CORRECTION OR CANCELLATION

Long Beach, California

April 8, 1994

Joe D. Rose
PETRO RESOURCES, INC.
4200 Easton Dr., Suite 16
Bakersfield, CA 93309

In accordance with our conversation on April 7, 1994

the following change pertaining to your well NWLBU 9-5 (037-00142), (Well designation)
Long Beach field, Los Angeles County,
Sec. 13, T. 4S, R. 13W, S.B. B. & M., is being made in our records:

☐ The corrected location is

☐ The corrected elevation is

☐ Report No. , dated , has been corrected as follows:

☒ Your notice to redrill (Drill, abandon, etc.) dated 03-31-92, and our report No. P 192-400, issued in answer thereto, are hereby cancelled inasmuch as the work will not be done. If you have an individual bond on file covering this notice, it will be returned. No request for such return is necessary.

☐ Other:

CANCELLATION/ CORRECTION made:	Date/Initial
Form 121	4-8-94 MB
Form 177	–
Form 140	–
WELL RECORDS: Report	4-8-94 MB
WELL RECORDS: Log File	–
EDP	
BOND	
FIELD MAP	–
MAP BOOK	–

JDJ:sds

cc: EDP
Update
Singal Hill, City of

William F. Guerard
State Oil and Gas Supervisor

By
For R. K. Baker, Deputy Supervisor

OG165 (5/90/GSR1/3M)

FORM 100

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

RECEIVED
OCT 27 1966
INGLEWOOD, CALIF.

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Sun Oil Co.

Operator General Exploration Co. of Calif. Well No. "Flood Control" 5

Sec. 13, T. 4-S, R. 13 W, S. B. B. & M. Long Beach Field Los Angeles County.

Location 1180' NWly on NEly line of P.E. R/W from C/L San Antonio Dr.; thence 390' SWly at R/A
(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 30.5 feet.

All depth measurements taken from top of Kelly Bushing which is 12.5 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

In compliance with Sec. 3215, of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date October 24, 1966

Signed R. S. Ballantyne, Jr.

R. S. Ballantyne, Jr. (Engineer or Geologist) Lloyd Stander (Superintendent) Title Vice-President (President, Secretary or Agent)

Commenced drilling 7/8/66

Completed drilling 8/15/66

Total depth Rd. 9107' 9151' Plugged depth 5825'

Junk Orig. hole - None
Redrill - one cone of 9-7/8" bit at T.D.

GEOLOGICAL MARKERS	DEPTH
Top Brown Zone	4930'

Geologic age at total depth: Miocene

Commenced producing 9/13/66 (Date) Flowing/~~gas lift/pumping~~ (Cross out unnecessary words) Name of producing zone Deep

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	12	46.6	71.8	462	470-490#	Pkr.
Production after ~~30~~ 16 days	7	39.0	65.5	283	200-230#	Pkr.

CASING RECORD (Present Hole)

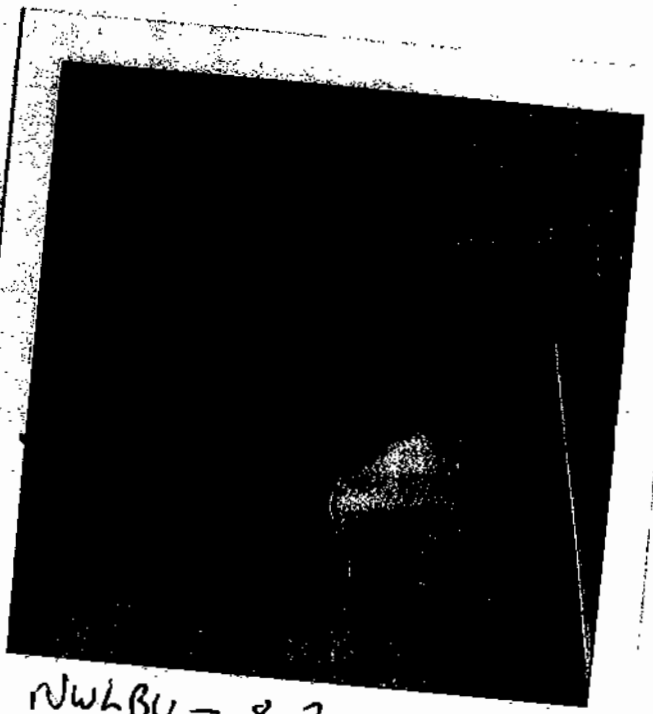
Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cement if through perfora
10-3/4"	720'	0	40.50#	New	Smls.	J-55	15"	360	
7"	9107'	0	23 & 26#	New	Smls.	J-55 & N-80	9-7/8"	150	8396'
	(See history for 7" casing detail)								

PERFORATED CASING
(Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

7": 8407' - 9107' - 1/4" round holes, 10 rows, 3" centers, machine; and 132 jet 3/8" holes on 1
centers covering 24 intervals (see history) between 8506' and 9086'.

7": 7356' - 7386' - 1/2", 3 jet holes per foot; four 1/2" jet holes over one foot intervals
centered as follows: 7347' (Sq.), 7348½' (W.S.O.), 7350' (Sq.), 7390' (W.S.O.Co.), 7392'(S
8378' (Sq.), 8378½' (W.S.O.), 8380' (Sq.)

Electrical Log Depths 720' - 8882', and Rd. 5825' - 9100' (Attach Copy of Log)



NWLBU – 8-2
View: west, 10-21-96
Photo - Bill F. with R. Manuel

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Long Beach, California

November 27, 1996

Steve Graner, President
NORTH SIDE OIL CORPORATION
P. O. Box 16007
LONG BEACH CA 90807

Your report of the plugging and abandonment of well **Pacific Energy Resources/NWLBU 8-2**, A.P.I. No. **037-09793**, Section **13**, T. **4S**, R. **13W**, S.B. B.& M., **Long Beach** Field, **Los Angeles** County, dated **November 1996**, received **November 22, 1996**, has been examined in conjunction with operations witnessed and records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and the filing of well records.

NOTES:
1. Surface plugging completed on **10-21-96.**
2. Surface inspection made and approved **11-26-96.**

William F. Guerard, Jr.
State Oil and Gas Supervisor

By T.R.C. Manuel
For R. K. Baker, *Deputy Supervisor*

DEC:df

NO BOND REQUIRED

cc: Update
L.A. County Assessor
L.A. County Fire Prevention Bureau
Gary Jones, City of Signal Hill
Pacific Energy Resources

00159

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-31536

Los Angeles, Calif. November 4, 1937.

Mr. M. Justen, Jr.,
Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Your proposal to drill Well No. "OIL OPERATORS" #
Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County,
dated Oct. 26, 1937, received Oct. 29, 1937, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The well is 580' S'ly along center line of San Antonio from the center line of Del Mar and thence 115' S'ly at right angles ---------- 56.97
The elevation of the derrick floor above sea level will be determined later (Approx. 55')
We estimate that the first productive oil or gas sand should be encountered at a depth of about 4000 feet, more or less."

PROPOSAL:

"We propose to use the following strings of casing, either cementing or landing them as hereinindicated:

Size of Casing	Weight	New or Second Hand	Depth	Landed or Cemented
13-3/8	48	New	700'	Cmtd.
8-5/8	36	New	4000	Cmtd.
6-5/8 Perforated liner		New	4100	Landed

Well is to be drilled with rotary tools.
It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. (a) Mud fluid of not less than 70 lb. per cubic foot shall be used in the drilling of the well and the column of mud fluid shall be maintained at all times to the surface, particularly while pulling the drill pipe.
   (b) Adequate blow-out prevention equipment shall be provided and ready for operation at all times.
2. Any hole to be sidetracked at any time during the drilling of this well shall be completely filled with cement.
3. The formations to be left back of the 8-5/8" casing shall be mudded by open circulation until the loss is not more than 5 bbl. per hr.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) The cementing of the 13-3/8" surface casing.
   (b) Final mudding operations before cementing the 8-5/8" casing.
   (c) A test of the effectiveness of the 8-5/8" shut-off.

cc- H. E. Winter
Long Beach
EJG:GH

* 523 ft. westerly along the center line of Bixby Road projected from the center line of the Pacific Electric Railway Right of Way and thence 45 ft. southerly at 90°. (Correction letter 11-24-37)

R. D. BUSH
State Oil and Gas Supervisor

By _____ Deputy

APPENDIX D

Reports of Previous Investigations

OIL OPERATORS INCORPORATED
712 WEST BAKER STREET
LONG BEACH, CALIFORNIA 90806
(213) 424-2451
RICHARD YOUNG, PRESIDENT
DAVID E. COMBS, SECY.-TREAS.

56 6751 + 6775
SIC No. 093

JR

October 24, 1990

Mr. Juan Gonzales
California Regional Water
Quality Control Board
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

RE: CI#6751, South Site and CI#6775, North Site

Dear Mr. Gonzales:

As a follow up to our phone conversation of October 17, 1990, I am enclosing copies of letters sent to Mr. Jim Ross requesting that monitoring requirements on the above noted locations be changed from quarterly to annually. The reason for the request was/is the consistant lack of variation in previous test results on the site(s).

We have no record of a response to either of our requests. The lack of response was taken as implied consent to our request to annual testing. It would be appreciated if we could at this time receive formal acknowledgement of and consent to our request for annual, instead of quarterly, monitoring.

Your attention to, and assistance in, this matter is very much appreciated.

Thank you,

Sheri Johnson

enc.
cc: Mark Pender

JACK K. BRYANT & ASSOCIATES, INC.
CONSULTING ENGINEERS • ARCHITECTS • PLANNERS
ENVIRONMENTAL SCIENTISTS

P-12

August 30, 1989

JKB E-8801

Mark Pender
CRG Properties, Inc.
2760 E. Spring Street Suite 200
Long Beach CA 90806

RECEIVED
AUG 31 1989
SUKUT CONSTRUCTION, INC.

SUBJECT: RESULTS OF POST EXCAVATION SOIL SAMPLING

REFERENCE: OIL OPERATORS- NORTH SITE

Dear Mr. Pender:

On August 1, 4, 17 and 18, 1989 exploratory excavations were conducted by personnel from Sukut Construction at the referenced site. Personnel from Jack K. Bryant & Associates, Inc. were also on hand on those dates to perform random soil sampling as needed.

A total of fourteen soil samples (E1 to E11, S1 and S2) were collected for analysis. All of them were analyzed for the presence of Total Recoverable Petroleum Hydrocarbons. Further, of these, only one soil sample (E1) was subjected to more extensive analysis for detection of other hazardous constituents. Samples E1 to E11 were taken on August 1 and 4 while S1 and S2 were taken on August 18. No samples were taken on August 17.

The results of the Total Recoverable Petroleum Hydrocarbons (TRPH) analysis through EPA method 418.1 are tabulated below. All the formal laboratory results are attached for your records.

Sample	TRPH, mg/kg = ppm
[redacted]	[redacted]
[redacted]	92,000
E3	3,400
E4	750
E5	3,500
E6	190
[redacted]	[redacted]
E8	16
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
E11	5,100
S1	120
S2	Not detected

460 CARSON PLAZA DRIVE, SUITE 106, CARSON, CA 90746 • (213) 769-0900 • FAX: (213) 769-0055

As can be seen, the bulk of the TRPH results are high. This would be reasonable as it is known that crude oil sludge is present on site. Further the high values indicate that the soil is amenable to biodegradation.

The soil sample E1 following extensive analysis exhibits the presence of the following volatile organics: benzene, ethylbenzene, tetrachloroethane, toluene and xylene. These are common petroleum constituents. The soil further appears to be slightly alkaline in nature with a pH of 7.6. Bioremediation typically needs an optimum pH range of 6-8. Also, semivolatile organics have been detected in the sample and include phenol, naphthalene, methylnaphthalene and acenaphthene. The analysis also indicates that the soil sample from excavation E1 is devoid of pesticides and PCBs. However, the soil sample has metallic constituents which include arsenic, barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium and zinc. These are known to be bacterial growth inhibitors but at only at certain concentrations.

In response to our request for a six months extension on the Rule 1150 permit, the South Coast Air Quality Management District has informed us that the said permit would be valid till November 1, 1989. The permit is however conditioned for further extension requests.

If you should have any queries, please do call me at (213) 769-0900.

With best regards.

Yours truly,

JACK K. BRYANT & ASSOC, INC.

Jack K. Bryant

Jack K. Bryant, PE/REA

cc: John Kelly - Sukut
Richard Young - Oil Operators
Bill Sulentor

rs\e8801-28.wp

MAY 31 '89 14:41 STORMS ENFORCEMENT DIV

C K Y incorporated
Environmental Services

Date: 08/15/89
890758

Jack Bryant & Associates
460 Carson Plaza Drive, Suite 106
Carson, CA 90746

Attn: Mr. Stan Che

Subject: Laboratory Report
Project: CRG/Oil Operators' North Site

Enclosed is the laboratory report for samples received on 08/01/89. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

Method	No. of Analysis
EPA 418.1 (TRPH)	8 Soils
EPA 8270	1 Soil
EPA 8240 (VOC by GC/MS)	1 Soil
CAM Metals	1 Soil
EPA 8080	1 Soil
PH 9040	1 Soil

The results are summarized on ten pages.

Please feel free to call if you have any questions concerning these results.

Sincerely,

Dr. Kam Pang
Laboratory Director

3551 Voyager St., Suite 102, Torrance, Calif. 90503 • Telephone (213) 371-0048

EPA METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

CLIENT:	Jack Bryant & Associates	**DATE REC'D:**	08/01/89
PROJECT:	Oil Operators/North Site	**DATE EXTRACTED:**	08/04/89
CONTROL NO:	890758	**DATE ANALYZED:**	08/07/89
MATRIX TYPE:	Soil		

SAMPLE ID:	CONTROL NO:	RESULTS (mg/kg)	DETECTION LIMIT (mg/kg)
E1	890758-1	44,000	5
E2	890758-2	92,000	5
E3	890758-3	3,400	5
E4	890758-4	750	5
E5	890758-5	3,500	5
E6	890758-6	190	5
E7	890758-7	84,000	5
E8	890758-8	16	5

EPA METHOD - 8240
VOLATILE ORGANICS BY GC/MS

CLIENT:	Jack Bryant & Associates	**DATE REC'D:**	08/01/89
PROJECT:	CRG/Oil Operators'	**DATE EXTRACTED:**	08/06/89
SAMPLE ID:	E-1	**DATE ANALYZED:**	08/06/89
CONTROL NO:	890758-1	**MATRIX TYPE:**	Soil

PARAMETERS (8240)	RESULTS (mg/kg)	DETECTION LIMIT (mg/kg)
Acetone	ND	20
Benzene	3	1
Bromodichloromethane	ND	1
Bromoform	ND	1
Bromomethane	ND	5
2-Butanone (MEK)	ND	10
Carbon Disulfide	ND	1
Carbon Tetrachloride	ND	1
Chlorobenzene	ND	1
Chlorodibromomethane	ND	1
Chloroethane	ND	5
2-Chloroethyl vinyl ether	ND	1
Chloroform	ND	1
Chloromethane	ND	5
1,1-Dichloroethane	ND	1
1,2-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloroethene (total)	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
trans-1,3-Dichloropropene	ND	1
Ethylbenzene	7.5	1
2-Hexanone	ND	10
Methylene chloride	ND	20
4-Methyl-2-pentanone (MIBK)	ND	5
Styrene	ND	1
1,1,2,2-Tetrachloroethane	3	1
Tetrachloroethene	ND	1
Toluene	5	1
1,1,1-Trichloroethane	ND	1
1,1,2-Trichloroethane	ND	1
Trichloroethene	ND	1
Trichlorofluoromethane	ND	1
Vinyl Acetate	ND	10
Vinyl Chloride	ND	5
Xylene (total)	13	1

ND = Not Detected

% Surrogate Recovery:	
1,2 Dichloroethane-d_4	100
Toluene-d_8	98
Bromofluorobenzene	92

EPA METHOD - 8270
SEMIVOLATILE ORGANICS BY GC/MS

CLIENT:	Jack Bryant & Associates	**DATE REC'D:**	08/01/89
PROJECT:	CRG/Oil Operators'	**DATE EXTRACTED:**	08/04/89
SAMPLE ID:	E-1	**DATE ANALYZED:**	08/10/89
CONTROL NO:	890758-1	**MATRIX TYPE:**	Soil

PARAMETER	RESULTS (mg/kg)	PARAMETER	RESULTS (mg/kg)
Phenol	3 (0.1)	Acenaphthene	2 (0.1)
bis(2-chloroethyl)ether	ND (0.1)	2,4-Dinitrophenol	ND (0.5)
2-Chlorophenol	ND (0.1)	4-Nitrophenol	ND (0.5)
1,3-Dichlorobenzene	ND (0.1)	Dibenzofuran	ND (0.1)
1,4-Dichlorobenzene	ND (0.1)	2,4-Dinitrotoluene	ND (0.1)
Benzyl Alcohol	ND (0.2)	2,6-Dinitrotoluene	ND (0.1)
1,2-Dichlorobenzene	ND (0.1)	Diethylphthalate	ND (0.1)
2-Methylphenol	ND (0.1)	4-Chlorophenyl-phenylether	ND (0.1)
bis(2-chloroisopropyl)ether	ND (0.1)	Fluorene	ND (0.1)
4-Methylphenol	ND (0.1)	4-Nitroaniline	ND (0.5)
N-Nitroso-Di-n-Propylamine	ND (0.1)	4,6-Dinitro-2-Methylphenol	ND (0.5)
Hexachloroethane	ND (0.1)	N-Nitrosodiphenylamine	ND (0.1)
Nitrobenzene	ND (0.1)	4-Bromophenyl-phenylether	ND (0.1)
Isophorone	ND (0.1)	Hexachlorobenzene	ND (0.1)
2-Nitrophenol	ND (0.1)	Pentachlorophenol	ND (0.5)
2,4-Dimethylphenol	ND (0.1)	Phenanthrene	ND (0.1)
Benzoic Acid	ND (0.5)	Anthracene	ND (0.1)
bis-(2-Chloroethoxy)methane	ND (0.1)	Di-n-Butylphthalate	ND (0.1)
2,4-Dichlorophenol	ND (0.1)	Fluoranthene	ND (0.1)
1,2,4-Trichlorobenzene	ND (0.1)	Pyrene	ND (0.1)
Naphthalene	4 (0.1)	Butylbenzylphthalate	ND (0.1)
4-Chloroanline	ND (0.2)	3,3'-Dichlorobenzidine	ND (0.2)
Hexachlorobutadiene	ND (0.1)	Benzo(a)Anthracene	ND (0.1)
4-Chloro-3-Methylphenol	ND (0.2)	bis(2-Ethylhexyl)Phthalate	ND (0.1)
2-Methylnaphthalene	15 (0.1)	Chrysene	ND (0.1)
Hexachlorocyclopentadiene	ND (0.1)	Di-n-Octyl Phthalate	ND (0.1)
2,4,6-Trichlorophenol	ND (0.1)	Benzo(b)Fluoranthene	ND (0.1)
2,4,5-Trichlorophenol	ND (0.1)	Benzo(k)Fluoranthene	ND (0.1)
2-Chloronaphthalene	ND (0.1)	Benzo(a)Pyrene	ND (0.1)
2-Nitroaniline	ND (0.5)	Indeno(1,2,3-cd)Pyrene	ND (0.1)
Dimethyl Phthalate	ND (0.1)	Dibenz(a,h)Anthracene	ND (0.1)
Acenaphthylene	ND (0.1)	Benzo(g,h,i)Perylene	ND (0.1)
3-Nitroaniline	ND (0.5)		

EPA METHOD - 9040 - pH

CLIENT:	Jack Bryant & Associates	**DATE REC'D:**	08/01/89
PROJECT:	Oil Operators'	**DATE EXTRACTED:**	08/16/89
CONTROL NO:	890758	**DATE ANALYZED:**	08/16/89
MATRIX TYPE:	Soil		

SAMPLE I.D.	CONTROL NO.	pH
E1	890758-1	7.6

EPA METHOD 8080 - PESTICIDES & PCBs

CLIENT:	Jack Bryant & Associates	**DATE REC'D:**	08/01/89
PROJECT:	CRG/Oil Operators'	**DATE EXTRACTED:**	08/08/89
SAMPLE ID:	E-1	**DATE ANALYZED:**	08/09/89
CONTROL NO:	890758-1	**MATRIX TYPE:**	Soil

PARAMETERS (8080)	RESULTS (mg/kg)	DETECTION LIMIT (mg/kg)
Aldrin	ND	0.02
Alpha-BHC	ND	0.01
Beta-BHC	ND	0.02
Delta-BHC	ND	0.02
Gamma-BHC (Lindane)	ND	0.01
Chlordane	ND	.05
4,4'-DDD	ND	.02
4,4'-DDE	ND	.02
4,4'-DDT	ND	.02
Dieldrin	ND	.02
Endosulfan I	ND	.02
Endosulfan II	ND	.05
Endosulfan Sulfate	ND	.05
Endrin	ND	.02
Endrin Aldehyde	ND	.05
Heptachlor	ND	.02
Heptachlor Epoxide	ND	.02
Methoxychlor	ND	.1
Toxaphene	ND	.1
Aroclor - 1016	ND	.1
Aroclor - 1221	ND	.1
Aroclor - 1232	ND	.1
Aroclor - 1242	ND	.1
Aroclor - 1248	ND	.1
Aroclor - 1254	ND	.1
Aroclor - 1260	ND	.1

CAM METALS

CLIENT:	Jack Bryant & Associates	**DATE REC'D:**	08/01/89
PROJECT:	CRG/Oil Operators'	**DATE EXTRACTED:**	08/14/89
SAMPLE ID:	E-1	**DATE ANALYZED:**	08/14/89
CONTROL NO:	890758-1	**MATRIX TYPE:**	Soil

PARAMETERS	RESULTS (mg/kg)	DETECTION LIMIT (mg/kg)
Antimony	ND	5.0
Arsenic	44	1.0
Barium	24	5.0
Beryllium	ND	1.0
Cadmium	7.3	1.0
Chromium - Total	34	1.0
Cobalt	11	1.0
Copper	55	1.0
Lead	540	1.0
Mercury	ND	0.05
Molybdenum	1.7	1.0
Nickel	24	1.0
Selenium	ND	10.1
Silver	ND	1.0
Thallium	ND	40.0
Vanadium	30	5.0
Zinc	260	1.0

QUALITY CONTROL DATA

CLIENT: Jack Bryant & Associates
PROJECT: Oil Operators' North Site
CKY I.D.: 890758

METHOD 418.1
MATRIX: Soil

SAMPLE ID: 890758-06

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
IR Ref Oil	190	176	60	71	11

METHOD 418.1
MATRIX: Soil

SAMPLE ID: Blank Spike III

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
IR Ref Oil	N/A	176	116	N/A	N/A

QUALITY CONTROL DATA

CLIENT: Jack Bryant & Associates
PROJECT: Oil Operators' North Site
CKY I.D.: 890758

METHOD 418.1
MATRIX: Soil

SAMPLE ID: 890758-08

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
IR Ref Oil	16	176	114	114	0

METHOD 418.1
MATRIX: Soil

SAMPLE ID: Blank Spike IV

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
IR Ref Oil	N/A	176	109	N/A	N/A

QUALITY CONTROL DATA

CLIENT: Jack Bryant & Associates
PROJECT: CRG/ Oil Operators' North Sit
CKY I.D.: 890758

METHOD 8270
MATRIX: Soil

SAMPLE ID: 890657-7

COMPOUND	SAMPLE RESULTS (ppm)	AMOUNT SPIKED (ppm)	% REC.	DUP. % REC.	RPD
Phenol	ND	40	91	115	9
2-Chlorophenol	ND	40	85	38	11
1,4-Dichlorobenzene	ND	20	73	87	18
1,2,4 Trichloro-benzene	ND	20	90	100	11
4-Chloro-3 methyl phenol	ND	40	95	98	3
Acenaphthalene	ND	20	82	94	13
2,4-Dinitrotoluene	ND	20	46	70	40
Di-n-butylphthalate	ND	20	92	99	7
Pyrene	ND	20	87	87	0

QUALITY CONTROL DATA

CLIENT: Jack Bryant & Associates
PROJECT: CRG/Oil Operators' North Site
CKY I.D.: 890758

METHOD EPA 6010
MATRIX: Soil

SAMPLE ID: 890631-05

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
Beryllium	0.20	10	110	110	0
Cadmium	ND	10	84	84	0
Chromium	31	20	95	95	0
Cobalt	6.0	20	105	100	4
Lead	9.6	50	97	99	2
Molybdenum	ND	100	77	76	1
Nickel	31	20	95	95	0
Silver	ND	10	91	91	0
Vanadium	29	100	91	91	0
Zinc	25	10	190	100	22

METHOD EPA 7471
MATRIX: Soil

SAMPLE ID: 890729-05

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
Mercury	ND	2.5	72	80	11

CLIENT NAME: JKS & ASSOCIATES, INC CHAIN OF CUSTODY RECORD

ADDRESS: 460 CARSON PLAZA DRIVE #106 CARSON

PHONE NO.: (213) 769-0900

PROJECT NAME/NO.: OIL OPERATORS — NORTH SITE

Page ___ of ___

Date AUGUST 1, 1995

Sample Number/Location	Type of Sample: Material	Type of Sample: Method	Type of Container	Type of Preservation: Temp.	Type of Preservation: Chemical	Analysis Required
E1	SOIL	GRAB	1 GLASS			EPA 418.1
E2	"	"	"			8240
E3	"	"	"			8270
E4	"	"	"			8015
E5	"	"	"			PCB
E6	"	"	"			CAM METALS
E7						
E8	V	V	V			

Shipment Method / Special Instructions:

Total No. of Samples Shipped 8 Sampler Signature S. Rau

Relinquished By:	Received By:	Date
Signature S. Rau	Signature [illegible]	8/1/95
Printed Name RAMESH SUNDARESWARAN	Printed Name K PANAF	Time
Company JKS & ASSOC. INC	Company CKY, INC	12:12pm
Reason FOR ANALYSIS		
Relinquished By:	Received By:	Date
Signature	Signature	
Printed Name	Printed Name	Time
Company	Company	
Reason		
Relinquished By:	Received By:	Date
Signature	Signature	
Printed Name	Printed Name	Time
Company	Company	
Reason		

CKY incorporated
Analytical Laboratories
3551 Voyager St., Suite 102
Torrance, CA 90503
213-371-0048

Storage/Disposal of Samples:
Samples will be stored at CKY for 30 days at no charge and at $10/sample/month thereafter. Disposal of sample by the laboratory will be charged at $10/sample.

Disposed by Lab. ___ Pick up by client ___

C K Y incorporated
Environmental Services

RECEIVED AUG 1 6 1989

Date: 08/10/89
890806

Jack Bryant & Associates
460 Carson Plaza Drive, Suite 106
Carson, CA 90746

Attn: Mr. Stan Che

Subject: Laboratory Report
Project: Oil Operators' North Site

Enclosed is the laboratory report for samples received on 08/04/89. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

Method	No. of Analysis
EPA 418.1 (TRPH)	4 Soils

The results are summarized on two pages.

Please feel free to call if you have any questions concerning these results.

Sincerely,

Dr. Kam Pang
Laboratory Director

3551 Voyager St., Suite 102, Torrance, Calif. 90503 • Telephone (213) 371-0048

EPA METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

CLIENT:	Jack Bryant & Associates	**DATE REC'D:**	08/04/89
PROJECT:	Oil Operators' North Site	**DATE EXTRACTED:**	08/08/89
CONTROL NO:	890806	**DATE ANALYZED:**	08/09/89
MATRIX TYPE:	Soil		

SAMPLE ID:	CONTROL NO:	RESULTS (mg/kg)	DETECTION LIMIT (mg/kg)
E9-A	890806-1	57,000	5
E9-B	890806-2	77,000	5
E10	890806-3	29,000	5
E11	890806-4	5,100	5

QUALITY CONTROL DATA

CLIENT: Jack Bryant & Associates
PROJECT: Oil Operators' North Site
CKY I.D.: 890806

METHOD 418.1
MATRIX: Soil

SAMPLE ID: 890809-45

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
IR Ref Oil	ND	166	100	99	1

METHOD 418.1
MATRIX: Soil

SAMPLE ID: Blank Spike VI

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
IR Ref Oil	N/A	166	96	N/A	N/A

CLIENT NAME: JKB + ASSOC.

ADDRESS:

PHONE NO.: (213) 769-0900

PROJECT NAME/NO.: OIL OPERATORS - NORTH SITE

CHAIN OF CUSTODY RECORD

Page 1 of 1

Date 4/8/89

Sample Number/Location	Type of Sample: Material	Type of Sample: Method	Type of Container	Type of Preservation: Temp.	Type of Preservation: Chemical	Analysis Required
EQ-A	SOIL	GLASS	GLASS			EPA 418.1
EQ-B	↓	↓	↓			
E10	↓	↓	↓			
E11	↓	↓	↓			

Shipment Method / Special Instructions:

Total No. of Samples Shipped 4 Sampler Signature S. Rao

Relinquished By:
Signature S. Rao
Printed Name RAMESH SANKARESWARAN
Company JKB + ASSOC.
Reason FOR ANALYSIS

Received By:
Signature K. Y. Pang
Printed Name K. Y. PANG
Company CKY

Date 8/4/89
Time 3:10 PM

Relinquished By:
Signature
Printed Name
Company
Reason

Received By:
Signature
Printed Name
Company

Date / /
Time

Relinquished By:
Signature
Printed Name
Company
Reason

Received By:
Signature
Printed Name
Company

Date / /
Time

CKY Incorporated
Analytical Laboratories
3551 Voyager St., Suite 102
Torrance, CA 90503
213-371-0048

Storage/Disposal of Samples:
Samples will be stored at CKY for 30 days at no charge and at $10/sample/month thereafter. Disposal of sample by the laboratory will be charged at $10/sample.

Disposed by Lab. _____ Pick up by client _____

C K Y incorporated
Environmental Services

Date: 08/23/89
890835

Jack Bryant & Associates
460 Carson Plaza Drive, Suite 106
Carson, CA 90746

Attn: Mr. Stan Che

Subject: Laboratory Report
Project: Oil Operators' North 1

Enclosed is the laboratory report for samples received on 08/18/89. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

Method	No. of Analysis
EPA 418.1 (TRPH)	2 Soils

The results are summarized on two pages.

Please feel free to call if you have any questions concerning these results.

Sincerely,

Dr. Kam Pang
Laboratory Director

3551 Voyager St., Suite 102, Torrance, Calif. 90503 • Telephone (213) 371-0048

EPA METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

CLIENT:	Jack Bryant & Associates	**DATE REC'D:**	08/16/89
PROJECT:	Oil Operators' North 1	**DATE EXTRACTED:**	08/21/89
CONTROL NO:	890835	**DATE ANALYZED:**	08/21/89
MATRIX TYPE:	Soil		

SAMPLE ID:	CONTROL NO:	RESULTS (mg/kg)	DETECTION LIMIT (mg/kg)
S1	890835-1	120	5
S2	890835-2	ND	5

QUALITY CONTROL DATA

CLIENT: Jack Bryant & Associates
PROJECT: Oil Operators' North 1
CKY I.D.: 890835

METHOD 418.1
MATRIX: Soil

SAMPLE ID: 890809-45

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
IR Ref Oil	ND	166	100	99	1

METHOD 418.1
MATRIX: Soil

SAMPLE ID: Blank Spike VI

COMPOUND	SAMPLE RESULTS (mg/kg)	AMOUNT SPIKED (mg/kg)	% REC.	DUP. % REC.	RPD
IR Ref Oil	N/A	166	96	N/A	N/A

890835

CLIENT NAME: JACK BRYANT

ADDRESS: 460 CARSON PLAZA DR #106

PHONE NO.: 769 0900

PROJECT NAME/NO.: OIL OPERATORS NORTH

CHAIN OF CUSTODY RECORD

Page 1 of 1

Date 8/18/89

Sample Number/Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
	Material	Method		Temp.	Chemical	
S1	SOIL	GRAB	GLASS	4°C	NONE	418.1
S2	SOIL	GRAB	GLASS	4°C	NONE	418.1

Shipment Method / Special Instructions: PUSH!

Total No. of Samples Shipped 2 Sampler Signature Craig Dryden

Relinquished By:	Received By:	Date
Signature: Craig Dryden	Signature: LaShawn J Robertson	8/18/89
Printed Name: CRAIG DRYDEN	Printed Name: LaShawn Robertson	Time
Company: JACK BRYANT & ASSOC.	Company: CKY	10:09 AM
Reason: ANALYSIS		
Relinquished By:	Received By:	Date
Signature:	Signature:	/ /
Printed Name:	Printed Name:	Time
Company:	Company:	
Reason:		
Relinquished By:	Received By:	Date
Signature:	Signature:	/ /
Printed Name:	Printed Name:	Time
Company:	Company:	
Reason:		

CKY Incorporated
Analytical Laboratories
3551 Voyager St., Suite 102
Torrance, CA 90503
213-371-0048

Storage/Disposal of Samples:
Samples will be stored at CKY for 30 days at no charge and at $10/sample/month thereafter. Disposal of sample by the laboratory will be charged at $10/sample.

Disposed by Lab. _____ Pick up by client _____

JACK K. BRYANT & ASSOCIATES, INC.
CONSULTING ENGINEERS • ARCHITECTS • PLANNERS
ENVIRONMENTAL SCIENTISTS

April 19, 1989

Ref: E-8801

RECEIVED APR 2 1 1989

Mr. Robert R. Pease, P.E.
Senior Air Quality Engineering Manager
South Coast Air Quality Management District
9150 Flair Drive
El Monte, California 91731

SUBJECT: OIL OPERATORS, INC.
RULE 1150 PERMIT NO. 157742

Dear Mr. Pease:

Reference is made to the meeting in the District Office on April 12, 1989. Attending the meeting were:

NAME	ORGANIZATION	PHONE NO.
Stacey M.K. Ebiner	SCAQMD	(818) 572-6318
Robert Pease	SCAQMD	(818) 572-6174
Jay Chen	SCAQMD	(818) 572-6193
Elliott Sernel (AQMD Attorney)	SCAQMD	(818) 572-2050
Mark Pender	Pender Properties	(213) 490-0077
Bill Smiland (Pender Attorney)	Donnelly, Clark etal	(213) 626-0211
Richard Young	Oil Operators	(213) 426-1912
Jack Bryant	JKB & A	(213) 769-0900
Don Best	JKB & A	(213) 769-0900
Stanley Che	JKB & A	(213) 769-0900

Following discussion it is our understanding that the District will extend Permit No. 157742. The conditions of the extended permit will be amended to limit the time period of the permit to any such time as 100,000 cubic yards of the material containing 20,000 ppm of oil or greater have been processed. At any such time the permit will again be extended provided that the material encountered has an absolute vapor pressure below 36 mm of mercury.

460 CARSON PLAZA DRIVE, SUITE 106, CARSON, CA 90746 • (213) 769-0900 • FAX: (213) 769-0055

BACKGROUND

Oil Operators, Inc. a California corporation operated as a cooperative for treating and disposing of oil field waste water has maintained a sump on approximately 14 acres of property located at the northeast quadrant of the intersection of the 110 and 405 freeways. This sump containing some 500,000 cu. yds. of material defined as clay and dirt containing upwards of 90,000 ppm of crude oil has existed since the 1920's.

In 1971-73 Oil Operators, Inc. biodegraded approximately 300,000 cu. yds. of the material. Due to financial limitations, the biodegradation was not completed. The residual material was covered with the processed material and has remained in this condition for the past 15 years.

Extensive testing, initial excavation and correspondence has taken place during the past two years and Oil Operators, Inc. through Pender Properties is now ready to proceed with the soil remediation.

It is now proposed to complete excavation of the processed material, biodegrade the unprocessed material and to replace all the material in a compacted state, thus creating a buildable site.

A remediation test and other work have been conducted as required by Title 22.

Also legal arguments have been presented relating to the extension of Permit No. 157742 and compliance with Rule 1166.

Test data has been submitted showing exemption from Rule 1166. The some 60 years of the sumps existence has permitted the light hydrocarbons to volatilize leaving a heavy material containing crude oil with a vapor pressure below the 36 limit established by Rule 1166.

We trust our request, supported with the appendixed data, will result in the extension of the Rule 1150 Permit upon the conditions discussed at our meeting.

Sincerely,

JACK K. BRYANT AND ASSOCIATES, INC.

Jack K. Bryant

Jack K. Bryant, P.E.
President

JKB/DB/sw-DBS-216

A P P E N D I X

LAND USE

The site is bounded on the northeast by the Pacific Electric Railroad, on the west by the Los Angeles County Flood Control Channel, and on the south by the San Diego Freeway. The Caltrans Pacific Place Maintenance Station lies in the southeast corner. An open area along the western boundary is used for horse riding trails. Los Cerritos Park, used for public recreation, lies directly to the east.

The western edge of the site lies approximately 200 feet east of the berm of the Los Angeles County Flood Control Channel (Los Angeles River), a partial concrete structure. Natural hill slopes on the site have been eliminated by grading and leveling. the west side of the property has an elevation of about 50 feet.

There are several operating oil wells and storage tanks to the northwest of the site. A functioning well is also located on the south side. The southwest area is currently used for pipe and equipment storage. Most of the site is overlain by material that formerly constituted an oil waste sump.

SITE CHARACTERIZATION

A site characterization study was conducted in August 1986. Copies of the report were submitted to SCAQMD, CRWQCB and DOHS.

Ten gas migration probes were drilled on the site and two adjacent to the site in August to assess both the gas being generated and to characterize the sump material. Samples were categorized into six types as determined by their physical characteristics. These are presented below:

Type 1 - Low to medium oil content in a dark silty or sandy clay

Type 2 - Medium to high oil content, with some samples showing liquid oil, in a black silty to sandy clay

Type 3 - Extremely high oil content in an toothpast-like consistency

Type 4 - Very low oil content in a dry blue clay

Type 5 - Very low oil content in a dry grey sand

Type 6 - None to very low oil content in a brown silty sand. These samples were taken from the Los Angeles County Flood Control and Pacific Electric Railroad easements adjacent to the site.

Prior to 1981, the entire parcel was similar to the type 3 material, extremely high oil content in a toothpaste-like consistency. Oil Operators, Inc. had previously embarked on a program to eliminate the sump. A major portion of the material originally constituting the sump has been treated and essentially stabilized. the remaining untreated material constitutes a wedge of wastes underlying the southwestern one-third of the site of the original sump. This wedge is more than 20 feet in thickness at the western side decreasing in thickness toward the southeastern side. Several scattered pockets of oil are also present. Proposed plans call for this untreated material to be mixed with soil and reclaimed as soil using appropriate proven soil stabilization techniques.

Four soil samples were collected with a backhoe and submitted for chemical analysis on April 28, 1986. The chemical analyses ordered included volatile organic hydrocarbons (including benzene, toluene, and xylene), total non-volatile organic hydrocarbons, organic lead, and polychlorinated biphenyls. While no benzene or toluene were found in the samples, low levels of xylene were detected (93 ppm average). Other volatile organic hydrocarbons average 11,158 ppm while non-volatiles averaged 130,200 ppm. Organic lead averaged 3.21 ppm and PCB levels were so low as to be not clearly identifiable. Results are presented in Table 1.

A water sample was obtained from a pocket of perched water located at an 8 foot depth. This sample was analyzed for total petroleum hydrocarbons, PCB's, BTXx, halogenated hydrocarbons, and six separate metals. Results of these analyses are presented in Table 2.

Gas analyses included field testing for lower explosive level concentrations and probe pressures, and laboratory analyses for major gases, GC/halogenated compounds, and BTX. For those probes located on the site, methane concentrations ranged from 12.1 to 83.6 percent with an average lower explosive level typically exceeded 100 percent and the average probe pressure was 0.3 inches of water pressure.

TABLE 1

RESULTS OF BACKHOE SAMPLES OBTAINED APRIL 28, 1986

SAMPLE NO.	1	2	3	4
Benzene (ppm)	[1]ND	ND	ND	ND
Toluene (ppm)	[2]ND	ND	ND	ND
Xylene (ppm)	26	57	289	[3]ND
Other Volatile Organic Hydrocarbons (ppm)	5,940	9,540	21,500	7,650
Non-Volatile Organic Hydrocarbons (ppm)	97,300	122,000	152,000	127,000
Non-Volatile Hydrocarbons (ppm)	103,266	131,597	173,789	134,650
Organic Lead (ppm)	1.77	2.37	1.93	6.77
PCB's (ppm)	[4]NCI<2	NCI<2	NCI<2	NCI<2

[1]ND < 0.05 ppm
[2]ND < 0.1 ppm
[3]ND < 0.1 ppm
[4]NCI - Not Clearly Identifiable.

TABLE 2

RESULTS OF PERCHED WATER ANALYSIS

Total Petroleum Hydrocarbons	=	26	mg/l
PCB's	=	<0.001	mg/l
Benzene	=	0.0094	mg/l
Toluene	=	0.0014	mg/l
Xylene	=	<0.0005	mg/l
Ethylbenzene	=	0.0010	mg/l
Methylene Chloride	=	0.0010	mg/l
1,1-Dichloroethane	=	0.013	mg/l
Cadmium	=	<0.1	mg/l
Chromium	=	5.5	mg/l
Copper	=	7.3	mg/l
Nickel	=	5.5	mg/l
Lead (total)	=	16	mg/l
Zinc	=	18	mg/l

Most recently, a test plot was prepared to demonstrate the feasibility of the biodegradation effort. Raw sump material was analyzed for total petroleum hydrocarbons (EPA Method 418.1), BTXEe (EPA Mmethod 8020), volatile organics (EPA Method 8240), semi-volatile organics, (EPA Method 8270), PCB's pH (EPA 9040), flash point (EPA 1010), CAM metals, and a CAM fish bioassay. All levels for all parameters fell below those specified by the USEPA. Table 3 lists the results of these analyses.

SOIL ATTENUATION PROCESS

Our goal is to reduce the current hydrocarbon contaminants to levels acceptable to the CRWQCB. The first phase will consist of digging out the soil sump material with a front loader and, if necessary, a backhoe, clamshell, or drag line. Strips of material will be removed until clean sand is encountered. This sand will also be removed and used for dilution. The sump material will be moved to an adjacent area for treatment. The clean underlying sand will be piled up in a stockpile area. In the second phase the sump materials will be spread to a depth of approximately 6 inches and serated with a Caterpillar SS-250 In-Place Soil Stabilizer to aerate the material. Fertilizer and oil utilizing bacteria will be added to the material while aerating to stimulate microbial growth. Aeration will continue until the material becomes friable. At this point laboratory analysis will be performed to determine the total residual oil content left in the treated material. If this residual level is greater than what is acceptable by the CRWQCB, clean fill sand which was previously stockpiled will be mixed in with the treatment material to attain this limit. The third phase will consist of replacement of this treated material into the original excavation.

RULE 1150 PERMIT NO. 157742 SUBSTANTIVE CONDITIONS

The above referenced permit provided for 34 conditions of implementation. Of those conditions the following are substative conditions to the issues.

19. Prior to the start of excavation, a minimum of three (3) ambient air sampling stations shall be installed and operational at the locations approved by the District.

20. Ambient air samples shall be collected using the District approved samplers at least once a week over a minimum of an 8-hour period while excavation activities are in progress. Each sample collected shall be

TABLE 3

LABORATORY ANALYSES FOR RAW MATERIAL SAMPLES

ANALYSIS	EPA NUMBER	CONSTITUENT	CONCENTRATION
Total Petroleum Hydrocarbons	418.1	Total Petroleum Hydrocarbons	17,000 ppm
BTXE	8020	Benzene	ND (<0.01ppm)
		Toluene	0.6 ppm
		Xylene	6 ppm
		Ethylbenzene	4 ppm
Volatile Organics	8240	Ethylbenzene	340 ppb
		Total Xylenes	630 ppb
Semi-volatile Organics	8270	All Parameters	ND
PCB's	-	Arochlor-1248	340 ppb
		Arochlor-1260	230 ppb
pH	9040	pH	8.5 pH units
Flash Point	1010	Flash Point	170° F
CAM Metals (TTLC)	6010	Antimony, Total	1.50
	7061	Arsenic, Total	17.
	6010	Barium, Total	17.
	6010	Beryllium, Total	ND (0.05)
	6010	Cadmium, Total	0.79
	6010	Chromium, Tri.	23.
	7169	Chromium, Hex.	ND (1.)
	6010	Cobalt, Total	5.17
	6010	Copper, Total	37.
	6010	Lead, Total	359.
	7471	Mercury, Total	0.74
	6010	Molybdenum, Total	0.50
	6010	Nickel, Total	18.
	7741	Selenium, Total	0.3
	6010	Silver, Total	0.11
	7840	Thallium, Total	5.2
	6010	Vanadium, Total	18.
	6010	Zinc, Total	130.
CAM Bioassay	-	CAM Bioassay	>750 ppm = 96 Hr. LC50

Of all the analyses reported, none exceed the action limits .

properly identified with an ID number and the sampling location, date and time. Each sample shall be analyzed for benzene, toluene, xylenen and halogenated hydrocarbons speciated and quantified by gas chromatography/mass spectrometry within 72 hours of collection. The weather conditions and wind speed and direction during sampling shall also be recorded.

21. All exposed sump material shall be covered with either a minimum of 6 inches of clean soil, approved foam or approved foam and heavy-duty plastic sheeting whenever the excavation is not actively in progress, and at the end of each working day. Foam by itself shall not be used as a night cover if it is raining or rain is predicted by the National Weather Service prior to the next scheduled day of excavation.

22. During excavation, if a considerable number of complaints are received, all work shall cease and the approved mitigation measures shall be implemented immediately. Other mitigation measures which are deemed appropriate by SCAQMD personnel to abate a nuisance condition shall be implemented upon request.

25. During excavation, monitoring for organics as methane using an organic vapor analyzer (OVA) or a TLV sniffer shall be conducted continuously at the property line directly downwind of the excavation and at the working face.

JAYKIM ENGINEERS, INC.

July 18, 1988

68033.01
CRWQCB File No.: 157742
JAYKIM Ref: 6871.06

Mr. J.T. Liu
Water Resource Control Engineer
California Regional Water Quality Control Board
107 South Broadway
Los Angeles, CA 90012-4596

SUBJECT: RESULTS OF TEST PLOT AT OIL OPERATORS NORTH SITE

Dear Mr. Liu:

This document outlines the procedures used in the construction, operation, sampling, and analyses of a test plot at the referenced site. The plot was used to demonstrate the feasibility of biodegrading the hydrocarbon contaminated soil found at the site.

A. Analytical Results for the Land Treatment Area

At this point we have performed a test plot to demonstrate the biodegradation of waste constituents.

On May 31, the area for the test plot was cleared and leveled. Figure 1 shows the location of the test plot within the boundries of the parcel. A TLV combustible vapor detector was used to monitor the soil gas emitted during this operation. All vapor readings were taken at a distance less than 3 inches from the soil surface. Readings were typically less than 10 ppm with the highest readings being about 40 ppm. A system of sprinklers to keep the area moist was constructed.

Six "cells" of approximately 8 feet wide by 50 feet long were laid out with stakes. A rototiller was then used to breakup the soil. Ammonium nitrate and phosphate were broadcast over the cells and tilled into the soil.

On June 3 composite soil samples were obtained from each cell (Figure 2). Following this, oil utilizing bacteria were applied to the plot. Commercially available bacteria were added to warm water (approximately 90 to 100 F) and agitated for 6 hours as per the distributor's instructions. This mixture was added to a 1,000 gallon water tank and sprayed onto cells A through E. Though none was intentionally sprayed on cell F, the breeze carried a minor quantity onto this cell also. The cells were then rototilled and watered so as to blend the bacteria with the soil.

On June 6, a backhoe was used to excavate about 20 cubic yards of oil contaminated soil from the site. Soil was removed to a depth of about 12 to 15 feet. This raw material was mixed with surface soil in approximately a 1:1 ratio. Downwind samples taken at a point about 10 feet from the pile of raw material and about 70 feet from the area where the raw material was being mixed with surface material gave readings of 10 to 30 ppm. Downwind readings taken near the property boundaries showed concentrations of 4 to 6 ppm with no noticeable

10701 Los Alamitos Blvd., Suite 200, Los Alamitos, CA 90720 (213) 596-2755

odor. These low value downwind readings may have been due to the mixing operations but were more probably due to freeway traffic and instrument drift.

The material was then spread on each of the cells and rototilled into the existing soil. Approximately 5 inches of this material was applied to cell A, 3 inches to cells B and C and 6 inches to cells D, E, and F. The oil content of A, B, and C appeared heavier then D, E, and F, however F had a large quantity of asphalt in the soil and E had a lesser quantity. The plot was then rototilled to mix the material into the underlying soil. The effective depth of the rototiller, however, precluded a good mix. Composite samples were then obtained from each cell (Figure 3). Laboratory results are reported in Table 1.

The operation schedule specifies that cells A and D be mixed twice daily, B and E four time daily, and C and F six times daily. This procedure was carried out on June 6 with the rototiller, and on June 8, 9, and 10 with a Caterpillar SS-250 In-Place Soil Stabilizer. Composite soil samples from each cell were taken on June 9, 10, and 13 (Figures 4, 5, and 6). All samples were obtained about 6 inches beneath the surface. Samples were analyzed for total petroleum hydrocarbons using EPA Method 418.1. Laboratory results are presented in Table 1.

TABLE 1

LABORATORY ANALYSES FOR COMPOSITE SOIL SAMPLES

	Times Mixed Daily	*June 3	June 6	June 9	June 10	June 13
TP-A	2	840	800	2,300	770	770
TP-B	4	140	970	530	510	390
TP-C	6	680	1,700	910	480	180
TP-D	2	46	130	140	220	160
TP-E	4	44	1,900	3,100	3,000	1,000
TP-F	6	31,000	3,200	12,000	8,700	1,300

*Before oil sludge was added to the test plot.

It should be noted that cell F contained a large quantity of crushed asphalt and cell E had a lesser quantity.

The results of the test plot show that the treatment process works most effectively with more mixing. While the cells mixed twice daily (A and D) show little if any improvement, the cells mixed twice daily (B and E) showed marked improvement and the cells mixed six times daily (C and F) show improvement by an order of magnitude even in the asphalt contaminated cells.

Test cells E and F show higher concentrations of hydrocarbon on June 9 and 10 then on June 6, most likely because the mixer pulverized the asphalt in the soil. After pulverization the asphalt chunks could not be removed from the sample. However, even the asphalt degraded with continued mixing. The high reading on June 9 for cell A may have also been due to asphalt or an unmixed piece of oil sludge. Formal laboratory results are included in Appendix A.

Results of the test are positive and clearly show the benefits of mixing and aeration.

B. **Analytical Results for Sump Soil Monitoring**

The pile of raw material was sampled for analyses. Samples were taken in laboratory supplied jars and a 3 gallon sealable bucket. Samples in jars were then placed in an ice chest with Blue Ice. All samples were delivered to State certified laboratory the same day for analyses. The analyses included total petroleum hydrocarbons (EPA 418.1), BTXE, volatile organics, semi-volatile organics, PCB's, pH, flash point, CAM metals, and a fish bioassay. Analyses results for those parameters detected are presented in Table 2.

TLV combustible vapor reading were taken for this raw material also. The probe was held directly (less than 1/2 inch) up to the mound of excavated material at various locations. Vapor readings were on the order of 200 to 300 ppm.

If you need further information please contact us at (213) 596-2755.

Sincerely,

JAYKIM ENGINEERS, INC.

Todd Bernall Bryant
Environmental Engineer

Jack K. Bryant
Professional Engineer

REGISTERED PROFESSIONAL ENGINEER · JACK KERNALL BRYANT · STATE OF CALIFORNIA

TB/JKB/YP

TB6Y1018

TABLE 2

LABORATORY ANALYSES FOR RAW MATERIAL SAMPLES

ANALYSIS	EPA NUMBER	CONSTITUENT	CONCENTRATION
Total Petroleum Hydrocarbons	418.1	Total Petroleum Hydrocarbons	17,000 ppm
BTXE	8020	Benzene	ND (<0.01ppm)
		Toluene	0.6 ppm
		Xylene	6 ppm
		Ethylbenzene	4 ppm
Volatile Organics	8240	Ethylbenzene	340 ppb
		Total Xylenes	630 ppb
Semi-volatile Organics	8270	All Parameters	ND
PCB's	-	Arochlor-1248	340 ppb
		Arochlor-1260	230 ppb
pH	9040	pH	8.5 pH units
Flash Point	1010	Flash Point	170° F
CAM Metals (TTLC)	6010	Antimony, Total	1.50
	7061	Arsenic, Total	17.
	6010	Barium, Total	17.
	6010	Beryllium, Total	ND (0.05)
	6010	Cadmium, Total	0.79
	6010	Chromium, Tri.	23.
	7169	Chromium, Hex.	ND (1.)
	6010	Cobalt, Total	5.17
	6010	Copper, Total	37.
	6010	Lead, Total	359.
	7471	Mercury, Total	0.74
	6010	Molybdenum, Total	0.50
	6010	Nickel, Total	18.
	7741	Selenium, Total	0.3
	6010	Silver, Total	0.11
	7840	Thallium, Total	5.2
	6010	Vanadium, Total	18.
	6010	Zinc, Total	130.
CAM Bioassay	-	CAM Bioassay	>750 ppm = 96 Hr. LC50

Of all the analyses reported, none exceed the action limits .

FIGURE 1
LOCATION OF TEST PLOT

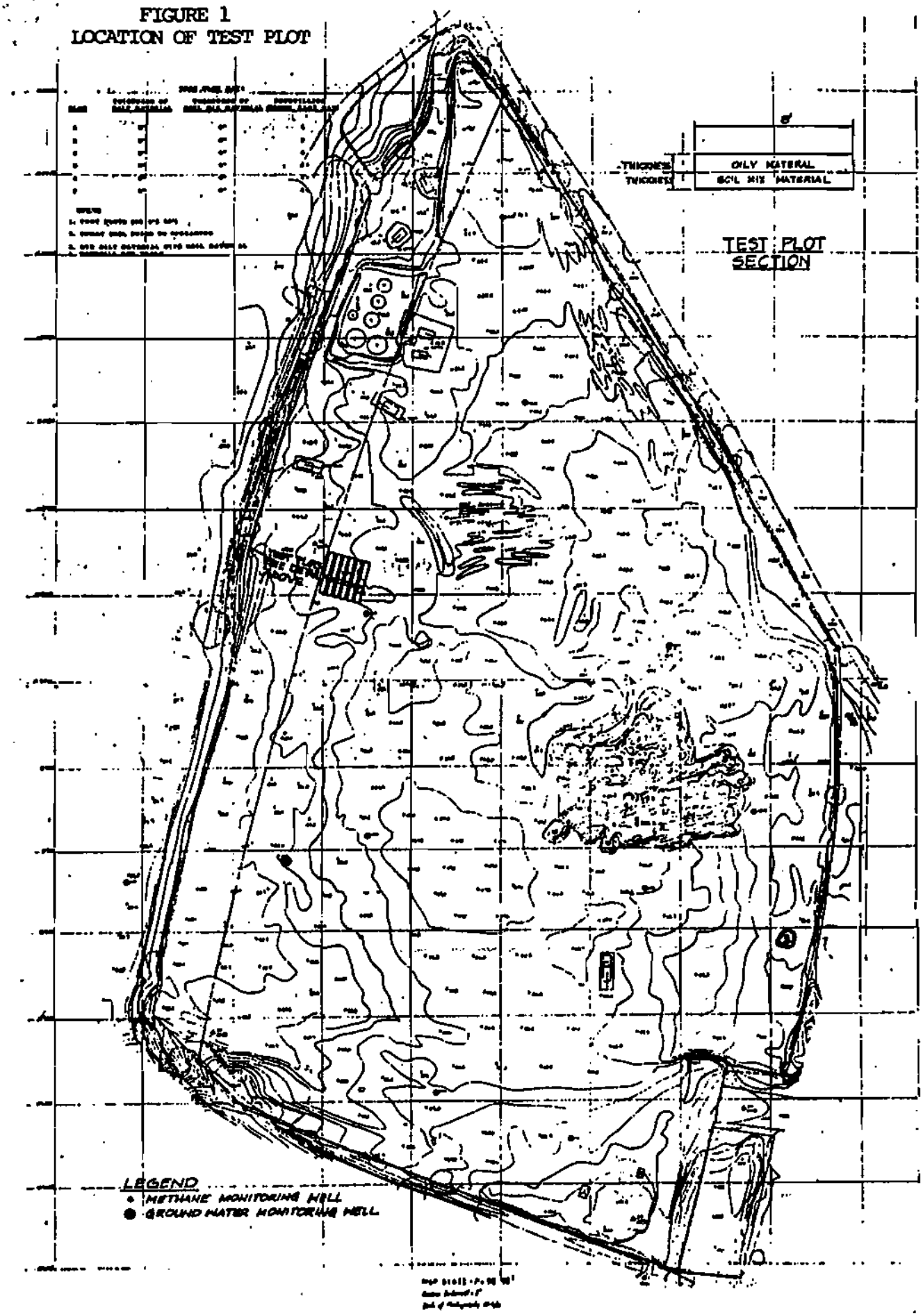
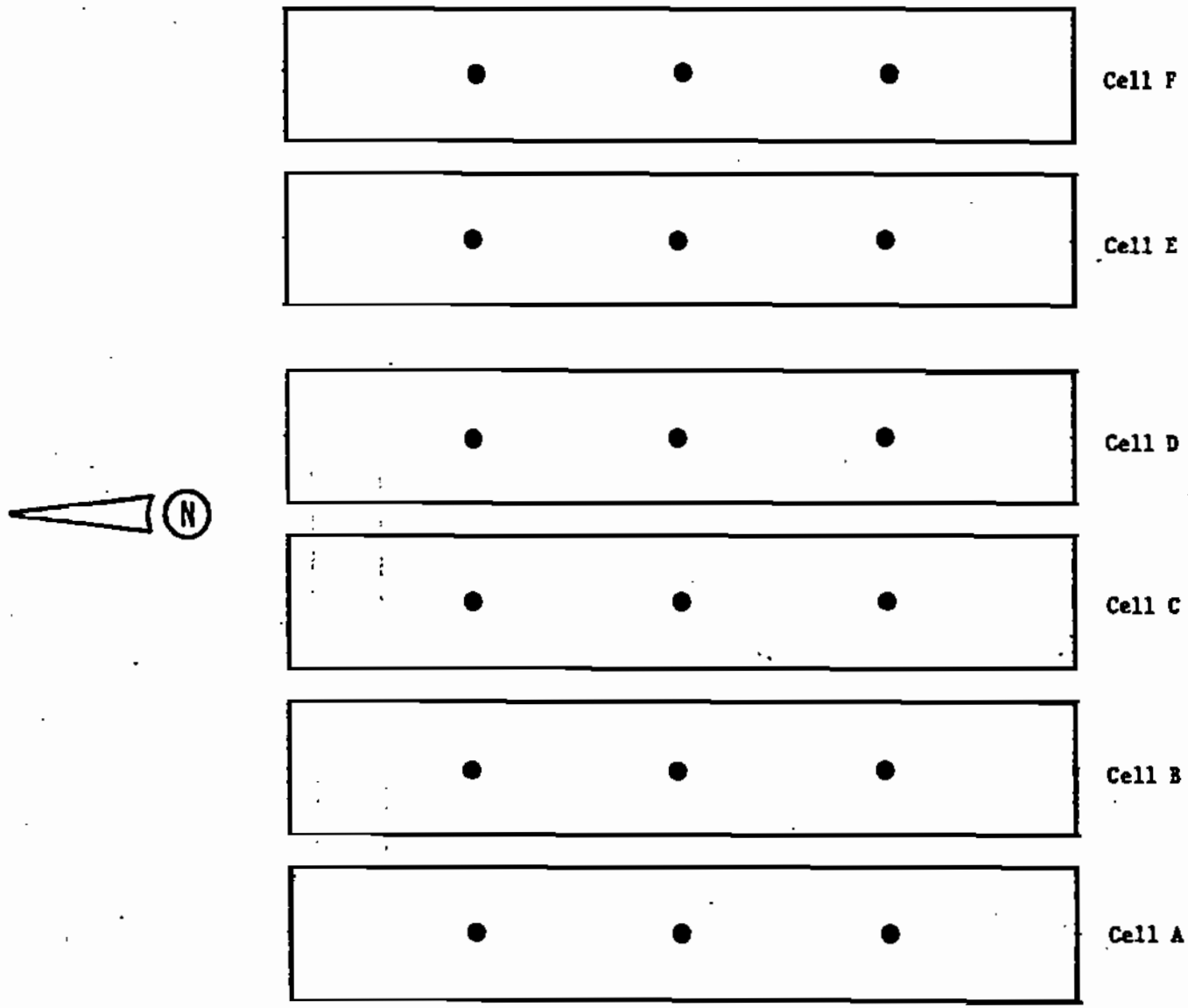
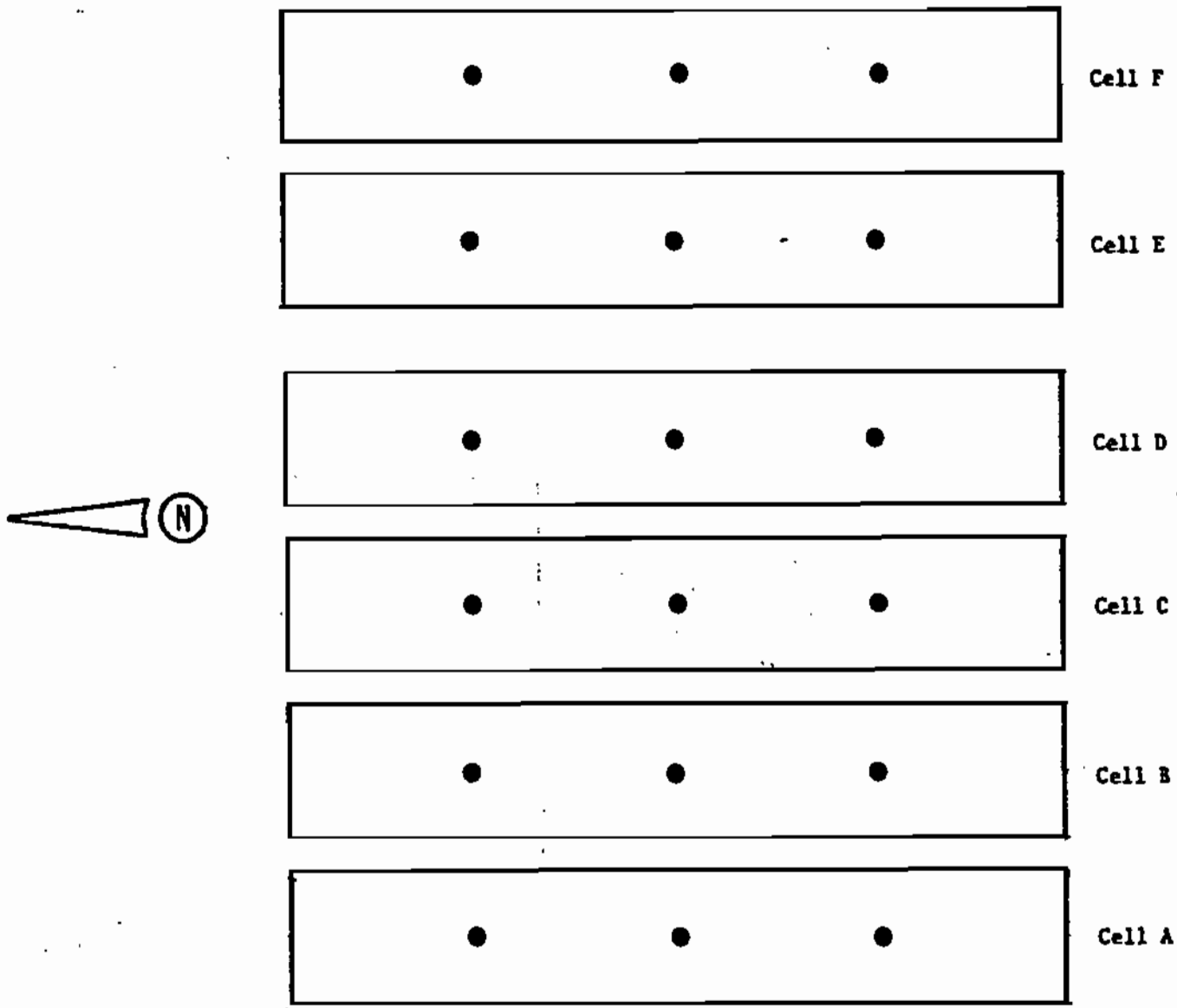


FIGURE 2
SOIL SAMPLE LOCATIONS
JUNE 3, 1988



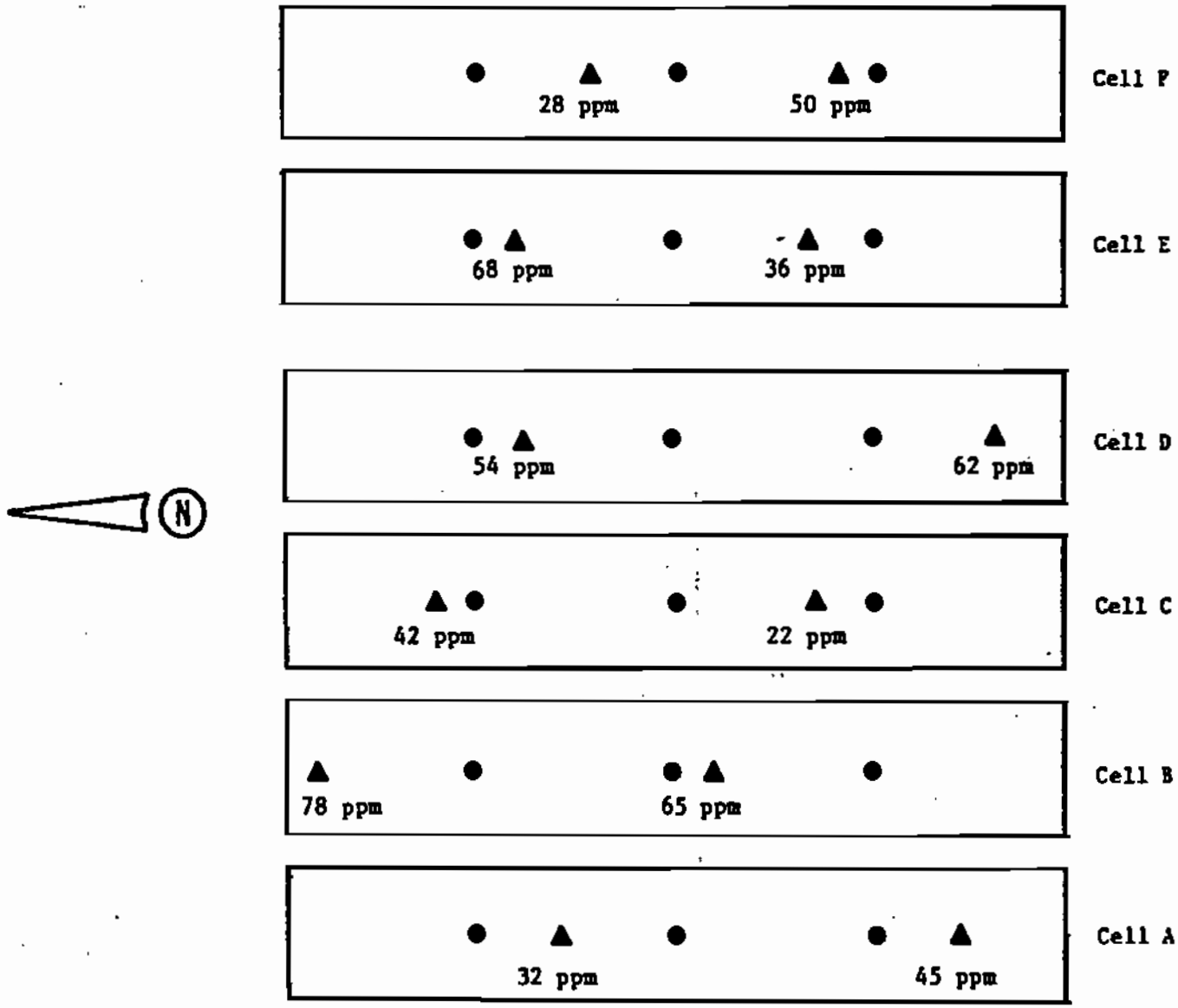
● Composite sample location.

FIGURE 3
SOIL SAMPLE LOCATIONS
JUNE 6, 1988



● Composite sample location.

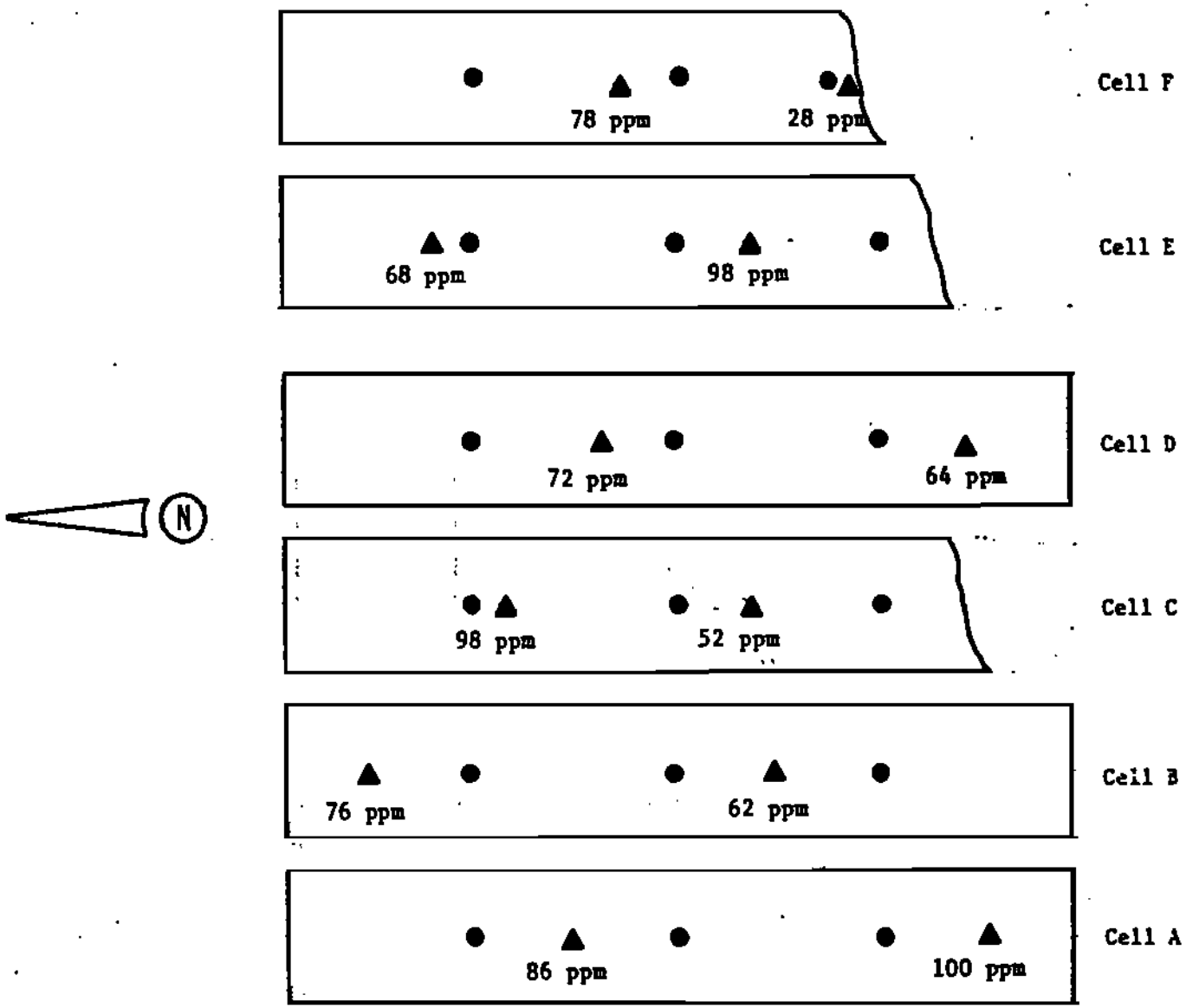
FIGURE 4
SOIL SAMPLE LOCATIONS
JUNE 9, 1988



● Composite sample location.

▲ TLV combustible vapor reading location.

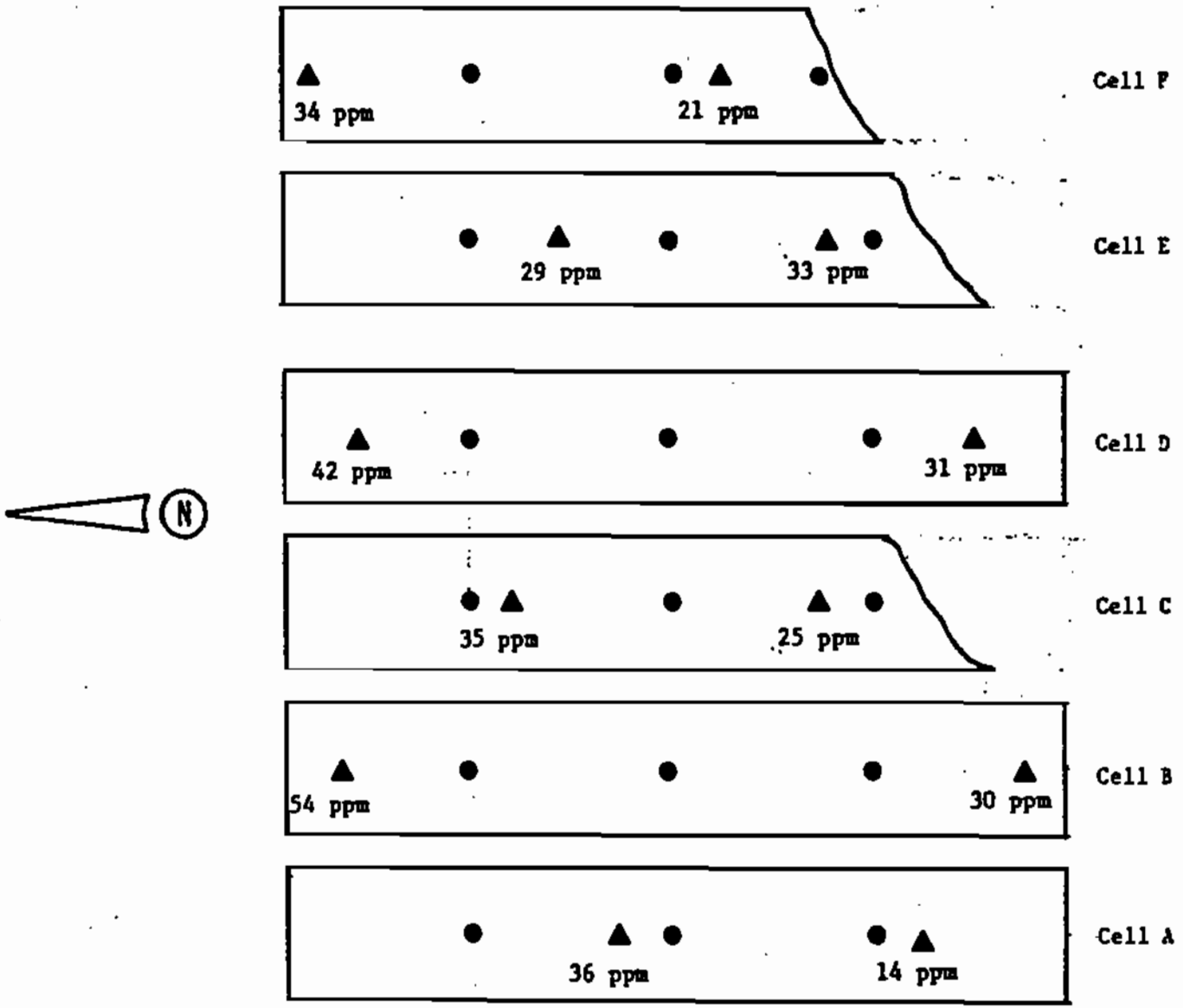
FIGURE 5
SOIL SAMPLE LOCATIONS
JUNE 10, 1988



● Composite sample location.

▲ TLV combustible vapor reading location.

FIGURE 6
SOIL SAMPLE LOCATIONS
JUNE 13, 1988



● Composite sample location.

▲ TLV combustible vapor reading location.

APPENDIX A

FORMAL LABORATORY RESULTS FOR TEST PLOT SAMPLES

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0488

LABORATORY REPORT

JAYKIM ENGINEERS, INC.
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Dr. Todd Brody

ANALYSIS NO.: 815519-001/006
ANALYSES: EPA Method 418.1
DATE SAMPLED: 06/03/88
DATE SAMPLE REC'D: 06/03/88
DATE ANALYZED: 06/09/88
SAMPLE TYPE: Solid
PROJECT: CRG 68033.01

SAMPLE IDENTIFICATION	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS EPA METHOD 418.1 (mg/kg)
TP-1A	840.
TP-1B	140.
TP-1C	680.
TP-1D	46.
TP-1E	44.
TP-1F	3,100.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-8370 • (213) 598-0458

LABORATORY REPORT

JAYKIM ENGINEERS
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Mr. Todd Brody

ANALYSIS NO.: 815814-001/008
ANALYSES: EPA Method 418.1
DATE SAMPLED: 06/06/88
DATE SAMPLE REC'D: 06/06/88
DATE ANALYZED: 06/11/88
SAMPLE TYPE: Solid
PROJECT: CRG #68033.01

SAMPLE IDENTIFICATION	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS EPA Method 418.1 (mg/kg)
RM - 1	17,000.
TP - 2A	800.
TP - 2B	970.
TP - 2C	1,700.
TP - 2D	130.
TP - 2E	1,900.
TP - 2F	3,200.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
SOUTHERN CALIFORNIA DIVISION
7440 Lincoln Way ● Garden Grove, CA 92641
(714)898-8370 ● FAX: (714)891-8917 ● (800)LAB-1CRL

LABORATORY REPORT

JAYKIM ENGINEERS, INC.
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Todd Brody

ANALYSIS NO.: 816226-001/006
ANALYSES: EPA Method 418.1
DATE SAMPLED: 06/09/88
DATE SAMPLE REC'D: 06/09/88
DATE ANALYZED: 06/17/88
SAMPLE TYPE: Solid
PROJECT: 68033.01 CRG

SAMPLE IDENTIFICATION	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS EPA METHOD 418.1 (mg/kg)
TP-3A	2,300.
TP-3B	530.
TP-3C	910.
TP-3D	140.
TP-3E	3,100.
TP-3F	12,000.

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
SOUTHERN CALIFORNIA DIVISION
7440 Lincoln Way ● Garden Grove, CA 92641
(714)898-8370 ● FAX: (714)891-5817 ● (800)LAB-1CRL

LABORATORY REPORT

JAYKIM ENGINEERS, INC.
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Todd Brody

ANALYSIS NO.: 816227-001/006
ANALYSES: EPA Method 418.1
DATE SAMPLED: 06/10/88
DATE SAMPLE REC'D: 06/10/88
DATE ANALYZED: 06/17/88
SAMPLE TYPE: Solid
PROJECT: 68033.01 CRG

SAMPLE IDENTIFICATION	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS EPA METHOD 418.1 (mg/kg)
TP-4A	770.
TP-4B	510.
TP-4C	480.
TP-4D	220.
TP-4E	3,000.
TP-4F	8,700.

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
SOUTHERN CALIFORNIA DIVISION
7440 Lincoln Way • Garden Grove, CA 92641
(714)898-6370 • FAX: (714)891-5917 • (800)LAB-1CRL

LABORATORY REPORT

Jaykim Engineers
10701 Los Alamitos Blvd.,Ste 200
Los Alamitos, CA 90720
ATTN: Mr. Todd Brody

ANALYSIS NO.: 815507-001/006
ANALYSES: EPA Method 418.1
DATE SAMPLED: 06/13/88
DATE SAMPLE REC'D: 06/13/88
DATE ANALYZED: 06/20/88
SAMPLE TYPE: Solid
PROJECT: CRG/68033.01

SAMPLE IDENTIFICATION	TOTAL PETROLEUM HYDROCARBONS EPA METHOD 418.1 (mg/kg)
TP-5A	770.
TP-5B	390.
TP-5C	180.
TP-5D	160.
TP-5E	1,100.
TP-5F	1,300.

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

CHAIN OF CUSTODY RECORD

Client name: Jenkins Engineers | Job number: 6E077.01

Project name: CRG

Sampler(s): Todd Brady

Sample number	Date sampled	Time sampled	Type Composite or Grab	Sample description	Number of containers	Analyses required: EPA 418.1	Hazardous sample / special handling required	Remarks
TP-1A	6/3/88	2:30	C	Soil Sample	1	✓		Mix Samples
TP-1B	"	2:35	C	" "	1	✓		well be Composited
TP-1C	"	2:40	C	" "	1	✓		analyses
TP-1D	"	2:45	C	" "	1	✓		
TP-1E	"	2:50	C	" "	1	✓		
TP-1F	"	2:55	C	" "	1	✓		

	Signature	Company	Date	Time
Relinquished by	Todd Brady	Jenkins Engineers	6/3/88	4:45 pm
Received by	[illegible]	CRL	6/3/88	4:45 pm
Relinquished by				
Received by				
Relinquished by				
Received by				

CHAIN OF CUSTODY RECORD

Client name: Jenkins | Job number: 6F032.01

Project name: CRG

Sampler(s): Todd Brady

Sample number	Date sampled	Time sampled	Type Composite or Grab	Sample description	Number of containers	Analyses required: EPA 418.1	CAM metals	PCB's	EPA 8240	EPA 8270	pH	Flash Point	EPA 8020	Remarks
RM-1	6/6/88	8:20	G	Soil Sample in Jars	G	✓	✓	✓	✓	✓	✓	✓	✓	
RM-2	6/6/88	8:30	G	Soil Sample in plastic jar	1	→							→	Fish Bioassay
TP-2A	6/6/88	12:10	C	Soil Sample	1	✓								Mix Samples
TP-2B	6/6/88	12:15	C	Soil Sample	1	✓								well before
TP-2C	6/6/88	12:20	C	Soil Sample	1	✓								analyses
TP-2D	6/6/88	12:25	C	Soil Sample	1	✓								
TP-2E	6/6/88	12:30	C	Soil Sample	1	✓								
TP-2F	6/6/88	12:35	C	Soil Sample	1	✓								

	Signature	Company	Date	Time
Relinquished by	[signature]	Jenkins Engineers CRL	6/6/88	4:25 pm
Received by	[signature]		6/6/88	4:25 pm
Relinquished by				
Received by				
Relinquished by				
Received by				

CHAIN OF CUSTODY RECORD

Client name: Jenkins Engineers
Job number: 6F033.01
Project name: CRG
Sampler(s): Todd Brody

Sample number	Date sampled	Time sampled	Type Composite or Grab	Sample description	Number of containers	EPA 418.1	Hazardous sample / Special handling required	Remarks
TP-3A	6/9/88	2:15	C	Soil Sample	1	✓		Mix well
TP-3B	6/9/88	2:20	C	" "	1	✓		before analyses
TP-3C	6/9/88	2:25	C	" "	1	✓		
TP-3D	6/9/88	2:30	C	" "	1	✓		
TP-3E	6/9/88	2:35	C	" "	1	✓		
TP-3F	6/9/88	2:40	C	" "	1	✓		
								HOLD SAMPLES
								Proceed with analyses
								Todd Brody 6/10/88 4:20

	Signature	Company	Date	Time
Relinquished by	Todd Brody	Jenkins Engineers	6/9/88	5:00 pm
Received by	[illegible]	CRL	6/9/88	5:00 pm
Relinquished by				
Received by				
Relinquished by				
Received by				

CHAIN OF CUSTODY RECORD

Client name: Jaykin Engineers

Job number: 68033.01

Project name: CRG

Sampler(s): Todd Brody

Sample number	Date sampled	Time sampled	Type Composite or Grab	Sample description	Number of containers	Analyses required: EPA 418.1	Hazardous sample Special handling required	Remarks
TP-4A	6/10/88	1:20	C	Soil Sample	1	✓		Mix well before
TP-4B	6/10/88	1:25	C	" "	1	✓		analysis
TP-4C	6/10/88	1:30	C	" "	1	✓		
TP-4D	6/10/88	1:35	C	" "	1	✓		
TP-4E	6/10/88	1:40	C	" "	1	✓		
TP-4F	6/10/88	1:45	C	" "	1	✓		

	Signature	Company	Date	Time
Relinquished by	Todd Brody	Jaykin Engineers	6/10/88	4:20 pm
Received by	Don Binder	CRL	6/10/88	4:20 PM
Relinquished by				
Received by				
Relinquished by				
Received by				

CHAIN OF CUSTODY RECORD

Client name: Jenkins Engineers | Job number: 68033.01

Project name: CRC

Sampler(s): Todd Rudy

Sample number	Date sampled	Time sampled	Type Composite or Grab	Sample description	Number of containers	Analyses required: EVA 4/8015							Hazardous sample special handling required	Remarks
TP-5A	6/13/88	8:15	C	Soil Sample	1	✓								M.W. well below analyses
TP-5B	6/13/88	8:20	C	" "	1	✓								
TP-5C	6/13/88	8:25	C	" "	1	✓								
TP-5D	6/13/88	8:30	C	" "	1	✓								
TP-5E	6/13/88	8:35	C	" "	1	✓								
TP-5F	6/13/88	8:40	C	" "	1	✓								

	Signature	Company	Date	Time
Relinquished by		Jenkins & Engineers CRL	6/13/88	4:45 pm
Received by			6/13/88	4:45 pm
Relinquished by				
Received by				
Relinquished by				
Received by				

APPENDIX B

FORMAL LABORATORY RESULTS FOR SUMP MATERIAL

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 596-0458

LABORATORY REPORT

JAYKIM ENGINEERS
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Mr. Todd Brody

ANALYSIS NO.: 815814-001/008
ANALYSES: EPA Method 418.1
DATE SAMPLED: 06/06/88
DATE SAMPLE REC'D: 06/06/88
DATE ANALYZED: 06/11/88
SAMPLE TYPE: Solid
PROJECT: CRG #68033.01

SAMPLE IDENTIFICATION	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS EPA Method 418.1 (mg/kg)
RM - 1	17,000.
TP - 2A	800.
TP - 2B	970.
TP - 2C	1,700.
TP - 2D	130.
TP - 2E	1,900.
TP - 2F	3,200.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458

LABORATORY REPORT

JAYKIM ENGINEERS
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Mr. Todd Brody

ANALYSIS NO.: 815814-001
ANALYSES: EPA Method 8020
DATE SAMPLED: 06/06/88
DATE SAMPLE REC'D: 06/06/88
DATE ANALYZED: 06/09/88
SAMPLE TYPE: Solid
PROJECT: CRG #68033.01

BTX EPA Method 8020, (mg/kg)

SAMPLE ID	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
RM - 1	ND(0.1)	0.6	4.	6.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-9320 • (213) 598-0454

LABORATORY REPORT

JAYKIM ENGINEERS
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Mr. Todd Brody

SAMPLE ID: RM - 1

ANALYSIS NO.: 815814-001
ANALYSES: EPA Method 8240
DATE SAMPLED: 06/06/88
DATE SAMPLE REC'D: 06/06/88
DATE ANALYZED: 06/16/88
SAMPLE TYPE: Solid
PROJECT: CRG #68033.01

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(500.)	1,2-Dichloropropane	ND(200.)
Bromomethane	ND(500.)	Trans-1,3-Dichloropropene	ND(200.)
Vinyl Chloride	ND(500.)	Trichloroethene	ND(200.)
Chloroethane	ND(500.)	Dibromochloromethane	ND(200.)
Methylene Chloride	ND(200.)	1,1,2-Trichloroethane	ND(200.)
Acetone	ND(500.)	Benzene	ND(200.)
Carbon Disulfide	ND(200.)	cis-1,3-Dichloropropene	ND(200.)
1,1-Dichloroethene	ND(200.)	2-Chloroethylvinyl ether	ND(500.)
1,1-Dichloroethane	ND(200.)	Bromoform	ND(200.)
Trans-1,2-Dichloroethene	ND(200.)	4-Methyl-2-Pentanone	ND(500.)
Chloroform	ND(200.)	2-Hexanone	ND(500.)
1,2-Dichloroethane	ND(200.)	Tetrachloroethene	ND(200.)
2-Butanone	ND(5,000.)	1,1,2,2-Tetrachloroethane	ND(200.)
1,1,1-Trichloroethane	ND(200.)	Toluene	ND(200.)
Carbon Tetrachloride	ND(200.)	Chlorobenzene	ND(200.)
Vinyl Acetate	ND(500.)	Ethylbenzene	340.
Bromodichloromethane	ND(200.)	Styrene	ND(200.)
		Total Xylenes	630.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0459

LABORATORY REPORT

JAYKIM ENGINEERS
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Mr. Todd Brody

SAMPLE ID: RM - 1

ANALYSIS NO.: 815814-001
ANALYSES: EPA Method 8270
DATE SAMPLED: 06/06/88
DATE SAMPLE REC'D: 06/06/88
DATE ANALYZED: 06/20/88
SAMPLE TYPE: Solid
PROJECT: CRG #68033.01

EPA METHODS 625/8270 SEMI-VOLATILE ORGANICS

	(mg/kg)		(mg/kg)
Phenol	ND(7.)	Acenaphthene	ND(7.)
bis(2-Chloroethyl)ether	ND(7.)	2,4-Dinitrophenol	ND(30.)
2-Chlorophenol	ND(7.)	4-Nitrophenol	ND(30.)
1,3-Dichlorobenzene	ND(7.)	Dibenzofuran	ND(7.)
1,4-Dichlorobenzene	ND(7.)	2,4-Dinitrotoluene	ND(7.)
Benzyl Alcohol	ND(7.)	2,6 Dinitrotoluene	ND(7.)
1,2-Dichlorobenzene	ND(7.)	Diethylphthalate	ND(7.)
2-Methylphenol	ND(7.)	4-Chlorophenyl-phenylether	ND(7.)
bis(2-chloroisopropyl)ether	ND(7.)	Fluorene	ND(7.)
4-Methylphenol	ND(7.)	4-Nitroaniline	ND(30.)
N-Nitroso-Di-n-Propylamine	ND(7.)	4,6-Dinitro-2-Methylphenol	ND(30.)
Hexachloroethane	ND(7.)	N-Nitrosodiphenylamine (1)	ND(7.)
Nitrobenzene	ND(7.)	4-Bromophenyl-phenylether	ND(7.)
Isophorone	ND(7.)	Hexachlorobenzene	ND(7.)
2-Nitrophenol	ND(7.)	Pentachlorophenol	ND(30.)
2,4-Dimethylphenol	ND(7.)	Phenanthrene	ND(7.)
Benzoic Acid	ND(7.)	Anthracene	ND(7.)
bis-(2-Chloroethoxy)methane	ND(30.)	Di-n-Butylphthalate	ND(7.)
2,4-Dichlorophenol	ND(7.)	Fluoranthene	ND(7.)
1,2,4-Trichlorobenzene	ND(7.)	Pyrene	ND(7.)
Naphthalene	ND(7.)	Butylbenzylphthalate	ND(7.)
4-Chloroanline	ND(7.)	3,3-Dichlorobenzidine	ND(10.)
Hexachlorobutadiene	ND(7.)	Benzo(a)Anthracene	ND(7.)
4-Chloro-3-Methylphenol	ND(7.)	bis(2-Ethylhexyl)Phthalate	ND(7.)
2-Methylnaphthalene	ND(7.)	Chrysene	ND(7.)
Hexachlorocyclopentadiene	ND(7.)	Di-n-Octyl Phthalate	ND(7.)
2,4,6-Trichlorophenol	ND(7.)	Benzo(b)Fluoranthene	ND(7.)
2,4,5-Trichlorophenol	ND(7.)	Benzo(k)Fluoranthene	ND(7.)
2-Chloronaphthalene	ND(7.)	Benzo(a)Pyrene	ND(7.)
2-Nitroaniline	ND(30.)	Indeno(1,2,3-cd)Pyrene	ND(7.)
Dimethyl Phthalate	ND(7.)	Dibenz(a,h)Anthracene	ND(7.)
Acenaphthylene	ND(7.)	Benzo(g,h,i)Perylene	ND(7.)
3-Nitroaniline	ND(30.)		

NOTE: Higher detection limits are due to sample matrix.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0488

LABORATORY REPORT

JAYKIM ENGINEERS	ANALYSIS NO.: 815814-001
10701 Los Alamitos Blvd., Suite 200	ANALYSES: PCB's
Los Alamitos, CA 90720	DATE SAMPLED: 06/06/88
ATTN: Mr. Todd Brody	DATE SAMPLE REC'D: 06/06/88
	DATE ANALYZED: 06/21/88
SAMPLE ID: RM - 1	SAMPLE TYPE: Solid
	PROJECT: CRG #68033.01

POLYCHLORINATED BIPHENYLS (PCB'S)

PARAMETERS	RESULTS, in (ug/kg)
Aroclor - 1016	ND(160.)
Aroclor - 1221	ND(160.)
Aroclor - 1232	ND(160.)
Aroclor - 1242	ND(160.)
Aroclor - 1248	340.
Aroclor - 1254	ND(160.)
Aroclor - 1260	230.

NOTE: Higher detection limits due to sample matrix.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458

LABORATORY REPORT

JAYKIM ENGINEERS
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Mr. Todd Brody

ANALYSIS NO.: 815814-001
ANALYSES: EPA Methods 1010, 9040
DATE SAMPLED: 06/06/88
DATE SAMPLE REC'D: 06/06/88
DATE ANALYZED: 06/13/88
SAMPLE TYPE: Solid
PROJECT: CRG #68033.01

SAMPLE IDENTIFICATION	pH EPA METHOD 9040 (pH)	FLASH POINT EPA Method 1010 (Degree F)
RM - 1	8.5	170.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 569-0454

LABORATORY REPORT

JAYKIM ENGINEERS
10701 Los Alamitos Blvd., Suite 200
Los Alamitos, CA 90720
ATTN: Mr. Todd Brody

SAMPLE ID: RM - 1

ANALYSIS NO.: 815814-001
ANALYSES: CAM METALS (TTLC)
DATE SAMPLED: 06/06/88
DATE SAMPLE REC'D: 06/06/88
DATE ANALYZED: 06/08-14/88
SAMPLE TYPE: Solid
PROJECT: CRG #68033.01

The following analytical determinations were conducted according to the guideline set forth in the California Administrative Code, Title 22, Chapter 30, Article II (January 12, 1985). The analyses were performed on a total sample digestion.

PARAMETERS		TTLC RESULTS (mg/kg)	Ca. Admin. Code Standard STLC (mg/L)	TTLC (mg/kg)
Antimony, Total	(EPA 6010)	1.50	15.	500.
Arsenic, Total	(EPA 7061)	17.	5.	500.
Barium, Total	(EPA 6010)	17.	100.	10,000.
Beryllium, Total	(EPA 6010)	ND(0.05)	0.75	75.
Cadmium, Total	(EPA 6010)	0.79	1.	100.
Chromium, Tri.	(EPA 6010)	23.	560.	2,500.
Chromium, Hex.	(EPA 7196)	ND(1.)	5.	500.
Cobalt, Total	(EPA 6010)	5.17	80.	8,000.
Copper, Total	(EPA 6010)	37.	25.	2,500.
Lead, Total	(EPA 6010)	359.	5.	1,000.
Mercury, Total	(EPA 7471)	0.74	0.2	20.
Molybdenum, Total	(EPA 6010)	0.50	350.	3,500.
Nickel, Total	(EPA 6010)	18.	20.	2,000.
Selenium, Total	(EPA 7741)	0.3	1.	100.
Silver, Total	(EPA 6010)	0.11	5.	500.
Thallium, Total	(EPA 7840)	5.2	7.	700.
Vanadium, Total	(EPA 6010)	18.	24.	2,400.
Zinc, Total	(EPA 6010)	130.	250.	5,000.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Chemical Research Laboratories, Inc.
VENTURA DIVISION
2810 Bunsen Avenue ● Ventura, CA 93003
(805)648-2735 ● FAX: (805)648-2755 ● (805)650-0546

CRL-Garden Grove
7440 Lincoln Way
Garden Grove, CA 92641

06/28/88

Attn: Cindy
714/898/2125

Project: Jaykim Engineers

Sample #: 8159150000 Collector: Client
Received: 06/07/88 Sampling Date & Time: 06/06/88, ****
Smpling. Method: Not Specified

I.D.: 815814-002M: RM-2

-CAM Bioassay- Fathead Minnow >750 mg/L =96Hr.LC50

Respectfully submitted,

Laboratory Director

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

CHAIN OF CUSTODY RECORD

Client name: Jacobs

Job number: 6F037.01

Project name: CRC

Sampler(s): Todd Kunkle

Sample number	Date sampled	Time sampled	Type Composite or Grab	Sample description	Number of containers	Analyses required	Remarks
RM-1	6/6/88	8:20	G	Soil Sample in Jar	6	✓	
RM-2	6/6/88	8:30	G	Soil Sample in plastic bag	1	→	Fish Bioassay
TP-2A	6/6/88	12:10	C	Soil Sample	1	✓	Mix Samples well before analyses
TP-2B	6/6/88	12:15	C	Soil Sample	1	✓	
TP-2C	6/6/88	12:20	C	Soil Sample	1	✓	
TP-2D	6/6/88	12:25	C	Soil Sample	1	✓	
TP-2E	6/6/88	12:30	C	Soil Sample	1	✓	
TP-2F	6/6/88	12:35	C	Soil Sample	1	✓	

	Signature	Company	Date	Time
Relinquished by	[signature]	Jacobs	6/6/88	4:25 pm
Received by	[signature]	CRC	6/6/88	4:25 pm
Relinquished by				
Received by				
Relinquished by				
Received by				

Jack Bryant Test Plot Study

8 x 50 ft. plots mixed with 6" clean soil

Test Plot	Sludge Layer(in.)	Disking Times Daily	Results TPH mg/kg (418.1) 6/3	6/6	6/9	6/10	6/13
A	5	2	840	800	2300	770	770
B	3	4	140	970	530	510	390
C	3	6	680	1700	910	480	180
D	6	2	46	130	140	220	160
E	6	4	44	1900	3100	3000	1100
F	6	4	3100	3200	12000	8700	1300

1) Henry F
2) FILE

JAYKIM ENGINEERS, INC.

June 6, 1988

CRWQCB FILE # 87-54
JAYKIM REF: 68033.01

Mr. Jim Ross
California Regional Water Quality Control Board
Los Angeles Region
107 South Broadway, Suite 4027
Los Angeles, CA 90012-4596

SUBJECT: 72-HOUR NOTICE TO PROCEED WITH LANDFARMING ACTIVITIES AT OIL OPERATORS NORTH SITE IN LONG BEACH

Dear Mr. Ross:

In response to the regulatory requirement to notify appropriate agencies 48-72 hours in advance of proceeding with landfarming activities at Oil Operators North Site in Long Beach, the following information is submitted in compliance with this specification.

Oil Operators, Inc. is located at 712 West Baker Street in Long Beach. Appropriate permits and variances have been attained to land treat oily soil from sumps north of the premises in order to reclaim and reuse the soil on site for future development.

The land treatment operation is to commence at the facility on May 31, 1988. The attached grid, Figure 1, indicates how the operation will proceed and a schedule of activities.

The first phase of the treatment program is to conduct a test plot of the proposed treatment to ensure the adequacy of the method on the contaminated soil. The test plot will be comprised of six individual 8 foot by 50 foot test plots to encompass a total area size of approximately 50 feet by 50 feet. Each plot will consist of a 6 inch layer of clean soil with varying quantities of sludge mixed in it. Nitrogen sulfate and nitrogen phosphate were added to the test plots, beneath the clean soil on May 31, 1988. Oil utilizing bacteria were applied to each plot (except F which is used as a control plot), also beneath the contaminated soil, on June 3. The oily contaminated sludge will be added atop this mixture of fertilizer, bacteria, and clean soil. The mixture will be disked daily, the number of times per day varying per plot.

The following table summarizes the test plot study:

Plot	Size (ft)	Sludge Layer (in)	Disking Times/Day
A	8 X 50	5	2
B	8 X 50	3	4
C	8 X 50	3	6
D	8 X 50	6	2
E	8 X 50	6	4
F	8 X 50	6	4

10701 Los Alamitos Blvd., Suite 200, Los Alamitos, CA 90720 (213) 596-2755

JAYKIM ENGINEERS, INC.

May 27, 1988 Ref:68033.01

Mr. Fred Tornatore
State Department of Health Services
Toxic Substances Control Division
Alternative Technology
400 P Street, 4th Floor
Sacramento, CA 95814

SUBJECT: LONG BEACH - BIOREMEDIATION OF CRUDE OIL CONTAMINATED SOIL

Dear Mr. Tornatore:

In accordance with your verbal approval given in a telephone conversation, we are proceeding with the test biodegradation plot at the Oil Operators North Site in the City of Long Beach. Land preparation (without the addition of oil) will begin on Tuesday, May 31, 1988.

The land plot to be utilized for the test will be located as shown on the enclosed map. There are to be 6 sections measuring 8 ft. X 50 ft. each with 5 feet of separation between each section.

The initial preparation of the earth will consist of rototilling the soil in each section to a depth of six inches, adding water, adding nutrients and finally adding freeze dried commercially available bacteria. These preparations will take 7 days.

On Tuesday, June 7, 1988, it is planned to excavate a limited amount of the oily material, spread this material in varying amounts onto each of the individual sections and rototill the spread material into the underlying prepared soil. Each section will receive varying rototilling efforts.

Samples for laboratory analysis will be taken at intervals to test for total petroleum hydrocarbons and bacterial activity.

10701 Los Alamitos Blvd., Suite 200, Los Alamitos, CA 90720 (213) 596-2755

LEGEND

● METHANE MONITORING WELL

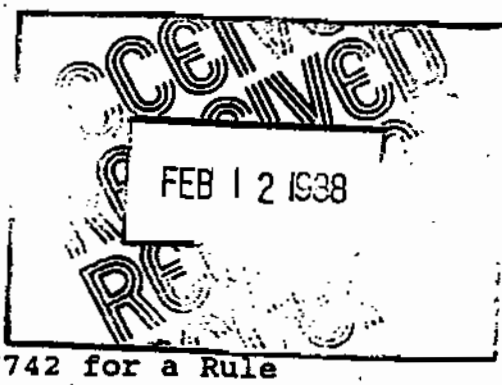
◉ GROUND WATER MONITORING WELL

South Coast
AIR QUALITY MANAGEMENT DISTRICT
9150 FLAIR DRIVE, EL MONTE, CA 91731 (818) 572-6200

6871.06

February 11, 1988

Oil Operators, Inc.
712 West Baker Street
Long Beach, CA 90806



Attention: Mr. Elton Oliver

Gentlemen:

Rule 1150 Excavation Permit

Reference is made to your Application No. 157742 for a Rule 1150 Excavation Permit for the removal, landfarming and backfilling of waste oil sump material at the North Site at 712 West Baker Street, Long Beach, CA. 90806. Please be advised that this Excavation Permit is granted under Rule 1150 of the Rules and Regulations of the South Coast Air Quality Management District and is subject to the following conditions:

1. THIS EXCAVATION SHALL BE CONDUCTED IN COMPLIANCE WITH ALL PLANS AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. FOR PURPOSES OF THIS PERMIT, EXCAVATION SHALL INCLUDE EXCAVATION, LANDFARMING AND BACKFILLING OPERATIONS, EXCEPT CONDITION NUMBERS 25, 26 AND 27.

3. THIS EXCAVATION PERMIT IS VALID UNTIL FEBRUARY 10, 1989. AN EXTENSION MAY BE GRANTED UPON WRITTEN REQUEST. SUCH A REQUEST WILL INCLUDE THE REASONS THE EXTENSION IS REQUIRED, THE LENGTH OF THE EXTENSION, AND THE STATUS OF THE EXCAVATION TO DATE.

4. THE SCAQMD SHALL BE NOTIFIED IN WRITING WHEN THE EXCAVATION COMMENCES AND WHEN IT IS COMPLETED. SUCH NOTIFICATIONS SHALL OCCUR AT LEAST TWO DAYS PRIOR TO THE COMMENCEMENT AND WITHIN FIVE DAYS AFTER THE COMPLETION OF THE EXCAVATION.

5. THIS EXCAVATION PERMIT IS VALID ONLY FOR THE REMOVAL AND LANDFARMING OF APPROXIMATELY 700,000 CUBIC YARDS OF EXCAVATED MATERIAL INCLUDING APPROXIMATELY 200,000 CUBIC YARDS OF UNTREATED WASTE OIL SUMP MATERIAL.

6. EXCAVATION SHALL NOT BE CONDUCTED BETWEEN THE HOURS OF 6 P.M. AND 7 A.M. OR ON SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS.

7. EXCAVATION SHALL NOT BE CONDUCTED ON DAYS WHEN THE SCAQMD FORECASTS SECOND OR THIRD STAGE EPISODES FOR AREA NUMBER 4. EPISODE FORECASTS FOR THE FOLLOWING DAY CAN BE OBTAINED BY CALLING (800) 445-3826 OR (800) 242-4666.

8. EXCAVATION SHALL NOT BE CONDUCTED ON DAYS WHEN THE SCAQMD REQUIRES COMPANIES IN AREA NUMBER 4 TO IMPLEMENT THEIR SECOND OR THIRD STAGE EPISODE PLANS. AREA NUMBERS REQUIRED TO IMPLEMENT THEIR EPISODE PLANS CAN BE DETERMINED FOR THE NEXT DAY BY CALLING (800) 445-3826 OR (800) 242-4666.

9. EXCAVATION SHALL NOT BE CONDUCTED WHEN THE WIND SPEED IS GREATER THAN 15 M.P.H. AVERAGE (OVER 15 MINUTES) OR THE WIND SPEED INSTANTANEOUSLY EXCEEDS 25 M.P.H.

10. DURING EXCAVATION, ALL WORKING AREAS, EXCAVATED MATERIAL AND UNPAVED ROADWAYS SHALL BE WATERED DOWN UNTIL THE SURFACE IS MOIST AND THEN MAINTAINED IN A MOIST CONDITION TO MINIMIZE DUST.

11. EXCAVATED MATERIAL EXCEPT REFUSE SHALL NOT BE TRANSPORTED OFFSITE. ALL WASTE OIL SUMP MATERIAL SHALL BE TREATED AND BACKFILLED ONSITE. EXCAVATED REFUSE NOT SUITABLE FOR ON-SITE TREATMENT SHALL BE PROPERLY DISPOSED OF AT A LEGAL DISPOSAL SITE.

12. ALL EXCAVATED REFUSE TO BE HAULED OFFSITE SHALL BE TRANSPORTED IN TRUCK BEDS OR TRAILERS WHICH ARE COVERED WITH AN IMPERMEABLE COVER, WITH SUCH COVERS TIED DOWN. ALL SEAMS AND OTHER AREAS SHALL BE SEALED TO PREVENT ANY MATERIAL FROM ESCAPING DURING TRANSPORTATION.

13. WHEN LOADING IS COMPLETED AND DURING TRANSPORT, NO MATERIAL SHALL BE EXTENDED ABOVE THE SIDES OR REAR OF THE TRUCK OR TRAILER WHICH WILL HAUL THE EXCAVATED REFUSE.

14. THE EXCAVATED ODOROUS REFUSE SHALL NOT BE STOCKPILED ON SITE. THIS MATERIAL SHALL BE DEPOSITED DIRECTLY INTO THE TRUCKS WHICH WILL HAUL IT OFF-SITE.

15. FOR PURPOSES OF THIS PERMIT, REFUSE IS DEFINED AS HOUSEHOLD/COMMERCIAL TRASH, UNCONTAMINATED INERT SOLIDS, AND OTHER MATERIAL THAT CANNOT BE LANDFARMED AS APPROVED BY THE DISTRICT.

16. ALL CONSTRUCTION EQUIPMENT AND TRUCKS (INCLUDING TIRES) COMING IN CONTACT WITH THE EXCAVATED MATERIAL SHALL BE CLEANED OFF PRIOR TO LEAVING THE EXCAVATION SITE.

17. THE EXCAVATION, LANDFARMING, AND BACKFILLING OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE GRID LOCATIONS(FIGURE 3) AND THE OPERATING SCHEDULE(FIGURE 4) OF THE REVISED EXCAVATION MANAGEMENT PLAN UNLESS OTHERWISE APPROVED BY THE DISTRICT. ALL LANDFARMING OPERATIONS SHALL ONLY BE CONDUCTED ON GRID AREAS B, D, F AND H.

18. DURING EXCAVATION, WIND SPEED AND DIRECTION SHALL BE CONTINUOUSLY MONITORED AND RECORDED AT A SITE APPROVED BY THE DISTRICT.

19. PRIOR TO THE START OF EXCAVATION, A MINIMUM OF THREE(3) AMBIENT AIR SAMPLING STATIONS SHALL BE INSTALLED AND OPERATIONAL AT THE LOCATIONS APPROVED BY THE DISTRICT.

20. AMBIENT AIR SAMPLES SHALL BE COLLECTED USING THE DISTRICT APPROVED SAMPLERS AT LEAST ONCE A WEEK OVER A MINIMUM OF AN 8-HOUR PERIOD WHILE EXCAVATION ACTIVITIES ARE IN PROGRESS. EACH SAMPLE COLLECTED SHALL BE PROPERLY IDENTIFIED WITH AN ID NUMBER AND THE SAMPLING LOCATION, DATE AND TIME. EACH SAMPLE SHALL BE ANALYZED FOR BENZENE, TOLUENE, XYLENE AND HALOGENATED HYDROCARBONS SPECIATED AND QUANTIFIED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY WITHIN 72 HOURS OF COLLECTION. THE WEATHER CONDITIONS AND WIND SPEED AND DIRECTION DURING SAMPLING SHALL ALSO BE RECORDED.

21. ALL EXPOSED SUMP MATERIAL SHALL BE COVERED WITH EITHER A MINIMUM OF 6 INCHES OF CLEAN SOIL, APPROVED FOAM OR APPROVED FOAM AND HEAVY-DUTY PLASTIC SHEETING WHENEVER THE EXCAVATION IS NOT ACTIVELY IN PROGRESS, AND AT THE END OF EACH WORKING DAY. FOAM BY ITSELF SHALL NOT BE USED AS A NIGHT COVER IF IT IS RAINING OR RAIN IS PREDICTED BY THE NATIONAL WEATHER SERVICE PRIOR TO THE NEXT SCHEDULED DAY OF EXCAVATION.

22. DURING EXCAVATION, IF A CONSIDERABLE NUMBER OF COMPLAINTS ARE RECEIVED, ALL WORK SHALL CEASE AND THE APPROVED MITIGATION MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. OTHER MITIGATION MEASURES WHICH ARE DEEMED APPROPRIATE BY SCAQMD PERSONNEL TO ABATE A NUISANCE CONDITION SHALL BE IMPLEMENTED UPON REQUEST.

23. IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING THE EXCAVATION, THE EXCAVATION SHALL CEASE IMMEDIATELY AND ALL EXPOSED MATERIALS SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL. THE EXCAVATION SHALL NOT RECOMMENCE UNTIL AFTER MITIGATION MEASURES FOR HANDLING THE HAZARDOUS WASTE HAVE BEEN SUBMITTED TO AND APPROVED BY THE DISTRICT AND OTHER APPROPRIATE GOVERNMENTAL AGENCIES.

24. ALL MATERIALS THAT ARE LISTED AS HAZARDOUS BY A FEDERAL OR STATE AGENCY SHALL BE CONSIDERED "HAZARDOUS MATERIALS" FOR THE PURPOSE OF THIS PERMIT.

25. DURING EXCAVATION, MONITORING FOR ORGANICS AS METHANE USING AN ORGANIC VAPOR ANALYZER (OVA) OR A TLV SNIFFER SHALL BE CONDUCTED CONTINUOUSLY AT THE PROPERTY LINE DIRECTLY DOWNWIND OF THE EXCAVATION AND AT THE WORKING FACE.

26. IF THE OVA OR TLV SNIFFER SHOWS A SUSTAINED (GREATER THAN 2 MINUTES) READING OF 2000 PPMV OR GREATER AT THE WORKING FACE, THE AREA GENERATING THE EMISSIONS SHALL IMMEDIATELY BE COMPLETELY COVERED WITH A MINIMUM OF 6 INCHES OF CLEAN DIRT OR AN APPROVED FOAM AND THE FOLLOWING ACTIONS IMPLEMENTED:

    A. EXCAVATION OF THE AFFECTED AREA SHALL NOT RECOMMENCE UNTIL THE ORGANIC READINGS ARE BELOW 500 PPMV.

    B. EXCAVATION OF THE AFFECTED AREA SHALL BE CONDUCTED IN SUCH A MANNER AS TO LIMIT THE WORKING FACE TO LESS THAN 2000 SQUARE FEET OR OTHER SMALLER AREA DEEMED APPROPRIATE BY SCAQMD PERSONNEL TO REDUCE NUISANCE POTENTIAL.

27. IF THE OVA OR TLV SNIFFER SHOWS A SUSTAINED (GREATER THAN 2 MINUTES) READING OF 200 PPMV OR GREATER AT THE PROPERTY LINE, THE EXCAVATION SHALL CEASE AND THE APPROVED MITIGATION MEASURES IMPLEMENTED IMMEDIATELY. THE EXCAVATION SHALL NOT RESUME UNTIL THE READINGS ARE BELOW 100 PPMV.

28. THE ENTIRE SURFACE OF THE AFFECTED LANDFARMING MATERIAL SHALL BE MONITORED USING AN OVA OR TLV SNIFFER WITHIN ONE(1) HOUR AFTER SPREADING, DISKING, MIXING AND OTHER LANDFARMING OPERATIONS. IN CONDUCTING THE SURFACE MONITORING, THE SAMPLING PROBE SHALL BE PLACED WITHIN THREE(3) INCHES ABOVE THE LANDFARMING MATERIAL.

29. IF THE OVA OR TLV SNIFFER MONITORING OF THE LANDFARMING AREA SHOWS A READING OF 200 PPM OR GREATER, THE APPROVED MITIGATION MEASURES SHALL BE IMPLEMENTED FOR THE AFFECTED AREA IMMEDIATELY. THE LANDFARMING OPERATIONS SHALL NOT RESUME AT THE AFFECTED AREA UNTIL THE READINGS ARE BELOW 200 PPM.

30. ALL LIMITS SPECIFIED IN CONDITION NUMBERS 26, 27 AND 29 MAY BE RE-EVALUATED AND MODIFIED BY AN SCAQMD REPRESENTATIVE.

31. ALL MONITORS SHALL BE CALIBRATED DAILY OR EACH DAY THEY WILL BE OPERATED USING A METHOD APPROVED BY THE DISTRICT.

32. IF A DISTINCT ODOR (LEVEL III OR GREATER) RESULTING FROM THE EXCAVATION IS DETECTED AT OR BEYOND THE PROPERTY LINE, THE EXCAVATION SHALL CEASE AND THE APPROVED MITIGATION MEASURES IMPLEMENTED IMMEDIATELY. ODOR LEVELS WILL BE DETERMINED BY SCAQMD PERSONNEL OR ON-SITE SAFETY COORDINATOR IN THE ABSENCE OF SCAQMD PERSONNEL.

33. WITHIN TWO(2) WEEKS AFTER THE START OF EXCAVATION AND MONTHLY THEREAFTER, A MONTHLY PROGRESS REPORT SHALL BE SUBMITTED TO THE DISTRICT. THE PROGRESS REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING INFORMATION:

    A. WORK COMPLETED DURING THE REPORT PERIOD,
    B. WORK PLANNED FOR THE FOLLOWING REPORT PERIOD,
    C. RESULTS OF THE AMBIENT AIR SAMPLING AND ANALYSES INCLUDING ALL SAMPLE IDENTIFICATION DATA AND WEATHER AND WIND DATA DURING SAMPLING.
    D. INCIDENTS WHEN THE OVA OR TLV MONITORING EXCEEDED THE SPECIFIED ACTION LEVELS AND ODOR INCIDENTS, AND THE MITIGATION MEASURES IMPLEMENTED. RECORDS SHALL INDICATE CONCENTRATION, DATE, TIME AND LOCATION; AND ACTIVITY DURING EACH EXCEEDANCE.

34. MITIGATION MEASURES, OTHER THAN THOSE INDICATED IN THESE CONDITIONS, WHICH ARE DEEMED APPROPRIATE BY SCAQMD PERSONNEL AS NECESSARY TO PROTECT THE COMFORT, REPOSE, HEALTH OR SAFETY OF THE PUBLIC, SHALL BE IMPLEMENTED UPON REQUEST.

Other governmental agencies may require approval before any excavation begins. It shall be the responsibility of the applicant to obtain that approval. The South Coast Air Quality Management District shall not be responsible or liable for any losses because of measures required or taken pursuant to the requirements of this approved Excavation Management Plan.

If you have any questions concerning this Permit, please call Mr. Jay Chen at (818) 572-6193.

Very truly yours,

William J. Dennison
Director of Engineering

Mohsen Nazemi, P.E.
Supervising A.Q. Engineer

JC

cc: Todd Brody, Jaykim Engineers ✓

February 11, 1988
~~October 17, 1987~~

PROPOSED RULE 1166 - VOLATILE ORGANIC COMPOUND EMISSIONS FROM DECONTAMINATION OF SOIL

(a) **Applicability**

This rule limits the emission of Volatile Organic Compounds (VOC) from soil contaminated with such VOC as a result of leakage from storage and transfer facilities, from accidental spillage, or other deposition.

(b) **Definitions**

(1) VOC-contaminated Soil is a soil which ~~a contains~~ registers 50 ppm or greater of Volatile Organic Compound when measured at a distance of up to three inches from the surface with an organic vapor analyzer (calibrated as hexane).

(2) VOC-contaminated Soil Mitigation Measures are those in which VOC is removed from VOC-contaminated soil by any process or such soil is removed from the site.

(3) Volatile Organic Compound (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates , ammonium carbonate, 1,1,1-trichloroethane, methylene chloride, trifluoromethane (FC-23), trichlorotrifluoroethane (CFC-113), dichlorodifluoromethane (CFC-112), trichlorofluoromethane (CFC-11), chlorodifluoromethane (CFC-22), dichlorotetrafluoroethane (CFC-114), and chloropentafluoroethane (CFC-115).

~~(4) Volatile Organic Compound Content is the measured concentration in parts of VOC by weight per million parts of soil by weight (PPM WT) of organic compounds volatilized from a composite soil sample collected~~

RECEIVED
MAY 05 1988

~~and analyzed using EPA methods described in SW-846, September 1986, or equivalent. Specific Environmental Protection Agency (EPA) methods include: 5030 purge and trap for extraction of VOC from contaminated soil, 8010 8015, and 8020 for VOC content determination.~~

(c) Requirements

A person treating or handling VOC-contaminated soil ~~after (60 days after date of adoption)~~ shall:

(1) Notify the Executive Officer by telephone within 24 hours of detection of VOC-contaminated soil

(2) Implement VOC-contaminated soil mitigation measures, as approved by the Executive Officer, to include, but not limited to, at least one of the following:

(A) Install and operate, an underground VOC collection and disposal system ~~prior to excavation in accordance with Rules 1150, 1150.1, and 1150.2.~~

(B) Excavate VOC-contaminated soil and transport to:

(i) a facility for incineration of VOC at an off-site location.

(ii) an appropriate landfill ~~for containment of VOC contaminated soil.~~

(C) Collect and ~~destroy~~ dispose of the VOC from the excavated soil on-site using equipment approved by the Executive Officer.

(D) Install and operate a biological degradation system approved by the Executive Officer.

(E) Perform an equivalent VOC-contaminated soil mitigation measure previously approved by the Executive Officer.

In no case will these methods include on-site or off-site spreading of

con. inated soil to enhance uncontroll. evaporation of VOC to the atmosphere , except as provided in subparagraph (d)(7).

(d) Exemptions

(1) Treatment of less than one (1) cubic yard of contaminated soil.

(2) ~~Evaporation from Soil~~ containing ~~of volatile~~ organic compounds that have initial boiling points of 302°F or greater provided that soil is not heated.

(3) Soil removed for sampling purposes.

(4) Accidental spillage of five (5) gallons or less of VOC.

(5) Emergency soil decontamination excavation performed by, under the jurisdiction of, or pursuant to the requirements of, an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer. Whenever possible, the Executive Officer shall be notified prior to commencing such excavation.

(6) Soil which is contaminated by VOC from oil and gas wells ~~and~~ or other sources which exist in nature such as natural seepage.

(7) Landfarming and landspreading operations provided that no VOC or VOC-bearing material is deposited.

(8) Soil containing ~~volatile~~ organic compounds having a Reid vapor pressure (RVP) less than 80 mm HGg (1.55 pounds per square inch), or an absolute vapor pressure (AVP) less than 36 mm Hg (0.7 psi) at 20°C.

JAYKIM ENGINEERS, INC.

January 22, 1988 Ref: 6871.06

Mr. Elton Oliver
Oil Operators, Inc.
712 West Baker Street
Long Beach, CA 90801

SUBJECT: REVISIONS TO THE RULE 1150 EXCAVATION PERMIT FOR LANDFARMING THE NORTH SITE

Dear Elton:

On January 20, 1988 I contacted Jay Chen of the South Coast Air Quality Management District regarding the conditions stated in the draft of the Rule 1150 Excavation Permit. Mr. Chen contacted me on January 22 to state that the District has made some concessions to our operation. I have addressed these below. Please refer to your copy of the permit when reviewing these changes.

5. The acceptable hours of excavation have now been extended until 6 p.m. (formerly 5 p.m.). Weekends and holidays are still not permissible.

6&7. First stage smog alerts have been removed from each of these conditions.

8. I was not able to change wind speed conditions. The District's reasoning is that 1) the wind rarely maintains an average velocity greater than 15 mph, 2) they feel that very little time will be lost due to the rare occurrences of the wind exceeding the referenced speeds, and 3) they feel that if the wind does exceed the referenced speeds there will be dust generated.

10. The District is modifying the permit to allow for the removal of debris.

17. If a considerable number of complaints (three) are received, an inspector from the District will come to the site and evaluate the conditions.

21, 22, &24. Sniffer reading limitations may be adjusted at the discretion of the District if we find them to be intolerable during actual operations.

21B. In the event that the sniffer exceeds the specified limit, the working face will be limited to 2,000 square feet.

10701 Los Alamitos Blvd., Suite 200, Los Alamitos, CA 90720 (213) 596-2755

Mr. Chen would like the draft to be finalized as soon as possible. I informed him that we needed a few days to review these changes and I would contact him on Tuesday, January 26.

Please review these changes and get back to me before this time. If you have any questions, please call me at (213) 596-2755.

Sincerely,

JAYKIM ENGINEERS, INC.

Todd Brody
Environmental Engineer

Jack K. Bryant
Project Manager

TB/JKB/cd

tb4c-614

cc: William Sulentor
Bob Davis

GEOFON

TABLE OF CONTENTS

1.0	INTRODUCTION		1
	1.1	General	1
	1.2	Proposal Development	1
	1.3	Site History	1
	1.4	Previous Geotechnical Studies	1
	1.5	Purpose of Investigation	2
	1.6	Exclusions	2
2.0	SCOPE OF WORK		3
3.0	SITE CONDITIONS		4
	3.1	Surface Conditions	4
	3.2	Subsurface Materials	4
	3.3	Groundwater	6
	3.4	Seismic Considerations	7
4.0	CONCLUSIONS AND RECOMMENDATIONS		8
	4.1	General	8
	4.2	Earthwork	9
		4.2.1 Clearing and Stripping	9
		4.2.2 Excavations	9
		4.2.3 Subgrade Preparation	10
		4.2.4 Material for Fill	10
		4.2.5 Placement and Compaction Fills	11
		4.2.6 Shrinkage and Subsidence	12
		4.2.7 Observation and Testing	12
	4.3	Foundations	12
		4.3.1 Foundation Type	12
		4.3.2 Allowable Bearing Pressures	13
		4.3.3 Minimum Footing Size	13
		4.3.4 Minimum Footing Embedment	13
		4.3.5 Estimated Settlements	13
		4.3.6 Lateral Load Resistance	14
		4.3.7 Foundation Concrete	14

4.4	Building Floor Slabs	14
4.5	Lateral Earth Pressures	15
4.6	Drainage	15
4.7	Corrosion Potential for Metallic Utility Lines	16
4.8	Trench/Wall Backfill	16
4.9	Exterior Concrete and Masonry Flatwork	16
4.10	Paved Areas	16
4.11	Post-Report Geotechnical Input	18
5.0 LIMITATIONS		19

APPENDICES

A Exploratory Boring Results

B Laboratory Test Results

LIST OF FIGURES

Figure No.

1	Location Map
2	Site Plan
3	Simplified Subsurface Sections A-A' and B-B'
4	Simplified Subsurface Sections C-C' and D-D'

Appendix A

A-1	Key for Soil Exploration Logs
A-2 through A-13	Logs of Borings
A-14	Schematic Drawing - Gas Monitoring Probe Detail

Appendix B

B-1	Plasticity Data
B-2 through B-5	Consolidation Test Data
B-6	Compaction Test Results

1.0 INTRODUCTION

1.1 General

This report presents the results of a geotechnical investigation performed by GEOFON for the proposed State Wide Business Park. The project site encompasses approximately 14 acres of land on the north side of the San Diego freeway west of the Los Angeles River Flood Control Channel in Long Beach. The general site location is shown on Figure 1.

1.2 Proposal Development

The proposed project will be a light industrial development consisting of nine one-story structures. The total building floor area will be about 285,000 square feet. Other site developments will include paved access streets and parking areas as well as utility lines. Structural information was not available at the time our investigation was performed. For our evaluations we assumed maximum column loads of 60 kips and maximum wall loads of 3 kips per lineal foot.

1.3 Site History

We understand that the site was used as a sump in the past to store drilling mud and other waste materials generated from oil production operations. The configuration of the sumps was changed over the years. In the late 1970's, a partial clean-up operation was undertaken. Land farming methods were applied to neutralize the oil, reduce the moisture content, and compact the sump materials. Detailed records are not available for either the sump modifications or the clean-up operations.

1.4 Previous Geotechnical Studies

Two preliminary geotechnical investigations were previously performed by Earth Technology Corporation (reports dated August 1983 and January 1984). These investigations were aimed at assessing the feasibility of supporting light industrial structures on the sump materials. The results of these two studies indicated that the majority of sump materials were too compressible to directly support structures. Data from these two studies have been used in the preparation of this report.

1.5 Purpose of Investigation

The primary purpose of this investigation is to provide a thorough evaluation of the subsurface conditions at the site described herein in relation to the design and construction of the proposed business park development.

1.6 Exclusions

This report does not include any environmental assessments related to the sump materials at the site. We understand that environmental evaluations related to impacts from gases and chemical substances that may be present at the site are being performed by others. Our geotechnical evaluations and recommendations are based on the assumption that the sump materials will not be considered hazardous or toxic from an environmental point of view.

2.0 SCOPE OF WORK

Our scope of work for this investigation consisted of field exploration, laboratory testing, engineering analysis, and the preparation of this report.

Hollow stem auger borings were used to obtain soil samples for laboratory testing, to visually classify soil types, level of oil contamination, and to confirm the depth of sump materials. Twelve borings were drilled at the site to depths ranging from 21.5 to 41.5 feet below existing grades. Borings B-1 through B-10 were drilled within the sump area. Borings B-11 and B-12 were drilled beyond the sump boundary. The approximate locations of these borings are shown in Figure 2, Site Plan. A description of the field procedures and logs of the borings are presented in Appendix A.

Laboratory soil tests were performed on selected representative samples as an aid in classification and to evaluate the engineering properties of the soils. The laboratory testing program included determinations of natural moisture content/dry density, optimum moisture content and maximum dry density (modified proctor compaction), Atterberg Limits, compressibility characteristics (consolidation), and chemical characteristics (soluble sulfate and total soluble salt contents). Laboratory testing procedures and results are summarized in Appendix B.

Engineering evaluations were performed to provide earthwork criteria, foundation design parameters, and preliminary pavement sections. As part of these evaluations, we reviewed historical aerial photographs and old topographic maps provided by Oil Operators. The results of our evaluations are presented in the remainder of this report.

3.0 SITE CONDITIONS

3.1 Surface Conditions

At the time of our field investigation the ground surface at the site was relatively flat, with the exception of a few soil piles located near the central parts of the site. The ground surface over most of the site was devoid of vegetation and had evidence of oil seeps. Localized areas at the site had shallow vegetative growth consisting mostly of weeds and grasses. The topographic conditions existing at the time of our field investigation are depicted on the Site Plan (Figure 2). The topographic base map was prepared by JAYKIM Engineers.

3.2 Subsurface Materials

The subsurface materials at the site consist of oil sump materials and fills overlying native soils.

The sump materials consist primarily of bentonitic muds that have engineering characteristics similar to clayey soils. These muds are mixed with highly variable amounts of salty water (brine) and oily wastes. For discussion purposes, the sump materials can be divided into three categories with different degrees of processing (landfarming and compaction).

Class I sump materials generally have low oil content (not visible but could be smelled), relatively low moisture, and moderate strength (stiff soil-like consistency). These materials are typically found at relatively shallow depths (upper 15 feet). Apparently these materials were processed, partly mixed with site soils, and compacted to variable degrees.

Class II sump materials have the consistency of soft to medium stiff soil. These materials apparently have been partially (incompletely) processed. They contain variable amounts of oil, sometimes concentrated in localized pockets that are randomly scattered in the fill. These fills contain variable amounts of soil.

Class III sump materials are unprocessed and consist primarily of muds with relatively high oil content. These materials are very soft (nearly liquid-like consistency). Localized oil pockets were detected within these sump materials.

Over the years, embankments were constructed to contain the liquid sump materials. Based on examination of aerial photographs of the site, it appears that the configuration of these embankments was modified as the site was developed. Where encountered in our borings, embankment fills appear to be mixtures of soils and sump materials, lightly to moderately compacted. In many cases these fills could not be distinguished from Class II sump materials.

The native soils beneath and on the sides of the sump consist primarily of dense silty sands with some layers of clayey sands and hard clayey silts. In general, these materials can be expected to be much less compressible than the sump materials.

The approximate distribution of the various classes of subsurface materials at the site is presented in the Simplified Subsurface Sections (Figures 3 and 4). It should be noted that the actual distribution of materials is more complex and variable than can be simply presented graphically. However, from the data available in preparing these cross-sections, the following general observations can be made:

The very soft, unprocessed sump materials typically occur in the lowest levels of the sump (below elevations of 24 to 34 feet MSL). The largest continuous body of very soft sump material occurs in the south-central portions of the site. This zone of sump material is estimated to be approximately 450 feet long (N-S direction) by 300 feet wide (E-W direction) by 15 feet deep, comprising about 75,000 (±5000) cubic yards. Another large body of unprocessed sump material occurs over the northern most corner of the site. Based on old air photos of the site, this sump is believed to be triangular shaped and have a depth on the order of 7 to 10 feet. The total volume of this material is estimated to be approximately 7000 cubic yards. Smaller pockets of unprocessed sump material were also detected in our explorations. These are believed to be the result of incomplete processing during the previous landfarming operations. Additional small bodies of unprocessed sump materials may also be present in parts of the site not explored. Overall, the total volume of unprocessed sump material is estimated to be in the range of 80,000 to 100,000 cubic yards.

The lightly processed sump materials comprise approximately half of all fills at the site. The total volume of the lightly processed sump materials and embankment fills having similar properties are estimated to be in the range of 200,000 to 250,000 cubic yards.

The moderately compacted sump materials typically found near the ground surface comprise an additional 110,000 to 140,000 cubic yards.

The total volume of all sump fills is estimated to be in the range of 390,000 to 490,000 cubic yards.

Average moisture contents and dry densities for sump materials indicated by laboratory tests are as follows:

Material Type	Moisture (%)	Dry Density (pcf)	Estimated Relative Compaction (%)
Class I	16	105	87
Class II	20	90	74
Class III	66	58	48

The moisture contents encompass all liquids, including oil. Considering the highly variable nature of the sump materials, these average values should be used with caution. Actual field values could vary from these values.

3.3 Groundwater

Groundwater was encountered only in one of our borings (B-4) at a relatively shallow depth of about 8 feet. This is believed to be a localized perched condition because the native sands at greater depths were not found to be saturated. Groundwater was not found in any of our other borings even though some of the borings extended to depths on the order of 40 feet. Based on a geologic map of the area (Randell et al, 1983) general groundwater levels are expected to be well below the base of the sump. Due to the low permeability of the sump materials, perched conditions could exist within the sump.

3.4 Seismic Considerations

Based on existing published information The Cherry Hill Fault (part of the active Newport-Inglewood Fault Zone) runs approximately along the northeastern property line. As such, the site is within an Alquist-Priolo Special Studies Zone and will need to be investigated, based on site-specific field exploration, for the potential for ground rupture. We recommend that these studies be performed prior to finalizing the site layouts, because, as a minimum, the building locations may need to be modified to allow sufficient offset distances from the mapped traces of the fault. The site could also experience strong earthquake shaking, particularly since it is located close to a potentially active fault. The seismic potential should be evaluated based on the results of the recommended site-specific geologic investigation.

Our foundation investigation did not disclose any natural soils at the site that would be susceptible to liquefaction, a condition whereby loose sandy soils lose part or all their strength when subjected to earthquake shaking. On the other hand, the soft sump materials (in their existing condition) could be weakened further when subjected to earthquake shaking. The site in its present condition is likely to experience lurching, cracking, and uneven settlement as a result of strong earthquake shaking.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 General

Based on the results of this investigation, it is our opinion that the existing subsurface conditions at the site are not suitable for supporting structures on shallow foundations. The sump materials, in their current state, have highly variable engineering properties and, in general, are too compressible for supporting structures or fills. Once moisture-conditioned and compacted, however, these materials would provide adequate support for structures and fills. Laboratory testing on representative samples of sump materials indicate that treated sump materials when compacted to dry densities equal to at least 90 percent of maximum density exhibit only about one tenth the compressibility of the untreated materials.

Based on these observations we recommend that the existing sump materials be completely excavated, dried to moisture contents near optimum, and compacted in lifts as recommended in the "Earthwork" section of this report. We have also evaluated the option of treating only the very soft sump materials and supporting the structures on piles. While this option is theoretically feasible it would not necessarily be more economical than the recommended option because of two reasons:

a. The costliest part of the earthwork is related to the treatment of the very soft sump materials typically found in the lower portions of the sump. To gain access to these materials, a large volume of treated sump materials will also need to be excavated.

b. The cost of re-working already treated sump materials in building areas is likely to be comparable to or lower than the cost of piles.

Complete removal and re-compaction of sump materials will also result in better foundation conditions for supporting fills that may be needed to improve drainage conditions at the site.

After the recommended earthwork is completed the ground surface will be approximately 4 to 5 feet below the existing levels. We recommend that non-expansive imported soil be used in the upper 3 feet of fills because the compacted sump materials exhibit expansive characteristics and would provide poor subgrade conditions for floor slabs and pavements. Additionally, the sump materials have very high soluble salt contents and would be corrosive to metallic utility lines.

Our detailed evaluations and recommendations are presented in the remainder of this report.

4.2 Earthwork

The earthwork anticipated at the project site will consist of clearing and grubbing, excavations, subgrade preparation and the placement and compaction of fill.

4.2.1 Clearing and Stripping

Prior to grading, the areas to be developed should be stripped of any vegetation and cleared of all debris. All deleterious material generated during the clearing operations should be removed from the site. At the conclusion of the clearing operations, the Geotechnical Engineer should observe and accept the site prior to any excavating or fill placement.

4.2.2 Excavations

The recommended earthwork will involve excavations to maximum depths on the order of 35 feet. Temporary excavations that do not extend below the processed materials found in the upper 10 to 15 feet are expected to remain stable with side slopes on the order of 3/4 to 1 (horizontal to vertical). Excavation into the softer, unprocessed sump materials will need to have much flatter slopes. Our slope stability analyses indicate that deep cuts extending into the soft sump materials will need to have 2 to 1 slopes within 15 feet of existing grades and 4 to 1 slopes through the soft sump materials below a depth of 15 feet. These slope estimates are provided herein for construction planning purposes. Considering the variability of sump materials at the site, the excavations should be closely monitored in the field during construction and cut slopes adjusted as necessary to maintain safe conditions.

The exposed slope faces should be kept moist (but not saturated) during construction to reduce local sloughing. No surcharge loads should be permitted within a horizontal distance equal to the height of cut from the toe of the excavation or 5 feet from the top of the slopes, whichever is greater, unless the cut is properly shored. Excavations that extend below an imaginary plane inclined at 45 degrees below the edge of any adjacent existing site facilities should be properly shored to maintain support of the adjacent elements. All excavations and shoring systems should meet the minimum requirements given in Article 6 of the State of California Occupational Safety and Health Standards.

In general, excavations into the processed sump materials should be readily accomplished by conventional soil excavation equipment such as loaders, scrapers, or dozers. The Class II sump materials contain localized soft spots that may cause poor subgrade conditions for rubber tired equipment. The soft, unprocessed (Class III) sump materials do not have adequate bearing capacity for supporting rubber-tired equipment. A major portion of the sump materials found below an approximate depth of 15 feet is too soft to support even track mounted equipment. Therefore, these materials may need to be excavated by dragline/clamshell equipment.

4.2.3 Subgrade Preparation

Prior to placing any fills, the subgrade soils exposed at the base of excavation should be scarified to a depth of 6 inches, moisture conditioned, and compacted to at least 90 percent of maximum dry density in accordance with ASTM D-1557. In areas to receive asphalt or concrete pavement, a minimum 12-inch zone of compacted fill should be provided for the support of the pavement.

4.2.4 Material for Fill

From a geotechnical point of view, the sump materials may be re-used in compacted fills provided they are moisture-conditioned properly. In general, the sump materials have in-place moisture contents above optimum. Therefore, these materials will need to be stockpiled in thin lifts, disked, and allowed to dry to a moisture content near optimum before they are used in fills. The already processed sump materials found at relatively shallow depths typically have moisture contents that are only a few percent above optimum. Therefore, these materials

will require minimal moisture conditioning. The softer, unprocessed sump materials have moisture contents that are much higher than optimum; spreading and disking may not be adequate to substantially lower the moisture content of these materials in a timely fashion. Therefore, we recommend that these materials be blended with drier soil in the process of being stockpiled.

We recommend that earthwork operations for this project be performed during the dry season. The earthwork operations at this site can be severely complicated by rain.

Compacted sump materials are expansive and should not be used within 3 feet of finish subgrade level. Granular soil should be used in the upper 3 feet of fill. Imported fill material should be predominately granular, non-expansive and contain no more than 40 percent fines (portion passing No. 200 sieve). The Geotechnical Engineer should be notified at least 72 hours in advance of the location of any soils proposed for import. Each proposed import source should be sampled, tested and accepted for use prior to delivery of the soils to the site. Soils imported prior to acceptance by the Geotechnical Engineer may be rejected if not suitable.

Both imported and existing on-site soils, to be used as fill, should be free of debris and any pieces larger than 6 inches in greatest dimension.

4.2.5 Placement and Compaction Fills

All fill soils should be placed in horizontal lifts, moisture-conditioned, and mechanically compacted to at least 90 percent of maximum dry density in accordance with ASTM D-1557. The optimum lift thickness will depend on the compaction equipment used and can best be determined in the field. The following uncompacted lift thickness can be used as preliminary guidelines.

Plate compactors	4-6 inches
Small sheepsfoot rollers (5-ton±)	6-8 inches
Scrapers and heavy loaders	8-10 inches
Heavy vibratory (20-ton) or static (30-ton) rollers	10-12 inches

The maximum lift thickness should never be greater than 12 inches. Sheeps-foot or pad-foot rollers are best suited for compacting processed sump materials.

The moisture content of the fill materials should be within 2 percent of optimum to readily achieve the required degree of compaction.

During backfill of excavations, the fill should be properly benched into the construction slopes as it is placed in lifts.

4.2.6 Shrinkage and Subsidence

Shrinkage is the loss of soil volume caused by compaction of fills to a higher density than before grading. For earthwork volume estimating purposes, an average shrinkage value of 22 percent may be assumed for the sump materials overall. The shrinkage of processed sump materials is expected to be approximately 2/3 of the above value while the shrinkage of unprocessed materials may be up to twice this average value. These values are estimates only. Actual shrinkage and subsidence should be determined during grading.

Subsidence is the settlement of in-place subgrade soils caused by loads generated by large earthmoving equipment. Subsidence in the native soils underlying the fills is expected to be less than 0.2 feet.

4.2.7 Observation and Testing

A representative of GEOFON, Inc. should observe all excavations, subgrade preparations and fill placement activities. Sufficient in-place field density tests should be performed during fill placement to evaluate the overall compaction of the soils. Soils that do not meet minimum compaction requirements should be reworked and tested prior to placement of any additional fill.

4.3 Foundations

4.3.1 Foundation Type

The proposed structures may be supported on conventional isolated and/or continuous shallow spread footings provided the subsurface materials have been prepared in accordance with the recommendations given in this report. All footings should be supported by either competent natural soils or properly compacted fill.

4.3.2 Allowable Bearing Pressures

Based on the assumption that granular soils will be used in the upper 3 feet of fills, a static allowable bearing pressure of 3000 pounds per square foot may be used for footing design for the support of the warehouse/office buildings. An allowable bearing pressure of 1500 pounds per square foot may be used for other minor structures, such as small retaining walls or transformer pads.

These bearing pressures are for dead load-plus-live load and assume minimum foundation sizes as discussed below. The allowable pressures may be increased one-third for short term, transient, wind and seismic loading. The maximum edge pressures induced by eccentric loading or overturning moments should not be allowed to exceed these recommended values.

4.3.3 Minimum Footing Size

The widths of footings should not be less than 15-inches even if the actual bearing pressures are less than the allowable pressures presented above.

4.3.4 Minimum Footing Embedment

Footings should be founded a minimum of 18 inches below the lowest adjacent finished grade.

4.3.5 Estimated Settlements

Based on analysis of consolidation data, total foundation settlements under sustained column loads of 60 kips are estimated to be less than one-half inch. Differential settlements between interior and exterior footings and between similarly loaded exterior footings are expected to be less than 1/4 inch.

Additional deep seated settlements may be experienced at the site due to long term compression of fills. Such settlements are expected to be fairly uniform across building sites and not to affect foundation performance.

The above estimates are based on the assumption that the recommended earthwork will be performed and that the footings will be sized in accordance with our recommendations.

4.3.6 Lateral Load Resistance

Soil resistance to lateral loads will be provided by a combination of frictional resistance between the bottom of footings and the underlying soils and by passive soil pressures acting against the embedded sides of the footings. For frictional resistance, a coefficient of friction of 0.35 may be used for design. In addition, an allowable lateral bearing pressure equal to an equivalent fluid weight of 300 pounds per cubic foot may be used, provided the footings are poured tight against undisturbed natural or compacted fill soils. These values may be used in combination without reduction.

4.3.7 Foundation Concrete

Results of laboratory testing of the on-site materials indicate soluble sulfate contents on the order of 0.03 percent by weight (300 parts per million). Therefore, the potential for sulfate corrosion of the concrete is considered to be low. Ordinary Type I or Type II Portland cement may be used in the construction of concrete structures in contact with the subgrade soils. The sulfate content of imported soil fills should be checked during construction to verify that it is within tolerable limits.

4.4 Building Floor Slabs

Slab-on-grade floors should be supported on granular, non-expansive soils compacted as discussed in the "Compacted Fill" section.

A vapor/moisture barrier should be placed under any slabs that are to be covered with moisture-sensitive floor coverings (parquet, vinyl tile, etc.). The vapor barrier should consist of a polyethylene sheet (visqueen) having a minimum thickness of 6 mils. This material should be covered by a layer of clean sand having a minimum thickness of 2 inches. The function of the sand layer is to protect the vapor barrier during construction and to aid in the uniform curing of the concrete.

A gas collection and venting system may also need to be installed under the slabs. An evaluation of gas control requirements is being performed by JAYKIM Engineers.

For elastic design of slabs supporting concentrated loads, a modulus of subgrade reaction (k) of 150 pounds per cubic inch (pounds per square inch per inch of deflection) may be used.

4.5 Lateral Earth Pressures

Based on information available to us at the time this report was prepared, no basements or major retaining walls are anticipated for this project. The following recommendations are for minor walls or buried portions of structures that do not extend more than 5 feet below the existing ground surface.

Active earth pressures can be used for designing walls that can yield at least 1/4 inch laterally under the imposed loads. The magnitude of active pressures are equivalent to the pressures imposed by a fluid weighing 30 pounds per cubic foot (pcf). This pressure may also be used for the design of temporary excavation support.

At-rest pressures should be used for restrained walls that remain rigid enough to be essentially non-yielding. At-rest pressures are equivalent to the pressures imposed by a fluid weighing 55 pounds per cubic foot.

Walls subject to surcharge loads should be designed for an additional uniform lateral pressure equal to one-third and one-half the anticipated surcharge pressure for unrestrained and restrained walls, respectively. The wall backfill should be well-drained to relieve possible hydrostatic pressure or designed to withstand these pressures. Wall footings should be designed as discussed in the "Foundations" section.

4.6 Drainage

Positive surface gradients should be provided adjacent to all structures so as to direct surface water run-off and roof drainage away from foundations and slabs toward suitable discharge facilities. Long term ponding of surface water should not be allowed on pavements or adjacent to buildings. Good drainage is particularly critical at this site because the compacted sump materials are susceptible to volume change when subjected to moisture variations.

4.7 Corrosion Potential for Metallic Utility Lines

The sump materials have very high soluble salt contents and can be expected to be very corrosive to metallic utility lines or other buried structures. Therefore, we recommend that either the use of metallic utility lines be avoided at this site or such lines be equipped with protective coatings or a cathodic protection system. A corrosion specialist should be consulted if the latter option is chosen.

4.8 Trench/Wall Backfill

Utility trench and wall backfill consisting of imported sand should be mechanically compacted in lifts. Lift thickness should not exceed those values given in the "Compacted Fill" section of this report. Jetting or flooding of backfill materials should not be permitted. The Geotechnical Engineer should observe and test all trench and wall backfills as they are placed.

In backfill areas where mechanical compaction of soil backfill is impractical due to space constraints, sand-cement slurry may be substituted for compacted backfill. The slurry should contain one sack of cement per cubic yard and have a maximum slump of 5 inches. When set, such a mix typically has the consistency of compacted soil.

4.9 Exterior Concrete and Masonry Flatwork

Exterior concrete and masonry flatwork should be supported on a zone of non-expansive, compacted fill. Prior to placement of concrete, the subgrade should be prepared as recommended in "Subgrade Preparation". The use of the clayey soils in the slab subgrade should not be permitted.

4.10 Paved Areas

Preliminary pavements design has been based on an assumed R-Value of 30, which is typical for surficial soils in the area. The California Division of Highways Design Method was used for design of the recommended preliminary pavement sections. These recommendations are based on the assumption that the pavement subgrades will consist of non-expansive import soils. Should the finish subgrade consist of processed sump material, much thicker sections will be required. Final pavement design should be based on R-value testing performed near the conclusion of rough grading. The following pavement sections are recommended.

LOCATION	THICKNESS (INCHES) ASPHALT CONCRETE	CLASS II BASE COURSE
Parking Spaces	3	5
Driveways	3	7

The pavement subgrade underlying Class II Base should be properly prepared and compacted in accordance with the recommendations outlined under "Subgrade Preparation".

The pavement base course should be compacted to at least 95 percent of maximum density (ASTM D-1557). Aggregate base should conform to the requirements of Section 26 of the California Department of Transportation Standard Specifications for Class II aggregate base (3/4" maximum) or Section 200-2 of the Standard Specifications for Public Works Construction (Green Book) for untreated base materials.

The above recommendations are based on the assumption that the base course will be properly drained. The design of paved areas should incorporate measures to prevent moisture build-up within the base course which can otherwise lead to premature pavement failure. For example, curbing adjacent to landscaped areas should be deep enough to act as a barrier to infiltration of irrigation water into the adjacent base course.

4.11 Post-Report Geotechnical Input

The successful completion of the project will be due in part of the proper interpretation of our recommendations by the designers, the translation of our recommendations into construction specifications, and the proper implementation of the specifications by the contractors. Post-report geotechnical services will be required as detailed design information is generated, as construction preparations are made, and as construction activities proceed. Representatives from GEOFON should provide these required post-report geotechnical services to ensure that our recommendations are properly interpreted and utilized.

The Geotechnical Engineer should be present to observe the soil conditions encountered during construction, to verify the applicability of the recommendations presented in this report to the soil conditions encountered, and to recommend appropriate changes in design and construction procedures if conditions differ from those described herein.

5.0 LIMITATIONS

The report, exploration logs, and other materials resulting from GEOFON's efforts were prepared exclusively for use by State Wide Investors and their consultants in designing the proposed development. The report is not intended to be suitable for reuse on extensions or modifications of the project or for use on any project other than the currently proposed development as it may not contain sufficient or appropriate information for such uses. If this report or portions of this report are provided to contractors or included in specifications, it should be understood that they are provided for information only.

Subsurface materials may vary in type, strength, and many other important properties between points of exploration due to non-uniformity of the geologic formations or to man-made cut and fill operations. While we cannot evaluate the consistency of the properties of materials in areas not explored, the conclusions drawn in this report are based on the assumption that the data obtained in the field and laboratory are reasonably representative of field conditions and are conducive to interpolation and extrapolation.

Furthermore, our recommendations were developed with the assumption that a proper level of field observation and construction review will be provided during grading, excavation, and foundation construction. If field conditions during construction appear to be different than is indicated in this report, we should be notified immediately so that we may assess the impact of such conditions on our recommendations.

Our investigation and evaluations were performed using generally accepted engineering approaches and principles available at this time and the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical engineers practicing in this area. No other representation, either expressed or implied, is included or intended in our report.

Respectfully submitted,
GEOFON, Inc.

Byron Konstantinidis
Vice President
R.C.E. No. 24824

REGISTERED PROFESSIONAL ENGINEER
(BYRON) KONSTANTINIDIS
No. C-024824
Exp. 12-31-89
CIVIL
STATE OF CALIFORNIA

REFERENCES

The Earth Technology Corporation; Oil Sump Site Development Feasibility Study, Near San Diego Freeway and Pacific Place, Long Beach California; Project No. 83-280; August 25, 1983.

The Earth Technology Corporation; Oil Sump Site Development, Supplemental Investigation, San Diego Freeway and Pacific Place, Long Beach, California, Project No. 83-280-02; January, 1984.

Randell, D. H., Reardon, J. B., Hileman, J. A., Matuschka, T., Liang, G. C., Khan, A. I., and LaViolette, J.; Geology of the City of Long Beach, California; Bulletin of the Association of Engineering Geologists, Volume XX, No. 1, February 1983.

Appendix A

APPENDIX A

EXPLORATORY BORING RESULTS

The subsurface conditions at the site were investigated by drilling and sampling twelve (12) exploratory borings, B-1 to B-12, to depths ranging from 21.5 to 41.5 feet using a truck-mounted hollow stem rig. Borings locations are shown on the site plan, Figure 2.

The field explorations were performed under the continuous technical supervision of a GEOFON Geotechnical Engineer who visually inspected the site, maintained detailed logs of the borings, classified the soils encountered, and obtained relatively undisturbed and bulk samples for examination and laboratory testing. The soils encountered were classified in the field and through further examination in the laboratory in accordance with the Unified Soil Classification System (Figure A-1). Relatively undisturbed soil samples were obtained with a 2.42-inch inside diameter ring sampler. The soil sampler was driven with a 140 pound down-holehammer falling 30 inches. Standard Penetration Tests (SPT) (ASTM D1586) were also performed in selected borings. Detailed logs of the borings are presented in Figures A-2 through A-13.

Upon completion of drilling, gas monitoring probes were installed in eleven of the twelve borings (all except B-4). Six of the gas monitoring probes had single pipes for monitoring a single depth zone. The other five installations had double pipes for monitoring two separate depth zones.

Typical gas probe installations are shown in Figure A-14. The details for each installation are summarized in Table A-1. Sampling and evaluation of gases at these installations was performed by JAYKIM Engineers.

Project No. 86-329

TABLE A-1

GAS MONITORING PROBE INSTALLATION DETAILS

Boring No.	Depth of Boring (ft.)	Types of Gas Vent	Location of Screen Interval (ft.)	Location of Bentonite Seal Interval (ft.)
B-1	26.5	Single Pipe	5.5-25.5	2.0-3.0 25.5-26.5
B-2	41.5	Double Pipes	3.0-20.0 20.5-40.5	2.0-3.0 20.0-21.0 40.5-41.5
B-3	41.5	Double Pipes	3.0-18.0 19.0-37.0	2.0-3.0 18.0-19.0 37.0-38.0
B-4	36.5	None	-	-
B-5	21.5	Single Pipe	6.0-21.0	5.0-6.0 21.0-21.5
B-6	26	Single Pipe	10.0-25.0	8.0-9.0 25.0-26.0
B-7	36	Double Pipes	4.0-19.0 20.0-35.0	3.0-4.0 19.0-20.0 35.0-36.0
B-8	31.5	Double Pipes	4.5-14.5 15.5-30.5	3.5-4.5 14.5-15.5 30.5-31.5
B-9	36	Single Pipe	20.0-35.0	7.0-8.0 35.0-36.0

SITE CHARACTERIZATION STUDY

STATEWIDE INVESTORS, INCORPORATED

LONG BEACH

OCTOBER, 1986

TABLE OF CONTENTS

	Page Number
EXECUTIVE SUMMARY	1
SECTION 1 - INTRODUCTION AND SITE USE	2
1.1 SITE USE BACKGROUND	2
1.1.1 Introduction	2
1.1.2 Historical Uses	2
1.1.3 Oil Operators, Incorporated	2
1.1.4 Basin Clearance Program	3
SECTION 2 - SITE CHARACTERISTICS	4
2.1 REGIONAL SITE INFORMATION	4
2.1.1 Site Location	4
2.1.2 Climate	4
2.1.3 Land Use	4
2.2 SUBSURFACE CHARACTERISTICS	5
2.2.1 General Description of Subsurface Conditions	5
2.2.2 Ground Water Aquifer Uses	5
2.2.3 Regional Ground Water Quality	6
2.2.4 Faults and Seismicity	7
SECTION 3 - FIELD AND LABORATORY TESTING	8
3.1 PRIOR TESTING	9
3.1.1 Field Testing	9
3.1.2 Organics in the Soil	9

EXECUTIVE SUMMARY

A preliminary site characterization study was conducted for Statewide Investors' 14 acre parcel located in Long Beach, California. The parcel was formerly used as an oil and drill cutting fluid waste sump by Oil Operators, Incorporated.

Geotechnical and environmental conditions were examined, and information concerning local soil and groundwater conditions was assembled and analyzed.

Twelve bores were drilled and soil samples were obtained for analysis of both geophysical properties and chemical constituents. These bores were converted to gas monitoring probes through the installation of PVC piping. Gas pressures and lower explosive limit levels were monitored over the course of a week.

The volume of fill material to be reprocessed is approximately 400,000 to 500,000 cubic yards. About 2/3 of this fill material has been previously processed and has a relatively low oil content and soil-like properties. This material can be removed, replaced, and compacted with relative ease. The remaining 1/3 has a high oil content and variable consistancy. This protion will be mixed with clean fill dirt, replaced, and compacted.

1.1.4 Basin Clearance Program

Oil Operators, Incorporated had previously embarked on a program to eliminate the sump. A major portion of the material originally constituting the sump has been treated and essentially stabilized. The remaining untreated material constitutes a wedge of wastes underlying the southwestern one-third of the site of the original sump. This wedge is more than 20 feet in thickness at the western side decreasing in thickness toward the southeastern side. Several scattered pockets of oil are also present. This untreated material is overlain by roughly 15 feet of stabilized material. Proposed plans call for this untreated material to be mixed with soil and reclaimed as soil using appropriate proven soil stabilization techniques.

SECTION 2

SITE CHARACTERISTICS

2.1 REGIONAL SITE INFORMATION

2.1.1 Site Location

Situated within the city limits of Long Beach, California, the Statewide Investors' site (formerly Oil Operators, Incorporated) is located near the intersection of the Long Beach Freeway (Interstate 710) and the San Diego Freeway (Interstate 405). The site is bounded on the northeast by the Pacific Electric Railroad, on the west by the Los Angeles County Flood Control Channel, and on the south by the San Diego Freeway. The Caltrans Pacific Place Maintenance Station lies at the southeast corner (Figure 1).

At the present time access to the site is from Pacific Place.

2.1.2 Climate

The City of Long Beach is located on the Los Angeles Coastal Plain, which has a mediterranean climate with mild temperatures and low rainfall. Mean monthly temperatures range from 50 to 65 degrees Fahrenheit.

Average annual rainfall is 10 inches, most of which falls between the months of November and March. Average net evaporation in the site vicinity is 50 inches per year.

2.1.3 Land Use

An open area along the western boundary is used for horse riding trails. Los Cerritos Park, used for public recreation, lies directly to the east.

The western edge of the site lies approximately 200 feet east of the berm of the Los Angeles County Flood Control Channel (Los Angeles River), a concrete structure. Natural hill slopes on the site have been eliminated by grading and leveling. The west side of the property has an elevation of about 55 feet gently sloping off toward the east to about 50 feet mean sea level.

There are several operating oil wells and storage tanks in the northwest part of the referenced site. There is also a functioning well on the south side. The southwest area is currently used for pipe and equipment storage. Most of the site is overlain by material that formerly constituted an oil waste sump. A site plan is presented in Figure 2.

2.2 SUBSURFACE CHARACTERISTICS

2.2.1 General Description of Subsurface Conditions

The Statewide Investors' site is situated on the coastal portion of the Los Angeles Basin, a large geographical area underlain by alluvial fill several thousand feet deep. The specific site rests immediately on deposits of the Pleistocene Lakewood formation, which consists of a mixture of uplifted marine and continental sediments. Interlayered deposits within the Lakewood formation range in composition from loose gravel to hard clay.

Because the site has been extensively graded, it is impossible to ascertain whether some parts of the existing ground surface have been cut or filled. Four to ten feet of fine to medium sand, ranging in color from light to darker brown, constitute the surficial layer. Beneath this lies clay in a variety of colors. In some areas the clay is mixed with sand or dissected by shallow layers of sand in a manner typical of mixed uplifted marine and continental sediments.

2.2.2 Ground Water Aquifer Uses

In terms of ground water occurrence, the site lies at the southern edge of the West Coast Basin, a ground water basin underlying the southwestern portion of the Los Angeles Coastal Plain. Ground water in this region is contained in a series of aquifers interlayered with thick clay strata which act as hydraulic barriers, or aquicludes.

Two aquifers exist which might be termed shallow. The most shallow is the surficial Gaspur aquifer which at its easternmost point lies about 1/4-mile to the west of the site. The semi-perched aquifer is the uppermost aquifer lying directly beneath the site. Found at a depth of between 50 and 65 feet, the aquifer consists of a sequence of layers of gravelly marine sands, interspersed with layers of silts and silty clays. Within this sequence three, and locally four, thin aquifer units may exist. The semi-perched aquifer is underlain by the Bellflower aquiclude, which separates the shallow ground water systems from deeper aquifers. Regionally, the Bellflower aquiclude is breached in several areas, and is only moderately effective in breaking hydraulic continuity between the shallow and deep aquifers.

As reported in the fall 1975, the surface of the ground water table of the semi-perched aquifer ranged in elevation from -20 to -30 feet below sea level in the vicinity of the site (Los Angeles Flood Control District). Based on historic levels in wells, ground water flow within the shallow aquifers is to the west-southwest. Some disruption of the regional ground water flow pattern occurs along the Cherry Hill fault, located along the northeast boundary of the parcel. Ground water levels are approximately 10 feet lower east of the fault due to structural disruption of aquifer units.

2.2.3 Regional Ground Water Quality

Regional ground water quality has been closely monitored in the West Coast Basin of Long Beach for approximately the last 10 years, as part of Los Angeles County's sea water intrusion barrier project. Early records (pre 1900) show a seaward gradient within shallow coastal aquifers which resulted in continuous flushing of the entire formation by fresh water. By 1932 heavy inland pumpage had resulted in a reversal of the seaward gradient and invasion of the entire Basin by sea water. In 1962 the following water quality observations were made regarding the semi-perched or "200-foot sand" aquifer which underlies the site (Los Angeles County Flood Control District (LACFCD), Dominquez Gap Barrier Project Geologic Investigation, March 1962, pgs 17-21):

a. Water within the "200-foot sand" aquifer (semi-perched aquifer) is moderately to grossly saline throughout the Long Beach area.

b. South of Pacific Coast Highway (2-1/2 miles south of the site) sea water from the Gaspur aquifer is moving directly into the "200-foot sand."

c. Industrial wastes, particularly brine disposal, have locally affected the aquifer. Industrial wastes have invaded the Gaspur aquifer through percolation from surface disposal at localities north of Wardlow Road at the Los Angeles River.

Little use is made of water from shallow aquifers as the result of regional impacts of scattered brine holding ponds, industrial liquid disposal pits, and saline surface runoff in the Los Angeles River Channel. Chloride concentrations in the shallow semi-perched aquifer locally have often exceeded 500 mg/l. In 1961, LACFCD reported chloride concentrations as high as 18,000 mg/l in scattered locations in the Long Beach area. The U.S. Environmental Protection Agency has established a limit of 250 mg/l chloride for drinking water, but concentrations over 175 mg/l are considered unsatisfactory for most industrial uses (California State Water Resource Control Board, Publication 3-A). Chloride in concentrations greater than 350 mg/l is toxic to many plants.

A review of records at the California Department of Water Resources, Water Masters Office in Los Angeles revealed that, for the most part, active wells in the vicinity draw water from aquifers at depths greater than 400 feet. Such aquifers are less vulnerable to surface-introduced contamination. No active shallow wells are located within 2-1/2 miles downgradient of the site.

Local background water quality data for the shallow aquifer underlying the site are scarce. The most extensive water quality data available are from a now abandoned LACFCD monitoring well (designated both as well 28R73 and DE-6) located approximately 1-1/2 miles south of the site near the intersection of Willow Street and the Los Angeles River. A complete chemical analysis by the LACFCD is available for a ground water sample tested in 1965 and yearly chloride concentrations are available for the years 1970-78. In 1965, the ground water had an electroconductivity (EC) of 4810 micromhos and chloride concentration of 1140 mg/l. By 1978, the chloride concentration had gradually decreased to 640 mg/l, but was still at a level well above the U.S. Environmental Protection Agency's limit of 250 mg/l for drinking water.

In order to more clearly establish background water quality in the vicinity of the site, four monitoring wells which were constructed both up and downgradient of the parcel were assessed. Analytical test results found the following (see Figure 3):

1. Chloride concentrations immediately downgradient of the site (Boring 12) to be 1150 mg/l. An anomalously high TOC concentration of 374 mg/l was also found at this point.

2. Chloride concentrations approximately 1/2 mile upgradient of the site (Boring 15) to be 50 mg/l and TOC 110 mg/l.

3. Other downgradient chloride concentrations to range from 900 mg/l in Boring 14, 1/2 mile south of the site to 150 mg/l in Boring 16, approximately 1-1/2 miles southwest of the site.

It should be pointed out that all downgradient wells are also strongly influenced by the storage basins at the Oil Operators' facility immediately south of the site.

2.2.4 Faults and Seismicity

The Los Angeles Coastal Basin is transected by a series of northwest-southeast trending faults collectively referred to as the Newport-Inglewood Fault Zone. The Cherry Hill Fault, part of the Newport-Inglewood Fault Zone, will have to be assessed before construction can begin.

The Long Beach area is situated in a seismically active zone. The Long Beach earthquake of 1933 had a magnitude of 6.3 on the Richter Scale and caused major damage to structures throughout the Long Beach area. The earthquake had an epicenter located 24 miles southeast of the site along the Newport-Inglewood Fault Zone.

Several additional moderate (magnitude 5.3 to 6.8) seismic events have been recorded in 1933, 1941, and 1944 along the Newport-Inglewood Fault Zone within 5 miles of the site.

The maximum credible earthquake on the Newport-Inglewood Fault Zone may have a magnitude as great as 7.0. The repeatable high ground acceleration at the site is anticipated to be 0.32g; for the maximum credible earthquake: maximum ground acceleration may approach 0.5g.

3.0 FIELD AND LABORATORY TESTING

3.1 PRIOR TESTING

3.1.1 Field Testing

Field tests, consisting of electronic cone penetrometer explorations, were made and are described in a report by the Earth Technology Corporation dated January, 1984. In these tests, the cone penetrometer test electrical conductivity tool was used to measure relative conductivity variations in the subsurface sump materials. Compression tests were also conducted on two of the samples.

The tests showed that the subsurface sump materials encountered in the eastern portion of the site were somewhat stronger than those in the western portion of the site. The variable conditions revealed in the investigation indicate that the existing state of the sump materials would not provide adequate uniform support for shallow foundations. If foundations were to be placed on these materials, differential foundation settlement is likely to be excessive.

For potential development possibilities, the site was considered as two separate areas. The western portion was considered relatively unfavorable for development while the eastern portion was relatively favorable. For test locations and detailed test results, see Appendix A.

3.1.2 Organics in the Soil

Four soil samples were taken with a backhoe and submitted for chemical analysis on April 28, 1986. Analyses included volatile organic hydrocarbons (including benzene, toluene, and xylene), total nonvolatile organic hydrocarbons, organic lead, and polychlorinated biphenyls. While no benzene or toluene were found in the samples, low levels of xylene were (93 ppm average). Other volatile organic hydrocarbons averaged 11,158 ppm while non-volatiles averaged 130,200 ppm. Organic lead averaged 3.21 ppm and PCB levels were so low as to be not clearly identifiable. Appendix B gives a complete listing of these lab results.

3.2 RECENT TESTING

Jaykim Engineers, Inc. and Geofon, Inc. performed an investigative study to generate data for general feasibility of supporting foundations of industrial structures on the existing sump materials. The focus of this study was to further qualify and quantify the extent of the remaining untreated sump materials. Involved were the drilling of 12 bores in and adjacent to the site, and the installation of gas monitoring probes within these bores.

3.2.1 Probe Bores

Twelve bores were drilled in and adjacent to the site between August 22 and 26, 1986. Drilling was performed by the Datum Corporation. The drill rig was a Mobile Drill, Model B47 and utilized a 6-3/4 inch continuous flight hollow stem auger. Probe locations are shown in Figure 4.

Samples obtained for soil structure were taken at 2 feet, 5 feet, and every 5 feet thereafter to the bottom of each bore. For the 2 foot sample, 5 pounds of soil was shoveled into a plastic bag. All other samples were taken using either a 1 or 2-1/2 inch I.D. split barrel sampler. These samples were immediately placed in plastic bags. Samples obtained for chemical analysis were typically taken at 5 feet and every 10 feet thereafter except in bore No. 1 where they were taken every 5 feet. These samples were taken undisturbed using 2-1/2 inch I.D. stainless steel sampling tubes and utilized aluminum foil within the end caps.

A perched water layer was encountered at 8 feet while drilling bore No. 4. At the termination of drilling the bore, this water level had risen to 7 feet. A water sample was obtained for analysis.

Geofon's drill logs are presented in Appendix C. TLV (combustable vapor) readings were taken on all of the samples. Readings taken on the 2 foot sample and all 1 inch I.D. samples were obtained by placing the TLV probe directly into the plastic bags. Readings taken on the 2-1/2 inch I.D. samples were obtained by pushing the TLV's probe through a hole cut in an end cap attached to the sample tube. TLV data are also presented in Appendix C.

All samples for chemical analysis were immediately placed in an ice chest with blue ice to lessen the potential for volatilization. Samples were transferred to a refrigerator at the end of each day. All samples were delivered to a DOHS certified laboratory on August 27.

3.2.2 Probe Installation and Monitoring

Gas monitoring probes were installed to determine both the gas quality and internal pressure within the site. Probes were constructed of 1 inch diameter PVC pipe with a slotted section surrounded by sand. Probe logs are presented in Appendix D. No probe could be installed in bore No. 4 which watered in. Probe pressures and lower explosive limit levels were monitored using a water manometer and TLV combustable vapor meter once per day on August 28 and 29 and September 2 through 5. Probe No. 1 continually gave zero pressure readings indicating a probable blockage of the slotline during installation. No TLV readings were obtained on September 4 due to a malfunction in the unit.

Gas samples for chemical analysis were obtained on September 3 for each probe bore. Samples were obtained using evacuated glass bulbs. Bilevel probes were sampled simultaneously in the same bulb using a "T" connector. All samples were transported to a DOHS certified lab for analysis on the following day. All samples were analyzed for major gases. In addition, the samples from bores No. 2 and 9 were analyzed for GC/halogenated and BTX constituents.

3.3 RESULTS OF RECENT TESTING

3.3.1 Soils Analysis

Samples were catagorized into six types as determined by their physical characteristics. These are as presented below:

Type 1 - Low to medium oil content in a dark silty or sandy clay

Type 2 - Medium to high oil content, with some samples showing liquid oil, in a black silty to sandy clay

Type 3 - Extremely high oil content in a toothpaste-like consistancy

Type 4 - Very low oil content in a dry blue clay

Type 5 - Very low oil content in a dry grey sand

Type 6 - None to very low oil content in a brown silty sand. These samples were taken from the Los Angeles County Flood Control and Pacific Electric Railroad easements adjacent to the site.

Soils of similar types were composited to yield a total of six samples to be analyzed. Samples (except Type 6) were analyzed for total petroleum hydrocarbons, PCB's, BTX, halogenated hydrocarbons, and six separate metals. The Type 6 composite was only analyzed for total petroleum hydrocarbons. The results of these analyses are presented in Table 1.

3.3.2 Water Analysis

A water sample was obtained from the perched water layer located at an 8 foot depth in bore No. 4. This sample was analyzed for total petroleum hydrocarbons, PCB's, BTX, halogenated hydrocarbons, and six separate metals. Results of these analyses are presented in Table 2.

3.3.3 Gas Analysis

Gas analyses included field testing for lower explosive level concentrations and probe pressures, and laboratory analyses for major gases, and on bores No. 2 and 9, GC/halogented compounds and BTX. For those probes located on the site, methane concentrations ranged from 12.1 to 83.6 percent with an average of 34 percent (standard deviation = 26, N=9). The average lower explosive level typically exceeded 100 percent and the average probe pressure was 0.3 inches of water pressure. Table 3 lists the results of the laboratory's gas analysis while Table 4 lists the results of the field observations.

SECTION 4

EVALUATION AND RECOMMENDATIONS

4.1 RECOMMENDATIONS

4.1.1 Earthwork

As the previously processed materials have variable density and include pockets of oil, they cannot be used for supporting structures. This material will have to be removed and recompacted along with the unprocessed sump material bringing the total volume of fill to be reprocessed to approximately 400,000 to 500,000 cubic yards. About 2/3 of this volume has been previously processed and has a relatively low oil content and soil-like properties. This material can be removed, replaced, and compacted with relative ease. The remaining 1/3 has a high oil content and variable consistancy. This portion will be mixed with clean fill dirt, replaced, and compacted.

Conventional earthmoving equipment such as scrapers and loaders can be used to excavate the previously processed material. Unprocessed sump materials are too soft to support rubber-tired equipment and are marginal for track-mounted equipment. Portions of the sump material may need to be excavated with a clamshell or dragline.

Most temporary excavations into processed sump materials are likely to be stable with fairly steep slopes (on the order of 3/4 horizontal to 1 vertical). The slopes of the excavations into the unprocessed materials will need to be much flatter

The site should be compacted to a dry density of at least 90 percent of maximum density (ASTM-D1557). Shrinkage due to this compaction is expected to average about 20 percent. This value will be somewhat higher for unprocessed material and lower for processed material.

The recompacted sump materials will have expansive properties and therefore should not be used within 3 feet of the finish subgrade surface. Nonexpansive imported soil will be needed in the upper portions of the fill.

4.1.2 Foundations

With a 90 percent compaction achieved and 3 feet of imported soil used for the upper portion, structures may be supported on shallow foundations. The allowable bearing pressure under static loads is 3,000 pounds per square foot provided the structures are supported on recompacted fill material. A 1/3 increase in allowable bearing pressure may be realized under seismic or wind loads.

Structures should use a minimum footing of 15 inches with a minimum depth of 18 inches to the base of the footing. Slabs should require no special reinforcement for expansive soils if the site is prepared as recommended. A vapor barrier with gas abatement system is recommended due to the generation of methane gas within the fill.

Pavement section will depend on the quality of the imported soil which is placed in the upper 3 feet of subgrade. Therefore, the final section will need to be determined based on R-value testing on samples of the "as graded" subgrade soils.

Proper drainage is very critical due to the presence of expansive sump materials. Positive drainage away from all structures is essential.

FIGURE 1

SITE LOCATION MAP

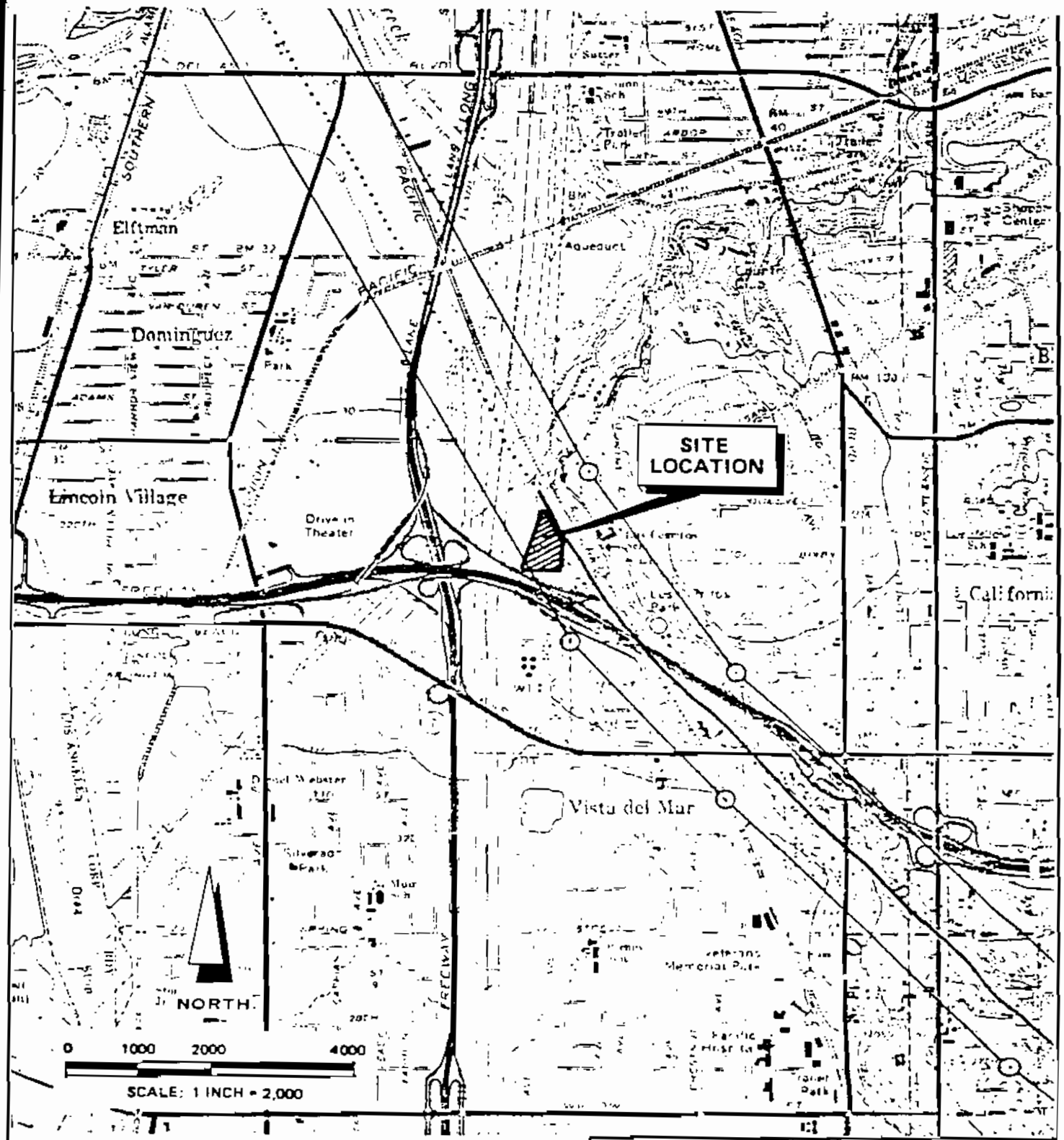
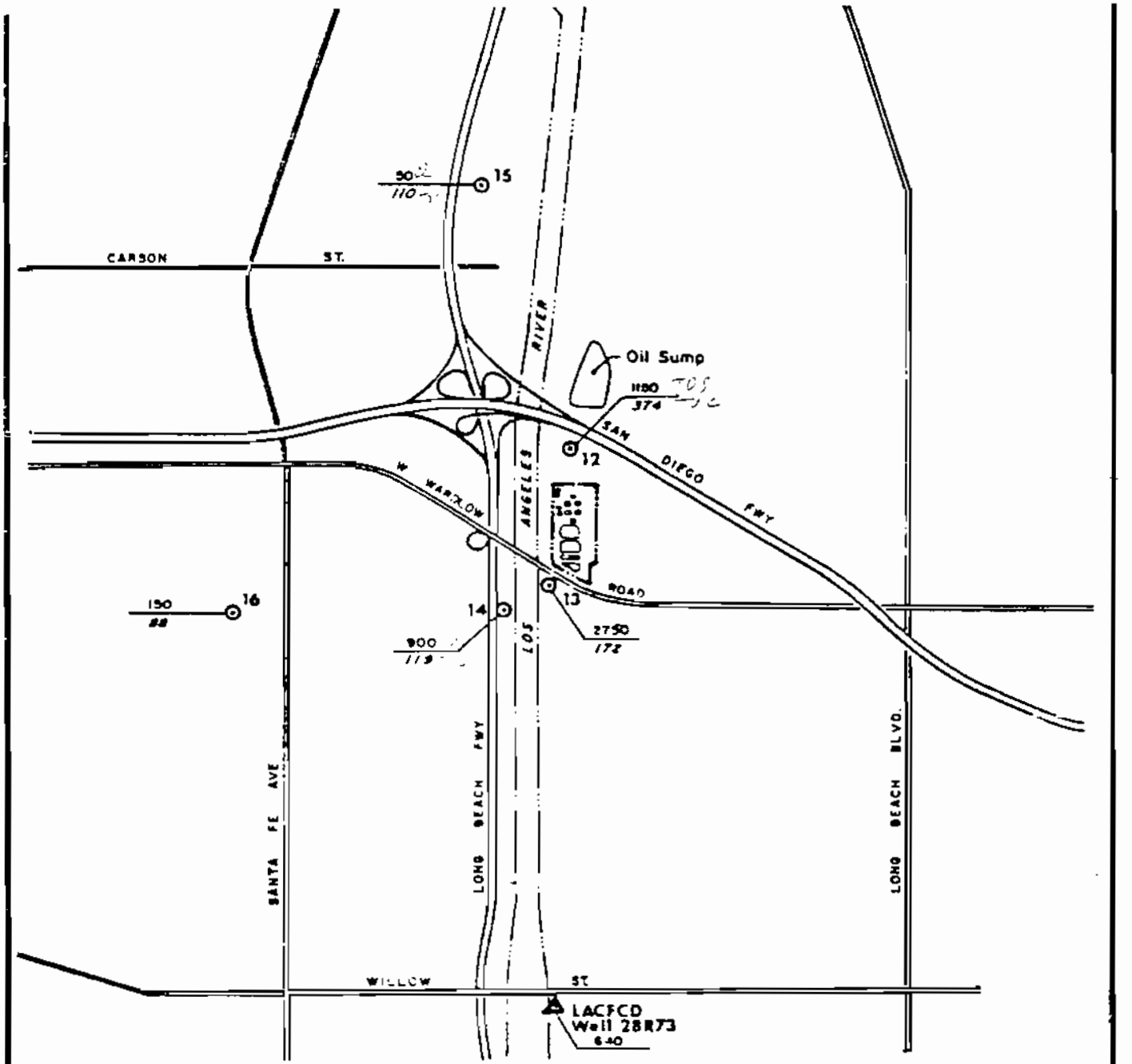


FIGURE 3

REGIONAL GROUND WATER QUALITY MAP



EMCON Associates
San Jose, California

CHEMICAL WASTE MANAGEMENT
LONG BEACH TRANSFER STATION
LONG BEACH, CALIFORNIA

REGIONAL GROUND WATER QUALITY MAP

PROJECT NO.
22[illegible]-3.1

TABLE 1

SOILS ANALYSIS

Type	Total Petroleum Hydrocarbons (ppm)	PCB (ppm)	Methylene Chloride (ppm)	1,1,1-Trichloro-ethane (ppm)	Perchloro-ethylene (ppm)
1	51	<0.01	0.02	<0.01	<0.01
2	36,600	<0.01	0.28	0.04	0.14
3	75,800	<0.01	<0.01	<0.01	<0.01
4	5,300	<0.01	0.087	<0.01	<0.01
5	38	<0.01	<0.01	<0.01	<0.01
6	<1	NA	NA	NA	NA

Type	Benzene (ppm)	Toluene (ppm)	Xylene (ppm)	Ethylbenzene (ppm)
1	<0.02	<0.02	<0.02	0.27
2	0.9	<0.05	28	5.2
3	3.0	0.09	3.7	6.0
4	0.085	<0.02	<0.02	1.4
5	<0.02	<0.02	<0.02	<0.02
6	NA	NA	NA	NA

TABLE 1

SOILS ANALYSIS
(Continued)

Type	Cd	Cr	Cu	Ni	Pb	Zn
1	1.2	17	29	19	32	194
2	0.95	15	37	27	147	112
3	1.5	22	51	29	444	131
4	0.80	26	32	22	24	63
5	0.42	10	14	13	7	36
6	NA	NA	NA	NA	NA	NA
[2]TTLC	100	2,500	2,500	2,000	1,000	5,000

1 NA - Not Analyzed

2 TTLC - Total threshold limit concentration

TABLE 2

WATER ANALYSIS

Total Petroleum Hydrocarbons	=	26	mg/l
PCB	=	<0.001	mg/l
Benzene	=	0.0094	mg/l
Toluene	=	0.0014	mg/l
Xylene	=	<0.0005	mg/l
Ethyl Benzene	=	0.0010	mg/l
Methylene Chloride	=	0.0010	mg/l
1,1-Dichloroethane	=	0.013	mg/l
Cadmium	=	<0.1	mg/l
Chromium	=	5.5	mg/l
Copper	=	7.3	mg/l
Nickel	=	5.5	mg/l
Lead (total)	=	16	mg/l
Zinc	=	18	mg/l

TABLE 4

PROBE PRESSURE AND LEL READINGS

Probe	Low ("H_2O)	High ("H_2O)	Avg ("H_2O)	[2]S.D.	[1]LEL (Avg)
1-25	0	0	0	0	>100%
2-20	0.03	0.09	0.06	0.03	>100%
2-40	0.22	0.81	0.63	0.24	>100%
3-20	0.03	0.06	0.04	0.01	>100%
3-40	0.03	0.06	0.04	0.02	>100%
5-20	0.13	0.19	0.17	0.03	>100%
6-25	0.25	0.31	0.28	0.03	>100%
7-20	0.03	0.13	0.07	0.03	>100%
7-40	0.13	0.16	0.14	0.02	>100%
8-15	0.13	0.16	0.14	0.02	>100%
8-30	0.06	0.16	0.14	0.04	>100%
9-35	1.44	2.25	1.74	0.33	>100%
10-20	0.09	0.16	0.12	0.03	>100%
10-35	0.09	0.16	0.12	0.03	>100%
11-20	0	0	0	0	2-1/2%
12-20	0	0	0	0	0.4%

[1]LEL - Lower explosive limit

[2]S.D.- Standard deviation

APPENDIX A

SITE INVESTIGATION BY CONE PENETROMETER

OIL SUMP SITE DEVELOPMENT
SUPPLEMENTAL INVESTIGATION
SAN DIEGO FREEWAY AND PACIFIC PLACE
LONG BEACH, CALIFORNIA

Prepared for:
Oil Operators, Inc.
712 West Baker Street
Long Beach, California 90807

Prepared by:
Earth Technology Corporation
3777 Long Beach Boulevard
Long Beach, California 90807

January 1984

Project No. 83-280-02

TABLE OF CONTENTS

		Page
1.0	Introduction	1
2.0	Scope of Work	2
3.0	Subsurface Conditions	3
4.0	Conclusions	5
5.0	Further Development Considerations	7

LIST OF FIGURES

Figure No.	Title
1	Site Location Map
2	Site Plan
3	Subsurface Profile No. 1
4	Subsurface Profile No. 2
5	Subsurface Profile No. 3

LIST OF APPENDICES

Appendix No.	Title
A	Cone Penetrometer Test Results

OIL SUMP SITE DEVELOPMENT
SUPPLEMENTAL INVESTIGATION
SAN DIEGO FREEWAY AND PACIFIC PLACE
LONG BEACH, CALIFORNIA

1.0 INTRODUCTION

This report presents the results of our supplemental geotechnical investigation related to the feasibility of developing an existing oil sump site for industrial facilities. The site is located north of the San Diego Freeway, east of the Los Angeles River Channel, and west of the Southern Pacific Railroad. The site location is shown in Figure 1.

It is our understanding that the site was used in the past as a sump for oil drilling operation wastes. A partial clean-up/treatment operation was conducted in the late 1970's. Some of the sump was removed, treated and replaced. Detailed records of the operation are not available.

A previous investigation study was performed by Earth Technology (report dated August 25, 1983) to generate data for general feasibility of supporting foundations of industrial structures (warehouses) on the existing sump materials. The results of the previous study indicated that the western portion of the site appeared unfavorable for foundation support while several locationa in the eastern portion appeared only marginally favorable.

The purpose of this supplemental study was to further delineate the portion of the site which may be favorable for industrial development.

2.0 SCOPE OF WORK

The scope of our supplemental work consisted of field subsurface explorations, laboratory tests, engineering evaluations, and report preparation.

Field explorations consisted of ten electronic cone penetrometer tests (CPT's). The CPT's are designated as C-7 through C-16. Six CPT's were performed for the previous investigation (C-1 through C-6). Locations of the CPT's are shown on Figure 2. The CPT electrical conductivity tool was used to measure relative conductivity variations in the subsurface sump materials. Individual logs of the CPT's and conductivity measurements are prescribed in Appendix A.

Several undisturbed soil samples were obtained using the CPT sampling device. Two single laboratory compression tests were performed on two samples to help assess the compression characteristics of soft sump materials.

Engineering evaluations consisted of compiling three subsurface profiles based on CPT results to help delineate the portion of the site which may be favorable for development. Subsurface profiles are presented in Figures 3 through 5. Conclusions and recommendations are presented in Section 4.

3.0 SUBSURFACE CONDITIONS

Subsurface conditions revealed by the supplemental CPT's indicate that the subsurface materials are primarily sump materials of varying degrrees of compactness. The high degree of variability indicates that the recompaction operation was not well controlled from a foundation support viewpoint.

Subsurface profiles were compiled using the supplemental CPT results plus results from several CPT's of the previous study. The orientation of profiles are shown on Figure 2. Subsurface profiles are presented on Figures 3 through 5.

Although subsurface conditions are quite variable, four general zones were detected. These zones are shown on the subsurface profiles and are briefly described as follows:

Zone 1

Moderately compact (stiff) sump material with relatively high to moderate oil content. Materials appear to have been treated and recompacted. The sump material contains clay and sandy clay soil with occasional sand near the ground surface.

Zone 2

Lightly compact (firm to soft) sump material with moderate to low oil content. Materials may have been lightly treated and replaced. The soil portion appears to be primarily clay and silt. These sump materials are very compressible. The two soil samples obtained within this zone had moderate oil content with strong aromatic vapors.

Zone 3

Untreated and uncompacted (very soft) sump material. Materials are highly compressible and appear to be water saturated, with the consistancy of mud. This material apperas to be clayey in nature.

Zone 4

Moderate to well compacted materials, possibly natural soils with some moderately recompacted sump material near the top of this zone. Materials are primarily sand soils with silt near the top.

Individual logs of the CPT's and conductivity measurements are presented in Appendix A. The cone resistance values on the CPT logs give an indication of soil consistency (relative degree of compaction) and soil strength. High cone resistance values indicate treated or compacted sump materials while low values indicate untreated sump materials. The electrical conductivity values give a general indication of the presence of oil or water in the subsurface. High conductivity values would tend to indicate water-saturated sump materials (muds) while low conductivity valuea would tend to indicate oily or dry sump materials.

4.0 CONCLUSIONS AND RECOMMENDATIONS

In general, subsurface sump materials encountered in the eastern portion of the site were somewhat stronger than in the western portion of the site. However, the variable conditions revealed in this supplemental investigation indicate that the existing state of the sump materials would not provide adequate uniform support for shallow foundations. If foundations were to be placed on these materials, ~~excessive~~ differential foundation settlements are likely to be excessive.

For potential development possibilities, the site can be considered as two separate areas. The western portion (Area 1) is relatively unfavorable for development while the eastern portion (Area 2) is relatively favorable (See Figure 2). Foundation support schemes are discussed for each area (See Figure 2).

AREA 1 (Western Portion)

To support industrial buildings in this area, pile foundations would be necessary. This area contains relatively thick zones of extremely soft or semi-liquid sump materials. Driven piles would have to extend through the sump materials to adequate bearing soils found at depths on the order of 30 feet. Overexcavation and recompaction may be needed for the upper 3 feet to provide adequate support conditions for building floor slabs; some soft near surface zone exist in this area. Relatively high ground settlements are likely to occur outside the buildings in this area due to the compression of the soft sump zones under the overburden weight. This is likely to cause problems for any pavements or other facilities. This ground settlement may also cause the building floor slabs to undergo relatively large undersireable settlements. The settlement problem could be avoided by considering an alternative scheme of removing, treating, and recompacting the sump materials. Shallow foundations could be used if good compaction is achieved. However, the cost and environmental complications of developing the site in this manner may be prohibitive.

AREA 2 (Eastern Portion)

To support industrial buildings in this area a combination of shallow and pile foundations can be utilized. The extremely soft sump materials were not encountered in this area. The majority of this area contains

relatively thick zones of lightly compacted compressible sump material. Driven piles would have to extend through these zones to adequate bearing soils found at depths on the order of 20 to 30 feet. The extreme eastern part of the area may be capable of supporting shallow foundations as evident by good shallow bearing materials found at CPT location C-16. Overexcavation and recompaction for supporting floor slabs does not appear necessary because of the thicker zone of near surface moderately compact material. Relatively small settlements are likely to occur in areas outside the buildings.

Common types of driven piles are precast concrete and timber. Since structural loads are expected to be relatively light, treated timber piles might be an economical choice for foundations.

The soft sump material may be currently settling and may continue to settle under the existing overburden weight. This may present a long term settlement if a development is placed on such unstable material. We recommend that a settlement monitoring program be established as soon as possible. The program would involve placing a few settlement monuments at strategic locations on site and periodically making elevation readings at each monument. The data from the readings would establish if the site is currently settling and if so, accurate predictions could be made on the future settlement behavior of the sump materials. The program is simple, inexpensive to set up, and readings could be made by oil operators' personnel on their regular visits to the site.

5.0 FURTHER DEVELOPMENT CONSIDERATIONS

Should the results of this foundation support investigation prove favorable for industrial development, other geotechnical factors must be considered for development feasibility. These considerations involve safety and environmental concerns which may, in themselves, ultimately determine the feasibility of developing the site.

- The Cherry Hill Fault that runs approximately along the eastern boundary of the site will have to be geologically investigated; the site lies within an Alquist-Priolo Special Studies Zone. The geologic fault investigation is a mandatory state requirement for developmental permits. The purpose of the investigation is to determine the fault hazard and ground surface rupture potential in seismically active areas.

- The chemical composition of the petroleum based sump components will need to be determined to assess the potential toxicity and the potential for gas accumulation and possible explosions. This information will be a critical factor when considering covering the existing sump materials with buildings; petroleum based gases can accumulate directly beneath and permeate buildings. Aromatic vapors indicative of a high aromatic fraction were detected in the soil samples collected during the field explorations.

Prepared by:

Charles K. Duckworth

Charles K. Duckworth, P.E.
Project Engineer

Reviewed and Approved by:

Byron Konstantinidis

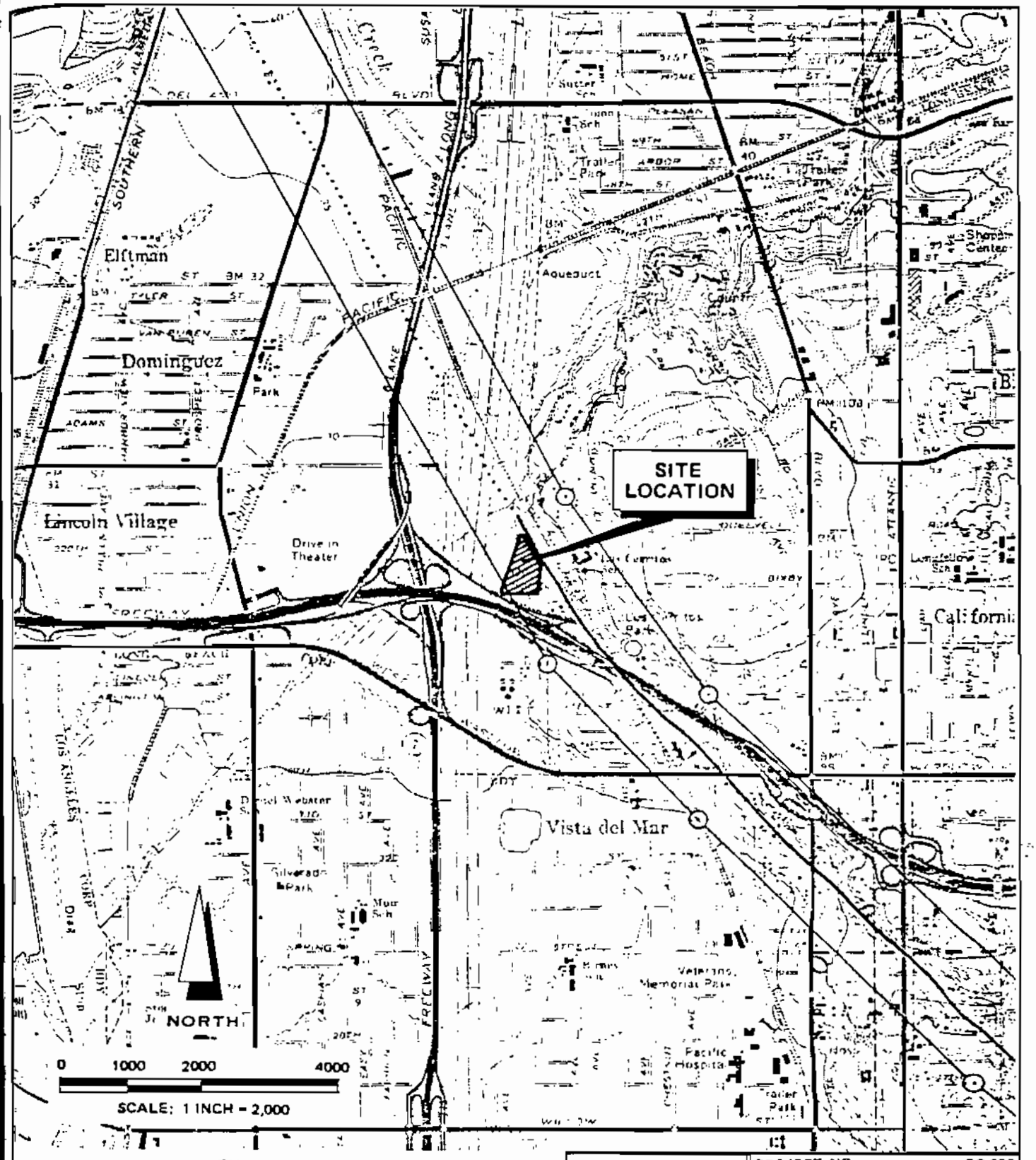
Byron Konstantinidis, P.E.
Manager, Foundation Engineering

Table 1

COMPRESSION TEST RESULTS

CPT NO.	SAMPLE DEPTH (FT)	NORMAL LOAD (KSF)	COMPRESSION (%)
C-8	5	0.47	0.41
		1.56	2.75
C-14	5	0.47	0.23
		1.56	2.79

Note: Compression values are percent of total sample thickness.



EXPLANTION*

ALQUIST PRIOLO SPECIAL STUDY ZONE BOUNDARY

CONCEALED FAULT

ACCURATELY LOCATED FAULT

*REFERENCE: CALIFORNIA DIVISION OF MINES & GEOLOGY

The Earth Technology Corporation

PROJECT NO: 83-280

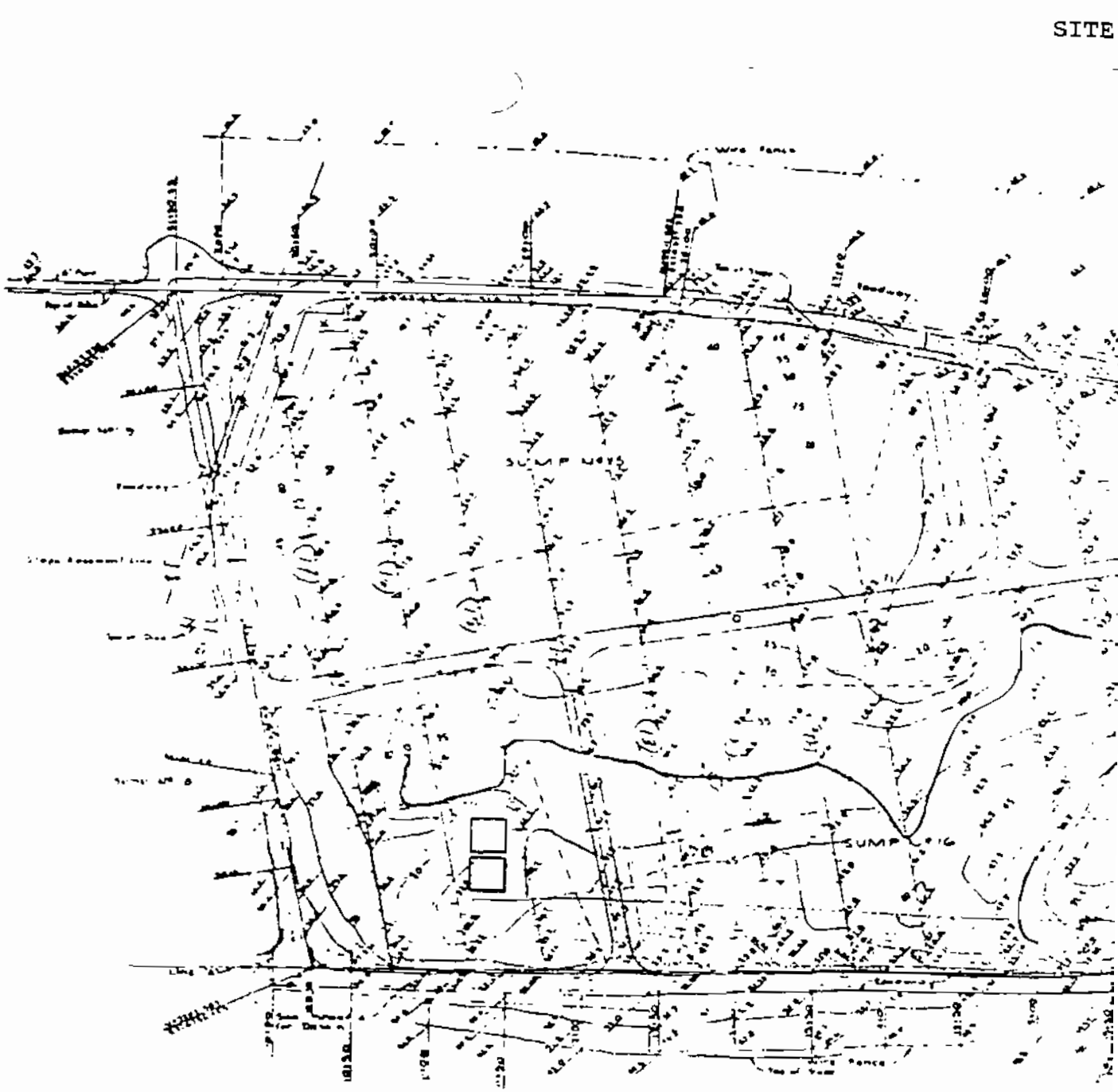
SUMP SITE SUPPLEMENTAL STUDY

SITE LOCATION MAP

FIGURE 1

FIGU

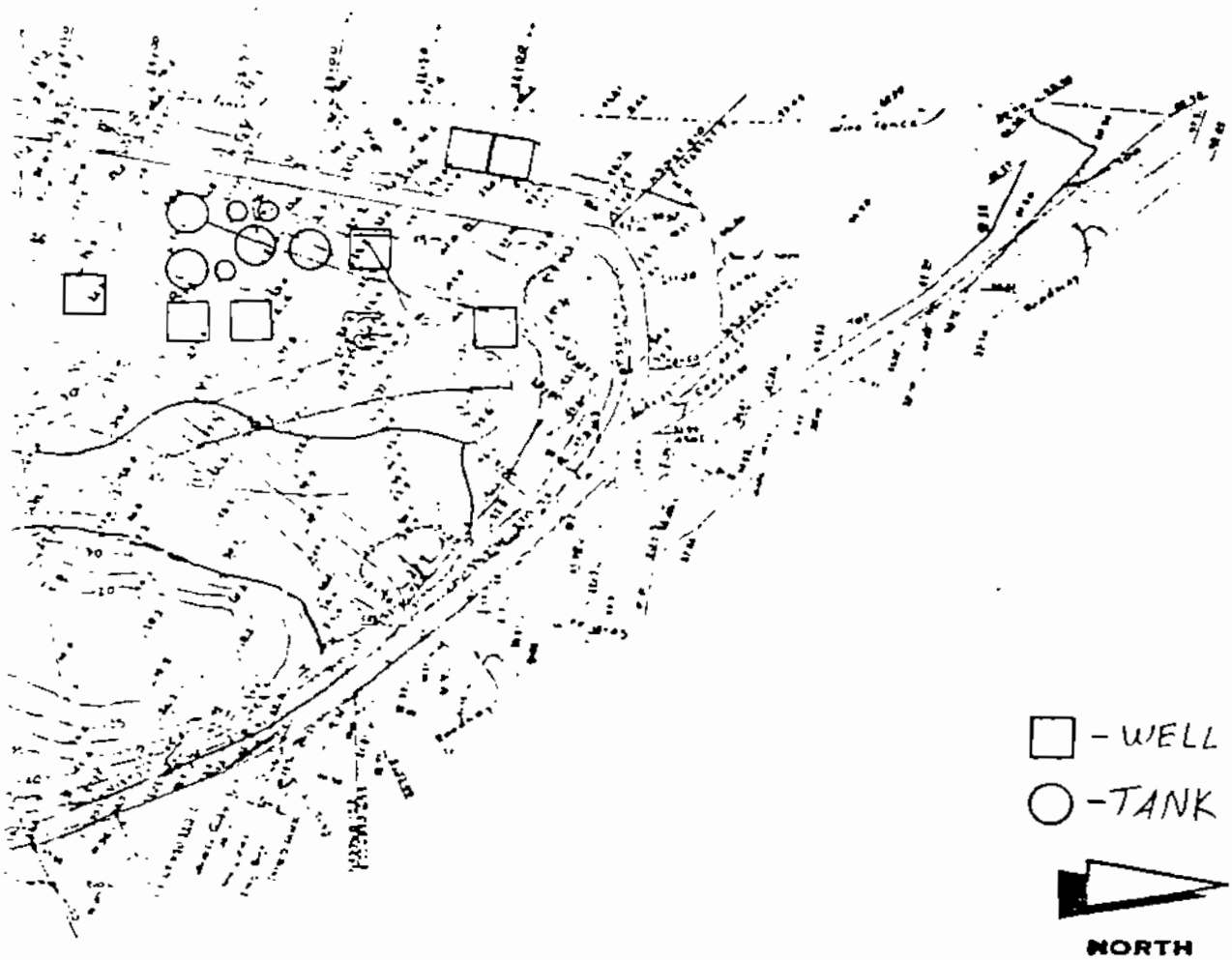
SITE



NOTE: ACTUAL EASTERN SITE BOUNDARY FENCE LINE
IS BEYOND WIRE FENCE AS SHOWN ABOVE

2

AN



□ - WELL

○ - TANK

NORTH

0 50 100 200 FEET

BASE DRAWING FURNISHED BY OIL OPERATORS, INC.

The Earth Technology Corporation

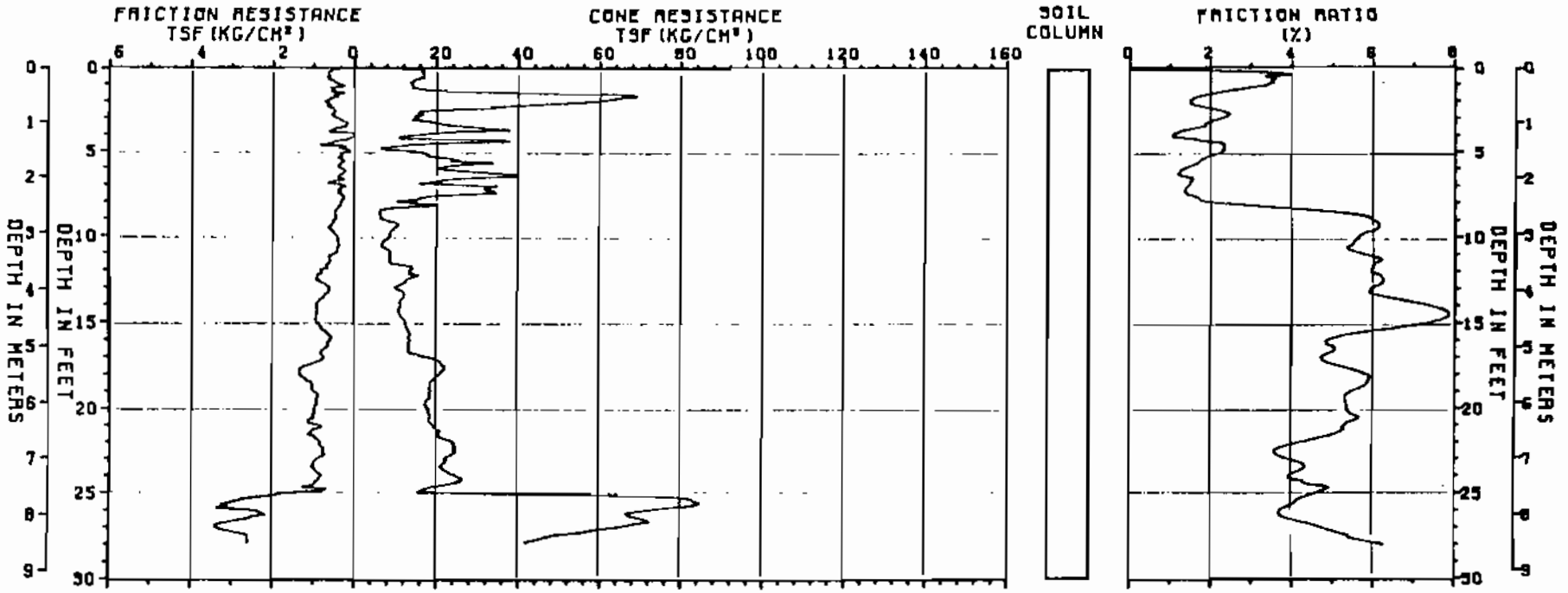
PROJECT NO.: 83-280

SUMP SITE DEVELOPMENT FEASIBILITY STUDY

SITE PLAN

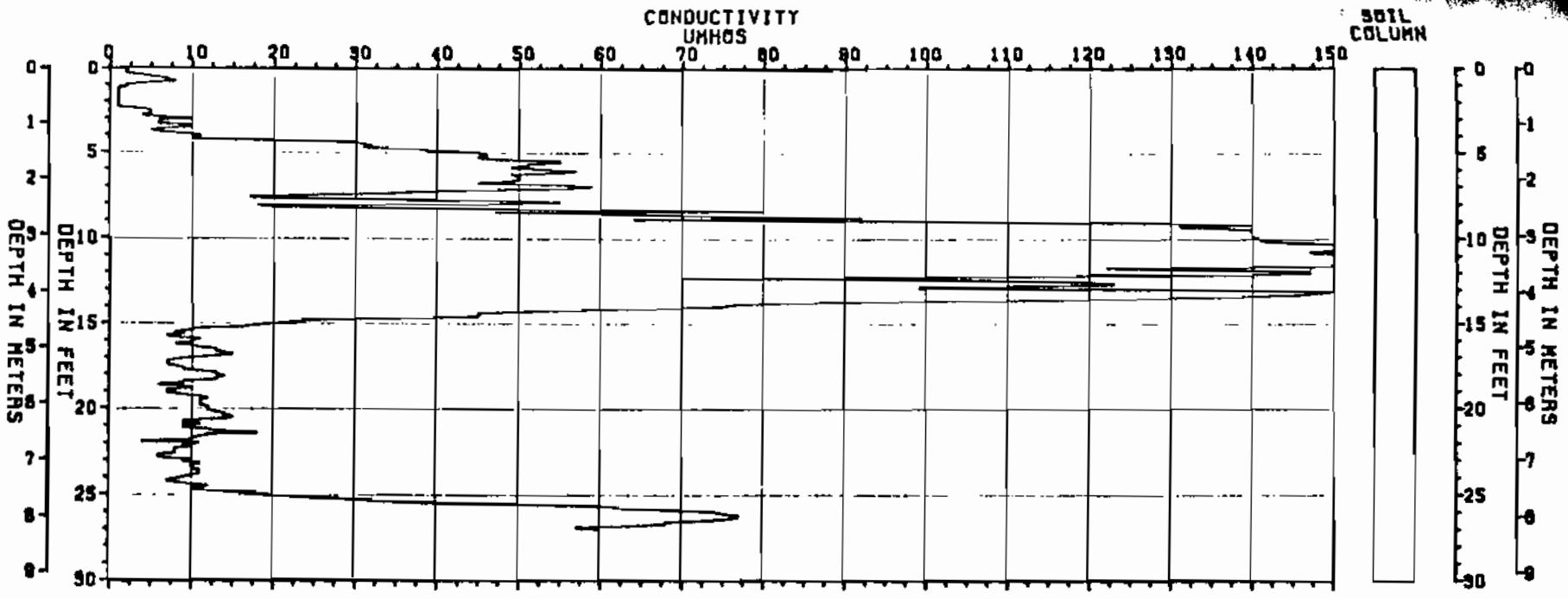
APPENDIX A

CONE PENETROMETER TEST RESULTS



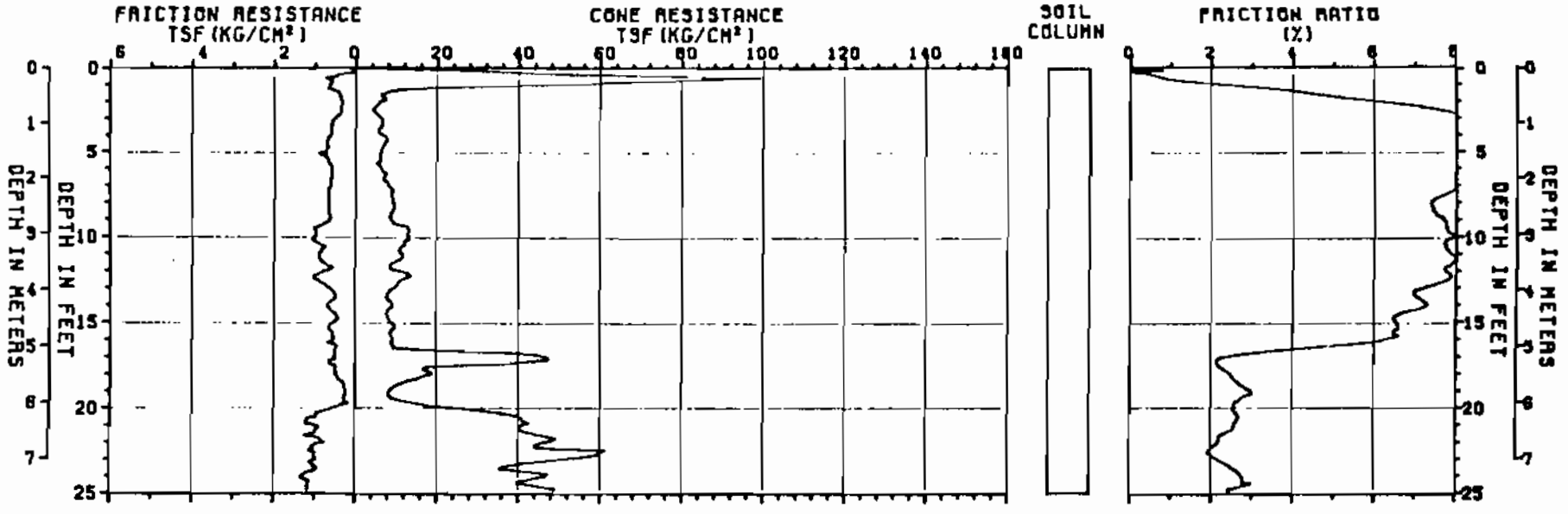
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-07



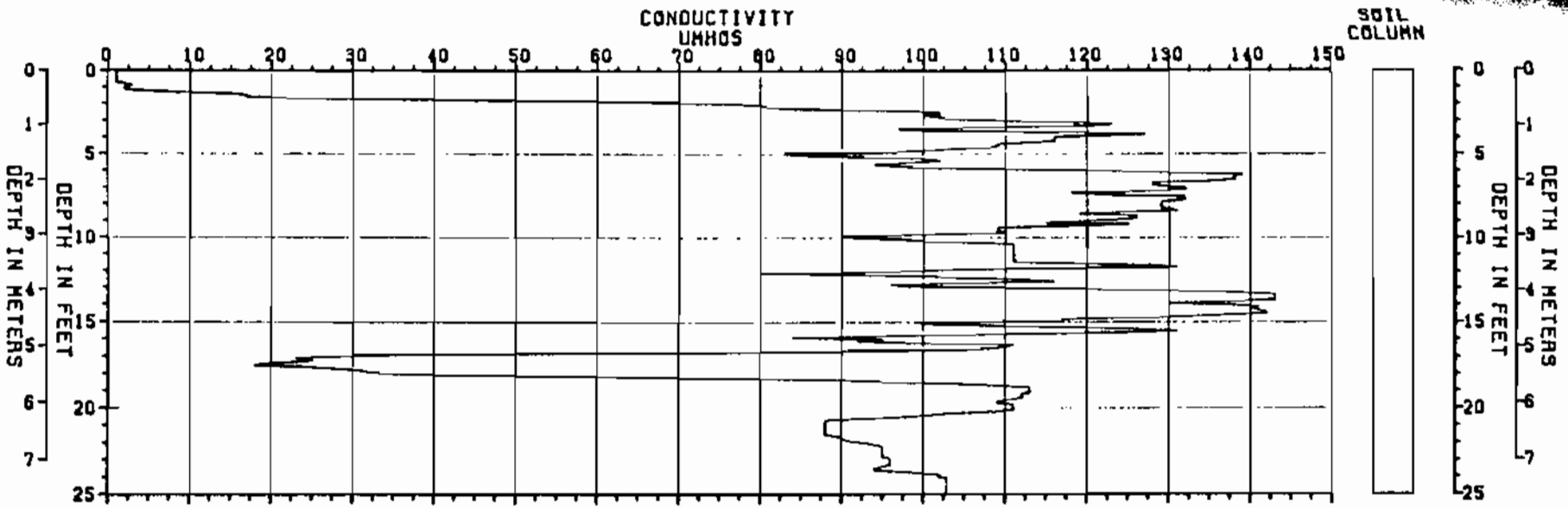
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-07



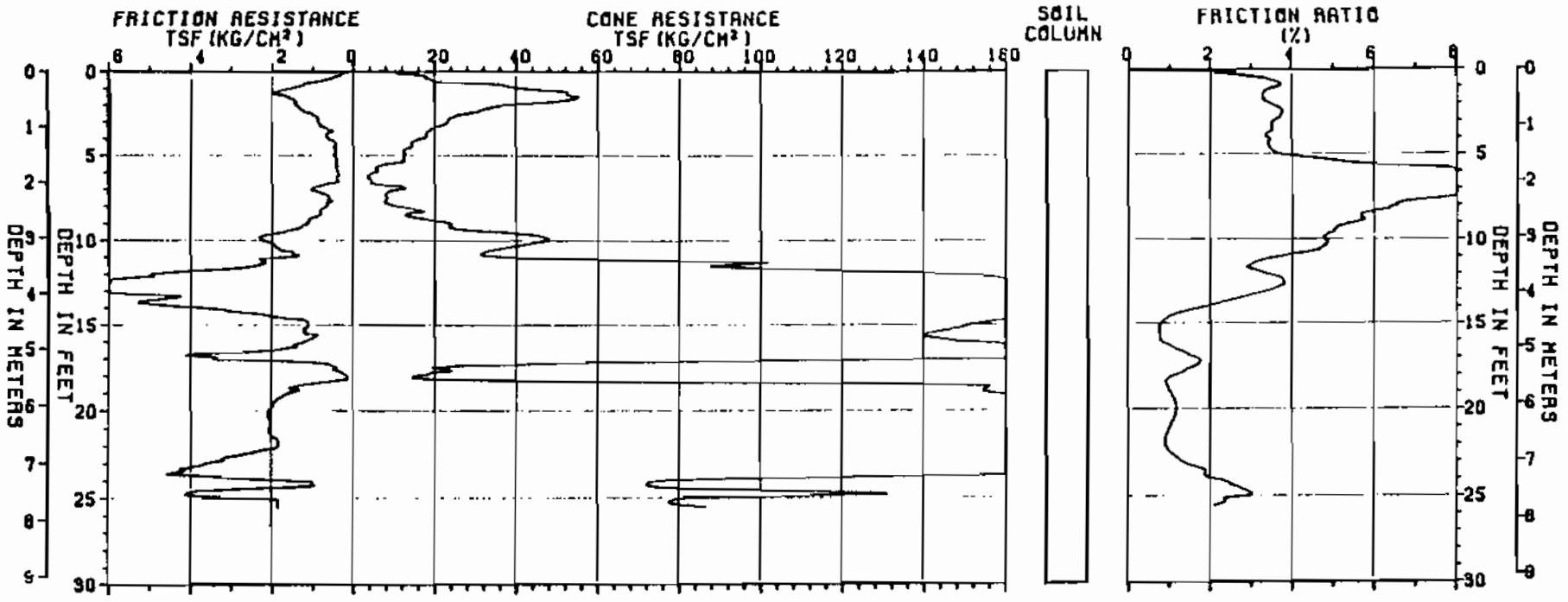
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-08



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

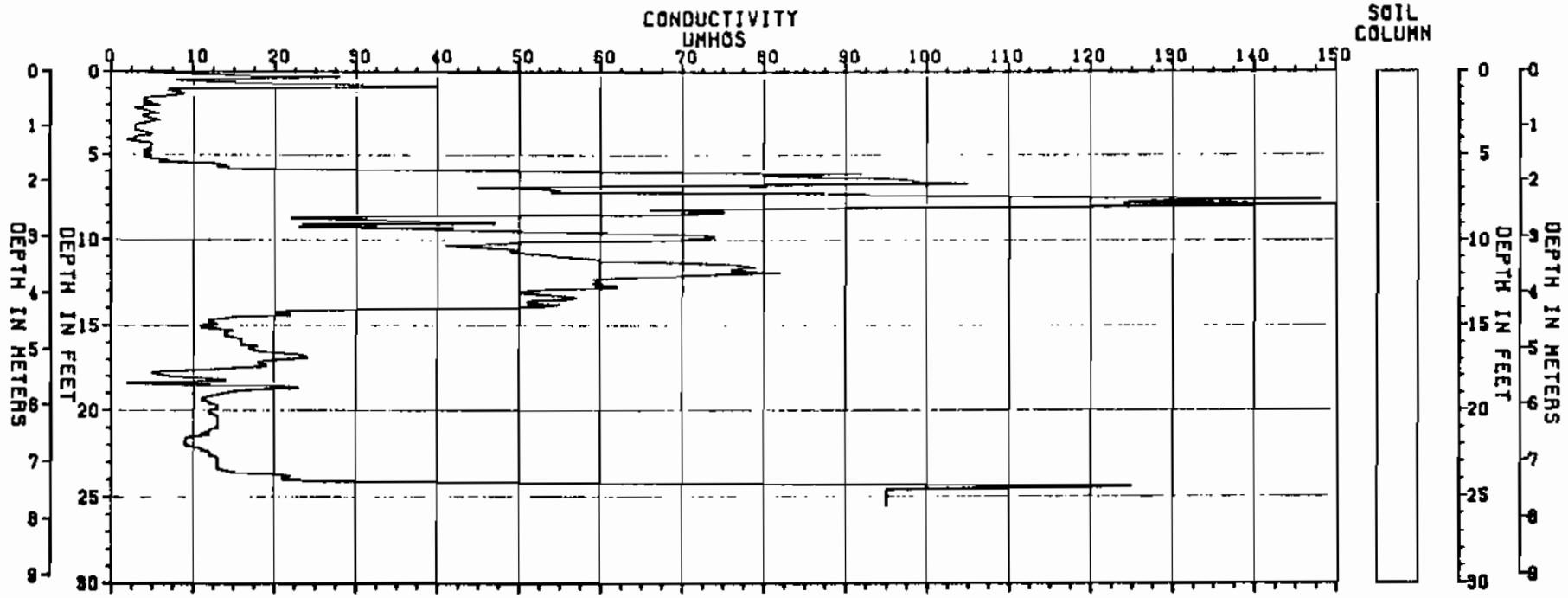
CONE PENETROMETER TEST
PROBE: 001-C-08



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

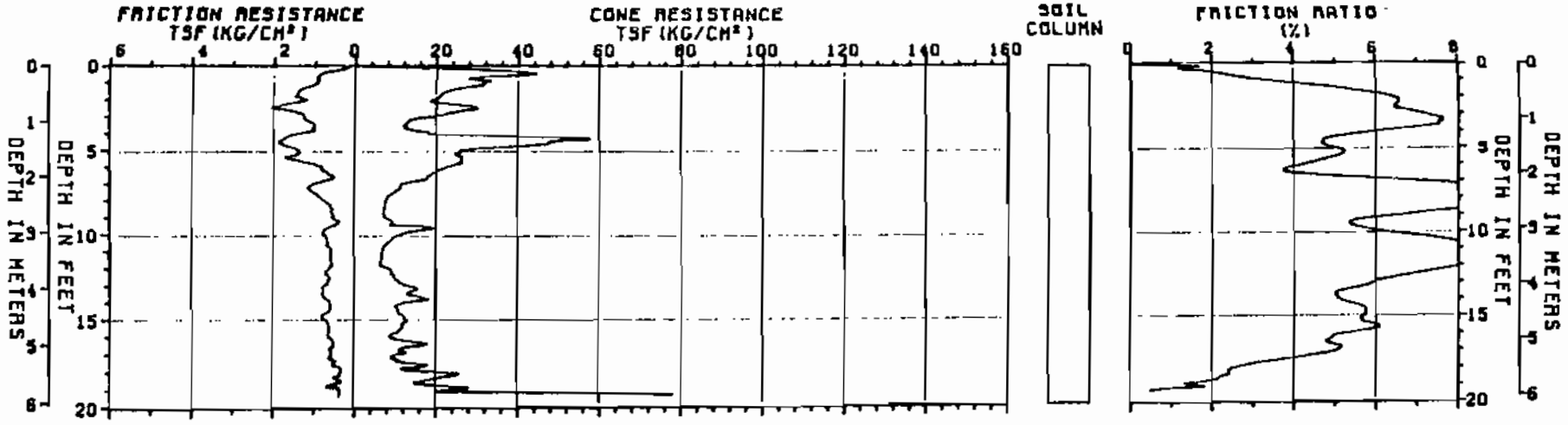
CONE PENETROMETER TEST

PROBE: 001-C-09



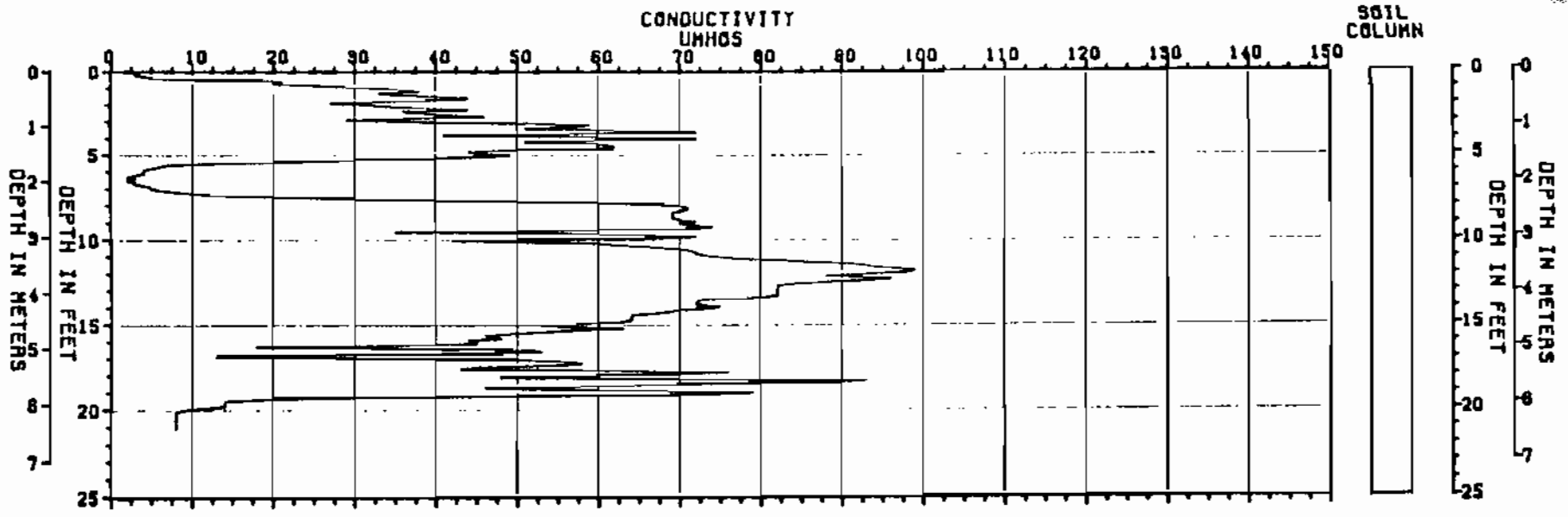
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-09



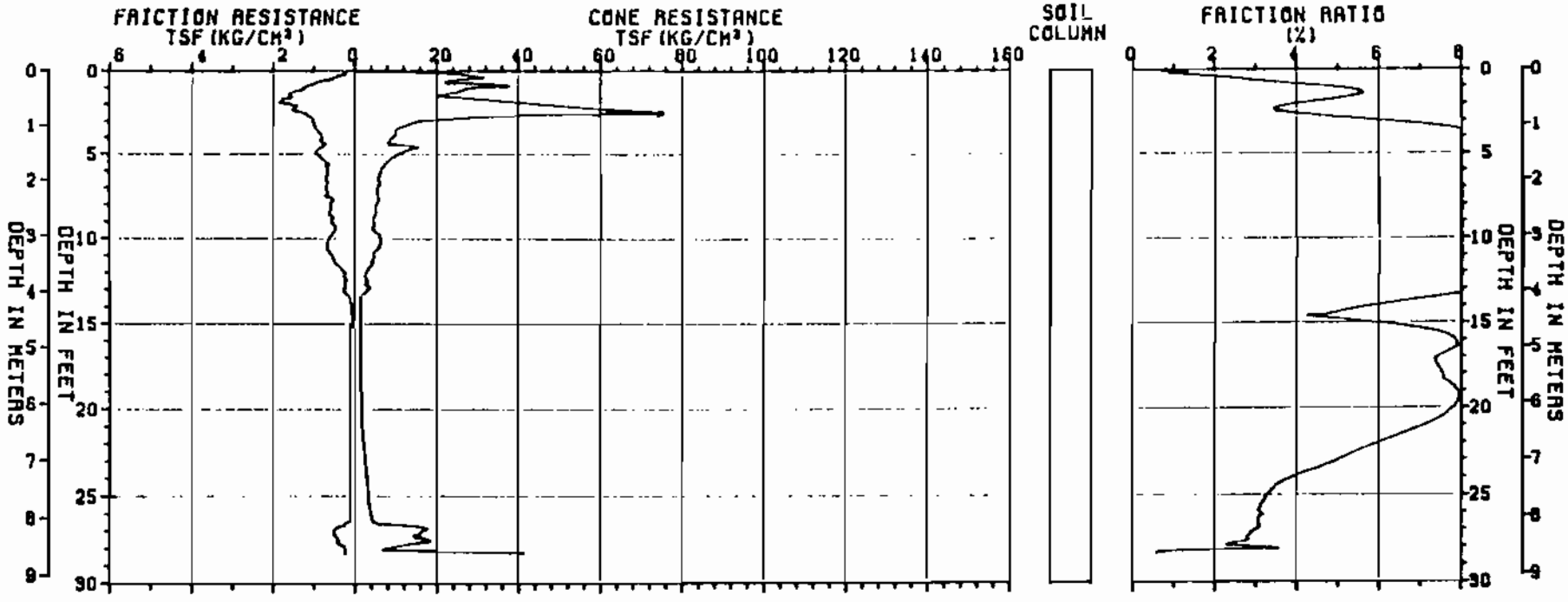
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 84-140-13
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-10



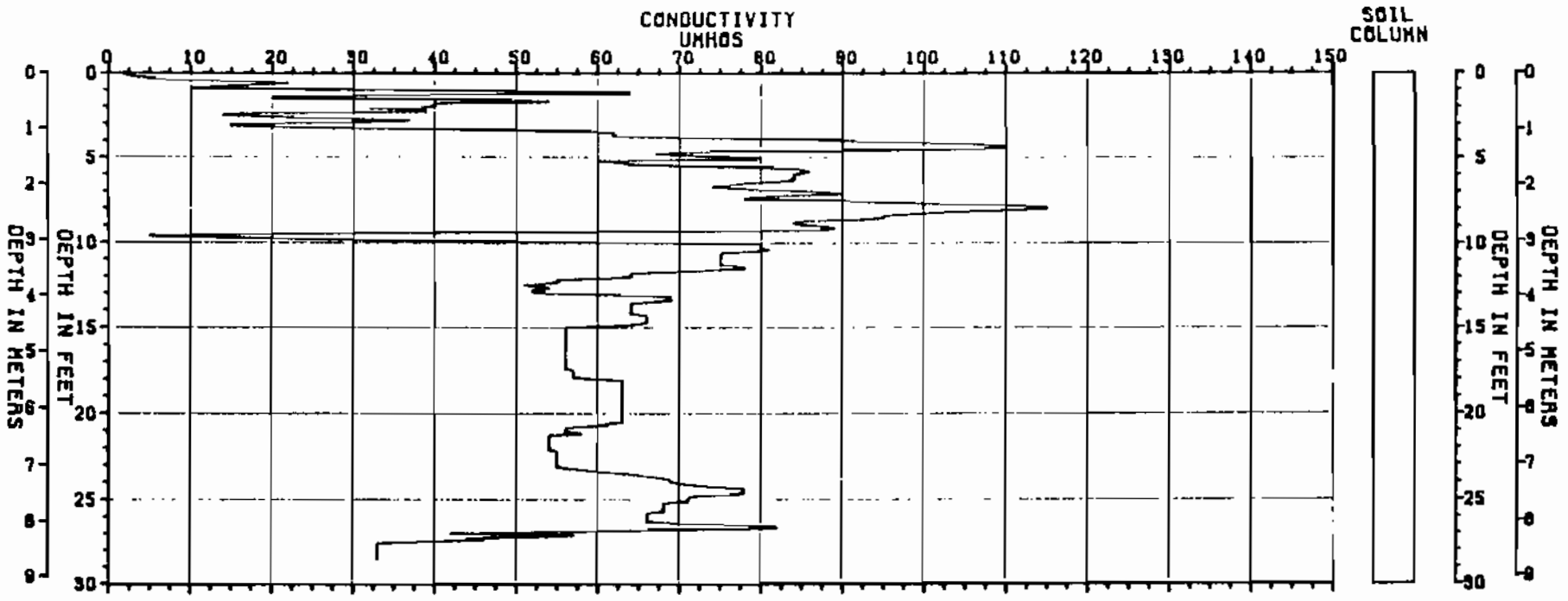
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-10



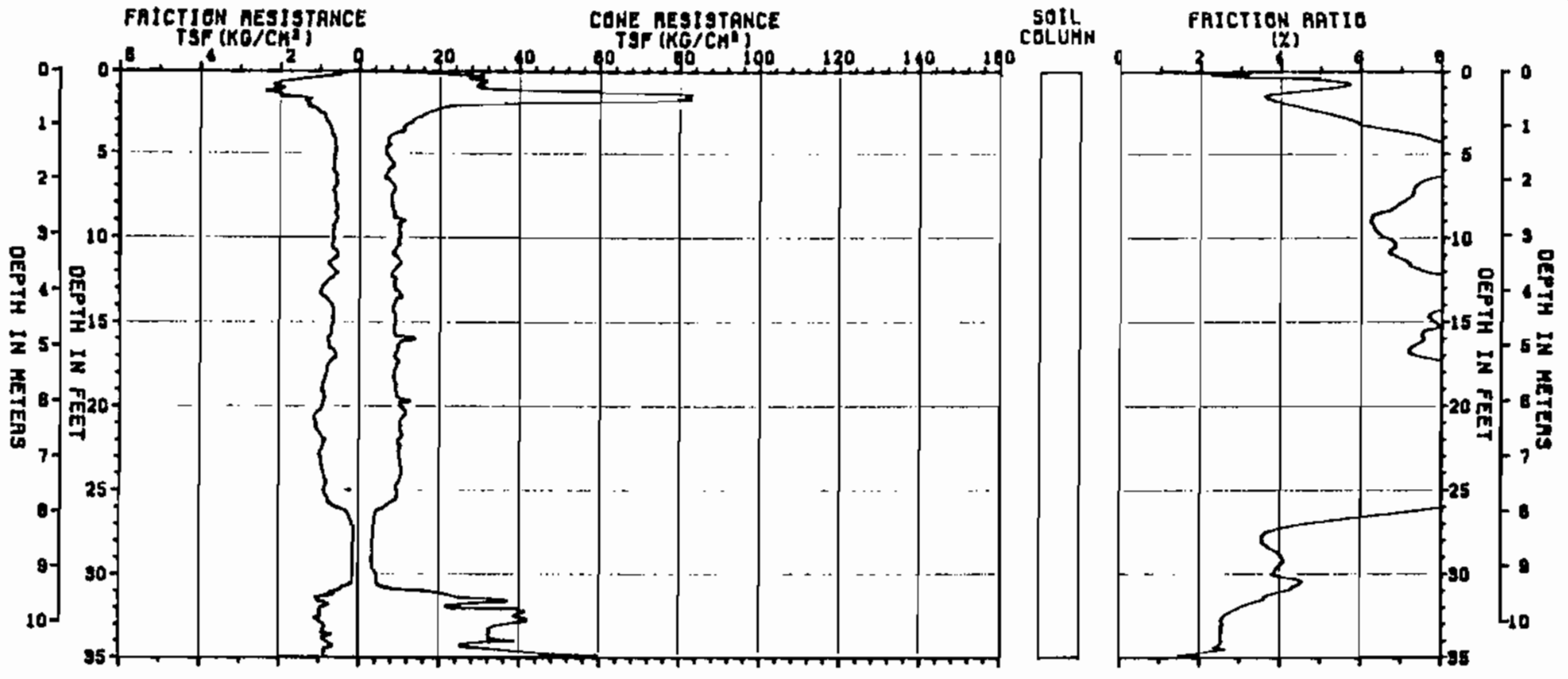
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-11



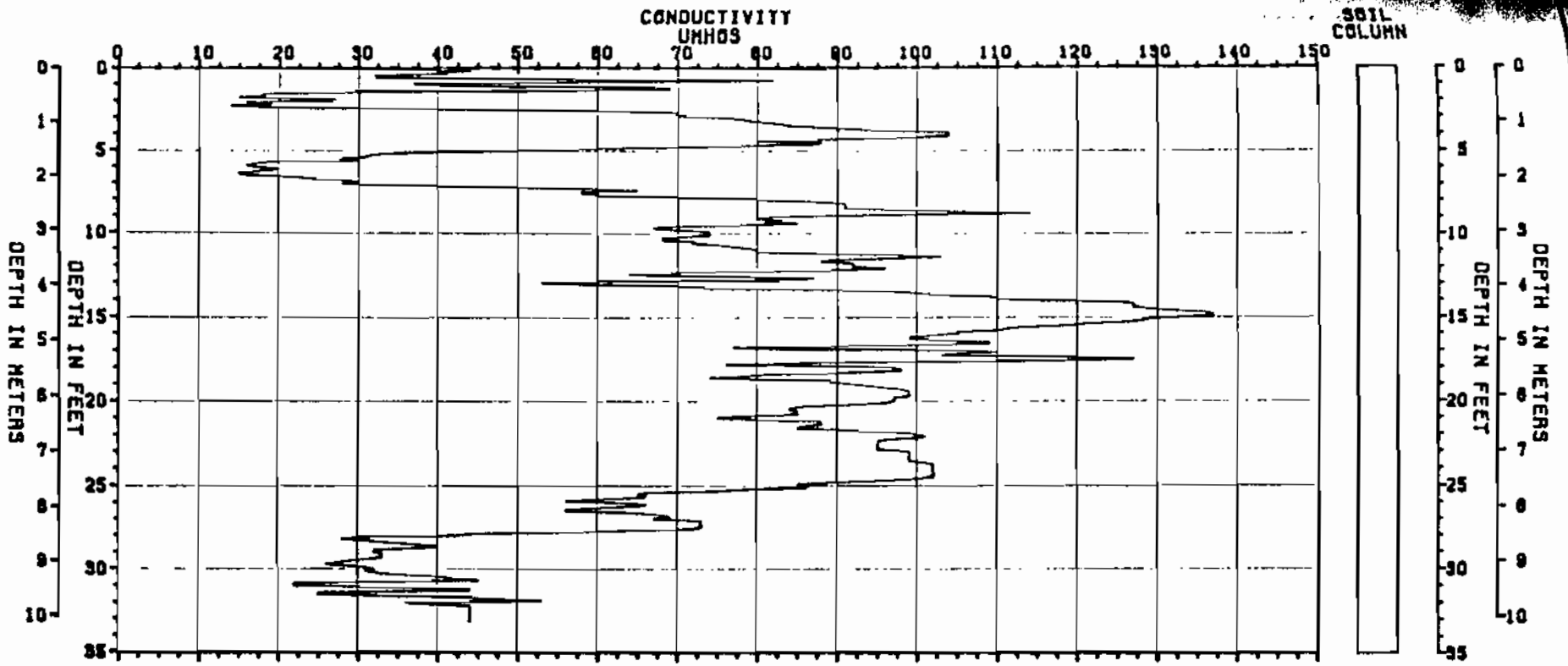
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F1SCKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-11



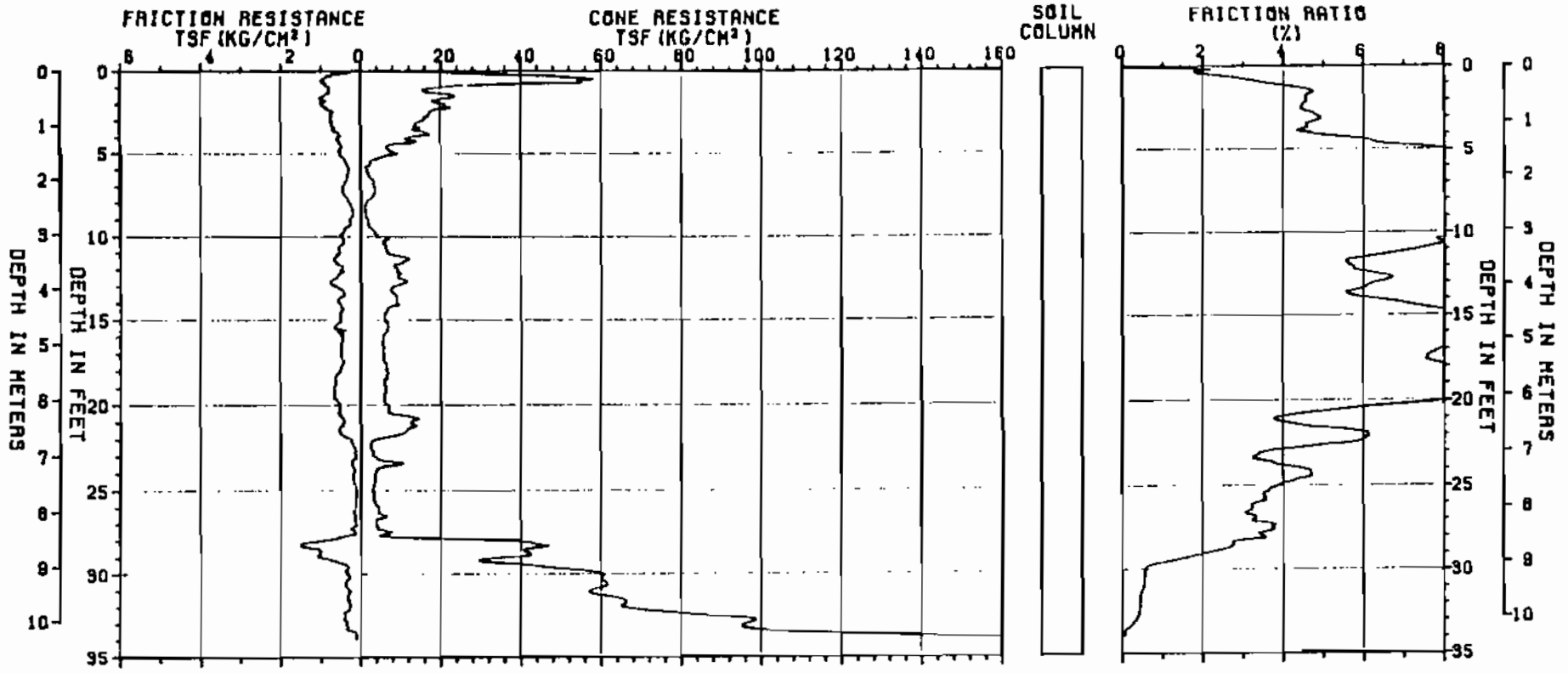
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-12



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

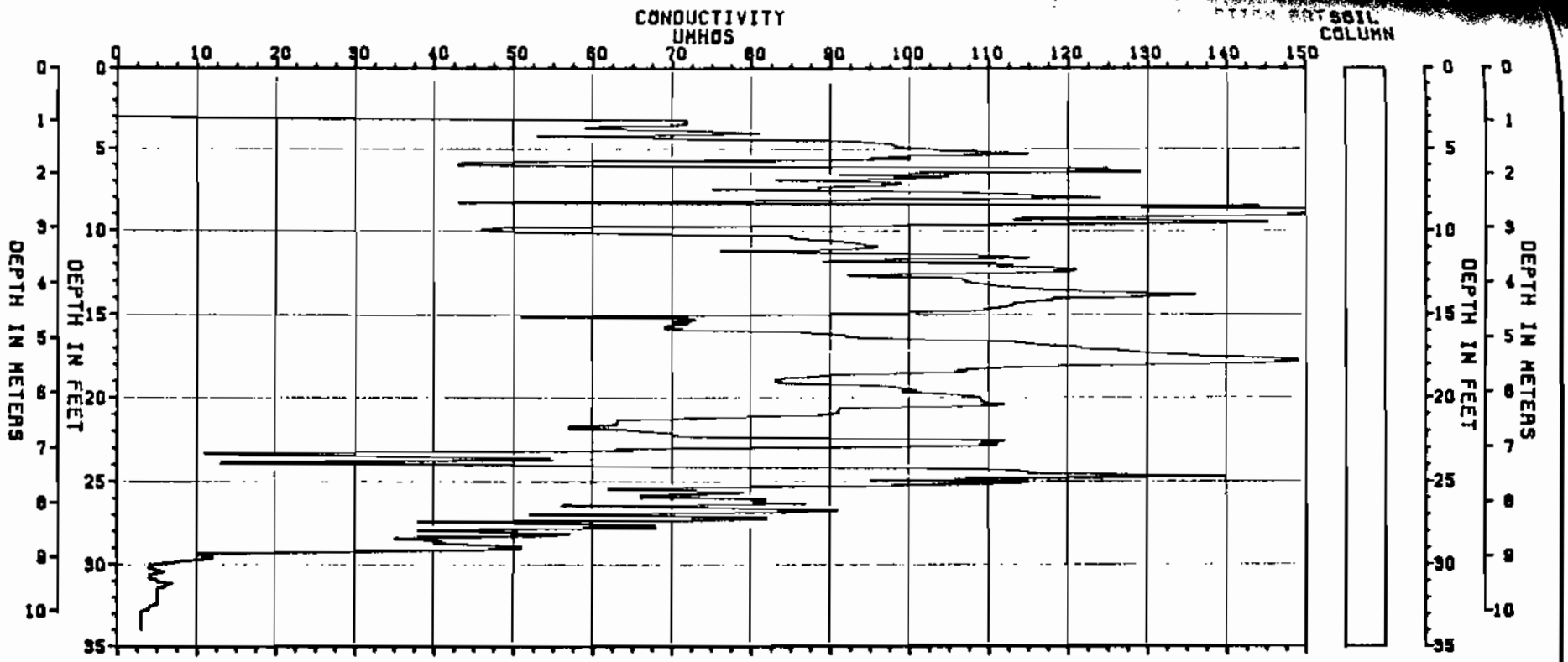
CONE PENETROMETER TEST
PROBE: 001-C-12



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

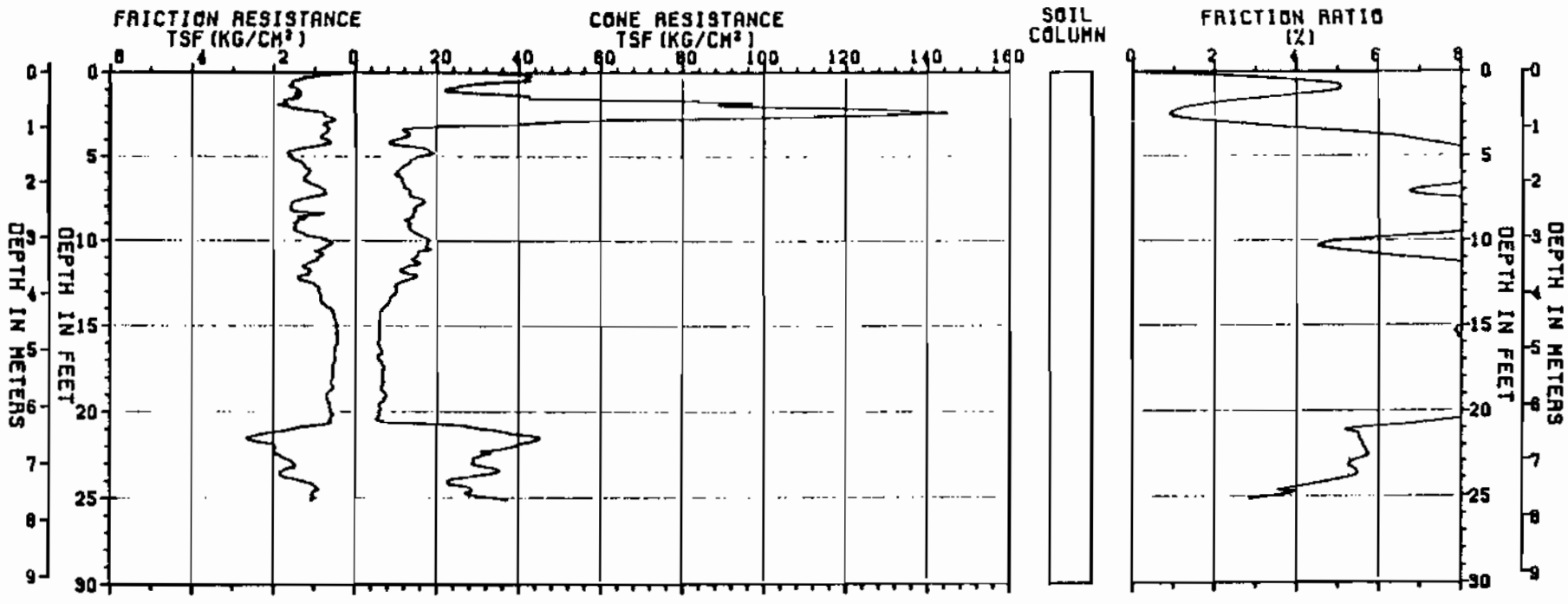
CONE PENETROMETER TEST

PROBE: 001-C-13



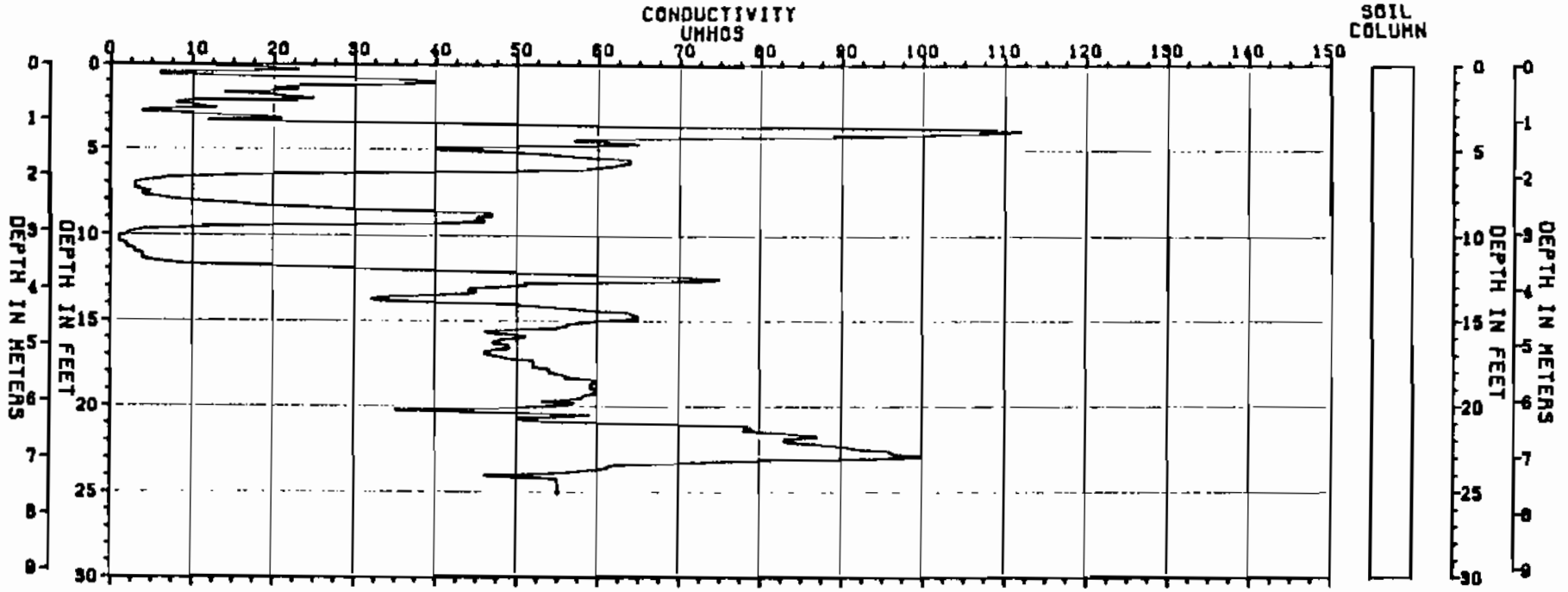
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-13



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

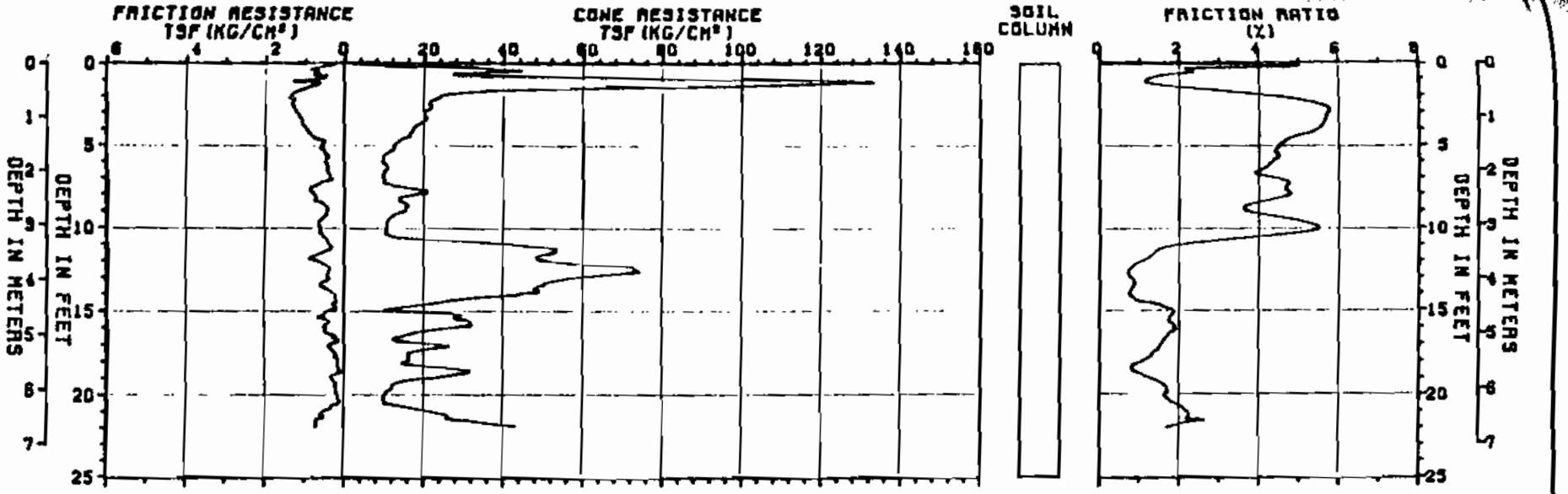
CONE PENETROMETER TEST
PROBE: 001-C-14



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

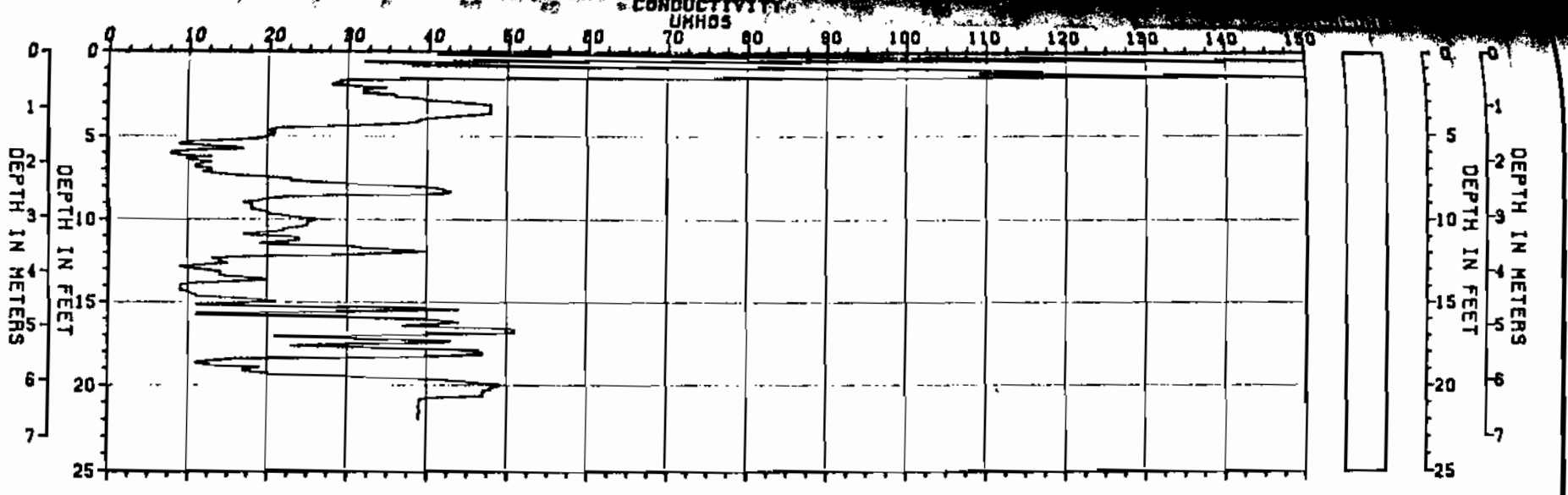
CONE PENETROMETER TEST

PROBE: 001-C-14



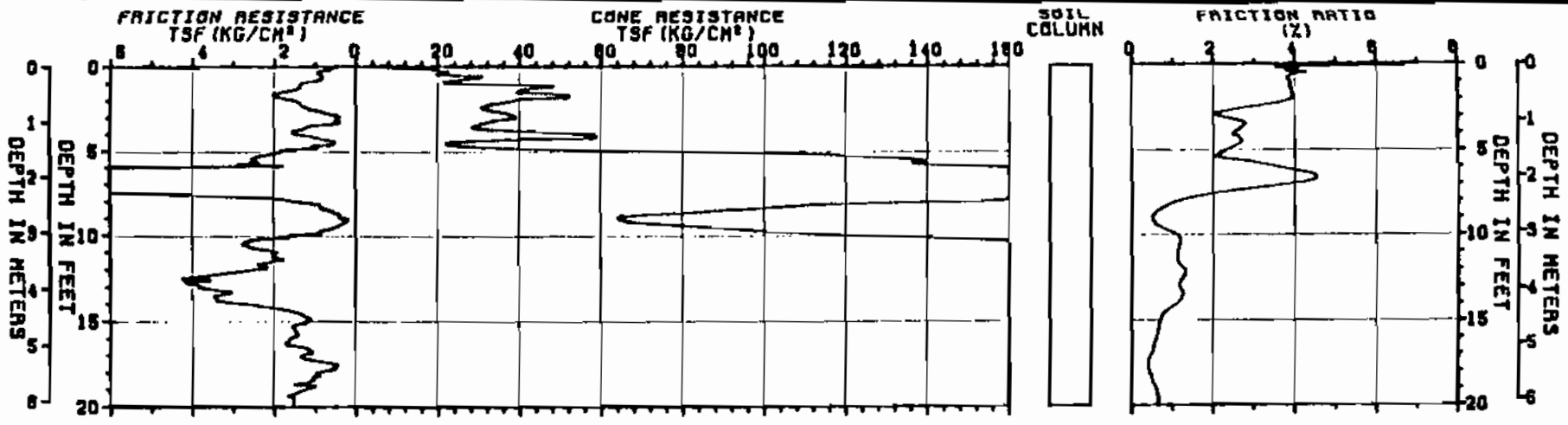
PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F1SCKE058
DATE: 12/07/83

CONE PENETROMETER TEST
PROBE: 001-C-15



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 83-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

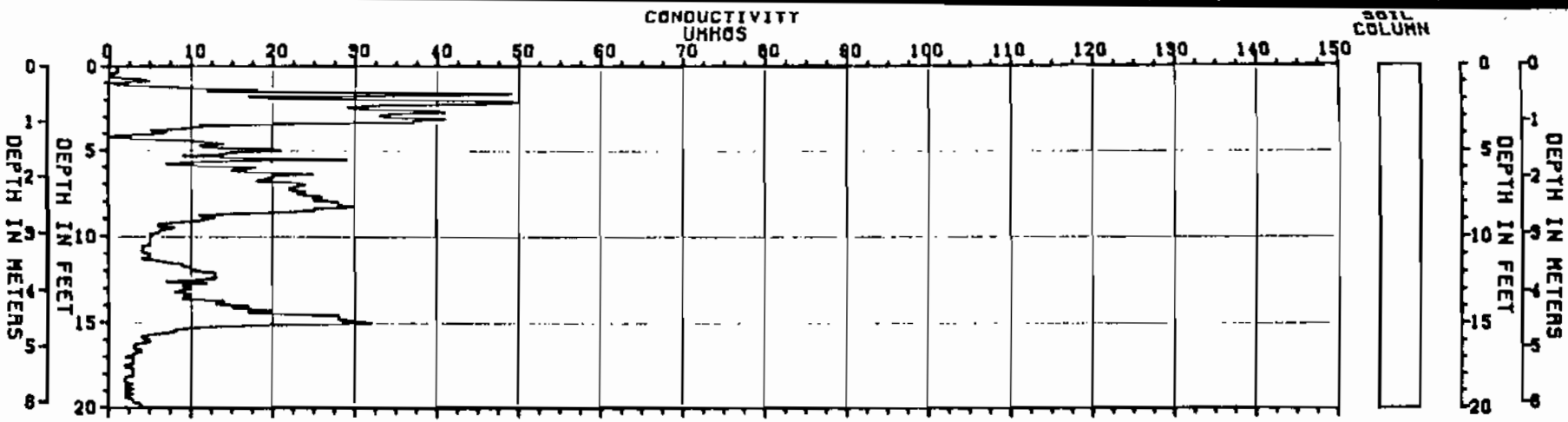
CONE PENETROMETER TEST
PROBE: 001-C-15



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 84-140-13
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/83

CONE PENETROMETER TEST

PROBE: 001-C-16



PROJECT: OIL OPERATORS, INC.
PROJECT NUMBER: 89-280-02
INSTRUMENT NUMBER: F15CKE058
DATE: 12/07/89

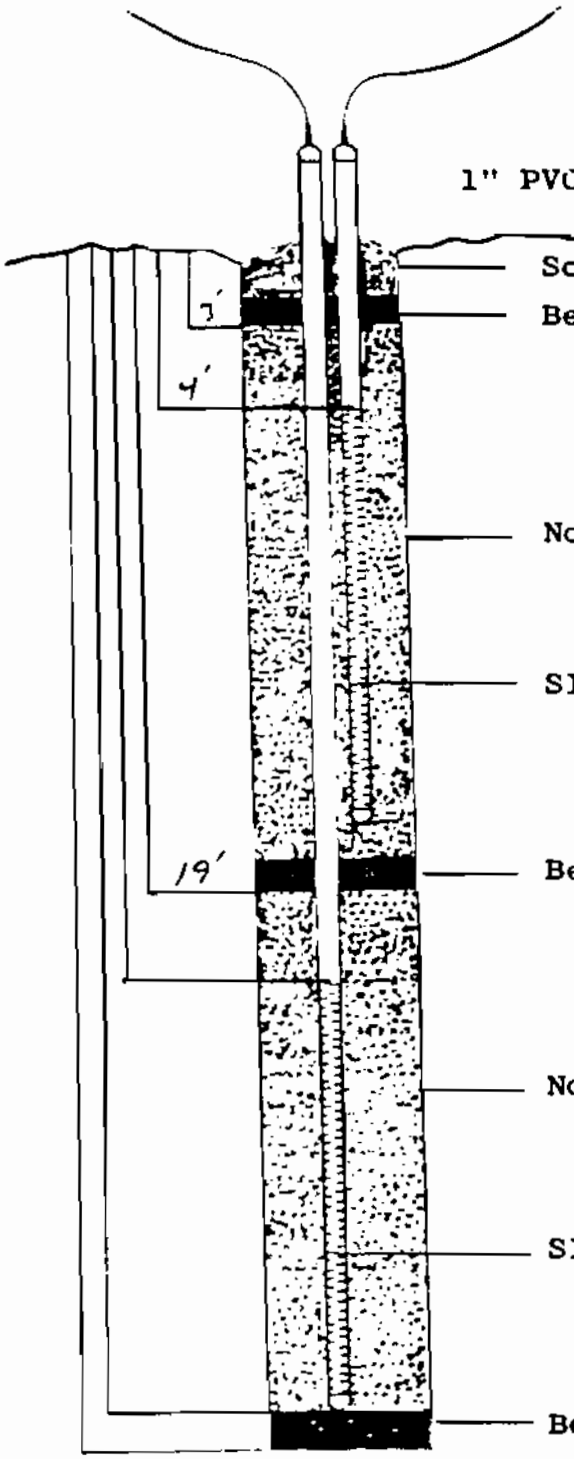
CONE PENETROMETER TEST

PROBE: 001-C-16

PROBE DESIGN LOG

Project: Shale Wide

Probe #: 12



Liquid Zones:

None

Well Pipe and Slot Line Lengths:

Single Probe

4' solid

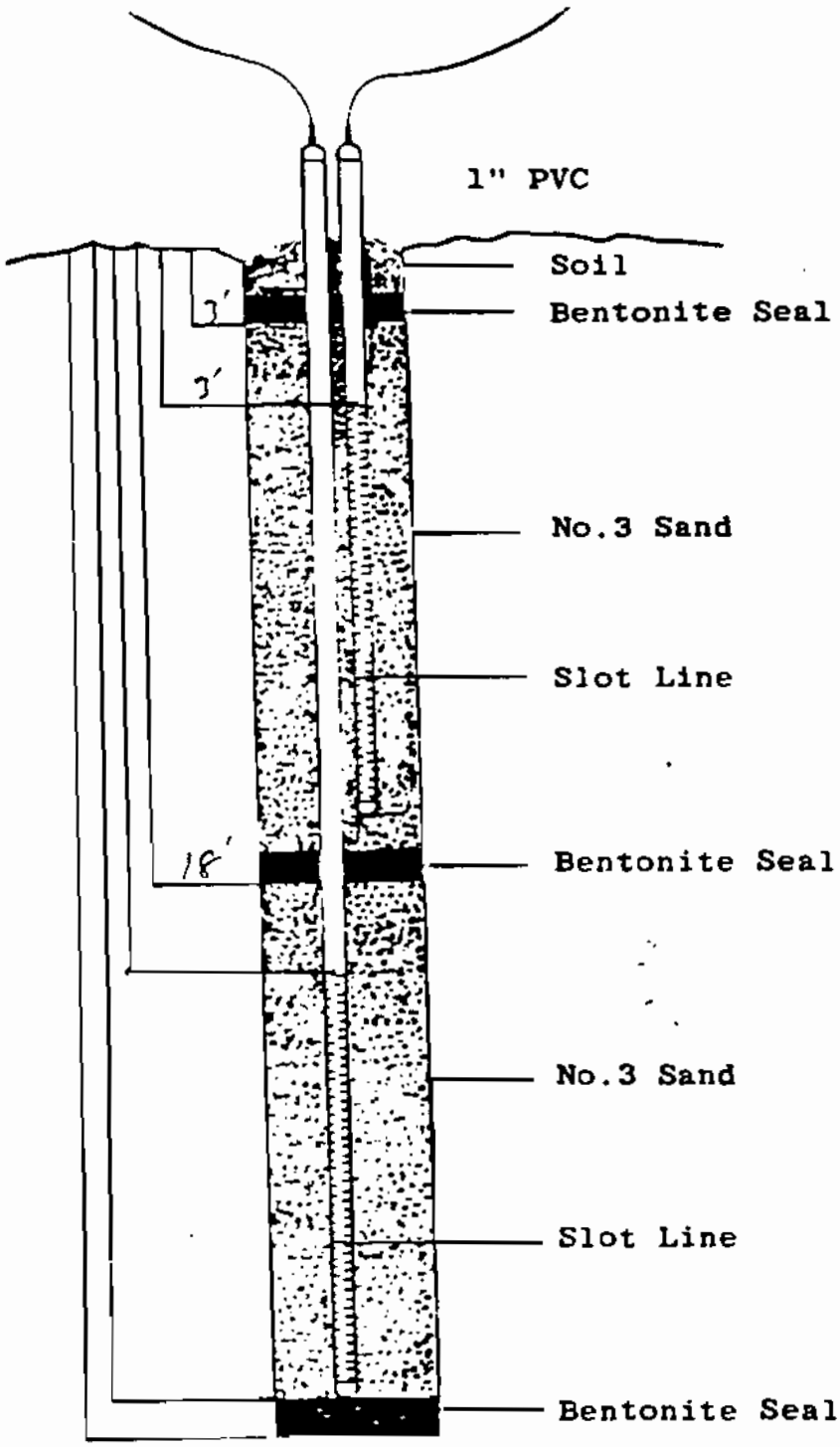
15' slotted

No bottom seal

PROBE DESIGN LOG

Project: Statewide

Probe #: 11



Liquid Zones:

None

Well Pipe and Slot Line Lengths:

Single Probe

3' solid

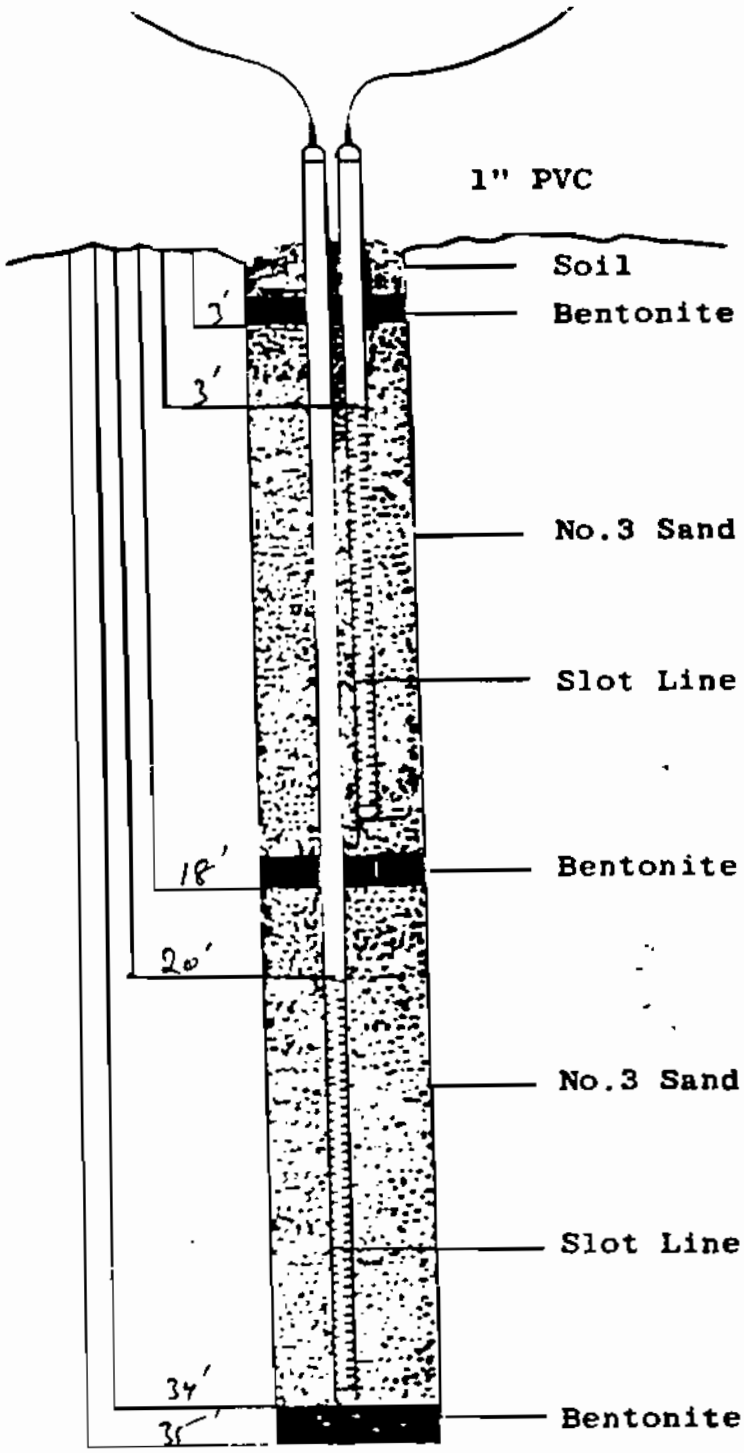
15' slotted

No bottom seal

PROBE DESIGN LOG

Project: Statewide

Probe #: 10



Liquid Zones:

None

Well Pipe and Slot Line Lengths:

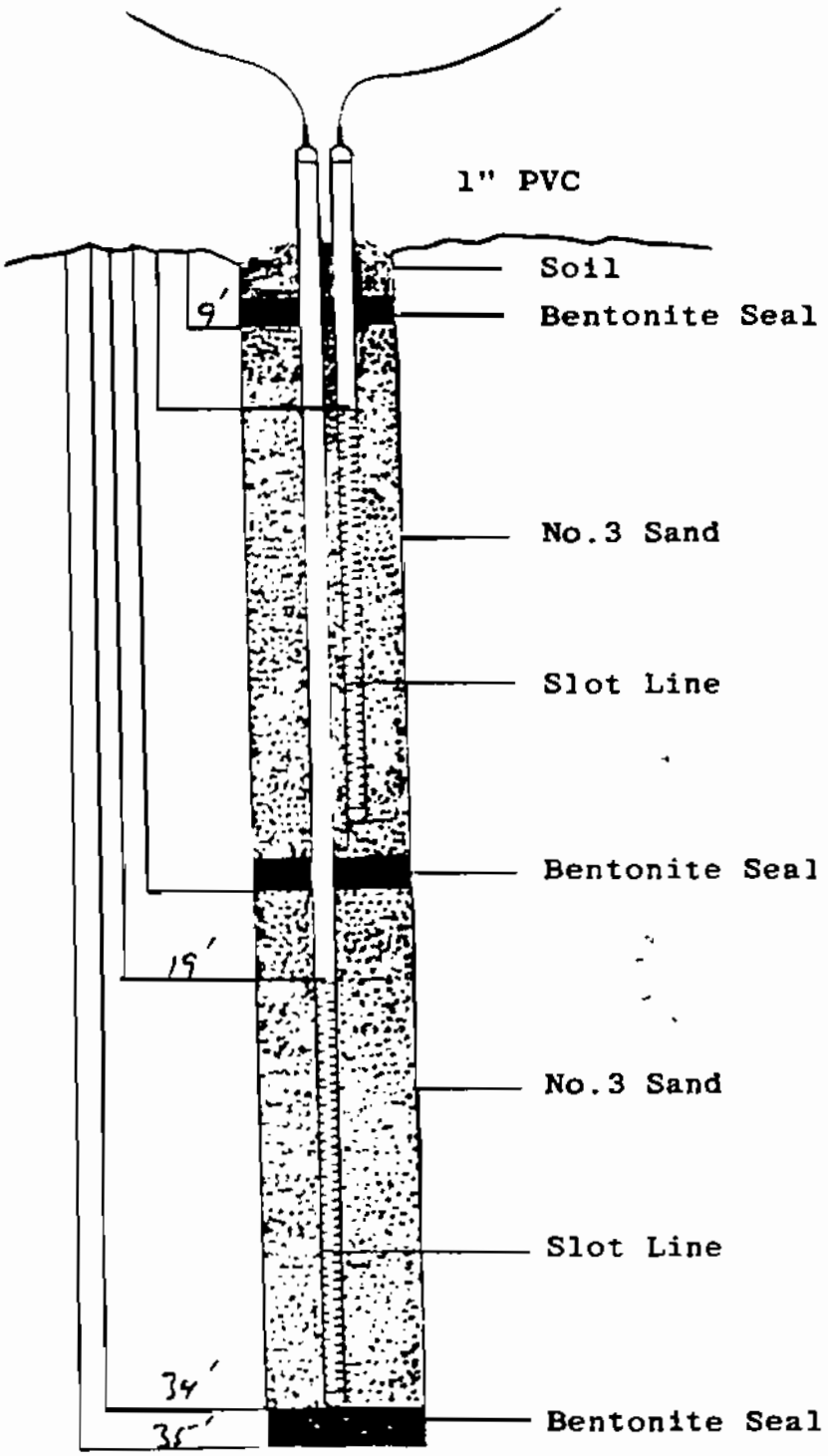
Shallow:
3' solid
15' slotted

Deep:
20' solid
14' slotted

PROBE DESIGN LOG

Project: State Wide

Probe #: 9



Liquid Zones:

None

Well Pipe and Slot Line Lengths:

19' solid
15' slotted

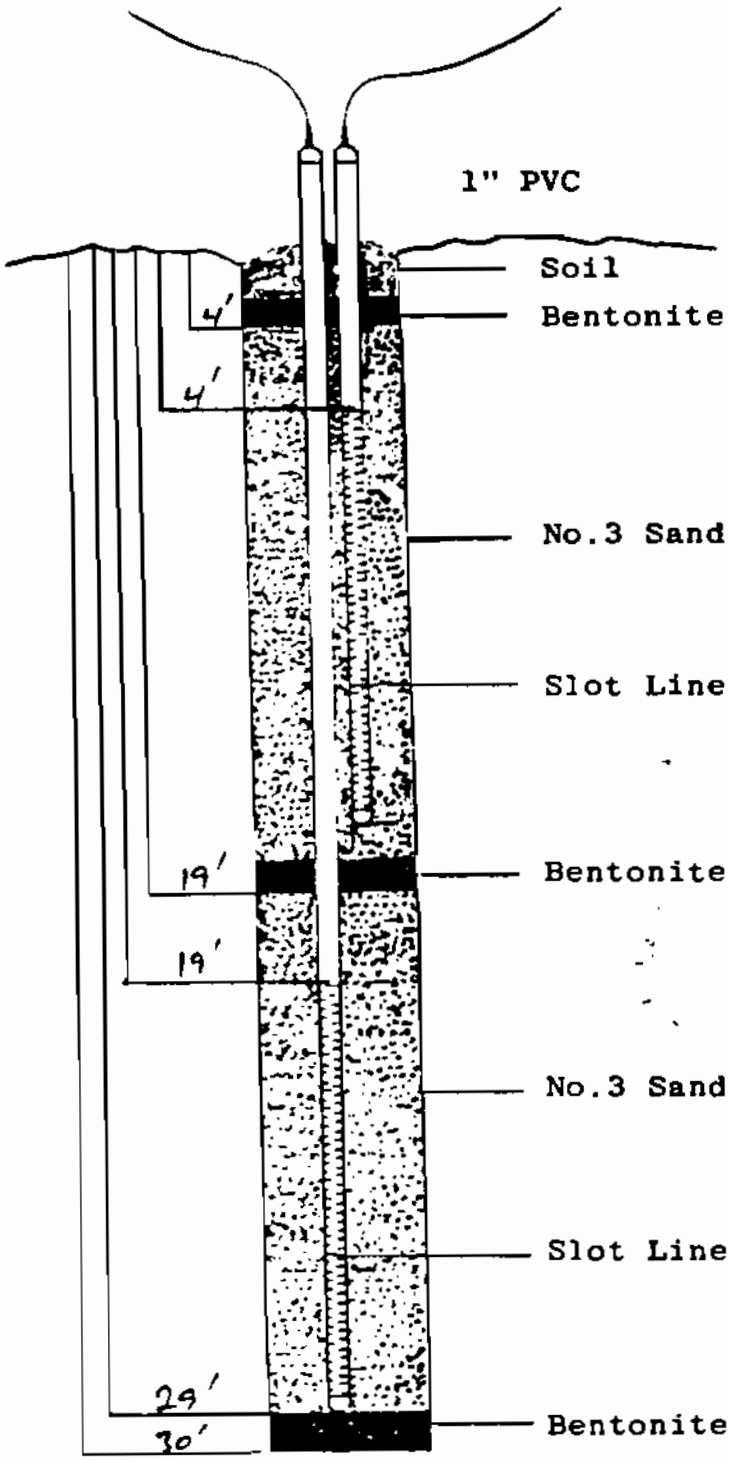
Single Probe

well bore caved in before shallow probe could be set.

PROBE DESIGN LOG

Project: Shk Wrks

Probe #: 8



Liquid Zones:

None

Well Pipe and Slot Line Lengths:

Deep Probe:

19' solid

10' slotted

Shallow Probe:

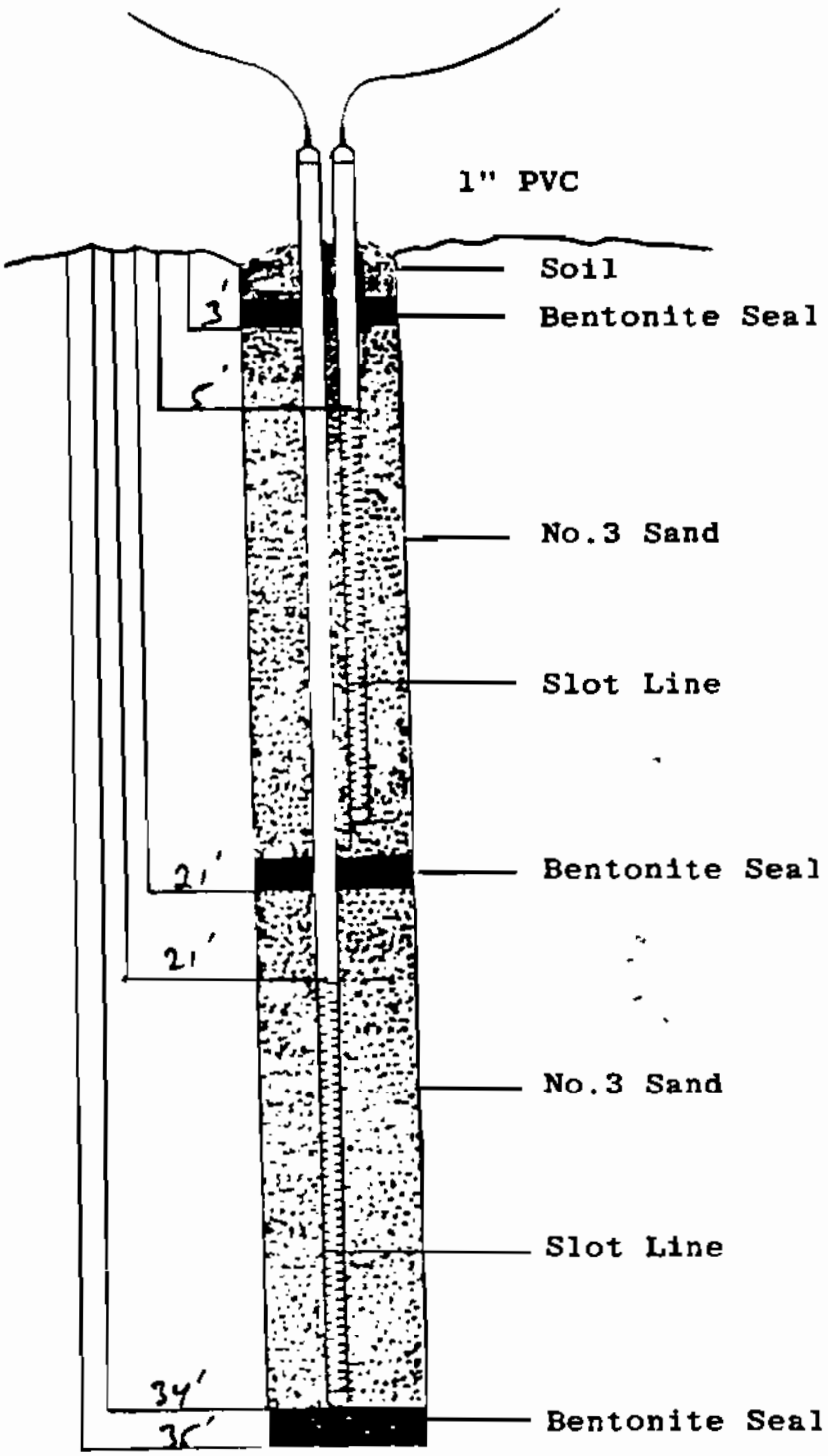
4' solid

15' slotted

PROBE DESIGN LOG

Project: Statewide

Probe #: 7



Liquid Zones:

None

Well Pipe and
Slot Line Lengths:

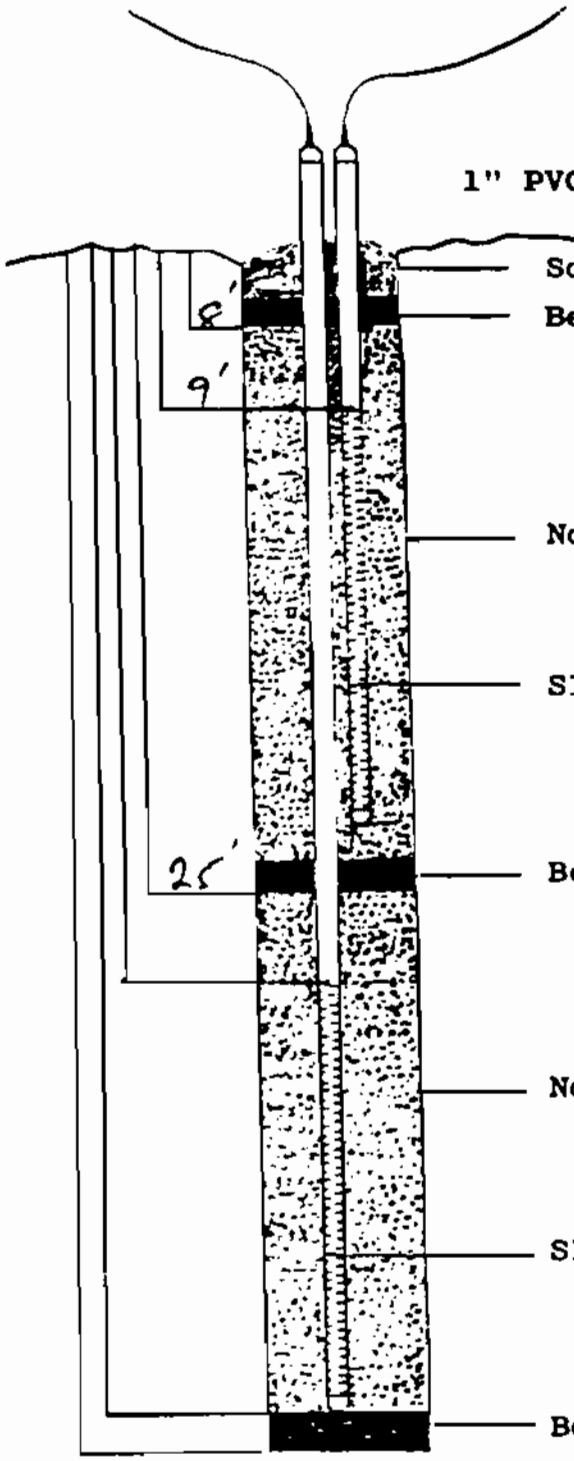
Deep Probe:
21' solid
13' slotted

Shallow Probe:
5' solid
15' slotted

PROBE DESIGN LOG

Project: Cable Wide

Probe #: 6



Liquid Zones:

None

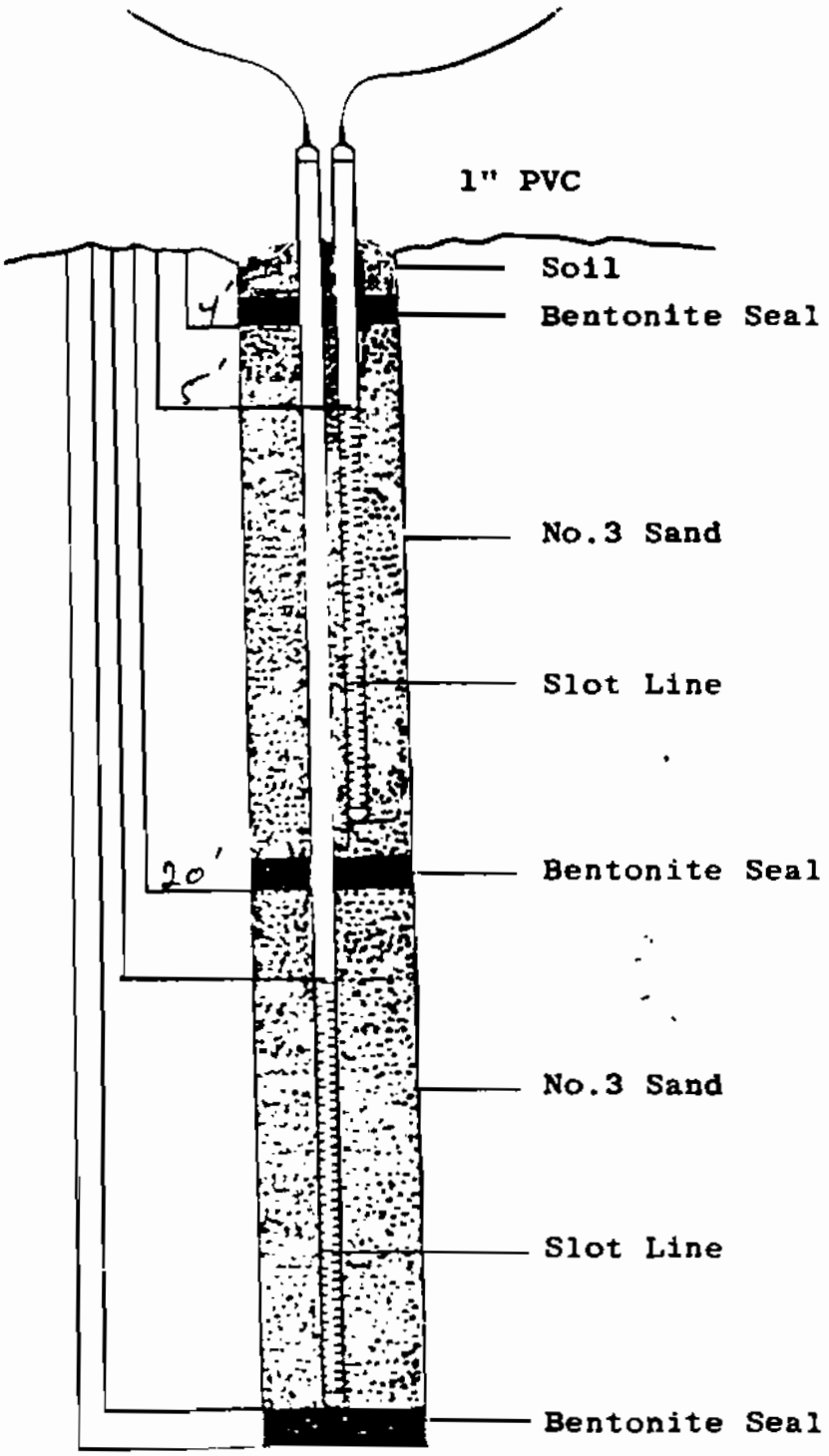
Well Pipe and
Slot Line Lengths:

Single Probe
9' Solid
15' Slotted
Bottom bentonite Seal

PROBE DESIGN LOG

oject: Statewide

obe #: 5



Liquid Zones:

None

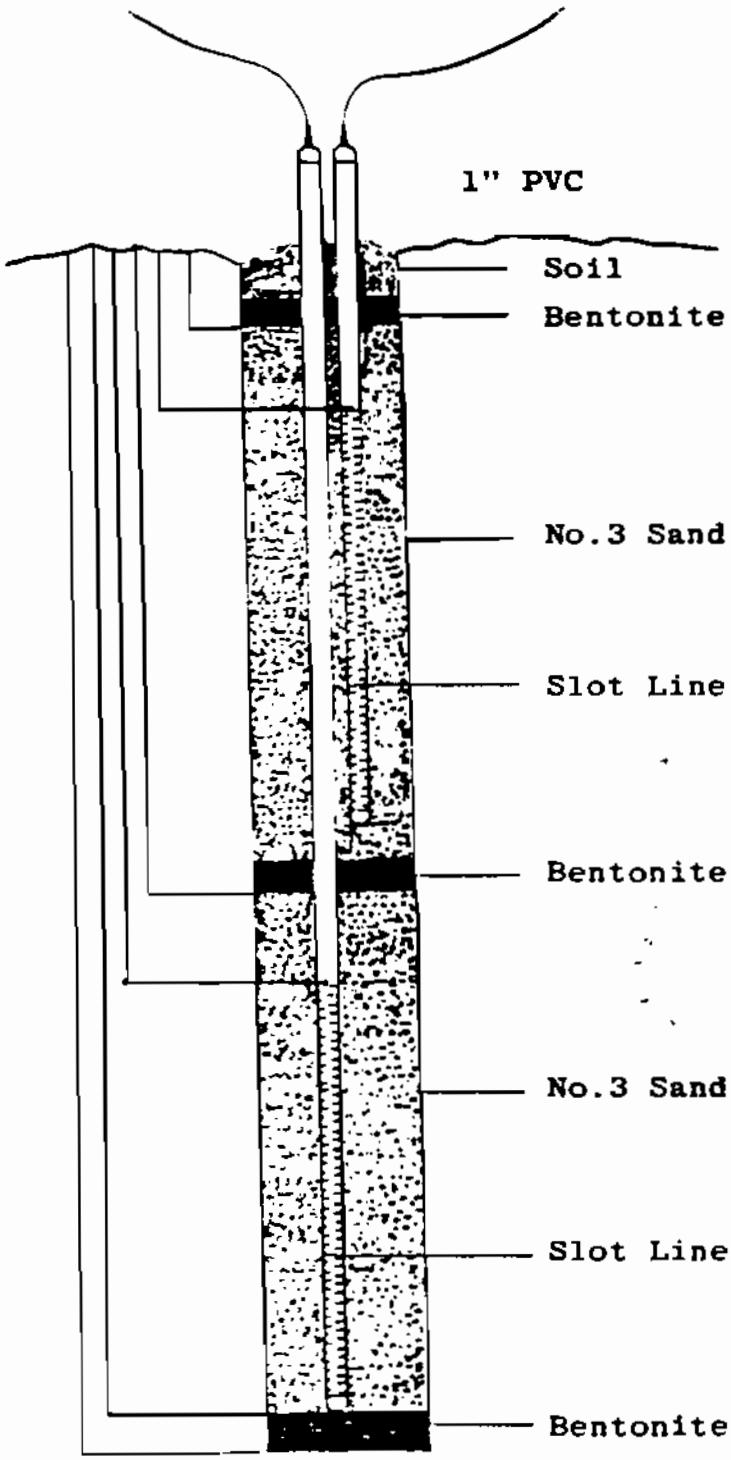
Well Pipe and
Slot Line Lengths:

5' solid
15' slotted
Bottom bentonite seal
Single probe

PROBE DESIGN LOG

Project: Shale Wide

Probe #: 4



Liquid Zones:

8'

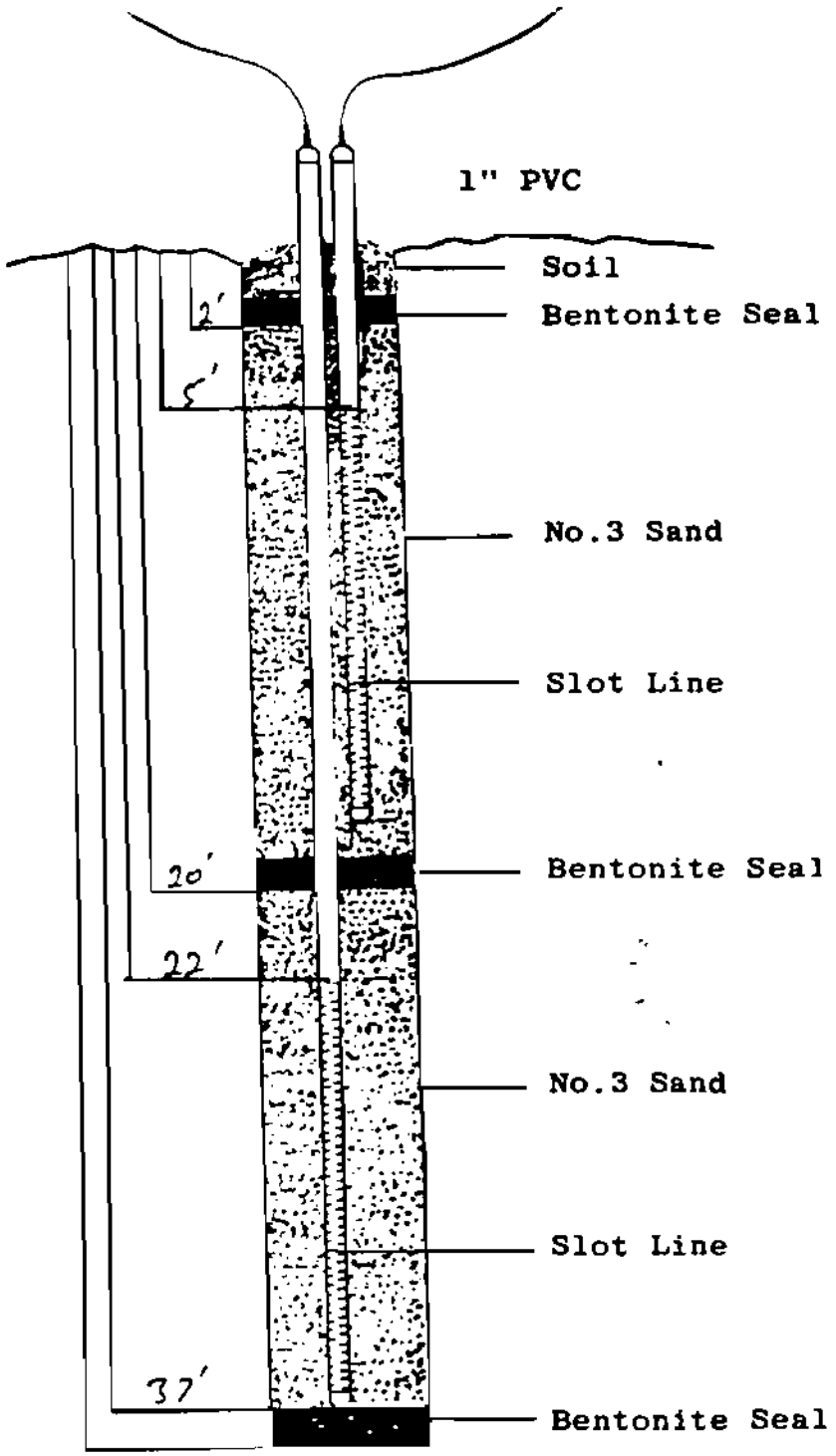
Well Pipe and Slot Line Lengths:

Bore caving in due to water pouring in from 8'. Well Not Set

PROBE DESIGN LOG

roject: Shake W.de

robe #: 3



Liquid Zones:

None

Well Pipe and
Slot Line Lengths:

Double well

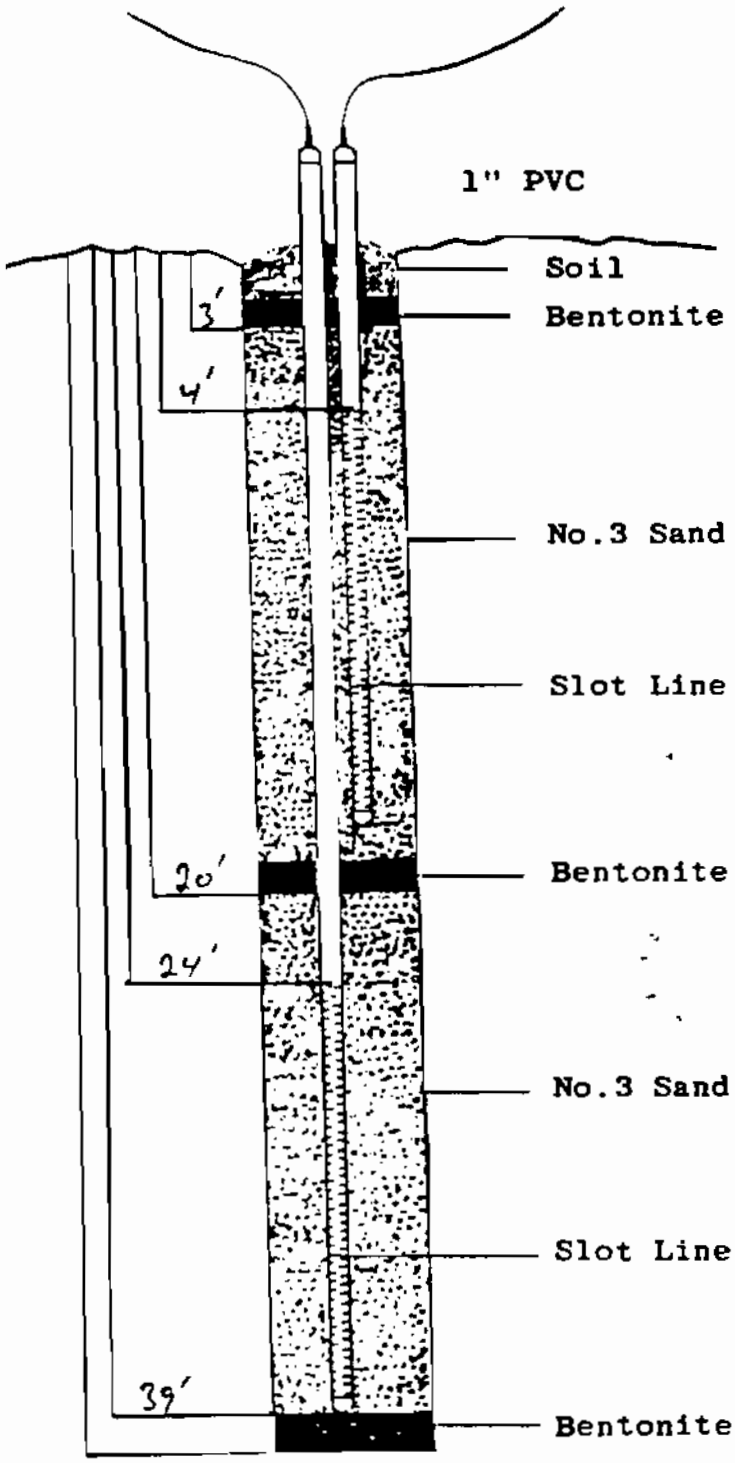
Deep:
22' solid
15' slotted

Shallow:
15' slotted
5' solid

PROBE DESIGN LOG

Project: Stuk w.life

Probe #: 2



Liquid Zones:

None

Well Pipe and Slot Line Lengths:

Double well

Deep:

24' solid

15' slotted

Shallow:

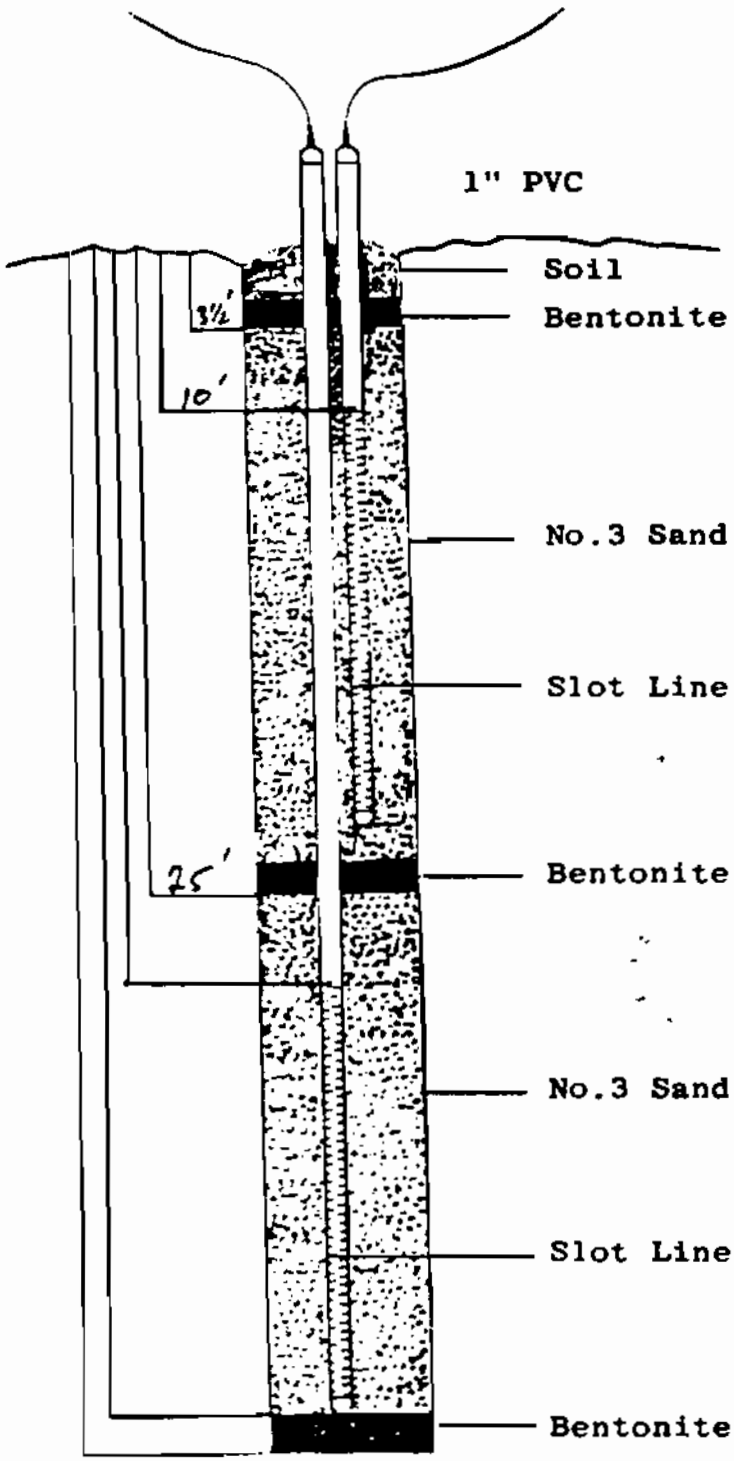
4' solid

15' slotted

PROBE DESIGN LOG

roject: Slot Wide

robe #: 1



Liquid Zones:

None

Well Pipe and
Slot Line Lengths:

10' solid

15' slotted

Single well

No bottom seal

APPENDIX D

PROBE LOGS

PRELIMINARY

DEPTH IN FEET	SAMPLE TYPE	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE
0	B		Dry		Reddish Brown	SILTY SAND (SM), fine, traces of gravel, no visual oil contamination,
5	D	100	Damp	Very Dense		fine to medium, traces of oil contamination,
10	S	100				small low level oil contaminated pockets.
15	D	24	Moist	~~Hard~~ Stiff	Olive green	SANDY SILT (ML), fine,
20	S	35				very low level oil contaminated layers
						Boring terminated at 21.5 feet.
25						
30						
35						
40						

TLU (PPM)

▲ 90	100	110	120

100

94

120

76

83

65

ELEVATION:

DATE DRILLED: 8/26/86

EQUIPMENT USED: 6" Hollow Stem Auger

WATER LEVEL: No water Encountered

GEOFON

86-329, B-12

[S] STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

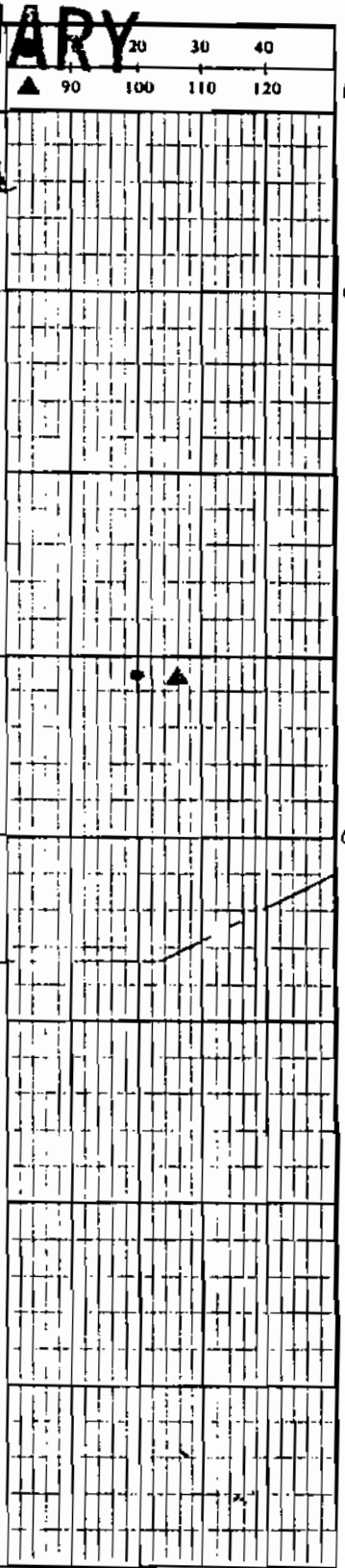
[D] DRIVE SAMPLE

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

PRELIMINARY

DEPTH IN FEET	SAMPLE TYPE	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE
0	B		Damp		Brown	SILTY SAND (SM), fine to medium, no visible oil contamination.
5	D	15		Stiff	Light Brown	SILTY CLAY (CL).
10	S	29	Moist	Very Stiff	Brown	traces of oil contamination,
15	D	17		Stiff		CLAYEY SILT (ML), no visible oil contamination.
20	S	57		Very Dense		SILTY SAND (SM), no visible oil contamination
25						Boring terminated at 21.5 feet.
30						
35						
40						



TLV (ppm)
105
62
66
77
62

ELEVATION:
DATE DRILLED: 8/26/86
EQUIPMENT USED: 7" Hollow Stem Auger
WATER LEVEL: No Water Encountered

GEOFON

[S] STANDARD SPLIT SPOON SAMPLE (ASTM D1586)
[D] DRIVE SAMPLE
▲ DRY DENSITY (LB/CU FT)
● FIELD MOISTURE (% DRY WT) (ASTM D2216)

86-329, B-11

PRELIMINARY

DEPTH IN FEET	SAMPLE TYPE	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE	TLV (PPM)
0	B		Moist		Black	SUMP (SLIGHTLY PROCESSED) clay, sand, & debris, high level of oil contamination.	525
5	D	8		Firm			125
10	D	15		Stiff		oil pockets at 10 to 11 feet depth.	90
15	S	15		Med Dense	Dark Grey	FILL SILTY SAND (SM), fine to medium, low to medium level of oil contamination	1,100
20	D	28				FILL SAND (SP), fine to coarse, wet, low level of oil contamination.	100
25	S	15		Stiff	Brown	SUMP MATERIAL (PROCESSED), sand & silty clay, medium level of oil contamination	300
30	D	47		Hard			300
35	S	24		Very Stiff	Greenish Grey	SILTY CLAY (CL), no visible oil contamination	85
40						Boring terminated at 365 feet.	

ELEVATION:

DATE DRILLED: 8/26/86

EQUIPMENT USED: 7" Hollowstem Auger

WATER LEVEL: No water Encountered

GEOFON

86-329 , B-10

S STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

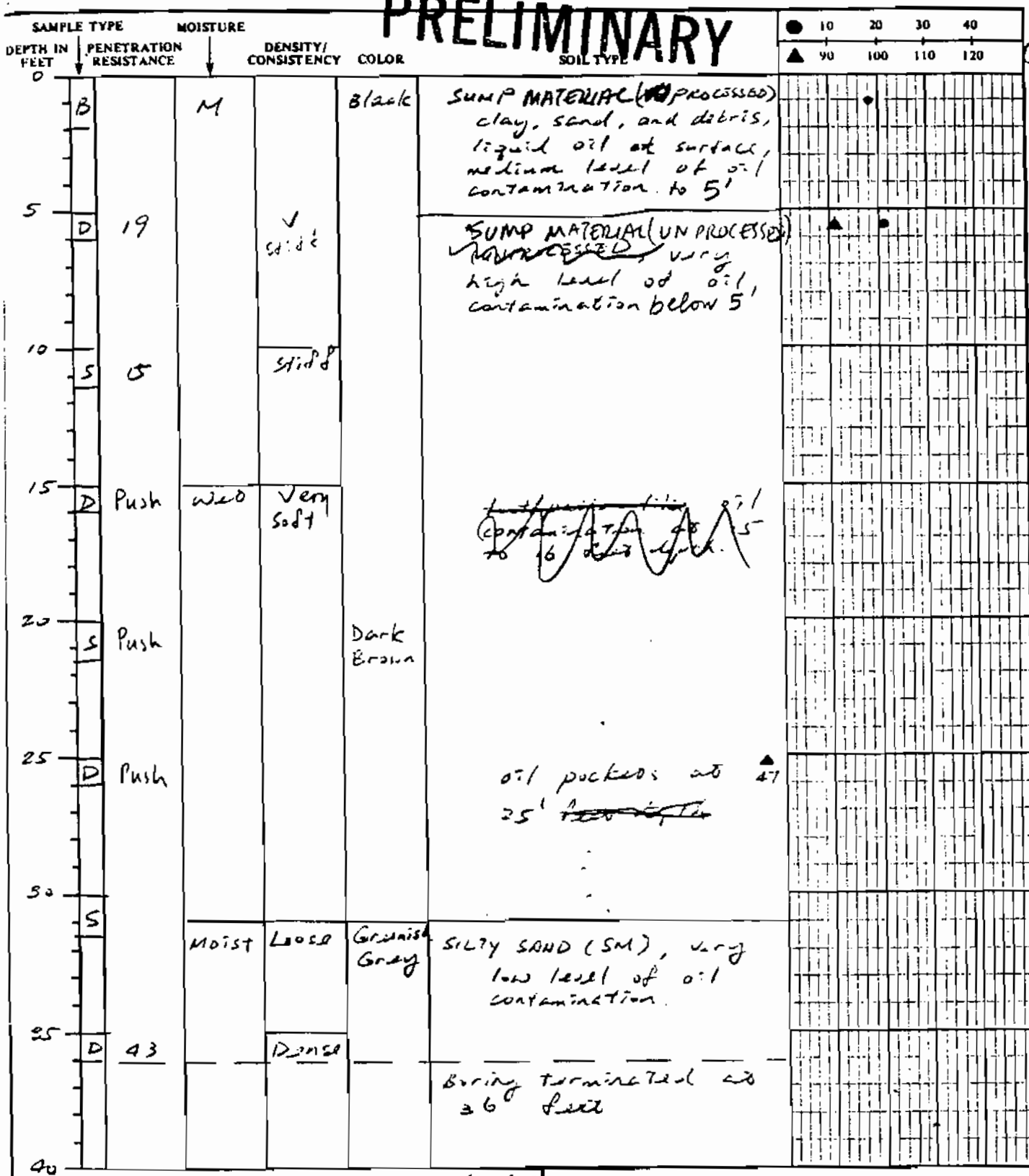
D DRIVE SAMPLE

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

ND NO RECOVERY

PRELIMINARY



ELEVATION:

DATE DRILLED: 8/26/86

EQUIPMENT USED: 8" Hollowstem Auger

WATER LEVEL: Not ~~Monitored~~ Encountered

S STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

D DRIVE SAMPLE

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

NR NO RECOVERY

GEOFON

86-329 . 69

PRELIMINARY

DEPTH IN FEET	SAMPLE TYPE	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE
0	B		M		Dark Brown	SUMP (PROCESSED), gravel sand, silt, and clay, medium level of oil contamination
5	D	17		very stiff	Black	SUMP (UNPROCESSED, clayey materials to 3 feet depth, oil pockets at 5 to 6 feet interval, V high level of oil contamination
10	S	26				high level of oil contamination
15	D	18			Grey	
20	S	14				SANDY SILT - CLAYEY SILT (ML) possibly sump material medium level of oil contamination
25	D	8		firm to stiff		low level of oil contamination ▲ 77
30	S	21				Boring Terminated at 31.5 feet.
35						
40						

● 10 20 30 40 TLV
▲ 90 100 110 120 (ppm)

18ppm
195?
70ppm
44ppm
63?
72

ELEVATION:
DATE DRILLED: 8/25/86
EQUIPMENT USED: 7" Hollowstem Auger
WATER LEVEL: No Water Encountered

[S] STANDARD SPLIT SPOON SAMPLE (ASTM D1586)
[D] DRIVE SAMPLE
▲ DRY DENSITY (LB/CU FT)
● FIELD MOISTURE (% DRY WT) (ASTM D2216)

GEOFON

86-329 B-8

PRELIMINARY

DEPTH IN FEET	SAMPLE TYPE	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE	TLV (ppm)
0	B		Moist		Dark Grayish Brown	SUMP (PROCESSED), sandy clay and small gravels, low level of oil contamination.	120
5	D	30		Hard		sand pockets and debris at 5 to 6 feet	92
10	S	11		firm to stiff		medium level of oil contamination at 10'	115
15	D	14	Wet		BLACK	SUMP (UNPROCESSED), ▲ 52 clay, sand pockets, high level of oil contamination.	38 65
20	S	11					94
25	D	19		very stiff		medium level of oil contamination	82
30	S	24			Dark Gray	SANDY CLAY (CL), fine, low level of oil contamination.	70
35	D	28		Med Dense	Greenish Grey	SAND (SP), medium to coarse, silty clay pockets, no visible oil contamination.	100
40						Boring terminated at 36 feet.	

● 10 20 30 40
▲ 90 100 110 120

ELEVATION:
DATE DRILLED: 8/25/86
EQUIPMENT USED: 7" Hollow Stem Auger
WATER LEVEL: No water Encountered

S STANDARD SPLIT SPOON SAMPLE (ASTM D1586)
D DRIVE SAMPLE
▲ DRY DENSITY (LB/CU FT)
● FIELD MOISTURE (% DRY WT) (ASTM D2216)

GEOFON

86-329 , B-7

PRELIMINARY

SAMPLE TYPE / FILL IN SET	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE	TLV (PPM)
B				Dark brown	SUMP (PROCESSED) MATERIAL, silty clay and sand, low level of oil contamination.	220
D	36	Moist	Hard	Black	sand pockets, medium level of oil contamination	100
S	18		Stiff to soft (variable)		SUMP (UNPROCESSED) MATERIAL, sandy clay, high level of oil contamination.	140
D	14				oil pockets	58
S	14	Moist	Medium Dense	grey	SAND (SP), fine to medium, low level of oil contamination.	260
D	53		Very Dense		very low level of oil contamination	110
					Boring Terminated at 26 feet.	

ELEVATION:

DATE DRILLED: 8/25/86

EQUIPMENT USED: 7" Hollowstem Auger

WATER LEVEL: Not Water Encountered.

S STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

D DRIVE SAMPLE

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

GEOFON

83-517 . E-6

PRELIMINARY

SAMPLE TYPE / IN	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE	● 10 20 30 40 ▲ 90 100 110 120	TLV (ppm)
B		M		Black	SUMP MATERIAL (PROCESSED), silty clay, traces of fine sand, low level of oil contamination.		810
D	17		Medium Dense	Gray	CLAYEY SAND (SC), low level of oil contamination.		88
D	81		Very Dense	Greenish Gray	SILTY SAND (SM), fine to coarse, very low level of oil contamination to 16'		440
S	52				No visible oil below contamination from 16 feet ~~depth~~ ~~about~~.		24
D							200
					Boring terminated at 21 feet.		

ELEVATION:
DATE DRILLED: 8/25/86
EQUIPMENT USED: 8" Hollowstem Auger
WATER LEVEL: Not ~~water~~ Encountered

S STANDARD SPLIT SPOON SAMPLE (ASTM D1586)
D DRIVE SAMPLE
▲ DRY DENSITY (LB/CU FT)
● FIELD MOISTURE (% DRY WT) (ASTM D2216)

GEOFON

86-329 B-5

PRELIMINARY

SAMPLE TYPE	IN	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE MATERIAL	● 10 20 30 40 ▲ 90 100 110 120	TLV (ppm)
B			M		Brownish Black	SUMP (PROCESSED), silty clay, low level of oil contamination.		36
S		7		Firm		[illegible] Lots of pieces of glass, medium level of oil contamination.		22
D			Wet	Stiff	Dark-Grayish Black			20
S		31 23	M	~~Firm~~		SUMP MATERIAL (UNPROCESSED). clay, high level of oil contamination		34
D		40		Dense	Brownish Black	CLAYEY SAND (SC), fine to medium, medium level of oil contamination.		30
S		100			Grayish Green	white consolidated particles at 25 feet		1
D		85		Very Dense		fine to coarse, very low level of oil contamination		10
S		100			Grayish Green	SAND (SP) fine, no visible oil contamination		0
						Boring terminated at 36.5 feet.		

ELEVATION:

DATE DRILLED: 6/25/86

EQUIPMENT USED: 7" Hollowstem Auger

WATER LEVEL: Not Encountered

S STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

D DRIVE SAMPLE

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

GEOFON

86-32 S-4

PRELIMINARY

DEPTH IN FEET	SAMPLE TYPE	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE
40	D	80		V. DENSE	Greyish Brown	CLAYEY SILT (ML), traces of fine sand, no visible oil contamination
						Boring terminated at 41 feet.
45						
50						

TLV (ppm)

● 10 20 30 40
▲ 90 100 110 120

220

ELEVATION:
DATE DRILLED: 8/22/86
EQUIPMENT USED: 3" Hollow-stem Auger
WATER LEVEL: Not Encountered

GEOFON

[S] STANDARD SPLIT SPOON SAMPLE (ASTM D1586)
[D] DRIVE SAMPLE
▲ DRY DENSITY (LB/CU FT)
● FIELD MOISTURE (% DRY WT) (ASTM D2216)

86-329, B-3 cont.

PRELIMINARY

SAMPLE TYPE	PENETRATION RESISTANCE	MOISTURE	DENSITY/ CONSISTENCY	COLOR	SOIL TYPE	● 10 20 30 40 ▲ 90 100 110 120	TLV (ppm)
B				Brown	SUMP MATERIAL (PROCESSED), silty clay and fine sand, low level of oil contamination.	●	160
D	19	M.	✓ Stiff	Black	SUMP MATERIAL (UNPROCESSED), clay, high level of oil contamination.	●	82
S	11		Stiff			●	110
D	35		Hard			▲ ●	64
S	40			Dark Grey	CLAYEY SILT (CL-ML) with lenses of fine sand, low level of oil contamination		62
D	56				Small oily pockets at 30 to 32 feet interval		64
S	80		V Dense	Greenish Grey	(ML) SANDY SILT, small oily pockets. low level of oil contamination		110

ELEVATION:

DATE DRILLED: 8/22/86

EQUIPMENT USED: 7" Hollowstem Auger

WATER LEVEL: Not Water Encountered

[S] STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

[D] DRIVE SAMPLE

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

GEOFON

86-327, B-3

45	62		Very dense	Dry to slightly moist	SILTY SAND (SM), fine to medium, no visible oil contamination.	
					Boring terminated at 41.5 feet.	
50						
55						
60						
65						
70						
75						
80						

ELEVATION:

DATE DRILLED: 8/22/86

EQUIPMENT USED: 6" Hollowstem Auger

WATER LEVEL: Not Water Encountered

STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

DRIVE SAMPLE

BULK SAMPLE

THIN WALL TUBE SAMPLE (ASTM D1587)

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

NR NO RECOVERY

GEOFON

86-34, B-2 cont.

					SOIL TYPE	▲ 90 100 110 12
B				Blackish Brown	SUMP MATERIAL (UNPROCESSED), silty clay, low level of oil contamination.	
5 D	23	M	V. Stiff			
10 S	37		Hard	Gray & Spotted white	silty clay, sand, and gravel.	
15 D	7	Wet	Firm to Soft	Dark Gray	SUMP MATERIAL (UNPROCESSED), clay and coarse sand, high level of oil contamination.	
20 S	12		Stiff	Brown	silty clay, traces of fine sand	
25 D	5		Soft	Black	clay. ▲ ST	
30 S	6				very high level of oil contamination, oil globules at 32 to 34 feet interval.	
35 D	56			Bluish Gray	CLAY (CH), traces of silt, very low level of contamination.	

ELEVATION:

DATE DRILLED: 8/22/86

EQUIPMENT USED: 8" Hollowstem Auger

WATER LEVEL: Not water Encountered

STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

DRIVE SAMPLE

BLOCK SAMPLE

THIN WALL TUBE SAMPLE (ASTM D1587)

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

NR NO RECOVERY

GEOFON

86-329 , B-2

	D		M		Brownish black	SUMP MATERIAL (MODERATELY PROCESSED), clay & silt, medium level of oil contamination.	
5	D	12		Stiff			
10	S	25		V. Stiff	Black	SUMP MATERIAL (UNPROCESSED), clay, oil pockets, very high level of oil contamination.	
15	D	18		Stiff			
				Soft		tooth paste-like oil contamination at 17 to 18 feet depth.	
20	S	38		Hard	Brownish Grey	CL, SILTY CLAY, traces of fine sand, very low level of oil contamination	
25	S	33		Hard			
						Boring terminated at 26.5 feet.	
30							
35							
40							

ELEVATION:

DATE DRILLED: 8/22/86

EQUIPMENT USED: 7" Hollow Stem Auger

WATER LEVEL: Not ~~Encountered~~ Encountered

STANDARD SPLIT SPOON SAMPLE (ASTM D1586)

DRIVE SAMPLE

BULK SAMPLE

THIN WALL TUBE SAMPLE (ASTM D1587)

▲ DRY DENSITY (LB/CU FT)

● FIELD MOISTURE (% DRY WT) (ASTM D2216)

NR NO RECOVERY

GEOFON

86 - 327 , B-1

APPENDIX C

DRILLING LOGS

TESTING 3310 Airport Way / Mailing Address P.O. Box 47 / Long Beach, CA 90801 / (213) 426-2255 / (213) 636-2306 / (714) 529-643
BRANCH OFFICE: 1514-D North Susan Street/ Santa Ana, CA 92703 / (714) 554-5545

May 13, 1986 Exam No. CH86-378

State Wide Investors
3951 Walnut
Long Beach, Ca. 90807

Attention: Ralph Roseman

Subject: Four soil samples submitted on April 28, 1986 for chemical analysis.

Results: (results based on dry soil)

A. Organic Hydrocarbons

Sample	Volatile OHC				Nonvolatile OHC	total
	B *	T *	X *	Other		
	ppm	ppm	ppm	ppm	ppm	ppm
1	N.D.	N.D.	26	5,940	97,300	103,266
2	N.D.	N.D.	57	9,540	122,000	131,597
3	N.D.	N.D.	289	21,500	152,000	173,789
4	N.D.	N.D.	N.D.	7,650	127,000	134,650

B. Organic Lead and PCB's

Sample	Organic Lead **	PCB's ***
	ppm	ppm
1	1.77	NCI < 2 ppm
2	2.37	NCI < 2 ppm
3	1.93	NCI < 2 ppm
4	6.77	NCI < 15 ppm

Comments:

* Benzene: N.D. < 0.05 ppm; Toluene: N.D. < 0.1 ppm; and Xylene: N.D. < 0.1 ppm

** Total Threshold Limit Concentration for organic lead equals 13 ppm

*** NCI = not clearly Identifiable; Total Threshold Limit Concentration for PCB's equals 50 ppm.

ING LABORATORIES OF SOUTHERN CALIFORNIA, INC.

Landwehr
Chemist

Richard Haug
Richard Haug
Chemist

MITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR EXTRACTS FROM O
SERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES

APPENDIX B

SURFACE INVESTIGATION FOR ORGANIC HYDROCARBONS

CONE RESISTANCE (TSF)
0 25 50 75 100 125 150

001-C-15

001-C-14

001-

001-C-01A

ZONE 1

ZONE 2

ZONE 3

ZONE 4

55
45
35
25
15
5

ELEVATION IN FEET

EXPLANATION

ZONE 1 – SUMP MATERIAL—MODERATELY COMPAC
ZONE 2 – SUMP MATERIAL—LIGHTLY COMPACT, SO
ZONE 3 – SUMP MATERIAL—VERY SOFT, HIGHLY C
ZONE 4 – POSSIBLE NATURAL SOIL—MODERATELY

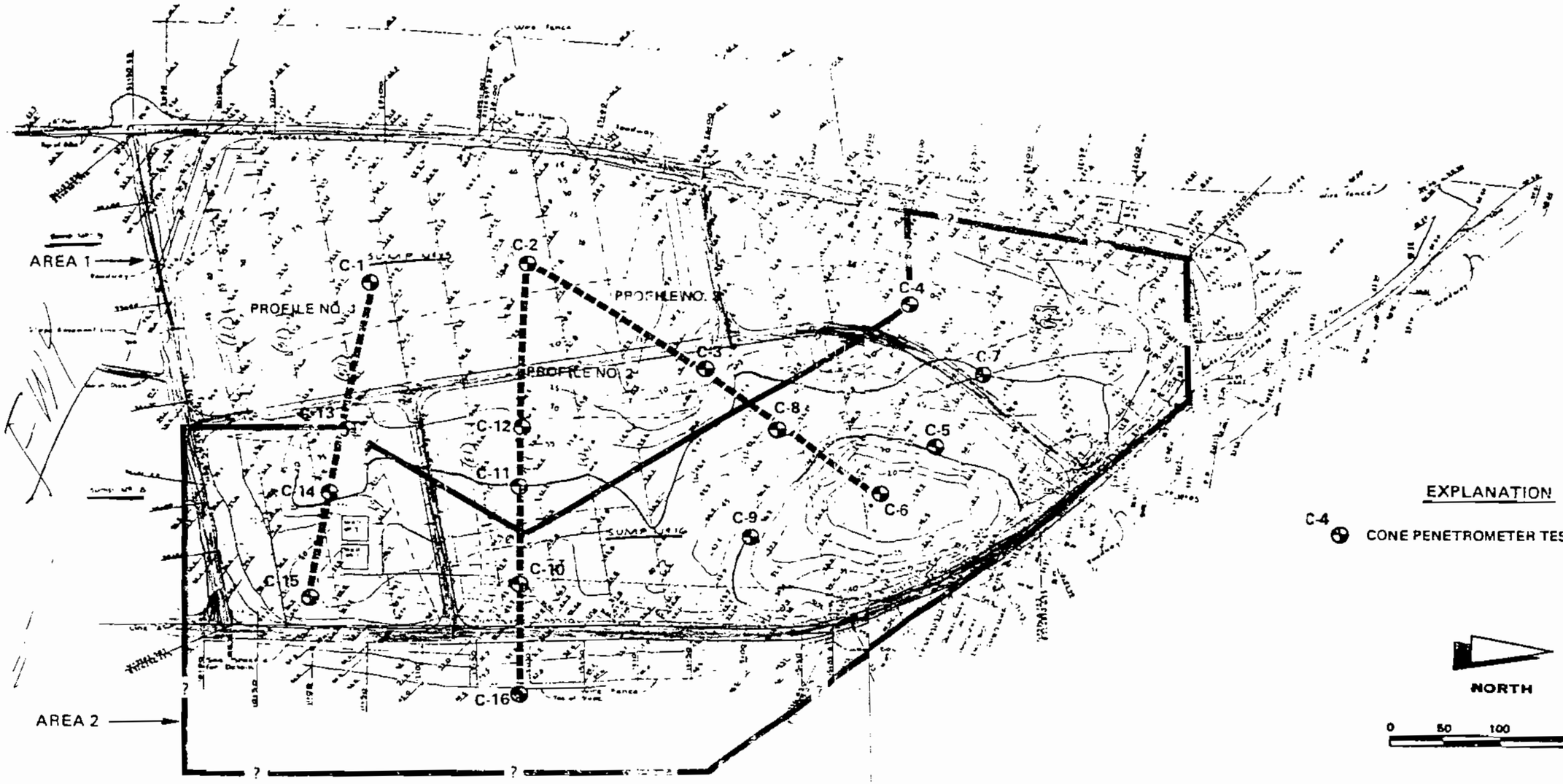
The Earth Technology Corporation

PROJECT NO. 83-280

SUMP SITE
SUPPLEMENTAL STUDY

SUBSURFACE PROFILE NO. 1

FIGURE 3



NOTE: ACTUAL EASTERN SITE BOUNDARY FENCE LINE IS BEYOND WIRE FENCE AS SHOWN ABOVE.

BASE DRAWING FURNISHED BY OIL OPERATORS, INC.

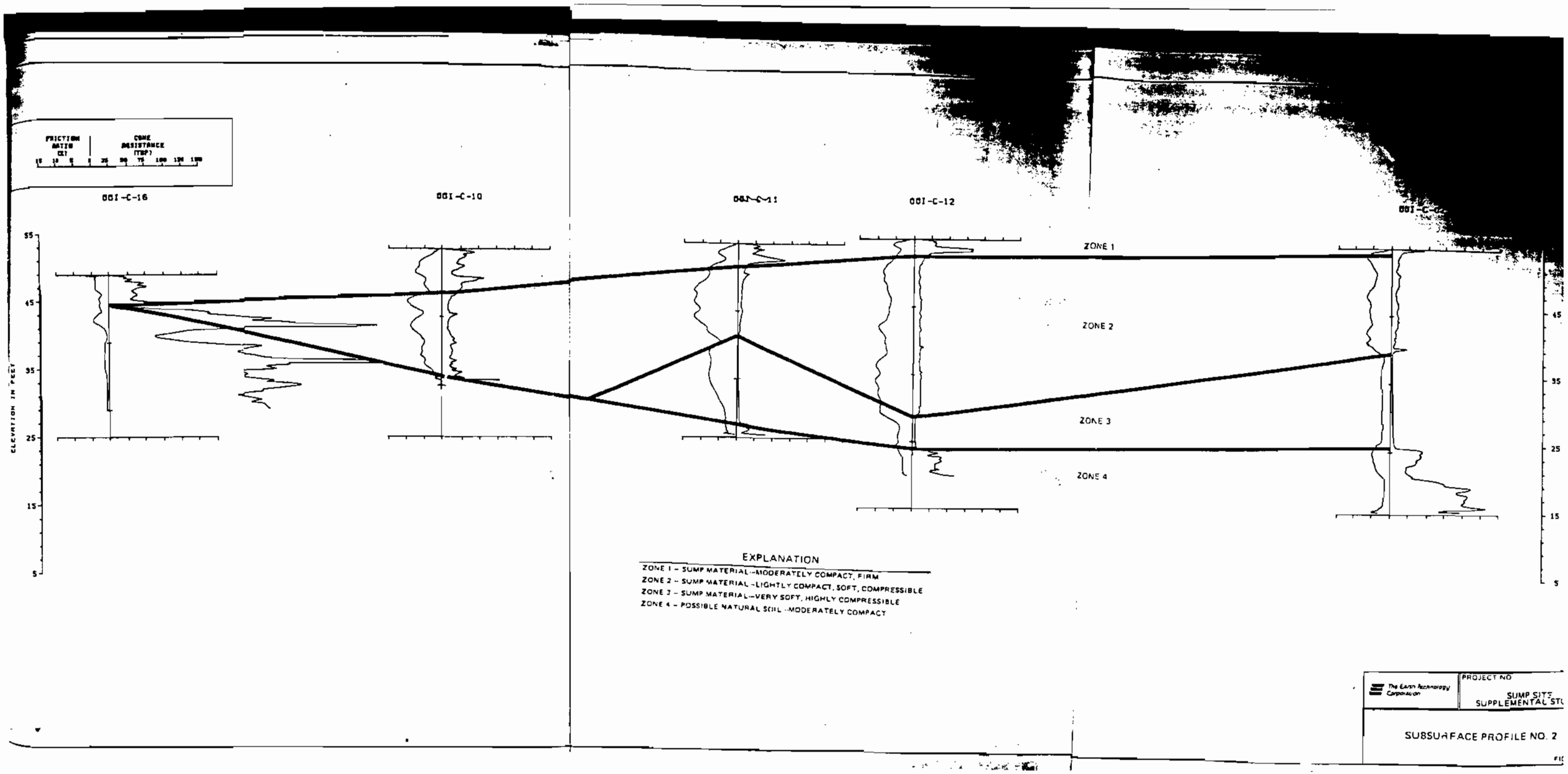
The Earth Technology Corporation

PROJECT NO.: 83-280

SUMP SITE DEVELOPMENT FEASIBILITY STUDY

SITE PLAN

FIGURE 2



EXPLANATION

ZONE 1 – SUMP MATERIAL – MODERATELY COMPACT, FIRM
ZONE 2 – SUMP MATERIAL – LIGHTLY COMPACT, SOFT, COMPRESSIBLE
ZONE 3 – SUMP MATERIAL – VERY SOFT, HIGHLY COMPRESSIBLE
ZONE 4 – POSSIBLE NATURAL SOIL – MODERATELY COMPACT

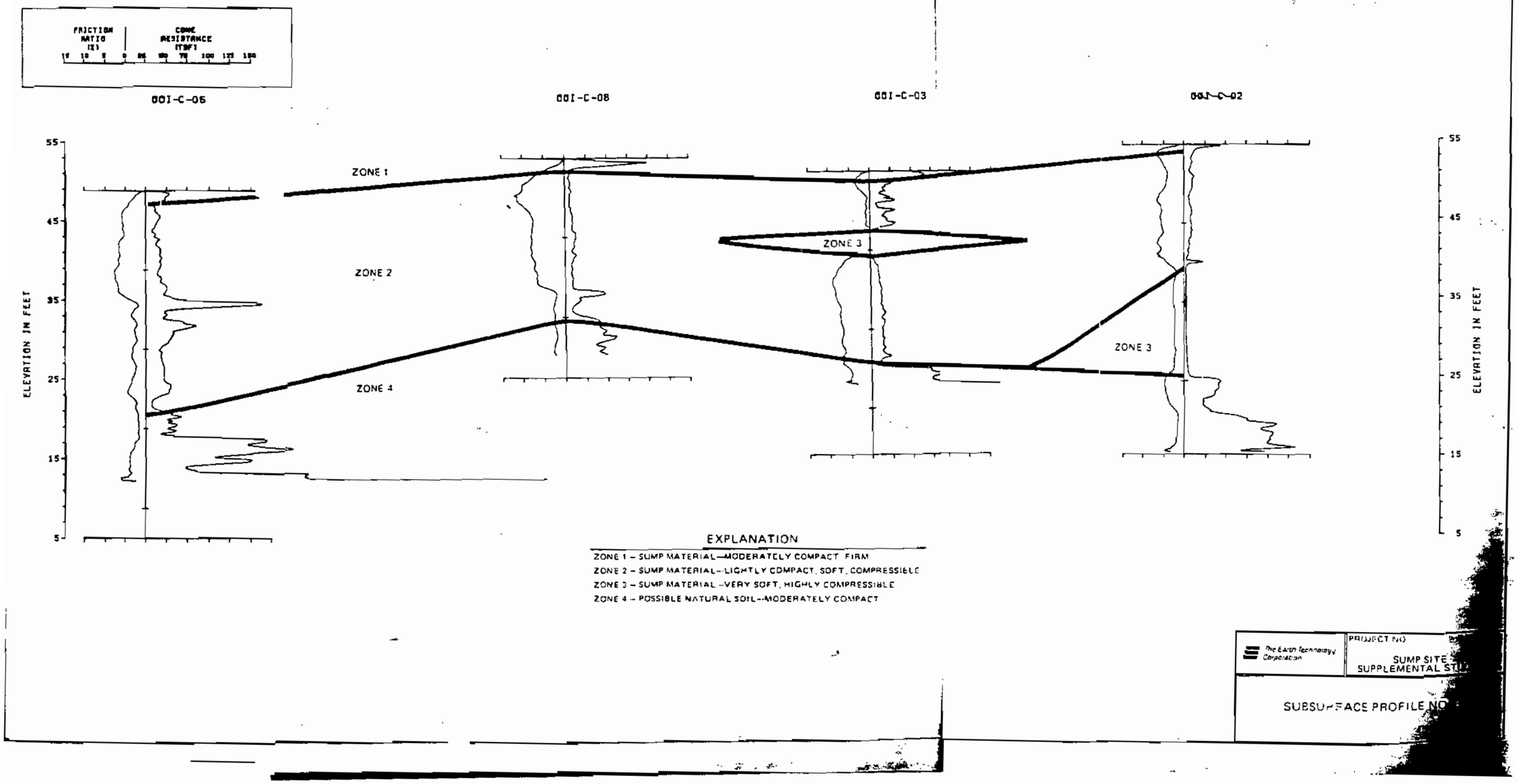
The Earth Technology Corporation

PROJECT NO

SUMP SITE SUPPLEMENTAL STU

SUBSURFACE PROFILE NO. 2

FIG


FRICTION RATIO (%)
CONE RESISTANCE (TSF)
001-C-05
001-C-08
001-C-03
001-C-02
55
45
35
25
15
5
ELEVATION IN FEET
ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 3
EXPLANATION
ZONE 1 – SUMP MATERIAL—MODERATELY COMPACT, FIRM
ZONE 2 – SUMP MATERIAL—LIGHTLY COMPACT, SOFT, COMPRESSIBLE
ZONE 3 – SUMP MATERIAL—VERY SOFT, HIGHLY COMPRESSIBLE
ZONE 4 – POSSIBLE NATURAL SOIL—MODERATELY COMPACT
The Earth Technology Corporation
PROJECT NO
SUMP SITE
SUPPLEMENTAL ST
SUBSURFACE PROFILE NO

APPENDIX E

Summary of Groundwater Conditions

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

July 9, 2008 002-10231-04

Mr. Greg Holmes
California Department of Toxic Substances Control
5796 Corporate Ave
Cypress, California 90603

Subject: Summary of Groundwater Conditions, Request for Clarification of Expectations of Groundwater Consideration for the RI and FS for the Former Oil Operators North Site (Long Beach Industrial Park) 3701 Pacific Place, Long Beach, California

Dear Mr. Holmes:

On behalf of CRG Properties Ltd. (CRG), LFR Inc. (LFR) has prepared this summary of groundwater conditions at the former Oil Operators, Inc. (OOI) North Site located at 3701 Pacific Place, Long Beach, California ("the Site"). Based on our June 4, 2008 meeting, it was decided that LFR would prepare this summary for the joint consideration of DTSC and the Los Angeles Regional Water Quality Control Board. At your discretion, a meeting was discussed for a brief presentation of data by LFR for both agencies. The primary purpose of this effort is to gain insight and direction on the overall intent of Cal-EPA to pursue groundwater issues at the Site. Since our last meeting, we have found additional data that further reinforce our overall interpretation of the region's salt impacted groundwater. References are attached as Appendix A.

SITE BACKGROUND

The approximately 18-acre Site (Figure 1) was formerly owned by OOI, a non-profit cooperative organization that functioned as a central brine water treatment facility serving member oil companies (AEMC, 1991). Beginning in 1926, oil brine (drilling mud and other waste materials generated from oil production operations) was pumped to sumps on the OOI property, of which the Site was the northernmost portion. Most of the Site was utilized as a treatment sump. After the water evaporated or infiltrated the aquifer from the sumps, the remaining sludge was either drummed or left in the treatment sumps. The site was divided into two portions referred to as the north site (Site) that we are writing about and have interest in, and the south site with the construction of the 405 freeway. We understand that the south site is being remediated in cooperation with the City of Long Beach. When a water treatment plant, including evaporation ponds, was built on the south site in the mid-1950s, evaporation activities ceased at the Site sumps.

A partial cleanup/treatment operation was conducted at the Site in the 1970s, which involved the removal, treatment, and replacement of a portion of the sump materials (ETC, 1984). However, detailed records of the treatment operation are not available.

714.444.0111 m
714.444.0117 f
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324
Offices Nationwide
www.lfr.com

Additional investigations were conducted in the 1980s, culminating in a land farming operation that was begun in 1989 (AEMC, 1991) under the direction of the RWQCB. Details of the investigations conducted at this time are included in Section 2.1 of the RI. The land farming operation was halted when public complaints were received by the South Coast Air Quality Management District (SCAQMD).

Under the direction of the RWQCB and in connection to the land farming effort, a groundwater monitoring program for the Site and southern adjacent property was implemented in 1987, according to Monitoring and Reporting Program No. 6775 for OOI (Land Treatment File No. 86-66). According to records available to LFR, annual monitoring at three groundwater wells (MW-2, MW-3, and MW-4) was ongoing as of 1997 (OOI, 1997).

The Site was capped with an unengineered fill, and is currently being used as a golf learning center. Improvements include a paved parking lot, several structures, and a large grassy area.

On behalf of CRG, LFR submitted a Voluntary Cleanup Program (VCP) application for the Site to the DTSC on March 24, 2005. Approval of the VCP application was granted on December 20, 2005.

LFR prepared a Characterization Data Report dated April 4, 2006 to describe current and historical investigation and remediation activities at the Site. In a letter dated July 12, 2006, the DTSC raised numerous issues that needed to be addressed as a remedial investigation prior to approval of the report. In general, the DTSC believed that data gaps existed, that the Site had not been fully characterized, and that the Characterization Data Report should be used in conjunction with further research and investigation to develop a remedial investigation workplan. The DTSC also made 19 specific comments to the Characterization Data Report. The DTSC's Human and Ecological Risk Division (HERD) also provided comments to the Characterization Data Report in a memorandum dated July 5, 2006.

LFR's responses to DTSC comments, along with an historical review of the Site, were submitted on March 12, 2007. The historical review included historical aerial photographs, topographic maps, and a review of California Department of Oil, Gas, and Geothermal Resources records.

On August 29, 2007, in conjunction with various meetings and other communications, LFR submitted a remedial investigation workplan for the Site that was subsequently approved by the DTSC on September 6, 2007. LFR submitted a Remedial Investigation Report for the Site to the DTSC on March 4, 2008. As part of the investigation, groundwater samples were collected from four on-site groundwater monitoring wells in December 2007 and analyzed for total petroleum hydrocarbons with carbon chain identification (TPH-cc) by EPA Method 8015 Modified, volatile organic compounds (VOCs) by EPA Method 8260B, Title 22 metals by EPA Method 6010, and semivolatile organic compounds (SVOCs) by EPA Method 8270C.

In March 2008, LFR collected groundwater samples from the four on-site monitoring wells for TPH-cc, VOCs, Title 22 metals, SVOCs, and for total dissolved solids (TDS).

HYDROGEOLOGY

The Site lies within the southern portion of the Coastal Plain of Los Angeles County, which gently slopes down to the south-southwest. The Site is located within the West Coast Basin, although it is adjacent to the boundary of the Central and West Coast Basins. The Los Angeles River is located along the western boundary of the Site and flows southward, where it discharges into the Pacific Ocean at San Pedro Bay. The Site is located along the Newport Inglewood Fault Zone (NIFZ), which forms the boundary between the Central and West Coast subbasins and acts as partial barrier to groundwater movement in the area. The NIFZ offsets, thins, and folds many of the aquifers. Due to the proximity of the Site to the NIFZ, aquifer depths, thicknesses, and potential for interconnections may vary significantly across the Site.

Named aquifers beneath the Site in order of increasing depth are the Gaspur, Gage, Lynwood, Silverado, and Sunnyside (California Department of Water Resources [CDWR] 1961). The Lakewood Formation contains the Gaspur and Gage aquifers, and the lower aquifers are in the San Pedro Formation.

The Bellflower aquitard immediately underlies the Site at approximately 5 to 50 feet bgs. Shallow groundwater was encountered at 8 feet bgs at one boring location (GB-4) during soil sampling activities in 1986. This was believed to be a localized perched condition because native sands at greater depths were not saturated and no other borings on site encountered perched groundwater.

The uppermost portion of the Lakewood Formation is designated as the Gaspur aquifer, which is present beneath the Site from approximately 50 to 70 feet bgs as sand and gravel. The Gaspur aquifer is believed to be the water-bearing zone encountered during the well installation by LFR and subsequently sampled and analyzed. On December 16, 2007, groundwater was found beneath the Site from 32.6 to 49.32 feet bgs, with a shallow gradient flowing in a southerly direction.

In the vicinity of the subject property, the Gage aquifer has a base at approximately 180 feet bgs and is approximately 35 feet thick. Deposits in this aquifer vary from silty sand to minor gravel (CDWR, 1961). Groundwater in both aquifers of the Lakewood Formation has been reported to be of inferior chemical quality as a result of elevated salt content from salt water intrusion.

The lower Pleistocene San Pedro Formation unconformably underlies the Lakewood Formation and is known to contain numerous aquifers of varying quality; however, the deep Silverado aquifer is the only significant water-producing zone. The Lynwood aquifer has a base at approximately 600 feet bgs and is approximately 400 feet in thickness. In this location, the Silverado aquifer joins the Lynwood aquifer at approximately 600 feet bgs and continues to over 1,000 feet bgs. The City of Long Beach obtains groundwater from more than 1,000 feet bgs within the Silverado aquifer.

Groundwater beneath the Site is considered of beneficial use by the RWQCB (AEMC, 1991). However, the regional groundwater is highly degraded due to salt water intrusion and industrial waste disposal (EMCON, 1981). The Site lies within an area of poor groundwater quality, at least in part due to historical oil and gas production activities in the site vicinity (Jaykim, 1986). Salts released during the production of oil appear to have degraded the regional groundwater to be non-potable, with TDS concentrations exceeding State Water Resources Control Board (SWRCB) Resolution 88-63 of 3,000 mg/L.

According to the hydrologic records maintained by the County of Los Angeles Department of Public Works (LADPW), groundwater well 896E is located approximately 0.5 mile north and upgradient of the Site. The well is inactive, and the last depth to water measurement was recorded at 81.2 feet bgs on May 6, 1996. Groundwater well 897KK, located approximately 50 feet southwest and cross-gradient of the Site, was destroyed in 1999. The last depth to water measurement was recorded at 50.4 feet bgs on April 19, 1995. Another groundwater well, 906D, is located approximately 0.75 mile northeast and cross-gradient of the Site at the Virginia Country Club. The groundwater is listed has having no reported use, and the most recent depth to groundwater was recorded at 112.5 feet bgs on June 16, 2007. Approximately 1 mile north and upgradient of the Site are two active wells, 906A and 906E. The listed usage for 906A is domestic and stock supply; 906E is used for irrigation. The most recent depth to water measurement for 906A was 69.1 feet bgs on April 30, 2006. The most recent depth to water measurement for 906E was 70.7 feet bgs on October 19, 2005 (LADPW, 2008).

So, while some local wells exist and are used for monitoring and agriculture uses, to our knowledge none are used for potable purposes.

GROUNDWATER MONITORING AT THE SITE BY OTHERS (1987 – 1997)

In a letter from the RWQCB to OOI dated May 5, 1987, approval was given for waste discharge requirements (Order No. 87-54) for the Oil Operators land treatment at the Site (File No. 86-66), effective April 27, 1987. This included a requirement for monthly groundwater elevation measurement and quarterly groundwater quality monitoring. LFR has reviewed the following documents relating to groundwater monitoring at the Site:

- **Letters dated November 7, 1989 and October 24, 1990** requesting that quarterly groundwater monitoring as required by RWQCB Order No. 87-54 be changed to annual monitoring, as monitoring results did not show variations from previous test results.

- **1995 Groundwater Monitoring Report for Oil Operators North Site dated February 1, 1996, prepared by Jack K. Bryant Engineers (JB)**. This was an annual report that presented the results of monitoring and sampling of wells MW-2, MW-3, and MW-4 that took place on January 10, 1996 (well locations are shown on

Figure 2). Groundwater elevations at the time ranged from 39.3 feet bgs (MW-4) to 50.6 feet bgs (MW-2). Analytical results included the following:

- The pH of the monitoring wells ranged from 6.45 to 6.65 units.
- Concentrations of TDS ranged from 2,690 milligrams per liter (mg/l) (MW-4) to 10,800 mg/l (MW-2).
- TRPH was detected in well MW-2 at a concentration of 1,400 µg/l.
- TPH was not detected in any of the monitoring wells.
- Ethylbenzene and total xylenes were detected in MW-3 at concentrations of 0.9 µg/l and 2.4 µg/l, respectively. Toluene was detected in monitoring well MW-4 at a concentration of 0.5 µg/l.
- Lead, chromium, and nickel were not detected in any of the monitoring wells. Zinc was detected at concentrations ranging from 20 µg/l (MW-3) to 120 µg/l (MW-2). Copper was detected at concentrations ranging from 74 µg/l (MW-4) to 80 µg/l (MW-2).

- **RWQCB File Number 86-66, Annual Groundwater Monitoring Report 1996, for Oil Operators North Site, Pacific Place, Long Beach, CA dated March 17, 1997, prepared by JB.** Monitoring and sampling of wells MW-2, MW-3, and MW-4 took place on February 17, 18, and 19, 1997. The following results were reported:

  - Groundwater depths ranged from 42.43 feet bgs (MW-4) to 61.95 feet bgs (MW-2). Increases in groundwater depth were attributed to grading and other earthmoving activities at the Site.
  - The pH ranged between 6.34 and 6.78.
  - TDS concentrations ranged from 2,030 to 11,800 mg/l.
  - TRPH and TPH were not detected in any of the wells.
  - Benzene was detected in two wells (MW-2 and MW-3) at concentrations of 0.6 and 88 µg/l, respectively. Toluene, ethylbenzene, and xylenes were detected in well MW-3 at concentrations ranging from 1.6 to 15 µg/l.
  - Zinc was detected at concentrations ranging from 100 µg/l (MW-4) to 200 µg/l (MW-2); lead was detected at concentrations ranging from 130 µg/l (MW-4) to 280 µg/l (MW-3); and nickel was detected in MW-3 at a concentration of 65 µg/l.

No other quarterly or annual groundwater monitoring reports were available for review. It is unclear whether additional groundwater sampling was conducted at the Site. LFR believes that the monitoring was associated with the land farming efforts, and as they had stopped, so did the monitoring.

GROUNDWATER MONITORING AT THE SITE BY LFR

November 2003 and May 2004

Under the direction of and in cooperation with the DTSC, analytical results collected from MW-3 in November 2003 and from MW-3, MW-5, and MW-6 in May 2004 are included in Tables 1 through 5 and summarized below.

Metals were analyzed using EPA Method 6010B and 7470A. Nine metals were detected above laboratory reporting limits:

- Antimony (22 µg/l at MW-6)
- Arsenic (72 µg/l and 15 µg/l in MW-3 in November 2003 and May 2004, respectively)
- Barium (ranging from 97 µg/l [MW-5] to 290 µg/l [MW-3])
- Lead (16 µg/l in MW-5)
- Mercury (4.8 and 160 µg/l in MW-3 in November 2003 and May 2004, respectively, and 12 µg/l in MW-6)
- Molybdenum (24 µg/l in MW-3)
- Selenium (52 µg/l in MW-6)
- Silver (84 µg/l in MW-3)
- Vanadium (59 µg/l in MW-6)

California MCLs (per CCR Title 22, September 12, 2003) were exceeded for five of these metals:

- Antimony at 22 µg/l in MW-6 exceeded the MCL of 6 µg/l
- Arsenic at 72 µg/l and 15 µg/l in MW-3 in 2003 and 2004 exceeded the MCL of 10 µg/l
- Mercury at 12 µg/l in MW-6 and at 4.8 µg/l and 160 µg/l in MW-3 exceeded the MCL of 2 µg/l
- Lead at 16 µg/l in MW-5 exceeded the MCL of 15 µg/l
- Selenium at 52 µg/l in MW-6 exceeded the MCL of 50 µg/l
- Vanadium, an unregulated chemical requiring monitoring, and detected at 59 µg/l in MW-6, exceeded its action level of 50 µg/l

TPH was not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

VOCs were not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

SVOCs were not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

December 2006

Analytical results collected from MW-3, MW-5, and MW-6 in December 2006 are included in Tables 1 through 5 and summarized below.

Metals were analyzed using EPA Methods 6010B and 7470A. Seven metals were detected at concentrations above laboratory reporting limits:

- barium (ranging from 100 µg/l [MW-5 and MW-6] to 140 µg/l [MW-3])
- calcium (ranging from 3,200 µg/l [MW-5] to 5,200 µg/l [MW-3])
- copper (ranging from 55 µg/l [MW-5] to 400 µg/l [MW-3])
- magnesium (ranging from 750 µg/l [MW-5] to 2,100 µg/l [MW-3])
- mercury (0.82 µg/l in MW-3 and 7.3 µg/l in MW-6)
- silver (62 µg/l in MW-3)
- sodium (ranging from 5,100 µg/l [MW-5] to 24,000 µg/l [MW-3]).

Arsenic was detected above the laboratory method detection limit (MDL) in MW-3 at 7.8 µg/l and at 12 µg/l in both MW-5 and MW-6.

California MCLs (per CCR Title 22, September 12, 2003) were exceeded for mercury (7.3 µg/l in MW-6); the MCL for mercury is listed at 2 µg/l.

TPH was not detected at concentrations above laboratory reporting limits in the groundwater samples collected at the Site, with the exception of TPH gasoline range organics (C_6-C_{12}). Concentrations of TPH (C_6-C_{12}) ranged from 0.05 µg/l in MW-5 to 0.38 µg/l in MW-6.

VOCs were not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

SVOCs were not detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site.

EC was detected at concentrations ranging from 1,700 microsiemens per centimeter (µs/cm) to 7,740 µs/cm. California Secondary MCLs – recommended ranges (per CCR Title 22, September 12, 2003) were exceeded for EC (1,700 µs/cm in MW-5, 3,660 µs/cm in MW-6, and 7,740 µs/cm in MW-3); the recommended secondary MCL for EC is listed as 900 µs/cm.

California Secondary MCLs – recommended ranges were exceeded for chloride (1,100 mg/l in MW-6 and 3,270 mg/l in MW-3); the recommended secondary MCL for chloride is listed as 250 mg/l.

Detected TDS concentrations ranged from 900 mg/l in MW-5 to 4,710 mg/l in MW-3.

December 2007

Analytical results for groundwater samples collected from MW-3, MW-5, MW-6, and MW-7 in December 2007 are discussed below. Groundwater analytical results are summarized in Tables 1 through 5 and shown on Figure 21.

Three metals were detected at concentrations above laboratory reporting limits:

- barium (ranging from 86 µg/l and 100 µg/l in MW-5 and MW-6, respectively, to 1,100 µg/l in MW-7)
- mercury (0.74 µg/l in MW-3 and 5.6 µg/l in MW-6)

  arsenic (210 µg/l in MW-7)

Cadmium was detected at 29 µg/l in Well MW-3 which is above the method detection limit [MDL] but below the laboratory reporting limit of 50 µg/l. The MCL for cadmium is 5 µg/l.

California MCLs (per CCR Title 22, June 27, 2007) were exceeded for mercury and barium. Mercury was detected in MW-6 at a concentration of 5.6 µg/l; the MCL for mercury is 2 µg/l. Barium was detected in MW-7 at a concentration of 1,100 µg/l; the MCL for barium is 1,000 mg/l. Analytical results for metals are summarized in Table 1.

TPH was not detected at concentrations above laboratory reporting limits in the groundwater samples collected at the Site, with the exception of TPHd. TPHd was detected in MW-7 at a concentration of 1.1 mg/l. A summary of historical TPH analytical results is provided in Table 2.

No VOCs or SVOCs were detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site. Historical summaries of the analytical results for VOCs and SVOCs are shown in Tables 3 and 4, respectively.

March 2008

On June 6, 2008, LFR submitted the Groundwater Monitoring Report for the First Quarter 2008 to the DTSC. Groundwater samples were collected from four groundwater monitoring wells on March 25, 2008 and analyzed for TPH-cc, VOCs, Title 22 metals, SVOCs and TDS analyses.

Analytical results for groundwater samples collected from MW-3, MW-5, MW-6, and MW-7 in March 2008 are discussed below. Groundwater analytical results are summarized in Tables 1 through 5, and shown on Figure 3.

Four metals were detected at concentrations above the laboratory reporting limits. Lead was detected above the method detection limits [MDL] but below the laboratory reporting limit:

- arsenic (420 µg/l in MW-7); concentration of arsenic has doubled when compared to the previous sampling event
- barium (ranging from 50 µg/l to 120 µg/l in MW-3, MW-5 and MW-6, and 1,700 µg/l in MW-7); there is a general increasing trend in barium concentrations from all wells when compared to the previous sampling events
- lead (24 µg/l [MDL result]in MW-7); lead was detected for the first time in MW-7
- mercury (2 µg/l in MW-3 and 7 µg/l in MW-6); concentrations were slightly greater than the previous sampling event, but exhibited a general decreasing trend over the past five years of sampling activities
- zinc (74 µg/l in MW-7); concentrations were well below MCL.

ANALYTICAL RESULTS FOR CHLORIDE AND TDS IN GROUNDWATER SAMPLES COLLECTED AT THE OIL OPERATOR'S SOUTH SITE LOCATED AT 712 WEST BAKER STREET (1987 – 1988)

The analytical results for chloride and TDS concentrations detected in groundwater samples collected from monitoring wells at the OOI South Site are presented below and shown on Figure 2.

Chloride

March 1987 - Chlorides were detected at 2,830 mg/L (MW-3), 17,000 mg/L (JK-1), and 11,700 mg/L (MW-4).

July 1987 - Chlorides were detected at 2,600 mg/L (MW-3), 10,400 mg/L (JK-1), and 15,700 mg/L (MW-4).

September 1987 - Chlorides were detected at 5,290 mg/L (MW-3), 18,170 mg/L (JK-1), and 30,690 mg/L (MW-4).

December 1987 - Chlorides were detected at 2,450 mg/L (MW-3), 9,080 mg/L (JK-1), and 17,180 mg/L (MW-4).

February 1988 – Chlorides were detected at 2,720 mg/L (MW-3), 10,400 mg/L (JK-1), and 16,600 mg/L (MW-4).

January 1996 – Chloride was detected in MW-1 at 3,090 mg/L, MW-2 at 1,380 mg/L, MW-3 at 1,540 mg/L, and in MW-4 at 1,970 mg/L.

TDS

March 1987 - TDS was detected at 5,550 mg/L (MW-3), 29,300 mg/L (JK-1), and 21,000 mg/L (MW-4).

July 1987 - TDS was detected at 5,190 mg/L (MW-3), 17,000 mg/L (JK-1), and 27,600 mg/L (MW-4).
September 1987 - TDS was detected at 6,020 mg/L (MW-3), 18,540 mg/L (JK-1), and 29,830 mg/L (MW-4).

December 1987 - TDS was detected at 1,500 mg/L (MW-3), 5,100 mg/L (JK-1), and 23,000 mg/L (MW-4).

February 1988 – TDS was detected at 5,760 mg/L (MW-3), 19,000 mg/L (JK-1), and 30,000 mg/L (MW-4).

January 1996 – TDS was detected in MW-1 at 9,250 mg/L, MW-2 at 4,270 mg/L, MW-3 at 3,790 mg/L, and in MW-4 at 4,360 mg/L.

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS (LADPW) DOMINGUEZ GAP CHLORIDE CONCENTRATIONS

Analytical results collected form LADPW groundwater observations wells to monitor chloride concentrations in the Dominguez Gap are summarized below and are presented in Table 6 and shown on Figure 4.

In a well approximately 0.8 mile south of the Site (29J’54), chloride levels measured in 2005, 2006, and 2008 ranged from 680 to 775 mg/L in samples collected at an elevation of 56 feet amsl or 79.6 feet below the ground surface.

In a well approximately 2.5 miles south of the Site (28B’82), chloride levels measured in 2008 were at 2,000 mg/L in a sample collected at an elevation of -65 feet amsl or 75.4 feet below the ground surface.

In a well located at Burnett Street and Fashion Avenue (28K’62), chloride was measured in 2008 at 430 mg/L approximately 0.36 mile to the southwest , chloride levels increase to 5,600 mg/L.

In a well (27R’64) approximately 3 miles SSW of the site, chloride levels were measured at 18, 800 mg/L in February 2008.

Approximately 2 ¼ miles SSW of the Site, chloride was measured at 5,600 mg/L (28C'49).

At the Site, chloride levels increase from 240 mg/L in MW-5 to 3,270 mg/L over a ¼ mile stretch.

DTSC COMMENTS TO REMEDIAL INVESTIGATION REPORT

LFR submitted a Remedial Investigation Report for the Site to the DTSC on March 4, 2008. DTSC reviewed the report and provided comments in a letter dated April 23, 2008. The Geological Services Unit (GSU) was concerned that the waste material at the Site contributes to groundwater degradation. The GSU comments in regards to groundwater are presented below.

Comment #2: GSU is concerned that waste is in contact with groundwater at the site and will continue to degrade groundwater for the foreseeable future. The contractor should propose to address this condition.

Comment #4: GSU does not concur that regional groundwater degradation can account for the groundwater contamination at the Site. There is clear evidence of onsite releases of arsenic, barium, mercury, and total dissolved solids. There is, in addition, a credible threat to groundwater from TPH, VOCs, and SVOCs originating at the site. The contractor should include these analytes as contaminants of concern at the site

Comment #5: GSU does not concur that increased TDS at the site is likely to be a result of seawater intrusion. The site was used to handle brine, which is a far more likely source of the TDS. The degradation of groundwater by TDS is a concern at the site.

Comment #8: GSU points out that the water sample taken at MW-3 in February 2008, downgradient of the former main sumps, contained 29 µg/L of cadmium. The MCL for cadmium is 5 µg/L. The contractor should discuss this observation.

CONCLUSIONS

In January 1996, concentrations of TDS ranged from 2,690 mg/l (MW-4) to 10,800 mg/l (MW-2). In 2006, TDS ranged from 900 mg/l (MW-5) to 4,710 mg/l (MW-3). Although TDS appears to have increased across the Site, historically the Gaspur aquifer has been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond the Site. In addition, numerous salt sources may have existed as part of the historical oil production in the area.

Metals in groundwater for MW-7 are generally consistent with the metals detected in December 2007. The federal MCL was exceeded for arsenic. California MCLs (per CCR Title 22, June 27, 2007) were exceeded for barium, lead and mercury. MW-7 had a concentration of arsenic at 420

µg/l; the federal MCL for arsenic is 10 µg/l. Barium was detected at a concentration of 1,700 µg/l in MW-7; the MCL for barium is 1,000 µg/l. Mercury was detected at concentrations of 2 µg/l and 7 µg/l in MW-3 and MW-6 respectively; the MCL for mercury is 2 µg/l. Lead was detected at a concentration of 24 µg/l using the MDL in MW-7; the MCL for lead is 15 µg/l. Historical analytical results for metals are summarized in Table 2 and first quarter 2008 analytical results are shown on Figure 3. During this round of sampling, cadmium was not detected below the MDL of 1.9 µg/l in any of the samples. Cadmium was not detected above the laboratory detection limit of 50 µg/l in the water sample collected from MW-3 in December 2007; however, it was above the MDL at 29 µg/l of cadmium. The MCL for cadmium is 5 µg/l.

TPH-cc was not detected at concentrations above laboratory reporting limits in the groundwater samples collected from MW-3 and MW-5.

TPHg (total petroleum hydrocarbon as gasoline, C6-C12) was detected in MW-6 at a concentration of 0.93 mg/l. TPHd (total petroleum hydrocarbon as diesel, C12-C28) was detected in MW-7 at a concentration of 2.3 mg/l. A summary of historical TPH analytical results is provided in Table 3.

No VOCs or SVOCs were detected at concentrations above laboratory reporting limits in any of the groundwater samples collected at the Site. Historical summaries of the analytical results for VOCs and SVOCs are shown in Tables 4 and 5, respectively.

TDS was measured at 1,000 mg/l and 2,000 mg/l in MW-5 and MW-6, respectively. Higher concentrations of TDS were measured in MW-3 and MW-7 with 6,200 mg/l and 7,800 mg/l, respectively. Historical summaries of the results for TDS and other geochemical parameters are shown in Table 5. Elevated measurements of TDS at the Site indicated inferior quality of groundwater in the shallow aquifer, not suitable for drinking water use. Concentrations of TDS in the groundwater increase in the downgradient direction. It is unknown whether the elevated concentrations are due to natural processes or human activity. However, the Gaspur aquifer has historically been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond Carson Street (located north of the Site) toward the crest of the Newport-Inglewood uplift (Poland 1959). Based on the concentrations of TDS detected during this sampling event, groundwater enters the Site classified as slightly saline water (1,000 to 3,000 mg/l), and exits the Site classified as moderately saline (3,000 to 10,000 mg/l).

Higher levels of TDS and chloride than those found at the Site have been detected in the Gaspur aquifer south of the Site. As observed on Figures 2 and 4, there is no clear regional trend to the groundwater chloride concentrations.

Historically, TPHcc, VOCs, and SVOCs in groundwater samples have either not been detected or are well below MCLs. Given the regional area's degraded surficial aquifers from historical oil production, while some degradation was observed at the Site, the conditions appear to be in general accordance with the regional degradation of groundwater quality. Lead has been historically observed, but recent analyses find no significant impact. Arsenic, barium, and

mercury slightly exceed the MCL. TDS appears to increase from potential historical Site activities, but regional degradation limits these concerns.

Given the above, LFR believes the following provide reasonable conclusions:

1. Groundwater in the area is degraded from numerous and complex interactions of nature as well as historical man-caused activities that date back numerous decades. The Site is likely part of this, but does not appear to be the sole or even primary cause of water degradation.

2. Remedial consideration of historical Site activities would be highly problematic within this environment, and would do little to remedy potential historical discharges within the context of the regions degraded groundwater. Salt is not easily remedied, and pump and treat options would pose highly costly challenges and could exacerbate the regional condition.

As a result of these observations, we request some agency concurrence with these opinions in order to consider if the Brownfield effort continues to be viable at this Site.

If you have any questions, please contact either Tony Marino or Charlie Robinson at (714) 444-0111.

Sincerely,

Tony Marino, P.G.
P.G. # 8304
Senior Associate Geologist

Charles E. Robinson, P.E.
P.E. # C-035368
Vice President/Principal Engineer

cc: Mr. Steve Sukut, CRG Properties, Inc.
Mr. David Armitage, Urban Partners LLC
Mr. John Gunn, Urban Partners LLC
Mr. Peter Nyquist, Weston Benshoof Rochefort Pubalcava JacCusish

Attachments:

Appendix A: References
Table 1: Summary of Groundwater Samples Analyzed for Metals

Table 2: Summary of Groundwater Samples Analyzed for Total Petroleum Hydrocarbons Chain Range (TPHcc) and Total Recoverable Petroleum Hydrocarbons (TRPH)
Table 3: Summary of Groundwater Samples Analyzed for Volatile Organic Compounds (VOCs)
Table 4: Summary of Groundwater Samples Analyzed for Semi Volatile Organic Compounds (SVOCs)
Table 5: Summary of Groundwater Samples Analyzed for TDS and other Geochemical Parameters
Table 6: Dominguez Gap Barrier Project – Chloride Concentrations from Observation Wells in the Gaspur Aquifer since the Year 2003
Figure 1: Vicinity Map
Figure 2: Former Oil Operators North and South Sites Showing TDS and Chloride Concentrations (1996-2008)
Figure 3: Site Map Showing Analytical Results in Groundwater, Mach 25, 2008
Figure 4: Dominguez Gap Barrier Project – Chloride Concentrations from Observation Wells in the Gaspur Aquifer since the Year 2003

TABLES

Table 1
Summary of Groundwater Samples Analyzed for Metals
3701 Pacific Place, Long Beach, CA
CRG Properties
Former Oil Operators North Site
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	Antimony EPA 6010B µg/L	Arsenic EPA 6010B µg/L	Barium EPA 6010B µg/L	Beryllium EPA 6010B µg/L	Cadmium EPA 6010B µg/L	Calcium EPA 6010B µg/L	Chromium EPA 6010B µg/L	Cobalt EPA 6010B µg/L	Copper EPA 6010B µg/L	Lead EPA 6010B µg/L	Magnesium EPA 6010B µg/L	Mercury EPA 7470A µg/L	Molybdenum EPA 6010B µg/L	Nickel EPA 6010B µg/L	Selenium EPA 6010B µg/L	Silver EPA 6010B µg/L	Sodium EPA 6010B µg/L	Thallium EPA 6010B µg/L	Vanadium EPA 6010B µg/L	Zinc EPA 6010B µg/L
MW-3	01/10/96	STS	--	--	--	--	--	--	--	ND	--	**75**	ND	--	--	--	ND	--	--	--	--	--	**20**
	2/17-19/97	STS	--	--	--	--	--	--	--	ND	--	ND	**280**	**--**	--	--	**65**	--	--	--	--	--	**130**
	12/19/03	SunStar	T301367-01	<100	**72 J**	**150**	<50	<50	--	<50	<50	<50	<50	--	**4.8**	**24 J**	<50	<250	84 J	--	<100	<100	12 J
	05/19/04	SunStar	T400513-01	<15	**15**	**290**	<3	<5	--	<10	<50	<50	<10	--	**160**	<50	<50	<25	<50	--	<10	<40	**66**
	12/18/06	SunStar	T601731-01	<50	**7.8**	**140**	<50	<50	**5,200**	<50	<50	**400**	<1.4	**2,100**	**0.82**	<50	<50	<50	**62**	**24,000**	<50	<50	<50
	12/03/07	SunStar	T701575-02	<50	<20	<50	<50	**29**	--	<50	<50	<50	<8.6	--	**0.74**	<50	<50	<50	<50	--	<50	<50	<50
	03/25/2008	SunStar	T800396-02	<10	<20	**50**	<4.1	<1.9	--	<50	<50	<50	<8.6	--	**2**	<50	<50	<50	<50	--	<14	<50	<50
MW-5	05/19/04	STS	T400513-02	<15	<10	**97**	<3	<5	--	<10	<50	<50	**16**	**--**	<0.5	<50	<50	<25	<50	--	<10	<40	**140**
	12/18/06	SunStar	T601731-02	<50	**12**	**100**	<50	<50	**3,200**	<50	<50	**55**	<1.4	**750**	<0.5	<50	<50	<50	<50	**5,100**	<50	<50	<50
	12/3/2007	SunStar	T701575-04	<50	<20	<50	<50	<1.8	--	<50	<50	<50	<8.6	--	<0.5	<50	<50	<50	<50	--	<50	<50	<50
	03/25/2008	SunStar	T800396-05	<10	<20	**120**	<4.1	<1.9	--	<50	<50	<50	<8.6	--	<0.5	<50	<50	<50	<50	--	<14	<50	<50
MW-6	05/19/04	STS	T400513-03	**22**	<10	**180**	<3	<5	--	<10	<50	<50	<10	--	**12**	<50	<50	**52**	<50	--	<10	**59**	**180**
	12/18/06	SunStar	T601731-03	<50	**12**	**100**	<50	<50	**4,100**	<50	<50	**140**	<1.4	**1,200**	**7.3**	<50	<50	<50	<50	**12,000**	<50	<50	<50
	12/03/07	SunStar	T701575-05	<50	<20	<50	<50	**3.9**	--	<50	<50	<50	<8.6	--	**5.6**	<50	<50	<50	<50	--	<50	<50	<50
	03/25/2008	SunStar	T800396-03	<10	<20	**110**	<4.1	<1.9	--	<50	<50	<50	<8.6	--	**7**	<50	<50	<50	<50	--	<14	<50	<50
MW-7	12/03/07	SunStar	T701575-06	<50	**210**	**1,100**	<50	<1.9	--	<50	<50	<50	<8.6	--	<0.5	<50	<50	<50	<50	--	<50	<50	<50
	03/25/2008	SunStar	T800396-04	<10	**420**	**1,700**	<4.1	<1.9	--	<50	<50	<50	**24**	--	<0.5	<50	<50	<50	<50	--	<14	<50	**74**
The following wells have not been located since the 1997 sampling event																							
MW-2	01/10/96	STS	--	--	--	**--**	--	--	--	ND	--	80	ND	--	--	--	ND	--	--	--	--	--	120
	2/17-19/97	STS	--	--	--	**--**	--	--	--	ND	--	ND	**210**	**--**	--	--	ND	--	--	--	--	--	200
MW-4	01/10/96	STS	--	--	--	**--**	--	--	--	ND	--	74	ND	--	**--**	--	ND	--	--	--	--	--	40
	2/17-19/97	STS	--	--	--	**--**	--	--	--	ND	--	ND	**130**	**--**	**--**	--	ND	--	--	--	--	--	100
MCLs				**6**	**10**	**1,000**	**4**	**5**	**--**	**50**	**--**	**1,000***	**15**	**--**	**2**	**--**	**100**	**50**	**100***	**--**	**2**	**50****	**5,000**

µg/L = micrograms per liter
< = Not detected above laboratory reporting limit indicated, except for antimony, arsenic, beryllium, cadmium, lead and thallium where the method detection limit (MDL) is shown for sampling date 3/25/2008; arsenic, cadmium and lead for sampling date 12/03/2007
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
MCLs = Maximum Contaminant Levels
-- = Not available
* = Secondary MCL
** = Action Level (AL) for unregulated chemical requiring monitoring.
J = Detected below the standard reporting limit; the result is an estimated concentration.
Note - Groundwater analysis from 2004 has a lower method detection limit.

QA/QC KLL

Table 2
Summary of Groundwater Samples Analyzed for Total Petroleum Hydrocarbon Chain range (TPHcc) and Total Recoverable Petroleum Hydrocarbons (TRPH)
3701 Pacific Place, Long Beach, CA
Former Oil Operators North Site
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	C6-C12 EPA 8015M mg/l	C12-C28 EPA 8015M mg/l	C28-C40 EPA 8015M mg/l	TPH EPA 8015M mg/l	TRPH EPA 8015M mg/l
MW-3	01/10/96	STS	--	--	--	--	ND	ND
	2/17-19/97	STS	--		--	--	ND	ND
	12/19/03	SunStar	T301367-01	<0.1	<0.1	<0.1	--	--
	05/19/04	SunStar	T400513-01	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	T601731-01	**0.13**	<0.05	<0.1	--	--
	12/03/07	SunStar	T701575-02	<0.5	<0.5	<0.5	--	--
	03/25/2008	SunStar	T800396-02	<0.5	<0.5	<0.5	--	--
MW-5	05/19/04	SunStar	T400513-02	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	T601731-02	**0.05**	<0.05	<0.1	--	--
	12/03/07	SunStar	T701575-04	<0.5	<0.5	<0.5	--	--
	03/25/08	SunStar	T800396-05	<0.5	<0.5	<0.5	--	--
MW-6	05/19/04	SunStar	T400513-03	<0.1	<0.1	<0.1	--	--
	12/18/06	SunStar	T601731-03	**0.38**	<0.05	<0.1	--	--
	12/03/07	SunStar	T701575-05	<0.5	<0.5	<0.5	--	--
	03/25/08	SunStar	T800396-03	**0.93**	<0.5	<0.5	--	--
MW-7	12/03/07	SunStar	T701575-06	<0.5	**1.1**	<0.5	--	--
	03/25/08	SunStar	T800396-04	<0.5	**2.3**	<0.5	--	--
The folllowing wells have not been located since the 1997 sampling event								
MW-2	01/10/96	STS	--	--	--	--	ND	**1.4**
	2/17-19/97	STS	--	--	--	--	ND	ND
MW-4	01/10/96	STS	--	--	--	--	ND	ND
	2/17-19/97	STS	--	--	--	--	ND	ND

< = Not detected above laboratory reporting limit indicated.
ID = Identification
mg/l = milligrams per liter
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
-- = Not Available
ND = Not detected above laboratory reporting limit (reporting limits from previous investigations are not available)

QA/QC KLL

Table 3
Summary of Groundwater Samples Analyzed for
Volatile Organic Compounds (VOCs)
3701 Pacific Place, Long Beach, CA
CRG Properties
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	Benzene EPA 8260B µg/L	Toluene EPA 8260B µg/L	Ethylbenzene EPA 8260B µg/L	Xylenes EPA 8260B µg/L
MW-3	01/10/96	STS	--	ND	ND	0.9	2.4
	2/17-19/97	STS	--	**88**	1.6	15	10
	12/19/03	SunStar	T301367-01	<0.5	<0.5	<0.5	<1.5
	05/19/04	SunStar	T400513-01	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	T601731-01	<0.5	<0.5	<0.5	<1.5
	12/03/07	SunStar	T701575-02	<0.5	<0.5	<0.5	<0.5
	03/25/08	SunStar	T800396-02	<0.5	<0.5	<0.5	<0.5
MW-5	05/19/04	SunStar	T400513-02	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	T601731-02	<0.5	<0.5	<0.5	<1.5
	12/03/07	SunStar	T701575-04	<0.5	<0.5	<0.5	<0.5
	03/25/08	SunStar	T800396-05	<0.5	<0.5	<0.5	<0.5
MW-6	05/19/04	SunStar	T400513-03	<0.5	<0.5	<0.5	<1.5
	12/18/06	SunStar	T601731-03	<0.5	<0.5	<0.5	<1.5
	12/03/07	SunStar	T701575-05	<0.5	<0.5	<0.5	<0.5
	03/25/08	SunStar	T800396-03	<0.5	<0.5	<0.5	<0.5
MW-7	12/03/07	SunStar	T701575-06	<0.5	<0.5	<0.5	<0.5
	03/25/08	SunStar	T800396-04	<0.5	<0.5	<0.5	<0.5

The folllowing wells have not been located since the 1997 sampling event

MW-2	01/10/96	STS	--	ND	ND	ND	ND
	2/17-19/97	STS	--	0.6	ND	ND	ND
MW-4	01/10/96	STS	--	ND	0.5	ND	ND
	2/17-19/97	STS	--	ND	ND	ND	ND
MCLs				**1**	**150**	**300**	**1,750**

Note: See laboratory reports for a complete list of compounds analyzed.
ID = Identification
µg/L = micrograms per liter
< = Not detected above laboratory reporting limit indicated.
SunStar = SunStar Laboratories Inc., Tustin, CA.
STS = Southland Technical Services, Inc., Montebello, CA.
ND = Non-detect.
-- = Not Available.
MCLs = Maximum Contamination Levels

QA/QC KLL

Table 4
Summary of Groundwater Samples Analyzed for
Semi Volatile Organic Compounds (SVOCs)
CRG
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	All Analytes EPA 8270C µg/L
MW-3	05/19/04	SunStar	T400513-01	ND
	12/18/06	SunStar	T601731-01	ND
	12/03/07	SunStar	T701575-02	ND
	03/25/08	SunStar	T800396-02	ND
MW-5	05/19/04	SunStar	T400513-02	ND
	12/18/06	SunStar	T601731-02	ND
	12/03/07	SunStar	T701575-02	ND
	03/25/08	SunStar	T800396-05	ND
MW-6	05/19/04	SunStar	T400513-03	ND
	12/18/06	SunStar	T601731-03	ND
	12/03/07	SunStar	T701575-02	ND
	03/25/08	SunStar	T800396-03	ND
MW-7	03/25/08	SunStar	T800396-04	ND

ID = Identification
µg/L = micrograms per liter
SunStar = SunStar Laboratories Inc., Tustin, CA.
ND = Non-detect.
Note: See laboratory reports for a complete list of compounds analyzed.

QA/QC KLL

Table 5
Summary of Groundwater Samples Analyzed for
TDS and other Geochemical Parameters
CRG Properties
3701 Pacific Place, Long Beach, CA
002-10231-03

Sample ID	Date Sampled	Lab	Lab ID	Specific Conductance (EC) SM2510b mod. umhos/cm	Alkalinity as CaCO3 EPA 310.1 mg/l	Chloride EPA 300.0 mg/l	Nitrate as NO3 EPA 300.0 mg/l	pH EPA 150.1 pH Units	Sulfate as SO4 EPA 300.0 mg/l	Total Dissolved Solids (TDS) mg/l
MW-3	01/10/96	STS	--	--	--	--	--	**6.45**	--	**8,970**
	2/17-19/97	STS	--	--	--	--	--	**6.34**	--	**11,800**
	12/18/06	Sunstar	T601731-01	**7,740**	**590**	**3,270**	**1.74**	**6.4**	**107**	**4,710***
	03/25/08	SunStar	T800396-02	--	--	--	--	--	--	**6,200**
MW-5	12/18/06	Sunstar	T601731-02	**1,700**	**520**	**240**	<0.5	**6.9**	**92.7**	**900***
	03/25/08	SunStar	T800396-05	--	--	--	--	--	--	**1,000**
MW-6	12/18/06	Sunstar	T601731-03	**3,660**	**540**	**1,100**	**40.1**	**6.8**	**102**	**2,090***
	03/25/08	Sunstar		--	--	--	--	--	--	**2,100**
MW-7	03/25/08	SunStar	T800396-03	--	--	--	--	--	--	**7,800**
The following wells have not been located since the 1997 sampling event										
MW-2	01/10/96	STS	--	--	--	--	--	**6.46**	--	**10,800**
	2/17-19/97	STS	--	--	--	--	--	**6.76**	--	**8,560**
MW-4	01/10/96	STS	--	--	--	--	--	**6.65**	--	**2,690**
	2/17-19/97	STS	--	--	--	--	--	**6.78**	--	**2,030**

< = Not detected above laboratory reporting limit indicated.
umhos/cm = microsiemens per centimeter
mg/l = milligrams per liter
STS = Southland Technical Services, Inc., Montebello, CA.
SunStar = SunStar Laboratories Inc., Tustin, CA.
* = TDS analytical results provided by SunStar and communicated by electronic mail
CaCO3 = calcuim carbonate
NO3 = nitrate
SO4 = sulfate
-- = Not Available

QA/QC KLL

Dominguez Gap Barrier Project
Chloride concentrations from observation wells in the gaspur aquifer since the year 2003

PROJECT NUMBER	FCD NUMBER	DATE	AQUIFER	REFERENCE ELEVATION (ft)	ELEVATION 1 (ft)	CHLORIDE 1 (mg/L)	ELEVATION 2 (ft)	CHLORIDE 2 (mg/L)	ELEVATION 2 (ft)	CHLORIDE 3 (mg/L)
26BC	351AF	20070620	GASPUR	13.40	-42	90				
26N'15	361J	20080213	(GASPUR(200))	4.20	-149	12,100				
26TY	361S	20040310	(GASPUR(200))	18.00	-100	3,700	-123	3,750	-145	9,900
26TY	361S	20041110	(GASPUR(200))	18.00	-100	190	-123	480	-145	10,000
26TY	361S	20061003	(GASPUR(200))	18.00	-100	145	-123	205	-145	10,900
26TY	361S	20070424	(GASPUR(200))	18.00	-100	258	-123	6,050	-145	12,000
26TY	361T	20040209	(GASPUR(200))	18.00	-30	4,850	-50	13,500		
26TY	361T	20041110	(GASPUR(200))	18.00	-30	9,300	-50	14,500		
26TY	361T	20061003	(GASPUR(200))	18.00	-30	13,200	-50	15,200		
26TY	361T	20070424	(GASPUR(200))	18.00	-30	9,600	-50	17,100		
26W'19	361Z	20050801	GASPUR	5.90	-104	13,300	-134	15,250		
26W'19	361Z	20060327	GASPUR	5.90	-104	12,600	-134	16,700		
26W'19	361Z	20080213	GASPUR	5.90	-104	12,600	-134	16,800		
26YA	362AS	20070620	GASPUR	16.00	-94	102				
27BF	361W	20040309	GASPUR	13.70	-56	2,175	-81	1,950	-106	3,475
27BF	361W	20041123	GASPUR	13.70	-56	1,850	-81	2,050	-106	6,400
27BF	361W	20050906	GASPUR	13.70	-56	2,000	-81	2,000	-106	6,700
27BF	361W	20060327	GASPUR	13.70	-56	2,200	-81	2,375	-106	8,950
27BF	361W	20061108	GASPUR	13.70	-56	2,350	-81	4,650	-106	9,400
27BF	361W	20070425	GASPUR	13.70	-56	2,200	-81	5,100	-106	2,900
27J'19	371J	20070817	GASPUR	8.30	-79	11,100	-102	11,500	-125	11,400
27J'19	371J	20080212	GASPUR	8.30	-79	10,600	-102	7,750	-125	12,600
27J'20	371E	20050901	GASPUR	8.50	-130	11,450				
27JM	360AD	20070621	GASPUR	17.30	-68	123	-93	148		
27K' 3	370H	20080225	GASPUR	12.80	-102	2,500				
27MT	370V	20040322	(GASPUR(200))	14.20	-86	1,175	-121	2,000	-161	2,300
27MT	370V	20050314	(GASPUR(200))	14.20	-86	1,400	-121	2,450	-161	2,550
27MT	370V	20050804	(GASPUR(200))	14.20	-86	2,050	-121	3,100	-161	3,100
27MT	370V	20060327	(GASPUR(200))	14.20	-86	3,950	-121	5,000	-161	4,750
27MT	370V	20061108	(GASPUR(200))	14.20	-86	3,850	-121	2,850	-161	1,450
27MT	370V	20070426	(GASPUR(200))	14.20	-86	2,350	-121	520	-161	1,550
27R'14	370X	20080226	GASPUR	10.30	-110	90	-130	4,900		
27R'14	370Y	20080226	GASPUR	10.30	-60	75	-80	2,900		
27R'64	381L	20080214	GASPUR	5.80	-104	18,800				
27TW	370AL	20070620	(GASPUR-200)	17.30	-108	135				
27W'54	380T	20050829	GASPUR	7.70	-126	17,550				
27W'54	380T	20060330	GASPUR	7.70	-126	12,300				
27W'54	380T	20080214	GASPUR	7.70	-126	15,300				
27YC	879XX	20040309	GASPUR	14.90	-65	4,050				
27YC	879XX	20041130	GASPUR	14.90	-65	4,500				
27YC	879XX	20050804	GASPUR	14.90	-65	5,650				
27YC	879XX	20060329	GASPUR	14.90	-65	3,050				
27YC	879XX	20061109	GASPUR	14.90	-65	5,100				
27YC	879XX	20070426	GASPUR	14.90	-65	5,500				
27Z'20	370AH	20080221	(GASPUR(200))	10.70	-59	1,800	-114	2,300	-174	8,800
28B'82	390S	20080219	GASPUR	10.40	-65	2,000	-115	3,300	-165	16,800
28C'17	370AA	20080225	GASPUR	13.40	-62	300	-82	510	-102	4,650
28C'49	380R	20050829	GASPUR	12.30	-98	5,400				
28C'49	380R	20060330	GASPUR	12.30	-98	4,700				
28C'49	380R	20080221	GASPUR	12.30	-98	5,600				
28K'27	889Q	20080227	(GASPUR-200)	19.60	-109	4,450				
28K'62	899N	20080220	GASPUR	15.20	-53	430	-85	310	-118	5,000
28N'48	889W	20050726	(GASPUR-200)	17.50	-49	900	-85	2,000	-119	5,900
28N'48	889W	20060405	(GASPUR-200)	17.50	-49	850	-85	830	-119	3,600
28N'48	889W	20080226	(GASPUR-200)	17.50	-49	825	-85	1,100	-119	3,950
28R 7	879X	20040322	(GASPUR-200)	17.10	-31	3,800				
28R 7	879X	20050308	(GASPUR-200)	17.10	-31	2,600				
28R 7	879X	20061107	(GASPUR-200)	17.10	-31	450				
28R 7	879X	20070403	(GASPUR-200)	17.10	-31	430				
28W'88	909L	20080219	GASPUR	16.80	-33	588				
28Z'32	888V	20050815	GASPUR	20.00	-65	610	-90	1,190		
28Z'32	888V	20060419	GASPUR	20.00	-65	68	-90	1,050		
28Z'32	888V	20080228	GASPUR	20.00	-65	185	-90	150		
28ZZ1	878BK	20070619	GASPUR	21.86	-78	160				
28ZZ1	878BK	20080311	GASPUR	21.86	-78	10				
29A14	888BD	20080306	GASPUR	22.50	-98	180				
29A4B	888AV	20070618	GASPUR	20.50	-336	60				
29A4B	888AV	20080304	GASPUR	20.50	-336	70				
29A'69	898W	20050816	GASPUR	20.30	-60	800				
29A'69	898W	20060501	GASPUR	20.30	-60	810				
29A'69	898W	20080305	GASPUR	20.30	-60	800				
29D13	868LL	20080310	GASPUR	16.40	-379	90				
29J'54	898X	20050816	GASPUR	23.60	-56	680	-76	2,150		
29J'54	898X	20060427	GASPUR	23.60	-56	690	-76	2,000		
29J'54	898X	20080228	GASPUR	23.60	-56	775	-76	1,950		
29W'23	889T	20050823	GASPUR	24.70	-34	270	-50	235	-75	265
29W'23	889T	20060410	GASPUR	24.70	-34	320	-50	300	-75	440
29W'23	889T	20080306	GASPUR	24.70	-34	58	-50	280	-75	240

FIGURES



CRG Property

McDonald Property

Tookey Property

Site

0 2000 ft

Vicinity Map

CRG Properties, Former Oil Operators North Site,
Long Beach, CA - 002-10231-03

LFR

Figure 1

CM: K:\Data\Graphics\10000\10231\03\10231-03 VicinityMap.ai

MW-5	Arsenic	Barium	Cadmium	Lead	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
3/25/2008	<20	120	<1.9	<8.6	<0.5	<50	ND	ND	<0.5	<0.5	<0.5
MCLs	**10***	**1,000**	**5**	**15**	**2**	**--**	**--**	**--**	**--**	**--**	**--**

MW-6	Arsenic	Barium	Cadmium	Lead	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
3/25/2008	<20	110	<1.9	<8.6	7	<50	ND	ND	0.93	<0.5	<0.5
MCLs	**10***	**1,000**	**5**	**15**	**2**	**--**	**--**	**--**	**--**	**--**	**--**

MW-7	Arsenic	Barium	Cadmium	Lead	Mercury	zinc	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
3/25/2008	420	1700	<1.9	24	<0.5	74	<50	ND	ND	<0.5	2.3	<0.5
MCLs	**10***	**1,000**	**5**	**15**	**2**	**5,000**	**--**	**--**	**--**	**--**	**--**	**--**

MW-3	Arsenic	Barium	Cadmium	Lead	Mercury	All other metals	VOCs	SVOCs	TPHg	TPHd	TPHmo
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
3/25/2008	<20	50	<1.9	<8.6	2	<50	ND	ND	<0.5	<0.5	<0.5
MCLs	**10***	**1,000**	**5**	**15**	**2**	**--**	**--**	**--**	**--**	**--**	**--**

MW-5
MW-4
MW-6
MW-2
MW-7
MW-3

LOS ANGELES RIVER
METRO BLU
DEL MAR AVENUE
LOS CERRITOS PARK
405

EXPLANATION

- MW-3 — Groundwater Monitoring Well
- MW-2 — Former Groundwater Monitoring Well (JB, 1995)
- Property Boundary
- Railroad Tracks
- VOCs — Volatile Organic Compounds
- SVOCs — Semi-Volatile Organic Compounds
- TPH — Total Petroleum Hydrocarbons
- TPHg — Gasoline Range Organics
- TPHd — Diesel Range Organics
- TPHmo — Motor Oil Range Organics
- * — Federal MCL for Arsenic (USEPA, January 2006)
- MCL — Maximum Contaminant Levels
- µg/L — micrograms per liter
- < — less than
- ND — not detected above laboratory reporting limits

Red denotes concentrations greater than MCL

0 160 FEET

Site Map Showing Analytical Results in Groundwater, March 25, 2008

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-03

LFR

Figure 3

CM: K:\Data\Graphics\10000\10231\03\10231-03 Well Locations-March08.dwg [All] 4/30/08 10:40am jdloving XREFS: [Map137.dwg

APPENDIX A

REFERENCES

REFERENCES

American Environmental Management Corporation (AEMC), 1991, Draft Site Review for Oil Operators, Inc. June 26.

_____, 1991, Subsurface Characterization Report of the Southern Portion of Oil Operators, Inc. prepared for Sukut Construction, December 12.

Batman, E., P.E., Los Angeles County Department of Public Works, Water Resources Division, Dominguez Gap Barrier Project, 2008.

California Department of Water Resources (CDWR), 1961. Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology. June

Earth Technology Corporation, 1984, Oil Sump Site Development Supplemental Investigation, San Diego Freeway and Pacific Place, Long Beach, California, January.

Jack K. Bryant Engineers, 1996, 1995 Groundwater Monitoring Report for Oil Operators North Site. February 1.

_____, 1997, RWQCB File Number 86-66, Annual Groundwater Monitoring Report 1996, for Oil Operators North Site, Pacific Place, Long Beach, CA. March 17.

Jaykim Engineers, Inc, 1988, Annual Monitoring Report, Land Treatment Operation, Oil Operators, Inc., January 29.

Los Angeles County Department of Public Works, 2008. http://dpw.lacounty.gov/

Oil Operators Incorporated, (OOI), Long Beach – North Side (File #86-066; CI 6775) and South Side (File #86-065; CI 6751) Plan for Project Completion. April 12.

Poland, J.F. et al. Ground Water Investigation along the Rio Hondo and Lower Los Angles Rivers, Los Angeles County, California - Progress Report No. 1. USGS Open File Report. January, 1946.

Poland, J.F., and Sinnott, A. Hydrology of the Long Beach – Santa Ana Area, California. USGS Water Supply Paper 1471. 1959.

APPENDIX F

Boring Logs Prepared by LFR

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, brown, dry, 85% silt, 15% fine to medium grained sand, non-plastic.	B1-5'	21	60
10		-same.	B1-10'	16	160
15		**SILTY SAND (SM)**, brown, moist, 80% fine grained sand, 20% silt.	B1-15'	19	60
20		**POORLY GRADED SAND (SP)**, light brown, moist, 95% fine grained sand, 5% silt.	B1-20'	45	80
25		-same.	B1-25'	34	120
30		-90% fine grained sand, 10% silt.	B1-30'	42	60
35		Continued			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B1

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
		SILTY SAND (SM), light brown, moist, 60% fine grained sand, 40% silt.	B1-35'	67	220
40		**POORLY GRADED SAND (SP)**, brown moist, 80% fine grained sand, 20% silt.	B1-40'	76	80
45			B1-45'	98	60
50		**SILT (ML)**, brown, moist, non-plastic. Bottom of boring at 50 feet bgs.	B1-50'	48	120

EXPLANATION

Clay

Silt

Sand

Gravel

Interval Sampled
Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B1 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, olive brown, moist, trace plant material, non-plastic.	B2-5'	21	160
10		-dark brown.	B2-10'	45	1180
15		-olive brown.	B2-15'	92	1020
20		**POORLY GRADED SAND (SP)**, olive, moist, 90% fine grained sand, 10% fines.	B2-20'	82	800
25		-same.	B2-25'	73	400
30		**SILTY SAND (SM)**, olive, moist, 80% fine grained sand, 20% silt.	B2-30'	83	1860
35	Continued				

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

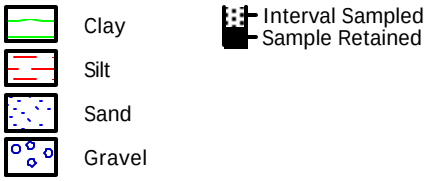
Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B2

LITHOLOGY			SAMPLING DATA			
Depth, feet	Graphic Log	Visual Description Continued		Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		-75% fine grained sand, 25% silt.		B2-35'	50-4"	180
40		-same.		B2-40'	45	640
45		-same.		B2-45'	82	1860
50		-same.		B2-50'	50-5"	180
		Bottom of boring at 50 feet bgs.				



Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B2 (CONTINUED)

	LITHOLOGY		SAMPLING DATA		
Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
5		**SILT (ML)**, tan, dry, trace plant material, 90% silt, 10% fine to coarse grained sand.	B3-5'	35	40
10		-dark brown, hydrocarbon odor.	B3-10'	25	3080
15		-black, oil seeps.	B3-15'	25	1560
20		**FAT CLAY (CH)**, olive, moist, medium to high plasticity.	B3-20'	21	780
25		**SILT (ML)**, light brown, moist, low plasticity.	B3-25'	39	540
30		-non-plastic.	B3-30'	28	110
35		Continued			

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B3

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
		SILTY SAND (SM), gray, moist, 70% fine grained sand, 30% silt.	B3-35'	56	860
40		-olive.	B3-40'	73	280
45		-same.	B3-45'	69	1240
50		-same.	B3-50'	80	1820
		Bottom of boring at 50 feet bgs.			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B3 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, light brown, moist, non-plastic.	B4-5'	10	220
10		-same.	B4-10'	18	640
15		-same.	B4-15'	20	80
20		-olive.	B4-20'	27	140
25		-same.	B4-25'	21	640
30		-same.	B4-30'	19	280
35		Continued			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

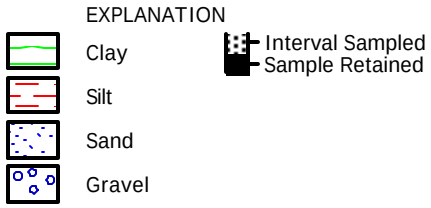
Date boring drilled: 11/22/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B4

LITHOLOGY			SAMPLING DATA		
Depth, feet	Graphic Log	Visual Description Continued	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		-same.	B4-35'	33	160
40		-wet.	B4-40'	35	460
45		**SILTY SAND (SM)**, olive, moist, 60% fine grained sand, 40% silt.	B4-45'	58	780
50		**POORLY GRADED SAND (SP)**, olive, moist, 100% fine grained sand. Bottom of boring at 50 feet bgs.	B4-50'	72	220



Date boring drilled: 11/22/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B4 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, brown, dry, non-plastic, 90% silt, 10% fine to medium grained sand, trace plant material.	B5-5'	16	20
10		**LEAN CLAY (CL)**, brown, moist, low plasticity to non-plastic.	B5-10'	12	40
15		-dark brown, low plasticity, hydrocarbon odor.	B5-15'	18	4000
20		**SILT WITH SAND (ML)**, brown, moist, 75% silt, 25% fine to medium grained sand, non-plastic.	B5-20'	17	260
25		**SILTY SAND (SM)**, light brown, moist, 75% fine grained sand, 25% silt.	B5-25'	35	3640
30		**SILT (ML)**, olive, moist, non-plastic.	B5-30'	33	260
35	Continued				

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B5

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY	**SAMPLING DATA**		
		SANDY SILT (ML), olive, moist, 70% silt, 30% fine grained sand.	B5-35'	41	140
		SILTY SAND (SM), olive, moist, 70% fine grained sand, 25% silt.			
40			B5-40'	58	5660
45		-65% fine grained sand, 35% silt.	B5-45'	60	780
50		-same.	B5-50'	45	660
		Bottom of boring at 50 feet bgs.			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B5 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILTY SAND (SM)**, light brown, moist, 60% fine grained sand, 40% silt.	B6-5'	11	100
10		-same.	B6-10'	30	380
15		**SILT (ML)**, dark brown, moist, low plasticity, hydrocarbon stain and odor.	B6-15'	20	1280
20		-non-plastic.	B6-20'	22	460
25		-same.	B6-25'	28	760
30		**SILTY SAND (SM)**, olive gray, moist, 70% fine grained sand, 30% silt.	B6-30'	39	4720
35		Continued			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

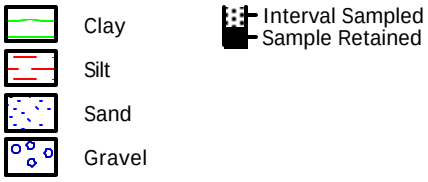
Date boring drilled: 11/22/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B6

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
		SILT (ML), olive brown, moist, non-plastic.	B6-35'	43	340
40		-brown, low plasticity.	B6-40'	31	860
45		-olive brown, non-plastic.	B6-45'	40	460
		SILTY SAND (SM), dark olive gray, moist, 60% fine grained sand, 40% silt.			
50		Bottom of boring at 50 feet bgs.	B6-50'	59	40



Date boring drilled: 11/22/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B6 (CONTINUED)

Depth, feet	Graphic Log	Visual Description	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		LITHOLOGY		**SAMPLING DATA**	
5		**SILT (ML)**, brown, dry, non-plastic, 90% silt, 10% fine grained sand, plant material.	B7-5'	7	100
10		-same.	B7-10'	14	120
15		-light brown, moist, non-plastic.	B7-15'	11	240
20		-same.	B7-20'	16	260
25		-85% silt, 15% fine to medium grained sand.	B7-25'	8	540
30		-olive, wet.	B7-30'	8	360
35		Continued			

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B7

Depth, feet	Graphic Log	Visual Description (Continued)	Sample ID	Penetration Rate (blows/ft.)	PID Values (ppm)
		-black, moist, low plasticity, hydrocarbon odor and staining.	B7-35'	16	5260
40		**ELASTIC SILT (MH)**, black, moist, low to medium plasticity, hydrocarbon odor and staining.	B7-40'	14	3540
45		-same.	B7-45'	15	1840
			B7-50'	20	3280
50		-same. Bottom of boring at 50 feet bgs.			

EXPLANATION

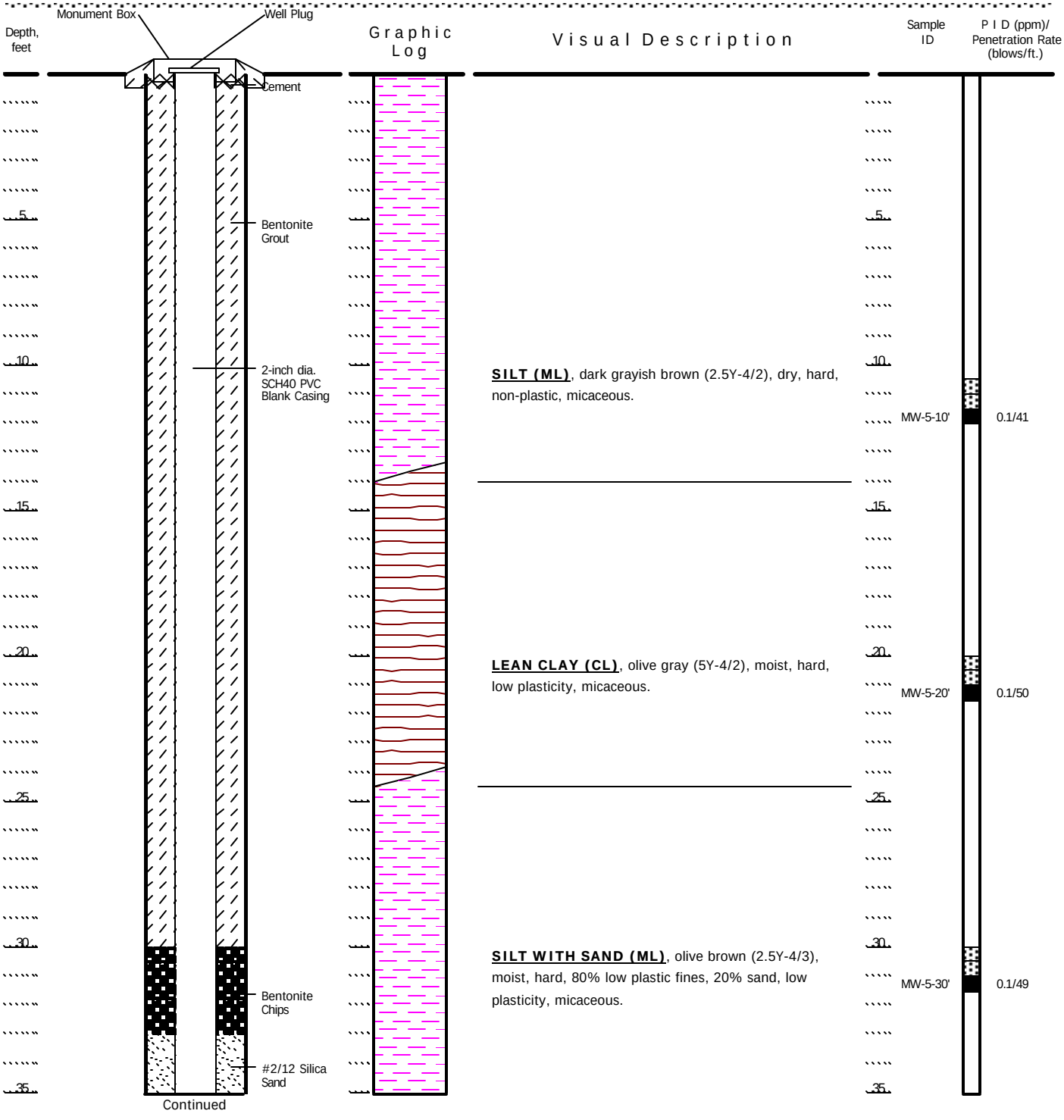
- Clay
- Silt
- Sand
- Gravel
- Interval Sampled / Sample Retained

Date boring drilled: 11/21/03

LFR Field Staff: Christine Brendle

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING B7 (CONTINUED)

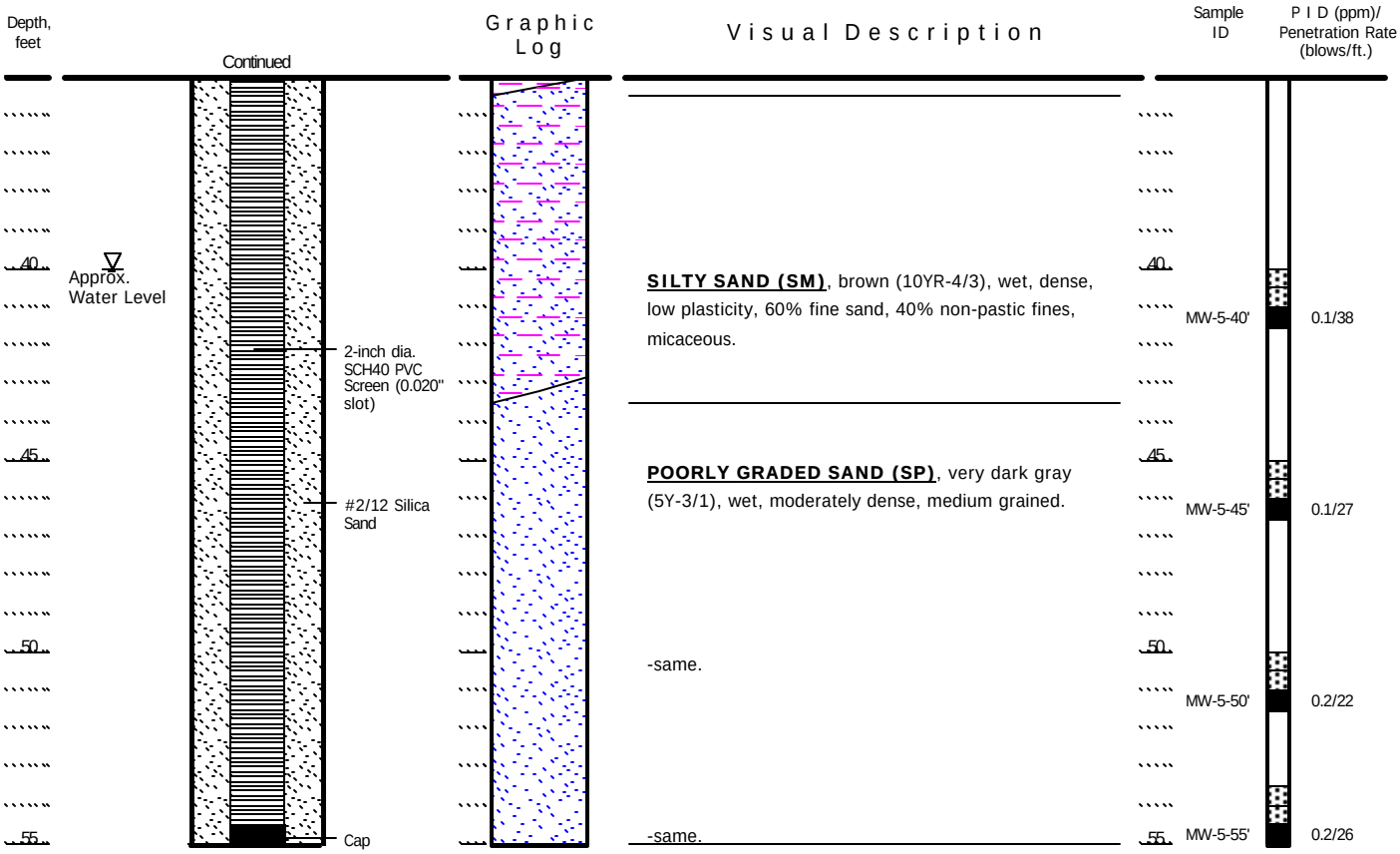


Date well drilled: 5/6/04

LFR Field Staff: Charlotte Berghoffer/Sonia Cisneros

Approved by:

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-5



EXPLANATION

Clay

Silt

Sand

Gravel

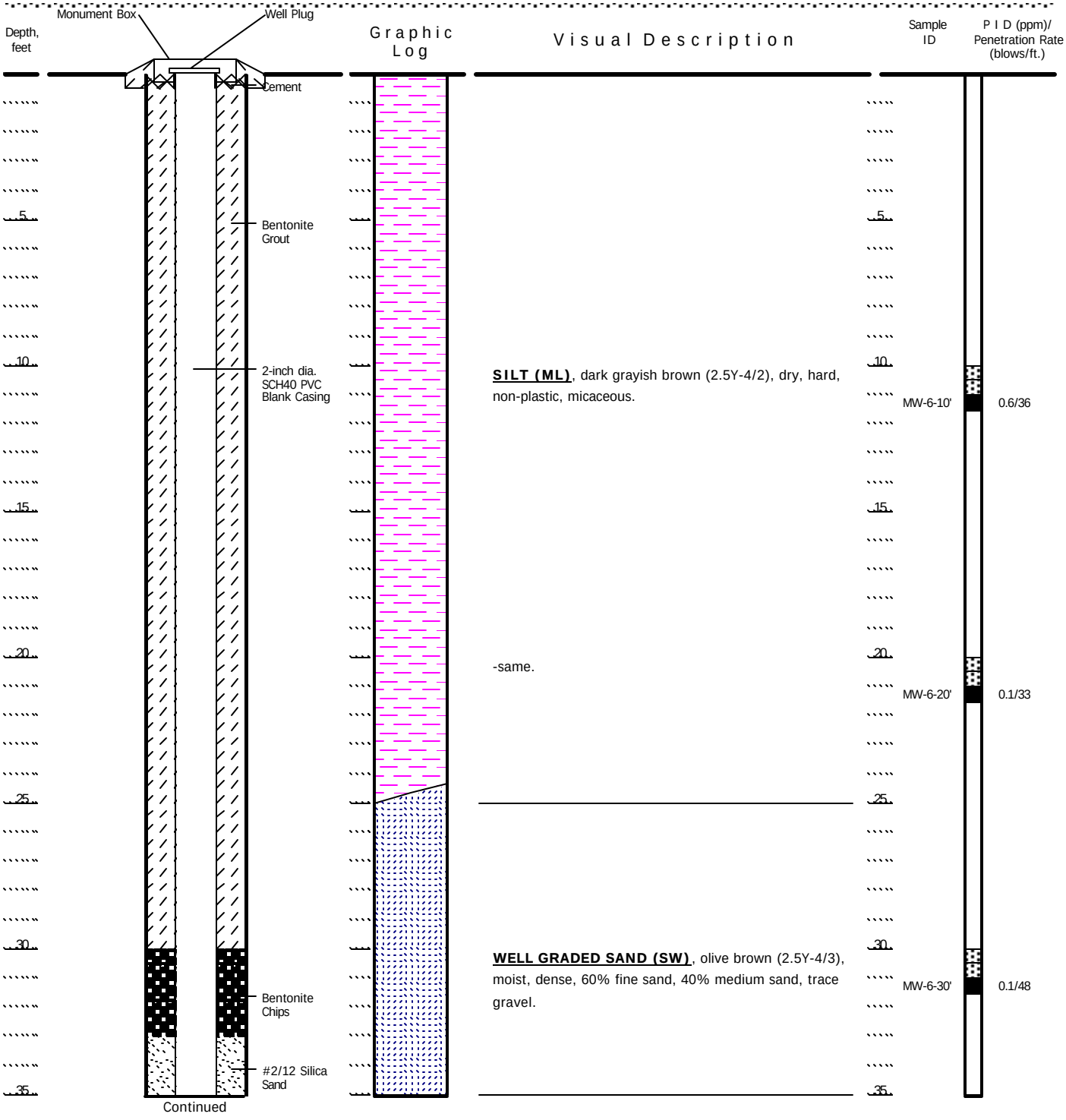
Interval Sampled
Sample Retained

Date well drilled: 5/6/04

LFR Field Staff: Charlotte Berghoffer/Sonia Cisneros

Approved by:

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-5 (CONTINUED)



EXPLANATION

Clay

Silt

Sand

Gravel

Interval Sampled
Sample Retained

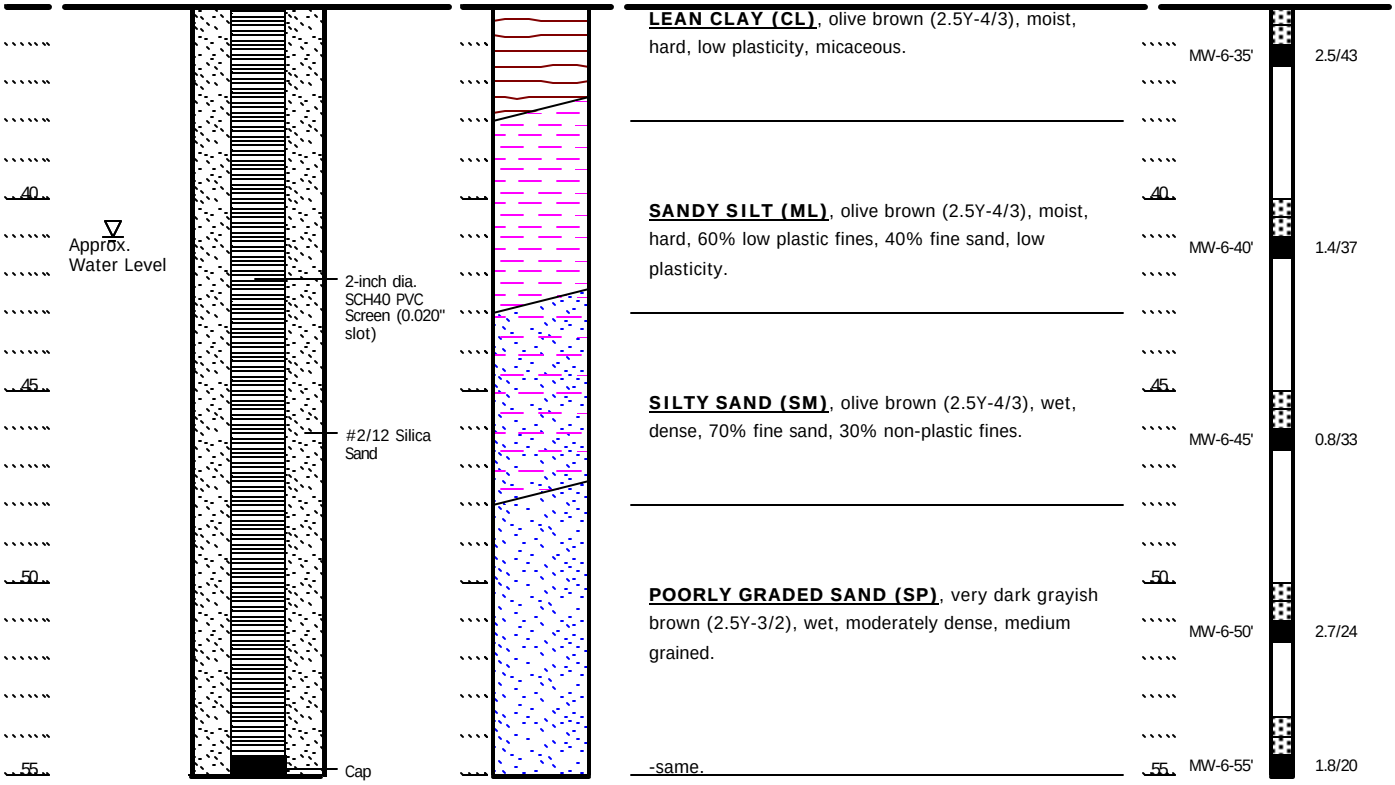
Date well drilled: 5/6/04

LFR Field Staff: Charlotte Berghoffer/Sonia Cisneros

Approved by:

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-6

WELL CONSTRUCTION	LITHOLOGY	SAMPLING DATA



Bottom of boring at 55 feet bgs.
Bottom of well at 55 feet bgs.

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date well drilled: 5/6/04
LFR Field Staff: Charlotte Berghoffer/Sonia Cisneros
Approved by:

WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-6 (CONTINUED)

APPENDIX G

Field Data Sheets and CPT Report

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-01

Page 1 of 3

Project Name: CRG Properties

Date: 12/18/06

Project Location: Long Beach, CA

Day: (M) T W Th F S S

Site Conditions/Weather: Clear, cool

LFR Staff: DPB/JJO

Comments: Needs well cap, although may not fit due to proximity to lid. No bolts

SAMPLING METHOD

- [ ] Centrifugal Pump
- [x] Submersible Pump
- [ ] Hand Bail
- [ ] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW 3

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested: See COC

Number and Types of Bottle Used: 6 VOA, 4 plastic

Method of shipment: Sun Star (lab name)

- [ ] Courier
- [x] Hand Deliver

Well Number: MW 3

Depth of Water: 47.77

Well Depth: 85.60

Height of Water Column: 37.83

Volume in Well: (gallons) 24.58

3 Well Volumes: (gallons) 73.74

Well Diameter:

- [ ] 2" (0.16 gallon / feet)
- [x] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 30.26/55.34

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
07:30		0		58.1	6.88	8.69		clear, no odor, no sheen
07:35		25		51.4	6.89	~~7.54~~ 6.61 DPB		" " " " "
07:40		50		51.7	6.88	6.67		" " " " "
07:48		75		51.9	6.88	6.71		" " " " "
						~~6.55~~ DPB		

Inlet Depth: _____

Reviewed by: _____ Signed: _____ Date: _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002 - 10231-01

Project Name: CLG Properties

Project Location: Long Beach

Site Conditions/Weather: clear, cool

Page 2 of 3

Date: 12/18/06

Day: M T W Th F S S

LFR Staff: DEB / JJO

Comments :

SAMPLING METHOD

- [ ] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Hand Bail
- [x] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW 5

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested: See C.O.C.

Number and Types of Bottle Used: 6 VOA, 4 plastic

Method of shipment: SunStar (lab name)

- [ ] Courier
- [x] Hand Deliver

Well Number: MW 5

Depth of Water: 32.14

Well Depth: 55.55

Height of Water Column: 23.41

Volume in Well: (gallons) 3.75

3 Well Volumes: (gallons) 11.24

Well Diameter:

- [x] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 18.73 / 36.82

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0905		0		63.0	7.21	2.47		rusty, no odor, no sheen
0912		4		60.9	7.19	2.35		rusty
0918		8		62.6	7.18	2.19		
0920		12		62.4	7.20	2.18		clear, no odor, no sheen

Inlet Depth: _____

Reviewed by: _____ Signed: _____ Date: _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002 · 10231 · 01

Project Name: CRG Properties

Project Location: Long Beach, CA

Site Conditions/Weather: Clear, cool

Page 3 of 3

Date: 12/18/06

Day: (M) T W Th F S S

LFR Staff: DAB / JJO

Comments :

SAMPLING METHOD

- [ ] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Hand Bail
- [x] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: _____

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested: See C.O.C.

Number and Types of Bottle Used: 6 VOA, 1 plastic

Method of shipment: SunStar (lab name)

- [ ] Courier
- [x] Hand Deliver

Well Number: MW6

Depth of Water: 28.43

Well Depth: 54.85'

Height of Water Column: 26.42

Volume in Well: (gallons) 4.22

3 Well Volumes: (gallons) 12.68

Well Diameter:

- [x] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area	
Height of water column =	
Depth to water =	
80% DTW	21.14 / 33.71'

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0950	28	0		66.2	7.13	3.94		clear, no odor, no sheen
1000		4		67.9	7.02	4.75		" " " " "
1010		8		69.2	6.97	4.90		" " " " "
1020		12		66.7	6.98	4.72		" " " " "

Inlet Depth: _____

Reviewed by: _____ Signed: _____ Date: _____

Water-Level Measurements

LFR LEVINE•FRICKE

Project Number: 002-10231-01

Project Name: CRG Properties

Project Location: Long Beach

Site Conditions/Weather: clear, cool

Comments :

Page 1 of 1

Date: 12/18/06

Day: (M) T W Th F S S

LFR Staff: DPB / JJO

Well Number	Time	Depth Measurements (feet below measuring point)			Product Thickness (feet)	Comments (Elevation, Condition Of Well Box, Etc.)
		Casing Depth	Depth to Product	Depth to Water		
MW3	0720	85.60	~~nd~~ 0	47.77	0	Needs cap, bolts
after bail	0750	"	0	49.13	0	
MW5	0900	55.55	0	32.14	0	
after bail	0930	"	0	35.29	0	
MW6	0945	54.85	0	28.43	0	
after bail	1030	"	0	31.68	0	

Reviewed by: _____ Signed: _____ Date: _____

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	[illegible]		[illegible]	010339

5. Generator's Name and Mailing Address

[illegible]
[illegible]
[illegible], CA [illegible]

Generator's Site Address (if different than mailing address)

3701 Pacific Place
Long Beach, CA [illegible]

Generator's Phone: [illegible]

6. Transporter 1 Company Name: [illegible]

U.S. EPA ID Number: CAR000146330

7. Transporter 2 Company Name:

U.S. EPA ID Number:

8. Designated Facility Name and Site Address

Crosby & Overton
2810 W. 11th Street
Long Beach, CA 90813

U.S. EPA ID Number: CAD078400018

Facility's Phone: 562-432-5445

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non-Hazardous waste liquid	2	[illegible]	110	G	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

Where appropriate PPE when handling. Weights or volumes are approximate
Pm#27001 21 Profile #27578

2 drums

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: [illegible] Shannon | Signature | Month: 1 | Day: 5 | Year: 07

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ron Briggs | Signature | Month: 1 | Day: 5 | Year: 07

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

H-135

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Tarred Chatterjee | Signature: Tarred Chatterjee | Month: 01 | Day: 08 | Year: 07

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 002-10231-00 Page 1 of 1

Project Name: CRG PROPERTIES Date: 11/19/03

Project Location: LONG BEACH, CA GOLF CEMENTING CONTRACTOR Day: M T (W) Th F S S

Site Conditions/Weather: CLEAR SKY, DRY, COOL LFR Staff: ROC

Job Description: SITE TONING

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
GOLDACH	DW	0620	0730	TONE 9 W LOCATIONS

EQUIPMENT NOTES FOR CB

Owner	Item	Comments
	- CHRISTINE B. WILL BE COMING ALONG W THE BACK GATE @ RIG OFFICE	
	- SPRINKLERS WILL BE FLAGGED	
	- ACCESS TO SITE MUST UTILIZE ACCESS ROAD	

VISITORS	Comments

Time	Activities
0530	LEAVE OFFICE FOR SITE
0600	ARRIVE @ SITE.
0620	MEET GOLDACH
0630-0730	MARK LOCATIONS, WITH # AND PINK FLAG. LOCATION @ FURTHEST NORTHERN LOCATION IS NOT FULLY STRAIGHT CAPABLE TO DRILL. ITS FENCED IN, NO ACCESS, ON A HILL.
07:30-8:30	MEASURE LOCATIONS WITH WHEEL, MARK STAKES WITH ASSOCIATING #'S.
0-830	LEAVE SITE
09:00	RETURN TO OFFICE, PUT EQUIPMENT BACK.

continue on reverse as needed

Reviewed by: _____ Signed: _____ Date: _____

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 002-10231-00 /002 **Page** 1 of 1

Project Name: CRG PROPERTIES **Date:** 11-20-03

Project Location: LONG BEACH **Day:** M T W (Th) F S S

Site Conditions/Weather: NIGHT **LFR Staff:** CLB

Job Description: SOIL BORINGS

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
BC2	MIKE	1000	0545	
	RUDY	1000	0545	
	JUAN	1130	0545	

EQUIPMENT

Owner	Item	Comments

VISITORS	Commenta

Time	Activities
0730	Left for site. Stopped by office for paperwork, equipment
0900	Arrived site. Tailgate onsite. Drove site with groundskeeper & checked locations. Chris Mardi Arrive site, Begg driving arrive site
1130	Juan arrives site. (Driller for Rx.) Will set up over B-2; see log for details
0200	Moved to B3; see log for details
0335	Moved to B5; see log for details
0545	Offsite w/ drillers

continue on reverse as needed

Reviewed by: _____ **Signed:** _____ **Date:** _____

Tim Chris 925 949 5775

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 052-10231-00/002

Page 1 of 1

Project Name: CRG PROPERTIES

Date: 11-21-03/11-22-03

Project Location: LONG BEACH CA

Day: M T W Th F S S

Site Conditions/Weather: COLD

LFR Staff: CAB

Job Description: SOIL BORINGS

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
BC²	Juan	2000		
	Rudy	2000		
	Mike	2000		

EQUIPMENT

Owner	Item	Comments

VISITORS	Comments

Time	Activities
2000	Arrive site w/ BC². Will drill B1 - see log for details
2215	Moving to B7 - see log for details
0030	Set up over B6 - see log for details
0140	Set up over B4 - see log for details
0345	Offsite w/ drillers.

continue on reverse as needed

Reviewed by: _____ Signed: _____ Date: _____

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T301254

Client: LFR

Address: 3150 BRISTOL ST 250 COSTA MESA CA 92626

Phone: 714-444-0111 Fax: 714-444-0117

Project Manager: DENNIS WILLD

Date: 11-21-03 Page: 1 Of 2

Project Name: 002-10231-00 / 002 ← CLG PROPERTIES

Collector: CLD Client Project #:

Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260 B	EPA 8270	EPA 418.1	EPA 8015M (gasoline) - C6	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA 8082 PCBs	EPA 6010 MOTALS	EPA 8015M CAMPBELL CHAIN	Laboratory ID #	* HOLD *	Comments	Total # of containers
B2-5	11-21-03	0035	SOIL														01	X		1
B2-10	11-21-03	0040															02	X		
B2-15	11-21-03	0045															03	X		
B2-20	11-21-03	0055															04	X		
B2-25	11-21-03	0100															05	X		
B2-30	11-21-03	0105					[redacted]			[redacted]							06	X		
B2-35	11-21-03	0110															07	X		
B2-40	11-21-03	0115															08	X		
B2-45	11-21-03	0120															09	X		↓
B2-50	11-21-03	0125		5035			X	X		[redacted]				X	X	X	10			3
B3-5		0225															11	X		1
B3-10		0227					[redacted]			[redacted]							12	X		
B3-15		0230															13	X		
B3-20		0235															14	X		
B3-25	↓	0240	↓														15	X		↓

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
[signature]	11-21-03 / 1550	[signature]	11/21 03 1550
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 17

Chain of Custody seals Y/N/NA: (NA)

Seals intact? Y/N/NA: (NA)

Received good condition/cold: 3°c

Turn around time: STD

Notes

Sample disposal Instructions Disposal @ $2.00 each ___ Return to client ___ Pickup ___

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T 301254

Client: LFR
Address: 3150 Bristol ST 250 Costa Mesa CA 92626
Phone: 714-444-0111 Fax: 714-444-0117
Project Manager: Derrick Wilkes

Date: 11-21-03 Page: 2 of 2
Project Name: 007-10231-00/007 CRG PROPERTIES
Collector: CAB Client Project #:
Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260	EPA 8270	EPA 418.1	EPA 8015M (carbon chain)	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA Lead Metals	Soil Lead	Laboratory ID #	Preservative # HOLD *	Comments	Total # of containers
B3-30	11-21-03	0850	Soil													16	X		1
B3-35		0855														17	X		
B3-40		0905														18	X		
B3-45		0910														19	X		
B3-50		0915		6035			X	X		X				X	X	20			3
B5-5		0955														21	X		1
B5-10		0400														22	X		
B5-15		0402					■			■						23	X		
B5-20		0405														24	X		
B5-25		0410														25	X		
B5-30		0415														26	X		
B5-35		0420														27	X		
B5-40		0430														28	X		
B5-45		0435					■			■						29	X		
B5-50	↓	0440	↓	6035			X	X		X				X	X	30			3

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	11-21-03 1550		11-21-03 1550
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 19
Chain of Custody seals Y/N/NA: N
Seals intact? Y/N/NA: N
Received good condition/cold: 3°

Turn around time: STD

Notes

Sample disposal Instructions. Disposal @ $2.00 each ___ Return to client ___ Pickup ___

Joint

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T30 1260

Client: LFR
Address: 3160 Bristol St 250 Costa Mesa CA 92626
Phone: 714-444-0111 Fax: 714-444-0117
Project Manager: Derrick Willis

Date: 11-22-03 Page: 1 Of 3
Project Name: CRB Properties
Collector: CLB Client Project #: 002-10731-01 / 002
Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260B	EPA 8270	EPA 418.1	EPA 8015M (CA LUFT CHAIN)	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA 6010 METALS	EPA 8260 PLUS	HOLD	Laboratory ID #	Preservative	Comments	Total # of containers
B2-50	11-21-03	0925	SOIL				X	X		X				X	X					1
B3-50		0305					X	X		X				X	X					1
B5-50		0940		[redacted]			X	X		X				X	X					1
B1-5	11-24-03	2040														X				
B1-10		2042														X				
B1-15		2045														X				
B1-20		2050														X				
B1-25		2055														X				
B1-30		2100														X				
B1-35	[redacted]	2105					[redacted]			[redacted]						X				
B1-40		2110														X				
B1-45		2115														X				
B1-50		2120		500X			X	X		X				X	X			3		1
B7-5		2145														X		1		1
B7-10		2150														X		1		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	11-24-03 / 0925		11-24-03 9:25
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 11°C

Turn around time: STD

Notes

Sample disposal instructions Disposal @ $2 00 each ___ Return to client ___ Pickup ___

[redacted] Analytical

SUN STAR T301260

[redacted]

CHAIN OF CUSTODY FORM

Client Name/Address:	P.O. #: 002-10231-00/002
LPC 3150 BRISTOL ST 250 COSTA MESA CA 92627	Project: CMC PROPERTIES
Project Manager/Phone Number: DERRICK WILLS	**Phone Number:** 714-444-0141
Sampler: CLB	**Fax Number:** 714-444-0117

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation TIME	8260B	8270D	Carbon Chain 8015M	LUFT Metals 6010	8082 PCBs		HOLD			Special Instructions
B7 - 15	Soil		1	11-21-03	2255							X			
B7 - 20					2300							X			
B7 - 25					2305							X			
B7 - 30					2315							X			
B7 - 35					2320	[redacted]		[redacted]				X			
B7 - 40					2330							X			
B7 - 45					2340							X			
B7 - 50			4		2350	X	X	X	X	X					
B6 - 5			1	11-22-03	0045							X			
B6 - 10					0048							X			
B6 - 15					0050							X			
B6 - 20					0055							X			
B6 - 25					0057							X			
B6 - 30					0100	[redacted]		[redacted]				X			
B6 - 35					0105							X			

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	11-24-03 0925	[signature]	11-24-03 9:15
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal X
Sample Integrity: (Check)
Intact _____ On Ice: _____

[redacted]

SUNSTAR (T301260)

Pg 3 of 3

CHAIN OF CUSTODY FORM

Client Name/Address:	P.O. #: 002-10231/00/002
LFR 3150 Bristol St 260 Costa Mesa CA 92626	Project: CRG Properties
Project Manager/Phone Number:	**Phone Number:**
Derrick Wood	714-444-014
Sampler:	**Fax Number:**
CLB	714-444-0157

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	~~Preservation~~ TIME	8260 B	8270	CAM 17 8015M	6010 METALS	8082 PCBs	HOLD	Special Instructions
B6 - 40	Soil		1	11-22-03	0110						X	
B6 - 45	↑		1	↑	0115						X	
B6 - 60	↑	5035	4	↑	0120	X	X	X	X	X		
B4 - 5	↑	↑	1	↑	↑						X	
B4 - 10	↑	↑	↑	↑	↑	[redacted]		[redacted]			X	
B4 - 15	↑	↑	↑	↑	↑						X	
B4 - 20	↑	↑	↑	↑	↑						X	
B4 - 25	↑	↑	↑	↑	↑						X	
B4 - 30	↑	↑	↑	↑	↑						X	
B4 - 35	↑	↑	↑	↑	↑						X	
B4 - 40	↑	↑	↑	↑	↑						X	
B4 - 45	↑	↑	↓	↑	↑						X	
B4 - 50	↓	5035	4	↓	↑	X	X	X	X	X		

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	11-24-03/0925	[signature]	11-24-03 0925
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal X
Sample Integrity: (Check)
Intact _____ On Ice:

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 002-10231-00.003 Page 1 of

Project Name: CRB Properties Date: 5/6/04

Project Location: LB Golf Learning Ctr. Day: M T W (Th) F S S

Site Conditions/Weather: no adverse LFR Staff: CKB SCO

Job Description: well installation

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
LFR	Sonia, Charlotte	0545		
BC	Mike, Diego, Daniel	0700		
Goldak		0600	0630	

EQUIPMENT

Owner	Item	Comments
Equip Co	W. level meter, D.I.D	

VISITORS	Comments

Time	Activities
0545 ~~0600~~	Arrive onsite. Set ups.
0845	Finished drilling first well. Now pouring sand and grout.
1005	Mobilization to next location.
1015	Began drilling.
1130	Installing well.
1230	Well installation & monument complete. Cleaning up.
1315	Offsite

continue on reverse as needed

Reviewed by: Signed: Date:

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 062-10231-4 Page 1 of 1

Project Name: CRB Properties Date: 5/11/04

Project Location: Long Beach Day: M T W Th F S S

Site Conditions/Weather: no odor LFR Staff: CRB SCD

Comments: well development - Surge w/ block for 15 min.

SAMPLING METHOD

- ☐ Centrifugal Pump
- ☐ Submersible Pump
- ☐ Hand Bail
- ☐ Disposable Bailer
- ☐ Teflon Bailer
- ☑ Metal bailer (other)

Sample Number: N/A

- ☐ FB:
- ☐ DUP:

Analysis Requested: N/A

Number and Types of Bottle Used:

Method of shipment: N/A (lab name)

- ☐ Courier
- ☐ Hand Deliver

Well Number: MW-6

Depth of Water: 35.84

Well Depth: 55.0

Height of Water Column: 19.16

Volume in Well: (gallons) 3.1

3 Well Volumes: (gallons) 9.2

Well Diameter:

- ☒ 2" (0.16 gallon / feet)
- ☐ 4" (0.65 gallon/ feet)
- ☐ 5" (1.02 gallon/ feet)
- ☐ 6" (1.47 gallon/ feet)

Calculation Area	
Height of water column =	19.16
Depth to water =	35.84
80% DTW	

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °C	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
1114	35.84	10		22.8	5.20	6.61	999	
1130		20 15		22.5	5.24	6.23	272	
1147		~~30~~ 20		22.1	5.31	6.12	248	
1205		~~40~~ 25		22.2	5.35	6.21	79	
1215		30		~~22.2~~	5.38	~~6.14~~	180	
1221		40		22.1	5.38	6.35	250	
1230		50		22.0	5.40	6.32	260	
1235	35.92	55		21.5	5.36	6.32	254	

Inlet Depth:

Reviewed by: Signed: Date:

Daily Field Report

LFR LEVINE • FRICKE

Project Number: 002-10231-00 **Page** 1 of 1

Project Name: CRG Properties **Date:** 5/11/04

Project Location: Long Beach **Day:** M T W Th F S S

Site Conditions/Weather: no adverse **LFR Staff:** CXB SCO

Job Description: well development

WORK FORCE

Company Name	Staff Name	Onsite From	Onsite To	Comments
LFR	Charlotte, Sonia	0645	1300	
J&H	Robert	0700	1310	

EQUIPMENT

Owner	Item	Comments
Equipco	U-10	

VISITORS	Comments

Time	Activities
0648	Arrive onsite. Set up.
0700	J&H on site. Setup.
0915	Take break.
0930	Back to work. Continue purging.
1020	Finish developing MW-5. Never cleared up totally after approx. 10 well volumes. Mobilize to mw-6.
1055	Begin purging MW-6.
1110	Finish purging. Setup & begin purging
1240	Finished purging MW-6. Cleaning up.
1300	offsite

continue on reverse as needed

Reviewed by: _____ **Signed:** _____ **Date:** _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 022-10231-00 Page 1 of 1

Project Name: CRG Properties Date: 5/11/04

Project Location: Long Beach Day: M (T) W Th F S S

Site Conditions/Weather: no advise LFR Staff: CKD SCD

Comments: well development. Surge well for 15 min. Use metal bailer - no pump.

SAMPLING METHOD

- ☐ Centrifugal Pump
- ☐ Submersible Pump
- ☐ Hand Bail
- ☐ Dispossble Bailer
- ☐ Teflon Bailer
- ☒ metal bailer (3.5 gal per bailer) (other)

Sample Number: NA

- ☐ FB:
- ☐ DUP:

Anslysis Requested

NA

Number and Types of Bottle Used

Method of shipment

N/A (lab name)

- ☐ Courier
- ☐ Hand Deliver

Well Number: MW-5

Depth of Water: ~~Surface~~

Well Depth: 55.0

Height of Water Column: 55.0

Volume In Well: (gallons) 8.8

3 Well Volumes: (gallons) 26.4

Well Diameter:

- ☒ 2" (0.16 gallon / feet)
- ☐ 4" (0.65 gallon/ feet)
- ☐ 5" (1.02 gallon/ feet)
- ☐ 6" (1.47 gallon/ feet)

Calculation Area

Height of water column =

Depth to water =

80% DTW

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F °C	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0740	0.0	0		~~21.~~				Silty. don't collect reading.
0754		10.0		21.6	5.27	2.15	108	
0803		15.0		21.2	5.32	~~1.62~~ 2.01	108	
0814		20.0		21.1	5.36	2.09	108	
0827		~~20~~ 25.0		21.6	5.37	2.05	~10	
0846		450.0		21.5	5.39	2.10	~~999~~ 10	
0906		50.0		21.5	5.39	2.08	999	
0938		60.0		21.6	5.44	2.02	88	
1006		75.0		21.8	5.44	2.00	87	
1043	36.8	90.0		21.5	5.~~40~~	1.99	87	have purged 9 well volumes. Not getting any clearer.

Inlet Depth: N/A

Reviewed by: Signed: Date:

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-00 Page 1 of 3

Project Name: CRG Properties Date: 05/19/04

Project Location: Long Beach, CA Day: M T (W) Th F S S

Site Conditions/Weather: Clear LFR Staff: JZG

Comments: Needs well cap although may not fit due to proximity to well.

SAMPLING METHOD

- [X] Centrifugal Pump
- [ ] Submersible Pump
- [X] Hand Bail
- [X] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW-3-051904

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested

See C.O.C.

Number and Types of Bottle Used

6 VOA
2 1-Liter Amber
1 Plastic

Method of shipment

Sunstar (lab name)

- [ ] Courier
- [X] Hand Deliver

Well Number: MW-3
Depth of Water: 55.64
Well Depth: 77.60
Height of Water Column: 21.96
Volume in Well: (gallons) 14.3
3 Well Volumes: (gallons) 42.9

Well Diameter:

- [ ] 2" (0.16 gallon / feet)
- [X] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area

Height of water column =
Depth to water =

80% DTW 60.03

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
7:40		0		23.2	6.63	14.6	12	
		15		23.4	6.75	14.0	24	
		30		23.1	6.79	14.2	11	
		45		23.1	6.70	14.6	3	
8:20	56.56	Sample						

Inlet Depth: 72.6

Reviewed by: _____ Signed: _____ Date: _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-00

Page 1 of 3

Project Name: CRG Properties

Date: 05/19/04

Project Location: Long Beach, CA

Day: M T (W) Th F S S

Site Conditions/Weather: Clear

LFR Staff: JZG

Comments : None

SAMPLING METHOD

- [X] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Hand Bail
- [X] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW-5-051904

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested

See C.O.C

Number and Types of Bottle Used

6 - VOA
2 - 1-liter Amber
1 - Plastic

Method of shipment: ~~Del Mar~~ Sunstar (lab name)

- [ ] Courier
- [X] Hand Deliver

Well Number: MW-5
Depth of Water: 36.79
Well Depth: 55.00
Height of Water Column: 18.21
Volume in Well: (gallons) 3
3 Well Volumes: (gallons) 9

Well Diameter:

- [X] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 40.43

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
9:41		0		26.3	7.47	2.3	53	
		3		25.6	7.47	1.8	17	
		6		22.4	7.46	2.0	6	
		9		22.3	7.47	2.0	4	
10:00	38.46	Sample						

Inlet Depth: Not 50.'

Reviewed by: _____ Signed: _____ Date: _____

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-K0231-00 Page 3 of 3

Project Name: CRG Properties Date: 05/19/04

Project Location: Long Beach, CA Day: M T W Th F S S

Site Conditions/Weather: Clear LFR Staff: JZG

Comments : None

SAMPLING METHOD

- [X] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Hand Bail
- [X] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW-6-051904

- [ ] FB: _____
- [ ] DUP: _____

Analysis Requested: See C.O.C

Number and Types of Bottle Used: 6 - VOA; 2 - 1-Liter Amber; 1 - Plastic

Method of shipment: SunStar (lab name)

- [ ] Courier
- [X] Hand Deliver

Well Number: MW-6

Depth of Water: 35.96

Well Depth: 55.00

Height of Water Column: 19.04

Volume in Well: (gallons) 3

3 Well Volumes: (gallons) 9

Well Diameter:

- [X] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 39.77

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °F	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
10:51		0		27.0	7.21	6.5	99	
		3		24.3	7.18	6.7	80	
		6		23.6	7.16	6.7	41	
		9		23.5	7.17	6.7	32	
11:10	37.02	Sample						

Inlet Depth: 50

Reviewed by: _____ Signed: _____ Date: _____

CHAIN OF CUSTODY - ANALYSES REQUEST FORM

Project No.: 002-10231-(X)	**Date:** 05/19/04
Project Name: CRG Acquisitions	**Project Location:** Long Beach, CA
Sampler (Signature):	**Samplers:** JZG

Serial No.: Nº 02- 11821

Item No.	SAMPLE ID (Example: Sample type - Location - Sample depth (if applicable) - Date; MW - 01 - - 010100; SB - 01 - 05 - 010100)	Sample Type	No. of Containers	Lab Sample No.	Date Sampled	Time	ANALYSES: TPHcc 8015M	VOC 8260	SVOC 8270	PCB's 8082	Metals 6010/7000	Turnaround Time: Standard	Expedited:	HOLD	REMARKS
1	MW-3-051904	Groundwater	9		5/19/04	08:20	X	X	X	X	X		X			Report +
2	MW-5-051904	↓	↓		↑	10:00	↓	↓	↓	↓	↓		↓			Invoice to
3	MW-6-051904	↓	↓		↓	11:10	↓	↓	↓	↓	↓		↓			Derrick Wills
4																
5																
6																
7																
8																
9																
10																

Received By: (Signature)	Date: 5/19/04	Time: 4:20pm	Received By: (Signature)	Date: 5/20/04	Time: 14:00
Received By: (Signature)	Date:	Time:	Received By: (Signature)	Date:	Time:
Received By: (Signature)	Date:	Time:	Received By: (Signature)	Date:	Time:
Method of Shipment:			Lab Comments:		

Sample Collector:

LFR LEVINE • FRICKE
3150 Bristol Street, Suite 250
Costa Mesa, California 92626
(714) 444-0111 • fax (714) 444-0117
www.LFR.com

LAB REPORT No.

Analytical Laboratory:

CITY OF LONG BEACH

DEPARTMENT OF HEALTH & HUMAN SERVICES

2525 Grand Avenue Long Beach, CA 90815-1765 (562) 570-4134 FAX (562) 570-4038

WELL PERMIT

Permit # 0991

Date: May 5, 2004

All work must be completed in accordance with Water Well Bulletin 74-81 and 74-90

Site Address:	3701 Pacific Place
Owner:	CRG Properties, Inc.
Owner Address:	Santa Ana, Ca
Consulting Firm:	LFR
Consulting Firm Address:	3150 Bristol St. Ste 250
Drilling Company:	BC2 Environmental
Drilling Company Address:	1835 E. Dawn Way Ste. B
Method of Construction/Destruction:	see attached
Number of Wells/Borings:	2 constructions

This permit valid for one year from date above

Steven Nakauchi, REHS IV
Cross-Connection/Water Program

CITY OF LONG BEACH

DEPARTMENT OF HEALTH & HUMAN SERVICES

2525 Grand Avenue Long Beach, CA 90815-1765 (562) 570-4134 FAX (562) 570-4038

0991

APPLICATION FOR WELL PERMIT

Date: 5/ 3/04

Type of Permit: (check)

☒ New Well Construction
☐ Destruction

Type of Well: (check)

☒ Monitoring (2)
☐ Cathodic
☐ Private Domestic
☐ Public Domestic
☐ Irrigation
☐ Soil Boring
☐ Vapor Extraction
☐ Other

Well Owner Name: CRA Properties, Inc.
Address: 4010 Chandler Ave.
City: Santa Ana, CA
Phone: 714-460-1031

Site Address 3701 Pacific Place
Site Map ☒ Site plan attached

Consulting Firm: LFR
Address: 3150 Bristol St. Ste. 250
City: Costa Mesa, CA
Phone: 714-444-0111

Drilling Company: BC² Environmental
Address: 1835 E. Dawn Way Ste. B
City: Fullerton, CA
Phone: 714 449-2990

Construction/Destruction Method
Type of casing, method of sealing, etc.
(Use additional sheet or attachments)

2" schedule 40 PVC casing, 0.020" slot screen, 25' screen, #2/12 silica sand extends 3' above slotted casing, hydrated bentonite chips 3' above sand pack, grout to surface, locking well monument, concrete.

Proposed Start Date:

5/6/04

To be done in accordance with Water Well Bulletin 74-81 & 74-90

I hereby agree to comply in every respect will all regulations of the Long Beach Department of Health and Human Services and with all ordinances and laws of the City of Long Beach and of the State of California pertaining to well construction, reconstruction and destruction. Upon completion of well and within ten days thereafter, I will furnish the Long Beach Department of Health and Human Services with a complete log of the well, giving date drilled, depth of well, all perforations in casing, and any other data deemed necessary by other City agencies.

Applicants Signature: Charlotte A Bushoffer
Print Name: Charlotte A Bushoffer

Disposition of Application: (For Office Use Only)

☒ Approved with Conditions
☐ Denied

Date: 5-5-04

If denied or approved with conditions, report reason or conditions here:

Approved By

PRESENTATION OF CONE PENETRATION TEST DATA

LONG BEACH GOLF LEARNING CENTER

LONG BEACH, CALIFORNIA

Prepared for:

LFR
Costa Mesa, California

Prepared by:

GREGG IN SITU, INC.
Signal Hill, California
03-312sh

Prepared on:

November 24, 2003

TABLE OF CONTENTS

1.0 INTRODUCTION

2.0 FIELD EQUIPMENT & PROCEDURES

3.0 CONE PENETRATION TEST DATA & INTERPRETATION

3.1 CPT PLOTS
3.2 INTERPRETED OUTPUT
3.3 PORE PRESSURE DISSIPATION PLOTS

APPENDIX

- Figure 1 Piezocone Figure
- Figure 2 PPDT Correlation Figure
- Figure 3 Soil Classification Chart
- References

ATTACHMENTS

- Interpretation Method
- Computer Diskette with ASCII Files

PRESENTATION OF CONE PENETRATION TEST DATA

1.0 INTRODUCTION

This report presents the results of a Cone Penetration Testing (CPT) program carried out at the Long Beach Golf Learning Center site located in Long Beach, CA. The work was performed on November 20th, 2003. The scope of work was performed as directed by LFR personnel.

2.0 FIELD EQUIPMENT & PROCEDURES

The Cone Penetration Tests (CPT) were carried out by GREGG IN SITU, INC. of Signal Hill, CA using an integrated electronic cone system. The CPT soundings were performed in accordance with ASTM standards (D 5778-95). A 20 ton capacity cone was used for all of the soundings (figure 1). This cone has a tip area of 15 cm^2 and friction sleeve area of 225 cm^2. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85.

The cones used during the program recorded the following parameters at 5 cm depth intervals:

- Tip Resistance (qc)
- Sleeve Friction (fs)
- Dynamic Pore Pressure (U)

The above parameters were printed simultaneously on a printer and stored on a computer diskette for future analysis and reference.

The pore water pressure element was located directly behind the cone tip. The pore water pressure element was 5.0 mm thick and consisted of porous plastic. Each of the elements were saturated in silicon oil under vacuum pressure prior to penetration. Pore pressure dissipations were recorded at 5 second intervals when appropriate during pauses in the penetration.

A complete set of baseline readings was taken prior to each sounding to determine temperature shifts and any zero load offsets. Monitoring base line readings ensures that the cone electronics are operating properly.

The cones were pushed using GREGG IN SITU's CPT rig, having a down pressure capacity of approximately 20 tons. Two CPT soundings were performed. The penetration tests were carried to depths of approximately 80 feet below ground surface. Test locations and depths were determined in the field by LFR personnel.

The CPT sample holes were grouted using our support rig. The grouting procedure consists of pushing a hollow CPT rod with a "knock out" plug back down the hole to the test hole termination depth. Grout is then pumped under pressure as the tremie pipe is pulled from the hole.

3.0 CONE PENETRATION TEST DATA & INTERPRETATION

The cone penetration test data is presented in graphical form. Penetration depths are referenced to existing ground surface. This data includes CPT logs of measured soil parameters and a computer tabulation of interpreted soil types along with additional geotechnical parameters and pore pressure dissipation data.

The stratigraphic interpretation is based on relationships between cone bearing (qc), sleeve friction (fs), and penetration pore pressure (U). The friction ratio (Rf), which is sleeve friction divided by cone bearing, is a calculated parameter which is used to infer soil behavior type. Generally, cohesive soils (clays) have high friction ratios, low cone bearing and generate large excess pore water pressures. Cohesionless soils (sands) have lower friction ratios, high cone bearing and generate little in the way of excess pore water pressures.

Pore Pressure Dissipation Tests (PPDT's) were taken at various intervals in order to measure hydrostatic water pressures and approximate depth to groundwater table. In addition, the PPDT data can be used to estimate the horizontal permeability (k_h) of the soil. The correlation to permeability is based on the time required for 50 percent of the measured dynamic pore pressure to dissipate (t_{50}). The PPDT correlation figure (figure 2) is provided in the Appendix.

The interpretation of soils encountered on this project was carried out using recent correlations developed by Robertson et al, 1990. It should be noted that it is not always possible to clearly identify a soil type based on qc, fs and U. In these situations, experience and judgement and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type. The soil classification chart (figure 3) used to interpret soil types based on qc and Rf is provided in the Appendix.

Interpreted output requires that depth of water be entered for calculation purposes, where depth to water is unknown an arbitrary depth in excess of 10 feet of the deepest sounding is entered as the groundwater depth.

GREGG IN SITU, INC.
November 24, 2003
03-312sh

LFR
Long Beach Golf Learning Ctr.
Long Beach, Ca.

We hope the information presented is sufficient for your purposes. We recommend that all data be carefully reviewed by qualified personnel to verify the data and make appropriate recommendations. If you have any questions, please do not hesitate to contact our office at (562) 427-6899.

Sincerely,
GREGG IN SITU, INC.

Brian Saveta
Operations Manager

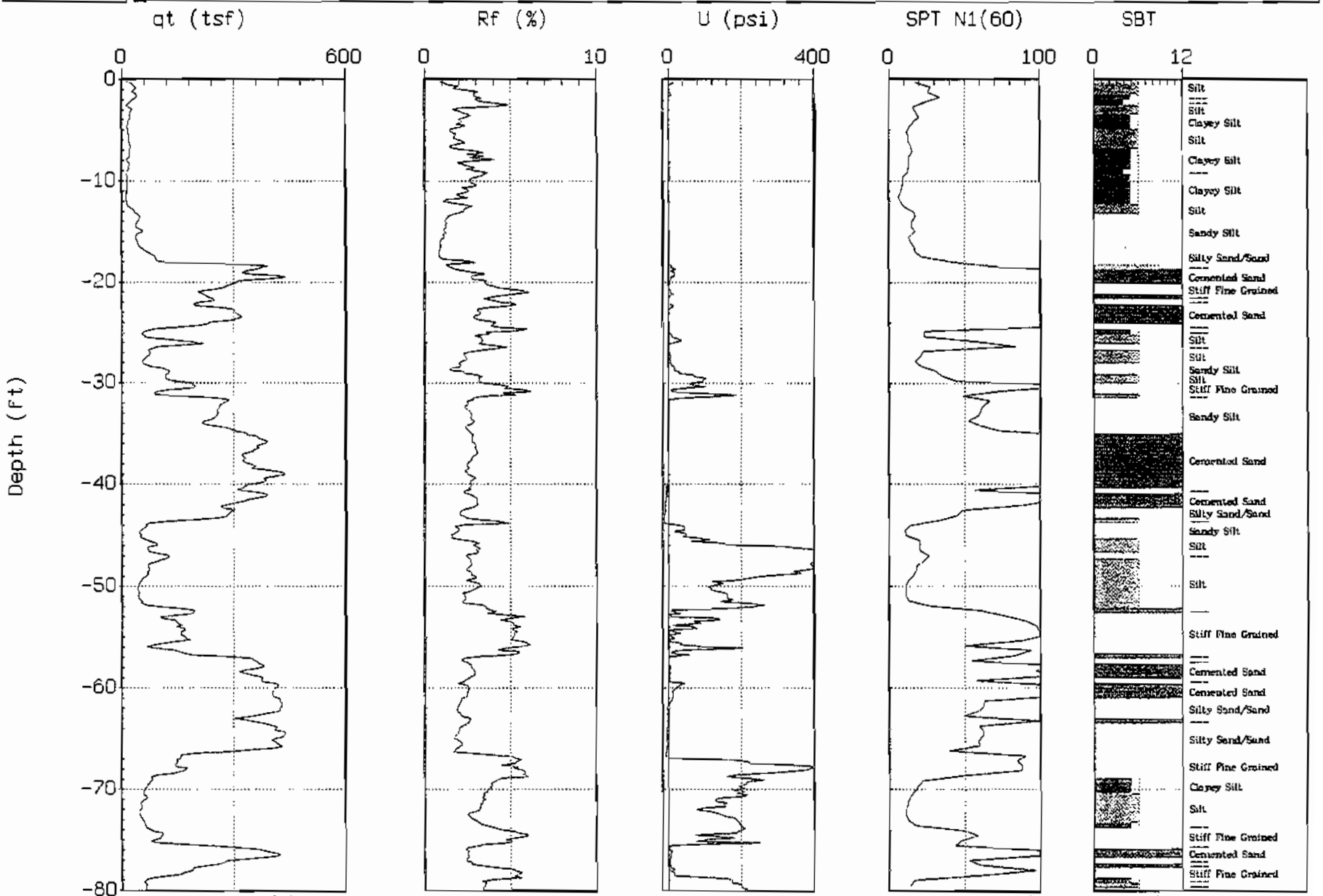
3.1 CPT PLOTS

GREGG

LFR

Site : L.B. GOLF CTR.
Location : CPT-01

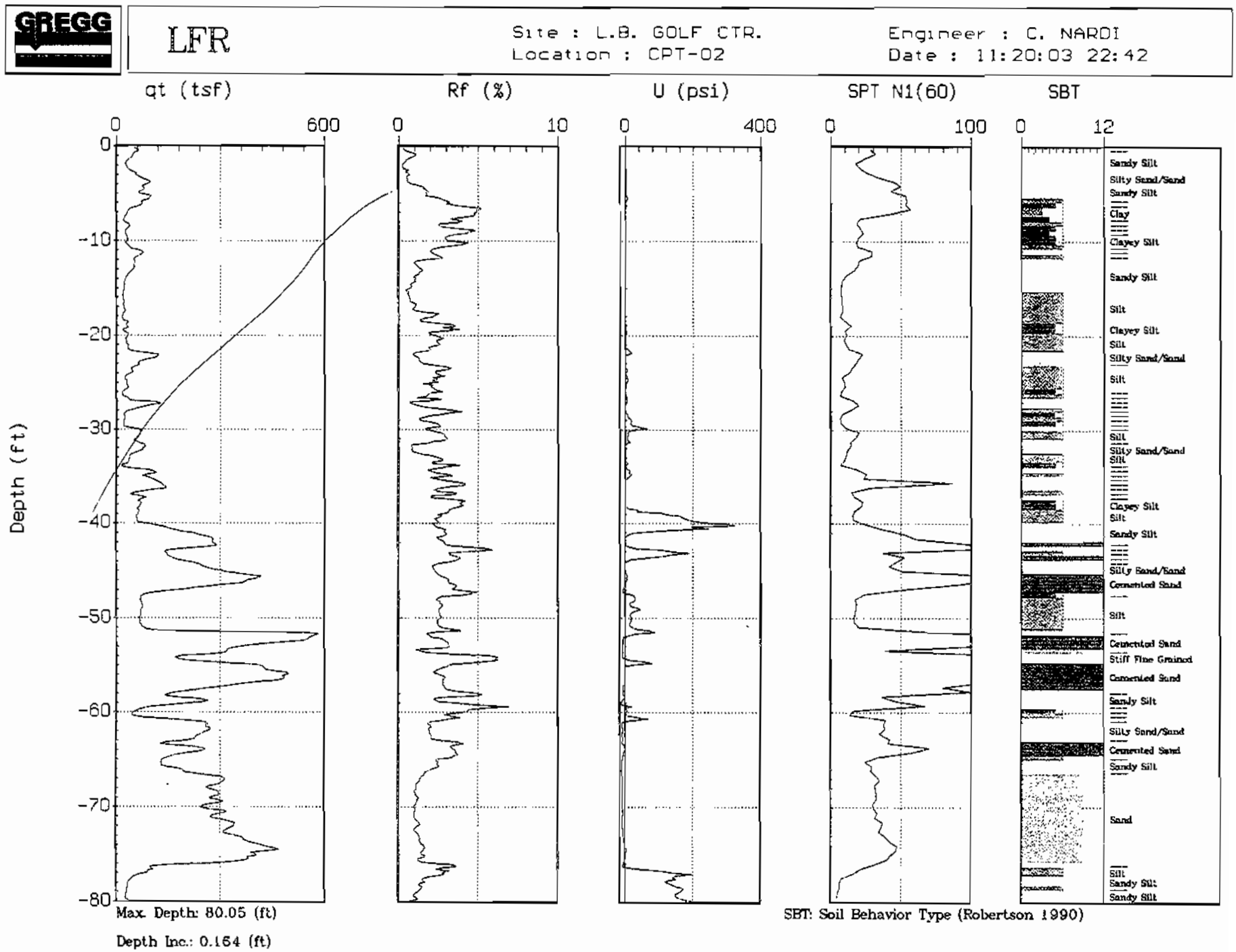
Engineer : C. NARDI
Date : 11:21:03 00:01



Max. Depth: 80.05 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)


GREGG
LFR
Site : L.B. GOLF CTR.
Location : CPT-02
Engineer : C. NARDI
Date : 11:20:03 22:42
qt (tsf)
Rf (%)
U (psi)
SPT N1(60)
SBT
0
600
10
400
100
12
Depth (ft)
-10
-20
-30
-40
-50
-60
-70
-80
Sandy Silt
Silty Sand/Sand
Clay
Clayey Silt
Silt
Cemented Sand
Stiff Fine Grained
Sand
Max. Depth: 80.05 (ft)
Depth Inc.: 0.164 (ft)
SBT: Soil Behavior Type (Robertson 1990)

3.2 INTERPRETED OUTPUT

Interpretation Output - Release 1.00.19e

Run No: 03-1124-0955-1057
Job No: 03-312sh
Client: LFR
Project: CPT SITE INVESTIGATION
Site: L.B. GOLF CTR.
Location: CPT-01
Engineer: C. NARDI
CPT Date: 03/21/11
CPT Time: 00:01
CPT File: 312C01.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): 9.14 (ft): 30.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
0.25	21.9	0.26	1.17	19.0	6	114.6	0.01	0.01	0.00	2.00	8.4	16.8	1.75	0.09
0.74	35.4	0.67	1.90	-3.4	6	114.6	0.04	0.04	0.00	2.00	13.6	27.1	2.83	0.00
1.23	33.7	0.98	2.92	9.7	5	114.6	0.07	0.07	0.00	2.00	16.1	32.2	2.69	0.00
1.72	35.2	1.06	3.01	0.0	5	114.6	0.10	0.10	0.00	2.00	16.8	33.7	2.80	0.00
2.21	18.3	0.72	3.94	-3.3	4	114.6	0.13	0.13	0.00	2.00	11.7	23.4	1.45	0.00
2.71	20.2	0.45	2.23	0.1	6	114.6	0.16	0.16	0.00	2.00	7.7	15.5	1.61	0.09
3.20	23.2	0.52	2.23	-1.5	6	114.6	0.18	0.18	0.00	2.00	8.9	17.8	1.84	0.10
3.61	21.1	0.52	2.47	-0.8	5	114.6	0.21	0.21	0.00	2.00	10.1	20.2	1.67	0.10
4.02	17.7	0.36	2.06	0.3	6	114.6	0.23	0.23	0.00	2.00	6.8	13.5	1.40	0.10
4.51	14.8	0.30	2.03	0.5	5	114.6	0.26	0.26	0.00	1.97	7.1	14.0	1.17	0.09
5.00	16.2	0.24	1.49	0.3	6	114.6	0.29	0.29	0.00	1.87	6.2	11.6	1.27	0.09
5.50	18.4	0.32	1.74	1.4	6	114.6	0.31	0.31	0.00	1.78	7.1	12.6	1.45	0.10
5.99	19.2	0.41	2.12	2.9	6	114.6	0.34	0.34	0.00	1.71	7.4	12.6	1.51	0.10
6.56	22.6	0.38	1.69	0.5	6	114.6	0.38	0.38	0.00	1.63	8.7	14.1	1.78	0.10
7.14	20.5	0.60	2.93	3.5	5	114.6	0.41	0.41	0.00	1.56	9.8	15.4	1.61	0.14
7.63	17.8	0.58	3.28	2.2	5	114.6	0.44	0.44	0.00	1.51	8.5	12.9	1.39	0.20
8.12	18.4	0.41	2.22	7.0	5	114.6	0.47	0.47	0.00	1.47	8.8	12.9	1.43	0.12
8.61	18.7	0.48	2.58	6.9	5	114.6	0.49	0.49	0.00	1.42	9.0	12.8	1.46	0.14
9.10	13.7	0.46	3.38	3.6	4	114.6	0.52	0.52	0.00	1.38	8.8	12.1	1.06	0.15
9.60	14.1	0.41	2.91	7.2	5	114.6	0.55	0.55	0.00	1.35	6.8	9.1	1.08	0.16

Gregg In Situ, Inc.
Run No: 03-1124-0955-1057
CPT File: 312C01.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
10.09	14.4	0.40	2.80	2.1	5	114.6	0.58	0.58	0.00	1.32	6.9	9.1	1.11	0.15
10.58	13.8	0.34	2.49	1.2	5	114.6	0.61	0.61	0.00	1.28	6.6	8.5	1.06	0.14
11.07	12.5	0.28	2.21	0.8	5	114.6	0.63	0.63	0.00	1.26	6.0	7.5	0.95	0.12
11.56	10.7	0.20	1.91	1.4	5	114.6	0.66	0.66	0.00	1.23	5.1	6.3	0.80	0.10
12.06	13.3	0.22	1.66	5.7	5	114.6	0.69	0.69	0.00	1.20	6.4	7.6	1.01	0.12
12.55	23.2	0.57	2.45	4.4	6	114.6	0.72	0.72	0.00	1.18	8.9	10.5	1.80	0.20
13.04	37.3	0.72	1.93	3.6	6	114.6	0.75	0.75	0.00	1.16	14.3	16.5	2.92	0.14
13.53	47.4	0.62	1.31	1.9	7	117.8	0.78	0.78	0.00	1.14	15.1	17.2	UnDef	0.13
14.03	41.4	0.50	1.20	1.3	7	117.8	0.80	0.80	0.00	1.11	13.2	14.7	UnDef	0.11
14.52	42.2	0.49	1.16	1.9	7	117.8	0.83	0.83	0.00	1.10	13.5	14.8	UnDef	0.11
15.01	49.5	0.56	1.13	2.4	7	117.8	0.86	0.86	0.00	1.08	15.8	17.0	UnDef	0.12
15.50	38.0	0.40	1.05	3.9	7	117.8	0.89	0.89	0.00	1.06	12.1	12.8	UnDef	0.11
15.99	42.1	0.38	0.90	2.8	7	117.8	0.92	0.92	0.00	1.04	13.4	14.0	UnDef	0.11
16.49	50.4	0.44	0.88	3.0	7	117.8	0.95	0.95	0.00	1.03	16.1	16.5	UnDef	0.11
16.98	70.5	0.57	0.81	2.8	8	120.9	0.98	0.98	0.00	1.01	16.9	17.1	UnDef	0.14
17.47	89.9	0.82	0.91	2.9	8	120.9	1.01	1.01	0.00	1.00	21.5	21.4	UnDef	0.19
17.96	176.6	3.23	1.83	4.8	8	120.9	1.04	1.04	0.00	0.98	42.3	41.5	UnDef	0.00
18.45	377.6	5.78	1.53	27.8	8	120.9	1.07	1.07	0.00	0.97	90.4	87.5	UnDef	0.00
18.95	333.5	9.63	2.89	29.6	12	120.9	1.10	1.10	0.00	0.95	159.7	152.4	UnDef	0.00
19.44	419.3	11.43	2.73	23.0	12	120.9	1.13	1.13	0.00	0.94	200.8	189.1	UnDef	0.00
19.93	306.7	10.85	3.54	6.8	12	120.9	1.16	1.16	0.00	0.93	146.9	136.5	UnDef	0.00
20.42	270.8	11.72	4.33	3.0	11	130.5	1.19	1.19	0.00	0.92	259.3	237.9	UnDef	0.00
20.92	213.1	12.02	5.64	16.4	11	130.5	1.22	1.22	0.00	0.91	204.1	184.8	UnDef	0.00
21.41	234.0	9.15	3.91	5.1	12	120.9	1.25	1.25	0.00	0.89	112.0	100.2	UnDef	0.00
21.90	215.1	9.84	4.58	0.6	11	130.5	1.28	1.28	0.00	0.88	206.0	181.9	UnDef	0.00
22.39	250.7	9.50	3.79	19.8	12	120.9	1.31	1.31	0.00	0.87	120.0	104.8	UnDef	0.00
22.88	305.0	9.65	3.16	1.2	12	120.9	1.34	1.34	0.00	0.86	146.0	126.0	UnDef	0.00
23.38	316.5	9.18	2.90	-1.0	12	120.9	1.37	1.37	0.00	0.85	151.6	129.4	UnDef	0.00
23.87	252.8	9.59	3.79	1.3	12	120.9	1.40	1.40	0.00	0.84	121.1	102.2	UnDef	0.00
24.36	145.5	6.46	4.44	-4.6	11	130.5	1.43	1.43	0.00	0.84	139.3	116.4	UnDef	0.00
24.85	60.0	2.57	4.28	3.5	5	114.6	1.46	1.46	0.00	0.83	28.7	23.8	4.68	0.00
25.34	72.3	2.28	3.16	35.5	6	114.6	1.49	1.49	0.00	0.82	27.7	22.7	5.66	0.00
25.84	187.0	6.04	3.23	43.4	6	114.6	1.52	1.52	0.00	0.81	71.6	58.1	14.84	0.00
26.33	109.0	4.63	4.25	-4.7	11	130.5	1.55	1.55	0.00	0.80	104.4	83.8	UnDef	0.00
26.82	73.7	1.98	2.68	2.9	6	114.6	1.58	1.58	0.00	0.80	28.2	22.5	5.77	0.44
27.31	68.3	1.60	2.34	10.6	6	114.6	1.61	1.61	0.00	0.79	26.2	20.6	5.33	0.34
27.80	57.1	1.23	2.15	13.1	6	114.6	1.64	1.64	0.00	0.78	21.9	17.1	4.43	0.31
28.30	84.0	1.52	1.81	32.2	7	117.8	1.67	1.67	0.00	0.77	26.8	20.8	UnDef	0.25
28.79	125.4	2.47	1.97	56.2	7	117.8	1.69	1.69	0.00	0.77	40.0	30.8	UnDef	0.41
29.28	118.5	3.69	3.11	185.2	6	114.6	1.72	1.72	0.00	0.76	45.4	34.6	9.34	0.00
29.77	153.3	4.97	3.24	189.3	6	114.6	1.75	1.75	0.00	0.76	58.7	44.4	12.13	0.00
30.27	193.7	8.97	4.63	159.2	11	130.5	1.78	1.77	0.01	0.75	185.5	139.3	UnDef	0.00

Gregg In Situ, Inc. Page: 3a
Run No: 03-1124-0955-1057
CPT File: 312C01.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
30.76	105.8	5.83	5.51	64.3	11	130.5	1.81	1.79	0.02	0.75	101.3	75.7	UnDef	0.00
31.17	128.2	5.20	4.05	369.7	11	130.5	1.84	1.80	0.04	0.74	122.8	91.4	UnDef	0.00
31.58	275.0	7.39	2.69	22.8	7	117.8	1.87	1.82	0.05	0.74	87.8	65.1	UnDef	0.00
32.07	266.7	6.51	2.44	-4.9	7	117.8	1.89	1.83	0.06	0.74	85.1	62.9	UnDef	0.00
32.56	259.4	6.35	2.45	-1.8	7	117.8	1.92	1.84	0.08	0.74	82.8	61.0	UnDef	0.00
33.05	256.5	6.92	2.70	-2.0	7	117.8	1.95	1.86	0.10	0.73	81.9	60.1	UnDef	0.00
33.55	236.2	6.51	2.75	-3.6	7	117.8	1.98	1.87	0.11	0.73	75.4	55.1	UnDef	0.00
34.04	234.8	5.97	2.54	-3.5	7	117.8	2.01	1.88	0.13	0.73	74.9	54.6	UnDef	0.00
34.53	297.6	7.42	2.49	-1.8	7	117.8	2.04	1.90	0.14	0.73	95.0	69.0	UnDef	0.00
35.02	345.5	9.40	2.72	0.0	12	120.9	2.07	1.91	0.16	0.72	165.5	119.7	UnDef	0.00
35.51	379.0	10.41	2.75	2.4	12	120.9	2.10	1.93	0.17	0.72	181.5	130.8	UnDef	0.00
36.01	374.0	10.87	2.91	2.5	12	120.9	2.13	1.94	0.19	0.72	179.1	128.6	UnDef	0.00
36.50	359.4	10.65	2.96	-0.4	12	120.9	2.16	1.95	0.20	0.72	172.1	123.1	UnDef	0.00
36.99	328.0	9.72	2.96	-1.5	12	120.9	2.19	1.97	0.22	0.71	157.0	111.9	UnDef	0.00
37.48	328.0	8.83	2.69	-2.9	12	120.9	2.22	1.98	0.23	0.71	157.1	111.5	UnDef	0.00
37.98	349.3	8.63	2.47	-4.3	7	117.8	2.25	2.00	0.25	0.71	111.5	78.9	UnDef	0.00
38.47	382.3	9.34	2.44	-4.0	7	117.8	2.28	2.01	0.26	0.71	122.0	86.1	UnDef	0.00
38.96	430.2	10.98	2.55	-2.5	12	128.9	2.31	2.03	0.28	0.70	206.0	144.8	UnDef	0.00
39.45	384.9	10.78	2.80	-4.1	12	120.9	2.33	2.04	0.30	0.70	184.3	129.1	UnDef	0.00
39.94	345.9	9.20	2.66	-8.9	12	120.9	2.36	2.05	0.31	0.70	165.6	115.6	UnDef	0.00
40.44	323.8	8.06	2.49	-12.0	7	117.8	2.39	2.07	0.33	0.70	103.4	71.9	UnDef	0.00
40.93	385.7	9.89	2.57	-12.4	12	120.9	2.42	2.08	0.34	0.69	184.7	128.0	UnDef	0.00
41.42	345.4	10.32	2.99	-16.7	12	120.9	2.45	2.10	0.36	0.69	165.4	114.2	UnDef	0.00
41.91	285.2	8.59	3.01	-19.6	12	120.9	2.48	2.11	0.37	0.69	136.6	94.0	UnDef	0.00
42.40	290.0	6.70	2.31	-20.9	7	117.8	2.51	2.12	0.39	0.69	92.6	63.5	UnDef	0.00
42.90	285.8	6.01	2.10	-26.9	8	120.9	2.54	2.14	0.40	0.68	68.4	46.8	UnDef	0.00
43.39	192.3	5.80	3.02	-31.2	7	117.8	2.57	2.15	0.42	0.68	61.4	41.8	UnDef	0.00
43.88	66.6	2.02	3.04	37.9	6	114.6	2.60	2.17	0.43	0.68	25.5	17.3	5.12	0.00
44.37	52.9	1.02	1.93	78.5	7	117.8	2.63	2.18	0.45	0.68	16.9	11.4	UnDef	0.00
44.86	48.9	0.78	1.59	103.0	7	117.8	2.66	2.19	0.46	0.68	15.6	10.5	UnDef	0.45
45.36	65.8	1.46	2.21	193.9	7	117.8	2.69	2.21	0.48	0.67	21.0	14.1	UnDef	0.00
45.85	87.1	2.58	2.97	484.0	6	114.6	2.71	2.22	0.49	0.67	33.3	22.4	6.75	0.00
46.34	71.1	2.19	3.08	1053.6	6	114.6	2.74	2.23	0.51	0.67	27.2	18.2	5.47	0.00
46.83	114.5	2.96	2.58	1540.7	7	117.8	2.77	2.25	0.53	0.67	36.5	24.4	UnDef	0.00
47.33	105.8	2.76	2.61	1378.6	7	117.8	2.80	2.26	0.54	0.67	33.8	22.5	UnDef	0.00
47.82	72.7	1.93	2.66	907.1	6	114.6	2.83	2.27	0.56	0.66	27.9	18.5	5.59	0.00
48.31	71.3	1.79	2.51	863.0	6	114.6	2.86	2.29	0.57	0.66	27.3	18.1	5.48	0.00
48.80	67.0	1.86	2.78	700.8	6	114.6	2.89	2.30	0.59	0.66	25.7	16.9	5.13	0.00
49.29	53.0	1.43	2.70	410.3	6	114.6	2.91	2.31	0.60	0.66	20.3	13.4	4.01	0.00
49.79	45.0	1.42	3.16	296.7	5	114.6	2.94	2.32	0.62	0.66	21.5	14.1	3.36	0.36
50.28	43.0	1.18	2.75	287.5	6	114.6	2.97	2.34	0.63	0.65	16.5	10.8	3.20	0.32
50.77	44.5	1.01	2.27	368.2	6	114.6	3.00	2.35	0.65	0.65	17.0	11.1	3.32	0.35

Gregg In Situ, Inc.
Run No: 03-1124-0955-1057
CPT File: 312C01.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
51.26	49.4	1.12	2.27	368.7	6	114.6	3.03	2.36	0.66	0.65	18.9	12.3	3.71	0.44
51.75	71.5	2.27	3.17	538.7	6	114.6	3.05	2.38	0.68	0.65	27.4	17.8	5.47	0.00
52.25	180.3	6.94	3.85	152.6	12	120.9	3.08	2.39	0.69	0.65	86.3	55.9	UnDef	0.00
52.74	150.5	6.71	4.46	31.5	11	130.5	3.11	2.40	0.71	0.64	144.1	92.9	UnDef	0.00
53.23	133.2	6.34	4.76	266.4	11	130.5	3.15	2.42	0.73	0.64	127.6	82.0	UnDef	0.00
53.72	152.0	8.05	5.29	128.8	11	130.5	3.18	2.44	0.74	0.64	145.6	93.3	UnDef	0.00
54.22	165.5	8.58	5.19	71.7	11	130.5	3.21	2.45	0.76	0.64	158.5	101.2	UnDef	0.00
54.71	163.2	8.46	5.19	31.6	11	130.5	3.24	2.47	0.77	0.64	156.3	99.4	UnDef	0.00
55.20	164.6	8.61	5.23	16.8	11	130.5	3.28	2.49	0.79	0.63	157.6	100.0	UnDef	0.00
55.69	89.2	5.24	5.88	132.0	11	130.5	3.31	2.50	0.80	0.63	85.4	54.0	UnDef	0.00
56.18	130.7	6.29	4.82	199.9	11	130.5	3.34	2.52	0.82	0.63	125.1	78.8	UnDef	0.00
56.68	217.9	9.11	4.18	53.5	12	120.9	3.37	2.54	0.83	0.63	104.4	65.5	UnDef	0.00
57.17	355.4	7.89	2.22	-3.6	8	120.9	3.40	2.55	0.85	0.63	85.1	53.3	UnDef	0.00
57.66	377.2	9.91	2.63	5.9	12	120.9	3.43	2.57	0.86	0.62	180.6	112.8	UnDef	0.00
58.15	335.5	9.43	2.81	6.9	12	120.9	3.46	2.58	0.88	0.62	160.7	100.0	UnDef	0.00
58.64	352.8	9.86	2.80	8.9	12	120.9	3.49	2.59	0.89	0.62	168.9	104.9	UnDef	0.00
59.14	378.0	9.01	2.38	6.5	8	120.9	3.52	2.61	0.91	0.62	90.5	56.0	UnDef	0.00
59.63	417.6	9.53	2.28	77.3	8	120.9	3.55	2.62	0.93	0.62	100.0	61.7	UnDef	0.00
60.12	409.1	10.28	2.51	34.0	12	120.9	3.58	2.64	0.94	0.62	195.9	120.6	UnDef	0.00
60.61	406.9	9.92	2.44	28.1	12	120.9	3.61	2.65	0.96	0.61	194.9	119.7	UnDef	0.00
61.10	425.3	9.01	2.12	20.3	8	120.9	3.64	2.67	0.97	0.61	101.8	62.4	UnDef	0.00
61.60	431.0	8.44	1.96	0.9	8	120.9	3.67	2.68	0.99	0.61	103.2	63.0	UnDef	0.00
62.09	422.7	7.88	1.86	-4.3	8	120.9	3.70	2.70	1.00	0.61	101.2	61.6	UnDef	0.00
62.58	366.2	7.71	2.10	-3.9	8	120.9	3.73	2.71	1.02	0.61	87.7	53.3	UnDef	0.00
63.07	331.2	8.67	2.62	-4.6	7	117.8	3.76	2.72	1.03	0.61	105.7	64.1	UnDef	0.00
63.57	399.9	9.10	2.28	-5.9	8	120.9	3.79	2.74	1.05	0.60	95.7	57.9	UnDef	0.00
64.06	421.6	8.32	1.97	-7.6	8	120.9	3.82	2.75	1.06	0.60	100.9	60.8	UnDef	0.00
64.55	438.0	7.91	1.81	-7.5	8	120.9	3.85	2.77	1.08	0.60	104.9	63.1	UnDef	0.00
65.04	411.3	7.79	1.89	-7.2	8	120.9	3.88	2.78	1.09	0.60	98.5	59.1	UnDef	0.00
65.53	424.6	8.88	2.09	-5.7	8	120.9	3.91	2.80	1.11	0.60	101.7	60.8	UnDef	0.00
66.03	342.0	5.98	1.75	-9.4	8	120.9	3.93	2.81	1.12	0.60	81.9	48.9	UnDef	0.00
66.52	172.3	6.56	3.81	-16.4	12	120.9	3.96	2.82	1.14	0.60	82.5	49.1	UnDef	0.00
67.01	151.6	8.19	5.41	312.1	11	130.5	4.00	2.84	1.16	0.59	145.2	86.1	UnDef	0.00
67.50	146.0	7.39	5.07	757.7	11	130.5	4.03	2.86	1.17	0.59	139.8	82.7	UnDef	0.00
67.99	168.0	9.30	5.54	846.8	11	130.5	4.06	2.87	1.19	0.59	160.9	94.9	UnDef	0.00
68.49	106.3	6.23	5.86	468.8	11	130.5	4.09	2.89	1.20	0.59	101.8	59.9	UnDef	0.00
68.98	80.8	3.44	4.26	528.8	5	114.6	4.12	2.90	1.22	0.59	38.7	22.7	6.13	0.00
69.47	70.7	2.73	3.86	472.7	5	114.6	4.15	2.92	1.23	0.59	33.9	19.8	5.33	0.00
69.96	62.1	2.30	3.71	456.0	5	114.6	4.18	2.93	1.25	0.58	29.7	17.4	4.63	0.00
70.46	61.4	2.12	3.45	469.5	5	114.6	4.21	2.94	1.26	0.58	29.4	17.1	4.58	0.00
70.95	61.7	2.10	3.41	305.5	5	114.6	4.23	2.96	1.28	0.58	29.5	17.2	4.59	0.00
71.44	52.7	1.72	3.27	356.6	5	114.6	4.26	2.97	1.29	0.58	25.2	14.6	3.87	0.39

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
71.93	50.3	1.57	3.13	215.7	6	114.6	4.29	2.98	1.31	0.58	19.3	11.2	3.68	0.35
72.42	48.9	1.25	2.55	334.5	6	114.6	4.32	2.99	1.32	0.58	18.7	10.8	3.57	0.33
72.92	55.7	1.60	2.88	427.9	6	114.6	4.35	3.01	1.34	0.58	21.3	12.3	4.11	0.44
73.41	62.9	2.17	3.45	453.6	5	114.6	4.38	3.02	1.36	0.58	30.1	17.3	4.68	0.00
73.90	77.0	3.59	4.65	463.6	11	130.5	4.41	3.04	1.37	0.57	73.8	42.4	UnDef	0.00
74.39	107.9	6.26	5.80	301.9	11	130.5	4.44	3.05	1.39	0.57	103.3	59.1	UnDef	0.00
74.88	92.6	4.65	5.02	282.5	11	130.5	4.47	3.07	1.40	0.57	88.6	50.6	UnDef	0.00
75.38	166.7	5.88	3.53	238.9	12	120.9	4.50	3.08	1.42	0.57	79.8	45.4	UnDef	0.00
75.87	353.7	8.74	2.47	11.4	7	117.8	4.53	3.10	1.43	0.57	112.9	64.1	UnDef	0.00
76.36	416.3	10.45	2.51	16.6	12	120.9	4.56	3.11	1.45	0.57	199.3	113.0	UnDef	0.00
76.85	327.6	8.05	2.46	9.8	7	117.8	4.59	3.13	1.46	0.57	104.6	59.1	UnDef	0.00
77.34	250.1	7.32	2.93	10.6	7	117.8	4.62	3.14	1.48	0.56	79.8	45.1	UnDef	0.00
77.84	188.6	9.31	4.94	23.5	11	130.5	4.65	3.16	1.49	0.56	180.6	101.7	UnDef	0.00
78.33	147.2	8.03	5.46	39.3	11	130.5	4.68	3.17	1.51	0.56	140.9	79.1	UnDef	0.00
78.82	70.5	3.15	4.48	359.2	5	114.6	4.71	3.19	1.52	0.56	33.7	18.9	5.26	0.00
79.31	63.6	2.23	3.50	440.6	5	114.6	4.74	3.20	1.54	0.56	30.5	17.0	4.71	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1124-0955-1057
Job No: 03-312sh
Client: LFR
Project: CPT SITE INVESTIGATION
Site: L.B. GOLF CTR.
Location: CPT-01
Engineer: C. NARDI
CPT Date: 03/21/11
CPT Time: 00:01
CPT File: 312C01.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): 9.14 (ft): 30.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-05	0.03	1000.0	1.17	9	42.0	0.0	42.0	1.2	50	84.3	10.0	-0.42	0.0	16.8
0.74	5.0E-05	0.00	836.9	1.90	12	67.9	UnDef	UnDef	0.0	50	82.3	10.0	-0.48	UnDef	UnDef
1.23	5.0E-06	0.01	476.7	2.92	12	64.5	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.72	5.0E-06	0.00	355.3	3.02	12	67.3	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
2.21	5.0E-07	-0.01	143.2	3.97	12	35.0	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
2.71	5.0E-05	0.00	129.5	2.25	7	38.7	14.4	53.1	15.1	44	47.6	10.0	-0.31	3.2	18.7
3.20	5.0E-05	0.00	125.5	2.25	7	44.4	17.1	61.5	15.4	44	49.1	10.0	-0.31	3.7	21.5
3.61	5.0E-06	0.00	100.9	2.50	7	40.4	22.6	62.9	18.4	UnDef	UnDef	10.0	UnDef	5.8	26.0
4.02	5.0E-05	0.00	75.8	2.09	7	33.9	21.3	55.1	19.5	40	38.0	10.0	-0.24	4.3	17.9
4.51	5.0E-06	0.00	56.4	2.06	7	28.4	25.4	53.8	22.7	UnDef	UnDef	10.0	UnDef	5.8	19.8
5.00	5.0E-05	0.00	55.5	1.51	7	29.6	19.2	48.8	19.7	40	32.4	10.0	-0.17	3.8	15.4
5.50	5.0E-05	0.00	57.6	1.77	7	32.2	23.5	55.7	20.8	40	34.8	10.0	-0.19	4.5	17.1
5.99	5.0E-05	0.00	55.1	2.16	7	32.2	31.2	63.3	23.4	40	34.8	10.0	-0.21	5.6	18.2
6.56	5.0E-05	0.00	59.2	1.72	7	36.1	24.8	60.9	20.2	40	38.1	10.0	-0.19	4.8	19.0
7.14	5.0E-06	0.01	49.2	2.99	6	31.4	54.8	86.2	28.8	UnDef	UnDef	6.0	UnDef	10.1	25.5
7.63	5.0E-06	0.00	39.6	3.36	6	26.3	82.9	109.2	33.4	UnDef	UnDef	6.0	UnDef	11.6	24.5
8.12	5.0E-06	0.01	38.5	2.28	7	26.3	46.1	72.5	28.8	UnDef	UnDef	6.0	UnDef	8.5	21.4
8.61	5.0E-06	0.01	37.0	2.65	6	26.1	61.6	87.8	31.3	UnDef	UnDef	6.0	UnDef	10.0	22.8
9.10	5.0E-07	0.01	25.3	3.52	6	18.6	74.4	93.0	41.4	UnDef	UnDef	6.0	UnDef	12.1	24.3
9.60	5.0E-06	0.02	24.7	3.03	6	18.6	74.5	93.1	39.7	UnDef	UnDef	6.0	UnDef	9.1	18.2

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	QclN	DeltaQclN	QclNcs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
10.09	5.0E-06	0.00	24.0	2.92	6	18.6	74.3	92.8	39.7	UnDef	UnDef	6.0	UnDef	9.1	18.2
10.58	5.0E-06	0.00	21.8	2.61	6	17.4	69.4	86.8	39.8	UnDef	UnDef	6.0	UnDef	8.5	17.0
11.07	5.0E-06	0.00	18.7	2.33	6	15.4	61.6	76.9	41.0	UnDef	UnDef	6.0	UnDef	7.5	15.1
11.56	5.0E-06	0.00	15.1	2.04	6	12.8	51.2	64.1	43.4	UnDef	UnDef	6.0	UnDef	6.3	12.5
12.06	5.0E-06	0.01	18.2	1.75	6	15.6	62.5	78.1	37.9	UnDef	UnDef	6.0	UnDef	7.6	15.3
12.55	5.0E-05	0.01	31.3	2.52	6	26.8	81.8	108.6	33.2	36	30.0	6.0	-0.16	9.3	19.8
13.04	5.0E-05	0.00	48.9	1.97	7	42.2	43.1	85.3	23.9	38	42.6	6.0	-0.18	7.6	24.2
13.53	5.0E-04	0.00	60.1	1.33	7	52.7	27.0	79.7	17.7	40	48.9	1.0	-0.17	4.6	21.8
14.03	5.0E-04	0.00	50.5	1.23	7	45.2	26.8	72.0	19.0	38	44.5	1.0	-0.14	4.5	19.2
14.52	5.0E-04	0.00	49.6	1.18	7	45.2	26.4	71.7	18.8	38	44.5	1.0	-0.14	4.4	19.2
15.01	5.0E-04	0.00	56.4	1.15	7	52.2	25.1	77.3	17.2	40	48.6	1.0	-0.15	4.3	21.4
15.50	5.0E-04	0.00	41.6	1.07	7	39.3	26.7	66.1	20.2	38	40.5	1.0	-0.11	4.3	17.2
15.99	5.0E-04	0.00	44.8	0.92	7	43.0	22.8	65.8	18.0	38	43.1	1.0	-0.10	3.9	17.9
16.49	5.0E-04	0.00	52.1	0.90	7	50.6	21.4	72.0	16.1	38	47.7	1.0	-0.12	3.8	20.3
16.98	5.0E-03	0.00	71.0	0.82	9	69.7	16.9	86.6	12.3	40	56.9	1.0	-0.14	2.4	19.4
17.47	5.0E-03	0.00	88.1	0.92	9	87.6	17.3	104.9	11.2	42	63.5	1.0	-0.17	2.5	23.9
17.96	5.0E-03	0.00	169.1	1.84	9	169.6	34.2	203.8	11.3	44	82.4	1.0	-0.31	4.9	46.4
18.45	5.0E-03	0.00	352.5	1.54	9	357.5	7.6	365.1	5.8	48	95.0	1.0	-0.36	1.2	88.6
18.95	1.0E-15	0.00	302.8	2.90	12	311.5	UnDef	UnDef	0.0	46	95.0	1.0	-0.47	UnDef	UnDef
19.44	1.0E-15	0.00	370.8	2.73	12	386.4	UnDef	UnDef	0.0	48	95.0	1.0	-0.47	UnDef	UnDef
19.93	1.0E-15	0.00	264.0	3.55	12	279.0	UnDef	UnDef	0.0	46	95.0	1.0	-0.52	UnDef	UnDef
20.42	1.0E-15	0.00	226.9	4.35	12	243.1	UnDef	UnDef	0.0	46	92.7	1.0	-0.60	UnDef	UnDef
20.92	1.0E-15	0.00	173.6	5.67	11	188.8	UnDef	UnDef	0.0	44	85.5	1.0	-0.80	UnDef	UnDef
21.41	1.0E-15	0.00	186.0	3.93	12	204.7	UnDef	UnDef	0.0	44	87.8	1.0	-0.51	UnDef	UnDef
21.90	1.0E-15	0.00	166.7	4.60	11	185.9	UnDef	UnDef	0.0	44	85.0	1.0	-0.58	UnDef	UnDef
22.39	1.0E-15	0.00	189.9	3.81	12	214.1	UnDef	UnDef	0.0	44	89.1	1.0	-0.50	UnDef	UnDef
22.88	1.0E-15	0.00	226.1	3.18	12	257.5	UnDef	UnDef	0.0	46	94.4	1.0	-0.46	UnDef	UnDef
23.38	1.0E-15	0.00	229.6	2.91	12	264.4	UnDef	UnDef	0.0	46	95.0	1.0	-0.43	UnDef	UnDef
23.87	1.0E-15	0.00	179.3	3.82	12	208.9	UnDef	UnDef	0.0	44	88.4	1.0	-0.49	UnDef	UnDef
24.36	1.0E-15	0.00	100.5	4.49	11	118.9	UnDef	UnDef	0.0	42	72.2	1.0	-0.48	UnDef	UnDef
24.85	5.0E-06	0.00	40.0	4.38	6	48.5	194.1	242.7	37.2	UnDef	UnDef	6.0	UnDef	23.8	47.5
25.34	5.0E-05	0.02	47.4	3.22	6	57.9	120.3	178.2	30.3	38	51.6	6.0	-0.25	16.6	39.2
25.84	5.0E-05	0.01	122.0	3.26	7	148.5	94.7	243.1	19.6	42	78.6	10.0	-0.38	18.7	76.8
26.33	1.0E-15	0.00	69.3	4.31	6	85.7	158.2	243.9	29.3	40	62.8	1.0	-0.40	57.2	141.1
26.82	5.0E-05	0.00	45.6	2.74	7	57.4	99.1	156.5	28.7	38	51.4	6.0	-0.22	14.7	37.2
27.31	5.0E-05	0.00	41.5	2.40	7	52.7	87.6	140.3	28.4	38	48.9	6.0	-0.19	13.2	33.8
27.80	5.0E-05	0.01	33.9	2.22	7	43.6	91.9	135.5	30.4	36	43.5	6.0	-0.16	12.6	29.7
28.30	5.0E-04	0.01	49.4	1.84	7	63.7	59.5	123.2	23.1	38	54.3	1.0	-0.18	9.0	29.8
28.79	5.0E-04	0.01	73.0	1.99	7	94.3	58.7	153.0	19.4	40	65.6	1.0	-0.23	9.7	40.5
29.28	5.0E-05	0.05	67.8	3.16	7	88.4	105.9	194.3	25.4	40	63.7	10.0	-0.29	17.9	52.5
29.77	5.0E-05	0.04	86.6	3.28	7	113.4	106.1	219.5	23.1	42	70.9	10.0	-0.33	19.2	63.6
30.27	1.0E-15	0.03	108.3	4.67	11	142.4	UnDef	UnDef	0.0	42	77.4	1.0	-0.51	UnDef	UnDef

Gregg In Situ, Inc.
Run No: 03-1124-0955-1057
CPT File: 312C01.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
30.76	1.0E-15	0.02	58.1	5.61	6	77.4	309.5	386.9	35.6	40	59.9	1.0	-0.53	75.7	151.5
31.17	1.0E-15	0.09	70.0	4.11	6	93.4	157.5	250.9	28.5	40	65.3	1.0	-0.37	59.1	150.5
31.58	5.0E-04	0.00	150.4	2.71	7	199.7	80.3	280.0	15.7	44	87.1	1.0	-0.36	14.2	79.4
32.07	5.0E-04	0.00	144.7	2.46	7	192.9	71.2	264.1	15.1	44	86.1	1.0	-0.34	12.8	75.7
32.56	5.0E-04	0.00	139.7	2.46	7	187.0	71.9	258.9	15.4	44	85.2	1.0	-0.34	12.8	73.8
33.05	5.0E-04	0.00	137.1	2.72	7	184.2	82.3	266.4	16.6	44	84.8	1.0	-0.35	14.4	74.5
33.55	5.0E-04	0.00	125.2	2.78	7	169.0	85.4	254.4	17.6	44	82.3	1.0	-0.35	14.7	69.8
34.04	5.0E-04	0.00	123.5	2.57	7	167.4	77.5	244.9	16.9	42	82.0	1.0	-0.33	13.5	68.1
34.53	5.0E-04	0.00	155.8	2.51	7	211.4	74.1	285.5	14.7	44	88.7	1.0	-0.35	13.4	82.3
35.02	1.0E-15	0.00	179.7	2.74	7	244.6	83.0	327.6	14.5	44	92.9	1.0	-0.39	22.5	142.2
35.51	1.0E-15	0.00	195.7	2.76	7	267.2	84.0	351.3	14.0	44	95.0	1.0	-0.40	23.0	153.8
36.01	1.0E-15	0.00	191.7	2.92	12	262.8	UnDef	UnDef	0.0	44	95.0	1.0	-0.41	UnDef	UnDef
36.50	1.0E-15	0.00	182.7	2.98	12	251.5	UnDef	UnDef	0.0	44	93.7	1.0	-0.41	UnDef	UnDef
36.99	1.0E-15	0.00	165.4	2.98	7	228.7	95.3	324.0	16.0	44	91.0	1.0	-0.40	25.2	137.1
37.48	1.0E-15	0.00	164.2	2.71	7	227.9	83.8	311.7	15.1	44	90.9	1.0	-0.37	22.6	134.1
37.98	5.0E-04	0.00	173.7	2.49	7	241.9	74.2	316.1	13.8	44	92.6	1.0	-0.36	13.6	92.5
38.47	5.0E-04	0.00	188.9	2.46	7	263.8	72.5	336.3	13.1	44	95.0	1.0	-0.37	13.4	99.5
38.96	1.0E-15	0.00	211.3	2.57	7	295.8	76.8	372.6	12.7	46	95.0	1.0	-0.39	21.4	166.2
39.45	1.0E-15	0.00	187.6	2.82	7	263.7	89.3	353.0	14.5	44	95.0	1.0	-0.40	24.3	153.3
39.94	1.0E-15	0.00	167.3	2.68	7	236.2	83.7	319.9	14.8	44	91.9	1.0	-0.37	22.6	138.2
40.44	5.0E-04	0.00	155.4	2.51	7	220.4	77.2	297.5	14.7	44	89.9	1.0	-0.35	13.9	85.8
40.93	1.0E-15	0.00	184.1	2.58	7	261.6	79.5	341.1	13.7	44	94.8	1.0	-0.38	21.9	149.9
41.42	1.0E-15	0.00	163.6	3.01	7	233.4	99.5	332.9	16.2	44	91.6	1.0	-0.40	26.3	140.5
41.91	1.0E-15	0.00	133.9	3.04	7	192.1	101.7	293.8	18.0	44	86.0	1.0	-0.38	26.0	120.0
42.40	5.0E-04	0.00	135.3	2.33	7	194.7	72.0	266.7	15.1	44	86.4	1.0	-0.32	12.9	76.4
42.90	5.0E-03	0.00	132.4	2.12	7	191.3	64.0	255.2	14.4	44	85.9	1.0	-0.30	8.7	55.5
43.39	5.0E-04	-0.01	88.1	3.06	7	128.2	107.3	235.6	22.1	42	74.4	1.0	-0.33	16.7	58.5
43.88	5.0E-05	0.01	29.6	3.16	6	44.3	177.2	221.5	37.2	36	43.9	6.0	-0.19	17.3	34.7
44.37	5.0E-04	0.04	23.1	2.03	6	35.1	140.3	175.4	35.4	34	37.3	1.0	-0.10	11.4	22.9
44.86	5.0E-04	0.06	21.1	1.69	6	32.3	125.6	157.8	34.8	34	34.9	1.0	-0.07	10.4	21.0
45.36	5.0E-04	0.09	28.6	2.31	6	43.3	138.2	181.6	33.5	36	43.3	1.0	-0.13	12.9	27.0
45.85	5.0E-05	0.17	38.0	3.06	6	57.2	164.6	221.8	32.8	38	51.3	6.0	-0.19	19.4	41.8
46.34	5.0E-05	0.47	30.6	3.20	6	46.5	186.2	232.7	36.8	36	45.4	6.0	-0.11	18.2	36.4
46.83	5.0E-04	0.43	49.7	2.65	7	74.8	107.9	182.6	27.1	38	58.9	1.0	-0.16	14.3	38.7
47.33	5.0E-04	0.41	45.6	2.68	7	68.8	115.6	184.4	28.5	38	56.6	1.0	-0.15	14.5	36.9
47.82	5.0E-05	0.40	30.7	2.76	6	47.2	180.8	228.0	34.7	36	45.8	6.0	-0.11	18.2	36.7
48.31	5.0E-05	0.39	30.0	2.62	6	46.2	168.3	214.4	34.4	36	45.1	6.0	-0.11	17.4	35.5
48.80	5.0E-05	0.33	27.9	2.91	6	43.2	172.9	216.2	37.0	36	43.2	6.0	-0.12	16.9	33.8
49.29	5.0E-05	0.24	21.7	2.85	6	34.1	136.5	170.7	41.2	34	36.5	6.0	-0.10	13.4	26.7
49.79	5.0E-06	0.21	18.1	3.38	6	28.9	115.4	144.3	47.2	UnDef	UnDef	6.0	UnDef	14.1	28.2
50.28	5.0E-05	0.21	17.1	2.96	6	27.5	110.1	137.6	46.2	32	30.3	6.0	-0.08	10.8	21.6
50.77	5.0E-05	0.26	17.7	2.43	6	28.4	113.6	142.1	42.7	32	31.2	6.0	-0.06	11.1	22.2

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
51.26	5.0E-05	0.23	19.6	2.41	6	31.5	125.8	157.3	40.6	34	34.1	6.0	-0.08	12.3	24.6
51.75	5.0E-05	0.24	28.8	3.31	6	45.4	181.5	226.8	38.3	36	44.6	6.0	-0.16	17.8	35.5
52.25	1.0E-15	0.02	74.2	3.92	6	114.1	165.1	279.3	27.1	40	71.1	1.0	-0.37	32.8	88.6
52.74	1.0E-15	0.00	61.3	4.56	6	95.0	235.0	330.0	31.7	40	65.8	1.0	-0.40	74.7	167.6
53.23	1.0E-15	0.06	53.7	4.87	6	83.8	310.4	394.1	34.5	40	62.2	1.0	-0.40	79.6	161.5
53.72	1.0E-15	0.02	61.1	5.40	6	95.3	344.1	439.4	34.3	40	65.9	1.0	-0.51	89.5	182.8
54.22	1.0E-15	0.01	66.1	5.29	6	103.4	303.3	406.6	32.9	40	68.2	1.0	-0.51	88.5	189.6
54.71	1.0E-15	0.00	64.7	5.29	6	101.6	310.1	411.7	33.2	40	67.7	1.0	-0.51	88.6	188.0
55.20	1.0E-15	0.00	64.8	5.34	6	102.1	317.2	419.3	33.3	40	67.9	1.0	-0.51	89.8	189.7
55.69	1.0E-15	0.04	34.3	6.10	1	55.2	UnDef	UnDef	100.0	36	50.2	1.0	-0.48	UnDef	UnDef
56.18	1.0E-15	0.04	50.5	4.94	6	80.5	322.1	402.6	35.6	38	61.1	1.0	-0.40	78.8	157.6
56.68	1.0E-15	0.00	84.6	4.24	6	133.9	184.5	318.4	26.7	42	75.6	1.0	-0.42	37.2	102.8
57.17	5.0E-03	0.00	138.0	2.24	7	217.8	74.8	292.5	14.6	44	89.6	1.0	-0.32	10.1	63.4
57.66	1.0E-15	0.00	145.7	2.65	7	230.4	93.4	323.8	15.8	44	91.2	1.0	-0.36	24.8	137.6
58.15	1.0E-15	0.00	128.7	2.84	7	204.4	103.3	307.6	17.6	44	87.8	1.0	-0.36	26.6	126.6
58.64	1.0E-15	0.00	134.6	2.82	7	214.3	102.5	316.8	17.1	44	89.1	1.0	-0.36	26.6	131.5
59.14	5.0E-03	0.00	143.5	2.41	7	229.0	82.8	311.8	14.9	44	91.0	1.0	-0.33	11.2	67.2
59.63	5.0E-03	0.00	157.8	2.30	7	252.3	77.2	329.5	13.8	44	93.8	1.0	-0.34	10.6	72.3
60.12	1.0E-15	0.00	153.7	2.53	7	246.5	88.7	335.2	14.9	44	93.1	1.0	-0.35	23.9	144.5
60.61	1.0E-15	0.00	152.1	2.46	7	244.5	85.5	330.0	14.7	44	92.9	1.0	-0.35	23.1	142.8
61.10	5.0E-03	0.00	158.1	2.14	7	254.9	69.9	324.8	13.1	44	94.1	1.0	-0.32	9.7	72.1
61.60	5.0E-03	0.00	159.4	1.98	9	257.6	62.4	320.0	12.3	44	94.4	1.0	-0.31	8.8	71.8
62.09	5.0E-03	0.00	155.4	1.88	9	251.9	58.5	310.5	12.1	44	93.8	1.0	-0.30	8.2	69.9
62.58	5.0E-03	0.00	133.7	2.13	7	217.7	72.2	289.9	14.3	44	89.6	1.0	-0.31	9.8	63.1
63.07	5.0E-04	0.00	120.2	2.65	7	196.4	97.5	293.9	17.4	42	86.6	1.0	-0.33	16.8	80.8
63.57	5.0E-03	0.00	144.7	2.30	7	236.5	79.6	316.1	14.4	44	91.9	1.0	-0.33	10.8	68.7
64.06	5.0E-03	0.00	151.8	1.99	9	248.7	64.7	313.4	12.7	44	93.4	1.0	-0.31	9.0	69.9
64.55	5.0E-03	0.00	156.9	1.82	9	257.7	56.3	314.0	11.7	44	94.4	1.0	-0.30	8.0	71.0
65.04	5.0E-03	0.00	146.5	1.91	9	241.4	62.0	303.3	12.7	44	92.5	1.0	-0.30	8.7	67.7
65.53	5.0E-03	0.00	150.5	2.11	7	248.5	71.1	319.6	13.3	44	93.4	1.0	-0.32	9.8	70.6
66.03	5.0E-03	0.00	120.3	1.77	7	199.7	58.9	258.6	13.5	42	87.1	1.0	-0.27	8.1	57.0
66.52	1.0E-15	-0.01	59.6	3.90	6	100.3	196.6	296.9	29.8	40	67.4	1.0	-0.34	34.7	83.8
67.01	1.0E-15	0.06	52.0	5.55	6	88.0	352.1	440.1	37.0	38	63.6	1.0	-0.49	86.1	172.3
67.50	1.0E-15	0.16	49.7	5.21	6	84.5	338.0	422.6	36.7	38	62.5	1.0	-0.41	82.7	165.4
67.99	1.0E-15	0.15	57.1	5.67	6	97.0	387.9	484.9	36.0	40	66.4	1.0	-0.50	94.9	189.8
68.49	1.0E-15	0.13	35.4	6.09	1	61.2	UnDef	UnDef	100.0	38	53.2	1.0	-0.46	UnDef	UnDef
68.98	5.0E-06	0.20	26.4	4.49	1	46.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
69.47	5.0E-06	0.20	22.8	4.10	4	40.5	162.1	202.6	45.8	UnDef	UnDef	6.0	UnDef	19.8	39.7
69.96	5.0E-06	0.22	19.8	3.98	4	35.5	141.9	177.4	48.1	UnDef	UnDef	6.0	UnDef	17.4	34.7
70.46	5.0E-06	0.23	19.4	3.70	4	35.0	140.1	175.1	47.2	UnDef	UnDef	6.0	UnDef	17.1	34.3
70.95	5.0E-06	0.14	19.4	3.66	6	35.1	140.4	175.5	47.0	UnDef	UnDef	6.0	UnDef	17.2	34.4
71.44	5.0E-06	0.20	16.3	3.56	4	29.9	119.7	149.6	50.1	UnDef	UnDef	6.0	UnDef	14.6	29.3

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
71.93	5.0E-05	0.12	15.4	3.42	4	28.5	114.1	142.7	50.6	32	31.3	6.0	-0.10	11.2	22.3
72.42	5.0E-05	0.20	14.9	2.79	6	27.7	110.7	138.3	48.2	32	30.4	6.0	-0.06	10.8	21.7
72.92	5.0E-05	0.23	17.1	3.12	6	31.4	125.6	157.1	47.1	32	34.1	6.0	-0.08	12.3	24.6
73.41	5.0E-06	0.22	19.4	3.70	4	35.4	141.6	177.0	47.3	UnDef	UnDef	6.0	UnDef	17.3	34.6
73.90	1.0E-15	0.18	23.9	4.94	1	43.3	UnDef	UnDef	100.0	34	43.3	1.0	-0.23	UnDef	UnDef
74.39	1.0E-15	0.08	33.9	6.05	1	60.4	UnDef	UnDef	100.0	36	52.8	1.0	-0.46	UnDef	UnDef
74.88	1.0E-15	0.08	28.7	5.28	1	51.7	UnDef	UnDef	100.0	36	48.4	1.0	-0.32	UnDef	UnDef
75.38	1.0E-15	0.04	52.6	3.62	6	92.9	197.3	290.1	30.5	40	65.2	1.0	-0.29	33.6	79.1
75.87	5.0E-04	0.00	112.7	2.50	7	196.6	97.6	294.3	17.4	42	86.7	1.0	-0.31	16.8	80.9
76.36	1.0E-15	0.00	132.3	2.54	7	230.9	97.9	328.8	16.2	44	91.3	1.0	-0.34	25.9	138.9
76.85	5.0E-04	0.00	103.3	2.49	7	181.3	98.5	279.8	18.2	42	84.3	1.0	-0.30	16.7	75.8
77.34	5.0E-04	0.00	78.2	2.98	7	138.1	128.8	266.9	23.1	42	76.5	1.0	-0.30	19.5	64.5
77.84	1.0E-15	0.00	58.3	5.06	6	103.9	353.4	457.3	33.9	40	68.4	1.0	-0.45	95.1	196.8
78.33	1.0E-15	0.00	44.9	5.64	1	80.9	UnDef	UnDef	100.0	38	61.2	1.0	-0.48	UnDef	UnDef
78.82	5.0E-06	0.15	20.6	4.80	1	38.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
79.31	5.0E-06	0.21	18.4	3.79	4	34.8	139.2	174.0	48.7	UnDef	UnDef	6.0	UnDef	17.0	34.1

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1124-0955-1123
Job No: 03-312sh
Client: LFR
Project: CPT SITE INVESTIGATION
Site: L.B. GOLF CTR.
Location: CPT-02
Engineer: C. NARDI
CPT Date: 03/20/11
CPT Time: 22:42
CPT File: 312C02.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): 10.36 (ft): 34.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	58.0	0.21	0.36	5.3	8	120.9	0.01	0.01	0.00	2.00	13.9	27.8	UnDef	0.21
0.74	49.6	0.47	0.96	2.9	7	117.8	0.04	0.04	0.00	2.00	15.8	31.7	UnDef	0.16
1.23	36.9	0.22	0.60	-0.1	7	117.8	0.07	0.07	0.00	2.00	11.8	23.5	UnDef	0.11
1.72	27.5	0.08	0.28	-0.4	7	117.8	0.10	0.10	0.00	2.00	8.8	17.6	UnDef	0.09
2.21	32.9	0.13	0.39	0.3	7	117.8	0.13	0.13	0.00	2.00	10.5	21.0	UnDef	0.10
2.71	52.9	0.29	0.56	0.9	8	120.9	0.16	0.16	0.00	2.00	12.7	25.3	UnDef	0.18
3.20	70.6	0.36	0.51	1.9	8	120.9	0.19	0.19	0.00	2.00	16.9	33.8	UnDef	0.31
3.61	96.0	0.52	0.54	1.1	8	120.9	0.22	0.22	0.00	2.00	23.0	46.0	UnDef	0.00
4.02	81.4	0.91	1.11	2.5	8	120.9	0.24	0.24	0.00	2.00	19.5	39.0	UnDef	0.43
4.51	76.7	1.30	1.69	4.8	7	117.8	0.27	0.27	0.00	1.93	24.5	47.2	UnDef	0.43
5.00	81.3	1.39	1.71	3.0	7	117.8	0.30	0.30	0.00	1.83	26.0	47.5	UnDef	0.44
5.50	90.3	2.38	2.63	13.4	6	114.6	0.33	0.33	0.00	1.75	34.6	60.5	7.20	0.00
5.99	71.7	2.32	3.24	3.5	6	114.6	0.36	0.36	0.00	1.68	27.5	46.1	5.71	0.00
6.56	42.3	2.02	4.77	2.4	4	114.6	0.39	0.39	0.00	1.61	27.0	43.3	3.35	0.00
7.14	27.9	1.31	4.70	0.3	3	111.4	0.42	0.42	0.00	1.54	26.7	41.1	2.19	0.36
7.63	21.1	0.78	3.68	0.1	4	114.6	0.45	0.45	0.00	1.49	13.5	20.1	1.65	0.24
8.12	33.3	0.94	2.82	0.6	5	114.6	0.48	0.48	0.00	1.45	15.9	23.1	2.62	0.16
8.61	31.1	1.15	3.70	-0.3	5	114.6	0.50	0.50	0.00	1.41	14.9	21.0	2.45	0.24
9.10	26.4	1.05	3.98	-1.7	4	114.6	0.53	0.53	0.00	1.37	16.9	23.1	2.07	0.35
9.60	31.2	0.93	2.96	-1.4	5	114.6	0.56	0.56	0.00	1.34	15.0	20.0	2.45	0.18

Gregg In Situ, Inc.
Run No: 03-1124-0955-1123
CPT File: 312C02.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
10.09	28.8	1.10	3.81	-2.1	5	114.6	0.59	0.59	0.00	1.30	13.8	18.0	2.26	0.35
10.58	38.7	1.05	2.71	-1.1	6	114.6	0.62	0.62	0.00	1.27	14.8	18.9	3.04	0.18
11.07	72.9	1.50	2.06	-0.1	7	117.8	0.65	0.65	0.00	1.24	23.3	29.0	UnDef	0.26
11.56	61.5	1.55	2.52	-1.5	6	114.6	0.67	0.67	0.00	1.22	23.6	28.7	4.87	0.24
12.06	52.0	0.61	1.18	-0.5	7	117.8	0.70	0.70	0.00	1.19	16.6	19.8	UnDef	0.13
12.55	51.5	0.60	1.16	-0.7	7	117.8	0.73	0.73	0.00	1.17	16.4	19.2	UnDef	0.13
13.04	45.1	0.63	1.41	-1.6	7	117.8	0.76	0.76	0.00	1.15	14.4	16.5	UnDef	0.13
13.53	32.1	0.35	1.10	-1.9	7	117.8	0.79	0.79	0.00	1.13	10.2	11.5	UnDef	0.10
14.03	24.5	0.25	1.02	-2.4	6	114.6	0.82	0.82	0.00	1.11	9.4	10.4	1.89	0.10
14.52	22.3	0.17	0.78	-2.5	6	114.6	0.85	0.85	0.00	1.09	8.6	9.3	1.72	0.09
15.01	21.6	0.12	0.57	-2.5	7	117.8	0.88	0.88	0.00	1.07	6.9	7.4	UnDef	0.09
15.50	18.5	0.11	0.58	-1.5	6	114.6	0.90	0.90	0.00	1.05	7.1	7.5	1.41	0.09
15.99	19.0	0.13	0.67	-2.0	6	114.6	0.93	0.93	0.00	1.04	7.3	7.5	1.44	0.09
16.49	20.3	0.18	0.90	-2.2	6	114.6	0.96	0.96	0.00	1.02	7.8	8.0	1.55	0.10
16.98	21.2	0.20	0.95	-2.3	6	114.6	0.99	0.99	0.00	1.01	8.1	8.2	1.62	0.10
17.47	21.9	0.35	1.62	-2.5	6	114.6	1.02	1.02	0.00	0.99	8.4	8.3	1.67	0.19
17.96	17.7	0.35	1.97	-3.0	6	114.6	1.04	1.04	0.00	0.98	6.8	6.6	1.33	0.14
18.45	27.4	0.48	1.77	-1.9	6	114.6	1.07	1.07	0.00	0.97	10.5	10.1	2.11	0.19
18.95	31.4	1.01	3.21	1.2	5	114.6	1.10	1.10	0.00	0.95	15.0	14.3	2.43	0.37
19.44	22.1	0.60	2.73	5.9	5	114.6	1.13	1.13	0.00	0.94	10.6	10.0	1.68	0.18
19.93	31.8	0.72	2.26	2.6	6	114.6	1.16	1.16	0.00	0.93	12.2	11.3	2.46	0.36
20.42	27.1	0.68	2.51	-2.3	6	114.6	1.19	1.19	0.00	0.92	10.4	9.5	2.07	0.25
20.92	31.4	0.75	2.38	-2.2	6	114.6	1.21	1.21	0.00	0.91	12.0	10.9	2.42	0.33
21.41	37.2	0.70	1.87	17.6	6	114.6	1.24	1.24	0.00	0.90	14.3	12.8	2.88	0.20
21.90	107.5	1.02	0.94	21.3	8	120.9	1.27	1.27	0.00	0.89	25.7	22.8	UnDef	0.22
22.39	94.7	1.18	1.25	-1.1	8	120.9	1.30	1.30	0.00	0.88	22.7	19.9	UnDef	0.21
22.88	64.9	1.09	1.68	-2.1	7	117.8	1.33	1.33	0.00	0.87	20.7	18.0	UnDef	0.19
23.38	46.0	1.40	3.04	5.6	6	114.6	1.36	1.36	0.00	0.86	17.6	15.1	3.57	0.00
23.87	41.3	0.98	2.36	5.5	6	114.6	1.39	1.39	0.00	0.85	15.8	13.4	3.20	0.42
24.36	24.4	0.61	2.50	13.0	6	114.6	1.42	1.42	0.00	0.84	9.3	7.8	1.84	0.17
24.85	29.4	0.59	2.00	12.3	6	114.6	1.44	1.44	0.00	0.83	11.3	9.4	2.23	0.24
25.34	32.3	0.68	2.11	4.1	6	114.6	1.47	1.47	0.00	0.82	12.4	10.2	2.46	0.29
25.84	19.4	0.46	2.36	0.0	5	114.6	1.50	1.50	0.00	0.82	9.3	7.6	1.43	0.12
26.33	22.2	0.33	1.48	7.6	6	114.6	1.53	1.53	0.00	0.81	8.5	6.9	1.65	0.14
26.82	62.0	0.82	1.32	10.3	7	117.8	1.56	1.56	0.00	0.80	19.8	15.9	UnDef	0.16
27.31	103.7	1.14	1.10	2.9	8	120.9	1.59	1.59	0.00	0.79	24.8	19.7	UnDef	0.21
27.80	48.5	1.38	2.85	0.6	6	114.6	1.62	1.62	0.00	0.79	18.6	14.6	3.75	0.00
28.30	22.3	0.59	2.64	12.9	5	114.6	1.64	1.64	0.00	0.78	10.7	8.3	1.65	0.14
28.79	23.3	0.32	1.39	33.7	6	114.6	1.67	1.67	0.00	0.77	8.9	6.9	1.73	0.14
29.28	19.9	0.45	2.28	40.2	6	114.6	1.70	1.70	0.00	0.77	7.6	5.9	1.46	0.12
29.77	44.6	0.81	1.82	97.0	7	117.8	1.73	1.73	0.00	0.76	14.2	10.8	UnDef	0.32
30.27	68.9	1.77	2.58	20.5	6	114.6	1.76	1.76	0.00	0.75	26.4	19.9	5.37	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
30.76	61.6	1.82	2.95	15.7	6	114.6	1.79	1.79	0.00	0.75	23.6	17.7	4.78	0.00
31.17	54.7	1.33	2.44	26.6	6	114.6	1.81	1.81	0.00	0.74	21.0	15.6	4.23	0.00
31.58	78.1	0.81	1.04	2.1	8	120.9	1.83	1.83	0.00	0.74	18.7	13.8	UnDef	0.16
32.07	73.6	0.61	0.83	1.6	8	120.9	1.86	1.86	0.00	0.73	17.6	12.9	UnDef	0.14
32.56	45.3	0.67	1.49	-1.9	7	117.8	1.89	1.89	0.00	0.73	14.4	10.5	UnDef	0.24
33.05	36.6	0.97	2.64	0.0	6	114.6	1.92	1.92	0.00	0.72	14.0	10.1	2.77	0.28
33.55	26.0	0.63	2.43	9.7	6	114.6	1.95	1.95	0.00	0.72	10.0	7.1	1.93	0.15
34.04	51.1	1.08	2.11	12.4	6	114.6	1.98	1.98	0.00	0.71	19.6	13.9	3.93	0.00
34.53	104.9	2.57	2.45	34.5	7	117.8	2.01	1.99	0.02	0.71	33.5	23.7	UnDef	0.00
35.02	90.5	2.25	2.48	22.5	7	117.8	2.03	2.00	0.03	0.71	28.9	20.4	UnDef	0.00
35.51	121.8	4.31	3.54	0.6	6	114.6	2.06	2.02	0.05	0.70	46.7	32.9	9.58	0.00
36.01	139.9	4.62	3.30	1.1	6	114.6	2.09	2.03	0.06	0.70	53.6	37.6	11.02	0.00
36.50	75.6	1.95	2.58	-2.5	6	114.6	2.12	2.04	0.08	0.70	29.0	20.3	5.88	0.00
36.99	65.0	1.53	2.35	-3.3	6	114.6	2.15	2.05	0.09	0.70	24.9	17.4	5.03	0.00
37.48	68.4	2.54	3.72	-2.9	5	114.6	2.18	2.07	0.11	0.70	32.8	22.8	5.30	0.00
37.98	68.9	2.68	3.89	5.8	5	114.6	2.20	2.08	0.12	0.69	33.0	22.9	5.34	0.00
38.47	63.5	2.04	3.22	63.1	6	114.6	2.23	2.09	0.14	0.69	24.3	16.8	4.90	0.00
38.96	60.8	1.66	2.73	301.0	6	114.6	2.26	2.11	0.15	0.69	23.3	16.0	4.68	0.00
39.45	59.8	1.43	2.38	416.8	6	114.6	2.29	2.12	0.17	0.69	22.9	15.7	4.60	0.00
39.94	91.0	2.08	2.28	654.2	7	117.8	2.32	2.13	0.19	0.68	29.1	19.9	UnDef	0.45
40.44	152.8	4.07	2.66	455.1	7	117.8	2.35	2.15	0.20	0.68	48.8	33.3	UnDef	0.00
40.93	216.9	6.36	2.93	84.9	7	117.8	2.38	2.16	0.22	0.68	69.2	47.1	UnDef	0.00
41.42	271.2	6.90	2.54	4.2	7	117.8	2.40	2.17	0.23	0.68	86.6	58.7	UnDef	0.00
41.91	280.8	7.92	2.82	4.9	7	117.8	2.43	2.19	0.25	0.68	89.7	60.6	UnDef	0.00
42.40	248.0	10.23	4.12	37.9	12	120.9	2.46	2.20	0.26	0.67	118.8	80.1	UnDef	0.00
42.90	144.8	6.37	4.40	338.1	11	130.5	2.49	2.22	0.28	0.67	138.6	93.1	UnDef	0.00
43.39	153.8	5.47	3.56	242.9	6	114.6	2.52	2.23	0.29	0.67	58.9	39.5	12.10	0.00
43.88	199.4	6.60	3.31	19.2	12	120.9	2.55	2.24	0.31	0.67	95.5	63.7	UnDef	0.00
44.37	247.7	5.52	2.23	-1.8	7	117.8	2.58	2.26	0.32	0.67	79.1	52.6	UnDef	0.00
44.86	296.5	6.65	2.24	2.0	8	120.9	2.61	2.27	0.34	0.66	71.0	47.1	UnDef	0.00
45.36	386.6	9.85	2.55	11.2	12	120.9	2.64	2.29	0.35	0.66	185.1	122.4	UnDef	0.00
45.85	385.8	11.91	3.09	10.1	12	120.9	2.67	2.30	0.37	0.66	184.8	121.8	UnDef	0.00
46.34	319.4	10.85	3.40	-0.4	12	120.9	2.70	2.32	0.39	0.66	152.9	100.5	UnDef	0.00
46.83	196.0	7.01	3.58	-10.8	12	120.9	2.73	2.33	0.40	0.66	93.8	61.5	UnDef	0.00
47.33	91.6	4.18	4.56	13.4	11	130.5	2.76	2.35	0.42	0.65	87.7	57.3	UnDef	0.00
47.82	69.2	1.73	2.50	66.9	6	114.6	2.79	2.36	0.43	0.65	26.5	17.3	5.31	0.00
48.31	72.3	1.91	2.64	40.2	6	114.6	2.82	2.37	0.45	0.65	27.7	18.0	5.56	0.00
48.80	73.8	1.93	2.62	70.9	6	114.6	2.85	2.39	0.46	0.65	28.3	18.3	5.68	0.00
49.29	70.2	1.79	2.56	57.1	6	114.6	2.88	2.40	0.48	0.65	26.9	17.4	5.38	0.00
49.79	68.1	1.79	2.63	37.5	6	114.6	2.90	2.41	0.49	0.64	26.1	16.8	5.21	0.00
50.28	67.7	1.65	2.44	38.4	6	114.6	2.93	2.42	0.51	0.64	25.9	16.7	5.18	0.00
50.77	75.3	1.94	2.58	40.5	6	114.6	2.96	2.44	0.52	0.64	28.8	18.5	5.79	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
51.26	259.5	6.76	2.60	150.9	7	117.8	2.99	2.45	0.54	0.64	82.8	52.9	UnDef	0.00
51.75	570.9	10.74	1.88	32.5	8	120.9	3.02	2.46	0.55	0.64	136.7	87.1	UnDef	0.00
52.25	530.4	15.18	2.86	-12.6	12	120.9	3.05	2.48	0.57	0.64	254.0	161.3	UnDef	0.00
52.74	394.6	12.34	3.13	-15.4	12	120.9	3.08	2.49	0.59	0.63	188.9	119.7	UnDef	0.00
53.23	324.5	5.86	1.80	-17.8	8	120.9	3.11	2.51	0.60	0.63	77.7	49.1	UnDef	0.00
53.72	258.4	8.51	3.29	-17.5	12	120.9	3.14	2.52	0.62	0.63	123.7	77.9	UnDef	0.00
54.22	181.5	11.21	6.18	7.2	11	130.5	3.17	2.54	0.63	0.63	173.8	109.1	UnDef	0.00
54.71	335.0	13.88	4.14	128.2	12	120.9	3.20	2.55	0.65	0.63	160.4	100.4	UnDef	0.00
55.20	427.5	11.90	2.78	-2.7	12	120.9	3.23	2.57	0.66	0.62	204.7	127.8	UnDef	0.00
55.69	481.6	11.22	2.33	-3.4	12	120.9	3.26	2.58	0.68	0.62	230.6	143.5	UnDef	0.00
56.18	482.5	13.62	2.82	1.8	12	120.9	3.29	2.60	0.69	0.62	231.0	143.4	UnDef	0.00
56.68	413.1	11.52	2.79	1.2	12	120.9	3.32	2.61	0.71	0.62	197.8	122.5	UnDef	0.00
57.17	306.3	8.67	2.83	-9.4	12	120.9	3.35	2.62	0.72	0.62	146.7	90.5	UnDef	0.00
57.66	198.9	7.23	3.64	-13.2	12	120.9	3.38	2.64	0.74	0.62	95.2	58.6	UnDef	0.00
58.15	154.7	6.53	4.22	-6.2	11	130.5	3.41	2.65	0.75	0.61	148.1	90.9	UnDef	0.00
58.64	252.1	5.94	2.36	-15.7	7	117.8	3.44	2.67	0.77	0.61	80.5	49.3	UnDef	0.00
59.14	155.3	7.67	4.94	1.8	11	130.5	3.47	2.69	0.78	0.61	148.7	90.8	UnDef	0.00
59.63	67.1	3.24	4.84	10.0	11	130.5	3.50	2.70	0.80	0.61	64.2	39.1	UnDef	0.00
60.12	47.1	1.55	3.29	8.7	5	114.6	3.53	2.72	0.82	0.61	22.5	13.7	3.48	0.33
60.61	144.0	4.39	3.05	92.8	6	114.6	3.56	2.73	0.83	0.61	55.2	33.4	11.23	0.00
61.10	260.1	5.00	1.92	-17.6	8	120.9	3.59	2.74	0.85	0.60	62.3	37.6	UnDef	0.00
61.60	267.7	5.22	1.95	-18.0	8	120.9	3.62	2.76	0.86	0.60	64.1	38.6	UnDef	0.00
62.09	249.0	4.89	1.96	-17.7	8	120.9	3.65	2.77	0.88	0.60	59.6	35.8	UnDef	0.00
62.58	228.8	4.67	2.04	-18.2	8	120.9	3.68	2.79	0.89	0.60	54.8	32.8	UnDef	0.00
63.07	158.0	5.37	3.40	-17.9	6	114.6	3.71	2.80	0.91	0.60	60.5	36.2	12.34	0.00
63.57	213.6	7.17	3.36	-3.2	12	120.9	3.74	2.81	0.92	0.60	102.3	61.0	UnDef	0.00
64.06	232.8	8.31	3.57	-5.1	12	120.9	3.77	2.83	0.94	0.59	111.5	66.3	UnDef	0.00
64.55	159.7	5.58	3.50	-15.0	6	114.6	3.80	2.84	0.95	0.59	61.2	36.3	12.47	0.00
65.04	131.5	3.17	2.41	-19.7	7	117.8	3.82	2.85	0.97	0.59	42.0	24.9	UnDef	0.00
65.53	137.4	3.38	2.46	-23.3	7	117.8	3.85	2.87	0.98	0.59	43.9	25.9	UnDef	0.00
66.03	190.2	3.63	1.91	-23.6	8	120.9	3.88	2.88	1.00	0.59	45.5	26.8	UnDef	0.00
66.52	258.3	3.95	1.53	-21.2	8	120.9	3.91	2.90	1.02	0.59	61.8	36.3	UnDef	0.00
67.01	311.8	4.14	1.33	-18.2	9	124.1	3.94	2.91	1.03	0.59	59.7	35.0	UnDef	0.00
67.50	290.9	3.26	1.12	-17.5	9	124.1	3.97	2.93	1.05	0.58	55.7	32.6	UnDef	0.00
67.99	273.6	2.89	1.06	-15.9	9	124.1	4.00	2.94	1.06	0.58	52.4	30.6	UnDef	0.00
68.49	297.7	3.14	1.06	-16.1	9	124.1	4.03	2.96	1.08	0.58	57.0	33.2	UnDef	0.00
68.98	280.0	3.35	1.20	-17.5	9	124.1	4.06	2.97	1.09	0.58	53.6	31.1	UnDef	0.00
69.47	291.5	3.28	1.12	-15.9	9	124.1	4.09	2.99	1.11	0.58	55.8	32.3	UnDef	0.00
69.96	252.4	2.50	0.99	-15.5	9	124.1	4.13	3.00	1.12	0.58	48.3	27.9	UnDef	0.00
70.46	311.1	3.14	1.01	-14.2	9	124.1	4.16	3.02	1.14	0.58	59.6	34.3	UnDef	0.00
70.95	276.9	2.76	1.00	-17.4	9	124.1	4.19	3.03	1.15	0.57	53.0	30.5	UnDef	0.00
71.44	325.8	3.94	1.21	-18.6	9	124.1	4.22	3.05	1.17	0.57	62.4	35.7	UnDef	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
71.93	336.2	3.99	1.19	-15.9	9	124.1	4.25	3.06	1.18	0.57	64.4	36.8	UnDef	0.00
72.42	313.3	3.16	1.01	-14.2	9	124.1	4.28	3.08	1.20	0.57	60.0	34.2	UnDef	0.00
72.92	344.8	4.34	1.26	-10.5	9	124.1	4.31	3.09	1.22	0.57	66.0	37.5	UnDef	0.00
73.41	374.6	4.98	1.33	-5.6	9	124.1	4.34	3.11	1.23	0.57	71.8	40.7	UnDef	0.00
73.90	420.0	6.42	1.53	0.3	8	120.9	4.37	3.12	1.25	0.57	100.6	56.9	UnDef	0.00
74.39	452.8	7.12	1.57	10.1	8	120.9	4.40	3.14	1.26	0.56	108.4	61.2	UnDef	0.00
74.88	398.1	5.88	1.48	2.9	8	120.9	4.43	3.15	1.28	0.56	95.3	53.7	UnDef	0.00
75.38	378.6	5.05	1.33	-0.9	9	124.1	4.46	3.17	1.29	0.56	72.5	40.7	UnDef	0.00
75.87	255.8	5.32	2.08	-6.5	8	120.9	4.49	3.18	1.31	0.56	61.2	34.3	UnDef	0.00
76.36	102.1	2.96	2.90	52.7	6	114.6	4.52	3.20	1.32	0.56	39.1	21.9	7.80	0.00
76.85	83.3	2.45	2.94	343.4	6	114.6	4.55	3.21	1.34	0.56	31.9	17.8	6.30	0.00
77.34	50.0	0.98	1.95	336.8	7	117.8	4.58	3.22	1.35	0.56	16.0	8.9	UnDef	0.32
77.84	35.3	0.52	1.48	289.2	7	117.8	4.60	3.24	1.37	0.56	11.3	6.3	UnDef	0.16
78.33	32.1	0.44	1.38	360.7	6	114.6	4.63	3.25	1.38	0.55	12.3	6.8	2.20	0.14
78.82	29.0	0.36	1.23	375.1	6	114.6	4.66	3.26	1.40	0.55	11.1	6.2	1.95	0.13
79.31	26.2	0.26	0.98	347.3	7	117.8	4.69	3.27	1.41	0.55	8.4	4.6	UnDef	0.11

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1124-0955-1123
Job No: 03-312sh
Client: LFR
Project: CPT SITE INVESTIGATION
Site: L.B. GOLF CTR.
Location: CPT-02
Engineer: C. NARDI
CPT Date: 03/20/11
CPT Time: 22:42
CPT File: 312C02.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): 10.36 (ft): 34.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	QclN	DeltaQclN	QclNcs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-03	0.00	1000.0	0.36	10	111.1	0.0	111.1	0.0	50	95.0	1.0	-0.30	0.0	27.8
0.74	5.0E-04	0.00	1000.0	0.96	10	95.0	0.0	95.0	0.3	50	91.2	1.0	-0.40	0.0	31.7
1.23	5.0E-04	0.00	502.4	0.60	10	70.6	0.0	70.6	0.0	48	75.5	1.0	-0.29	0.0	23.5
1.72	5.0E-04	0.00	268.2	0.28	10	52.7	0.0	52.7	0.0	46	62.3	1.0	-0.17	0.0	17.6
2.21	5.0E-04	0.00	249.5	0.39	10	62.9	0.0	62.9	0.9	46	63.9	1.0	-0.19	0.0	21.0
2.71	5.0E-03	0.00	328.5	0.56	9	101.3	0.0	101.3	1.0	48	74.6	1.0	-0.24	0.0	25.3
3.20	5.0E-03	0.00	369.8	0.51	10	135.1	0.0	135.1	0.4	48	80.4	1.0	-0.25	0.0	33.8
3.61	5.0E-03	0.00	445.4	0.54	10	183.9	0.0	183.9	0.0	48	87.5	1.0	-0.27	0.0	46.0
4.02	5.0E-03	0.00	338.5	1.12	9	156.0	0.0	156.0	4.0	48	81.2	1.0	-0.31	0.0	39.0
4.51	5.0E-04	0.00	283.8	1.70	9	144.6	10.4	155.0	7.5	46	77.9	1.0	-0.35	2.1	49.2
5.00	5.0E-04	0.00	271.6	1.72	9	145.7	11.9	157.5	7.8	46	78.1	1.0	-0.35	2.4	49.9
5.50	5.0E-05	0.00	275.3	2.64	12	154.6	UnDef	UnDef	0.0	46	79.8	10.0	-0.43	UnDef	UnDef
5.99	5.0E-05	0.00	200.9	3.26	12	117.7	UnDef	UnDef	0.0	46	71.9	10.0	-0.45	UnDef	UnDef
6.56	5.0E-07	0.00	108.0	4.82	11	66.4	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
7.14	5.0E-08	0.00	65.3	4.77	6	42.0	102.3	144.4	31.5	UnDef	UnDef	10.0	UnDef	32.8	73.9
7.63	5.0E-07	0.00	46.0	3.76	6	30.8	89.0	119.8	32.8	UnDef	UnDef	6.0	UnDef	17.4	37.6
8.12	5.0E-06	0.00	68.8	2.86	7	47.2	48.8	95.9	24.0	UnDef	UnDef	10.0	UnDef	10.8	33.8
8.61	5.0E-06	0.00	60.6	3.76	6	42.9	77.1	119.9	29.1	UnDef	UnDef	10.0	UnDef	14.1	35.1
9.10	5.0E-07	0.00	48.6	4.07	6	35.4	107.8	143.3	33.2	UnDef	UnDef	6.0	UnDef	20.6	43.7
9.60	5.0E-06	0.00	54.7	3.02	7	40.8	61.5	102.3	27.5	UnDef	UnDef	10.0	UnDef	12.0	32.0

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
10.09	5.0E-06	0.00	47.9	3.89	6	36.7	105.2	142.0	32.8	UnDef	UnDef	6.0	UnDef	15.5	33.5
10.58	5.0E-05	0.00	61.6	2.76	7	48.2	54.6	102.8	24.9	40	46.3	10.0	-0.26	9.4	28.2
11.07	5.0E-04	0.00	111.9	2.08	7	88.8	35.1	123.9	15.6	42	63.9	1.0	-0.28	6.2	35.2
11.56	5.0E-05	0.00	90.2	2.55	7	73.3	47.7	120.9	19.8	42	58.4	10.0	-0.29	9.4	38.1
12.06	5.0E-04	0.00	72.9	1.19	7	60.7	21.4	82.1	14.8	40	52.9	1.0	-0.17	3.9	23.6
12.55	5.0E-04	0.00	69.4	1.18	7	58.9	22.0	80.9	15.2	40	52.1	1.0	-0.17	3.9	23.1
13.04	5.0E-04	0.00	58.3	1.43	7	50.6	29.1	79.7	18.7	40	47.8	1.0	-0.17	4.9	21.4
13.53	5.0E-04	0.00	39.6	1.13	7	35.3	27.0	62.3	21.2	38	37.4	1.0	-0.11	4.3	15.8
14.03	5.0E-05	0.00	28.9	1.06	7	26.5	30.1	56.6	24.9	36	30.0	6.0	-0.07	5.2	15.5
14.52	5.0E-05	0.00	25.4	0.81	7	23.8	25.9	49.7	24.5	34	30.0	6.0	-0.04	4.5	13.8
15.01	5.0E-04	0.00	23.7	0.60	7	22.6	21.5	44.1	23.2	34	30.0	1.0	-0.01	3.2	10.6
15.50	5.0E-05	0.00	19.5	0.61	7	19.1	25.4	44.5	26.4	32	30.0	6.0	0.00	4.1	11.6
15.99	5.0E-05	0.00	19.3	0.70	7	19.2	29.5	48.7	27.7	32	30.0	6.0	-0.01	4.6	12.1
16.49	5.0E-05	0.00	20.2	0.95	7	20.3	38.5	58.9	29.5	34	30.0	6.0	-0.03	5.5	13.5
16.98	5.0E-05	0.00	20.4	0.99	7	20.9	40.6	61.4	29.7	34	30.0	6.0	-0.04	5.7	13.9
17.47	5.0E-05	0.00	20.5	1.70	6	21.2	84.9	106.2	35.3	34	30.0	6.0	-0.08	8.3	16.6
17.96	5.0E-05	-0.01	15.9	2.09	6	16.9	67.7	84.6	42.7	32	30.0	6.0	-0.07	6.6	13.3
18.45	5.0E-05	0.00	24.5	1.84	6	25.9	79.2	105.1	33.2	34	30.0	6.0	-0.10	9.0	19.2
18.95	5.0E-06	0.00	27.5	3.33	6	29.3	117.2	146.5	39.2	UnDef	UnDef	6.0	UnDef	14.3	28.7
19.44	5.0E-06	0.01	18.6	2.88	6	20.4	81.5	101.9	44.2	UnDef	UnDef	6.0	UnDef	10.0	19.9
19.93	5.0E-05	0.00	26.5	2.34	6	29.0	115.3	144.3	34.9	36	31.8	6.0	-0.14	11.3	22.7
20.42	5.0E-05	0.00	21.8	2.62	6	24.3	97.3	121.7	39.8	34	30.0	6.0	-0.13	9.5	19.1
20.92	5.0E-05	0.00	24.9	2.48	6	27.9	111.6	139.5	36.8	34	30.7	6.0	-0.14	10.9	21.8
21.41	5.0E-05	0.02	29.0	1.93	7	32.7	75.5	108.2	31.1	36	35.2	6.0	-0.13	9.9	22.7
21.90	5.0E-03	0.01	83.6	0.96	9	93.3	20.9	114.3							

Interpretation Output - Release 1.00.19e
Run No: 03-1124-0955-1123
Job No: 03-312sh
Client: LFR
Project: CPT SITE INVESTIGATION
Site: L.B. GOLF CTR.
Location: CPT-02
Engineer: C. NARDI
CPT Date: 03/20/11
CPT Time: 22:42
CPT File: 312C02.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): 10.36 (ft): 34.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20

Used Unit Weights Assigned to Soil Zones

Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
0.25	58.0	0.21	0.36	5.3	8	120.9	0.01	0.01	0.00	2.00	13.9	27.8	UnDef	0.21
0.74	49.6	0.47	0.96	2.9	7	117.8	0.04	0.04	0.00	2.00	15.8	31.7	UnDef	0.16
1.23	36.9	0.22	0.60	-0.1	7	117.8	0.07	0.07	0.00	2.00	11.8	23.5	UnDef	0.11
1.72	27.5	0.08	0.28	-0.4	7	117.8	0.10	0.10	0.00	2.00	8.8	17.6	UnDef	0.09
2.21	32.9	0.13	0.39	0.3	7	117.8	0.13	0.13	0.00	2.00	10.5	21.0	UnDef	0.10
2.71	52.9	0.29	0.56	0.9	8	120.9	0.16	0.16	0.00	2.00	12.7	25.3	UnDef	0.18
3.20	70.6	0.36	0.51	1.9	8	120.9	0.19	0.19	0.00	2.00	16.9	33.8	UnDef	0.31
3.61	96.0	0.52	0.54	1.1	8	120.9	0.22	0.22	0.00	2.00	23.0	46.0	UnDef	0.00
4.02	81.4	0.91	1.11	2.5	8	120.9	0.24	0.24	0.00	2.00	19.5	39.0	UnDef	0.43
4.51	76.7	1.30	1.69	4.8	7	117.8	0.27	0.27	0.00	1.93	24.5	47.2	UnDef	0.43
5.00	81.3	1.39	1.71	3.0	7	117.8	0.30	0.30	0.00	1.83	26.0	47.5	UnDef	0.44
5.50	90.3	2.38	2.63	13.4	6	114.6	0.33	0.33	0.00	1.75	34.6	60.5	7.20	0.00
5.99	71.7	2.32	3.24	3.5	6	114.6	0.36	0.36	0.00	1.68	27.5	46.1	5.71	0.00
6.56	42.3	2.02	4.77	2.4	4	114.6	0.39	0.39	0.00	1.61	27.0	43.3	3.35	0.00
7.14	27.9	1.31	4.70	0.3	3	111.4	0.42	0.42	0.00	1.54	26.7	41.1	2.19	0.36
7.63	21.1	0.78	3.68	0.1	4	114.6	0.45	0.45	0.00	1.49	13.5	20.1	1.65	0.24
8.12	33.3	0.94	2.82	0.6	5	114.6	0.48	0.48	0.00	1.45	15.9	23.1	2.62	0.16
8.61	31.1	1.15	3.70	-0.3	5	114.6	0.50	0.50	0.00	1.41	14.9	21.0	2.45	0.24
9.10	26.4	1.05	3.98	-1.7	4	114.6	0.53	0.53	0.00	1.37	16.9	23.1	2.07	0.35
9.60	31.2	0.93	2.96	-1.4	5	114.6	0.56	0.56	0.00	1.34	15.0	20.0	2.45	0.18

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
10.09	28.8	1.10	3.81	-2.1	5	114.6	0.59	0.59	0.00	1.30	13.8	18.0	2.26	0.35
10.58	38.7	1.05	2.71	-1.1	6	114.6	0.62	0.62	0.00	1.27	14.8	18.9	3.04	0.18
11.07	72.9	1.50	2.06	-0.1	7	117.8	0.65	0.65	0.00	1.24	23.3	29.0	UnDef	0.26
11.56	61.5	1.55	2.52	-1.5	6	114.6	0.67	0.67	0.00	1.22	23.6	28.7	4.87	0.24
12.06	52.0	0.61	1.18	-0.5	7	117.8	0.70	0.70	0.00	1.19	16.6	19.8	UnDef	0.13
12.55	51.5	0.60	1.16	-0.7	7	117.8	0.73	0.73	0.00	1.17	16.4	19.2	UnDef	0.13
13.04	45.1	0.63	1.41	-1.6	7	117.8	0.76	0.76	0.00	1.15	14.4	16.5	UnDef	0.13
13.53	32.1	0.35	1.10	-1.9	7	117.8	0.79	0.79	0.00	1.13	10.2	11.5	UnDef	0.10
14.03	24.5	0.25	1.02	-2.4	6	114.6	0.82	0.82	0.00	1.11	9.4	10.4	1.89	0.10
14.52	22.3	0.17	0.78	-2.5	6	114.6	0.85	0.85	0.00	1.09	8.6	9.3	1.72	0.09
15.01	21.6	0.12	0.57	-2.5	7	117.8	0.88	0.88	0.00	1.07	6.9	7.4	UnDef	0.09
15.50	18.5	0.11	0.58	-1.5	6	114.6	0.90	0.90	0.00	1.05	7.1	7.5	1.41	0.09
15.99	19.0	0.13	0.67	-2.0	6	114.6	0.93	0.93	0.00	1.04	7.3	7.5	1.44	0.09
16.49	20.3	0.18	0.90	-2.2	6	114.6	0.96	0.96	0.00	1.02	7.8	8.0	1.55	0.10
16.98	21.2	0.20	0.95	-2.3	6	114.6	0.99	0.99	0.00	1.01	8.1	8.2	1.62	0.10
17.47	21.9	0.35	1.62	-2.5	6	114.6	1.02	1.02	0.00	0.99	8.4	8.3	1.67	0.19
17.96	17.7	0.35	1.97	-3.0	6	114.6	1.04	1.04	0.00	0.98	6.8	6.6	1.33	0.14
18.45	27.4	0.48	1.77	-1.9	6	114.6	1.07	1.07	0.00	0.97	10.5	10.1	2.11	0.19
18.95	31.4	1.01	3.21	1.2	5	114.6	1.10	1.10	0.00	0.95	15.0	14.3	2.43	0.37
19.44	22.1	0.60	2.73	5.9	5	114.6	1.13	1.13	0.00	0.94	10.6	10.0	1.68	0.18
19.93	31.8	0.72	2.26	2.6	6	114.6	1.16	1.16	0.00	0.93	12.2	11.3	2.46	0.36
20.42	27.1	0.68	2.51	-2.3	6	114.6	1.19	1.19	0.00	0.92	10.4	9.5	2.07	0.25
20.92	31.4	0.75	2.38	-2.2	6	114.6	1.21	1.21	0.00	0.91	12.0	10.9	2.42	0.33
21.41	37.2	0.70	1.87	17.6	6	114.6	1.24	1.24	0.00	0.90	14.3	12.8	2.88	0.20
21.90	107.5	1.02	0.94	21.3	8	120.9	1.27	1.27	0.00	0.89	25.7	22.8	UnDef	0.22
22.39	94.7	1.18	1.25	-1.1	8	120.9	1.30	1.30	0.00	0.88	22.7	19.9	UnDef	0.21
22.88	64.9	1.09	1.68	-2.1	7	117.8	1.33	1.33	0.00	0.87	20.7	18.0	UnDef	0.19
23.38	46.0	1.40	3.04	5.6	6	114.6	1.36	1.36	0.00	0.86	17.6	15.1	3.57	0.00
23.87	41.3	0.98	2.36	5.5	6	114.6	1.39	1.39	0.00	0.85	15.8	13.4	3.20	0.42
24.36	24.4	0.61	2.50	13.0	6	114.6	1.42	1.42	0.00	0.84	9.3	7.8	1.84	0.17
24.85	29.4	0.59	2.00	12.3	6	114.6	1.44	1.44	0.00	0.83	11.3	9.4	2.23	0.24
25.34	32.3	0.68	2.11	4.1	6	114.6	1.47	1.47	0.00	0.82	12.4	10.2	2.46	0.29
25.84	19.4	0.46	2.36	0.0	5	114.6	1.50	1.50	0.00	0.82	9.3	7.6	1.43	0.12
26.33	22.2	0.33	1.48	7.6	6	114.6	1.53	1.53	0.00	0.81	8.5	6.9	1.65	0.14
26.82	62.0	0.82	1.32	10.3	7	117.8	1.56	1.56	0.00	0.80	19.8	15.9	UnDef	0.16
27.31	103.7	1.14	1.10	2.9	8	120.9	1.59	1.59	0.00	0.79	24.8	19.7	UnDef	0.21
27.80	48.5	1.38	2.85	0.6	6	114.6	1.62	1.62	0.00	0.79	18.6	14.6	3.75	0.00
28.30	22.3	0.59	2.64	12.9	5	114.6	1.64	1.64	0.00	0.78	10.7	8.3	1.65	0.14
28.79	23.3	0.32	1.39	33.7	6	114.6	1.67	1.67	0.00	0.77	8.9	6.9	1.73	0.14
29.28	19.9	0.45	2.28	40.2	6	114.6	1.70	1.70	0.00	0.77	7.6	5.9	1.46	0.12
29.77	44.6	0.81	1.82	97.0	7	117.8	1.73	1.73	0.00	0.76	14.2	10.8	UnDef	0.32
30.27	68.9	1.77	2.58	20.5	6	114.6	1.76	1.76	0.00	0.75	26.4	19.9	5.37	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60	Su (tsf)	CRR
30.76	61.6	1.82	2.95	15.7	6	114.6	1.79	1.79	0.00	0.75	23.6	17.7	4.78	0.00
31.17	54.7	1.33	2.44	26.6	6	114.6	1.81	1.81	0.00	0.74	21.0	15.6	4.23	0.00
31.58	78.1	0.81	1.04	2.1	8	120.9	1.83	1.83	0.00	0.74	18.7	13.8	UnDef	0.16
32.07	73.6	0.61	0.83	1.6	8	120.9	1.86	1.86	0.00	0.73	17.6	12.9	UnDef	0.14
32.56	45.3	0.67	1.49	-1.9	7	117.8	1.89	1.89	0.00	0.73	14.4	10.5	UnDef	0.24
33.05	36.6	0.97	2.64	0.0	6	114.6	1.92	1.92	0.00	0.72	14.0	10.1	2.77	0.28
33.55	26.0	0.63	2.43	9.7	6	114.6	1.95	1.95	0.00	0.72	10.0	7.1	1.93	0.15
34.04	51.1	1.08	2.11	12.4	6	114.6	1.98	1.98	0.00	0.71	19.6	13.9	3.93	0.00
34.53	104.9	2.57	2.45	34.5	7	117.8	2.01	1.99	0.02	0.71	33.5	23.7	UnDef	0.00
35.02	90.5	2.25	2.48	22.5	7	117.8	2.03	2.00	0.03	0.71	28.9	20.4	UnDef	0.00
35.51	121.8	4.31	3.54	0.6	6	114.6	2.06	2.02	0.05	0.70	46.7	32.9	9.58	0.00
36.01	139.9	4.62	3.30	1.1	6	114.6	2.09	2.03	0.06	0.70	53.6	37.6	11.02	0.00
36.50	75.6	1.95	2.58	-2.5	6	114.6	2.12	2.04	0.08	0.70	29.0	20.3	5.88	0.00
36.99	65.0	1.53	2.35	-3.3	6	114.6	2.15	2.05	0.09	0.70	24.9	17.4	5.03	0.00
37.48	68.4	2.54	3.72	-2.9	5	114.6	2.18	2.07	0.11	0.70	32.8	22.8	5.30	0.00
37.98	68.9	2.68	3.89	5.8	5	114.6	2.20	2.08	0.12	0.69	33.0	22.9	5.34	0.00
38.47	63.5	2.04	3.22	63.1	6	114.6	2.23	2.09	0.14	0.69	24.3	16.8	4.90	0.00
38.96	60.8	1.66	2.73	301.0	6	114.6	2.26	2.11	0.15	0.69	23.3	16.0	4.68	0.00
39.45	59.8	1.43	2.38	416.8	6	114.6	2.29	2.12	0.17	0.69	22.9	15.7	4.60	0.00
39.94	91.0	2.08	2.28	654.2	7	117.8	2.32	2.13	0.19	0.68	29.1	19.9	UnDef	0.45
40.44	152.8	4.07	2.66	455.1	7	117.8	2.35	2.15	0.20	0.68	48.8	33.3	UnDef	0.00
40.93	216.9	6.36	2.93	84.9	7	117.8	2.38	2.16	0.22	0.68	69.2	47.1	UnDef	0.00
41.42	271.2	6.90	2.54	4.2	7	117.8	2.40	2.17	0.23	0.68	86.6	58.7	UnDef	0.00
41.91	280.8	7.92	2.82	4.9	7	117.8	2.43	2.19	0.25	0.68	89.7	60.6	UnDef	0.00
42.40	248.0	10.23	4.12	37.9	12	120.9	2.46	2.20	0.26	0.67	118.8	80.1	UnDef	0.00
42.90	144.8	6.37	4.40	338.1	11	130.5	2.49	2.22	0.28	0.67	138.6	93.1	UnDef	0.00
43.39	153.8	5.47	3.56	242.9	6	114.6	2.52	2.23	0.29	0.67	58.9	39.5	12.10	0.00
43.88	199.4	6.60	3.31	19.2	12	120.9	2.55	2.24	0.31	0.67	95.5	63.7	UnDef	0.00
44.37	247.7	5.52	2.23	-1.8	7	117.8	2.58	2.26	0.32	0.67	79.1	52.6	UnDef	0.00
44.86	296.5	6.65	2.24	2.0	8	120.9	2.61	2.27	0.34	0.66	71.0	47.1	UnDef	0.00
45.36	386.6	9.85	2.55	11.2	12	120.9	2.64	2.29	0.35	0.66	185.1	122.4	UnDef	0.00
45.85	385.8	11.91	3.09	10.1	12	120.9	2.67	2.30	0.37	0.66	184.8	121.8	UnDef	0.00
46.34	319.4	10.85	3.40	-0.4	12	120.9	2.70	2.32	0.39	0.66	152.9	100.5	UnDef	0.00
46.83	196.0	7.01	3.58	-10.8	12	120.9	2.73	2.33	0.40	0.66	93.8	61.5	UnDef	0.00
47.33	91.6	4.18	4.56	13.4	11	130.5	2.76	2.35	0.42	0.65	87.7	57.3	UnDef	0.00
47.82	69.2	1.73	2.50	66.9	6	114.6	2.79	2.36	0.43	0.65	26.5	17.3	5.31	0.00
48.31	72.3	1.91	2.64	40.2	6	114.6	2.82	2.37	0.45	0.65	27.7	18.0	5.56	0.00
48.80	73.8	1.93	2.62	70.9	6	114.6	2.85	2.39	0.46	0.65	28.3	18.3	5.68	0.00
49.29	70.2	1.79	2.56	57.1	6	114.6	2.88	2.40	0.48	0.65	26.9	17.4	5.38	0.00
49.79	68.1	1.79	2.63	37.5	6	114.6	2.90	2.41	0.49	0.64	26.1	16.8	5.21	0.00
50.28	67.7	1.65	2.44	38.4	6	114.6	2.93	2.42	0.51	0.64	25.9	16.7	5.18	0.00
50.77	75.3	1.94	2.58	40.5	6	114.6	2.96	2.44	0.52	0.64	28.8	18.5	5.79	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
51.26	259.5	6.76	2.60	150.9	7	117.8	2.99	2.45	0.54	0.64	82.8	52.9	UnDef	0.00
51.75	570.9	10.74	1.88	32.5	8	120.9	3.02	2.46	0.55	0.64	136.7	87.1	UnDef	0.00
52.25	530.4	15.18	2.86	-12.6	12	120.9	3.05	2.48	0.57	0.64	254.0	161.3	UnDef	0.00
52.74	394.6	12.34	3.13	-15.4	12	120.9	3.08	2.49	0.59	0.63	188.9	119.7	UnDef	0.00
53.23	324.5	5.86	1.80	-17.8	8	120.9	3.11	2.51	0.60	0.63	77.7	49.1	UnDef	0.00
53.72	258.4	8.51	3.29	-17.5	12	120.9	3.14	2.52	0.62	0.63	123.7	77.9	UnDef	0.00
54.22	181.5	11.21	6.18	7.2	11	130.5	3.17	2.54	0.63	0.63	173.8	109.1	UnDef	0.00
54.71	335.0	13.88	4.14	128.2	12	120.9	3.20	2.55	0.65	0.63	160.4	100.4	UnDef	0.00
55.20	427.5	11.90	2.78	-2.7	12	120.9	3.23	2.57	0.66	0.62	204.7	127.8	UnDef	0.00
55.69	481.6	11.22	2.33	-3.4	12	120.9	3.26	2.58	0.68	0.62	230.6	143.5	UnDef	0.00
56.18	482.5	13.62	2.82	1.8	12	120.9	3.29	2.60	0.69	0.62	231.0	143.4	UnDef	0.00
56.68	413.1	11.52	2.79	1.2	12	120.9	3.32	2.61	0.71	0.62	197.8	122.5	UnDef	0.00
57.17	306.3	8.67	2.83	-9.4	12	120.9	3.35	2.62	0.72	0.62	146.7	90.5	UnDef	0.00
57.66	198.9	7.23	3.64	-13.2	12	120.9	3.38	2.64	0.74	0.62	95.2	58.6	UnDef	0.00
58.15	154.7	6.53	4.22	-6.2	11	130.5	3.41	2.65	0.75	0.61	148.1	90.9	UnDef	0.00
58.64	252.1	5.94	2.36	-15.7	7	117.8	3.44	2.67	0.77	0.61	80.5	49.3	UnDef	0.00
59.14	155.3	7.67	4.94	1.8	11	130.5	3.47	2.69	0.78	0.61	148.7	90.8	UnDef	0.00
59.63	67.1	3.24	4.84	10.0	11	130.5	3.50	2.70	0.80	0.61	64.2	39.1	UnDef	0.00
60.12	47.1	1.55	3.29	8.7	5	114.6	3.53	2.72	0.82	0.61	22.5	13.7	3.48	0.33
60.61	144.0	4.39	3.05	92.8	6	114.6	3.56	2.73	0.83	0.61	55.2	33.4	11.23	0.00
61.10	260.1	5.00	1.92	-17.6	8	120.9	3.59	2.74	0.85	0.60	62.3	37.6	UnDef	0.00
61.60	267.7	5.22	1.95	-18.0	8	120.9	3.62	2.76	0.86	0.60	64.1	38.6	UnDef	0.00
62.09	249.0	4.89	1.96	-17.7	8	120.9	3.65	2.77	0.88	0.60	59.6	35.8	UnDef	0.00
62.58	228.8	4.67	2.04	-18.2	8	120.9	3.68	2.79	0.89	0.60	54.8	32.8	UnDef	0.00
63.07	158.0	5.37	3.40	-17.9	6	114.6	3.71	2.80	0.91	0.60	60.5	36.2	12.34	0.00
63.57	213.6	7.17	3.36	-3.2	12	120.9	3.74	2.81	0.92	0.60	102.3	61.0	UnDef	0.00
64.06	232.8	8.31	3.57	-5.1	12	120.9	3.77	2.83	0.94	0.59	111.5	66.3	UnDef	0.00
64.55	159.7	5.58	3.50	-15.0	6	114.6	3.80	2.84	0.95	0.59	61.2	36.3	12.47	0.00
65.04	131.5	3.17	2.41	-19.7	7	117.8	3.82	2.85	0.97	0.59	42.0	24.9	UnDef	0.00
65.53	137.4	3.38	2.46	-23.3	7	117.8	3.85	2.87	0.98	0.59	43.9	25.9	UnDef	0.00
66.03	190.2	3.63	1.91	-23.6	8	120.9	3.88	2.88	1.00	0.59	45.5	26.8	UnDef	0.00
66.52	258.3	3.95	1.53	-21.2	8	120.9	3.91	2.90	1.02	0.59	61.8	36.3	UnDef	0.00
67.01	311.8	4.14	1.33	-18.2	9	124.1	3.94	2.91	1.03	0.59	59.7	35.0	UnDef	0.00
67.50	290.9	3.26	1.12	-17.5	9	124.1	3.97	2.93	1.05	0.58	55.7	32.6	UnDef	0.00
67.99	273.6	2.89	1.06	-15.9	9	124.1	4.00	2.94	1.06	0.58	52.4	30.6	UnDef	0.00
68.49	297.7	3.14	1.06	-16.1	9	124.1	4.03	2.96	1.08	0.58	57.0	33.2	UnDef	0.00
68.98	280.0	3.35	1.20	-17.5	9	124.1	4.06	2.97	1.09	0.58	53.6	31.1	UnDef	0.00
69.47	291.5	3.28	1.12	-15.9	9	124.1	4.09	2.99	1.11	0.58	55.8	32.3	UnDef	0.00
69.96	252.4	2.50	0.99	-15.5	9	124.1	4.13	3.00	1.12	0.58	48.3	27.9	UnDef	0.00
70.46	311.1	3.14	1.01	-14.2	9	124.1	4.16	3.02	1.14	0.58	59.6	34.3	UnDef	0.00
70.95	276.9	2.76	1.00	-17.4	9	124.1	4.19	3.03	1.15	0.57	53.0	30.5	UnDef	0.00
71.44	325.8	3.94	1.21	-18.6	9	124.1	4.22	3.05	1.17	0.57	62.4	35.7	UnDef	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
71.93	336.2	3.99	1.19	-15.9	9	124.1	4.25	3.06	1.18	0.57	64.4	36.8	UnDef	0.00
72.42	313.3	3.16	1.01	-14.2	9	124.1	4.28	3.08	1.20	0.57	60.0	34.2	UnDef	0.00
72.92	344.8	4.34	1.26	-10.5	9	124.1	4.31	3.09	1.22	0.57	66.0	37.5	UnDef	0.00
73.41	374.6	4.98	1.33	-5.6	9	124.1	4.34	3.11	1.23	0.57	71.8	40.7	UnDef	0.00
73.90	420.0	6.42	1.53	0.3	8	120.9	4.37	3.12	1.25	0.57	100.6	56.9	UnDef	0.00
74.39	452.8	7.12	1.57	10.1	8	120.9	4.40	3.14	1.26	0.56	108.4	61.2	UnDef	0.00
74.88	398.1	5.88	1.48	2.9	8	120.9	4.43	3.15	1.28	0.56	95.3	53.7	UnDef	0.00
75.38	378.6	5.05	1.33	-0.9	9	124.1	4.46	3.17	1.29	0.56	72.5	40.7	UnDef	0.00
75.87	255.8	5.32	2.08	-6.5	8	120.9	4.49	3.18	1.31	0.56	61.2	34.3	UnDef	0.00
76.36	102.1	2.96	2.90	52.7	6	114.6	4.52	3.20	1.32	0.56	39.1	21.9	7.80	0.00
76.85	83.3	2.45	2.94	343.4	6	114.6	4.55	3.21	1.34	0.56	31.9	17.8	6.30	0.00
77.34	50.0	0.98	1.95	336.8	7	117.8	4.58	3.22	1.35	0.56	16.0	8.9	UnDef	0.32
77.84	35.3	0.52	1.48	289.2	7	117.8	4.60	3.24	1.37	0.56	11.3	6.3	UnDef	0.16
78.33	32.1	0.44	1.38	360.7	6	114.6	4.63	3.25	1.38	0.55	12.3	6.8	2.20	0.14
78.82	29.0	0.36	1.23	375.1	6	114.6	4.66	3.26	1.40	0.55	11.1	6.2	1.95	0.13
79.31	26.2	0.26	0.98	347.3	7	117.8	4.69	3.27	1.41	0.55	8.4	4.6	UnDef	0.11

Interpretation Output - Release 1.00.19e
Run No: 03-1124-0955-1123
Job No: 03-312sh
Client: LFR
Project: CPT SITE INVESTIGATION
Site: L.B. GOLF CTR.
Location: CPT-02
Engineer: C. NARDI
CPT Date: 03/20/11
CPT Time: 22:42
CPT File: 312C02.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): 10.36 (ft): 34.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-03	0.00	1000.0	0.36	10	111.1	0.0	111.1	0.0	50	95.0	1.0	-0.30	0.0	27.8
0.74	5.0E-04	0.00	1000.0	0.96	10	95.0	0.0	95.0	0.3	50	91.2	1.0	-0.40	0.0	31.7
1.23	5.0E-04	0.00	502.4	0.60	10	70.6	0.0	70.6	0.0	48	75.5	1.0	-0.29	0.0	23.5
1.72	5.0E-04	0.00	268.2	0.28	10	52.7	0.0	52.7	0.0	46	62.3	1.0	-0.17	0.0	17.6
2.21	5.0E-04	0.00	249.5	0.39	10	62.9	0.0	62.9	0.9	46	63.9	1.0	-0.19	0.0	21.0
2.71	5.0E-03	0.00	328.5	0.56	9	101.3	0.0	101.3	1.0	48	74.6	1.0	-0.24	0.0	25.3
3.20	5.0E-03	0.00	369.8	0.51	10	135.1	0.0	135.1	0.4	48	80.4	1.0	-0.25	0.0	33.8
3.61	5.0E-03	0.00	445.4	0.54	10	183.9	0.0	183.9	0.0	48	87.5	1.0	-0.27	0.0	46.0
4.02	5.0E-03	0.00	338.5	1.12	9	156.0	0.0	156.0	4.0	48	81.2	1.0	-0.31	0.0	39.0
4.51	5.0E-04	0.00	283.8	1.70	9	144.6	10.4	155.0	7.5	46	77.9	1.0	-0.35	2.1	49.2
5.00	5.0E-04	0.00	271.6	1.72	9	145.7	11.9	157.5	7.8	46	78.1	1.0	-0.35	2.4	49.9
5.50	5.0E-05	0.00	275.3	2.64	12	154.6	UnDef	UnDef	0.0	46	79.8	10.0	-0.43	UnDef	UnDef
5.99	5.0E-05	0.00	200.9	3.26	12	117.7	UnDef	UnDef	0.0	46	71.9	10.0	-0.45	UnDef	UnDef
6.56	5.0E-07	0.00	108.0	4.82	11	66.4	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
7.14	5.0E-08	0.00	65.3	4.77	6	42.0	102.3	144.4	31.5	UnDef	UnDef	10.0	UnDef	32.8	73.9
7.63	5.0E-07	0.00	46.0	3.76	6	30.8	89.0	119.8	32.8	UnDef	UnDef	6.0	UnDef	17.4	37.6
8.12	5.0E-06	0.00	68.8	2.86	7	47.2	48.8	95.9	24.0	UnDef	UnDef	10.0	UnDef	10.8	33.8
8.61	5.0E-06	0.00	60.6	3.76	6	42.9	77.1	119.9	29.1	UnDef	UnDef	10.0	UnDef	14.1	35.1
9.10	5.0E-07	0.00	48.6	4.07	6	35.4	107.8	143.3	33.2	UnDef	UnDef	6.0	UnDef	20.6	43.7
9.60	5.0E-06	0.00	54.7	3.02	7	40.8	61.5	102.3	27.5	UnDef	UnDef	10.0	UnDef	12.0	32.0

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	QclN	DeltaQclN	QclNcs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
10.09	5.0E-06	0.00	47.9	3.89	6	36.7	105.2	142.0	32.8	UnDef	UnDef	6.0	UnDef	15.5	33.5
10.58	5.0E-05	0.00	61.6	2.76	7	48.2	54.6	102.8	24.9	40	46.3	10.0	-0.26	9.4	28.2
11.07	5.0E-04	0.00	111.9	2.08	7	88.8	35.1	123.9	15.6	42	63.9	1.0	-0.28	6.2	35.2
11.56	5.0E-05	0.00	90.2	2.55	7	73.3	47.7	120.9	19.8	42	58.4	10.0	-0.29	9.4	38.1
12.06	5.0E-04	0.00	72.9	1.19	7	60.7	21.4	82.1	14.8	40	52.9	1.0	-0.17	3.9	23.6
12.55	5.0E-04	0.00	69.4	1.18	7	58.9	22.0	80.9	15.2	40	52.1	1.0	-0.17	3.9	23.1
13.04	5.0E-04	0.00	58.3	1.43	7	50.6	29.1	79.7	18.7	40	47.8	1.0	-0.17	4.9	21.4
13.53	5.0E-04	0.00	39.6	1.13	7	35.3	27.0	62.3	21.2	38	37.4	1.0	-0.11	4.3	15.8
14.03	5.0E-05	0.00	28.9	1.06	7	26.5	30.1	56.6	24.9	36	30.0	6.0	-0.07	5.2	15.5
14.52	5.0E-05	0.00	25.4	0.81	7	23.8	25.9	49.7	24.5	34	30.0	6.0	-0.04	4.5	13.8
15.01	5.0E-04	0.00	23.7	0.60	7	22.6	21.5	44.1	23.2	34	30.0	1.0	-0.01	3.2	10.6
15.50	5.0E-05	0.00	19.5	0.61	7	19.1	25.4	44.5	26.4	32	30.0	6.0	0.00	4.1	11.6
15.99	5.0E-05	0.00	19.3	0.70	7	19.2	29.5	48.7	27.7	32	30.0	6.0	-0.01	4.6	12.1
16.49	5.0E-05	0.00	20.2	0.95	7	20.3	38.5	58.9	29.5	34	30.0	6.0	-0.03	5.5	13.5
16.98	5.0E-05	0.00	20.4	0.99	7	20.9	40.6	61.4	29.7	34	30.0	6.0	-0.04	5.7	13.9
17.47	5.0E-05	0.00	20.5	1.70	6	21.2	84.9	106.2	35.3	34	30.0	6.0	-0.08	8.3	16.6
17.96	5.0E-05	-0.01	15.9	2.09	6	16.9	67.7	84.6	42.7	32	30.0	6.0	-0.07	6.6	13.3
18.45	5.0E-05	0.00	24.5	1.84	6	25.9	79.2	105.1	33.2	34	30.0	6.0	-0.10	9.0	19.2
18.95	5.0E-06	0.00	27.5	3.33	6	29.3	117.2	146.5	39.2	UnDef	UnDef	6.0	UnDef	14.3	28.7
19.44	5.0E-06	0.01	18.6	2.88	6	20.4	81.5	101.9	44.2	UnDef	UnDef	6.0	UnDef	10.0	19.9
19.93	5.0E-05	0.00	26.5	2.34	6	29.0	115.3	144.3	34.9	36	31.8	6.0	-0.14	11.3	22.7
20.42	5.0E-05	0.00	21.8	2.62	6	24.3	97.3	121.7	39.8	34	30.0	6.0	-0.13	9.5	19.1
20.92	5.0E-05	0.00	24.9	2.48	6	27.9	111.6	139.5	36.8	34	30.7	6.0	-0.14	10.9	21.8
21.41	5.0E-05	0.02	29.0	1.93	7	32.7	75.5	108.2	31.1	36	35.2	6.0	-0.13	9.9	22.7
21.90	5.0E-03	0.01	83.6	0.96	9	93.3	20.9	114.3	11.9	42	65.3	1.0	-0.17	3.0	25.8
22.39	5.0E-03	0.00	71.8	1.26	7	81.2	31.2	112.4	15.4	40	61.3	1.0	-0.18	4.2	24.0
22.88	5.0E-04	0.00	47.8	1.72	7	55.1	49.8	104.9	22.8	38	50.2	1.0	-0.17	7.6	25.6
23.38	5.0E-05	0.00	32.9	3.13	6	38.6	154.6	193.2	35.4	36	40.0	6.0	-0.20	15.1	30.3
23.87	5.0E-05	0.00	28.8	2.44	6	34.3	120.1	154.4	34.1	36	36.6	6.0	-0.15	12.7	26.2
24.36	5.0E-05	0.02	16.2	2.65	6	20.0	80.2	100.2	45.7	32	30.0	6.0	-0.09	7.8	15.7
24.85	5.0E-05	0.01	19.4	2.11	6	23.9	95.7	119.6	39.1	32	30.0	6.0	-0.09	9.4	18.7
25.34	5.0E-05	0.00	20.9	2.21	6	26.0	104.2	130.2	38.3	34	30.0	6.0	-0.10	10.2	20.4
25.84	5.0E-06	0.00	11.9	2.56	6	15.5	62.0	77.5	51.6	UnDef	UnDef	3.0	UnDef	7.6	15.2
26.33	5.0E-05	0.01	13.5	1.59	6	17.6	70.2	87.8	42.4	32	30.0	6.0	-0.03	6.9	13.7
26.82	5.0E-04	0.01	38.8	1.35	7	48.6	45.4	94.1	23.1	38	46.6	1.0	-0.12	6.9	22.7
27.31	5.0E-03	0.00	64.4	1.12	7	80.6	31.5	112.1	15.5	40	61.1	1.0	-0.16	4.2	23.9
27.80	5.0E-05	0.00	29.0	2.95	6	37.3	149.4	186.7	36.5	36	39.0	6.0	-0.18	14.6	29.2
28.30	5.0E-06	0.02	12.6	2.85	4	17.0	68.1	85.2	52.1	UnDef	UnDef	6.0	UnDef	8.3	16.7
28.79	5.0E-05	0.05	12.9	1.50	6	17.6	70.5	88.1	42.6	30	30.0	6.0	-0.02	6.9	13.8
29.28	5.0E-05	0.07	10.7	2.49	4	15.0	59.9	74.9	53.6	30	30.0	3.0	-0.03	5.9	11.7
29.77	5.0E-04	0.07	24.8	1.89	6	33.2	104.3	137.5	33.4	34	35.7	1.0	-0.10	9.8	20.6
30.27	5.0E-05	0.01	38.2	2.64	6	50.8	112.4	163.2	30.8	38	47.9	6.0	-0.19	15.1	35.0

Gregg In Situ, Inc. Page: 3b
Run No: 03-1124-0955-1123
CPT File: 312C02.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
30.76	5.0E-05	0.01	33.5	3.04	6	45.1	171.1	216.2	34.6	36	44.4	6.0	-0.20	17.3	35.0
31.17	5.0E-05	0.02	29.3	2.52	6	39.8	142.3	182.1	34.3	36	40.9	6.0	-0.16	14.9	30.5
31.58	5.0E-03	0.00	41.6	1.06	7	56.4	37.9	94.3	20.1	38	50.9	1.0	-0.11	4.6	18.4
32.07	5.0E-03	0.00	38.5	0.85	7	52.8	32.5	85.2	19.3	38	48.9	1.0	-0.08	4.0	16.9
32.56	5.0E-04	0.00	22.9	1.56	7	32.2	88.3	120.5	32.4	34	34.8	1.0	-0.08	8.9	19.4
33.05	5.0E-05	0.00	18.0	2.79	6	25.8	103.3	129.1	44.3	32	30.0	6.0	-0.11	10.1	20.2
33.55	5.0E-05	0.01	12.4	2.62	6	18.2	73.0	91.2	51.3	30	30.0	3.0	-0.06	7.1	14.3
34.04	5.0E-05	0.01	24.9	2.20	6	35.6	142.3	177.9	35.2	34	37.7	6.0	-0.12	13.9	27.9
34.53	5.0E-04	0.01	51.7	2.50	7	72.8	92.0	164.8	25.9	38	58.2	1.0	-0.22	12.7	36.5
35.02	5.0E-04	0.01	44.2	2.54	7	62.6	102.1	164.7	28.2	38	53.8	1.0	-0.21	12.9	33.4
35.51	5.0E-05	0.00	59.4	3.60	6	84.0	145.4	229.4	28.7	40	62.3	10.0	-0.31	21.6	54.5
36.01	5.0E-05	0.00	67.9	3.35	7	96.1	124.6	220.7	26.1	40	66.1	10.0	-0.31	20.5	58.2
36.50	5.0E-05	0.00	36.0	2.66	6	51.8	129.0	180.7	31.7	38	48.4	6.0	-0.19	16.3	36.6
36.99	5.0E-05	0.00	30.6	2.43	6	44.4	133.5	177.9	33.1	36	44.0	6.0	-0.16	15.4	32.8
37.48	5.0E-06	0.00	32.1	3.84	6	46.6	186.4	232.9	38.7	UnDef	UnDef	6.0	UnDef	22.8	45.6
37.98	5.0E-06	0.00	32.1	4.02	6	46.8	187.1	233.9	39.4	UnDef	UnDef	6.0	UnDef	22.9	45.8
38.47	5.0E-05	0.03	29.3	3.34	6	43.0	171.9	214.9	38.1	36	43.1	6.0	-0.19	16.8	33.7
38.96	5.0E-05	0.16	27.8	2.83	6	41.0	164.0	204.9	36.7	36	41.7	6.0	-0.14	16.0	32.1
39.45	5.0E-05	0.22	27.2	2.48	6	40.2	160.9	201.1	35.3	36	41.2	6.0	-0.12	15.7	31.5
39.94	5.0E-04	0.23	41.6	2.34	7	61.0	97.6	158.6	28.0	38	53.1	1.0	-0.16	12.5	32.4
40.44	5.0E-04	0.09	70.1	2.70	7	102.1	96.0	198.1	23.1	40	67.9	1.0	-0.26	14.5	47.8
40.93	5.0E-04	0.01	99.4	2.96	7	144.5	101.7	246.1	20.5	42	77.8	1.0	-0.33	16.4	63.5
41.42	5.0E-04	0.00	123.7	2.57	7	180.1	83.2	263.3	16.8	42	84.1	1.0	-0.33	14.5	73.2
41.91	5.0E-04	0.00	127.4	2.85	7	185.9	95.2	281.1	17.7	44	85.0	1.0	-0.35	16.3	76.9
42.40	1.0E-15	0.00	111.6	4.16	11	163.6	UnDef	UnDef	0.0	42	81.4	1.0	-0.46	UnDef	UnDef
42.90	1.0E-15	0.07	64.2	4.48	6	95.2	211.1	306.3	30.8	40	65.9	1.0	-0.39	70.6	163.7
43.39	5.0E-05	0.05	67.8	3.62	6	100.8	146.1	246.9	27.2	40	67.5	10.0	-0.33	23.2	62.6
43.88	1.0E-15	0.00	87.7	3.35	7	130.2	123.7	253.9	23.2	42	74.8	1.0	-0.35	27.9	91.7
44.37	5.0E-04	0.00	108.6	2.25	7	161.3	73.1	234.4	16.7	42	81.0	1.0	-0.29	12.8	65.4
44.86	5.0E-03	0.00	129.3	2.26	7	192.5	72.0	264.5	15.2	44	86.0	1.0	-0.31	9.7	56.8
45.36	1.0E-15	0.00	167.9	2.57	7	250.2	83.2	333.4	14.4	44	93.6	1.0	-0.37	22.7	145.1
45.85	1.0E-15	0.00	166.5	3.11	12	248.9	UnDef	UnDef	0.0	44	93.4	1.0	-0.41	UnDef	UnDef
46.34	1.0E-15	0.00	136.8	3.42	12	205.4	UnDef	UnDef	0.0	44	87.9	1.0	-0.41	UnDef	UnDef
46.83	1.0E-15	0.00	82.9	3.63	7	125.6	141.5	267.1	24.8	42	73.8	1.0	-0.36	30.5	91.9
47.33	1.0E-15	0.00	37.9	4.71	6	58.5	234.1	292.6	39.2	38	51.9	1.0	-0.33	57.3	114.6
47.82	5.0E-05	0.02	28.1	2.61	6	44.1	176.3	220.3	35.4	36	43.8	6.0	-0.15	17.3	34.5
48.31	5.0E-05	0.01	29.3	2.75	6	45.9	183.8	229.7	35.4	36	45.0	6.0	-0.17	18.0	36.0
48.80	5.0E-05	0.02	29.7	2.73	6	46.8	187.0	233.8	35.1	36	45.5	6.0	-0.17	18.3	36.6
49.29	5.0E-05	0.02	28.1	2.67	6	44.3	177.3	221.6	35.7	36	44.0	6.0	-0.16	17.4	34.7
49.79	5.0E-05	0.01	27.0	2.75	6	42.9	171.6	214.5	36.8	36	43.0	6.0	-0.16	16.8	33.6
50.28	5.0E-05	0.01	26.7	2.55	6	42.5	170.2	212.7	36.0	36	42.8	6.0	-0.15	16.7	33.3
50.77	5.0E-05	0.01	29.7	2.69	6	47.2	186.8	234.0	34.9	36	45.8	6.0	-0.17	18.4	36.9

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
51.26	5.0E-04	0.02	104.7	2.63	7	162.2	93.0	255.2	18.6	42	81.1	1.0	-0.31	15.6	68.5
51.75	5.0E-03	0.00	230.5	1.89	9	355.9	48.5	404.4	9.5	46	95.0	1.0	-0.35	7.1	94.1
52.25	1.0E-15	0.00	212.8	2.88	12	329.7	UnDef	UnDef	0.0	46	95.0	1.0	-0.42	UnDef	UnDef
52.74	1.0E-15	0.00	157.0	3.15	12	244.6	UnDef	UnDef	0.0	44	92.9	1.0	-0.41	UnDef	UnDef
53.23	5.0E-03	0.00	128.2	1.82	9	200.6	56.9	257.4	13.3	44	87.2	1.0	-0.28	7.9	56.9
53.72	1.0E-15	0.00	101.2	3.33	7	159.2	127.6	286.9	21.7	42	80.6	1.0	-0.37	30.0	108.0
54.22	1.0E-15	0.00	70.3	6.29	11	111.5	UnDef	UnDef	0.0	40	70.4	1.0	-0.74	UnDef	UnDef
54.71	1.0E-15	0.01	130.0	4.18	11	205.2	UnDef	UnDef	0.0	44	87.9	1.0	-0.48	UnDef	UnDef
55.20	1.0E-15	0.00	165.2	2.81	7	261.1	100.1	361.1	15.4	44	94.8	1.0	-0.38	26.8	154.5
55.69	1.0E-15	0.00	185.3	2.35	7	293.3	76.8	370.2	12.8	44	95.0	1.0	-0.36	21.4	165.0
56.18	1.0E-15	0.00	184.6	2.84	7	293.1	102.1	395.1	14.7	44	95.0	1.0	-0.40	27.6	171.0
56.68	1.0E-15	0.00	157.0	2.81	7	250.2	101.4	351.6	15.8	44	93.6	1.0	-0.38	26.9	149.4
57.17	1.0E-15	0.00	115.4	2.86	7	185.0	105.9	290.9	18.6	42	84.9	1.0	-0.34	26.7	117.2
57.66	1.0E-15	-0.01	74.1	3.70	6	119.8	159.7	279.5	26.4	40	72.5	1.0	-0.35	32.6	91.2
58.15	1.0E-15	-0.01	57.0	4.32	6	92.9	235.3	328.2	31.9	40	65.2	1.0	-0.37	73.9	164.9
58.64	5.0E-04	-0.01	93.1	2.39	7	151.0	87.5	238.5	18.7	42	79.1	1.0	-0.28	14.7	63.9
59.14	1.0E-15	0.00	56.5	5.05	6	92.7	334.2	427.0	34.3	40	65.1	1.0	-0.45	87.1	177.8
59.63	1.0E-15	-0.01	23.5	5.11	1	39.9	UnDef	UnDef	100.0	34	41.0	1.0	-0.28	UnDef	UnDef
60.12	5.0E-06	-0.01	16.0	3.55	4	28.0	111.8	139.8	50.4	UnDef	UnDef	6.0	UnDef	13.7	27.4
60.61	5.0E-05	0.01	51.4	3.13	6	85.3	148.3	233.6	28.8	38	62.7	10.0	-0.26	22.0	55.4
61.10	5.0E-03	-0.01	93.5	1.95	7	153.7	69.5	223.2	16.7	42	79.6	1.0	-0.25	9.1	46.7
61.60	5.0E-03	-0.01	95.8	1.98	7	157.8	70.5	228.2	16.6	42	80.3	1.0	-0.26	9.2	47.8
62.09	5.0E-03	-0.01	88.5	1.99	7	146.4	72.4	218.8	17.4	42	78.2	1.0	-0.25	9.3	45.2
62.58	5.0E-03	-0.01	80.8	2.07	7	134.2	77.5	211.6	18.7	42	75.7	1.0	-0.25	9.7	42.6
63.07	5.0E-05	-0.01	55.1	3.48	6	92.4	170.6	263.0	29.3	40	65.0	10.0	-0.29	24.7	60.9
63.57	1.0E-15	0.00	74.6	3.42	7	124.6	147.3	272.0	25.3	40	73.6	1.0	-0.33	31.3	92.2
64.06	1.0E-15	0.00	81.0	3.63	7	135.5	157.0	292.5	25.1	42	76.0	1.0	-0.36	33.5	99.8
64.55	5.0E-05	-0.01	54.9	3.58	6	92.7	180.2	272.9	29.7	40	65.1	10.0	-0.30	25.5	61.8
65.04	5.0E-04	-0.01	44.7	2.49	7	76.2	118.2	194.4	27.8	38	59.5	1.0	-0.21	15.3	40.1
65.53	5.0E-04	-0.01	46.6	2.53	7	79.4	119.0	198.4	27.5	38	60.7	1.0	-0.21	15.5	41.4
66.03	5.0E-03	-0.01	64.6	1.95	7	109.6	77.3	186.9	20.5	40	69.9	1.0	-0.21	9.4	36.2
66.52	5.0E-03	-0.01	87.8	1.55	7	148.5	55.4	204.0	15.2	42	78.6	1.0	-0.22	7.4	43.8
67.01	5.0E-02	-0.01	105.7	1.34	9	178.8	43.5	222.3	12.3	42	83.9	1.0	-0.22	4.9	39.9
67.50	5.0E-02	-0.01	98.0	1.14	9	166.4	36.4	202.7	11.7	42	81.9	1.0	-0.20	4.1	36.7
67.99	5.0E-02	-0.01	91.6	1.07	9	156.1	35.0	191.1	11.9	42	80.0	1.0	-0.19	3.9	34.5
68.49	5.0E-02	-0.01	99.3	1.07	9	169.4	33.4	202.8	11.2	42	82.4	1.0	-0.19	3.8	37.0
68.98	5.0E-02	-0.01	92.8	1.21	9	158.9	40.9	199.9	12.7	42	80.6	1.0	-0.20	4.6	35.7
69.47	5.0E-02	-0.01	96.2	1.14	9	165.1	37.2	202.3	11.9	42	81.6	1.0	-0.20	4.2	36.5
69.96	5.0E-02	-0.01	82.7	1.01	9	142.5	34.6	177.1	12.3	42	77.4	1.0	-0.17	3.9	31.8
70.46	5.0E-02	-0.01	101.7	1.02	9	175.2	31.3	206.5	10.7	42	83.4	1.0	-0.19	3.6	37.9
70.95	5.0E-02	-0.01	89.9	1.01	9	155.6	33.3	188.9	11.6	42	79.9	1.0	-0.18	3.8	34.2
71.44	5.0E-02	-0.01	105.5	1.22	9	182.6	39.4	222.0	11.6	42	84.5	1.0	-0.21	4.5	40.2

Gregg In Situ, Inc.
Run No: 03-1124-0955-1123
CPT File: 312C02.COR

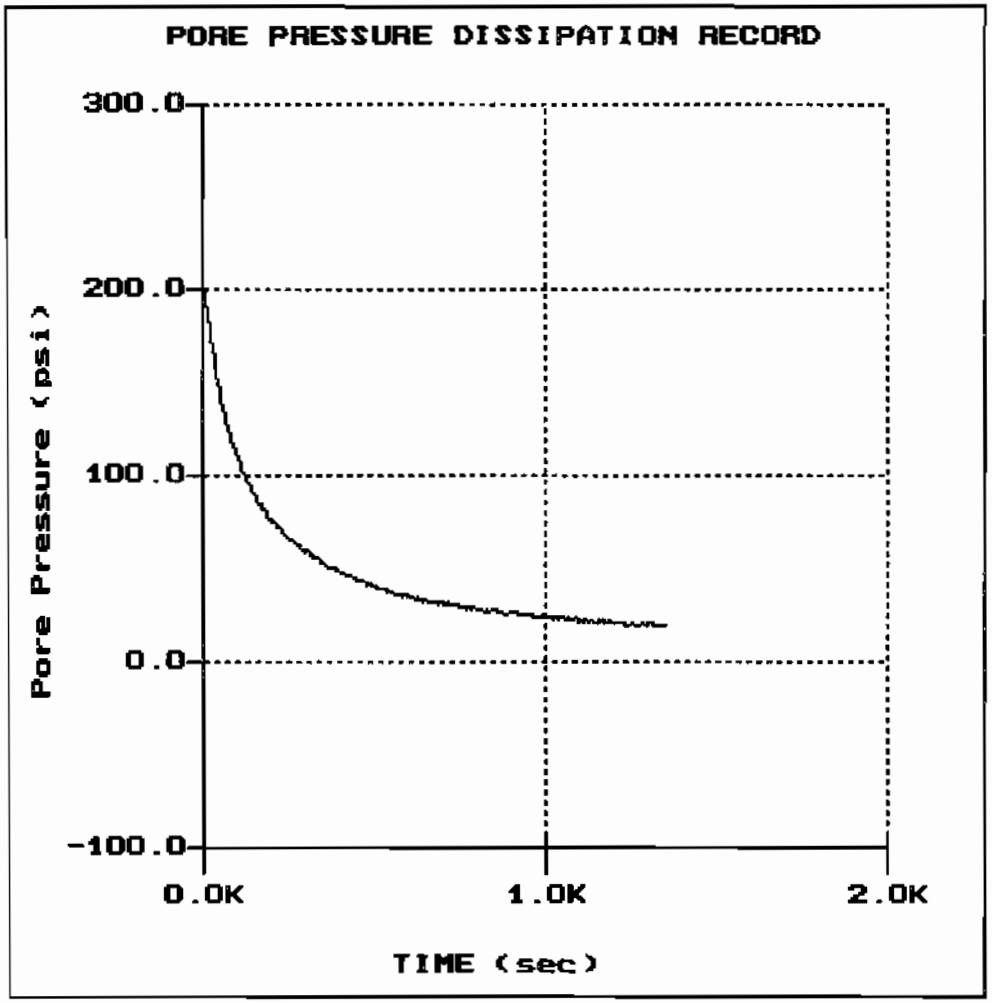
Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
71.93	5.0E-02	-0.01	108.4	1.20	9	188.0	37.9	225.8	11.3	42	85.4	1.0	-0.21	4.3	41.1
72.42	5.0E-02	-0.01	100.4	1.02	9	174.8	31.8	206.6	10.8	42	83.3	1.0	-0.19	3.6	37.9
72.92	5.0E-02	0.00	110.0	1.27	9	191.8	41.0	232.8	11.6	42	85.9	1.0	-0.22	4.6	42.2
73.41	5.0E-02	0.00	119.1	1.34	9	207.9	42.6	250.5	11.4	42	88.3	1.0	-0.23	4.8	45.5
73.90	5.0E-03	0.00	133.1	1.54	9	232.6	49.6	282.2	11.6	44	91.5	1.0	-0.26	7.0	63.9
74.39	5.0E-03	0.00	142.9	1.59	9	250.1	50.4	300.5	11.3	44	93.6	1.0	-0.27	7.2	68.4
74.88	5.0E-03	0.00	124.9	1.49	9	219.4	48.9	268.3	11.8	44	89.8	1.0	-0.25	6.9	60.6
75.38	5.0E-02	0.00	118.1	1.35	9	208.2	43.4	251.6	11.5	42	88.3	1.0	-0.23	4.9	45.7
75.87	5.0E-03	-0.01	79.0	2.12	7	140.3	85.4	225.7	19.2	42	77.0	1.0	-0.25	10.6	45.0
76.36	5.0E-05	0.00	30.5	3.04	6	55.9	223.5	279.3	36.1	36	50.6	6.0	-0.19	21.9	43.7
76.85	5.0E-05	0.12	24.5	3.11	6	45.5	182.0	227.5	40.2	34	44.7	6.0	-0.15	17.8	35.6
77.34	5.0E-04	0.20	14.1	2.15	6	27.2	109.0	136.2	45.5	32	30.0	1.0	-0.03	8.9	17.8
77.84	5.0E-04	0.25	9.5	1.71	6	19.2	76.9	96.1	51.0	30	30.0	1.0	0.03	6.3	12.5
78.33	5.0E-05	0.36	8.5	1.62	6	17.4	69.8	87.2	53.0	30	30.0	3.0	0.06	6.8	13.7
78.82	5.0E-05	0.42	7.5	1.47	6	15.7	62.9	78.7	54.8	30	30.0	3.0	0.09	6.2	12.3
79.31	5.0E-04	0.44	6.6	1.20	6	14.2	56.7	70.8	55.4	30	30.0	1.0	0.12	4.6	9.2

3.3 PORE PRESSURE DISSIPATION PLOTS

LFR

Site: L.B. GOLF CTR.
Location: CPT-02

Engineer: C. NARDI
Date:11:20:03 22:42



File: 312C02.PPC
Depth (m): 24.40
(ft): 80.05
Duration : 1350.0s
U-min: 18.88 1345.0s
U-max: 202.94 0.0s

APPENDIX

ELECTRICAL PIEZOCONE

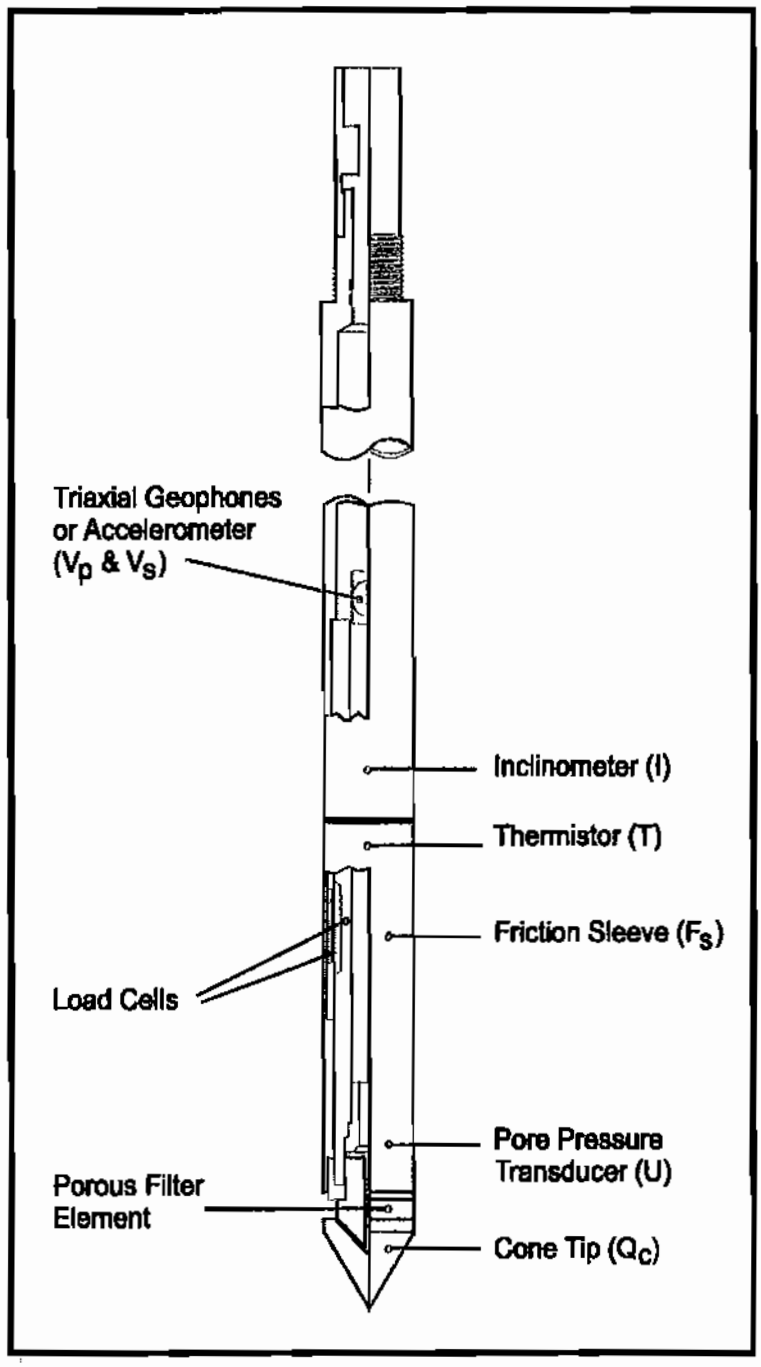
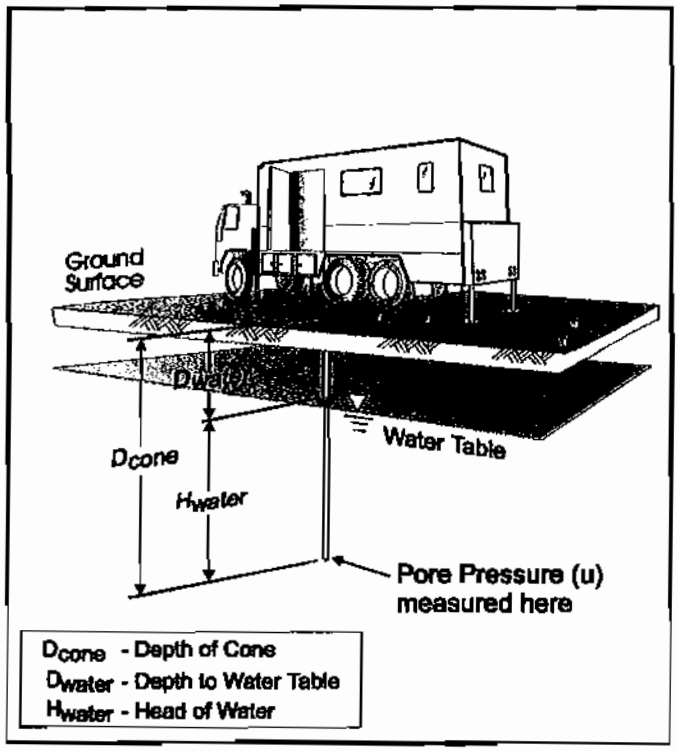
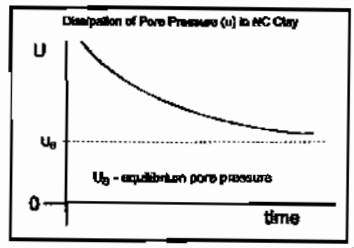
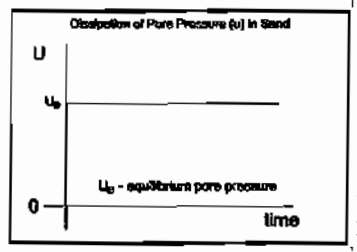


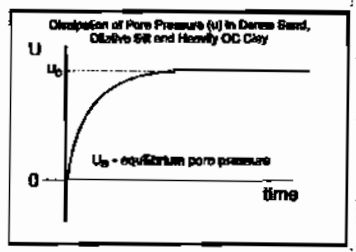
Figure 1

PPDT CORRELATION









Water Table Calculation

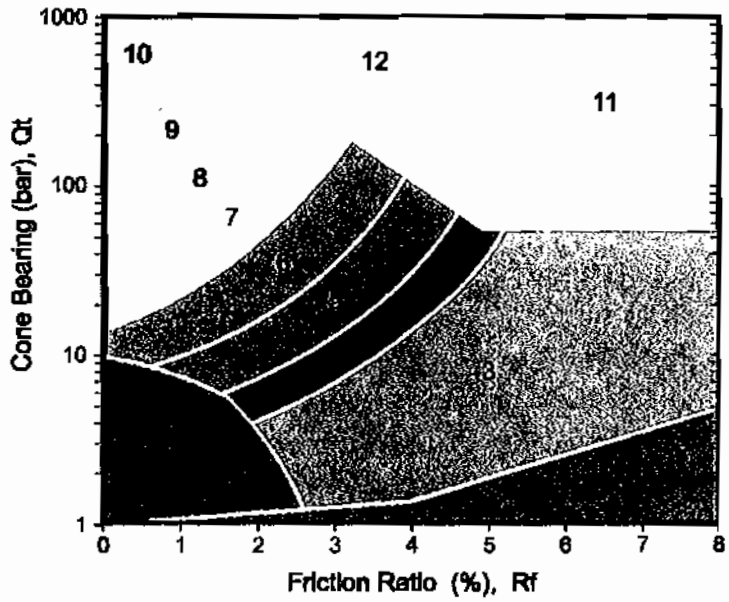
$$D_{water} = D_{cone} - H_{water}$$

where $H_{water} = U_e$ (depth units)

Useful Conversion Factors: 1psi = 0.704m = 2.31 feet (water)
1tsf = 0.958 bar = 13.9 psi
1m = 3.28 feet

Figure 2

SOIL CLASSIFICATION CHART



Zone	Q_t / N	Soil Behaviour Type
1	2	sensitive fine grained
2	1	organic material
3	1	clay
4	1.5	silty clay to clay
5	2	clayey silt to silty clay
6	2.5	sandy silt to clayey silt
7	3	silty sand to sandy silt
8	4	sand to silty sand
9	5	sand
10	6	gravelly sand to sand
11	1	very stiff fine grained *
12	2	sand to clayey sand *

* overconsolidated or cemented

After Robertson and Campenella

Figure 3

REFERENCES

Robertson, P.K. and Campanella, R.G. and Wightman, A., 1983 "SPT-CPT Correlations", Journal of the Geotechnical Division, ASCE, Vol. 109, No. GT11, Nov., pp. 1449-1460.

Robertson, P.K. and Wride C.E., 1998 "Evaluating Cyclic Liquefaction Potential Using The Cone Penetration Test", Journal of Geotechnical Division, Mar. 1998, pp. 442-459.

Robertson, P.K. and Campanella, R.G., Gillespie, D. and Greig, J., 1986, "Use of Piezometer Cone Data", Proceedings of In Situ 86, ASCE Specialty Conference, Blacksburg, Virginia.

Robertson, P.K. and Campanella, R.G., 1988, "Guidelines for Use, Interpretation and Application of the CPT and CPTU", UBC, Soil Mechanics Series No. 105, Civil Eng. Dept., Vancouver, B.C., V6T 1W5, Canada.

Robertson, P.K., Campanella, R.G., Gillespie, D. and Rice, A., 1986, "Seismic CPT to Measure In Situ Shear Wave Velocity", Journal of Geotechnical Engineering, ASCE, Vol. 112, No. 8, pp. 791-803.

Gregg In Situ CPT Interpretations as of January 7, 1999 (Release 1.00.19)

Gregg In Situ's interpretation routine should be considered a calculator of current published CPT correlations and is subject to change to reflect the current state of practice. The interpreted values are not considered valid for all soil types. The interpretations are presented only as a guide for geotechnical use and should be carefully scrutinized for consideretion in any geotechnical design. Reference to current literature is strongly recommended.

The CPT interpretations are based on values of tip, sleeve friction and pore pressure averaged over a user specified interval (typically 0.25m). Note that Qt is the recorded tip value, Qc, corrected for pore pressure effects. Since all Gregg In Situ cones have equal end area friction sleeves, pore pressure corrections to sleeve friction, Fs, are not required.

The tip correction is: $Qt = Qc + (1-a) \bullet Ud$

where: *Qt* is the corrected tip load
Qc is the recorded tip load
Ud is the recorded dynamic pore pressure
a is the Net Area Ratio for the cone (typically 0.85 for Gregg In Situ cones)

Effective vertical overburden stresses are calculated based on a hydrostatic distribution of equilibrium pore pressures below the water table or from a user defined equilibrium pore pressure profile (this can be obtained from CPT dissipation tests). The stress calculations use unit weights assigned to the Soil Behavior Type zones or from a user defined unit weight profile.

Details regarding the interpretation methods for all of the interpreted parameters is given in table 1. The appropriate references referred to in table 1 are listed in table 2.

The estimated Soil Behavior Type is based on the charts developed by Robertson and Campanella shown in figure 1.

Table 1 CPT Interpretation Methods

Interpreted Parameter	Description	Equation	Ref
Depth	mid layer depth		
AvgQt	Averaged corrected tip (Qt)	$AvgQt = \frac{1}{n}\sum_{i=1}^{n} Qt_i$	
AvgFs	Averaged sleeve friction (Fs)	$AvgFs = \frac{1}{n}\sum_{i=1}^{n} Fs_i$	
AvgRf	Averaged friction ratio (Rf)	$AvgRf = 100\% \bullet \frac{AvgFs}{AvgQt}$	
AvgUd	Averaged dynamic pore pressure (Ud)	$AvgUd = \frac{1}{n}\sum_{i=1}^{n} Ud_i$	
SBT	Soil Behavior Type as defined by Robertson and Campanella		1

U.Wt.	Unit Weight of soil determined from: 1) uniform value or 2) value assigned to each SBT zone 3) user supplied unit weight profile		
TStress	Total vertical overburden stress at mid layer depth	$TStress = \sum_{i=1}^{n} \gamma_i h_i$ where γ_i is layer unit weight h_i is layer thickness	
EStress	Effective vertical overburden stress at mid layer depth	$EStress = TStress - Ueq$	
Ueq	Equilibrium pore pressure determined from: 1) hydrostatic from water table depth 2) user supplied profile		
Cn	SPT N_{60} overburden correction factor	$Cn=(\sigma_v')^{-0.5}$ where σ_v' is in tsf $0.5 < C_n < 2.0$	
N_{60}	SPT N value at 60% energy calculated from Qt/N ratios assigned to each SBT zone		3
$(N1)_{60}$	SPT N_{60} value corrected for overburden pressure	$N1_{60} = Cn \bullet N_{60}$	3
$\Delta(N1)_{60}$	Equivalent Clean Sand Correction to $(N1)_{60}$	$\Delta(N1)_{60} = \frac{K_{SPT}}{1 - K_{SPT}} \bullet (N1)_{60}$ Where: K_{SPT} is defined as: 0.0 for FC < 5% 0.0167 • (FC - 5) for 5% < FC < 35% 0.5 for FC > 35% FC - Fines Content in %	7
$(N1)_{60cs}$	Equivalent Clean Sand $(N1)_{60}$	$(N1)_{60cs} = (N1)_{60} + \Delta(N1)_{60}$	7
Su	Undrained shear strength - Nkt is use selectable	$Su = \frac{Qt - \sigma_v}{N_{kt}}$	2
k	Coefficient of permeability (assigned to each SBT zone)		6
Bq	Pore pressure parameter	$Bq = \frac{\Delta u}{Qt - \sigma_v}$	2
Qtn	Normalized Qt for Soil Behavior Type classification as defined by Robertson, 1990	$Qtn = \frac{Qt - \sigma_v}{\sigma_v'}$	4
Rfn	Normalized Rf for Soil Behavior Type classification as defined by Robertson, 1990	$Rfn = 100\% \bullet \frac{f_s}{Qt - \sigma_v}$	4
SBTn	Normalized Soil Behavior Type (slightly modified from that published by Robertson, 1990. This version includes all the soil zones of the original non-normalized SBT chart - see figure 1)		4
Qc1	Normalized Qt for seismic analysis	$qc1 = qc \bullet (Pa/\sigma_v')^{0.5}$ where: Pa = atm. pressure	5
Qc1N	Dimensionless Normalized Qt1	qc1N = qc1 / Pa where: Pa = atm. pressure	

ΔQc1N1	Equivalent clean sand correction	$\Delta qc1N = \frac{K_{CPT}}{1 - K_{CPT}} \bullet qc1N$ Where: K_{CPT} is defined as: 0.0 for FC < 5% 0.0267 • (FC - 5) for 5% < FC < 35% 0.5 for FC > 35% FC - Fines Content in %	5
Qc1Ncs	Clean Sand equivalent Qc1N	$qc1Ncs = qc1N + \Delta qc1N$	5
Ic	Soil index for estimating grain characteristics	$Ic = [(3.47 - \log Q)^2 + (\log F + 1.22)^2]^{0.5}$	5
FC	Fines content (%)	$FC=1.75(Ic^{3.25}) - 3.7$ $FC=100$ for $Ic > 3.5$ $FC=0$ for $Ic < 1.26$ $FC = 5\%$ if $1.64 < Ic < 2.6$ AND $Rfn<0.5$	8
PHI	Friction Angle	Campanella and Robertson Durunoglu and Mitchel Janbu	1
Dr	Relative Density	Ticino Sand Hokksund Sand Schmertmann 1976 Jamiolkowski - All Sands	1
OCR	Over Consolidation Ratio		1
State Parameter			9
CRR	Cyclic Resistance Ratio		7

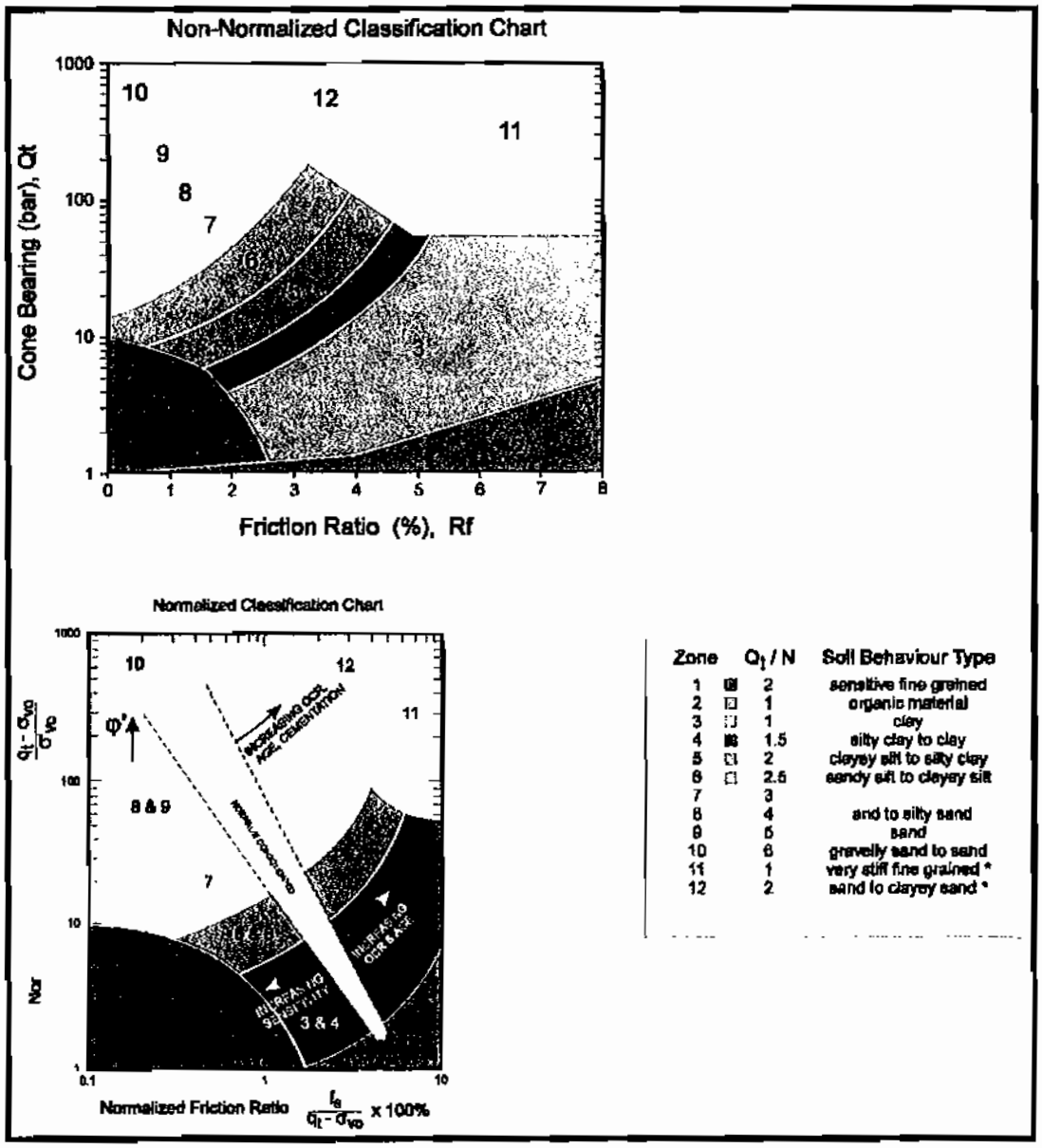


Figure 1 Non-Normalized and Normalized Soil Behavior Type Classification Charts

Table 2 References

No.	Reference
1	Robertson, P.K. and Campanella, R.G., 1986, "Guidelines for Use, Interpretation and Application of the CPT and CPTU", UBC, Soil Mechanics Series No. 105, Civil Eng. Dept., Vancouver, B.C., Canada
2	Robertson, P.K., Campanella, R.G., Gillespie, D. and Greig, J., 1986, "Use of Piezometer Cone Data", Proceedings of InSitu 86, ASCE Specialty Conference, Blacksburg, Virginia.
3	Robertson, P.K. and Campanella, R.G., 1989, "Guidelines for Geotechnical Design Using CPT and CPTU", UBC, Soil Mechanics Series No. 120, Civil Eng. Dept., Vancouver, B.C., Canada
4	Robertson, P.K., 1990, "Soil Classification Using the Cone Penetration Test", Canadian Geotechnical Journal, Volume 27.
5	Robertson, P.K. and Fear, C.E., 1995, "Liquefaction of Sands and its Evaluation", Keynote Lecture, First International Conference on Earthquake Geotechnical Engineering, Tokyo, Japan.
6	Gregg In Situ Internal Report
7	Robertson, P.K. and Wride, C.E., 1997, "Cyclic Liquefaction and its Evaluation Based on SPT and CPT", NCEER Workshop Paper, January 22, 1997
8	Wride, C.E. and Robertson, P.K., 1997, "Phase II Data Review Report (Massey and Kidd Sites, Fraser River Delta)", Volume 1 - Data Report (June 1997), University of Alberta.
9	Plewes, H.D., Davies, M.P. and Jefferies, M.G., 1992, "CPT Based Screening Procedure for Evaluating Liquefaction Susceptibility", 45th Canadian Geotechnical Conference, Toronto, Ontario, October 1992.

MW-5

N= 6204.97
E= 5079.67
EL= 34.70'RIM
EL= 34.19'PVC

BENCH MARK:

CITY OF LONG BEACH BENCH MARK #1720,: LOCATED AT THE NE INTER. OF WARDLOW RD. & PACIFIC PL. BRASS DISC STAMPED "CLB BM 1720, 2000" 586' N/N CURB WARDLOW RD., 1' E/CURB.

ELEVATION = 52.68'

MW-3

N= 5045.90
E= 5647.80
EL= 48.36' RIM
EL= 48.28' PVC

MW-6

N= 5025.68
E= 4921.25
EL= 29.15' RIM
EL= 28.97' PVC

N

1"=250

TITLE: *LOCATION OF WELLS*
3701 PACIFIC PLACE
LONG BEACH, CALIFORNIA

Hall & Foreman, Inc.
Civil Engineering • Planning • Surveying • Public Works
420 Exchange, Suite 100 • Irvine, CA 92602 • (714) 665-4500

JOB NO. 05084
S:\05084\SURVEY\FIELD TOPO\FT05084.dwg

DATE OF PREPARATION: 9/04/04

CITY OF LONG BEACH

DEPARTMENT OF HEALTH & HUMAN SERVICES

2525 Grand Avenue Long Beach, CA 90815-1765 (562) 570-4134 FAX (562) 570-4038

WELL PERMIT

Permit # 0991

Date: May 5, 2004

All work must be completed in accordance with Water Well Bulletin 74-81 and 74-90

Site Address:	3701 Pacific Place
Owner:	CRG Properties, Inc.
Owner Address:	Santa Ana, Ca
Consulting Firm:	LFR
Consulting Firm Address:	3150 Bristol St. Ste 250
Drilling Company:	BC2 Environmental
Drilling Company Address:	1835 E. Dawn Way Ste. B
Method of Construction/Destruction:	see attached
Number of Wells/Borings:	2 constructions

This permit valid for one year from date above

Steven Nakauchi, REHS IV
Cross-Connection/Water Program

CITY OF LONG BEACH

DEPARTMENT OF HEALTH & HUMAN SERVICES

2525 Grand Avenue Long Beach, CA 90815-1765 (562) 570-4134 FAX (562) 570-4038

0991

APPLICATION FOR WELL PERMIT

Date: 5/ 3/04

Type of Permit: (check)

☒ New Well Construction
☐ Destruction

Type of Well: (check)

☒ Monitoring (2)
☐ Cathodic
☐ Private Domestic
☐ Public Domestic
☐ Irrigation
☐ Soil Boring
☐ Vapor Extraction
☐ Other

Well Owner Name: CRA Properties, Inc.
Address: 4010 Chandler Ave.
City: Santa Ana, CA
Phone: 714-460-1031

Site Address 3701 Pacific Place
Site Map ☒ Site plan attached

Consulting Firm: LFR
Address: 3150 Bristol St. Ste. 250
City: Costa Mesa, CA
Phone: 714-444-0111

Drilling Company: BC² Environmental
Address: 1835 E. Dawn Way Ste. B
City: Fullerton, CA
Phone: 714 449-2990

Construction/Destruction Method
Type of casing, method of sealing, etc.
(Use additional sheet or attachments)

2" schedule 40 PVC casing, 0.020" slot screen, 25' screen, #2/12 silica sand extends 3' above slotted casing, hydrated bentonite chips 3' above sand pack, grout to surface, locking well monument, concrete.

Proposed Start Date:

5/6/04

To be done in accordance with Water Well Bulletin 74-81 & 74-90

I hereby agree to comply in every respect will all regulations of the Long Beach Department of Health and Human Services and with all ordinances and laws of the City of Long Beach and of the State of California pertaining to well construction, reconstruction and destruction. Upon completion of well and within ten days thereafter, I will furnish the Long Beach Department of Health and Human Services with a complete log of the well, giving date drilled, depth of well, all perforations in casing, and any other data deemed necessary by other City agencies.

Applicants Signature: Charlotte A Bushoffer
Print Name: Charlotte A Bushoffer

Disposition of Application: (For Office Use Only)

☒ Approved with Conditions
☐ Denied

Date: 5-5-04

If denied or approved with conditions, report reason or conditions here:

Approved By

APPENDIX H

Laboratory Reports Prepared for LFR

LABORATORY REPORT FOR DECEMBER 2003

SunStar Laboratories, Inc.

31 December 2003

Derrick Willis
LFR Levine-Fricke
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: Oil Operators/CRG Properties

Enclosed are the results of analyses for samples received by the laboratory on 12/19/03 12:37. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ben Beauchaine
Laboratory Supervisor

3002 Dow Avenue, Suite 212, Tustin, CA 92780 Phone (714) 505-4010 Fax (714) 505-4028

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T301367

Client: LFR

Address: 3156 BRISTOL ST, SUITE 250, COSTA MESA, CA

Phone: (714) 444-0111 Fax: (714) 444-0117

Project Manager: DERRICK WILLIS

Date: 12/19/03 Page: 1 Of 1

Project Name: OIL OPERATORS / CRG PROPERTIES

Collector: AXS Client Project #: 002-10231-002

Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260 B	EPA 8270	EPA 418.1	EPA 8015M (gasoline)	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	TPH-CC	METALS -- 6010		Laboratory ID #	Preservative	Comments	Total # of containers
MW3	12/19/03	9:55	H_2O	VOA BOTTLE			X							X	X		01	✓		3
~~MW3~~ TRIP BLANK	↓	—	H_2O	VOA			X										02	✓		2

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	12-19-03 12:37		12/19/03 12:37
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers

Chain of Custody seals Y/N/NA

Seals intact? Y/N/NA

Received good condition/cold

Turn around time: STANDARD

Notes

3°C

Sample disposal Instructions Disposal @ $2 00 each ___ Return to client ___ Pickup ___

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW3	T301367-01	Water	12/19/03	12/19/03
Trip Blank	T301367-02	Water	12/19/03	12/19/03

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	03/28/06 17:59

MW3

T301367-01(Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
				SunStar Laboratories, Inc.						
Extractable Petroleum Hydrocarbons by 8015										
C13-C28 (DRO)	ND		0.10	mg/l	1	3121915	12/19/03	12/19/03	EPA 8015m	
C6-C12	ND		0.10	"	"	"	"	"	"	
C29-C40 (MORO)	ND		0.10	"	"	"	"	"	"	
Metals by EPA 6010B										
Chromium	ND	6.9	50	ug/l	1	3122401	12/24/03	12/30/03	EPA 6010B	
Beryllium	ND	2.9	50	"	"	"	"	"	"	
Barium	**150**	1.9	50	"	"	"	"	"	"	
Arsenic	**72**	5.8	250	"	"	"	"	"	"	J
Antimony	ND	15	100	"	"	"	"	"	"	
Cobalt	ND	4.8	50	"	"	"	"	"	"	
Thallium	ND	9.8	100	"	"	"	"	"	"	
Vanadium	ND	31	100	"	"	"	"	"	"	
Cadmium	ND	4.9	50	"	"	"	"	"	"	
Silver	**84**	24	100	"	"	"	"	"	"	J
Selenium	ND	13	250	"	"	"	"	"	"	
Nickel	ND	6.2	50	"	"	"	"	"	"	
Molybdenum	**24**	4.6	50	"	"	"	"	"	"	J
Lead	ND	6.3	50	"	"	"	"	"	"	
Copper	ND	2.0	50	"	"	"	"	"	"	
Zinc	**12**	3.2	50	"	"	"	"	"	"	J
Cold Vapor Extraction EPA 7470/7471										
Mercury	**4.8**		0.50	ug/l	1	3123107	12/30/03	12/31/03	EPA 7470A Water	

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3 (T301367-01) Water	**Sampled: 12/19/03 09:55**	**Received: 12/19/03 12:37**							
Bromobenzene	ND	1.0	ug/l	1	3121901	12/19/03	12/20/03	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3 (T301367-01) Water	**Sampled: 12/19/03 09:55**	**Received: 12/19/03 12:37**							
Styrene	ND	1.0	ug/l	1	3121901	12/19/03	12/20/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1 2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*99.0 %*	*86-115*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*86-115*		"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*	*86-118*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Trip Blank (T301367-02) Water	**Sampled: 12/19/03 00:00**		**Received: 12/19/03 12:37**						
Bromobenzene	ND	1.0	ug/l	1	3121901	12/19/03	12/20/03	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Trip Blank (T301367-02) Water	**Sampled: 12/19/03 00:00**		**Received: 12/19/03 12:37**						
Styrene	ND	1.0	ug/l	1	3121901	12/19/03	12/20/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*86-115*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*86-115*		"	"	"	"	
Surrogate: Dibromofluoromethane		*97.8 %*	*86-118*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3121915 - EPA 3510C H2O										
Blank (3121915-BLK1)				Prepared & Analyzed: 12/19/03						
C6-C12	ND	0.10	mg/l							
C12-C28	ND	0.10	"							
C28-C40	ND	0.10	"							
LCS (3121915-BS1)				Prepared & Analyzed: 12/19/03						
C12-C28	43.8	0.10	mg/l	50.0		87.6	75-125			
Matrix Spike (3121915-MS1)	**Source: T301367-01**			Prepared & Analyzed: 12/19/03						
C12-C28	51.2	0.10	mg/l	50.0	ND	102	75-125			
Matrix Spike Dup (3121915-MSD1)	**Source: T301367-01**			Prepared: 12/19/03 Analyzed: 12/20/03						
C12-C28	46.5	0.10	mg/l	50.0	ND	93.0	75-125	9.62	20	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	03/28/06 17:59

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122401 - EPA 3020A											
Blank (3122401-BLK1)					Prepared: 12/24/03 Analyzed: 12/30/03						
Antimony	ND	15	100	ug/l							
Silver	ND	24	100	"							
Arsenic	ND	5.8	250	"							
Barium	ND	1.9	50	"							
Beryllium	ND	2.9	50	"							
Cadmium	ND	4.9	50	"							
Chromium	ND	6.9	50	"							
Cobalt	ND	4.8	50	"							
Copper	ND	2.0	50	"							
Lead	ND	6.3	50	"							
Molybdenum	ND	4.6	50	"							
Nickel	ND	6.2	50	"							
Selenium	ND	13	250	"							
Thallium	ND	9.8	100	"							
Vanadium	ND	31	100	"							
Zinc	ND	3.2	50	"							
LCS (3122401-BS1)					Prepared: 12/24/03 Analyzed: 12/30/03						
Arsenic	1070	5.8	250	ug/l	1050		102	65-135			
Barium	1120	1.9	50	"	1050		107	65-135			
Cadmium	1240	4.9	50	"	1050		118	65-135			
Chromium	1220	6.9	50	"	1050		116	65-135			
Lead	1200	6.3	50	"	1050		114	65-135			
Matrix Spike (3122401-MS1)		Source: T301367-01			Prepared: 12/24/03 Analyzed: 12/30/03						
Arsenic	1250	5.8	250	ug/l	1050	72	112	65-135			
Barium	1250	1.9	50	"	1050	150	105	65-135			
Cadmium	1210	4.9	50	"	1050	ND	115	65-135			
Chromium	1100	6.9	50	"	1050	ND	105	65-135			
Lead	1180	6.3	50	"	1050	ND	112	65-135			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	03/28/06 17:59

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122401 - EPA 3020A											
Matrix Spike Dup (3122401-MSD1)		**Source: T301367-01**			Prepared: 12/24/03 Analyzed: 12/30/03						
Arsenic	1290	5.8	250	ug/l	1050	72	116	65-135	3.15	30	
Barium	1270	1.9	50	"	1050	150	107	65-135	1.59	30	
Cadmium	1180	4.9	50	"	1050	ND	112	65-135	2.51	30	
Chromium	1050	6.9	50	"	1050	ND	100	65-135	4.65	30	
Lead	1180	6.3	50	"	1050	ND	112	65-135	0.00	30	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3123107 - EPA 7470A Water										
Blank (3123107-BLK1)				Prepared: 12/30/03		Analyzed: 12/31/03				
Mercury	ND	0.50	ug/l							
LCS (3123107-BS1)				Prepared: 12/30/03		Analyzed: 12/31/03				
Mercury	20.0	0.50	ug/l	20.0		100	75-125			
Matrix Spike (3123107-MS1)	**Source: T301367-01**			Prepared: 12/30/03		Analyzed: 12/31/03				
Mercury	23.0	0.50	ug/l	20.0	2.4	103	75-125			
Matrix Spike Dup (3123107-MSD1)	**Source: T301367-01**			Prepared: 12/30/03		Analyzed: 12/31/03				
Mercury	22.6	0.50	ug/l	20.0	2.4	101	75-125	1.75	20	

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3121901 - EPA 5030 Water MS										
Blank (3121901-BLK1)				Prepared: 12/19/03 Analyzed: 12/20/03						
Bromobenzene	ND	1.0	ug/l							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Carbon tetrachloride	ND	0.50	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
Dibromomethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	0.50	"							
1,1-Dichloroethane	ND	1.0	"							
1,2-Dichloroethane	ND	0.50	"							
1,1-Dichloroethene	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	0.50	"							
trans-1,3-Dichloropropene	ND	0.50	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							
p-Isopropyltoluene	ND	1.0	"							
Methylene chloride	ND	1.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3121901 - EPA 5030 Water MS										
Blank (3121901-BLK1)				Prepared: 12/19/03 Analyzed: 12/20/03						
Naphthalene	ND	1.0	ug/l							
n-Propylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,1,2-Tetrachloroethane	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl chloride	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	10	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Surrogate: Toluene-d8	*39.0*		"	*40.0*		*97.5*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*34.5*		"	*40.0*		*86.2*	*86-115*			
Surrogate: Dibromofluoromethane	*39.0*		"	*40.0*		*97.5*	*86-118*			

LFR Levine-Fricke	Project: Oil Operators/CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/31/03

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3121901 - EPA 5030 Water MS										
LCS (3121901-BS1)				Prepared: 12/19/03 Analyzed: 12/20/03						
Chlorobenzene	96.2	1.0	ug/l	100		96.2	75-125			
1,1-Dichloroethene	85.2	1.0	"	100		85.2	15-125			
Trichloroethene	96.8	1.0	"	100		96.8	75-125			
Benzene	106	0.50	"	100		106	75-125			
Toluene	108	0.50	"	100		108	75-125			
Surrogate: Toluene-d8	*39.9*		"	*40.0*		*99.8*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*37.1*		"	*40.0*		*92.8*	*86-115*			
Surrogate: Dibromofluoromethane	*38.6*		"	*40.0*		*96.5*	*86-118*			
Matrix Spike (3121901-MS1)	**Source: T301357-17**			Prepared: 12/19/03 Analyzed: 12/20/03						
Chlorobenzene	97.8	1.0	ug/l	100	ND	97.8	75-125			
1,1-Dichloroethene	83.5	1.0	"	100	ND	83.5	75-125			
Trichloroethene	94.6	1.0	"	100	ND	94.6	75-125			
Benzene	101	0.50	"	100	ND	101	75-125			
Toluene	112	0.50	"	100	ND	112	75-125			
Surrogate: Toluene-d8	*39.9*		"	*40.0*		*99.8*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*37.7*		"	*40.0*		*94.2*	*86-115*			
Surrogate: Dibromofluoromethane	*38.9*		"	*40.0*		*97.2*	*86-118*			
Matrix Spike Dup (3121901-MSD1)	**Source: T301357-17**			Prepared: 12/19/03 Analyzed: 12/20/03						
Chlorobenzene	96.3	1.0	ug/l	100	ND	96.3	75-125	1.55	20	
1,1-Dichloroethene	79.6	1.0	"	100	ND	79.6	75-125	4.78	20	
Trichloroethene	92.5	1.0	"	100	ND	92.5	75-125	2.24	20	
Benzene	99.4	0.50	"	100	ND	99.4	75-125	1.60	20	
Toluene	103	0.50	"	100	ND	103	75-125	8.37	20	
Surrogate: Toluene-d8	*40.1*		"	*40.0*		*100*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*36.8*		"	*40.0*		*92.0*	*86-115*			
Surrogate: Dibromofluoromethane	*38.4*		"	*40.0*		*96.0*	*86-118*			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Notes and Definitions

J	Detected but below the Standard Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

LABORATORY REPORTS FOR SOIL SAMPLES DECEMBER 2003

SunStar Laboratories, Inc.

26 November 2003

Derrick Willis
LFR Levine-Fricke
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: CRG Properties

Enclosed are the results of analyses for samples received by the laboratory on 11/21/03 15:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ben Beauchaine
Laboratory Supervisor

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T301254

Client: LFR

Address: 3150 BRISTOL ST 250 COSTA MESA CA 92626

Phone: 714-444-0111 Fax: 714-444-0117

Project Manager: DERRICK WILLD

Date: 11-21-03 Page: 1 Of 2

Project Name: 002-10231-00 / 002 ← CRG PROPERTIES

Collector: CLD Client Project #:

Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260 B	EPA 8270	EPA 418.1	EPA 8015M (gasoline)	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA 8082 PCBs	EPA 6010 METALS	EPA 8015 CARBON CHAIN	Laboratory ID #	*HOLD*	Comments	Total # of containers
B2-5	11-21-03	0035	SOIL														01	X	* ONLY RUN 8260, NOT ENOUGH SAMPLE. OK BY DERRICK 11/23 (BD)	1
B2-10	11-21-03	0040															02	X		
B2-15	11-21-03	0045															03	X		
B2-20	11-21-03	0055															04	X		
B2-25	11-21-03	0100															05	X		
B2-30	11-21-03	0105															06	X		
B2-35	11-21-03	0110															07	X		
B2-40	11-21-03	0115															08	X		
B2-45	11-21-03	0120															09	X		↓
B2-50	11-21-03	0125		5035			X	X						X	X	X	10			3
B3-5		0225															11	X		1
B3-10		0227															12	X		
B3-15		0230															13	X		
B3-20		0235															14	X		
B3-25		0240															15	X		↓

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	11-21-03 / 1550		11/24/03 1550
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 17

Chain of Custody seals Y/N/(NA)

Seals intact? Y/N/(NA)

Received good condition/cold: 3°

Turn around time: STD

Notes

Sample disposal Instructions: Disposal @ $2 00 each ___ Return to client ___ Pickup ___

T 301254

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

Client: LFR

Address: 3150 BRISTOL ST 250 COSTA MESA CA 92627

Phone: 714-444-0114 Fax: 714-444-0117

Project Manager: DERRICK WILLIS

Date: 11-21-03 Page: 2 Of 2

Project Name: 002-10231-00/002 CRG PROPERTIES

Collector: CLB Client Project #:

Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260 B	EPA 8270	EPA 418.1	EPA 8015M (gasoline) CARBON CHAIN	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA 6010 Lead Metals	5035 PLUGS		Laboratory ID #	Preservative # HOLD *	Comments	Total # of containers
B3 - 30	11-21-03	0250	SOIL														16	X		1
B3 - 35		0255															17	X		
B3 - 40		0300															18	X		
B3 - 45		0305															19	X		
B3 - 50		0305		5035			X	X		X				X	X		20			3
B5 - 5		0355															21	X		1
B5 - 10		0400															22	X		
B5 - 15		0402															23	X		
B5 - 20		0405															24	X		
B5 - 25		0410															25	X		
B5 - 30		0415															26	X		
B5 - 35		0420															27	X		
B5 - 40		0430															28	X		
B5 - 45		0436															29	X		
B5 - 50		0440		5035			X	X		X				X	X		30			3

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	11-21-03 1550		11/21/03 1550
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers 19

Chain of Custody seals Y/N/NA

Seals intact? Y/N/NA

Received good condition/cold 3°c

Turn around time: STD

Notes

Sample disposal Instructions: Disposal @ $2.00 each ___ Return to client ___ Pickup ___

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	11/26/03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B2-50	T301254-10	Soil	11/21/03	11/21/03
B3-50	T301254-20	Soil	11/21/03	11/21/03
B5-50	T301254-30	Soil	11/21/03	11/21/03

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	11/26/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301254-10) Soil	**Sampled: 11/21/03 01:25**	**Received: 11/21/03 15:50**							
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	11/26/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301254-10) Soil	**Sampled: 11/21/03 01:25**	**Received: 11/21/03 15:50**							
n-Propylbenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Styrene	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*86.1 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.2 %*	*74-121*		"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*81-125*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	11/26/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-50 (T301254-20) Soil Sampled: 11/21/03 03:05 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	11/26/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-50 (T301254-20) Soil	**Sampled: 11/21/03 03:05**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*87.7 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.1 %*	*74-121*		"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*81-125*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	11/26/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-50 (T301254-30) Soil	**Sampled: 11/21/03 04:40**	**Received: 11/21/03 15:50**							
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	11/26/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-50 (T301254-30) Soil	**Sampled: 11/21/03 04:40**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8	*79.7 %*	*81-117*			"	"	"	"	*S-LOW*
Surrogate: 4-Bromofluorobenzene	*94.7 %*	*74-121*			"	"	"	"	
Surrogate: Dibromofluoromethane	*122 %*	*81-125*			"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
Blank (3112401-BLK1)				Prepared & Analyzed: 11/24/03						
Bromobenzene	ND	2.0	ug/kg							
Bromochloromethane	ND	2.0	"							
Bromodichloromethane	ND	2.0	"							
Bromoform	ND	2.0	"							
Bromomethane	ND	2.0	"							
n-Butylbenzene	ND	2.0	"							
sec-Butylbenzene	ND	2.0	"							
tert-Butylbenzene	ND	2.0	"							
Carbon tetrachloride	ND	2.0	"							
Chlorobenzene	ND	2.0	"							
Chloroethane	ND	2.0	"							
Chloroform	ND	2.0	"							
Chloromethane	ND	2.0	"							
2-Chlorotoluene	ND	2.0	"							
4-Chlorotoluene	ND	2.0	"							
Dibromochloromethane	ND	2.0	"							
1,2-Dibromo-3-chloropropane	ND	2.0	"							
1,2-Dibromoethane (EDB)	ND	2.0	"							
Dibromomethane	ND	2.0	"							
1,2-Dichlorobenzene	ND	2.0	"							
1,3-Dichlorobenzene	ND	2.0	"							
1,4-Dichlorobenzene	ND	2.0	"							
Dichlorodifluoromethane	ND	2.0	"							
1,1-Dichloroethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
1,1-Dichloroethene	ND	2.0	"							
cis-1,2-Dichloroethene	ND	2.0	"							
trans-1,2-Dichloroethene	ND	2.0	"							
1,2-Dichloropropane	ND	2.0	"							
1,3-Dichloropropane	ND	2.0	"							
2,2-Dichloropropane	ND	2.0	"							
1,1-Dichloropropene	ND	2.0	"							
cis-1,3-Dichloropropene	ND	2.0	"							
trans-1,3-Dichloropropene	ND	2.0	"							
Hexachlorobutadiene	ND	2.0	"							
Isopropylbenzene	ND	2.0	"							
p-Isopropyltoluene	ND	2.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
Blank (3112401-BLK1)				Prepared & Analyzed: 11/24/03						
Methylene chloride	ND	2.0	ug/kg							
Naphthalene	ND	2.0	"							
n-Propylbenzene	ND	2.0	"							
Styrene	ND	2.0	"							
1,1,2,2-Tetrachloroethane	ND	2.0	"							
1,1,1,2-Tetrachloroethane	ND	2.0	"							
Tetrachloroethene	ND	2.0	"							
1,2,3-Trichlorobenzene	ND	2.0	"							
1,2,4-Trichlorobenzene	ND	2.0	"							
1,1,2-Trichloroethane	ND	2.0	"							
1,1,1-Trichloroethane	ND	2.0	"							
Trichloroethene	ND	2.0	"							
Trichlorofluoromethane	ND	2.0	"							
1,2,3-Trichloropropane	ND	2.0	"							
1,3,5-Trimethylbenzene	ND	2.0	"							
1,2,4-Trimethylbenzene	ND	2.0	"							
Vinyl chloride	ND	2.0	"							
Benzene	ND	2.0	"							
Toluene	ND	2.0	"							
Ethylbenzene	ND	2.0	"							
m,p-Xylene	ND	4.0	"							
o-Xylene	ND	2.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: Toluene-d8	*86.2*		"	*100*		*86.2*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*92.2*		"	*100*		*92.2*	*74-121*			
Surrogate: Dibromofluoromethane	*109*		"	*100*		*109*	*81-125*			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	11/26/03

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
LCS (3112401-BS1)				Prepared & Analyzed: 11/24/03						
Chlorobenzene	253	2.0	ug/kg	250		101	75-125			
1,1-Dichloroethene	234	2.0	"	250		93.6	15-125			
Trichloroethene	283	2.0	"	250		113	75-125			
Benzene	280	2.0	"	250		112	75-125			
Toluene	270	2.0	"	250		108	75-125			
Surrogate: Toluene-d8	*96.6*		"	*100*		*96.6*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*84.9*		"	*100*		*84.9*	*74-121*			
Surrogate: Dibromofluoromethane	*105*		"	*100*		*105*	*81-125*			
LCS Dup (3112401-BSD1)				Prepared & Analyzed: 11/24/03						
Chlorobenzene	253	2.0	ug/kg	250		101	75-125	0.00	20	
1,1-Dichloroethene	233	2.0	"	250		93.2	15-125	0.428	20	
Trichloroethene	285	2.0	"	250		114	75-125	0.704	20	
Benzene	282	2.0	"	250		113	75-125	0.712	20	
Toluene	270	2.0	"	250		108	75-125	0.00	20	
Surrogate: Toluene-d8	*95.0*		"	*100*		*95.0*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*86.8*		"	*100*		*86.8*	*74-121*			
Surrogate: Dibromofluoromethane	*102*		"	*100*		*102*	*81-125*			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Notes and Definitions

S-LOW	Low surrogate recovery confirmed as a matrix effect by a second analysis.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

SunStar Laboratories, Inc.

11 December 2003

Derrick Willis
LFR Levine-Fricke
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: CRG Properties

Enclosed are the results of analyses for samples received by the laboratory on 11/21/03 15:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ben Beauchaine
Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B2-30	T301254-06	Soil	11/21/03	11/21/03
B2-50	T301254-10	Soil	11/21/03	11/21/03
B3-10	T301254-12	Soil	11/21/03	11/21/03
B3-25	T301254-15	Soil	11/21/03	11/21/03
B3-30	T301254-16	Soil	11/21/03	11/21/03
B3-45	T301254-19	Soil	11/21/03	11/21/03
B3-50	T301254-20	Soil	11/21/03	11/21/03
B5-15	T301254-23	Soil	11/21/03	11/21/03
B5-20	T301254-24	Soil	11/21/03	11/21/03
B5-25	T301254-25	Soil	11/21/03	11/21/03
B5-40	T301254-28	Soil	11/21/03	11/21/03
B5-45	T301254-29	Soil	11/21/03	11/21/03
B5-50	T301254-30	Soil	11/21/03	11/21/03

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Extractable Petroleum Hydrocarbons by 8015

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-30 (T301254-06) Soil	**Sampled: 11/21/03 01:05**	**Received: 11/21/03 15:50**							
C6-C12	ND	10	mg/kg	1	3112612	11/26/03	11/29/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	
B3-10 (T301254-12) Soil	**Sampled: 11/21/03 02:27**	**Received: 11/21/03 15:50**							
C6-C12	ND	10	mg/kg	1	3112612	11/26/03	12/02/03	EPA 8015m	
C12-C28	**20000**	100	"	10	"	"	"	"	
C28-C40	**22000**	100	"	"	"	"	"	"	
B3-25 (T301254-15) Soil	**Sampled: 11/21/03 02:40**	**Received: 11/21/03 15:50**							
C12-C28	**350**	10	mg/kg	1	3120603	12/06/03	12/09/03	EPA 8015m	O-04
C28-C40	**280**	10	"	"	"	"	"	"	O-04
B3-30 (T301254-16) Soil	**Sampled: 11/21/03 02:50**	**Received: 11/21/03 15:50**							
C12-C28	**14000**	100	mg/kg	10	3120603	12/06/03	12/10/03	EPA 8015m	O-04
C28-C40	**11000**	100	"	"	"	"	"	"	O-04
B3-45 (T301254-19) Soil	**Sampled: 11/21/03 03:00**	**Received: 11/21/03 15:50**							
C12-C28	ND	10	mg/kg	1	3120603	12/06/03	12/09/03	EPA 8015m	O-04
C28-C40	ND	10	"	"	"	"	"	"	O-04
B5-15 (T301254-23) Soil	**Sampled: 11/21/03 04:02**	**Received: 11/21/03 15:50**							
C6-C12	ND	10	mg/kg	1	3112612	11/26/03	12/02/03	EPA 8015m	
C12-C28	**17000**	100	"	10	"	"	"	"	
C28-C40	**20000**	100	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Extractable Petroleum Hydrocarbons by 8015

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-20 (T301254-24) Soil	**Sampled: 11/21/03 04:05**	**Received: 11/21/03 15:50**							
C12-C28	**12000**	100	mg/kg	10	3120603	12/06/03	12/10/03	EPA 8015m	O-04
C28-C40	**11000**	100	"	"	"	"	"	"	O-04
B5-25 (T301254-25) Soil	**Sampled: 11/21/03 04:10**	**Received: 11/21/03 15:50**							
C12-C28	ND	10	mg/kg	1	3120603	12/06/03	12/09/03	EPA 8015m	O-04
C28-C40	ND	10	"	"	"	"	"	"	O-04
B5-40 (T301254-28) Soil	**Sampled: 11/21/03 04:30**	**Received: 11/21/03 15:50**							
C12-C28	ND	10	mg/kg	1	3120603	12/06/03	12/09/03	EPA 8015m	O-04
C28-C40	ND	10	"	"	"	"	"	"	O-04
B5-45 (T301254-29) Soil	**Sampled: 11/21/03 04:35**	**Received: 11/21/03 15:50**							
C12-C28	ND	10	mg/kg	1	3120603	12/06/03	12/09/03	EPA 8015m	O-04
C28-C40	ND	10	"	"	"	"	"	"	O-04

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-30 (T301254-06) Soil Sampled: 11/21/03 01:05 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-30 (T301254-06) Soil	**Sampled: 11/21/03 01:05**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*101 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301254-10) Soil Sampled: 11/21/03 01:25 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301254-10) Soil	**Sampled: 11/21/03 01:25**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*86.1 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.2 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-10 (T301254-12) Soil Sampled: 11/21/03 02:27 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3112607	11/26/03	11/28/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	**25**	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	**22**	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	**34**	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	**140**	2.0	"	"	"	"	"	"	
n-Propylbenzene	**36**	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-10 (T301254-12) Soil	**Sampled: 11/21/03 02:27**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3112607	11/26/03	11/28/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**60**	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**210**	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	**63**	2.0	"	"	"	"	"	"	
Toluene	**45**	2.0	"	"	"	"	"	"	
Ethylbenzene	**52**	2.0	"	"	"	"	"	"	
m,p-Xylene	**180**	4.0	"	"	"	"	"	"	
o-Xylene	**81**	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*108 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*74-121*		"	"	"	"	
Surrogate: Dibromofluoromethane		*97.6 %*	*81-125*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-25 (T301254-15) Soil Sampled: 11/21/03 02:40 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
Bromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromoform	ND	2.0	"	"	"	"	"	"	O-05
Bromomethane	ND	2.0	"	"	"	"	"	"	O-05
n-Butylbenzene	**8.1**	2.0	"	"	"	"	"	"	O-05
sec-Butylbenzene	**11**	2.0	"	"	"	"	"	"	O-05
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	O-05
Chlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Chloroethane	ND	2.0	"	"	"	"	"	"	O-05
Chloroform	ND	2.0	"	"	"	"	"	"	O-05
Chloromethane	ND	2.0	"	"	"	"	"	"	O-05
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	O-05
Dibromomethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	O-05
Isopropylbenzene	**19**	2.0	"	"	"	"	"	"	O-05
p-Isopropyltoluene	**3.3**	2.0	"	"	"	"	"	"	O-05
Methylene chloride	ND	2.0	"	"	"	"	"	"	O-05
Naphthalene	ND	2.0	"	"	"	"	"	"	O-05
n-Propylbenzene	**31**	2.0	"	"	"	"	"	"	O-05

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-11/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-25 (T301254-15) Soil	**Sampled: 11/21/03 02:40**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
Trichloroethene	ND	2.0	"	"	"	"	"	"	O-05
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trimethylbenzene	**3.1**	2.0	"	"	"	"	"	"	O-05
Vinyl chloride	ND	2.0	"	"	"	"	"	"	O-05
Benzene	**4.4**	2.0	"	"	"	"	"	"	O-05
Toluene	ND	2.0	"	"	"	"	"	"	O-05
Ethylbenzene	**38**	2.0	"	"	"	"	"	"	O-05
m,p-Xylene	**4.8**	4.0	"	"	"	"	"	"	O-05
o-Xylene	ND	2.0	"	"	"	"	"	"	O-05
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	O-05
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	O-05
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	O-05
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Surrogate: Toluene-d8	*105 %*	*81-117*			"	"	"	"	*O-05*
Surrogate: 4-Bromofluorobenzene	*120 %*	*74-121*			"	"	"	"	*S-HI, O-05*
Surrogate: Dibromofluoromethane	*92.2 %*	*81-125*			"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
2150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-30 (T301254-16) Soil Sampled: 11/21/03 02:50 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
Bromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromoform	ND	2.0	"	"	"	"	"	"	O-05
Bromomethane	ND	2.0	"	"	"	"	"	"	O-05
n-Butylbenzene	**41**	2.0	"	"	"	"	"	"	O-05
sec-Butylbenzene	**75**	2.0	"	"	"	"	"	"	O-05
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	O-05
Chlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Chloroethane	ND	2.0	"	"	"	"	"	"	O-05
Chloroform	ND	2.0	"	"	"	"	"	"	O-05
Chloromethane	ND	2.0	"	"	"	"	"	"	O-05
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	O-05
Dibromomethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	O-05
Isopropylbenzene	**130**	2.0	"	"	"	"	"	"	O-05
p-Isopropyltoluene	**49**	2.0	"	"	"	"	"	"	O-05
Methylene chloride	ND	2.0	"	"	"	"	"	"	O-05
Naphthalene	**360**	2.0	"	"	"	"	"	"	O-05
n-Propylbenzene	**190**	2.0	"	"	"	"	"	"	O-05

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-30 (T301254-16) Soil	**Sampled: 11/21/03 02:50**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
Trichloroethene	ND	2.0	"	"	"	"	"	"	O-05
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trimethylbenzene	**62**	2.0	"	"	"	"	"	"	O-05
Vinyl chloride	ND	2.0	"	"	"	"	"	"	O-05
Benzene	**51**	2.0	"	"	"	"	"	"	O-05
Toluene	ND	2.0	"	"	"	"	"	"	O-05
Ethylbenzene	**290**	2.0	"	"	"	"	"	"	O-05
m,p-Xylene	**7.2**	4.0	"	"	"	"	"	"	O-05
o-Xylene	**10**	2.0	"	"	"	"	"	"	O-05
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	O-05
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	O-05
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	O-05
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Surrogate: Toluene-d8		*99.9 %*	*81-117*		"	"	"	"	*O-05*
Surrogate: 4-Bromofluorobenzene		*255 %*	*74-121*		"	"	"	"	*S-HI, O-05*
Surrogate: Dibromofluoromethane		*94.0 %*	*81-125*		"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-11/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-45 (T301254-19) Soil Sampled: 11/21/03 03:00 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
Bromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromoform	ND	2.0	"	"	"	"	"	"	O-05
Bromomethane	ND	2.0	"	"	"	"	"	"	O-05
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	O-05
Chlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Chloroethane	ND	2.0	"	"	"	"	"	"	O-05
Chloroform	ND	2.0	"	"	"	"	"	"	O-05
Chloromethane	ND	2.0	"	"	"	"	"	"	O-05
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	O-05
Dibromomethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	O-05
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	O-05
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	O-05
Methylene chloride	ND	2.0	"	"	"	"	"	"	O-05
Naphthalene	ND	2.0	"	"	"	"	"	"	O-05
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	O-05

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-45 (T301254-19) Soil	**Sampled: 11/21/03 03:00**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
Trichloroethene	ND	2.0	"	"	"	"	"	"	O-05
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Vinyl chloride	ND	2.0	"	"	"	"	"	"	O-05
Benzene	ND	2.0	"	"	"	"	"	"	O-05
Toluene	ND	2.0	"	"	"	"	"	"	O-05
Ethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
m,p-Xylene	ND	4.0	"	"	"	"	"	"	O-05
o-Xylene	ND	2.0	"	"	"	"	"	"	O-05
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	O-05
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	O-05
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	O-05
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Surrogate: Toluene-d8		*100 %*	*81-117*		"	"	"	"	*O-05*
Surrogate: 4-Bromofluorobenzene		*104 %*	*74-121*		"	"	"	"	*O-05*
Surrogate: Dibromofluoromethane		*97.3 %*	*81-125*		"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-50 (T301254-20) Soil	**Sampled: 11/21/03 03:05**	**Received: 11/21/03 15:50**							
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-50 (T301254-20) Soil	**Sampled: 11/21/03 03:05**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*87.7 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.1 %*	*74-121*		"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*81-125*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-15 (T301254-23) Soil Sampled: 11/21/03 04:02 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3112607	11/26/03	11/28/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	**10**	2.0	"	"	"	"	"	"	
sec-Butylbenzene	**11**	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	**13**	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	**18**	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	**130**	2.0	"	"	"	"	"	"	
n-Propylbenzene	**17**	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-15 (T301254-23) Soil	**Sampled: 11/21/03 04:02**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3112607	11/26/03	11/28/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
'.1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**35**	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**130**	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	**10**	2.0	"	"	"	"	"	"	
Toluene	**7.3**	2.0	"	"	"	"	"	"	
Ethylbenzene	**24**	2.0	"	"	"	"	"	"	
m,p-Xylene	**42**	4.0	"	"	"	"	"	"	
o-Xylene	**22**	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*97.9 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.2 %*	*74-121*		"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*81-125*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-20 (T301254-24) Soil	**Sampled: 11/21/03 04:05**	**Received: 11/21/03 15:50**							
Bromobenzene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
Bromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromoform	ND	2.0	"	"	"	"	"	"	O-05
Bromomethane	ND	2.0	"	"	"	"	"	"	O-05
n-Butylbenzene	**8.2**	2.0	"	"	"	"	"	"	O-05
sec-Butylbenzene	**7.7**	2.0	"	"	"	"	"	"	O-05
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	O-05
Chlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Chloroethane	ND	2.0	"	"	"	"	"	"	O-05
Chloroform	ND	2.0	"	"	"	"	"	"	O-05
Chloromethane	ND	2.0	"	"	"	"	"	"	O-05
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	O-05
Dibromomethane	ND	2.0	"	"	"	"	"	"	O-05
',2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	O-05
Isopropylbenzene	**7.8**	2.0	"	"	"	"	"	"	O-05
p-Isopropyltoluene	**13**	2.0	"	"	"	"	"	"	O-05
Methylene chloride	ND	2.0	"	"	"	"	"	"	O-05
Naphthalene	**73**	2.0	"	"	"	"	"	"	O-05
n-Propylbenzene	**13**	2.0	"	"	"	"	"	"	O-05

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-11/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-20 (T301254-24) Soil	**Sampled: 11/21/03 04:05**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
Trichloroethene	ND	2.0	"	"	"	"	"	"	O-05
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3,5-Trimethylbenzene	**21**	2.0	"	"	"	"	"	"	O-05
1,2,4-Trimethylbenzene	**94**	2.0	"	"	"	"	"	"	O-05
Vinyl chloride	ND	2.0	"	"	"	"	"	"	O-05
Benzene	**21**	2.0	"	"	"	"	"	"	O-05
Toluene	**8.0**	2.0	"	"	"	"	"	"	O-05
Ethylbenzene	**16**	2.0	"	"	"	"	"	"	O-05
m,p-Xylene	**58**	4.0	"	"	"	"	"	"	O-05
o-Xylene	**27**	2.0	"	"	"	"	"	"	O-05
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	O-05
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	O-05
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	O-05
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Surrogate: Toluene-d8		*104 %*	*81-117*		"	"	"	"	*O-05*
Surrogate: 4-Bromofluorobenzene		*116 %*	*74-121*		"	"	"	"	*O-05*
Surrogate: Dibromofluoromethane		*99.1 %*	*81-125*		"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-11/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-25 (T301254-25) Soil Sampled: 11/21/03 04:10 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
Bromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromoform	ND	2.0	"	"	"	"	"	"	O-05
Bromomethane	ND	2.0	"	"	"	"	"	"	O-05
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	O-05
Chlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Chloroethane	ND	2.0	"	"	"	"	"	"	O-05
Chloroform	ND	2.0	"	"	"	"	"	"	O-05
Chloromethane	ND	2.0	"	"	"	"	"	"	O-05
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	O-05
Dibromomethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	O-05
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	O-05
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	O-05
Methylene chloride	ND	2.0	"	"	"	"	"	"	O-05
Naphthalene	ND	2.0	"	"	"	"	"	"	O-05
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	O-05

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-25 (T301254-25) Soil	**Sampled: 11/21/03 04:10**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
Trichloroethene	ND	2.0	"	"	"	"	"	"	O-05
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Vinyl chloride	ND	2.0	"	"	"	"	"	"	O-05
Benzene	ND	2.0	"	"	"	"	"	"	O-05
Toluene	ND	2.0	"	"	"	"	"	"	O-05
Ethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
m,p-Xylene	ND	4.0	"	"	"	"	"	"	O-05
o-Xylene	ND	2.0	"	"	"	"	"	"	O-05
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	O-05
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	O-05
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	O-05
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Surrogate: Toluene-d8		*98.7 %*	*81-117*		"	"	"	"	*O-05*
Surrogate: 4-Bromofluorobenzene		*102 %*	*74-121*		"	"	"	"	*O-05*
Surrogate: Dibromofluoromethane		*101 %*	*81-125*		"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-40 (T301254-28) Soil	**Sampled: 11/21/03 04:30**	**Received: 11/21/03 15:50**							
Bromobenzene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
Bromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromoform	ND	2.0	"	"	"	"	"	"	O-05
Bromomethane	ND	2.0	"	"	"	"	"	"	O-05
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	O-05
Chlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Chloroethane	ND	2.0	"	"	"	"	"	"	O-05
Chloroform	ND	2.0	"	"	"	"	"	"	O-05
Chloromethane	ND	2.0	"	"	"	"	"	"	O-05
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	O-05
Dibromomethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	O-05
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	O-05
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	O-05
Methylene chloride	ND	2.0	"	"	"	"	"	"	O-05
Naphthalene	ND	2.0	"	"	"	"	"	"	O-05
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	O-05

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke 3150 Bristol Street #250 Costa Mesa CA, 92626	Project: CRG Properties Project Number: 002-10231-11/002 Project Manager: Derrick Willis	Reported: 12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-40 (T301254-28) Soil	**Sampled: 11/21/03 04:30**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
Trichloroethene	ND	2.0	"	"	"	"	"	"	O-05
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Vinyl chloride	ND	2.0	"	"	"	"	"	"	O-05
Benzene	ND	2.0	"	"	"	"	"	"	O-05
Toluene	ND	2.0	"	"	"	"	"	"	O-05
Ethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
m,p-Xylene	ND	4.0	"	"	"	"	"	"	O-05
o-Xylene	ND	2.0	"	"	"	"	"	"	O-05
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	O-05
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	O-05
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	O-05
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Surrogate: Toluene-d8		*98.4 %*	*81-117*		"	"	"	"	*O-05*
Surrogate: 4-Bromofluorobenzene		*102 %*	*74-121*		"	"	"	"	*O-05*
Surrogate: Dibromofluoromethane		*105 %*	*81-125*		"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-45 (T301254-29) Soil Sampled: 11/21/03 04:35 Received: 11/21/03 15:50									
Bromobenzene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
Bromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	O-05
Bromoform	ND	2.0	"	"	"	"	"	"	O-05
Bromomethane	ND	2.0	"	"	"	"	"	"	O-05
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	O-05
Chlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Chloroethane	ND	2.0	"	"	"	"	"	"	O-05
Chloroform	ND	2.0	"	"	"	"	"	"	O-05
Chloromethane	ND	2.0	"	"	"	"	"	"	O-05
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	O-05
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	O-05
Dibromomethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	O-05
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	O-05
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	O-05
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	O-05
Methylene chloride	ND	2.0	"	"	"	"	"	"	O-05
Naphthalene	ND	2.0	"	"	"	"	"	"	O-05
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	O-05

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-45 (T301254-29) Soil	**Sampled: 11/21/03 04:35**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3120601	12/06/03	12/06/03	EPA 8260B	O-05
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	O-05
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	O-05
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	O-05
Trichloroethene	ND	2.0	"	"	"	"	"	"	O-05
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	O-05
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	O-05
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
Vinyl chloride	ND	2.0	"	"	"	"	"	"	O-05
Benzene	ND	2.0	"	"	"	"	"	"	O-05
Toluene	ND	2.0	"	"	"	"	"	"	O-05
Ethylbenzene	ND	2.0	"	"	"	"	"	"	O-05
m,p-Xylene	ND	4.0	"	"	"	"	"	"	O-05
o-Xylene	ND	2.0	"	"	"	"	"	"	O-05
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	O-05
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	O-05
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	O-05
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	O-05
Surrogate: Toluene-d8		*101 %*	*81-117*		"	"	"	"	*O-05*
Surrogate: 4-Bromofluorobenzene		*103 %*	*74-121*		"	"	"	"	*O-05*
Surrogate: Dibromofluoromethane		*103 %*	*81-125*		"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-50 (T301254-30) Soil	**Sampled: 11/21/03 04:40**	**Received: 11/21/03 15:50**							
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-50 (T301254-30) Soil	**Sampled: 11/21/03 04:40**	**Received: 11/21/03 15:50**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*79.7 %*	*81-117*		"	"	"	"	*S-LOW*
Surrogate: 4-Bromofluorobenzene		*94.7 %*	*74-121*		"	"	"	"	
Surrogate: Dibromofluoromethane		*122 %*	*81-125*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-11/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-10 (T301254-12) Soil Sampled: 11/21/03 02:27 Received: 11/21/03 15:50									**O-05**
Carbazole	ND	300	ug/kg	1	3120604	12/05/03	12/10/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	**9300**	300	"	"	"	"	"	"	
2-Methylnaphthalene	**6400**	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-10 (T301254-12) Soil Sampled: 11/21/03 02:27 Received: 11/21/03 15:50									**O-05**
2,4-Dimethylphenol	ND	300	ug/kg	1	3120604	12/05/03	12/10/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	**1500**	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	**1600**	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	**2200**	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*46.9 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*43.7 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*67.1 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*59.1 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*1650 %*	*19-122*		"	"	"	"	*S-02*
Surrogate: Terphenyl-dl4		*41.1 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-15 (T301254-23) Soil	**Sampled: 11/21/03 04:02**	**Received: 11/21/03 15:50**							**O-05**
Carbazole	ND	300	ug/kg	1	3120604	12/05/03	12/10/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	**6300**	300	"	"	"	"	"	"	
2-Methylnaphthalene	**4900**	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-15 (T301254-23) Soil	**Sampled: 11/21/03 04:02**	**Received: 11/21/03 15:50**							**O-05**
2,4-Dimethylphenol	ND	300	ug/kg	1	3120604	12/05/03	12/10/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	**1300**	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	**1100**	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	**1800**	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*27.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*31.7 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*47.9 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*34.9 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*1420 %*	*19-122*		"	"	"	"	*S-02*
Surrogate: Terphenyl-dl4		*28.3 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Purgeable Petroleum Hydrocarbons by 8015

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-25 (T301254-15) Soil Sampled: 11/21/03 02:40 Received: 11/21/03 15:50									
Gasoline Range Hydrocarbons	**4900**	500	ug/kg	1	3120602	12/06/03	12/08/03	EPA 8015m	O-05
Surrogate: 4-Bromofluorobenzene		*114 %*	*65-135*		"	"	"	"	*O-05*
B3-30 (T301254-16) Soil Sampled: 11/21/03 02:50 Received: 11/21/03 15:50									
Gasoline Range Hydrocarbons	**53000**	500	ug/kg	1	3120602	12/06/03	12/08/03	EPA 8015m	O-05
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*		"	"	"	"	*O-05*
B3-45 (T301254-19) Soil Sampled: 11/21/03 03:00 Received: 11/21/03 15:50									
Gasoline Range Hydrocarbons	ND	500	ug/kg	1	3120602	12/06/03	12/09/03	EPA 8015m	O-05
Surrogate: 4-Bromofluorobenzene		*112 %*	*65-135*		"	"	"	"	*O-05*
B5-20 (T301254-24) Soil Sampled: 11/21/03 04:05 Received: 11/21/03 15:50									
Gasoline Range Hydrocarbons	**7300**	500	ug/kg	1	3120602	12/06/03	12/08/03	EPA 8015m	O-05
Surrogate: 4-Bromofluorobenzene		*117 %*	*65-135*		"	"	"	"	*O-05*
B5-25 (T301254-25) Soil Sampled: 11/21/03 04:10 Received: 11/21/03 15:50									
Gasoline Range Hydrocarbons	ND	500	ug/kg	1	3120602	12/06/03	12/09/03	EPA 8015m	D-12, O-05
Surrogate: 4-Bromofluorobenzene		*114 %*	*65-135*		"	"	"	"	*O-05*
B5-40 (T301254-28) Soil Sampled: 11/21/03 04:30 Received: 11/21/03 15:50									
Gasoline Range Hydrocarbons	ND	500	ug/kg	1	3120602	12/06/03	12/08/03	EPA 8015m	O-05
Surrogate: 4-Bromofluorobenzene		*121 %*	*65-135*		"	"	"	"	*O-05*
B5-45 (T301254-29) Soil Sampled: 11/21/03 04:35 Received: 11/21/03 15:50									
Gasoline Range Hydrocarbons	ND	500	ug/kg	1	3120602	12/06/03	12/08/03	EPA 8015m	O-05
Surrogate: 4-Bromofluorobenzene		*102 %*	*65-135*		"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112612 - EPA 3550B Soil										
Blank (3112612-BLK1)				Prepared: 11/26/03		Analyzed: 11/29/03				
C6-C12	ND	10	mg/kg							
C12-C28	ND	10	"							
C28-C40	ND	10	"							
LCS (3112612-BS1)				Prepared: 11/26/03		Analyzed: 11/29/03				
C12-C28	480	10	mg/kg	500		96.0	75-125			
Matrix Spike (3112612-MS1)	Source: T301254-06			Prepared: 11/26/03		Analyzed: 11/29/03				
C12-C28	470	10	mg/kg	500	ND	94.0	75-125			
Matrix Spike Dup (3112612-MSD1)	Source: T301254-06			Prepared: 11/26/03		Analyzed: 11/29/03				
C12-C28	440	10	mg/kg	500	ND	88.0	75-125	6.59	20	
Batch 3120603 - EPA 3550B Soil										
Blank (3120603-BLK1)				Prepared: 12/06/03		Analyzed: 12/08/03				
C12-C28	ND	10	mg/kg							
C28-C40	ND	10	"							
LCS (3120603-BS1)				Prepared: 12/06/03		Analyzed: 12/09/03				
C12-C28	460	10	mg/kg	500		92.0	75-125			
Matrix Spike (3120603-MS1)	Source: T301254-25			Prepared: 12/06/03		Analyzed: 12/09/03				
C12-C28	530	10	mg/kg	500	ND	106	75-125			
Matrix Spike Dup (3120603-MSD1)	Source: T301254-25			Prepared: 12/06/03		Analyzed: 12/09/03				
C12-C28	540	10	mg/kg	500	ND	108	75-125	1.87	20	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
Blank (3112401-BLK1)				Prepared & Analyzed: 11/24/03						
Bromobenzene	ND	2.0	ug/kg							
Bromochloromethane	ND	2.0	"							
Bromodichloromethane	ND	2.0	"							
Bromoform	ND	2.0	"							
Bromomethane	ND	2.0	"							
n-Butylbenzene	ND	2.0	"							
sec-Butylbenzene	ND	2.0	"							
tert-Butylbenzene	ND	2.0	"							
Carbon tetrachloride	ND	2.0	"							
Chlorobenzene	ND	2.0	"							
Chloroethane	ND	2.0	"							
Chloroform	ND	2.0	"							
Chloromethane	ND	2.0	"							
2-Chlorotoluene	ND	2.0	"							
4-Chlorotoluene	ND	2.0	"							
Dibromochloromethane	ND	2.0	"							
1,2-Dibromo-3-chloropropane	ND	2.0	"							
1,2-Dibromoethane (EDB)	ND	2.0	"							
Dibromomethane	ND	2.0	"							
1,2-Dichlorobenzene	ND	2.0	"							
1,3-Dichlorobenzene	ND	2.0	"							
1,4-Dichlorobenzene	ND	2.0	"							
Dichlorodifluoromethane	ND	2.0	"							
1,1-Dichloroethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
1,1-Dichloroethene	ND	2.0	"							
cis-1,2-Dichloroethene	ND	2.0	"							
trans-1,2-Dichloroethene	ND	2.0	"							
1,2-Dichloropropane	ND	2.0	"							
1,3-Dichloropropane	ND	2.0	"							
2,2-Dichloropropane	ND	2.0	"							
1,1-Dichloropropene	ND	2.0	"							
cis-1,3-Dichloropropene	ND	2.0	"							
trans-1,3-Dichloropropene	ND	2.0	"							
Hexachlorobutadiene	ND	2.0	"							
Isopropylbenzene	ND	2.0	"							
p-Isopropyltoluene	ND	2.0	"							
Methylene chloride	ND	2.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
Blank (3112401-BLK1)				Prepared & Analyzed: 11/24/03						
Naphthalene	ND	2.0	ug/kg							
n-Propylbenzene	ND	2.0	"							
Styrene	ND	2.0	"							
1,1,2,2-Tetrachloroethane	ND	2.0	"							
1,1,1,2-Tetrachloroethane	ND	2.0	"							
Tetrachloroethene	ND	2.0	"							
1,2,3-Trichlorobenzene	ND	2.0	"							
1,2,4-Trichlorobenzene	ND	2.0	"							
1,1,2-Trichloroethane	ND	2.0	"							
1,1,1-Trichloroethane	ND	2.0	"							
Trichloroethene	ND	2.0	"							
Trichlorofluoromethane	ND	2.0	"							
1,2,3-Trichloropropane	ND	2.0	"							
1,3,5-Trimethylbenzene	ND	2.0	"							
1,2,4-Trimethylbenzene	ND	2.0	"							
Vinyl chloride	ND	2.0	"							
Benzene	ND	2.0	"							
Toluene	ND	2.0	"							
Ethylbenzene	ND	2.0	"							
m,p-Xylene	ND	4.0	"							
o-Xylene	ND	2.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: Toluene-d8	*86.2*		"	*100*		*86.2*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*92.2*		"	*100*		*92.2*	*74-121*			
Surrogate: Dibromofluoromethane	*109*		"	*100*		*109*	*81-125*			

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
LCS (3112401-BS1)				Prepared & Analyzed: 11/24/03						
Chlorobenzene	253	2.0	ug/kg	250		101	75-125			
1,1-Dichloroethene	234	2.0	"	250		93.6	15-125			
Trichloroethene	283	2.0	"	250		113	75-125			
Benzene	280	2.0	"	250		112	75-125			
Toluene	270	2.0	"	250		108	75-125			
Surrogate: Toluene-d8	*96.6*		"	*100*		*96.6*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*84.9*		"	*100*		*84.9*	*74-121*			
Surrogate: Dibromofluoromethane	*105*		"	*100*		*105*	*81-125*			
LCS Dup (3112401-BSD1)				Prepared & Analyzed: 11/24/03						
Chlorobenzene	253	2.0	ug/kg	250		101	75-125	0.00	20	
1,1-Dichloroethene	233	2.0	"	250		93.2	15-125	0.428	20	
Trichloroethene	285	2.0	"	250		114	75-125	0.704	20	
Benzene	282	2.0	"	250		113	75-125	0.712	20	
Toluene	270	2.0	"	250		108	75-125	0.00	20	
Surrogate: Toluene-d8	*95.0*		"	*100*		*95.0*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*86.8*		"	*100*		*86.8*	*74-121*			
Surrogate: Dibromofluoromethane	*102*		"	*100*		*102*	*81-125*			
Batch 3112607 - EPA 5035 Soil MS										
Blank (3112607-BLK1)				Prepared: 11/26/03 Analyzed: 11/27/03						
Bromobenzene	ND	2.0	ug/kg							
Bromochloromethane	ND	2.0	"							
Bromodichloromethane	ND	2.0	"							
Bromoform	ND	2.0	"							
Bromomethane	ND	2.0	"							
n-Butylbenzene	ND	2.0	"							
sec-Butylbenzene	ND	2.0	"							
tert-Butylbenzene	ND	2.0	"							
Carbon tetrachloride	ND	2.0	"							
Chlorobenzene	ND	2.0	"							
Chloroethane	ND	2.0	"							
Chloroform	ND	2.0	"							
Chloromethane	ND	2.0	"							
2-Chlorotoluene	ND	2.0	"							
4-Chlorotoluene	ND	2.0	"							
Dibromochloromethane	ND	2.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112607 - EPA 5035 Soil MS										
Blank (3112607-BLK1)				Prepared: 11/26/03 Analyzed: 11/27/03						
1,2-Dibromo-3-chloropropane	ND	2.0	ug/kg							
1,2-Dibromoethane (EDB)	ND	2.0	"							
Dibromomethane	ND	2.0	"							
1,2-Dichlorobenzene	ND	2.0	"							
1,3-Dichlorobenzene	ND	2.0	"							
1,4-Dichlorobenzene	ND	2.0	"							
Dichlorodifluoromethane	ND	2.0	"							
1,1-Dichloroethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
1,1-Dichloroethene	ND	2.0	"							
cis-1,2-Dichloroethene	ND	2.0	"							
trans-1,2-Dichloroethene	ND	2.0	"							
1,2-Dichloropropane	ND	2.0	"							
1,3-Dichloropropane	ND	2.0	"							
2,2-Dichloropropane	ND	2.0	"							
1,1-Dichloropropene	ND	2.0	"							
cis-1,3-Dichloropropene	ND	2.0	"							
trans-1,3-Dichloropropene	ND	2.0	"							
Hexachlorobutadiene	ND	2.0	"							
Isopropylbenzene	ND	2.0	"							
p-Isopropyltoluene	ND	2.0	"							
Methylene chloride	ND	2.0	"							
Naphthalene	ND	2.0	"							
n-Propylbenzene	ND	2.0	"							
Styrene	ND	2.0	"							
1,1,2,2-Tetrachloroethane	ND	2.0	"							
1,1,1,2-Tetrachloroethane	ND	2.0	"							
Tetrachloroethene	ND	2.0	"							
1,2,3-Trichlorobenzene	ND	2.0	"							
1,2,4-Trichlorobenzene	ND	2.0	"							
1,1,2-Trichloroethane	ND	2.0	"							
1,1,1-Trichloroethane	ND	2.0	"							
Trichloroethene	ND	2.0	"							
Trichlorofluoromethane	ND	2.0	"							
1,2,3-Trichloropropane	ND	2.0	"							
1,3,5-Trimethylbenzene	ND	2.0	"							
1,2,4-Trimethylbenzene	ND	2.0	"							
Vinyl chloride	ND	2.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112607 - EPA 5035 Soil MS										
Blank (3112607-BLK1)				Prepared: 11/26/03 Analyzed: 11/27/03						
Benzene	ND	2.0	ug/kg							
Toluene	ND	2.0	"							
Ethylbenzene	ND	2.0	"							
m,p-Xylene	ND	4.0	"							
o-Xylene	ND	2.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: Toluene-d8	*99.1*		"	*100*		*99.1*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*95.8*		"	*100*		*95.8*	*74-121*			
Surrogate: Dibromofluoromethane	*105*		"	*100*		*105*	*81-125*			
LCS (3112607-BS1)				Prepared: 11/26/03 Analyzed: 11/28/03						
Chlorobenzene	239	2.0	ug/kg	250		95.6	75-125			
1,1-Dichloroethene	206	2.0	"	250		82.4	15-125			
Trichloroethene	219	2.0	"	250		87.6	75-125			
Benzene	210	2.0	"	250		84.0	75-125			
Toluene	211	2.0	"	250		84.4	75-125			
Surrogate: Toluene-d8	*93.2*		"	*100*		*93.2*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*96.2*		"	*100*		*96.2*	*74-121*			
Surrogate: Dibromofluoromethane	*99.6*		"	*100*		*99.6*	*81-125*			
Matrix Spike (3112607-MS1)	**Source: T301277-04**			Prepared: 11/26/03 Analyzed: 11/27/03						
Chlorobenzene	259	2.0	ug/kg	250	ND	104	75-125			
1,1-Dichloroethene	215	2.0	"	250	ND	86.0	75-125			
Trichloroethene	238	2.0	"	250	ND	95.2	75-125			
Benzene	250	2.0	"	250	ND	100	75-125			
Toluene	262	2.0	"	250	ND	105	75-125			
Surrogate: Toluene-d8	*99.3*		"	*100*		*99.3*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*98.0*		"	*100*		*98.0*	*74-121*			
Surrogate: Dibromofluoromethane	*95.2*		"	*100*		*95.2*	*81-125*			

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112607 - EPA 5035 Soil MS										
Matrix Spike Dup (3112607-MSD1)	**Source: T301277-04**			Prepared: 11/26/03		Analyzed: 11/27/03				
Chlorobenzene	246	2.0	ug/kg	250	ND	98.4	75-125	5.15	20	
1,1-Dichloroethene	226	2.0	"	250	ND	90.4	75-125	4.99	20	
Trichloroethene	216	2.0	"	250	ND	86.4	75-125	9.69	20	
Benzene	238	2.0	"	250	ND	95.2	75-125	4.92	20	
Toluene	247	2.0	"	250	ND	98.8	75-125	5.89	20	
Surrogate: Toluene-d8	*101*		"	*100*		*101*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*100*		"	*100*		*100*	*74-121*			
Surrogate: Dibromofluoromethane	*101*		"	*100*		*101*	*81-125*			
Batch 3120601 - EPA 5030 Soil MS										
Blank (3120601-BLK1)				Prepared & Analyzed: 12/06/03						
Bromobenzene	ND	2.0	ug/kg							
Bromochloromethane	ND	2.0	"							
Bromodichloromethane	ND	2.0	"							
Bromoform	ND	2.0	"							
Bromomethane	ND	2.0	"							
n-Butylbenzene	ND	2.0	"							
sec-Butylbenzene	ND	2.0	"							
tert-Butylbenzene	ND	2.0	"							
Carbon tetrachloride	ND	2.0	"							
Chlorobenzene	ND	2.0	"							
Chloroethane	ND	2.0	"							
Chloroform	ND	2.0	"							
Chloromethane	ND	2.0	"							
2-Chlorotoluene	ND	2.0	"							
4-Chlorotoluene	ND	2.0	"							
Dibromochloromethane	ND	2.0	"							
1,2-Dibromo-3-chloropropane	ND	2.0	"							
1,2-Dibromoethane (EDB)	ND	2.0	"							
Dibromomethane	ND	2.0	"							
1,2-Dichlorobenzene	ND	2.0	"							
1,3-Dichlorobenzene	ND	2.0	"							
1,4-Dichlorobenzene	ND	2.0	"							
Dichlorodifluoromethane	ND	2.0	"							
1,1-Dichloroethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
1,1-Dichloroethene	ND	2.0	"							

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120601 - EPA 5030 Soil MS										
Blank (3120601-BLK1)				Prepared & Analyzed: 12/06/03						
cis-1,2-Dichloroethene	ND	2.0	ug/kg							
trans-1,2-Dichloroethene	ND	2.0	"							
1,2-Dichloropropane	ND	2.0	"							
1,3-Dichloropropane	ND	2.0	"							
2,2-Dichloropropane	ND	2.0	"							
1,1-Dichloropropene	ND	2.0	"							
cis-1,3-Dichloropropene	ND	2.0	"							
trans-1,3-Dichloropropene	ND	2.0	"							
Hexachlorobutadiene	ND	2.0	"							
Isopropylbenzene	ND	2.0	"							
p-Isopropyltoluene	ND	2.0	"							
Methylene chloride	ND	2.0	"							
Naphthalene	ND	2.0	"							
n-Propylbenzene	ND	2.0	"							
Styrene	ND	2.0	"							
1,1,2,2-Tetrachloroethane	ND	2.0	"							
1,1,1,2-Tetrachloroethane	ND	2.0	"							
Tetrachloroethene	ND	2.0	"							
1,2,3-Trichlorobenzene	ND	2.0	"							
1,2,4-Trichlorobenzene	ND	2.0	"							
1,1,2-Trichloroethane	ND	2.0	"							
1,1,1-Trichloroethane	ND	2.0	"							
Trichloroethene	ND	2.0	"							
Trichlorofluoromethane	ND	2.0	"							
1,2,3-Trichloropropane	ND	2.0	"							
1,3,5-Trimethylbenzene	ND	2.0	"							
1,2,4-Trimethylbenzene	ND	2.0	"							
Vinyl chloride	ND	2.0	"							
Benzene	ND	2.0	"							
Toluene	ND	2.0	"							
Ethylbenzene	ND	2.0	"							
m,p-Xylene	ND	4.0	"							
o-Xylene	ND	2.0	"							
Xylenes (total)	ND	6.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120601 - EPA 5030 Soil MS										
Blank (3120601-BLK1)				Prepared & Analyzed: 12/06/03						
Methyl tert-butyl ether	ND	5.0	ug/kg							
Gasoline Range Hydrocarbons	ND	500	"							
Surrogate: Toluene-d8	*103*		"	*100*		*103*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*97.9*		"	*100*		*97.9*	*74-121*			
Surrogate: Dibromofluoromethane	*97.8*		"	*100*		*97.8*	*81-125*			
LCS (3120601-BS1)				Prepared & Analyzed: 12/06/03						
Chlorobenzene	250	2.0	ug/kg	250		100	75-125			
1,1-Dichloroethene	233	2.0	"	250		93.2	15-125			
Trichloroethene	224	2.0	"	250		89.6	75-125			
Benzene	216	2.0	"	250		86.4	75-125			
Toluene	228	2.0	"	250		91.2	75-125			
Surrogate: Toluene-d8	*95.7*		"	*100*		*95.7*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*97.3*		"	*100*		*97.3*	*74-121*			
Surrogate: Dibromofluoromethane	*101*		"	*100*		*101*	*81-125*			
LCS Dup (3120601-BSD1)				Prepared & Analyzed: 12/06/03						
Chlorobenzene	245	2.0	ug/kg	250		98.0	75-125	2.02	20	
1,1-Dichloroethene	248	2.0	"	250		99.2	15-125	6.24	20	
Trichloroethene	230	2.0	"	250		92.0	75-125	2.64	20	
Benzene	242	2.0	"	250		96.8	75-125	11.4	20	
Toluene	235	2.0	"	250		94.0	75-125	3.02	20	
Surrogate: Toluene-d8	*106*		"	*100*		*106*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*111*		"	*100*		*111*	*74-121*			
Surrogate: Dibromofluoromethane	*101*		"	*100*		*101*	*81-125*			
Matrix Spike (3120601-MS1)	**Source: T301303-01**			Prepared & Analyzed: 12/06/03						
Chlorobenzene	122	2.0	ug/kg	250	ND	48.8	75-125			QM-05
1,1-Dichloroethene	133	2.0	"	250	ND	53.2	75-125			QM-05
Trichloroethene	165	2.0	"	250	ND	66.0	75-125			QM-05
Benzene	176	2.0	"	250	ND	70.4	75-125			QM-05
Toluene	157	2.0	"	250	ND	62.8	75-125			QM-05
Surrogate: Toluene-d8	*102*		"	*100*		*102*	*81-117*			*QM-05*
Surrogate: 4-Bromofluorobenzene	*102*		"	*100*		*102*	*74-121*			*QM-05*
Surrogate: Dibromofluoromethane	*92.5*		"	*100*		*92.5*	*81-125*			*QM-05*

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120601 - EPA 5030 Soil MS										
Matrix Spike Dup (3120601-MSD1)	**Source: T301303-01**			Prepared & Analyzed: 12/06/03						
Chlorobenzene	102	2.0	ug/kg	250	ND	40.8	75-125	17.9	20	QM-05
1,1-Dichloroethene	96.0	2.0	"	250	ND	38.4	75-125	32.3	20	QM-05
Trichloroethene	158	2.0	"	250	ND	63.2	75-125	4.33	20	QM-05
Benzene	155	2.0	"	250	ND	62.0	75-125	12.7	20	QM-05
Toluene	134	2.0	"	250	ND	53.6	75-125	15.8	20	QM-05
Surrogate: Toluene-d8	*106*		"	*100*		*106*	*81-117*			*QM-05*
Surrogate: 4-Bromofluorobenzene	*111*		"	*100*		*111*	*74-121*			*QM-05*
Surrogate: Dibromofluoromethane	*72.6*		"	*100*		*72.6*	*81-125*			*QM-05*

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120604 - EPA 3550B GCMS Soil										
Blank (3120604-BLK1)				Prepared: 12/06/03 Analyzed: 12/10/03						
Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	300	"							
2-Chlorophenol	ND	300	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	300	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	500	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	500	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							
1,2-Dichlorobenzene	ND	300	"							
1,3-Dichlorobenzene	ND	300	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120604 - EPA 3550B GCMS Soil										
Blank (3120604-BLK1)				Prepared: 12/06/03 Analyzed: 12/10/03						
4-Dichlorophenol	ND	300	ug/kg							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	300	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	300	"							
2,4-Dinitrophenol	ND	300	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	300	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	500	"							
N-Nitrosodiethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
2,4,6-Trichlorophenol	ND	300	"							
Surrogate: 2-Fluorophenol	*1010*		*"*	*1670*		*60.5*	*15-121*			
Surrogate: Phenol-d6	*994*		*"*	*1670*		*59.5*	*24-113*			
Surrogate: Nitrobenzene-d5	*1130*		*"*	*1670*		*67.7*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1260*		*"*	*1670*		*75.4*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1180*		*"*	*1670*		*70.7*	*19-122*			
Surrogate: Terphenyl-dl4	*1580*		*"*	*1670*		*94.6*	*18-137*			

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120604 - EPA 3550B GCMS Soil										
LCS (3120604-BS1)				Prepared: 12/06/03		Analyzed: 12/10/03				
Phenol	943	300	ug/kg	1670		56.5	12-89			
2-Chlorophenol	977	300	"	1670		58.5	27-123			
1,4-Dichlorobenzene	964	300	"	1670		57.7	36-97			
N-Nitrosodi-n-propylamine	1220	300	"	1670		73.1	41-116			
1,2,4-Trichlorobenzene	1020	300	"	1670		61.1	39-98			
4-Chloro-3-methylphenol	1020	300	"	1670		61.1	23-97			
Acenaphthene	1150	300	"	1670		68.9	46-118			
4-Nitrophenol	920	500	"	1670		55.1	10-80			
2,4-Dinitrotoluene	734	300	"	1670		44.0	24-96			
Pentachlorophenol	884	500	"	1670		52.9	9-103			
Pyrene	1780	300	"	1670		107	26-127			
Surrogate: 2-Fluorophenol	*881*		"	*1670*		*52.8*	*15-121*			
Surrogate: Phenol-d6	*1040*		"	*1670*		*62.3*	*24-113*			
Surrogate: Nitrobenzene-d5	*1140*		"	*1670*		*68.3*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1150*		"	*1670*		*68.9*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1230*		"	*1670*		*73.7*	*19-122*			
Surrogate: Terphenyl-dl4	*1420*		"	*1670*		*85.0*	*18-137*			
LCS Dup (3120604-BSD1)				Prepared: 12/06/03		Analyzed: 12/10/03				
Phenol	832	300	ug/kg	1670		49.8	12-89	12.5	42	
2-Chlorophenol	859	300	"	1670		51.4	27-123	12.9	40	
1,4-Dichlorobenzene	855	300	"	1670		51.2	36-97	12.0	28	
N-Nitrosodi-n-propylamine	1070	300	"	1670		64.1	41-116	13.1	38	
1,2,4-Trichlorobenzene	922	300	"	1670		55.2	39-98	10.1	28	
4-Chloro-3-methylphenol	909	300	"	1670		54.4	23-97	11.5	42	
Acenaphthene	1070	300	"	1670		64.1	46-118	7.21	31	
4-Nitrophenol	819	500	"	1670		49.0	10-80	11.6	50	
2,4-Dinitrotoluene	675	300	"	1670		40.4	24-96	8.37	38	
Pentachlorophenol	787	500	"	1670		47.1	9-103	11.6	50	
Pyrene	1690	300	"	1670		101	26-127	5.19	31	
Surrogate: 2-Fluorophenol	*741*		"	*1670*		*44.4*	*15-121*			
Surrogate: Phenol-d6	*895*		"	*1670*		*53.6*	*24-113*			
Surrogate: Nitrobenzene-d5	*1050*		"	*1670*		*62.9*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1020*		"	*1670*		*61.1*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1280*		"	*1670*		*76.6*	*19-122*			
Surrogate: Terphenyl-dl4	*1520*		"	*1670*		*91.0*	*18-137*			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-11/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Purgeable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120602 - EPA 5030 Soil GC										
Blank (3120602-BLK1)				Prepared: 12/06/03 Analyzed: 12/08/03						
Gasoline Range Hydrocarbons	ND	500	ug/kg							
Surrogate: 4-Bromofluorobenzene	*135*		"	*125*		*108*	*65-135*			
LCS (3120602-BS1)				Prepared: 12/06/03 Analyzed: 12/08/03						
Gasoline Range Hydrocarbons	13500	500	ug/kg	13800		97.8	75-125			
Surrogate: 4-Bromofluorobenzene	*127*		"	*125*		*102*	*65-135*			
Matrix Spike (3120602-MS1)	**Source: T301254-25**			Prepared: 12/06/03 Analyzed: 12/08/03						
Gasoline Range Hydrocarbons	12600	500	ug/kg	13800	220	89.7	65-135			
Surrogate: 4-Bromofluorobenzene	*125*		"	*125*		*100*	*65-135*			
Matrix Spike Dup (3120602-MSD1)	**Source: T301254-25**			Prepared: 12/06/03 Analyzed: 12/08/03						
Gasoline Range Hydrocarbons	13100	500	ug/kg	13800	220	93.3	65-135	3.89	20	
Surrogate: 4-Bromofluorobenzene	*116*		"	*125*		*92.8*	*65-135*			

Notes and Definitions

D-12	Results in the Gasoline Range are primarily due to overlap from a heavier fuel hydrocarbon product.
O-04	This sample was analyzed outside the EPA recommended holding time.
O-05	This sample was extracted outside of the EPA recommended holding time.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
S-HI	High surrogate recovery was confirmed as a matrix effect by a second analysis.
S-LOW	Low surrogate recovery confirmed as a matrix effect by a second analysis.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

SunStar Laboratories, Inc.

11 December 2003

Derrick Willis
LFR Levine-Fricke
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: CRG Properties

Enclosed are the results of analyses for samples received by the laboratory on 11/24/03 09:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ben Beauchaine
Laboratory Supervisor

3002 Dow Avenue, Suite 212, Tustin, CA 92780 Phone (714) 505-4010 Fax (714) 505-4028

SunStar Laboratories, Inc.
3002 Dow Ave., Ste. 212
Tustin, CA 92780
1-800-781-6777

Chain of Custody Record

T30 1260

Client: LFR
Address: 3150 Bristol St 750 Costa Mesa CA 92626
Phone: 714-444-0111 Fax: 714-444-0117
Project Manager: DERRICK WILLIS

Date: 11-22-03 Page: 1 Of 3
Project Name: CRG PROPERTIES
Collector: CLB Client Project #: 002-10231-02 / 002
Batch #: Proposal #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260B	EPA 8270	EPA 418.1	EPA 8015M (gas) CARBON CHAIN	EPA 8015M (diesel)	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 Title 22 Metals	EPA 6010 METALS	EPA 8082 PCBs	HOLD	Laboratory ID #	Preservative	Comments	Total # of containers
B2-50	11-21-03	0825	SOIL				X	X		X				X	X		01	4		1
B3-50		0830					X	X		X				X	X		02			
B5-50		0840					X	X		X				X	X		03			
B1-5	11-21-03	2040														X	04			
B1-10		2042														X	05			
B1-15		2045														X	06			
B1-20		2050														X	07			
B1-25		2055														X	08			
B1-30		2100														X	09			
B1-35		2105														X	10			
B1-40		2110														X	11			
B1-45		2115														X	12			
B1-50		2120		5035			X	X		X				X	X		13	3		4
B7-5		2245														X	14	1		1
B7-10		2250														X	15	4		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	11-24-03 / 0925		11-24-03 9:25
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/(NA)
Seals intact? Y/N/(NA)
Received good condition/(cold) 11°C

Turn around time: STD

Notes

Sample disposal Instructions. Disposal @ $2.00 each ___ Return to client ___ Pickup ___

[redacted] Analytical

SUN STAR T301260

[redacted]
9830 South [redacted]
2520 E. [redacted]

CHAIN OF CUSTODY FORM

Client Name/Address:	P.O. #:	ANALYSIS REQUIRED
LFR 3150 BRISTOL ST 250 COSTA MESA CA 92627	002-10231-00/002 Project: CRG PROPERTIES	
Project Manager/Phone Number: DERRICK WILLS	**Phone Number:** 714-444-0114	
Sampler: CLB	**Fax Number:** 714-444-0117	

	Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation TIME	8260B	8270	8015M CHROMATOGRAM CHAIN	6010 METALS	8082 PCBS		HOLD			Special Instructions
16	B7 - 15	SOIL		1	11-21-03	2255							X			
17	B7 - 20					2300							X			
18	B7 - 25					2305							X			
19	B7 - 30					2315							X			
20	B7 - 35					2320							X			
21	B7 - 40					2330							X			
22	B7 - 45			↓		2340							X			
23	B7 - 50			4	↓	2350	X	X	X	X	X					
24	B6 - 5			1	11-22-03	0045							X			
25	B6 - 10					0048							X			
26	B6 - 15					0050							X			
27	B6 - 20					0055							X			
28	B6 - 25					0057							X			
29	B6 - 30					0100							X			
30	B6 - 35	↓		↓	↓	0105							X			

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	11-24-03 0925	[signature]	11-24-03 9:25
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal X

Sample Integrity: (Check)
Intact On Ice:

[redacted]

SUNSTAR T301260

Pg 3 of 3

[redacted]

CHAIN OF CUSTODY FORM

Client Name/Address:	P.O. #: 002-10231/00/002
LFR 3150 Bristol St 250 COSTA MESA CA 92626	Project: CRC PROPERTIES
Project Manager/Phone Number:	**Phone Number:**
DERRICK WOOD	714-444-014
Sampler:	**Fax Number:**
CLB	714-444-0177

ANALYSIS REQUIRED

	Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	8260 B	8270	CAM 17 Metals	6010 Metals	8082 PCBs				HOLD			Special Instructions
31	B6 - 40	Soil		1	11-22-03	0110									X			
32	B6 - 45			1		0115									X			
33	B6 - 60		5035	4		0170	X	X	X	X								
34	B4 - 5			1											X			
35	B4 - 10														X			
36	B4 - 15														X			
37	B4 - 20														X			
38	B4 - 25														X			
39	B4 - 30														X			
40	B4 - 35														X			
41	B4 - 40														X			
42	B4 - 45														X			
43	B4 - 50		5035	4			X	X	X	X	X							

Relinquished By	Date/Time:	Received By	Date/Time:
[redacted]	11-24-03/0925	[redacted]	11-24-03 0925
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal X
Sample Integrity: (Check)
Intact _____ On Ice: _____

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B2-50	T301260-01	Soil	11/21/03	11/24/03
B3-50	T301260-02	Soil	11/21/03	11/24/03
B5-50	T301260-03	Soil	11/21/03	11/24/03
B1-35	T301260-10	Soil	11/21/03	11/24/03
B1-50	T301260-13	Soil	11/21/03	11/24/03
B7-35	T301260-20	Soil	11/21/03	11/24/03
B7-50	T301260-23	Soil	11/21/03	11/24/03
B6-30	T301260-29	Soil	11/22/03	11/24/03
B6-50	T301260-33	Soil	11/22/03	11/24/03
B4-10	T301260-35	Soil	11/22/03	11/24/03
B4-15	T301260-36	Soil	11/22/03	11/24/03
B4-20	T301260-37	Soil	11/22/03	11/24/03
B4-50	T301260-43	Soil	11/22/03	11/24/03

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Extractable Petroleum Hydrocarbons by 8015

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301260-01) Soil	**Sampled: 11/21/03 01:25**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112405	11/24/03	11/24/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	
B3-50 (T301260-02) Soil	**Sampled: 11/21/03 03:05**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112405	11/24/03	11/24/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	
B5-50 (T301260-03) Soil	**Sampled: 11/21/03 04:40**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112405	11/24/03	11/24/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	
B1-35 (T301260-10) Soil	**Sampled: 11/21/03 21:05**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112612	11/26/03	11/29/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	
B1-50 (T301260-13) Soil	**Sampled: 11/21/03 21:20**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112405	11/24/03	11/24/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	
B7-35 (T301260-20) Soil	**Sampled: 11/21/03 23:20**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112612	11/26/03	12/02/03	EPA 8015m	
C12-C28	**15000**	100	"	10	"	"	"	"	
C28-C40	**20000**	100	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Extractable Petroleum Hydrocarbons by 8015

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-50 (T301260-23) Soil	**Sampled: 11/21/03 23:50**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112405	11/24/03	11/25/03	EPA 8015m	
C12-C28	**20000**	100	"	10	"	"	"	"	
C28-C40	**22000**	100	"	"	"	"	"	"	
B6-30 (T301260-29) Soil	**Sampled: 11/22/03 01:00**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112612	11/26/03	11/29/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	
B6-50 (T301260-33) Soil	**Sampled: 11/22/03 01:20**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112405	11/24/03	11/24/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	
B4-10 (T301260-35) Soil	**Sampled: 11/22/03 02:00**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112612	11/26/03	12/02/03	EPA 8015m	
C12-C28	**8400**	100	"	10	"	"	"	"	
C28-C40	**22000**	100	"	"	"	"	"	"	
B4-15 (T301260-36) Soil	**Sampled: 11/22/03 02:05**	**Received: 11/24/03 09:25**							
C12-C28	ND	10	mg/kg	1	3120603	12/06/03	12/09/03	EPA 8015m	O-04
C28-C40	ND	10	"	"	"	"	"	"	O-04
B4-20 (T301260-37) Soil	**Sampled: 11/22/03 02:08**	**Received: 11/24/03 09:25**							
C12-C28	ND	10	mg/kg	1	3120603	12/06/03	12/09/03	EPA 8015m	O-04
C28-C40	ND	10	"	"	"	"	"	"	O-04

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Extractable Petroleum Hydrocarbons by 8015

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-50 (T301260-43) Soil	**Sampled: 11/22/03 02:35**	**Received: 11/24/03 09:25**							
C6-C12	ND	10	mg/kg	1	3112405	11/24/03	11/25/03	EPA 8015m	
C12-C28	ND	10	"	"	"	"	"	"	
C28-C40	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Metals by EPA 6010B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301260-01) Soil	**Sampled: 11/21/03 01:25**	**Received: 11/24/03 09:25**							
Antimony	ND	3.0	mg/kg	1	3112601	11/26/03	11/26/03	EPA 6010B	
Arsenic	**5.8**	5.0	"	"	"	"	"	"	
Barium	**35**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**3.8**	2.0	"	"	"	"	"	"	
Cobalt	**5.2**	2.0	"	"	"	"	"	"	
Copper	**15**	1.0	"	"	"	"	"	"	
Lead	**3.5**	3.0	"	"	"	"	"	"	
Molybdenum	ND	1.0	"	"	"	"	"	"	
Nickel	**7.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	2.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**12**	5.0	"	"	"	"	"	"	
Zinc	**32**	1.0	"	"	"	"	"	"	
B3-50 (T301260-02) Soil	**Sampled: 11/21/03 03:05**	**Received: 11/24/03 09:25**							
Antimony	ND	3.0	mg/kg	1	3112601	11/26/03	11/26/03	EPA 6010B	
Arsenic	**12**	5.0	"	"	"	"	"	"	
Barium	**59**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**9.9**	2.0	"	"	"	"	"	"	
Cobalt	**7.7**	2.0	"	"	"	"	"	"	
Copper	**21**	1.0	"	"	"	"	"	"	
Lead	**4.1**	3.0	"	"	"	"	"	"	
Molybdenum	ND	1.0	"	"	"	"	"	"	
Nickel	**17**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	2.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**48**	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Metals by EPA 6010B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-50 (T301260-03) Soil	**Sampled: 11/21/03 04:40**	**Received: 11/24/03 09:25**							
Antimony	ND	3.0	mg/kg	1	3112601	11/26/03	11/26/03	EPA 6010B	
Arsenic	**8.4**	5.0	"	"	"	"	"	"	
Barium	**62**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**13**	2.0	"	"	"	"	"	"	
Cobalt	**9.6**	2.0	"	"	"	"	"	"	
Copper	**23**	1.0	"	"	"	"	"	"	
Lead	**6.2**	3.0	"	"	"	"	"	"	
Molybdenum	ND	1.0	"	"	"	"	"	"	
Nickel	**19**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	2.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**29**	5.0	"	"	"	"	"	"	
Zinc	**65**	1.0	"	"	"	"	"	"	
B1-50 (T301260-13) Soil	**Sampled: 11/21/03 21:20**	**Received: 11/24/03 09:25**							
Antimony	ND	3.0	mg/kg	1	3112601	11/26/03	11/26/03	EPA 6010B	
Arsenic	**14**	5.0	"	"	"	"	"	"	
Barium	**140**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	**2.0**	2.0	"	"	"	"	"	"	
Chromium	**22**	2.0	"	"	"	"	"	"	
Cobalt	**9.2**	2.0	"	"	"	"	"	"	
Copper	**21**	1.0	"	"	"	"	"	"	
Lead	**10**	3.0	"	"	"	"	"	"	
Molybdenum	**1.0**	1.0	"	"	"	"	"	"	
Nickel	**18**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	2.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**31**	5.0	"	"	"	"	"	"	
Zinc	**60**	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Metals by EPA 6010B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-50 (T301260-23) Soil	**Sampled: 11/21/03 23:50**	**Received: 11/24/03 09:25**							
Antimony	ND	3.0	mg/kg	1	3112601	11/26/03	11/26/03	EPA 6010B	
Arsenic	**24**	5.0	"	"	"	"	"	"	
Barium	**340**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**29**	2.0	"	"	"	"	"	"	
Cobalt	**8.5**	2.0	"	"	"	"	"	"	
Copper	**54**	1.0	"	"	"	"	"	"	
Lead	**350**	3.0	"	"	"	"	"	"	
Molybdenum	**1.6**	1.0	"	"	"	"	"	"	
Nickel	**32**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	2.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**22**	5.0	"	"	"	"	"	"	
Zinc	**210**	1.0	"	"	"	"	"	"	
B6-50 (T301260-33) Soil	**Sampled: 11/22/03 01:20**	**Received: 11/24/03 09:25**							
Antimony	ND	3.0	mg/kg	1	3112601	11/26/03	11/26/03	EPA 6010B	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**77**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**13**	2.0	"	"	"	"	"	"	
Cobalt	**9.1**	2.0	"	"	"	"	"	"	
Copper	**16**	1.0	"	"	"	"	"	"	
Lead	**4.3**	3.0	"	"	"	"	"	"	
Molybdenum	ND	1.0	"	"	"	"	"	"	
Nickel	**13**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	2.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**32**	5.0	"	"	"	"	"	"	
Zinc	**45**	1.0	"	"	"	"	"	"	

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Metals by EPA 6010B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-50 (T301260-43) Soil	**Sampled: 11/22/03 02:35**	**Received: 11/24/03 09:25**							
Antimony	ND	3.0	mg/kg	1	3112601	11/26/03	11/26/03	EPA 6010B	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**38**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	ND	2.0	"	"	"	"	"	"	
Cobalt	**5.2**	2.0	"	"	"	"	"	"	
Copper	**8.7**	1.0	"	"	"	"	"	"	
Lead	**3.6**	3.0	"	"	"	"	"	"	
Molybdenum	ND	1.0	"	"	"	"	"	"	
Nickel	**7.0**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Silver	ND	2.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**11**	5.0	"	"	"	"	"	"	
Zinc	**36**	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Cold Vapor Extraction EPA 7470/7471

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301260-01) Soil	**Sampled: 11/21/03 01:25**	**Received: 11/24/03 09:25**							
Mercury	ND	0.10	mg/kg	1	3112602	11/26/03	11/26/03	EPA 7471A Soil	
B3-50 (T301260-02) Soil	**Sampled: 11/21/03 03:05**	**Received: 11/24/03 09:25**							
Mercury	ND	0.10	mg/kg	1	3112602	11/26/03	11/26/03	EPA 7471A Soil	
B5-50 (T301260-03) Soil	**Sampled: 11/21/03 04:40**	**Received: 11/24/03 09:25**							
Mercury	ND	0.10	mg/kg	1	3112602	11/26/03	11/26/03	EPA 7471A Soil	
B1-50 (T301260-13) Soil	**Sampled: 11/21/03 21:20**	**Received: 11/24/03 09:25**							
Mercury	ND	0.10	mg/kg	1	3112602	11/26/03	11/26/03	EPA 7471A Soil	
B7-50 (T301260-23) Soil	**Sampled: 11/21/03 23:50**	**Received: 11/24/03 09:25**							
Mercury	ND	0.10	mg/kg	1	3112602	11/26/03	11/26/03	EPA 7471A Soil	
B6-50 (T301260-33) Soil	**Sampled: 11/22/03 01:20**	**Received: 11/24/03 09:25**							
Mercury	ND	0.10	mg/kg	1	3112602	11/26/03	11/26/03	EPA 7471A Soil	
B4-50 (T301260-43) Soil	**Sampled: 11/22/03 02:35**	**Received: 11/24/03 09:25**							
Mercury	ND	0.10	mg/kg	1	3112602	11/26/03	11/26/03	EPA 7471A Soil	

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Polychlorinated Biphenyls by EPA Method 8082

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301260-01) Soil Sampled: 11/21/03 01:25 Received: 11/24/03 09:25									
PCB-1016	ND	10	ug/kg	1	3112407	11/24/03	11/26/03	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*118 %*	*35-140*		"	"	"	"	
B3-50 (T301260-02) Soil Sampled: 11/21/03 03:05 Received: 11/24/03 09:25									
PCB-1016	ND	10	ug/kg	1	3112407	11/24/03	11/26/03	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*115 %*	*35-140*		"	"	"	"	
B5-50 (T301260-03) Soil Sampled: 11/21/03 04:40 Received: 11/24/03 09:25									
PCB-1016	ND	10	ug/kg	1	3112407	11/24/03	11/26/03	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*47.8 %*	*35-140*		"	"	"	"	

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Polychlorinated Biphenyls by EPA Method 8082

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-50 (T301260-13) Soil	**Sampled: 11/21/03 21:20**	**Received: 11/24/03 09:25**							
PCB-1016	ND	10	ug/kg	1	3112407	11/24/03	11/26/03	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*87.0 %*	*35-140*		"	"	"	"	
B7-50 (T301260-23) Soil	**Sampled: 11/21/03 23:50**	**Received: 11/24/03 09:25**							
PCB-1016	ND	10	ug/kg	1	3112407	11/24/03	11/26/03	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*58.1 %*	*35-140*		"	"	"	"	
B6-50 (T301260-33) Soil	**Sampled: 11/22/03 01:20**	**Received: 11/24/03 09:25**							
PCB-1016	ND	10	ug/kg	1	3112407	11/24/03	11/26/03	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*96.5 %*	*35-140*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Polychlorinated Biphenyls by EPA Method 8082

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-50 (T301260-43) Soil	**Sampled: 11/22/03 02:35**	**Received: 11/24/03 09:25**							
PCB-1016	ND	10	ug/kg	1	3112407	11/24/03	11/26/03	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*106 %*		*35-140*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke 3150 Bristol Street #250 Costa Mesa CA, 92626	Project: CRG Properties Project Number: 002-10231-00/002 Project Manager: Derrick Willis	**Reported:** 12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-35 (T301260-10) Soil Sampled: 11/21/03 21:05 Received: 11/24/03 09:25									
Bromobenzene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1-35 (T301260-10) Soil	**Sampled: 11/21/03 21:05**	**Received: 11/24/03 09:25**							
Styrene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*96.3 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.5 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*105 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-50 (T301260-13) Soil	**Sampled: 11/21/03 21:20**	**Received: 11/24/03 09:25**							
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-50 (T301260-13) Soil	**Sampled: 11/21/03 21:20**	**Received: 11/24/03 09:25**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*87.1 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89.0 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-35 (T301260-20) Soil	**Sampled: 11/21/03 23:20**	**Received: 11/24/03 09:25**							
Bromobenzene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	**6.7**	2.0	"	"	"	"	"	"	
sec-Butylbenzene	**7.2**	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	**11**	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	**12**	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	**110**	2.0	"	"	"	"	"	"	
n-Propylbenzene	**15**	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-35 (T301260-20) Soil	**Sampled: 11/21/03 23:20**	**Received: 11/24/03 09:25**							
Styrene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**27**	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**120**	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	**40**	2.0	"	"	"	"	"	"	
Toluene	**19**	2.0	"	"	"	"	"	"	
Ethylbenzene	**29**	2.0	"	"	"	"	"	"	
m,p-Xylene	**140**	4.0	"	"	"	"	"	"	
o-Xylene	**47**	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*97.3 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*117 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*96.0 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-50 (T301260-23) Soil	**Sampled: 11/21/03 23:50**	**Received: 11/24/03 09:25**							
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	**30**	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	**37**	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	**49**	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	**150**	2.0	"	"	"	"	"	"	
n-Propylbenzene	**64**	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-50 (T301260-23) Soil	**Sampled: 11/21/03 23:50**	**Received: 11/24/03 09:25**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**92**	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**360**	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	**580**	2.0	"	"	"	"	"	"	
Toluene	**28**	2.0	"	"	"	"	"	"	
Ethylbenzene	**160**	2.0	"	"	"	"	"	"	
m,p-Xylene	**520**	4.0	"	"	"	"	"	"	
o-Xylene	**87**	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*97.3 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B6-30 (T301260-29) Soil	**Sampled: 11/22/03 01:00**	**Received: 11/24/03 09:25**							
Bromobenzene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B6-30 (T301260-29) Soil	**Sampled: 11/22/03 01:00**	**Received: 11/24/03 09:25**							
Styrene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*92.7 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.4 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B6-50 (T301260-33) Soil	**Sampled: 11/22/03 01:20**	**Received: 11/24/03 09:25**							
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B6-50 (T301260-33) Soil	**Sampled: 11/22/03 01:20**	**Received: 11/24/03 09:25**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*88.8 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*86.6 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*115 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-10 (T301260-35) Soil Sampled: 11/22/03 02:00 Received: 11/24/03 09:25									
Bromobenzene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-10 (T301260-35) Soil	**Sampled: 11/22/03 02:00**	**Received: 11/24/03 09:25**							
Styrene	ND	2.0	ug/kg	1	3112607	11/26/03	11/27/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*94.8 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.4 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*94.4 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-50 (T301260-43) Soil	**Sampled: 11/22/03 02:35**	**Received: 11/24/03 09:25**							
Bromobenzene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
Methylene chloride	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-50 (T301260-43) Soil	**Sampled: 11/22/03 02:35**	**Received: 11/24/03 09:25**							
Styrene	ND	2.0	ug/kg	1	3112401	11/24/03	11/24/03	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	4.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*85.8 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.3 %*		*74-121*	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*		*81-125*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301260-01) Soil	**Sampled: 11/21/03 01:25**	**Received: 11/24/03 09:25**							
Carbazole	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B2-50 (T301260-01) Soil Sampled: 11/21/03 01:25 Received: 11/24/03 09:25									
2,4-Dimethylphenol	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*37.4 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*60.5 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*69.5 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*64.7 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*56.3 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*101 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-50 (T301260-02) Soil Sampled: 11/21/03 03:05 Received: 11/24/03 09:25									
Carbazole	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3-50 (T301260-02) Soil Sampled: 11/21/03 03:05 Received: 11/24/03 09:25									
2,4-Dimethylphenol	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*71.3 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*79.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*78.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*71.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*62.9 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*101 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-50 (T301260-03) Soil	**Sampled: 11/21/03 04:40**	**Received: 11/24/03 09:25**							
Carbazole	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-50 (T301260-03) Soil Sampled: 11/21/03 04:40 Received: 11/24/03 09:25									
2,4-Dimethylphenol	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*61.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*71.9 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*75.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*67.1 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*62.3 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*98.2 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke 3150 Bristol Street #250 Costa Mesa CA, 92626	Project: CRG Properties Project Number: 002-10231-00/002 Project Manager: Derrick Willis	Reported: 12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-50 (T301260-13) Soil Sampled: 11/21/03 21:20 Received: 11/24/03 09:25									
Carbazole	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-50 (T301260-13) Soil Sampled: 11/21/03 21:20 Received: 11/24/03 09:25									
2,4-Dimethylphenol	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*59.8 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*71.3 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*73.7 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*68.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*70.7 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*117 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-50 (T301260-23) Soil Sampled: 11/21/03 23:50 Received: 11/24/03 09:25									
Carbazole	ND	300	ug/kg	1	3112408	11/24/03	11/27/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	**8700**	300	"	"	"	"	"	"	
2-Methylnaphthalene	**5300**	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	**400**	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-50 (T301260-23) Soil Sampled: 11/21/03 23:50 Received: 11/24/03 09:25									
2,4-Dimethylphenol	ND	300	ug/kg	1	3112408	11/24/03	11/27/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	**3600**	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	**2200**	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*51.0 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*66.5 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*66.5 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*79.0 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*499 %*	*19-122*		"	"	"	"	*S-02*
Surrogate: Terphenyl-dl4		*163 %*	*18-137*		"	"	"	"	*S-02*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B6-50 (T301260-33) Soil Sampled: 11/22/03 01:20 Received: 11/24/03 09:25									
Carbazole	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B6-50 (T301260-33) Soil Sampled: 11/22/03 01:20 Received: 11/24/03 09:25									
2,4-Dimethylphenol	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*52.2 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*61.7 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*65.3 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*59.8 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*58.9 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*95.8 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-10 (T301260-35) Soil Sampled: 11/22/03 02:00 Received: 11/24/03 09:25									
Carbazole	ND	300	ug/kg	1	3120604	12/05/03	12/10/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	Reported:
3150 Bristol Street #250	Project Number: 002-10231-00/002	
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-10 (T301260-35) Soil Sampled: 11/22/03 02:00 Received: 11/24/03 09:25									
2,4-Dimethylphenol	ND	300	ug/kg	1	3120604	12/05/03	12/10/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*28.1 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*29.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*45.3 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*34.6 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*81.4 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*38.7 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-50 (T301260-43) Soil Sampled: 11/22/03 02:35 Received: 11/24/03 09:25									
Carbazole	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	500	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	300	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-50 (T301260-43) Soil Sampled: 11/22/03 02:35 Received: 11/24/03 09:25									
2,4-Dimethylphenol	ND	300	ug/kg	1	3112408	11/24/03	11/26/03	EPA 8270C	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	300	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	500	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	300	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*62.9 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*75.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*79.6 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*75.4 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*78.4 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*125 %*	*18-137*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Purgeable Petroleum Hydrocarbons by 8015

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-15 (T301260-36) Soil Sampled: 11/22/03 02:05 Received: 11/24/03 09:25									
Gasoline Range Hydrocarbons	ND	500	ug/kg	1	3120602	12/06/03	12/08/03	EPA 8015m	O-05
Surrogate: 4-Bromofluorobenzene		*124 %*	*65-135*		"	"	"	"	*O-05*
B4-20 (T301260-37) Soil Sampled: 11/22/03 02:08 Received: 11/24/03 09:25									
Gasoline Range Hydrocarbons	**680**	500	ug/kg	1	3120602	12/06/03	12/08/03	EPA 8015m	O-05
Surrogate: 4-Bromofluorobenzene		*115 %*	*65-135*		"	"	"	"	*O-05*

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112405 - EPA 3550B Soil										
Blank (3112405-BLK1)				Prepared & Analyzed: 11/24/03						
C6-C12	ND	10	mg/kg							
C12-C28	ND	10	"							
C28-C40	ND	10	"							
LCS (3112405-BS1)				Prepared: 11/24/03		Analyzed: 11/25/03				
C12-C28	440	10	mg/kg	500		88.0	75-125			
Matrix Spike (3112405-MS1)	Source: T301265-02			Prepared: 11/24/03		Analyzed: 11/25/03				
C12-C28	820	10	mg/kg	500	370	90.0	75-125			
Matrix Spike Dup (3112405-MSD1)	Source: T301265-02			Prepared: 11/24/03		Analyzed: 11/25/03				
C12-C28	830	10	mg/kg	500	370	92.0	75-125	1.21	20	
Batch 3112612 - EPA 3550B Soil										
Blank (3112612-BLK1)				Prepared: 11/26/03		Analyzed: 11/29/03				
C6-C12	ND	10	mg/kg							
C12-C28	ND	10	"							
C28-C40	ND	10	"							
LCS (3112612-BS1)				Prepared: 11/26/03		Analyzed: 11/29/03				
C12-C28	480	10	mg/kg	500		96.0	75-125			
Matrix Spike (3112612-MS1)	Source: T301254-06			Prepared: 11/26/03		Analyzed: 11/29/03				
C12-C28	470	10	mg/kg	500	ND	94.0	75-125			
Matrix Spike Dup (3112612-MSD1)	Source: T301254-06			Prepared: 11/26/03		Analyzed: 11/29/03				
C12-C28	440	10	mg/kg	500	ND	88.0	75-125	6.59	20	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120603 - EPA 3550B Soil										
Blank (3120603-BLK1)				Prepared: 12/06/03 Analyzed: 12/08/03						
C12-C28	ND	10	mg/kg							
C28-C40	ND	10	"							
LCS (3120603-BS1)				Prepared: 12/06/03 Analyzed: 12/09/03						
C12-C28	460	10	mg/kg	500		92.0	75-125			
Matrix Spike (3120603-MS1)	**Source: T301254-25**			Prepared: 12/06/03 Analyzed: 12/09/03						
C12-C28	530	10	mg/kg	500	ND	106	75-125			
Matrix Spike Dup (3120603-MSD1)	**Source: T301254-25**			Prepared: 12/06/03 Analyzed: 12/09/03						
C12-C28	540	10	mg/kg	500	ND	108	75-125	1.87	20	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112601 - EPA 3050B										
Blank (3112601-BLK1)				Prepared: 11/26/03 Analyzed: 12/01/03						
Antimony	ND	3.0	mg/kg							
Arsenic	ND	5.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	2.0	"							
Chromium	ND	2.0	"							
Cobalt	ND	2.0	"							
Copper	ND	1.0	"							
Lead	ND	3.0	"							
Molybdenum	ND	1.0	"							
Nickel	ND	2.0	"							
Selenium	ND	5.0	"							
Silver	ND	2.0	"							
Thallium	ND	2.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	1.0	"							
LCS (3112601-BS1)				Prepared: 11/26/03 Analyzed: 12/01/03						
Arsenic	97.6	5.0	mg/kg	100		97.6	65-135			
Barium	98.3	1.0	"	100		98.3	65-135			
Cadmium	103	2.0	"	100		103	65-135			
Chromium	110	2.0	"	100		110	65-135			
Lead	104	3.0	"	100		104	65-135			
Matrix Spike (3112601-MS1)	**Source: T301260-01**			Prepared: 11/26/03 Analyzed: 12/01/03						
Arsenic	107	5.0	mg/kg	100	5.8	101	65-135			
Barium	154	1.0	"	100	35	119	65-135			
Cadmium	112	2.0	"	100	0.77	111	65-135			
Chromium	125	2.0	"	100	3.8	121	65-135			
Lead	117	3.0	"	100	3.5	114	65-135			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112601 - EPA 3050B										
Matrix Spike Dup (3112601-MSD1)	**Source: T301260-01**			Prepared: 11/26/03		Analyzed: 12/01/03				
Arsenic	95.7	5.0	mg/kg	100	5.8	89.9	65-135	11.1	30	
Barium	148	1.0	"	100	35	113	65-135	3.97	30	
Cadmium	111	2.0	"	100	0.77	110	65-135	0.897	30	
Chromium	175	2.0	"	100	3.8	171	65-135	33.3	30	QM-05
Lead	116	3.0	"	100	3.5	112	65-135	0.858	30	

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112602 - EPA 7471A Soil										
Blank (3112602-BLK1)				Prepared & Analyzed: 11/26/03						
Mercury	ND	0.10	mg/kg							
LCS (3112602-BS1)				Prepared & Analyzed: 11/26/03						
Mercury	1.05	0.10	mg/kg	1.00		105	80-120			
Matrix Spike (3112602-MS1)	**Source: T301260-01**			Prepared & Analyzed: 11/26/03						
Mercury	0.950	0.10	mg/kg	1.00	ND	95.0	75-125			
Matrix Spike Dup (3112602-MSD1)	**Source: T301260-01**			Prepared & Analyzed: 11/26/03						
Mercury	0.930	0.10	mg/kg	1.00	ND	93.0	75-125	2.13	20	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112407 - EPA 3550B GCMS Soil										
Blank (3112407-BLK1)				Prepared: 11/24/03 Analyzed: 11/26/03						
PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	*97.7*		"	*100*		*97.7*	*35-140*			
LCS (3112407-BS1)				Prepared: 11/24/03 Analyzed: 11/26/03						
PCB-1016	259	10	ug/kg	500		51.8	40-120			
PCB-1260	257	10	"	500		51.4	40-120			
Surrogate: Tetrachloro-meta-xylene	*98.5*		"	*100*		*98.5*	*35-140*			
Matrix Spike (3112407-MS1)	**Source: T301260-01**			Prepared: 11/24/03 Analyzed: 11/26/03						
PCB-1016	266	10	ug/kg	500	ND	53.2	40-120			
PCB-1260	235	10	"	500	ND	47.0	40-120			
Surrogate: Tetrachloro-meta-xylene	*108*		"	*100*		*108*	*35-140*			
Matrix Spike Dup (3112407-MSD1)	**Source: T301260-01**			Prepared: 11/24/03 Analyzed: 11/26/03						
PCB-1016	278	10	ug/kg	500	ND	55.6	40-120	4.41	30	
PCB-1260	256	10	"	500	ND	51.2	40-120	8.55	30	
Surrogate: Tetrachloro-meta-xylene	*115*		"	*100*		*115*	*35-140*			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
Blank (3112401-BLK1)				Prepared & Analyzed: 11/24/03						
Bromobenzene	ND	2.0	ug/kg							
Bromochloromethane	ND	2.0	"							
Bromodichloromethane	ND	2.0	"							
Bromoform	ND	2.0	"							
Bromomethane	ND	2.0	"							
n-Butylbenzene	ND	2.0	"							
sec-Butylbenzene	ND	2.0	"							
tert-Butylbenzene	ND	2.0	"							
Carbon tetrachloride	ND	2.0	"							
Chlorobenzene	ND	2.0	"							
Chloroethane	ND	2.0	"							
Chloroform	ND	2.0	"							
Chloromethane	ND	2.0	"							
2-Chlorotoluene	ND	2.0	"							
4-Chlorotoluene	ND	2.0	"							
Dibromochloromethane	ND	2.0	"							
1,2-Dibromo-3-chloropropane	ND	2.0	"							
1,2-Dibromoethane (EDB)	ND	2.0	"							
Dibromomethane	ND	2.0	"							
1,2-Dichlorobenzene	ND	2.0	"							
1,3-Dichlorobenzene	ND	2.0	"							
1,4-Dichlorobenzene	ND	2.0	"							
Dichlorodifluoromethane	ND	2.0	"							
1,1-Dichloroethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
1,1-Dichloroethene	ND	2.0	"							
cis-1,2-Dichloroethene	ND	2.0	"							
trans-1,2-Dichloroethene	ND	2.0	"							
1,2-Dichloropropane	ND	2.0	"							
1,3-Dichloropropane	ND	2.0	"							
2,2-Dichloropropane	ND	2.0	"							
1,1-Dichloropropene	ND	2.0	"							
cis-1,3-Dichloropropene	ND	2.0	"							
trans-1,3-Dichloropropene	ND	2.0	"							
Hexachlorobutadiene	ND	2.0	"							
Isopropylbenzene	ND	2.0	"							
p-Isopropyltoluene	ND	2.0	"							
Methylene chloride	ND	2.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
Blank (3112401-BLK1)				Prepared & Analyzed: 11/24/03						
Naphthalene	ND	2.0	ug/kg							
n-Propylbenzene	ND	2.0	"							
Styrene	ND	2.0	"							
1,1,2,2-Tetrachloroethane	ND	2.0	"							
1,1,1,2-Tetrachloroethane	ND	2.0	"							
Tetrachloroethene	ND	2.0	"							
1,2,3-Trichlorobenzene	ND	2.0	"							
1,2,4-Trichlorobenzene	ND	2.0	"							
1,1,2-Trichloroethane	ND	2.0	"							
1,1,1-Trichloroethane	ND	2.0	"							
Trichloroethene	ND	2.0	"							
Trichlorofluoromethane	ND	2.0	"							
1,2,3-Trichloropropane	ND	2.0	"							
1,3,5-Trimethylbenzene	ND	2.0	"							
1,2,4-Trimethylbenzene	ND	2.0	"							
Vinyl chloride	ND	2.0	"							
Benzene	ND	2.0	"							
Toluene	ND	2.0	"							
Ethylbenzene	ND	2.0	"							
m,p-Xylene	ND	4.0	"							
o-Xylene	ND	2.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: Toluene-d8	*86.2*		"	*100*		*86.2*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*92.2*		"	*100*		*92.2*	*74-121*			
Surrogate: Dibromofluoromethane	*109*		"	*100*		*109*	*81-125*			

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112401 - EPA 5035 Soil MS										
LCS (3112401-BS1)				Prepared & Analyzed: 11/24/03						
Chlorobenzene	253	2.0	ug/kg	250		101	75-125			
1,1-Dichloroethene	234	2.0	"	250		93.6	15-125			
Trichloroethene	283	2.0	"	250		113	75-125			
Benzene	280	2.0	"	250		112	75-125			
Toluene	270	2.0	"	250		108	75-125			
Surrogate: Toluene-d8	*96.6*		"	*100*		*96.6*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*84.9*		"	*100*		*84.9*	*74-121*			
Surrogate: Dibromofluoromethane	*105*		"	*100*		*105*	*81-125*			
LCS Dup (3112401-BSD1)				Prepared & Analyzed: 11/24/03						
Chlorobenzene	253	2.0	ug/kg	250		101	75-125	0.00	20	
1,1-Dichloroethene	233	2.0	"	250		93.2	15-125	0.428	20	
Trichloroethene	285	2.0	"	250		114	75-125	0.704	20	
Benzene	282	2.0	"	250		113	75-125	0.712	20	
Toluene	270	2.0	"	250		108	75-125	0.00	20	
Surrogate: Toluene-d8	*95.0*		"	*100*		*95.0*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*86.8*		"	*100*		*86.8*	*74-121*			
Surrogate: Dibromofluoromethane	*102*		"	*100*		*102*	*81-125*			
Batch 3112607 - EPA 5035 Soil MS										
Blank (3112607-BLK1)				Prepared: 11/26/03 Analyzed: 11/27/03						
Bromobenzene	ND	2.0	ug/kg							
Bromochloromethane	ND	2.0	"							
Bromodichloromethane	ND	2.0	"							
Bromoform	ND	2.0	"							
Bromomethane	ND	2.0	"							
n-Butylbenzene	ND	2.0	"							
sec-Butylbenzene	ND	2.0	"							
tert-Butylbenzene	ND	2.0	"							
Carbon tetrachloride	ND	2.0	"							
Chlorobenzene	ND	2.0	"							
Chloroethane	ND	2.0	"							
Chloroform	ND	2.0	"							
Chloromethane	ND	2.0	"							
2-Chlorotoluene	ND	2.0	"							
4-Chlorotoluene	ND	2.0	"							
Dibromochloromethane	ND	2.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112607 - EPA 5035 Soil MS										
Blank (3112607-BLK1)				Prepared: 11/26/03 Analyzed: 11/27/03						
1,2-Dibromo-3-chloropropane	ND	2.0	ug/kg							
1,2-Dibromoethane (EDB)	ND	2.0	"							
Dibromomethane	ND	2.0	"							
1,2-Dichlorobenzene	ND	2.0	"							
1,3-Dichlorobenzene	ND	2.0	"							
1,4-Dichlorobenzene	ND	2.0	"							
Dichlorodifluoromethane	ND	2.0	"							
1,1-Dichloroethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
1,1-Dichloroethene	ND	2.0	"							
cis-1,2-Dichloroethene	ND	2.0	"							
trans-1,2-Dichloroethene	ND	2.0	"							
1,2-Dichloropropane	ND	2.0	"							
1,3-Dichloropropane	ND	2.0	"							
2,2-Dichloropropane	ND	2.0	"							
1,1-Dichloropropene	ND	2.0	"							
cis-1,3-Dichloropropene	ND	2.0	"							
trans-1,3-Dichloropropene	ND	2.0	"							
Hexachlorobutadiene	ND	2.0	"							
Isopropylbenzene	ND	2.0	"							
p-Isopropyltoluene	ND	2.0	"							
Methylene chloride	ND	2.0	"							
Naphthalene	ND	2.0	"							
n-Propylbenzene	ND	2.0	"							
Styrene	ND	2.0	"							
1,1,2,2-Tetrachloroethane	ND	2.0	"							
1,1,1,2-Tetrachloroethane	ND	2.0	"							
Tetrachloroethene	ND	2.0	"							
1,2,3-Trichlorobenzene	ND	2.0	"							
1,2,4-Trichlorobenzene	ND	2.0	"							
1,1,2-Trichloroethane	ND	2.0	"							
1,1,1-Trichloroethane	ND	2.0	"							
Trichloroethene	ND	2.0	"							
Trichlorofluoromethane	ND	2.0	"							
1,2,3-Trichloropropane	ND	2.0	"							
1,3,5-Trimethylbenzene	ND	2.0	"							
1,2,4-Trimethylbenzene	ND	2.0	"							
Vinyl chloride	ND	2.0	"							

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112607 - EPA 5035 Soil MS										
Blank (3112607-BLK1)				Prepared: 11/26/03 Analyzed: 11/27/03						
Benzene	ND	2.0	ug/kg							
Toluene	ND	2.0	"							
Ethylbenzene	ND	2.0	"							
m,p-Xylene	ND	4.0	"							
o-Xylene	ND	2.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: Toluene-d8	*99.1*		"	*100*		*99.1*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*95.8*		"	*100*		*95.8*	*74-121*			
Surrogate: Dibromofluoromethane	*105*		"	*100*		*105*	*81-125*			
LCS (3112607-BS1)				Prepared: 11/26/03 Analyzed: 11/28/03						
Chlorobenzene	239	2.0	ug/kg	250		95.6	75-125			
1,1-Dichloroethene	206	2.0	"	250		82.4	75-125			
Trichloroethene	219	2.0	"	250		87.6	75-125			
Benzene	210	2.0	"	250		84.0	75-125			
Toluene	211	2.0	"	250		84.4	75-125			
Surrogate: Toluene-d8	*93.2*		"	*100*		*93.2*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*96.2*		"	*100*		*96.2*	*74-121*			
Surrogate: Dibromofluoromethane	*99.6*		"	*100*		*99.6*	*81-125*			
Matrix Spike (3112607-MS1)	**Source: T301277-04**			Prepared: 11/26/03 Analyzed: 11/27/03						
Chlorobenzene	259	2.0	ug/kg	250	ND	104	75-125			
1,1-Dichloroethene	215	2.0	"	250	ND	86.0	75-125			
Trichloroethene	238	2.0	"	250	ND	95.2	75-125			
Benzene	250	2.0	"	250	ND	100	75-125			
Toluene	262	2.0	"	250	ND	105	75-125			
Surrogate: Toluene-d8	*99.3*		"	*100*		*99.3*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*98.0*		"	*100*		*98.0*	*74-121*			
Surrogate: Dibromofluoromethane	*95.2*		"	*100*		*95.2*	*81-125*			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112607 - EPA 5035 Soil MS										
Matrix Spike Dup (3112607-MSD1)	**Source: T301277-04**			Prepared: 11/26/03		Analyzed: 11/27/03				
Chlorobenzene	246	2.0	ug/kg	250	ND	98.4	75-125	5.15	20	
1,1-Dichloroethene	226	2.0	"	250	ND	90.4	75-125	4.99	20	
Trichloroethene	216	2.0	"	250	ND	86.4	75-125	9.69	20	
Benzene	238	2.0	"	250	ND	95.2	75-125	4.92	20	
Toluene	247	2.0	"	250	ND	98.8	75-125	5.89	20	
Surrogate: Toluene-d8	*101*		"	*100*		*101*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*100*		"	*100*		*100*	*74-121*			
Surrogate: Dibromofluoromethane	*101*		"	*100*		*101*	*81-125*			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	Reported:
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112408 - EPA 3550B GCMS Soil										
Blank (3112408-BLK1)				Prepared: 11/24/03 Analyzed: 11/26/03						
Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	300	"							
2-Chlorophenol	ND	300	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	300	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	500	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	500	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							
',2-Dichlorobenzene	ND	300	"							
1,3-Dichlorobenzene	ND	300	"							

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112408 - EPA 3550B GCMS Soil										
Blank (3112408-BLK1)				Prepared: 11/24/03 Analyzed: 11/26/03						
2,4-Dichlorophenol	ND	300	ug/kg							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	300	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	300	"							
2,4-Dinitrophenol	ND	300	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	300	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	500	"							
N-Nitrosodiethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
2,4,6-Trichlorophenol	ND	300	"							
Surrogate: 2-Fluorophenol	*1040*		*"*	*1670*		*62.3*	*15-121*			
Surrogate: Phenol-d6	*1220*		*"*	*1670*		*73.1*	*24-113*			
Surrogate: Nitrobenzene-d5	*1290*		*"*	*1670*		*77.2*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1160*		*"*	*1670*		*69.5*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1140*		*"*	*1670*		*68.3*	*19-122*			
Surrogate: Terphenyl-dl4	*2140*		*"*	*1670*		*128*	*18-137*			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112408 - EPA 3550B GCMS Soil										
LCS (3112408-BS1)				Prepared: 11/24/03 Analyzed: 11/26/03						
Phenol	1350	300	ug/kg	1670		80.8	12-89			
2-Chlorophenol	1240	300	"	1670		74.3	27-123			
1,4-Dichlorobenzene	1280	300	"	1670		76.6	36-97			
N-Nitrosodi-n-propylamine	1880	300	"	1670		113	41-116			
1,2,4-Trichlorobenzene	1100	300	"	1670		65.9	39-98			
4-Chloro-3-methylphenol	1240	300	"	1670		74.3	23-97			
Acenaphthene	1410	300	"	1670		84.4	46-118			
4-Nitrophenol	786	500	"	1670		47.1	10-80			
2,4-Dinitrotoluene	1050	300	"	1670		62.9	24-96			
Pentachlorophenol	591	500	"	1670		35.4	9-103			
Pyrene	2050	300	"	1670		123	26-127			
Surrogate: 2-Fluorophenol	*1080*		"	*1670*		*64.7*	*15-121*			
Surrogate: Phenol-d6	*1290*		"	*1670*		*77.2*	*24-113*			
Surrogate: Nitrobenzene-d5	*1290*		"	*1670*		*77.2*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1200*		"	*1670*		*71.9*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1340*		"	*1670*		*80.2*	*19-122*			
Surrogate: Terphenyl-dl4	*2000*		"	*1670*		*120*	*18-137*			
Matrix Spike (3112408-MS1)	**Source: T301260-01**			Prepared: 11/24/03 Analyzed: 11/26/03						
Phenol	1170	300	ug/kg	1670	ND	70.1	12-89			
2-Chlorophenol	1030	300	"	1670	ND	61.7	27-123			
1,4-Dichlorobenzene	1050	300	"	1670	ND	62.9	36-97			
N-Nitrosodi-n-propylamine	1600	300	"	1670	ND	95.8	41-116			
1,2,4-Trichlorobenzene	974	300	"	1670	ND	58.3	39-98			
4-Chloro-3-methylphenol	1050	300	"	1670	ND	62.9	23-97			
Acenaphthene	1200	300	"	1670	ND	71.9	46-118			
4-Nitrophenol	668	500	"	1670	ND	40.0	10-80			
2,4-Dinitrotoluene	945	300	"	1670	ND	56.6	24-96			
Pentachlorophenol	462	500	"	1670	ND	27.7	9-103			
Pyrene	1920	300	"	1670	ND	115	26-127			
Surrogate: 2-Fluorophenol	*932*		"	*1670*		*55.8*	*15-121*			
Surrogate: Phenol-d6	*1190*		"	*1670*		*71.3*	*24-113*			
Surrogate: Nitrobenzene-d5	*1290*		"	*1670*		*77.2*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1160*		"	*1670*		*69.5*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1290*		"	*1670*		*77.2*	*19-122*			
Surrogate: Terphenyl-dl4	*1870*		"	*1670*		*112*	*18-137*			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3112408 - EPA 3550B GCMS Soil										
Matrix Spike Dup (3112408-MSD1)	**Source: T301260-01**			Prepared: 11/24/03		Analyzed: 11/27/03				
Phenol	1040	300	ug/kg	1670	ND	62.3	12-89	11.8	42	
2-Chlorophenol	925	300	"	1670	ND	55.4	27-123	10.7	40	
1,4-Dichlorobenzene	963	300	"	1670	ND	57.7	36-97	8.64	28	
N-Nitrosodi-n-propylamine	1400	300	"	1670	ND	83.8	41-116	13.3	38	
1,2,4-Trichlorobenzene	875	300	"	1670	ND	52.4	39-98	10.7	28	
4-Chloro-3-methylphenol	995	300	"	1670	ND	59.6	23-97	5.38	42	
Acenaphthene	1100	300	"	1670	ND	65.9	46-118	8.70	31	
4-Nitrophenol	638	500	"	1670	ND	38.2	10-80	4.59	50	
2,4-Dinitrotoluene	845	300	"	1670	ND	50.6	24-96	11.2	38	
Pentachlorophenol	503	500	"	1670	ND	30.1	9-103	8.50	50	
Pyrene	2040	300	"	1670	ND	122	26-127	6.06	31	
Surrogate: 2-Fluorophenol	*993*		"	*1670*		*59.5*	*15-121*			
Surrogate: Phenol-d6	*1290*		"	*1670*		*77.2*	*24-113*			
Surrogate: Nitrobenzene-d5	*1400*		"	*1670*		*83.8*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1300*		"	*1670*		*77.8*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1400*		"	*1670*		*83.8*	*19-122*			
Surrogate: Terphenyl-dl4	*1940*		"	*1670*		*116*	*18-137*			
Batch 3120604 - EPA 3550B GCMS Soil										
Blank (3120604-BLK1)				Prepared: 12/06/03		Analyzed: 12/10/03				
Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	300	"							
2-Chlorophenol	ND	300	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	300	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	500	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	500	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120604 - EPA 3550B GCMS Soil										
Blank (3120604-BLK1)				Prepared: 12/06/03 Analyzed: 12/10/03						
Benzo (a) anthracene	ND	300	ug/kg							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							
1,2-Dichlorobenzene	ND	300	"							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	300	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	300	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	300	"							
2,4-Dinitrophenol	ND	300	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	300	"							

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120604 - EPA 3550B GCMS Soil										
Blank (3120604-BLK1)				Prepared: 12/06/03 Analyzed: 12/10/03						
4-Methylphenol	ND	1000	ug/kg							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	500	"							
N-Nitrosodiethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
2,4,6-Trichlorophenol	ND	300	"							
Surrogate: 2-Fluorophenol	*1010*		"	*1670*		*60.5*	*15-121*			
Surrogate: Phenol-d6	*994*		"	*1670*		*59.5*	*24-113*			
Surrogate: Nitrobenzene-d5	*1130*		"	*1670*		*67.7*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1260*		"	*1670*		*75.4*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1180*		"	*1670*		*70.7*	*19-122*			
Surrogate: Terphenyl-dl4	*1580*		"	*1670*		*94.6*	*18-137*			
LCS (3120604-BS1)				Prepared: 12/06/03 Analyzed: 12/10/03						
Phenol	943	300	ug/kg	1670		56.5	12-89			
2-Chlorophenol	977	300	"	1670		58.5	27-123			
1,4-Dichlorobenzene	964	300	"	1670		57.7	36-97			
N-Nitrosodi-n-propylamine	1220	300	"	1670		73.1	41-116			
1,2,4-Trichlorobenzene	1020	300	"	1670		61.1	39-98			
4-Chloro-3-methylphenol	1020	300	"	1670		61.1	23-97			
Acenaphthene	1150	300	"	1670		68.9	46-118			
4-Nitrophenol	920	500	"	1670		55.1	10-80			
2,4-Dinitrotoluene	734	300	"	1670		44.0	24-96			
Pentachlorophenol	884	500	"	1670		52.9	9-103			
Pyrene	1780	300	"	1670		107	26-127			
Surrogate: 2-Fluorophenol	*881*		"	*1670*		*52.8*	*15-121*			
Surrogate: Phenol-d6	*1040*		"	*1670*		*62.3*	*24-113*			
Surrogate: Nitrobenzene-d5	*1140*		"	*1670*		*68.3*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1150*		"	*1670*		*68.9*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1230*		"	*1670*		*73.7*	*19-122*			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120604 - EPA 3550B GCMS Soil										
LCS (3120604-BS1)				Prepared: 12/06/03		Analyzed: 12/10/03				
Surrogate: Terphenyl-dl4	*1420*		*ug/kg*	*1670*		*85.0*	*18-137*			
LCS Dup (3120604-BSD1)				Prepared: 12/06/03		Analyzed: 12/10/03				
Phenol	832	300	ug/kg	1670		49.8	12-89	12.5	42	
2-Chlorophenol	859	300	"	1670		51.4	27-123	12.9	40	
1,4-Dichlorobenzene	855	300	"	1670		51.2	36-97	12.0	28	
N-Nitrosodi-n-propylamine	1070	300	"	1670		64.1	41-116	13.1	38	
1,2,4-Trichlorobenzene	922	300	"	1670		55.2	39-98	10.1	28	
4-Chloro-3-methylphenol	909	300	"	1670		54.4	23-97	11.5	42	
Acenaphthene	1070	300	"	1670		64.1	46-118	7.21	31	
4-Nitrophenol	819	500	"	1670		49.0	10-80	11.6	50	
2,4-Dinitrotoluene	675	300	"	1670		40.4	24-96	8.37	38	
Pentachlorophenol	787	500	"	1670		47.1	9-103	11.6	50	
Pyrene	1690	300	"	1670		101	26-127	5.19	31	
Surrogate: 2-Fluorophenol	*741*		*"*	*1670*		*44.4*	*15-121*			
Surrogate: Phenol-d6	*895*		*"*	*1670*		*53.6*	*24-113*			
Surrogate: Nitrobenzene-d5	*1050*		*"*	*1670*		*62.9*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*1020*		*"*	*1670*		*61.1*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*1280*		*"*	*1670*		*76.6*	*19-122*			
Surrogate: Terphenyl-dl4	*1520*		*"*	*1670*		*91.0*	*18-137*			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	12/11/03

Purgeable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3120602 - EPA 5030 Soil GC										
Blank (3120602-BLK1)				Prepared: 12/06/03 Analyzed: 12/08/03						
Gasoline Range Hydrocarbons	ND	500	ug/kg							
Surrogate: 4-Bromofluorobenzene	*135*		"	*125*		*108*	*65-135*			
LCS (3120602-BS1)				Prepared: 12/06/03 Analyzed: 12/08/03						
Gasoline Range Hydrocarbons	13500	500	ug/kg	13800		97.8	75-125			
Surrogate: 4-Bromofluorobenzene	*127*		"	*125*		*102*	*65-135*			
Matrix Spike (3120602-MS1)	**Source: T301254-25**			Prepared: 12/06/03 Analyzed: 12/08/03						
Gasoline Range Hydrocarbons	12600	500	ug/kg	13800	220	89.7	65-135			
Surrogate: 4-Bromofluorobenzene	*125*		"	*125*		*100*	*65-135*			
Matrix Spike Dup (3120602-MSD1)	**Source: T301254-25**			Prepared: 12/06/03 Analyzed: 12/08/03						
Gasoline Range Hydrocarbons	13100	500	ug/kg	13800	220	93.3	65-135	3.89	20	
Surrogate: 4-Bromofluorobenzene	*116*		"	*125*		*92.8*	*65-135*			

Notes and Definitions

O-04	This sample was analyzed outside the EPA recommended holding time.
O-05	This sample was extracted outside of the EPA recommended holding time.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

SunStar Laboratories, Inc.

13 January 2004

Derrick Willis
LFR Levine-Fricke
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: CRG Properties

Enclosed are the results of analyses for samples received by the laboratory on 11/24/03 09:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Ben Beauchaine
Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	1/13/04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B7-50	T301260-23	Soil	11/21/03	11/24/03

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	1/13/04

TCLP Metals by 6000/7000 Series Methods

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-50 (T301260-23) Soil	**Sampled: 11/21/03 23:50**	**Received: 11/24/03 09:25**							
Lead	**0.98**	0.10	mg/l	1	4010802	01/06/04	01/12/04	EPA 6010B	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	1/13/04

STLC Metals by 6000/7000 Series Methods

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B7-50 (T301260-23) Soil	**Sampled: 11/21/03 23:50**	**Received: 11/24/03 09:25**							
Lead	1.1	0.10	mg/l	1	4010801	01/06/04	01/12/04	STLC EPA 6010A	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00/002	**Reported:**
Costa Mesa CA, 92626	Project Manager: Derrick Willis	1/13/04

TCLP Metals by 6000/7000 Series Methods - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010802 - Title 22-STLC										
Blank (4010802-BLK1)				Prepared: 01/06/04		Analyzed: 01/12/04				
Lead	ND	0.10	mg/l							
LCS (4010802-BS1)				Prepared: 01/06/04		Analyzed: 01/12/04				
Lead	2.33	0.10	mg/l	2.00		116	75-125			
LCS Dup (4010802-BSD1)				Prepared: 01/06/04		Analyzed: 01/12/04				
Lead	2.40	0.10	mg/l	2.00		120	75-125	2.96	30	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

LABORATORY REPORT FOR GROUND WATER SAMPLES MAY 2004

26 May 2004

Jacob Goldstein
LFR Levine-Fricke
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: CRG Properties

Enclosed are the results of analyses for samples received by the laboratory on 05/19/04 16:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Dahl For Ben Beauchaine
Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3-051904	T400513-01	Water	5/19/04	5/19/04
MW-5-051904	T400513-02	Water	5/19/04	5/19/04
MW-6-051904	T400513-03	Water	5/19/04	5/19/04

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Extractable Petroleum Hydrocarbons by 8015

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-051904 (T400513-01) Water	**Sampled: 05/19/04 08:20**		**Received: 05/19/04 16:20**						
C6-C12	ND	0.10	mg/l	1	4052003	05/20/04	05/21/04	EPA 8015m	
C13-C28	ND	0.10	"	"	"	"	"	"	
C29-C40	ND	0.10	"	"	"	"	"	"	
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00**		**Received: 05/19/04 16:20**						
C6-C12	ND	0.10	mg/l	1	4052003	05/20/04	05/21/04	EPA 8015m	
C13-C28	ND	0.10	"	"	"	"	"	"	
C29-C40	ND	0.10	"	"	"	"	"	"	
MW-6-051904 (T400513-03) Water	**Sampled: 05/19/04 11:10**		**Received: 05/19/04 16:20**						
C6-C12	ND	0.10	mg/l	1	4052003	05/20/04	05/21/04	EPA 8015m	
C13-C28	ND	0.10	"	"	"	"	"	"	
C29-C40	ND	0.10	"	"	"	"	"	"	

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Metals by EPA 6010B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-051904 (T400513-01) Water	**Sampled: 05/19/04 08:20**		**Received: 05/19/04 16:20**						
Antimony	ND	100	ug/l	1	4052011	05/20/04	05/21/04	EPA 6010B	
Arsenic	ND	250	"	"	"	"	"	"	
Barium	**290**	50	"	"	"	"	"	"	
Beryllium	ND	50	"	"	"	"	"	"	
Cadmium	ND	50	"	"	"	"	"	"	
Chromium	ND	50	"	"	"	"	"	"	
Cobalt	ND	50	"	"	"	"	"	"	
Copper	ND	50	"	"	"	"	"	"	
Lead	ND	50	"	"	"	"	"	"	
Molybdenum	ND	50	"	"	"	"	"	"	
Nickel	ND	50	"	"	"	"	"	"	
Selenium	ND	250	"	"	"	"	"	"	
Silver	ND	100	"	"	"	"	"	"	
Thallium	ND	100	"	"	"	"	"	"	
Vanadium	ND	100	"	"	"	"	"	"	
Zinc	**66**	50	"	"	"	"	"	"	
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00**		**Received: 05/19/04 16:20**						
Antimony	ND	100	ug/l	1	4052011	05/20/04	05/21/04	EPA 6010B	
Arsenic	ND	250	"	"	"	"	"	"	
Barium	**97**	50	"	"	"	"	"	"	
Beryllium	ND	50	"	"	"	"	"	"	
Cadmium	ND	50	"	"	"	"	"	"	
Chromium	ND	50	"	"	"	"	"	"	
Cobalt	ND	50	"	"	"	"	"	"	
Copper	ND	50	"	"	"	"	"	"	
Lead	ND	50	"	"	"	"	"	"	
Molybdenum	ND	50	"	"	"	"	"	"	
Nickel	ND	50	"	"	"	"	"	"	
Selenium	ND	250	"	"	"	"	"	"	
Silver	ND	100	"	"	"	"	"	"	
Thallium	ND	100	"	"	"	"	"	"	
Vanadium	ND	100	"	"	"	"	"	"	
Zinc	**140**	50	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Metals by EPA 6010B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6-051904 (T400513-03) Water	**Sampled: 05/19/04 11:10**		**Received: 05/19/04 16:20**						
Antimony	ND	100	ug/l	1	4052011	05/20/04	05/21/04	EPA 6010B	
Arsenic	ND	250	"	"	"	"	"	"	
Barium	**180**	50	"	"	"	"	"	"	
Beryllium	ND	50	"	"	"	"	"	"	
Cadmium	ND	50	"	"	"	"	"	"	
Chromium	ND	50	"	"	"	"	"	"	
Cobalt	ND	50	"	"	"	"	"	"	
Copper	ND	50	"	"	"	"	"	"	
Lead	ND	50	"	"	"	"	"	"	
Molybdenum	ND	50	"	"	"	"	"	"	
Nickel	ND	50	"	"	"	"	"	"	
Selenium	ND	250	"	"	"	"	"	"	
Silver	ND	100	"	"	"	"	"	"	
Thallium	ND	100	"	"	"	"	"	"	
Vanadium	ND	100	"	"	"	"	"	"	
Zinc	**180**	50	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	**Reported:**
3150 Bristol Street #250	Project Number: 002-10231-00	
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Cold Vapor Extraction EPA 7470/7471

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-051904 (T400513-01) Water	**Sampled: 05/19/04 08:20 Received: 05/19/04 16:20**								
Mercury	**160**	5.0	ug/l	10	4052103	05/21/04	05/26/04	EPA 7470A Water	
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00 Received: 05/19/04 16:20**								
Mercury	ND	0.50	ug/l	1	4052103	05/21/04	05/26/04	EPA 7470A Water	
MW-6-051904 (T400513-03) Water	**Sampled: 05/19/04 11:10 Received: 05/19/04 16:20**								
Mercury	**12**	0.50	ug/l	1	4052103	05/21/04	05/26/04	EPA 7470A Water	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Polychlorinated Biphenyls by EPA Method 8082

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-051904 (T400513-01) Water	**Sampled: 05/19/04 08:20**		**Received: 05/19/04 16:20**						
PCB-1016	ND	2.00	ug/l	1	4052113	05/21/04	05/26/04	EPA 8082	
PCB-1221	ND	2.00	"	"	"	"	"	"	
PCB-1232	ND	2.00	"	"	"	"	"	"	
PCB-1242	ND	2.00	"	"	"	"	"	"	
PCB-1248	ND	2.00	"	"	"	"	"	"	
PCB-1254	ND	2.00	"	"	"	"	"	"	
PCB-1260	ND	2.00	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*69.7 %*	*35-140*		"	"	"	"	
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00**		**Received: 05/19/04 16:20**						
PCB-1016	ND	2.00	ug/l	1	4052113	05/21/04	05/26/04	EPA 8082	
PCB-1221	ND	2.00	"	"	"	"	"	"	
PCB-1232	ND	2.00	"	"	"	"	"	"	
PCB-1242	ND	2.00	"	"	"	"	"	"	
PCB-1248	ND	2.00	"	"	"	"	"	"	
PCB-1254	ND	2.00	"	"	"	"	"	"	
PCB-1260	ND	2.00	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*68.5 %*	*35-140*		"	"	"	"	
MW-6-051904 (T400513-03) Water	**Sampled: 05/19/04 11:10**		**Received: 05/19/04 16:20**						
PCB-1016	ND	2.00	ug/l	1	4052113	05/21/04	05/26/04	EPA 8082	
PCB-1221	ND	2.00	"	"	"	"	"	"	
PCB-1232	ND	2.00	"	"	"	"	"	"	
PCB-1242	ND	2.00	"	"	"	"	"	"	
PCB-1248	ND	2.00	"	"	"	"	"	"	
PCB-1254	ND	2.00	"	"	"	"	"	"	
PCB-1260	ND	2.00	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*61.0 %*	*35-140*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-051904 (T400513-01) Water	**Sampled: 05/19/04 08:20**		**Received: 05/19/04 16:20**						
Bromobenzene	ND	1.0	ug/l	1	4052005	05/20/04	05/20/04	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-051904 (T400513-01) Water	**Sampled: 05/19/04 08:20**		**Received: 05/19/04 16:20**						
Styrene	ND	1.0	ug/l	1	4052005	05/20/04	05/20/04	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*86-115*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*		*86-115*	"	"	"	"	
Surrogate: Dibromofluoromethane		*95.5 %*		*86-118*	"	"	"	"	
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00**		**Received: 05/19/04 16:20**						
Bromobenzene	ND	1.0	ug/l	1	4052005	05/20/04	05/20/04	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00**		**Received: 05/19/04 16:20**						
Dibromochloromethane	ND	1.0	ug/l	1	4052005	05/20/04	05/20/04	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00**		**Received: 05/19/04 16:20**						
Toluene	ND	0.50	ug/l	1	4052005	05/20/04	05/20/04	EPA 8260B	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Surrogate: Toluene-d8		*108 %*	*86-115*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*86-115*		"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*	*86-118*		"	"	"	"	
MW-6-051904 (T400513-03) Water	**Sampled: 05/19/04 11:10**		**Received: 05/19/04 16:20**						
Bromobenzene	ND	1.0	ug/l	1	4052005	05/20/04	05/20/04	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Volatile Organic Compounds by EPA Method 8260B

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6-051904 (T400513-03) Water	**Sampled: 05/19/04 11:10**		**Received: 05/19/04 16:20**						
2,2-Dichloropropane	ND	1.0	ug/l	1	4052005	05/20/04	05/20/04	EPA 8260B	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*86-115*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.0 %*		*86-115*	"	"	"	"	
Surrogate: Dibromofluoromethane		*96.0 %*		*86-118*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-051904 (T400513-01) Water	**Sampled: 05/19/04 08:20**		**Received: 05/19/04 16:20**						
Carbazole	ND	10	ug/l	1	4052115	05/21/04	05/26/04	EPA 8270C	
Aniline	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	20	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20	"	"	"	"	"	"	
Pentachlorophenol	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Benzyl alcohol	ND	50	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	20	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	20	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	20	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-051904 (T400513-01) Water	**Sampled: 05/19/04 08:20**		**Received: 05/19/04 16:20**						
2,4-Dimethylphenol	ND	5.0	ug/l	1	4052115	05/21/04	05/26/04	EPA 8270C	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	20	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	5.0	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	20	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	20	"	"	"	"	"	"	
Hexachloroethane	ND	5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
4-Methylphenol	ND	20	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
2-Nitroaniline	ND	10	"	"	"	"	"	"	
3-Nitroaniline	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	20	"	"	"	"	"	"	
Nitrobenzene	ND	20	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	25	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND	10	"	"	"	"	"	"	
Pyridine	ND	10	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*25.4 %*	*9.97-110*		"	"	"	"	
Surrogate: Phenol-d6		*17.9 %*	*8.4-110*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*50.8 %*	*14.7-110*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*61.7 %*	*33.3-110*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*49.0 %*	*12.9-110*		"	"	"	"	
Surrogate: Terphenyl-dl4		*85.1 %*	*15.8-136*		"	"	"	"	

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00**		**Received: 05/19/04 16:20**						
Carbazole	ND	10	ug/l	1	4052115	05/21/04	05/26/04	EPA 8270C	
Aniline	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	20	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20	"	"	"	"	"	"	
Pentachlorophenol	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Benzyl alcohol	ND	50	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	20	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	20	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	20	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5-051904 (T400513-02) Water	**Sampled: 05/19/04 10:00**		**Received: 05/19/04 16:20**						
2,4-Dimethylphenol	ND	5.0	ug/l	1	4052115	05/21/04	05/26/04	EPA 8270C	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	20	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	5.0	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	20	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	20	"	"	"	"	"	"	
Hexachloroethane	ND	5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
4-Methylphenol	ND	20	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
2-Nitroaniline	ND	10	"	"	"	"	"	"	
3-Nitroaniline	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	20	"	"	"	"	"	"	
Nitrobenzene	ND	20	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	25	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND	10	"	"	"	"	"	"	
Pyridine	ND	10	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*19.8 %*	*9.97-110*		"	"	"	"	
Surrogate: Phenol-d6		*15.7 %*	*8.4-110*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*59.1 %*	*14.7-110*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*72.6 %*	*33.3-110*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*62.1 %*	*12.9-110*		"	"	"	"	
Surrogate: Terphenyl-dl4		*123 %*	*15.8-136*		"	"	"	"	

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6-051904 (T400513-03) Water	**Sampled: 05/19/04 11:10**		**Received: 05/19/04 16:20**						
Carbazole	ND	10	ug/l	1	4052115	05/21/04	05/26/04	EPA 8270C	
Aniline	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	20	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20	"	"	"	"	"	"	
Pentachlorophenol	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Benzyl alcohol	ND	50	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	20	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	20	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	20	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Semivolatile Organic Compounds by EPA Method 8270C

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6-051904 (T400513-03) Water	**Sampled: 05/19/04 11:10**		**Received: 05/19/04 16:20**						
2,4-Dimethylphenol	ND	5.0	ug/l	1	4052115	05/21/04	05/26/04	EPA 8270C	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	20	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	5.0	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	20	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	20	"	"	"	"	"	"	
Hexachloroethane	ND	5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
4-Methylphenol	ND	20	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
2-Nitroaniline	ND	10	"	"	"	"	"	"	
3-Nitroaniline	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	20	"	"	"	"	"	"	
Nitrobenzene	ND	20	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
N-Nitrosodiethylamine	ND	25	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND	10	"	"	"	"	"	"	
Pyridine	ND	10	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*19.4 %*	*9.97-110*		"	"	"	"	
Surrogate: Phenol-d6		*18.4 %*	*8.4-110*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*62.7 %*	*14.7-110*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*68.7 %*	*33.3-110*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*60.2 %*	*12.9-110*		"	"	"	"	
Surrogate: Terphenyl-dl4		*128 %*	*15.8-136*		"	"	"	"	

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052003 - EPA 3510C H2O										
Blank (4052003-BLK1)				Prepared: 05/20/04		Analyzed: 05/21/04				
C6-C12	ND	0.10	mg/l							
C13-C28	ND	0.10	"							
C29-C40	ND	0.10	"							
LCS (4052003-BS1)				Prepared: 05/20/04		Analyzed: 05/24/04				
C13-C28	46.6	0.10	mg/l	50.0		93.2	75-125			
Matrix Spike (4052003-MS1)	**Source: T400513-01**			Prepared: 05/20/04		Analyzed: 05/24/04				
C13-C28	47.3	0.10	mg/l	50.0	ND	94.6	75-125			
Matrix Spike Dup (4052003-MSD1)	**Source: T400513-01**			Prepared: 05/20/04		Analyzed: 05/21/04				
C13-C28	43.3	0.10	mg/l	50.0	ND	86.6	75-125	8.83	20	

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052011 - EPA 3020A										
Blank (4052011-BLK1)				Prepared: 05/20/04 Analyzed: 05/21/04						
Antimony	ND	100	ug/l							
Arsenic	ND	250	"							
Barium	ND	50	"							
Beryllium	ND	50	"							
Cadmium	ND	50	"							
Chromium	ND	50	"							
Cobalt	ND	50	"							
Copper	ND	50	"							
Lead	ND	50	"							
Molybdenum	ND	50	"							
Nickel	ND	50	"							
Selenium	ND	250	"							
Silver	ND	100	"							
Thallium	ND	100	"							
Vanadium	ND	100	"							
Zinc	ND	50	"							
Matrix Spike (4052011-MS1)	**Source: T400513-03**			Prepared: 05/20/04 Analyzed: 05/21/04						
Arsenic	1330	250	ug/l	1050	ND	127	65-135			
Barium	1360	50	"	1050	180	112	65-135			
Cadmium	1340	50	"	1050	ND	128	65-135			
Chromium	1310	50	"	1050	ND	125	65-135			
Lead	1260	50	"	1050	ND	120	65-135			
Matrix Spike Dup (4052011-MSD1)	**Source: T400513-03**			Prepared: 05/20/04 Analyzed: 05/21/04						
Arsenic	1340	250	ug/l	1050	ND	128	65-135	0.749	30	
Barium	1310	50	"	1050	180	108	65-135	3.75	30	
Cadmium	1360	50	"	1050	ND	130	65-135	1.48	30	
Chromium	1330	50	"	1050	ND	127	65-135	1.52	30	
Lead	1280	50	"	1050	ND	122	65-135	1.57	30	

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052103 - EPA 7470A Water										
Blank (4052103-BLK1)				Prepared: 05/21/04		Analyzed: 05/26/04				
Mercury	ND	0.50	ug/l							
LCS (4052103-BS1)				Prepared: 05/21/04		Analyzed: 05/26/04				
Mercury	21.0	0.50	ug/l	20.0		105	75-125			
Matrix Spike (4052103-MS1)	**Source: T400543-03**			Prepared: 05/21/04		Analyzed: 05/26/04				
Mercury	21.0	0.50	ug/l	20.0	ND	105	75-125			
Matrix Spike Dup (4052103-MSD1)	**Source: T400543-03**			Prepared: 05/21/04		Analyzed: 05/26/04				
Mercury	21.0	0.50	ug/l	20.0	ND	105	75-125	0.00	20	



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052113 - EPA 3510C Water										
Blank (4052113-BLK1)				Prepared: 05/21/04 Analyzed: 05/26/04						
PCB-1016	ND	2.00	ug/l							
PCB-1221	ND	2.00	"							
PCB-1232	ND	2.00	"							
PCB-1242	ND	2.00	"							
PCB-1248	ND	2.00	"							
PCB-1254	ND	2.00	"							
PCB-1260	ND	2.00	"							
Surrogate: Tetrachloro-meta-xylene	*6.94*		"	*10.0*		*69.4*	*35-140*			
LCS (4052113-BS1)				Prepared: 05/21/04 Analyzed: 05/26/04						
PCB-1016	5.48	2.00	ug/l	10.0		54.8	0-200			
PCB-1260	6.90	2.00	"	10.0		69.0	50-100			
Surrogate: Tetrachloro-meta-xylene	*6.08*		"	*10.0*		*60.8*	*35-140*			
LCS Dup (4052113-BSD1)				Prepared: 05/21/04 Analyzed: 05/26/04						
PCB-1016	4.32	2.00	ug/l	10.0		43.2	0-200	23.7	200	
PCB-1260	5.26	2.00	"	10.0		52.6	50-100	27.0	30	
Surrogate: Tetrachloro-meta-xylene	*4.78*		"	*10.0*		*47.8*	*35-140*			

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052005 - EPA 5030 Water MS										
Blank (4052005-BLK1)				Prepared & Analyzed: 05/20/04						
1,2-Dichloroethane	ND	0.50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	10	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Surrogate: Toluene-d8	*42.2*		"	*40.0*		*106*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*39.0*		"	*40.0*		*97.5*	*86-115*			
Surrogate: Dibromofluoromethane	*39.7*		"	*40.0*		*99.2*	*86-118*			
LCS (4052005-BS1)				Prepared: 05/20/04			Analyzed: 05/21/04			
Benzene	90.0	0.50	ug/l	100		90.0	75-125			
Toluene	80.9	0.50	"	100		80.9	75-125			
Surrogate: Toluene-d8	*43.1*		"	*40.0*		*108*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*42.1*		"	*40.0*		*105*	*86-115*			
Surrogate: Dibromofluoromethane	*41.9*		"	*40.0*		*105*	*86-118*			
Matrix Spike (4052005-MS1)	**Source: T400514-06**			Prepared: 05/20/04			Analyzed: 05/21/04			
Benzene	97.8	0.50	ug/l	100	ND	97.8	75-125			
Toluene	98.0	0.50	"	100	ND	98.0	75-125			
Surrogate: Toluene-d8	*42.6*		"	*40.0*		*106*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*39.2*		"	*40.0*		*98.0*	*86-115*			
Surrogate: Dibromofluoromethane	*36.8*		"	*40.0*		*92.0*	*86-118*			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052005 - EPA 5030 Water MS										
Matrix Spike Dup (4052005-MSD1)	**Source: T400514-06**			Prepared: 05/20/04		Analyzed: 05/21/04				
Benzene	82.0	0.50	ug/l	100	ND	82.0	75-125	17.6	20	
Toluene	81.4	0.50	"	100	ND	81.4	75-125	18.5	20	
Surrogate: Toluene-d8	*42.3*		*"*	*40.0*		*106*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*42.8*		*"*	*40.0*		*107*	*86-115*			
Surrogate: Dibromofluoromethane	*43.8*		*"*	*40.0*		*110*	*86-118*			

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052115 - EPA 3510C Water										
Blank (4052115-BLK1)				Prepared: 05/21/04 Analyzed: 05/26/04						
Carbazole	ND	10	ug/l							
Aniline	ND	10	"							
Phenol	ND	10	"							
2-Chlorophenol	ND	10	"							
Acenaphthylene	ND	10	"							
1,4-Dichlorobenzene	ND	10	"							
Anthracene	ND	10	"							
N-Nitrosodi-n-propylamine	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1-Methylnaphthalene	ND	10	"							
2-Methylnaphthalene	ND	20	"							
4-Chloro-3-methylphenol	ND	10	"							
Acenaphthene	ND	10	"							
Benzo (a) anthracene	ND	10	"							
4-Nitrophenol	ND	10	"							
Benzo (b) fluoranthene	ND	10	"							
2,4-Dinitrotoluene	ND	10	"							
Benzo (k) fluoranthene	ND	10	"							
Benzo (g,h,i) perylene	ND	20	"							
Pentachlorophenol	ND	10	"							
Benzo (a) pyrene	ND	10	"							
Pyrene	ND	10	"							
Benzyl alcohol	ND	50	"							
Bis(2-chloroethoxy)methane	ND	10	"							
Bis(2-chloroethyl)ether	ND	5.0	"							
Bis(2-chloroisopropyl)ether	ND	20	"							
Bis(2-ethylhexyl)phthalate	ND	10	"							
4-Bromophenyl phenyl ether	ND	5.0	"							
Butyl benzyl phthalate	ND	10	"							
4-Chloroaniline	ND	20	"							
2-Chloronaphthalene	ND	10	"							
4-Chlorophenyl phenyl ether	ND	20	"							
Chrysene	ND	10	"							
Dibenz (a,h) anthracene	ND	10	"							
Dibenzofuran	ND	20	"							
Di-n-butyl phthalate	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052115 - EPA 3510C Water										
Blank (4052115-BLK1)				Prepared: 05/21/04 Analyzed: 05/26/04						
2,4-Dichlorophenol	ND	10	ug/l							
Diethyl phthalate	ND	10	"							
2,4-Dimethylphenol	ND	5.0	"							
Dimethyl phthalate	ND	10	"							
4,6-Dinitro-2-methylphenol	ND	5.0	"							
2,4-Dinitrophenol	ND	10	"							
2,6-Dinitrotoluene	ND	20	"							
Di-n-octyl phthalate	ND	10	"							
Fluoranthene	ND	5.0	"							
Fluorene	ND	10	"							
Hexachlorobenzene	ND	20	"							
Hexachlorobutadiene	ND	10	"							
Hexachlorocyclopentadiene	ND	20	"							
Hexachloroethane	ND	5.0	"							
Indeno (1,2,3-cd) pyrene	ND	10	"							
Isophorone	ND	10	"							
2-Methylphenol	ND	10	"							
4-Methylphenol	ND	20	"							
Naphthalene	ND	5.0	"							
2-Nitroaniline	ND	10	"							
3-Nitroaniline	ND	10	"							
4-Nitroaniline	ND	20	"							
Nitrobenzene	ND	20	"							
2-Nitrophenol	ND	10	"							
N-Nitrosodiethylamine	ND	25	"							
N-Nitrosodiphenylamine	ND	10	"							
Phenanthrene	ND	10	"							
2,4,5-Trichlorophenol	ND	20	"							
2,4,6-Trichlorophenol	ND	10	"							
2,3,4,6-Tetrachlorophenol	ND	10	"							
2,3,5,6-Tetrachlorophenol	ND	10	"							
1,4-Dinitrobenzene	ND	10	"							
Pyridine	ND	10	"							
Surrogate: 2-Fluorophenol	*19.1*		*"*	*100*		*19.1*	*9.97-110*			
Surrogate: Phenol-d6	*13.0*		*"*	*100*		*13.0*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*46.3*		*"*	*100*		*46.3*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*55.5*		*"*	*100*		*55.5*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*44.2*		*"*	*100*		*44.2*	*12.9-110*			

SunStar Laboratories, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052115 - EPA 3510C Water										
Blank (4052115-BLK1)				Prepared: 05/21/04 Analyzed: 05/26/04						
Surrogate: Terphenyl-dl4	*92.0*		"	*100*		*92.0*	*15.8-136*			
LCS (4052115-BS1)				Prepared: 05/21/04 Analyzed: 05/26/04						
Phenol	17.7	10	ug/l	100		17.7	12-89			
2-Chlorophenol	47.9	10	"	100		47.9	27-123			
1,4-Dichlorobenzene	49.9	10	"	100		49.9	36-97			
N-Nitrosodi-n-propylamine	59.8	5.0	"	100		59.8	41-116			
1,2,4-Trichlorobenzene	56.5	5.0	"	100		56.5	39-98			
4-Chloro-3-methylphenol	61.4	10	"	100		61.4	23-97			
Acenaphthene	62.8	10	"	100		62.8	46-118			
4-Nitrophenol	28.4	10	"	100		28.4	10-80			
2,4-Dinitrotoluene	50.7	10	"	100		50.7	24-96			
Pentachlorophenol	83.7	10	"	100		83.7	9-103			
Pyrene	72.0	10	"	100		72.0	26-127			
Surrogate: 2-Fluorophenol	*32.5*		"	*100*		*32.5*	*9.97-110*			
Surrogate: Phenol-d6	*22.2*		"	*100*		*22.2*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*72.1*		"	*100*		*72.1*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*79.3*		"	*100*		*79.3*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*83.3*		"	*100*		*83.3*	*12.9-110*			
Surrogate: Terphenyl-dl4	*123*		"	*100*		*123*	*15.8-136*			
Matrix Spike (4052115-MS1)	**Source: T400513-03**			Prepared: 05/21/04 Analyzed: 05/26/04						
Phenol	14.0	10	ug/l	100	ND	14.0	12-89			
2-Chlorophenol	50.8	10	"	100	ND	50.8	27-123			
1,4-Dichlorobenzene	55.8	10	"	100	ND	55.8	36-97			
N-Nitrosodi-n-propylamine	87.1	5.0	"	100	ND	87.1	41-116			
1,2,4-Trichlorobenzene	62.5	5.0	"	100	ND	62.5	39-98			
4-Chloro-3-methylphenol	64.7	10	"	100	ND	64.7	23-97			
Acenaphthene	68.2	10	"	100	ND	68.2	46-118			
4-Nitrophenol	38.1	10	"	100	ND	38.1	10-80			
2,4-Dinitrotoluene	50.4	10	"	100	ND	50.4	24-96			
Pentachlorophenol	86.5	10	"	100	ND	86.5	9-103			
Pyrene	97.3	10	"	100	ND	97.3	26-127			
Surrogate: 2-Fluorophenol	*20.3*		"	*100*		*20.3*	*9.97-110*			
Surrogate: Phenol-d6	*16.1*		"	*100*		*16.1*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*49.3*		"	*100*		*49.3*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*55.7*		"	*100*		*55.7*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*58.8*		"	*100*		*58.8*	*12.9-110*			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jennifer Dahl For Ben Beauchaine, Laboratory Supervisor

LFR Levine-Fricke	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-00	**Reported:**
Costa Mesa CA, 92626	Project Manager: Jacob Goldstein	5/26/04

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052115 - EPA 3510C Water										
Matrix Spike (4052115-MS1)	**Source: T400513-03**			Prepared: 05/21/04		Analyzed: 05/26/04				
Surrogate: Terphenyl-dl4	*105*		*ug/l*	*100*		*105*	*15.8-136*			
Matrix Spike Dup (4052115-MSD1)	**Source: T400513-03**			Prepared: 05/21/04		Analyzed: 05/26/04				
Phenol	16.1	10	ug/l	100	ND	16.1	12-89	14.0	42	
2-Chlorophenol	56.4	10	"	100	ND	56.4	27-123	10.4	40	
1,4-Dichlorobenzene	60.2	10	"	100	ND	60.2	36-97	7.59	28	
N-Nitrosodi-n-propylamine	79.3	5.0	"	100	ND	79.3	41-116	9.37	38	
1,2,4-Trichlorobenzene	73.0	5.0	"	100	ND	73.0	39-98	15.5	28	
4-Chloro-3-methylphenol	80.0	10	"	100	ND	80.0	23-97	21.1	42	
Acenaphthene	82.0	10	"	100	ND	82.0	46-118	18.4	31	
4-Nitrophenol	26.0	10	"	100	ND	26.0	10-80	37.8	50	
2,4-Dinitrotoluene	57.8	10	"	100	ND	57.8	24-96	13.7	38	
Pentachlorophenol	81.8	10	"	100	ND	81.8	9-103	5.59	50	
Pyrene	91.4	10	"	100	ND	91.4	26-127	6.25	31	
Surrogate: 2-Fluorophenol	*23.8*		*"*	*100*		*23.8*	*9.97-110*			
Surrogate: Phenol-d6	*20.1*		*"*	*100*		*20.1*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*69.8*		*"*	*100*		*69.8*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*74.8*		*"*	*100*		*74.8*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*76.2*		*"*	*100*		*76.2*	*12.9-110*			
Surrogate: Terphenyl-dl4	*117*		*"*	*100*		*117*	*15.8-136*			

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

21 February 2008

Tony Marino
LFR Inc.
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: CRG Properties

Enclosed are the results of analyses for samples received by the laboratory on 12/18/06 13:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Ben Beauchaine
Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW3	T601731-01	Water	12/18/06 07:50	12/18/06 13:43
MW5	T601731-02	Water	12/18/06 09:30	12/18/06 13:43
MW6	T601731-03	Water	12/18/06 10:30	12/18/06 13:43

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW3

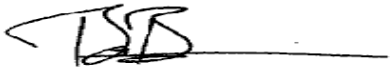
T601731-01(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C13-C28 (DRO)	ND		0.050	mg/l	1	6121811	12/18/06	12/19/06	EPA 8015B	
C6-C12 (GRO)	**0.13**		0.050	"	"	"	"	"	"	D-03
C29-C40 (MORO)	ND		0.10	"	"	"	"	"	"	
Metals by EPA 6000/7000 Series Methods										
Calcium	**5200**		500	ug/l	1	6121807	12/18/06	12/20/06	EPA 6010B	
Magnesium	**2100**		500	"	"	"	"	"	"	
Sodium	**24000**		500	"	"	"	"	"	"	
Metals by EPA 6010B										
Copper	**400**	4.4	50	ug/l	1	6121808	12/18/06	12/18/06	EPA 6010B	
Antimony	ND	7.8	50	"	"	"	"	"	"	
Arsenic	**7.8**	5.7	50	"	"	"	"	"	"	J
Barium	**140**	2.8	50	"	"	"	"	"	"	
Beryllium	ND	0.97	50	"	"	"	"	12/18/06	"	
Cadmium	**29**	1.8	50	"	"	"	"	12/18/06	"	J
Cobalt	**4.1**	1.7	50	"	"	"	"	"	"	J
Lead	ND	1.4	50	"	"	"	"	"	"	
Molybdenum	ND	1.9	50	"	"	"	"	"	"	
Nickel	**3.8**	3.2	50	"	"	"	"	"	"	J
Selenium	ND	14	50	"	"	"	"	"	"	
Silver	**62**	0.69	50	"	"	"	"	"	"	
Thallium	ND	4.9	50	"	"	"	"	"	"	
Vanadium	**1.4**	1.0	50	"	"	"	"	"	"	J
Zinc	**6.8**	4.8	50	"	"	"	"	"	"	J
Chromium	**2.4**	1.7	50	"	"	"	"	"	"	J

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW3

T601731-01(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cold Vapor Extraction EPA 7470/7471										
Mercury	**0.82**		0.50	ug/l	1	6121809	12/18/06	12/20/06	EPA 7470A Water	
Volatile Organic Compounds by EPA Method 8260B										
1,2-Dibromoethane (EDB)	ND		1.0	ug/l	1	6121816	12/18/06	12/18/06	EPA 8260B	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
Benzene	ND		0.50	"	"	"	"	"	"	
Bromobenzene	ND		1.0	"	"	"	"	"	"	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Bromoform	ND		1.0	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
Tetrachloroethene	ND		1.0	"	"	"	"	"	"	
Toluene	ND		0.50	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW3

T601731-01(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
trans-1,2-Dichloroethene	ND		1.0	ug/l	1	6121816	12/18/06	12/18/06	EPA 8260B	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
Vinyl chloride	ND		0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
Chloromethane	ND		1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND		1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
Naphthalene	ND		1.0	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*94.9 %*	*83.5-119*		"	"	"	"	
Surrogate: Toluene-d8			*100 %*	*88.8-117*		"	"	"	"	
Surrogate: Dibromofluoromethane			*123 %*	*78.6-135*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW3

T601731-01(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bis(2-chloroethoxy)methane	ND		10	ug/l	1	6121812	12/18/06	12/19/06	EPA 8270C	
Acenaphthylene	ND		10	"	"	"	"	"	"	
Aniline	ND		10	"	"	"	"	"	"	
Anthracene	ND		10	"	"	"	"	"	"	
Benzo (a) anthracene	ND		10	"	"	"	"	"	"	
Benzo (a) pyrene	ND		10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND		10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		20	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		5.0	"	"	"	"	"	"	
Benzyl alcohol	ND		50	"	"	"	"	"	"	
4-Nitroaniline	ND		20	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		5.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		10	"	"	"	"	"	"	
Carbazole	ND		10	"	"	"	"	"	"	
Chrysene	ND		10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		5.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		10	"	"	"	"	"	"	
2-Nitrophenol	ND		10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		20	"	"	"	"	"	"	
2-Chloronaphthalene	ND		10	"	"	"	"	"	"	
2-Chlorophenol	ND		10	"	"	"	"	"	"	
2-Methylnaphthalene	ND		20	"	"	"	"	"	"	
Acenaphthene	ND		10	"	"	"	"	"	"	
2-Nitroaniline	ND		10	"	"	"	"	"	"	
4-Nitrophenol	ND		10	"	"	"	"	"	"	
3-Nitroaniline	ND		10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		5.0	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		10	"	"	"	"	"	"	
4-Chloroaniline	ND		20	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		20	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW3

T601731-01(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
4-Methylphenol	ND		20	ug/l	1	6121812	12/18/06	12/19/06	EPA 8270C	
Dimethyl phthalate	ND		10	"	"	"	"	"	"	
2-Methylphenol	ND		10	"	"	"	"	"	"	
Dibenzofuran	ND		20	"	"	"	"	"	"	
Pyridine	ND		10	"	"	"	"	"	"	
Pyrene	ND		10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		25	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		10	"	"	"	"	"	"	
Fluoranthene	ND		5.0	"	"	"	"	"	"	
Fluorene	ND		10	"	"	"	"	"	"	
Hexachlorobenzene	ND		20	"	"	"	"	"	"	
Hexachlorobutadiene	ND		10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		20	"	"	"	"	"	"	
Hexachloroethane	ND		5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		10	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
Nitrobenzene	ND		20	"	"	"	"	"	"	
Pentachlorophenol	ND		10	"	"	"	"	"	"	
Phenanthrene	ND		10	"	"	"	"	"	"	
Phenol	ND		10	"	"	"	"	"	"	
Isophorone	ND		10	"	"	"	"	"	"	
Diethyl phthalate	ND		10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND		10	"	"	"	"	"	"	
1-Methylnaphthalene	ND		10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		10	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
Surrogate: 2-Fluorobiphenyl			*78.8 %*	*33.3-110*		*"*	*"*	*"*	*"*	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW3

T601731-01(Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Surrogate: 2-Fluorophenol	*49.4 %*	*9.97-110*	*6121812*	*12/18/06*	*12/19/06*	*EPA 8270C*		
Surrogate: Terphenyl-dl4	*126 %*	*15.8-136*	"	"	"	"		
Surrogate: Nitrobenzene-d5	*78.2 %*	*14.7-110*	"	"	"	"		
Surrogate: Phenol-d6	*40.6 %*	*8.4-110*	"	"	"	"		
Surrogate: 2,4,6-Tribromophenol	*77.0 %*	*12.9-110*	"	"	"	"		

Conventional Chemistry Parameters by APHA/EPA Methods

Specific Conductance (EC)	**7740**		2.00	umhos/cm	1	6121905	12/19/06	12/20/06	SM2510b mod.	
pH	**6.4**		0.10	pH Units	"	6121815	12/18/06	12/19/06	SM4500	

Anions by EPA Method 300.0

Chloride	**3270**		0.500	mg/l	1	6121904	12/19/06	12/19/06	EPA 300.0	
Sulfate as SO4	**107**		0.500	"	"	"	"	"	"	
Nitrate as NO3	**1.74**		0.500	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW5

T601731-02(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C29-C40 (MORO)	ND		0.10	mg/l	1	6121811	12/18/06	12/19/06	EPA 8015B	
C6-C12 (GRO)	ND		0.050	"	"	"	"	"	"	
C13-C28 (DRO)	ND		0.050	"	"	"	"	"	"	
Metals by EPA 6000/7000 Series Methods										
Sodium	**5100**		500	ug/l	1	6121807	12/18/06	12/20/06	EPA 6010B	
Magnesium	**750**		500	"	"	"	"	"	"	
Calcium	**3200**		500	"	"	"	"	"	"	
Metals by EPA 6010B										
Cobalt	ND	1.7	50	ug/l	1	6121808	12/18/06	12/18/06	EPA 6010B	
Zinc	**12**	4.8	50	"	"	"	"	"	"	J
Thallium	ND	4.9	50	"	"	"	"	"	"	
Silver	ND	0.69	50	"	"	"	"	"	"	
Selenium	ND	14	50	"	"	"	"	"	"	
Nickel	ND	3.2	50	"	"	"	"	"	"	
Molybdenum	ND	1.9	50	"	"	"	"	"	"	
Copper	**55**	4.4	50	"	"	"	"	"	"	
Chromium	**2.0**	1.7	50	"	"	"	"	"	"	J
Cadmium	ND	1.8	50	"	"	"	"	"	"	
Beryllium	ND	0.97	50	"	"	"	"	12/18/06	"	
Barium	**100**	2.8	50	"	"	"	"	12/18/06	"	
Arsenic	**12**	5.7	50	"	"	"	"	"	"	J
Antimony	ND	7.8	50	"	"	"	"	"	"	
Vanadium	ND	1.0	50	"	"	"	"	"	"	
Lead	ND	1.4	50	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW5

T601731-02(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cold Vapor Extraction EPA 7470/7471										
Mercury	ND		0.50	ug/l	1	6121809	12/18/06	12/20/06	EPA 7470A Water	
Volatile Organic Compounds by EPA Method 8260B										
Hexachlorobutadiene	ND		1.0	ug/l	1	6121816	12/18/06	12/18/06	EPA 8260B	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
Naphthalene	ND		1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
Chloromethane	ND		1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
Vinyl chloride	ND		0.50	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Toluene	ND		0.50	"	"	"	"	"	"	
Tetrachloroethene	ND		1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW5

T601731-02(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1-Dichloroethane	ND		1.0	ug/l	1	6121816	12/18/06	12/18/06	EPA 8260B	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
Bromoform	ND		1.0	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Bromobenzene	ND		1.0	"	"	"	"	"	"	
Benzene	ND		0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane			*123 %*		*78.6-135*	"	"	"	"	
Surrogate: Toluene-d8			*100 %*		*88.8-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*96.8 %*		*83.5-119*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW5

T601731-02(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2,4-Trichlorobenzene	ND		5.0	ug/l	1	6121812	12/18/06	12/19/06	EPA 8270C	
2,4,5-Trichlorophenol	ND		20	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
1-Methylnaphthalene	ND		10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND		10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		5.0	"	"	"	"	"	"	
Isophorone	ND		10	"	"	"	"	"	"	
Phenol	ND		10	"	"	"	"	"	"	
Phenanthrene	ND		10	"	"	"	"	"	"	
Pentachlorophenol	ND		10	"	"	"	"	"	"	
Nitrobenzene	ND		20	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		10	"	"	"	"	"	"	
Diethyl phthalate	ND		10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		10	"	"	"	"	"	"	
Hexachloroethane	ND		5.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		20	"	"	"	"	"	"	
Hexachlorobutadiene	ND		10	"	"	"	"	"	"	
Hexachlorobenzene	ND		20	"	"	"	"	"	"	
Fluorene	ND		10	"	"	"	"	"	"	
Fluoranthene	ND		5.0	"	"	"	"	"	"	
Dimethyl phthalate	ND		10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		25	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		10	"	"	"	"	"	"	
Pyrene	ND		10	"	"	"	"	"	"	
Pyridine	ND		10	"	"	"	"	"	"	
Dibenzofuran	ND		20	"	"	"	"	"	"	
4-Nitroaniline	ND		20	"	"	"	"	"	"	
4-Methylphenol	ND		20	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		20	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW5

T601731-02(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
4-Chloroaniline	ND		20	ug/l	1	6121812	12/18/06	12/19/06	EPA 8270C	
4-Chloro-3-methylphenol	ND		10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		5.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		5.0	"	"	"	"	"	"	
4-Nitrophenol	ND		10	"	"	"	"	"	"	
2-Nitrophenol	ND		10	"	"	"	"	"	"	
3-Nitroaniline	ND		10	"	"	"	"	"	"	
2-Methylphenol	ND		10	"	"	"	"	"	"	
2-Methylnaphthalene	ND		20	"	"	"	"	"	"	
2-Chlorophenol	ND		10	"	"	"	"	"	"	
2-Chloronaphthalene	ND		10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		20	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		10	"	"	"	"	"	"	
2-Nitroaniline	ND		10	"	"	"	"	"	"	
Acenaphthene	ND		10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		5.0	"	"	"	"	"	"	
Carbazole	ND		10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		20	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		5.0	"	"	"	"	"	"	
Anthracene	ND		10	"	"	"	"	"	"	
Acenaphthylene	ND		10	"	"	"	"	"	"	
Chrysene	ND		10	"	"	"	"	"	"	
Aniline	ND		10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		10	"	"	"	"	"	"	
Benzo (a) anthracene	ND		10	"	"	"	"	"	"	
Benzo (a) pyrene	ND		10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND		10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		20	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		10	"	"	"	"	"	"	
Benzyl alcohol	ND		50	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol			*52.4 %*	*12.9-110*		*"*	*"*	*"*	*"*	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW5

T601731-02(Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.										
Semivolatile Organic Compounds by EPA Method 8270C										
Surrogate: Phenol-d6			*16.6 %*	*8.4-110*		*6121812*	*12/18/06*	*12/19/06*	*EPA 8270C*	
Surrogate: Nitrobenzene-d5			*56.4 %*	*14.7-110*		"	"	"	"	
Surrogate: Terphenyl-dl4			*93.5 %*	*15.8-136*		"	"	"	"	
Surrogate: 2-Fluorophenol			*25.8 %*	*9.97-110*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl			*56.6 %*	*33.3-110*		"	"	"	"	
Conventional Chemistry Parameters by APHA/EPA Methods										
Specific Conductance (EC)	**1700**		2.00	umhos/cm	1	6121905	12/19/06	12/20/06	SM2510b mod.	
pH	**6.9**		0.10	pH Units	"	6121815	12/18/06	12/19/06	SM4500	
Anions by EPA Method 300.0										
Sulfate as SO4	**92.7**		0.500	mg/l	1	6121904	12/19/06	12/19/06	EPA 300.0	
Chloride	**240**		0.500	"	"	"	"	"	"	
Nitrate as NO3	ND		0.500	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW6

T601731-03(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C6-C12 (GRO)	**0.38**		0.050	mg/l	1	6121811	12/18/06	12/19/06	EPA 8015B	D-03
C13-C28 (DRO)	ND		0.050	"	"	"	"	"	"	
C29-C40 (MORO)	ND		0.10	"	"	"	"	"	"	
Metals by EPA 6000/7000 Series Methods										
Calcium	**4100**		500	ug/l	1	6121807	12/18/06	12/20/06	EPA 6010B	
Magnesium	**1200**		500	"	"	"	"	"	"	
Sodium	**12000**		500	"	"	"	"	"	"	
Metals by EPA 6010B										
Vanadium	**5.8**	1.0	50	ug/l	1	6121808	12/18/06	12/18/06	EPA 6010B	J
Cobalt	ND	1.7	50	"	"	"	"	"	"	
Antimony	ND	7.8	50	"	"	"	"	"	"	
Arsenic	**12**	5.7	50	"	"	"	"	"	"	J
Barium	**100**	2.8	50	"	"	"	"	"	"	
Beryllium	ND	0.97	50	"	"	"	"	12/18/06	"	
Chromium	ND	1.7	50	"	"	"	"	12/18/06	"	
Copper	**140**	4.4	50	"	"	"	"	"	"	
Lead	ND	1.4	50	"	"	"	"	"	"	
Molybdenum	ND	1.9	50	"	"	"	"	"	"	
Nickel	ND	3.2	50	"	"	"	"	"	"	
Selenium	ND	14	50	"	"	"	"	"	"	
Silver	**14**	0.69	50	"	"	"	"	"	"	J
Cadmium	**3.9**	1.8	50	"	"	"	"	"	"	J
Thallium	ND	4.9	50	"	"	"	"	"	"	
Zinc	ND	4.8	50	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW6

T601731-03(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cold Vapor Extraction EPA 7470/7471										
Mercury	**7.3**		0.50	ug/l	1	6121809	12/18/06	12/20/06	EPA 7470A Water	
Volatile Organic Compounds by EPA Method 8260B										
Chloromethane	ND		1.0	ug/l	1	6121816	12/18/06	12/18/06	EPA 8260B	
Benzene	ND		0.50	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		1.0	"	"	"	"	"	"	
Bromobenzene	ND		1.0	"	"	"	"	"	"	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Bromoform	ND		1.0	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW6

T601731-03(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dibromo-3-chloropropane	ND		1.0	ug/l	1	6121816	12/18/06	12/18/06	EPA 8260B	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
Vinyl chloride	ND		0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND		1.0	"	"	"	"	"	"	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Naphthalene	ND		1.0	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Tetrachloroethene	ND		1.0	"	"	"	"	"	"	
Toluene	ND		0.50	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*95.3 %*		*83.5-119*	"	"	"	"	
Surrogate: Toluene-d8			*101 %*		*88.8-117*	"	"	"	"	
Surrogate: Dibromofluoromethane			*128 %*		*78.6-135*	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW6

T601731-03(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bis(2-chloroisopropyl)ether	ND		20	ug/l	1	6121812	12/18/06	12/19/06	EPA 8270C	
Benzo (b) fluoranthene	ND		10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		20	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		10	"	"	"	"	"	"	
Benzyl alcohol	ND		50	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		5.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND		10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		10	"	"	"	"	"	"	
Carbazole	ND		10	"	"	"	"	"	"	
Chrysene	ND		10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		5.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		10	"	"	"	"	"	"	
Dibenzofuran	ND		20	"	"	"	"	"	"	
Dimethyl phthalate	ND		10	"	"	"	"	"	"	
Diethyl phthalate	ND		10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		10	"	"	"	"	"	"	
2-Chlorophenol	ND		10	"	"	"	"	"	"	
2-Methylnaphthalene	ND		20	"	"	"	"	"	"	
2-Methylphenol	ND		10	"	"	"	"	"	"	
2-Nitroaniline	ND		10	"	"	"	"	"	"	
2-Nitrophenol	ND		10	"	"	"	"	"	"	
3-Nitroaniline	ND		10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		5.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND		10	"	"	"	"	"	"	
4-Chloroaniline	ND		20	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		20	"	"	"	"	"	"	
4-Methylphenol	ND		20	"	"	"	"	"	"	
4-Nitroaniline	ND		20	"	"	"	"	"	"	
4-Nitrophenol	ND		10	"	"	"	"	"	"	
Acenaphthene	ND		10	"	"	"	"	"	"	
Acenaphthylene	ND		10	"	"	"	"	"	"	
Aniline	ND		10	"	"	"	"	"	"	
Anthracene	ND		10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW6

T601731-03(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
4,6-Dinitro-2-methylphenol	ND		5.0	ug/l	1	6121812	12/18/06	12/19/06	EPA 8270C	
Pyrene	ND		10	"	"	"	"	"	"	
2-Chloronaphthalene	ND		10	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
Fluorene	ND		10	"	"	"	"	"	"	
Hexachlorobenzene	ND		20	"	"	"	"	"	"	
Hexachlorobutadiene	ND		10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		20	"	"	"	"	"	"	
Hexachloroethane	ND		5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		10	"	"	"	"	"	"	
Isophorone	ND		10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		10	"	"	"	"	"	"	
Fluoranthene	ND		5.0	"	"	"	"	"	"	
Nitrobenzene	ND		20	"	"	"	"	"	"	
Pentachlorophenol	ND		10	"	"	"	"	"	"	
Phenanthrene	ND		10	"	"	"	"	"	"	
Phenol	ND		10	"	"	"	"	"	"	
Pyridine	ND		10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		25	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		10	"	"	"	"	"	"	
1-Methylnaphthalene	ND		10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND		10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		20	"	"	"	"	"	"	
Surrogate: Terphenyl-dl4			*124 %*	*15.8-136*		*"*	*"*	*"*	*"*	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

MW6

T601731-03(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Semivolatile Organic Compounds by EPA Method 8270C										
Surrogate: 2-Fluorobiphenyl			*78.6 %*	*33.3-110*		*6121812*	*12/18/06*	*12/19/06*	*EPA 8270C*	
Surrogate: 2-Fluorophenol			*37.3 %*	*9.97-110*		"	"	"	"	
Surrogate: Nitrobenzene-d5			*74.6 %*	*14.7-110*		"	"	"	"	
Surrogate: Phenol-d6			*23.8 %*	*8.4-110*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol			*69.1 %*	*12.9-110*		"	"	"	"	
Conventional Chemistry Parameters by APHA/EPA Methods										
Specific Conductance (EC)	**3660**		2.00	umhos/cm	1	6121905	12/19/06	12/20/06	SM2510b mod.	
pH	**6.8**		0.10	pH Units	"	6121815	12/18/06	12/19/06	SM4500	
Anions by EPA Method 300.0										
Chloride	**1100**		0.500	mg/l	1	6121904	12/19/06	12/19/06	EPA 300.0	
Sulfate as SO4	**102**		0.500	"	"	"	"	"	"	
Nitrate as NO3	**40.1**		0.500	"	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121811 - EPA 3510C GC											
Blank (6121811-BLK1)					Prepared: 12/18/06 Analyzed: 12/19/06						
C6-C12 (GRO)	ND		0.050	mg/l							
C13-C28 (DRO)	ND		0.050	"							
C29-C40 (MORO)	ND		0.10	"							
LCS (6121811-BS1)					Prepared: 12/18/06 Analyzed: 12/19/06						
C13-C28 (DRO)	18.5		0.050	mg/l	20.0		92.6	75-125			
Matrix Spike (6121811-MS1)		**Source: T601731-01**			Prepared: 12/18/06 Analyzed: 12/19/06						
C13-C28 (DRO)	18.1		0.050	mg/l	20.0	ND	90.7	75-125			
Matrix Spike Dup (6121811-MSD1)		**Source: T601731-01**			Prepared: 12/18/06 Analyzed: 12/19/06						
C13-C28 (DRO)	20.2		0.050	mg/l	20.0	ND	101	75-125	10.9	20	

Metals by EPA 6000/7000 Series Methods - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121807 - EPA 3010A											
Blank (6121807-BLK1)					Prepared: 12/18/06 Analyzed: 12/27/06						
Calcium	163		500	ug/l							J
Magnesium	472		500	"							J
Sodium	ND		500	"							

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121808 - EPA 3010A											
Blank (6121808-BLK1)					Prepared: 12/18/06 Analyzed: 12/19/06						
Antimony	ND	7.8	50	ug/l							
Silver	ND	0.69	50	"							
Arsenic	ND	5.7	50	"							
Barium	ND	2.8	50	"							
Beryllium	ND	0.97	50	"							
Cadmium	2.11	1.8	50	"							J
Chromium	2.11	1.7	50	"							J
Cobalt	ND	1.7	50	"							
Copper	ND	4.4	50	"							
Lead	ND	1.4	50	"							
Molybdenum	ND	1.9	50	"							
Nickel	ND	3.2	50	"							
Selenium	ND	14	50	"							
Thallium	ND	4.9	50	"							
Vanadium	ND	1.0	50	"							
Zinc	ND	4.8	50	"							
LCS (6121808-BS1)					Prepared: 12/18/06 Analyzed: 12/19/06						
Arsenic	974	5.7	50	ug/l	1110		87.7	75-125			
Barium	1080	2.8	50	"	1110		96.9	75-125			
Cadmium	1080	1.8	50	"	1110		97.5	75-125			
Chromium	1100	1.7	50	"	1110		99.0	75-125			
Lead	1060	1.4	50	"	1110		95.4	75-125			
Matrix Spike (6121808-MS1)		**Source: T601731-01**			Prepared: 12/18/06 Analyzed: 12/19/06						
Arsenic	967	5.7	50	ug/l	1110	7.76	86.3	75-125			
Barium	1160	2.8	50	"	1110	135	91.8	75-125			
Cadmium	943	1.8	50	"	1110	29.2	82.3	75-125			
Chromium	862	1.7	50	"	1110	2.44	77.4	75-125			
Lead	804	1.4	50	"	1110	ND	72.4	75-125			QM-03

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121808 - EPA 3010A											
Matrix Spike Dup (6121808-MSD1)		**Source: T601731-01**			Prepared: 12/18/06		Analyzed: 12/19/06				
Arsenic	994	5.7	50	ug/l	1110	7.76	88.8	75-125	2.83	20	
Barium	1010	2.8	50	"	1110	135	78.7	75-125	13.4	20	
Cadmium	938	1.8	50	"	1110	29.2	81.8	75-125	0.591	20	
Chromium	902	1.7	50	"	1110	2.44	81.0	75-125	4.53	20	
Lead	784	1.4	50	"	1110	ND	70.6	75-125	2.52	20	QM-03

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121809 - EPA 7470A Water											
Blank (6121809-BLK1)					Prepared: 12/18/06 Analyzed: 12/20/06						
Mercury	ND		0.50	ug/l							
LCS (6121809-BS1)					Prepared: 12/18/06 Analyzed: 12/20/06						
Mercury	10.8		0.50	ug/l	10.3		104	75-125			
Matrix Spike (6121809-MS1)		**Source: T601731-01**			Prepared: 12/18/06 Analyzed: 12/20/06						
Mercury	11.3		0.50	ug/l	10.3	0.816	102	75-125			
Matrix Spike Dup (6121809-MSD1)		**Source: T601731-01**			Prepared: 12/18/06 Analyzed: 12/20/06						
Mercury	11.5		0.50	ug/l	10.3	0.816	103	75-125	1.18	20	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121816 - EPA 5030 GCMS											
Blank (6121816-BLK1)				Prepared & Analyzed: 12/18/06							
Surrogate: 4-Bromofluorobenzene	*35.1*			*ug/l*	*40.0*		*87.7*	*83.5-119*			
Surrogate: Dibromofluoromethane	*51.0*			*"*	*40.0*		*128*	*78.6-135*			
Surrogate: Toluene-d8	*40.7*			*"*	*40.0*		*102*	*88.8-117*			
Bromobenzene	ND		1.0	"							
Bromochloromethane	ND		1.0	"							
Bromodichloromethane	ND		1.0	"							
Bromoform	ND		1.0	"							
Bromomethane	ND		1.0	"							
n-Butylbenzene	ND		1.0	"							
sec-Butylbenzene	ND		1.0	"							
tert-Butylbenzene	ND		1.0	"							
Carbon tetrachloride	ND		0.50	"							
Chlorobenzene	ND		1.0	"							
Chloroethane	ND		1.0	"							
Chloroform	ND		1.0	"							
Chloromethane	ND		1.0	"							
2-Chlorotoluene	ND		1.0	"							
4-Chlorotoluene	ND		1.0	"							
Dibromochloromethane	ND		1.0	"							
1,2-Dibromo-3-chloropropane	ND		1.0	"							
1,2-Dibromoethane (EDB)	ND		1.0	"							
Dibromomethane	ND		1.0	"							
1,2-Dichlorobenzene	ND		1.0	"							
1,3-Dichlorobenzene	ND		1.0	"							
1,4-Dichlorobenzene	ND		1.0	"							
Dichlorodifluoromethane	ND		0.50	"							
1,1-Dichloroethane	ND		1.0	"							
1,2-Dichloroethane	ND		0.50	"							
1,1-Dichloroethene	ND		1.0	"							
cis-1,2-Dichloroethene	ND		1.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121816 - EPA 5030 GCMS											
Blank (6121816-BLK1)					Prepared & Analyzed: 12/18/06						
trans-1,2-Dichloroethene	ND		1.0	ug/l							
1,2-Dichloropropane	ND		1.0	"							
1,3-Dichloropropane	ND		1.0	"							
2,2-Dichloropropane	ND		1.0	"							
1,1-Dichloropropene	ND		1.0	"							
cis-1,3-Dichloropropene	ND		0.50	"							
trans-1,3-Dichloropropene	ND		0.50	"							
Hexachlorobutadiene	ND		1.0	"							
Isopropylbenzene	ND		1.0	"							
p-Isopropyltoluene	ND		1.0	"							
Methylene chloride	ND		1.0	"							
Naphthalene	ND		1.0	"							
n-Propylbenzene	ND		1.0	"							
Styrene	ND		1.0	"							
1,1,2,2-Tetrachloroethane	ND		1.0	"							
1,1,1,2-Tetrachloroethane	ND		1.0	"							
Tetrachloroethene	ND		1.0	"							
1,2,3-Trichlorobenzene	ND		1.0	"							
1,2,4-Trichlorobenzene	ND		1.0	"							
1,1,2-Trichloroethane	ND		1.0	"							
1,1,1-Trichloroethane	ND		1.0	"							
Trichloroethene	ND		1.0	"							
Trichlorofluoromethane	ND		1.0	"							
1,2,3-Trichloropropane	ND		1.0	"							
1,3,5-Trimethylbenzene	ND		1.0	"							
1,2,4-Trimethylbenzene	ND		1.0	"							
Vinyl chloride	ND		0.50	"							
Benzene	ND		0.50	"							
Toluene	ND		0.50	"							
Ethylbenzene	ND		0.50	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121816 - EPA 5030 GCMS											
Blank (6121816-BLK1)					Prepared & Analyzed: 12/18/06						
m,p-Xylene	ND		1.0	ug/l							
o-Xylene	ND		0.50	"							
Tert-amyl methyl ether	ND		2.0	"							
Tert-butyl alcohol	ND		10	"							
Di-isopropyl ether	ND		2.0	"							
Ethyl tert-butyl ether	ND		2.0	"							
Methyl tert-butyl ether	ND		1.0	"							
LCS (6121816-BS1)					Prepared: 12/18/06 Analyzed: 12/19/06						
Surrogate: 4-Bromofluorobenzene	*40.7*			*ug/l*	*40.0*		*102*	*83.5-119*			
Surrogate: Dibromofluoromethane	*39.4*			*"*	*40.0*		*98.5*	*78.6-135*			
Surrogate: Toluene-d8	*41.1*			*"*	*40.0*		*103*	*88.8-117*			
Chlorobenzene	95.3		1.0	"	100		95.3	75-125			
1,1-Dichloroethene	81.0		1.0	"	100		81.0	75-125			
Trichloroethene	102		1.0	"	100		102	75-125			
Benzene	102		0.50	"	100		102	75-125			
Toluene	98.9		0.50	"	100		98.9	75-125			
Matrix Spike (6121816-MS1)		**Source: T601731-01**			Prepared & Analyzed: 12/18/06						
Surrogate: 4-Bromofluorobenzene	*37.2*			*ug/l*	*40.0*		*92.9*	*83.5-119*			
Surrogate: Dibromofluoromethane	*49.3*			*"*	*40.0*		*123*	*78.6-135*			
Surrogate: Toluene-d8	*40.3*			*"*	*40.0*		*101*	*88.8-117*			
Chlorobenzene	71.5		1.0	"	100	ND	71.5	75-125			QM-07
1,1-Dichloroethene	104		1.0	"	100	ND	104	75-125			
Trichloroethene	78.1		1.0	"	100	ND	78.1	75-125			
Benzene	79.1		0.50	"	100	ND	79.1	75-125			
Toluene	76.9		0.50	"	100	ND	76.9	75-125			

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121816 - EPA 5030 GCMS											
Matrix Spike Dup (6121816-MSD1)		**Source: T601731-01**			Prepared & Analyzed: 12/18/06						
Surrogate: 4-Bromofluorobenzene	*36.5*			*ug/l*	*40.0*		*91.3*	*83.5-119*			
Surrogate: Dibromofluoromethane	*49.0*			*"*	*40.0*		*122*	*78.6-135*			
Surrogate: Toluene-d8	*39.8*			*"*	*40.0*		*99.6*	*88.8-117*			
Chlorobenzene	96.5		1.0	"	100	ND	96.5	75-125	29.8	20	QR-02
1,1-Dichloroethene	143		1.0	"	100	ND	143	75-125	32.1	20	QM-07, QR-02
Trichloroethene	107		1.0	"	100	ND	107	75-125	31.4	20	QR-02
Benzene	110		0.50	"	100	ND	110	75-125	32.7	20	QR-02
Toluene	106		0.50	"	100	ND	106	75-125	31.9	20	QR-02

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121812 - EPA 3510C GCMS/ECD											
Blank (6121812-BLK1)					Prepared: 12/18/06 Analyzed: 12/19/06						
Surrogate: 2-Fluorophenol	*36.0*			*ug/l*	*100*		*36.0*	*9.97-110*			
Surrogate: Phenol-d6	*26.7*			*"*	*100*		*26.7*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*58.3*			*"*	*100*		*58.3*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*61.8*			*"*	*100*		*61.8*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*54.3*			*"*	*100*		*54.3*	*12.9-110*			
Surrogate: Terphenyl-dl4	*106*			*"*	*100*		*106*	*15.8-136*			
Carbazole	ND		10	"							
Aniline	ND		10	"							
Phenol	ND		10	"							
Acenaphthylene	ND		10	"							
2-Chlorophenol	ND		10	"							
1,4-Dichlorobenzene	ND		10	"							
N-Nitrosodi-n-propylamine	ND		5.0	"							
Anthracene	ND		10	"							
1,2,4-Trichlorobenzene	ND		5.0	"							
1-Methylnaphthalene	ND		10	"							
2-Methylnaphthalene	ND		20	"							
4-Chloro-3-methylphenol	ND		10	"							
Acenaphthene	ND		10	"							
Benzo (a) anthracene	ND		10	"							
Benzo (b) fluoranthene	ND		10	"							
4-Nitrophenol	ND		10	"							
Benzo (k) fluoranthene	ND		10	"							
2,4-Dinitrotoluene	ND		10	"							
Pentachlorophenol	ND		10	"							
Benzo (g,h,i) perylene	ND		20	"							
Benzo (a) pyrene	ND		10	"							
Pyrene	ND		10	"							
Benzyl alcohol	ND		50	"							
Bis(2-chloroethoxy)methane	ND		10	"							
Bis(2-chloroethyl)ether	ND		5.0	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121812 - EPA 3510C GCMS/ECD											
Blank (6121812-BLK1)					Prepared: 12/18/06 Analyzed: 12/19/06						
Bis(2-chloroisopropyl)ether	ND		20	ug/l							
Bis(2-ethylhexyl)phthalate	ND		10	"							
4-Bromophenyl phenyl ether	ND		5.0	"							
Butyl benzyl phthalate	ND		10	"							
4-Chloroaniline	ND		20	"							
2-Chloronaphthalene	ND		10	"							
4-Chlorophenyl phenyl ether	ND		20	"							
Chrysene	ND		10	"							
Dibenz (a,h) anthracene	ND		10	"							
Dibenzofuran	ND		20	"							
Di-n-butyl phthalate	ND		5.0	"							
1,2-Dichlorobenzene	ND		5.0	"							
1,3-Dichlorobenzene	ND		5.0	"							
2,4-Dichlorophenol	ND		10	"							
Diethyl phthalate	ND		10	"							
2,4-Dimethylphenol	ND		5.0	"							
Dimethyl phthalate	ND		10	"							
4,6-Dinitro-2-methylphenol	ND		5.0	"							
2,4-Dinitrophenol	ND		10	"							
2,6-Dinitrotoluene	ND		20	"							
Di-n-octyl phthalate	ND		10	"							
Fluoranthene	ND		5.0	"							
Fluorene	ND		10	"							
Hexachlorobenzene	ND		20	"							
Hexachlorobutadiene	ND		10	"							
Hexachlorocyclopentadiene	ND		20	"							
Hexachloroethane	ND		5.0	"							
Indeno (1,2,3-cd) pyrene	ND		10	"							
Isophorone	ND		10	"							
2-Methylphenol	ND		10	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121812 - EPA 3510C GCMS/ECD											
Blank (6121812-BLK1)					Prepared: 12/18/06 Analyzed: 12/19/06						
4-Methylphenol	ND		20	ug/l							
Naphthalene	ND		5.0	"							
2-Nitroaniline	ND		10	"							
3-Nitroaniline	ND		10	"							
4-Nitroaniline	ND		20	"							
Nitrobenzene	ND		20	"							
2-Nitrophenol	ND		10	"							
N-Nitrosodiphenylamine	ND		10	"							
N-Nitrosodimethylamine	ND		25	"							
Phenanthrene	ND		10	"							
2,4,5-Trichlorophenol	ND		20	"							
2,4,6-Trichlorophenol	ND		10	"							
2,3,4,6-Tetrachlorophenol	ND		10	"							
2,3,5,6-Tetrachlorophenol	ND		10	"							
1,4-Dinitrobenzene	ND		10	"							
Pyridine	ND		10	"							
LCS (6121812-BS1)					Prepared: 12/18/06 Analyzed: 12/19/06						
Surrogate: 2-Fluorophenol	*28.5*			*ug/l*	*100*		*28.5*	*9.97-110*			
Surrogate: Phenol-d6	*20.7*			*"*	*100*		*20.7*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*65.9*			*"*	*100*		*65.9*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*68.2*			*"*	*100*		*68.2*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*72.4*			*"*	*100*		*72.4*	*12.9-110*			
Surrogate: Terphenyl-dl4	*107*			*"*	*100*		*107*	*15.8-136*			
Phenol	12.5		10	"	100		12.5	12-89			
2-Chlorophenol	32.9		10	"	100		32.9	27-123			
1,4-Dichlorobenzene	41.3		10	"	100		41.3	36-97			
N-Nitrosodi-n-propylamine	45.6		5.0	"	100		45.6	41-116			
1,2,4-Trichlorobenzene	44.9		5.0	"	100		44.9	39-98			
4-Chloro-3-methylphenol	33.7		10	"	100		33.7	23-97			
Acenaphthene	47.4		10	"	100		47.4	46-118			

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121812 - EPA 3510C GCMS/ECD											
LCS (6121812-BS1)					Prepared: 12/18/06 Analyzed: 12/19/06						
4-Nitrophenol	11.8		10	ug/l	100		11.8	10-80			
2,4-Dinitrotoluene	43.3		10	"	100		43.3	24-96			
Pentachlorophenol	45.6		10	"	100		45.6	9-103			
Pyrene	49.6		10	"	100		49.6	26-127			
LCS Dup (6121812-BSD1)					Prepared: 12/18/06 Analyzed: 12/19/06						
Surrogate: 2-Fluorophenol	*21.6*			*ug/l*	*100*		*21.6*	*9.97-110*			
Surrogate: Phenol-d6	*15.0*			*"*	*100*		*15.0*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*47.4*			*"*	*100*		*47.4*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*49.8*			*"*	*100*		*49.8*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*53.2*			*"*	*100*		*53.2*	*12.9-110*			
Surrogate: Terphenyl-dl4	*81.4*			*"*	*100*		*81.4*	*15.8-136*			
Phenol	13.7		10	"	100		13.7	12-89	9.32	42	
2-Chlorophenol	36.6		10	"	100		36.6	27-123	10.6	40	
1,4-Dichlorobenzene	42.3		10	"	100		42.3	36-97	2.34	28	
N-Nitrosodi-n-propylamine	48.7		5.0	"	100		48.7	41-116	6.62	38	
1,2,4-Trichlorobenzene	46.1		5.0	"	100		46.1	39-98	2.59	28	
4-Chloro-3-methylphenol	39.5		10	"	100		39.5	23-97	15.9	42	
Acenaphthene	47.3		10	"	100		47.3	46-118	0.127	31	
4-Nitrophenol	13.5		10	"	100		13.5	10-80	13.8	50	
2,4-Dinitrotoluene	48.8		10	"	100		48.8	24-96	11.9	38	
Pentachlorophenol	50.5		10	"	100		50.5	9-103	10.2	50	
Pyrene	55.5		10	"	100		55.5	26-127	11.2	31	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-01	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/21/08 11:05

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121815 - General Preparation											
Duplicate (6121815-DUP1)		**Source: T601731-01**			Prepared: 12/18/06	Analyzed: 12/19/06					
pH	6.44		0.10	pH Units		6.43			0.155	20	
Batch 6121905 - General Preparation											
Duplicate (6121905-DUP1)		**Source: T601731-01**			Prepared: 12/19/06	Analyzed: 12/20/06					
Specific Conductance (EC)	7840		2.00	umhos/cm		7740			1.28	20	

Anions by EPA Method 300.0 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6121904 - General Preparation											
Blank (6121904-BLK1)					Prepared & Analyzed: 12/19/06						
Chloride	2.55		0.500	mg/l							QB-01
Sulfate as SO4	ND		0.500	"							
Nitrate as NO3	ND		0.500	"							
LCS (6121904-BS1)					Prepared & Analyzed: 12/19/06						
Chloride	113		0.500	mg/l	100		113	80-120			
Sulfate as SO4	113		0.500	"	100		113	80-120			
Nitrate as NO3	106		0.500	"	100		106	80-120			
Matrix Spike (6121904-MS1)		**Source: T601731-01**			Prepared & Analyzed: 12/19/06						
Chloride	3610		0.500	mg/l	100	3270	340	80-120			QM-4X
Sulfate as SO4	222		0.500	"	100	107	115	80-120			
Nitrate as NO3	108		0.500	"	100	1.74	106	80-120			
Matrix Spike Dup (6121904-MSD1)		**Source: T601731-01**			Prepared & Analyzed: 12/19/06						
Chloride	3650		0.500	mg/l	100	3270	380	80-120	1.10	20	QM-4X
Sulfate as SO4	224		0.500	"	100	107	118	80-120	1.18	20	
Nitrate as NO3	103		0.500	"	100	1.74	101	80-120	4.51	20	

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
QM-07	The spike recovery and or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-03	Multiple analyses indicate the percent recovery exceeds the Quality Control acceptance criteria due to a matrix effect.
QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
J	Detected but below the Standard Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
D-03	The result for the hydrocarbon range is due to the presence of a single analyte peak in the quantitation range. It does not resemble the requested pattern.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

APPENDIX I

Remedial Investigation Workplan and DTSC Approval Letter

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

August 29, 2007 002-10231-02

Ms. Loni Adams
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

Subject: Remedial Investigation Workplan, Former Oil Operators North Site, 3701 Pacific Place, Long Beach, California

Dear Ms. Adams:

On behalf of CRG Properties, LFR Inc. (LFR) is pleased to submit this Remedial Investigation Workplan to the Department of Toxic Substances Control for the Former Oil Operators North Site, located at 3701 Pacific Place, Long Beach, California (Site, Figure 1). The approximately 18-acre Site consists of three contiguous properties: Portion 1 is owned by CRG Properties, Ltd., and is designated by Los Angeles County assessor parcel numbers (APNs) 7140-014-019 and 7140-014-020; Portion 2 is owned by John B. McDonald/Family J.B. McDonald and is designated by APNs 7140-014-021, 7140-014-022, 7140-014-023, and 7140-014-027. Portion 3 is owned by Victor R. Tookey and Evelyn M. Tookey and is designated by APN 7140-014-025. Portion 1 is roughly triangular-shaped. Portion 2 is irregular-shaped and is situated east of Portion 1. Portion 3 is situated in the south central portion of the Site.

The Site is located in a mixed residential and industrial area of Long Beach. The site is bounded on the northeast by a light rail line, followed by a residential development; on the south by Interstate 405; and on the west by the Los Angeles River flood control channel (Figure 2). CRG Properties wants to prepare the Site for other commercial/industrial uses.

Based on these proposed development plans, the Site appears to be well-suited for the leaving the existing soils in place. Geotechnical evaluation will be given to stabilizing the soils at the Site and mitigating any potential migration of methane or other gases.

Background

Historical

Based on LFR's historical research, the Site was formerly owned by Oil Operators, Inc., a non-profit cooperative organization that functioned as a central brine water treatment facility serving member oil companies (AEMC, 1991). Beginning in 1926, oil brine (drilling mud

714.444.0111 m
714.444.0117 f
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324
Offices Nationwide
www.lfr.com

and other waste materials generated from oil production operations) was pumped to sumps at the Oil Operators property, of which the Site was the northernmost portion. Most of the Site was utilized as a treatment sump. After the water evaporated or infiltrated from the sumps, the remaining sludge was either drummed or left in the treatment sumps. When a water treatment plant, including evaporation ponds, was built south of the Site in the mid-1950s, Site sump use was curtailed.

A historical review of the Site including historical aerial photographs and topographic maps is attached as Appendix B of the Revised Characterization Data Report.

The 1968 aerial photograph shows that the 405 Freeway bisected the Site, with portions of the historical sumps apparently removed and filled to accommodate the construction.

A partial cleanup/treatment operation was conducted at the Site in the 1970s, which involved the removal, treatment, and replacement of a portion of the sump materials (ETC, 1984). However, detailed records of the treatment operation are not available.

Additional investigations were conducted in the 1980s, culminating in a land farming operation that was begun in 1989 (AEMC, 1991). Details of the investigations conducted at this time are included in Section 2.1. The land farming operation was halted when public complaints about odors were received by the South Coast Air Quality Management District (SCAQMD).

A groundwater monitoring program for the Site and southern adjacent property was implemented in 1987, according to Monitoring and Reporting Program No. 6775 for Oil Operators (Land Treatment File No. 86-66). According to records available to LFR, annual monitoring at three groundwater wells (MW-2, MW-3, and MW-4) was ongoing as of 1997 (Oil Operators, 1997).

LFR prepared a Characterization Data Report dated April 4, 2006 to describe current and historical investigation and remediation activities at the Site. In a letter dated July 12, 2006, the DTSC raised several issues that will need to be addressed prior to approval of the report. In general, the DTSC believed that data gaps exist, that the Site has not been fully characterized, and that the Characterization Data Report should be used in conjunction with further research and investigation to develop a Remedial Investigation Workplan. The DTSC also made nineteen specific comments to the Characterization Data Report, which is attached as Appendix B. LFR's response to the DTSC comments is attached as Appendix C.

Discussions with DTSC have been focused on adequate characterization to evaluate remedial options with the understanding that source control and exposure pathway control appear to be obvious considerations within a Brownfield redevelopment context for commercial and/or industrial use.

Current Site Conditions

The Site is currently operated as the Long Beach Golf Learning Center which consists of a practice driving range, a maintenance building, and a golf shop. The historic industrial sludge material is beneath a soil fill material, approximately seven or more feet in depth. Public access to the Site is controlled by the golf operation and Site location, adjacent to major freeways and the flood control easement.

The Site has three monitoring wells: MW-3, MW-5, and MW-6.

Public Participation

LFR has developed a Community Profile to consider potential community interests and concerns regarding the investigation of the Site. This document identifies key community, city, and government contacts; identifies past public participation activities; and proposes future public participation activities intended to involve and inform the local community. The Community Profile was approved by Ms. Stacey Lear, Public Participation Specialist for the DTSC, on July 18, 2007. Community profile documents will be prepared and sent to the public prior to conducting Site field activities.

Soil Sampling and Analysis

Impacted soil beneath the Site predominantly consists of TPH (C_{12}–C_{40}) and TPHg (C_4–C_{12}). The areas of deepest impact are in two locations in the central and northern portions of the CRG property (the northernmost part of the Site). The largest area extends from LFR boring B3 northward to GEOFON boring GB10, and extends vertically to at least 30 feet bgs. The second largest concentration of impacted soil, located north of the first area, is centered on LFR borings B7 and CPT2, and extends vertically to approximately 50 feet bgs. Analysis of soil samples collected in November 2003 indicated that lower-range carbon chain concentrations (C_{12}-C_{28}) ranged from 350 to 20,000 mg/kg, and higher-range carbon chain concentrations (C_{28}-C_{40}) ranged from 280 to 22,000 mg/kg. Gasoline-range hydrocarbons, tested in three locations at the Site (B3, B4, and B5), were found at concentrations ranging from 0.680 to 53 mg/kg.

Analytical results for metals in soil samples collected in November 2003 were below the United States USEPA iPRGs for all metals with the exception of arsenic, which was detected at concentrations ranging from 5.8 to 24 mg/kg in borings B1, B2, B3, B5, and B7. The iPRG for arsenic is 0.25 mg/kg. Arsenic is a naturally-occurring trace metal that has been found in California soils at concentrations ranging between 0.6 and 11.0 mg/kg (Kearney, 1996) and in native U.S. alluvial soils ranging from 2.1 to 22 mg/kg (Kabata-Pendias and Pendias, (1984). Concentrations of arsenic in all the samples where it was detected exceed the iPRG, and in three locations (B1, B3, and B7) the concentrations exceed expected background levels for California soils. As part of this work plan, LFR will be collecting soil samples near the Site to establish background concentrations for metals.

Benzene, ethylbenzene, toluene, and total xylenes were detected above laboratory reporting limits, but none of these VOC concentrations exceeded iPRGs for those compounds. LFR will evaluate all organic chemicals detected above health based detection limits as iPRGs are not appropriate screening criteria. Concentrations in soil gas will be evaluated using OEHHA CHHSLs. PCBs were not detected at concentrations above the laboratory reporting limit in any boring at a depth of 50 feet bgs. As part of this work plan, LFR will be collecting additional soil samples for PCB, SVOC, and TPH. In addition, select soil samples will be collected for TPH analysis that will be reported according to categories of aliphatic chain length and aromatic carbon numbers. The iPRGs for SVOCs were not exceeded for those compounds that have iPRGs, with the exception of benzo(a)pyrene in sample B7-50 at 400 µg/kg. The iPRG for benzo(a)pyrene is 210 µg/kg.

Groundwater Sampling and Analysis

Depth to groundwater was measured at wells MW-3, MW-5, and MW-6 on December 18, 2006. Depths to groundwater ranged from 28.43 (MW-6) to 47.77 (MW-3) feet below the top of the well casings with a shallow gradient flowing in a southerly direction as indicated on Figure 3. Groundwater elevations ranged from 0.51 feet above mean sea level (msl) in MW-3 to 2.05 feet above msl in MW-5. The groundwater surface gradient is approximately 0.003 foot per foot (ft/ft) across the Site. The estimated flow direction and gradient measured during this monitoring event are consistent with those measured during previous monitoring.

During the latest groundwater sampling event, laboratory analytical results indicated concentrations of each constituent analyzed was below MCLs, with one exception. Mercury was detected in MW-6 at a concentration of 7.3 µg/l, which is above the MCL currently listed at 2 µg/l. Mercury concentrations in groundwater samples collected during this sampling event decreased when compared with the previous sampling event, in wells MW-3 (from 160 µg/l to 0.82 µg/l) and MW-6 (from 12 µg/l to 7.3 µg/l).

Concentrations of TPH in the C_6-C_{12} carbon chain range were detected in groundwater samples from each of the three wells sampled during this sampling event, with concentrations ranging from 0.05 mg/l in MW-5 to 0.38 mg/l in MW-6. This is the first detection of TPH in the C_6-C_{12} carbon chain range in these wells.

VOCs and SVOCs were not detected in the groundwater above laboratory detection limits during this sampling event, which is consistent with the previous sampling event.

California Secondary MCLs – recommended ranges (per CCR Title 22, September 12, 2003) for EC were exceeded at 1,700 microsiemens per centimeter (µs/cm) in MW-5, 3,660 µs/cm in MW-6, and 7,740 µs/cm in MW-3, with the secondary MCL recommended range listed at 900 µs/cm.

California Secondary MCLs – recommended ranges for chloride were exceeded at 1,100 mg/l in MW-6 and 3,270 mg/l in MW-3, with the secondary MCL recommended range listed at 250 mg/l.

Concentrations of TDS and EC in the groundwater increase in the downgradient direction. Based on the concentrations of TDS detected during the latest sampling event, groundwater enters the site classified as slightly saline water and exits the site classified as moderately saline. It is unknown whether the elevated concentrations are due to natural processes or human activity. However the Gaspur aquifer has historically been intruded by an influx of seawater during low water conditions in an inland direction to areas beyond Carson Street [located north of the site] toward the crest of the Newport-Inglewood uplift (Poland, J.F., 1959). State Water Resources Control Board Resolution 88-63 stipulates that groundwater in excess of 3000 ppm TDS is no longer considered potable, suggesting that the groundwater at the Site is of marginal quality, but remaining potable in accordance with the RWQCB Basin Plan. The closest body of water is the Los Angeles River, which is a concrete channel adjacent to the Site.

Workplan for Additional Site Characterization

Pre-Field Activities

Prior to the field activities, LFR will coordinate field activities with the golf practice center operator and will notify CRG and DTSC.

LFR has prepared a site-specific Health and Safety Plan (HSP) for all LFR personnel and subcontractors in accordance with applicable federal and state regulations (29 CFR 1910.120 and 8 CCR 5192, respectively) and was reviewed and approved by an LFR Certified Health Professional. The HSP, included as Attachment A, addresses the potential for exposure to hazardous constituents, and delineates the general safety procedures required for the safe operation of mechanical equipment to be used while conducting field operations at the site. All proposed sampling locations will be marked as required by Underground Service Alert (USA). LFR will contact USA at least three days before commencement of the field work to obtain a utility clearance ticket number. LFR may also subcontract with a subsurface utility locator to screen the proposed sampling locations.

LFR has prepared a Quality Assurance Project Plan (QAPP) to detail field protocol, which is included as Attachment B.

Additional Soil and Soil Gas Investigation

Additional soil and soil gas sampling will be necessary to complete site characterization and provide information for the Human Health Risk Assessment (HHRA), which will also consider exposure pathways that may be eliminated because of past or future mitigation and

remediation. Soil samples will be collected from approximately 10 locations in the site vicinity, if accessible and representative of native soils, to be analyzed for Title 22 metals including arsenic to establish background concentrations. Soil samples will be collected in the vicinity of borings B-6 and B-7 and analyzed for TPH, PCBs, SVOCs, and metals. Soil gas samples will be collected at approximately sixteen locations across the site and analyzed for VOCs. methane, oxygen, carbon dioxide, and hydrogen sulfide concentrations.

Off-site Soil Sampling for Background Conditions

LFR will advance soil borings using a hand auger from various locations in the site vicinity for Title 22 metals including arsenic analysis to establish background conditions. The number, location, and depth of background soil samples to be collected will depend on property accessibility and representation of soils to native conditions. Upon obtaining permission from the city of Long Beach, LFR will collect background soil samples from Los Cerritos Park at 3750 Del Mar Avenue and along Del Mar Avenue, which is located adjacent to and east of the Site (Figure 4).

On-site Soil Sampling

LFR will advance borings using a direct-push drill-rig in the vicinity of borings B-6 and B-7 to collect soil samples for metals, TPH, PCBs, VOCs, and SVOCs to characterize the subsurface (Figure 4). Based on analytical results at the B-6 location, additional soil samples should be collected for TPH to a depth of 15, 20, and 25 feet bgs to assess the vertical extent of impacted soil. Based on analytical results at the B-7 location, samples should be collected at depths of 5, 10, 20, 30, 40 and 50 feet bgs and analyzed for arsenic, lead, mercury, VOCs (including naphthalene), SVOCs (including benzo(a)pyrene), and TPH to assess the vertical extent of impacted soil. Based on previous soil sampling in this area, the total metal concentrations for lead and arsenic exceeded ten times their respective soluble threshold limit concentration (STLC). If laboratory results indicate any concentration of metal exceeding ten times their respective STLC, then a waste extraction test using deionized water to simulate actual Site pH conditions will be performed.

Three worst-case samples will be selected for additional analysis using the Synthetic Precipitation Leaching Procedure (SPLP) and for TPH. The extraction fluid for the SPLP is an aqueous solution (of sulphuric and nitric acids) intended to simulate rain water. Consequently, the SPLP would provide a more conservative evaluation than deionized water, and evaluate the buffering capacity of Site materials from effects from acid rain. The TPH will be reported according to categories of aliphatic chain lengths and aromatic carbon numbers.

Fill Material Soil samples will be collected at six locations at approximately 0.5-, 5- and 10-foot depths from the fill material that was placed as an estimated 10-foot cover over the sump. Soil samples will be analyzed for CAM 17 metals using EPA method 6010B/7471A, organochlorine pesticides using EPA method 8081A, PCBS using EPA method 8082, and SVOCs using EPA method 8082.

Soil Gas Sampling

Soil gas samples will be collected and analyzed for VOCs, methane, oxygen, carbon dioxide, and hydrogen sulfide in accordance with the most recent version of DTSC guidance for soil gas investigations and as described in the attached QAPP. Borings will be placed at depths of approximately 5 and 10 feet bgs within the fill material and above the sludge material. Soil gas sampling locations SG15 and SG16 will be placed near former borings GB4 and C7, respectively (Figure 5).

Borings located in native soil outside the sump materials will be advanced to depths of 5 and 10 feet bgs. All soil cuttings will be collected in 55-gallon drums, labeled, and secured on Site. All waste material generated during field activities will be properly disposed of in accordance with local, state, and federal regulations.

Groundwater Monitoring Well – Installation, Survey, and Sampling

One additional groundwater monitoring well will be installed in a downgradient position and sampled for TPH, VOCs, SVOCs, and metals (Figure 3). During installation, soil samples will be collected at five-foot intervals beginning at 5 feet bgs. Soil samples will be analyzed for TPH, VOCs, SVOCs, and metals at the 5- and 10-foot depths. The remainder of the soil samples will be placed on hold pending the results of the 5- and 10-foot samples unless field indicators warrant laboratory analysis. If the analytical results indicate that the concentrations are below regulatory cleanup goals, then groundwater monitoring may be conducted to demonstrate that the concentrations in groundwater remain below regulatory cleanup goals.

LFR will provide personnel to sample the three existing wells and one newly installed well for analysis and submit reports to the DTSC on a quarterly basis for a period of one year. After one year, the wells will be sampled annually. The wells will be sampled for TPH, VOCs, SVOCs, and metals. A groundwater sample will be collected from each of the groundwater monitoring wells on the Site. LFR personnel will measure and record groundwater quality parameters (temperature, pH, conductivity, and turbidity) during well purging activities.

The purge water from groundwater sampling will be temporarily contained on site in 55-gallon drums and disposed of at an appropriate licensed facility. The volumes of purged water will be recorded on field logs and documented for the summary report. All waste material generated during field activities will be properly disposed of in accordance with local, state, and federal regulations.

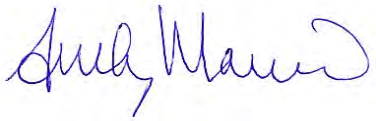
Reporting

LFR will submit a report to the DTSC summarizing the investigation and the results of the laboratory analysis. LFR's intention is to perform this work in a timely manner such that we can implement a remedial plan to allow for the future development of the Site. LFR will contact the DTSC prior to implementing the scope of work described in this workplan. LFR

and CRG Properties will be happy to meet with DTSC staff to discuss the program presented in this work plan. If you have any questions, please contact either Tony Marino or Charlie Robinson at (714) 444-0111.

Sincerely,





Darren P. Burgett
Project Geologist

Tony Marino, P.G
Senior Associate Geologist
California Professional Geologist No. 8304



Charles E. Robinson, P.E.
P.E. # C-035368
Vice President/Principal Engineer

cc: Steve Sukut – CRG Properties, Ltd.
Mark Pender, CRG Properties, Ltd.

References

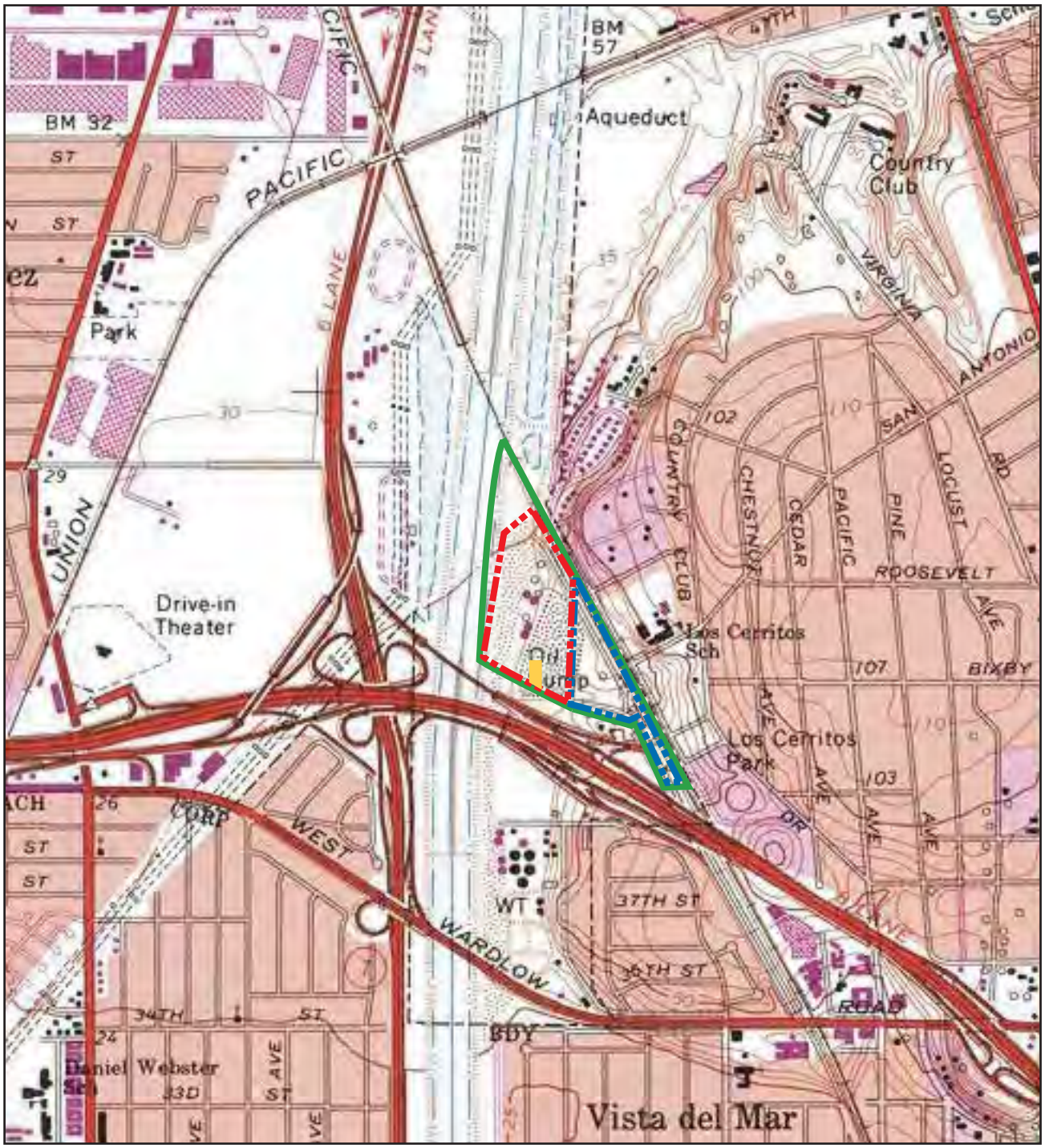
Kabata-Pendias, A. and H. Pendias. 1984. Trace elements in soils and plants. CRC Press, Inc. Boca Raton, Florida.

Kearney, 1996, Background Concentrations of Trace and Major Elements in California Soils.

Attachments:

Figure 1 – Vicinity Map
Figure 2 – Site Map
Figure 3 – Groundwater Elevation and Flow Direction Map, December 18, 2006, Showing Proposed Groundwater Monitoring Well Location
Figure 4 – Site Map Showing Proposed Soil Boring Locations
Figure 5 – Isopach Map of Sump Materials Showing Proposed Soil Gas Sampling Locations

Attachment A - Quality Assurance Project Plan



CRG Property

McDonald Property

Tookey Property

Site

0 2000 ft

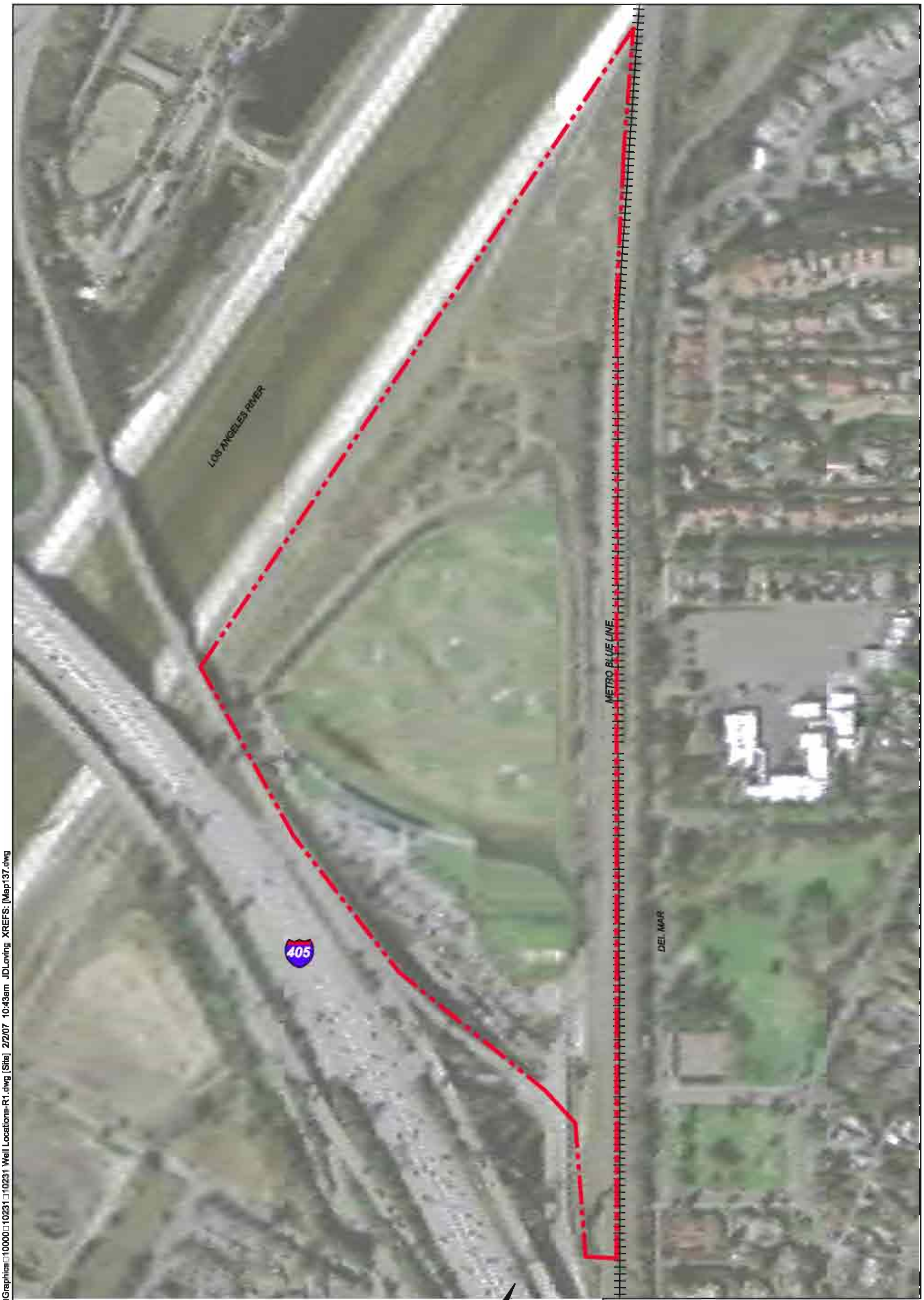
Vicinity Map

CRG Properties, Former Oil Operators North Site,
Long Beach, CA - 002-10231-12

LFR

Figure 1

CM: K:\Data\Graphics\10000\10231\10231Vicinity Map2.ai



EXPLANATION

Property Boundary

Railroad Tracks

0 220 FEET

Site Plan

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-01

LFR

Figure 2

CM: □□Cm-fs02□graphics□Data□Graphics□10000□10231□10231 Well Locations-R1.dwg [Site] 2/2/07 10:43am JDLoving XREFS: [Map137.dwg]



Groundwater Elevation and Flow Direction
December 18, 2006
with Proposed Groundwater Monitoring Well Location

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-01

LFR

Figure 3

CM: K:\Data\Graphics\10000\10231\10231 Well Locations-R1.dwg [PropGW] 3/12/07 12:25pm JDLoving XREFS: [Map137.dwg



Site Map Showing Proposed Soil Boring and Background Sampling Locations

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-01

LFR

Figure 4

CM: K:\Data\Graphics\10000\10231\10231 Well Locations-R1.dwg [PropSB] 3/12/07 12:16pm JDLoving XREFS: [Map137.dwg

LOS ANGELES RIVER

MW-5
MW-4
GB1
C7
SG16
GB2
C5
C4
GB3
P7
C6
C8
SG14
C3
GB10
SG13
B6
PROFILE 3
C9
GB11
MW-6
SG12
C2
GB9
PROFILE 2
GB4
SG15
E(S1)
SG9
GB12
B4
C1
C12
B5
SG11
E(S2)
C11
MW-2
PROFILE 1
GB5
C10
E11
B3
SG8
GB6
SG10
C16
C13
C14
E9
B2
SG5
E10
CPT1
SG7
C15
E8
SG4
GB8
E2
E7
E4
MW-3
SG6
E5
E3
E6
SG3
GB7
B1
SG2
405
SG1
METRO BLUE LINE
DEL MAR AVENUE
LOS CERRITOS PARK

40'
30'
50'
0'
10'
30'
20'
20'
10'
0'
10'

EXPLANATION

- B1 — LFR Boring
- CPT1 — LFR CPT Location
- MW-3 — LFR Groundwater Monitoring Well
- GB1 — Geofon Boring (Jaykim, 1998)
- E1 — Excavation Sample Location (JB, 1989)
- C1 — ETC CPT Location (ETC, 1983)
- MW-2 — Former Groundwater Monitoring Well (JB, 1995)
- SG1 — Proposed Soil Gas Sampling Locations
- Profile Line (ETC, 1984)
- Property Boundary
- Railroad Tracks
- 10' — Depth of Base of Sump Material

0 160 FEET

Isopach Map Showing Proposed Soil Gas Sampling Locations

CRG Properties, Former Oil Operators North Site
3701 Pacific Place, Long Beach, CA - 002-10231-01

LFR

Figure 5

CM: K:\Data\Graphics\10000\10231\10231 Well Locations-R1.dwg [PropSG] 8/22/07 8:52am JDLoving XREFS: [Map137.dwg

APPENDIX A

QUALITY ASSURANCE PROJECT PLAN

Pre-Sampling Activities

A site-specific Health and Safety Plan (HSP) will be prepared for the sampling activities. All LFR employees at the Site, as well as subcontractors and regulatory personnel, will be required to read and sign the HSP in order to familiarize themselves with the safety procedures and protocols to be maintained while performing work at the Site. A copy of the HSP will be available on-site during field activities for reference and review by regulatory or site personnel.

All proposed sampling locations will be marked as required by Underground Service Alert (USA). LFR will contact USA at least three days before commencement of the field work to obtain a utility clearance ticket number. LFR may also subcontract with a subsurface utility locator to screen the proposed sampling locations.

Drilling of Soil Borings

Collection of soil samples at the Site will be performed using the following methods:

- **Hand-auger** – Shallow soil samples (up to 2.5 feet bgs) in brass or stainless steel sleeves using a hand auger or slide-hammer sampling device

- **Truck-mounted Geoprobe drill -** A Geoprobe drill with a 1-inch diameter hollow tube and 4-foot acetate sleeves fitted into the hollow tube

- **Hollow-stem auger** – a truck-mounted drill rig with variable diameter hollow augers; stainless steel or brass sleeves fitted into sampler

Prior to drilling activities, hand-auger equipment will be used to advance a pilot boring to a depth of approximately 5 feet bgs. The pilot boring will be used to assess whether underground utilities are present.

The sampling equipment will be cleaned between each sampling point and soil boring. The sampler will be washed between sampling intervals using a steam cleaner followed by an Alconox solution (an inorganic detergent); followed by a tapwater rinse. The sampler will be dried by air and/or with a paper towel prior to sampling. Augers will be advanced to the desired sample interval and removed.

Collection of Soil Samples

A core-barrel sampler will be used to collect shallow soil samples at the required interval. The core-barrel sampler will be lined with clean brass or stainless steel sleeves fitted into the end of the sampler. The sampler will be driven into the soils to obtain relatively undisturbed soil samples.

Immediately upon collection of the sample, the soil-filled sampling tube will be removed from the sampling tool and the ends of the tube will be capped with Teflon sheets, plastic end caps, and silicone-based tape. Following collection, the samples will be labeled, placed in locking bags, and then placed in a light-occlusive thermostatically controlled preservation device (i.e., a cooler containing ice) until they are transferred to the analytical laboratory. The cooler will be kept at a temperature of 4 degrees Celsius (plus or minus 2 degrees Celsius). To reduce the potential for cross contamination between borings, hand auger and sampling equipment will be cleaned prior to use at each drilling location. Strict chain-of-custody protocol will be followed throughout all phases of the sample handling process.

Sample container labels will include a unique sample identification number, the name of the person collecting the sample, the time the sample was collected, project identification, sample location, analytical parameters, date sampled, and any preservative added to the sample.

Sample Selection

The selection of soil samples to be submitted for chemical analysis will be based on the work plan, and may be augmented based on field observations such as VOC or total petroleum hydrocarbon (TPH) emission measurements using the flame ionization detector (FID) or photoionization detector (PID), lithology, and soil staining. The FID or PID will be calibrated prior to use. One soil sample from each sampling interval will be placed in a plastic bag, broken apart, and allowed to stand for a minimum of 5 minutes prior to screening. The concentration of emissions in the resultant “head space” gas will then be measured with the FID or PID and recorded. Lithology will be evaluated to select samples with finer grain size for VOC analysis.

LFR Soil Sample Collection Procedures for VOCs Using EPA Method 5035

Discrete soil samples collected for VOC analysis will be obtained using EPA Method 5035. Soil samples can be preserved in the field or by the laboratory. Discrete soil samples for VOC analysis will be collected assuming that the concentrations are unknown. Soil samples will be obtained by either collecting soil from a sampling sleeve using a syringe, or by thrusting the En Core™ sampler into the soil until it is full. Descriptions of the syringe method and En Core™ sampler method are provided below.

If soil samples are collected from a syringe, they will be preserved in the field. For soil samples preserved in the field, each soil sample will consist of two subsamples (soil collected with a clean syringe and extracted into laboratory-provided vials that contain

preweighed amounts of methanol or sodium bisulfate). If soil samples are preserved in the laboratory, each soil sample will consist of either two clean 5-gram En Core™ samplers or one clean 25-gram En Core™ sampler.

The sample containers will be placed in a sealable plastic bag in a portable cooler. The samples will be placed immediately on ice and will be kept cooled and on ice or in a refrigerator until transport to the laboratory (at 4°C ±2°C). Sample collection, handling, and custody procedures will be documented in the field logbook. Soil sample collection requirements for EPA Method 5035 are attached. Samples collected for analytical testing will be maintained under strict chain-of-custody protocol.

Procedures for Collecting Soil Samples Using the Syringe Method

Before going to the field:

1 Discuss the analytical requirements for the project with the analytical laboratory. Obtain pre-weighed clean VOAs from the laboratory. The laboratory will provide separate VOAs containing methanol and sodium bisulfate preservative.

2 Determine from the laboratory the mass of soils that should be placed in each VOA, as well as the number of VOAs to be filled in the field for the required number of analyses. The mass of soil is proscribed by the laboratory when the laboratory specifies the size of the syringe to use and the number of syringe volumes to be placed in the VOA.

In the field:

1 For each sampling depth, drive samplers containing clean sleeves into the soils at the desired depth. Evaluate the soils in the sleeve using a PID, FID or by visual evidence to select the soils that are finer grained for VOC analysis and/or have higher volatile emissions.

2 Using a new clean syringe, remove the specified mass of soils from the sleeve and inject it into the VOA. Seal the VOA and clean off any excess soil from the outside of the VOA.

3 Label the VOA with all the required sampling information and place the VOA in the chilled cooler for delivery to the laboratory.

Procedures for Collecting Soil Samples with the En Core™ Sampler

Before taking sample:

1 Hold the clean coring body and push the plunger rod down until the small O-ring rests against the tabs. This will assure that the plunger moves freely.

2 Depress the locking lever on the En Core™ T-Handle. Place the coring body, plunger end first, into the open end of the T-Handle, aligning the two slots on the coring body with the two locking pins in the T-Handle. Twist the coring body clockwise to lock the pins in the slots. Check to ensure that the sampler is locked in place. The sampler is now ready for use.

Taking sample:

1 Turn the T-Handle with the T up and the coring body down. This positions the plunger bottom flush with the bottom of the coring body (ensure that the plunger bottom is in position). Using the T-Handle, push the Sampler into soil until the coring body is completely full. When full, the small o-ring will be centered in the T-Handle viewing hole. Remove the Sampler from soil. Wipe excess soil from the coring body exterior.

2 Cap coring body while it is still on the T-handle. Push cap over the flat area of the ridge and twist to lock the cap in place. The cap must be seated to seal the sampler.

3 Clean the coring body and plunger using the triple rinse procedure.

Preparing Sampler for Shipment:

1 Remove the capped Sampler by depressing the locking lever on the T-Handle while twisting and pulling the Sampler from the T-Handle.

2 Lock the plunger by rotating the extended plunger rod fully counter-clockwise until the wings rest firmly against the tabs.

3 Attach completed circular label (from En Core™ Sampler bag) to the cap on the coring body. Label the En Core™ Sampler with all the required sampling information, and place the sampler in the chilled cooler for delivery to the analytical laboratory.

4 Return the full En Core™ Sampler to the zipper bag. Seal the bag and put it on ice.

Collection of Soil Gas Samples

Soil gas sampling will be conducted in general accordance with the most recent version of the DTSC guidance for soil gas investigations, as clarified in discussions with DTSC below. Soil gas tubing will be Teflon or some other chemical resistant tubing. Prior to sample collection of samples to be analyzed by EPA Method 8260B, the first five dead volumes of gas shall be discarded to flush the sample tubing and fill it with in situ soil gas, and the appropriate purge volume will be selected.

The purge volume or “dead space volume” can be estimated based on a summation of the volume of the sample container (e.g., glass bulbs), internal volume of tubing used, and

annular space around the probe tip. Summa canisters, syringe, and Tedlar bags are not included in the dead space volume calculation. The Agency recommends step purge tests of one (1), three (3) and seven (7) purge volumes be conducted as a means to determine the purge volume to be applied at all sampling points.

The appropriate purge volume should be selected based on the highest concentration for the compound(s) of concern detected during the step purge tests. The purge volume should be optimized for the compound(s) of greatest concern in accordance with Section 2.2 of the AGSI.

If VOCs are not detected in any of the step purge tests, a default of three (3) purge volumes should be extracted prior to sampling.

The step purge tests and purging should be conducted at the same rate soil gas is to be sampled.

The purge test data (e.g., calculated purge volume, rate and duration of each purge step) should be included in the report to support the purge volume selection.

Additional purge volume tests should be performed to ensure appropriate purge volumes are extracted if: (1) widely variable or different site soils are encountered; or (2) the default purge volume is used and a VOC is newly detected.

Purge volumes from the gas probes will be collected by capping the probe and drawing a vacuum through a coupling on the cap. The purge flow rate will be approximately 100 milliliters (ml) per minute. Soil gas samples will be collected by filling a glass sample syringe from an unbroken length of 1/4 –inch polyethylene tubing in the gas probe. The glass syringe will be wrapped with foil in order to protect the soil gas sample from UV sunlight. Per DTSC requirements, a tracer gas (isopropyl alcohol or propane) will be released at the surface immediately adjacent to the probe/soil interface and at the top of the probe to determine if ambient air has broken through and diluted the soil-gas sample. The tracer gas will be added to the list of analytes reported by the laboratory. A lack of the leak test compound detected in the samples will be an indication that the fittings and probe were sealed and were not conduits for ambient air to be drawn into the sampling assembly. At least 10 percent of the soil-gas samples will be checked for tracer gas. A portable photoionization detector (PID) will be used in the field to ensure adequate venting of soil vapor during investigative activities.

Soil gas samples will be collected in clean (new) syringes and directly injected into the analytical instrument. The volume for the gas-tight soil-gas syringe samplers used is approximately 5 ml or 10 ml (two different sizes are used).

Methane. Soil gas samples will also be collected in Tedlar bags for off-site analysis for methane using a GC equipped with a Flame Ionization Detector (FID). Standard reporting limits of 10 ppmv will be used.

On-Site Monitoring for Oxygen, Carbon Dioxide, Methane and Hydrogen Sulfide. O_2, CO_2, CH_4, and H_2S will be collected in Tedlar bags for on site monitoring using a Landtec GEM 2000 Plus portable gas analyzer or similar gas analyzer.

Sample Intervals

Soils gas samples will be sampled at the intervals specified in the Workplan, or at the discretion of the geologist based on field observations such as changes in lithology, visual observations of staining or measurements of volatile emissions.

The presence of moisture in soil decreases the rate of vapor intrusion by decreasing soil airspace and inhibiting vapor movement. Thus soil gas sampling after a significant precipitation event where the ground is saturated is not recommended. In the event that saturated soil is found when soil borings are made for soil gas collection no soil gas sample will be collected in a saturated zone.

Drilling of Boring for Groundwater Monitoring Well

The borings drilled to install the groundwater monitoring wells will be drilled using a truck-mounted drill rig equipped with a hollow-stem auger. Drilling services will be provided by a State-licensed C-57 drilling contractor.

The augers will be steam-cleaned prior to the drilling. Soil cuttings from the drilling operations will be monitored during drilling activities for stains, odors, and photoionization detector (PID) readings. Based on the analytical results of the soil samples collected during drilling, the soils will either be left on site or transported off site to an appropriate disposal facility. All waste material generated will be properly disposed of in accordance with local, state, and federal regulations.

Soil descriptions, in general accordance with the Unified Soil Classification System, sample type and depth, and related drilling information, will be recorded on a boring log under the supervision of a State-professional geologist from LFR. Soil samples will be collected during drilling activities in a manner consistent with the procedures described in the preceding paragraphs. The borings will be used to install groundwater monitoring wells.

Groundwater Monitoring Well Installation and Development Procedures

Monitoring well installation permits will be obtained at the Los Angeles County Department of Health Services. The wells will be constructed of flush-jointed 2-inch inside-diameter threaded screen and blank Schedule 40 PVC casing. Machine-slotted 0.020-inch screen width will be installed at a depth interval which encounters the top of the groundwater table. Blank PVC casing will be used to construct the remainder of the

well to the ground surface. The well casing will be installed inside the hollow-stem augers.

Prior to beginning the placement of the filter pack, the casing will be suspended in the annulus of the auger, a few feet of sand filter pack material will be poured into the annulus, the augers will be lifted 2 to 4 feet, and a few feet of sand filter pack material will be poured into the annulus again. The augers will be lifted in 2- to 4-foot segments and sand filter pack material placed each time until the sand backfill is approximately 1.5 feet above the top of the screen.

Prior to the placement of the pelletized bentonite zone, the well will be surged with a surge block for approximately one-half hour to enable settling of the filter pack. Additional filter pack will be added. An approximate 3-foot-thick, pelletized bentonite zone will be placed immediately above the sand filter pack and will be hydrated with clean water. Bentonite grout will be placed in the annulus above the pelletized bentonite zone to a depth of approximately 1.5 feet bgs. A traffic-rated well housing will be placed above the well casing and set in concrete. The well housing will be raised approximately 1 to 2 inches above the ground surface.

Prior to development, depth to groundwater in the wells will be recorded to the nearest 0.01 foot using a conductance probe. Following installation, the wells will be developed by surging with a surge block and bailing using the drill rig. Development will continue until a minimum of three well volumes of water are removed or the water from the well becomes clear, whichever occurred first. The well will be developed at or near to the recovery rate in an attempt to minimize the likelihood of cascading water.

Water recovered from the well will be stored in DOT-approved 55-gallon drums on site until analysis of the initial water samples had been completed. The water depth measuring points on the well casings will be noted with a small notch in the casing and marked with indelible ink.

Purge Method Groundwater Sample Collection Procedures

Field activities and equipment utilization will be recorded on groundwater sampling field data sheets. The water level and depth to the bottom of each well will be measured using a conductance probe; the measurements will be recorded to the nearest 0.01 foot. Prior to use, the probe will be rinsed in an Alconox solution (an inorganic detergent), followed by two deionized-water rinses.

The volume of water (in gallons) contained in the well casings will be estimated using the following equation:

$$\text{Casing Volume (gallons)} = \pi \times h \times 7.5 \times r_1^2$$

Where r_1 equals the radius of the well casing, h equals the height of the water in the well, $\pi = 3.14$ and 7.5 is equal to gallons per 1 cubic foot of water.

Prior to initiating a sampling program, the wells will be purged of standing water. A water sample will be collected following the removal of a minimum of three casing volumes of water and/or stabilization of pH, temperature, and electrical conductivity readings to within 5 percent of each other for three subsequent measurements. A 55-gallon drum will be used to measure the volume of water removed. Disposable bailers will be used for sampling the wells. New string will be used on the sampling bailers for each well.

Water samples will be collected by lowering the bailer approximately 2 to 4 feet below the static groundwater level, and raising the bailer slowly in order to minimize agitation of the water sample in the bailer. Water will be discharged from the bailer through a bottom discharge valve placed on the bottom of the sample container. Discharge to the sample container will be conducted at a rate slow enough to minimize bubbling or significant agitation of the liquid. The sample container will be filled to the top (from the bottom up) and overfilled leaving no remaining headspace. Samples will be collected in laboratory-approved containers.

Sample Handling

The samples retained for chemical analyses will be placed in plastic bags and stored in an ice chest cooled, using ice, to a temperature of approximately 40 degrees Fahrenheit.

The samples will be delivered to and analyzed by a State-certified hazardous waste laboratory within 24 hours of collection. Sample handling, transport, and delivery to the laboratory will be documented using chain-of-custody procedures, including the use of chain-of-custody forms.

Field Logbook Recordings

The LFR field technician will record sampling activities, sampling locations, site observations, and other pertinent information on field service forms. Information to be recorded in the field logbooks includes: date, starting time, site identification, meteorological conditions, sample identification numbers, location and description of sampling points, number of samples collected, time of sample collection, photo log, deviations from work plan, field personnel protection, level of personnel protection, field observations and parameters, problems encountered and actions taken to resolve problems, and the signature of the person making the entry. Information will be recorded in permanent ink. If an error is made, corrections must be made by crossing a line through the error and entering the correct information. Changes will be initialed.

Boring Logs

Soil lithology will be logged by an experienced field geologist under the supervision of a California Professional Geologist. Recovered soil samples will be field screened for evidence of contamination using an organic vapor analyzer along with visual senses.

Information to be recorded on the boring logs include: Registered Professional (PE or PG) responsible for the boring log (stamp, signature, license number, and expiration date), boring location (survey coordinates or identification number), surface elevation if known, outside boring diameter, total depth, depth to groundwater (during drilling and static), sample identification, interval, percent recovery in sample tubes, USCS soil classification group name and symbol, major and minor soil constituents and their relative percentages, soil color, soil moisture, odor, observations regarding the possible presence of contaminants, grain size and shape, field estimation of moisture content, field instrumentation readings, sampling intervals, and other pertinent details.

Lithologic Description

Soil samples will be lithologically described and classified using the Unified Soil Classification System (USCS). A lithologic log will be prepared for each boring. Blow counts will be recorded at each sampling interval to evaluate consistency of the soils. Drilling and logging will be performed under the direction of an LFR California Professional Geologist.

Borehole Abandonment

After samples are collected from the boring, the boring will be completely filled with clean soil and/or grout/bentonite to within 6 inches of the ground surface. The upper 6 inches of each boring will then be filled to the ground surface with clean soil and/or cement slurry. Hand auger locations will be backfilled with bentonite chips and/or clean soil.

Decontamination Procedures

To reduce the potential for cross contamination, soil sampling equipment will be properly cleaned prior to use at each sampling location. Sampling equipment will either be steam cleaned or washed with a laboratory grade non-phosphate detergent solution and double-rinsed with deionized water. Equipment that comes into contact with potentially contaminated soil will be decontaminated consistently to assure the quality of samples collected. Disposable equipment intended for one-time use will not be decontaminated, but will be packaged for appropriate disposal. Decontamination will occur prior to and after each use of a piece of equipment.

All drilling and sampling devices used at the Site will be decontaminated using the following procedures:

- non-phosphate detergent and tap water wash, in a 5-gallon plastic bucket, using a brush
- initial deionized/distilled water rinse, in a 5-gallon plastic bucket
- final deionized/distilled water rinse, in a 5-gallon plastic bucket

Equipment will be decontaminated in a pre-designated area on plastic sheeting, and clean bulky equipment will be stored on plastic sheeting in uncontaminated areas. Cleaned small equipment will be stored in plastic bags. Materials that will be stored more than a few hours will also be covered.

Chain-of-Custody Records

A chain-of-custody record will accompany all sample shipments. Chain-of-custody forms will be completed and sent with each shipment for each laboratory. If multiple coolers are sent to a single laboratory on a single day, a chain-of-custody form will be completed for each cooler. The chain-of-custody record will identify the contents of each shipment and maintain the custodial integrity of the samples. Generally, a sample is considered to be in someone's custody if it is either in someone's physical possession, in someone's view, locked up or kept in a secured area that is restricted to authorized personnel. Until the samples are received by the laboratory, sample custody will be the responsibility of the sample collector. Sample container labels will include a unique sample identification number, the name of the person collecting the sample, the time the sample was collected, project identification, sample location, analytical parameters, date sampled, and any preservative added to the sample.

Sample Transfers

Strict chain-of-custody protocol will be followed throughout all sample transfers. A chain-of-custody document will be completed in triplicate. One copy will accompany the samples to the laboratory, one will be retained by the sampler, and the third will be forwarded to the LFR data management system.

Field QA/QC Procedures

Field QA/QC procedures performed at the Site will consist of the following measures:

- Chain-of-custody forms will be used for sample submittal to the laboratory.
- Daily information regarding soil sample collection will be recorded in field logbooks dedicated to this project. Sample types, soil descriptions, sample identification numbers, and sample times will be collected and recorded on field data sheets and in the field logbooks. Pages will be numbered, dated, and signed by the person performing data entry.

Field QA/QC samples will be collected and submitted for analysis along with the discrete soil samples, using the following sampling frequency:

- equipment blanks – one equipment rinseate blank per field day
- field blanks – one field blank sample per field day

- field duplicates – one duplicate for every ten discrete samples
- travel blanks – one travel blank per field day for all soil samples

Equipment Rinsate Blanks

An equipment rinsate blank (equipment blank) will be collected from the final water rinsed over equipment after cleaning activities have been performed. The equipment blank will be collected from non-dedicated (reusable) sampling equipment such as soil sampling tools and sampling equipment. The equipment blank will be analyzed using the same analytical method used on the unique soil samples.

To collect an equipment blank sample, distilled water will be carefully poured over or through the recently cleaned equipment, and collected directly into an appropriated sample container held over a bucket. Equipment blank samples will be stored and processed in the same manner as all other samples.

Field Blanks

Field blank samples will consist of a sample of the distilled deionized water that was used to wash sampling equipment during equipment cleaning activities. The purpose of the field blank sample is to evaluate the water for COCs. A field blank sample will be collected by pouring distilled water into the appropriate sample container. The field blank samples will be stored and processed in the same manner as all other aqueous samples.

Field Duplicate Sample

Duplicate soil samples will be collected to evaluate the analytical procedures and methods employed by the laboratory. The field duplicate sample will be collected immediately after collecting the original soil sample. One field duplicate will be collected for every ten soil samples collected.

Travel Blanks

Travel blank samples will be utilized to determine cross contamination of COCs during travel. One travel blank per field day will be utilized for all soil samples.

Investigation-Derived Wastes

Waste soils and water produced during sampling activities will be contained in DOT-approved drums, labeled, and temporarily stored on site pending receipt of the analytical data and evaluation of appropriate disposal options.

The volume of investigation-derived wastes is estimated to be relatively small. All soil cuttings and purged groundwater will be collected in a 55-gallon drum, labeled, and secured on the Site. The Office of Emergency and Remedial Response (OERR) Directive 9345.3-02 (May 1991), which provides guidance for the management of investigation-derived wastes, will be followed. Liquids generated from the proposed sampling activities (estimated to be less than 20 gallons) will be collected in a 55-gallon drum, labeled, and secured on the Site. All waste material generated will be properly disposed of in accordance with local, state, and federal regulations.

Field Measurements

Field measurements will include use of a PID and/or FID to measure volatile emissions from soils and to monitor concentrations of volatiles in air. Soil samples will also have pH measurements obtained by mixing 50 percent soil and 50 percent water in a beaker and measuring the pH of the solution with litmus paper. For the syringe method, the mass of soil to place in the laboratory-provided VOA is measured by the number of syringe volumes used.

QA/QC

One duplicate soil sample for every ten soil samples collected will be taken for laboratory analysis. The duplicate sample will be given a different identifier for laboratory analytical purposes.

Other QA/QC measures include obtaining equipment blanks (one per day), field blanks (one per day), and travel blanks (one per day) for laboratory analysis. These samples will be immediately placed in a chilled cooler to avoid loss of VOCs. Preservatives will also be used in the VOAs or En Core™ samplers to avoid loss of VOCs.

Housekeeping/Cleanliness

Sampling equipment will be triple rinsed prior to collection of each sample to avoid cross contamination. The equipment will first be cleaned by scrubbing with a mixture of deionized water and non-phosphate detergent. A primary rinse of the equipment will then be conducted. After the primary rinse, the equipment will be given a final clean rinse with deionized water. Disposable equipment, including gloves, will be replaced between sampling locations.

Analytical Methods and Preservation

The analytical methods used for this project are EPA-approved methods. These documents may be reviewed by LFR's QA staff during laboratory audits to verify that project specifications are met. The analytical procedures described below are carried out

by the laboratory. Detection limits for these methods are attached to the end of this Appendix.

The following are the analyses that may be conducted during this project:

- California Code of Regulations (CCR) Title 22 Metals using EPA 6010/7000 Series Methods
- total petroleum hydrocarbons (TPH) using EPA Method 8015M
- VOCs using EPA Method 5035/8260B
- SVOCs using EPA Method 8270

Internal Standards

Internal standards are measured amounts of method-specified compounds added after preparation or extraction of a sample. Internal standards are added to samples, controls, and blanks in accordance with method requirements to identify column injection losses, purging losses, or viscosity effects.

Acceptance limits for internal standard recoveries are set forth in the applicable method. If the internal standard recovery falls outside of acceptance criteria, the instrument will be checked for malfunction and the sample will be reanalyzed after any problems are resolved.

Method Detection Limits

The Method Detection Limit (MDL) is the minimum concentration of an analyte or compound that can be measured and reported with 99 percent confidence that the concentration is greater than zero. MDLs are established for each method, matrix, and analyte, and for each instrument used to analyze project samples. MDLs are derived using the procedures described in 40 Code of Federal Regulations (CFR) 136, Appendix B (EPA 1990a). The EPA requires that MDLs be established on an annual basis. MDLs must be less than the applicable reporting limits for each target analyte and should be below screening level health based criteria for unrestricted use and for ecological receptors.

To the extent feasible, the MDL will be less than or equal to screening criteria such as the National Ambient Water Quality Criteria and the Maximum Contaminant Levels (MCLs). The analytical reporting limit may vary, depending on sample dilution. Efforts will be made to use the lowest reporting limit as technically feasible.

A summary table showing type of media, all known COPCs, detection limits for each COPC, PRGs, MCLs, and CHHCLs for each applicable COPC is attached.

SUMMARY TABLE OF KNOWN CHEMICALS OF POTENTIAL CONCERN

Known Chemicals of Potential Concern	MCLs mg/L	iPRG Industrial Soil (mg/kg)	Indoor Air Human Health Screening Levels (µg/m³) Commercial/Industrial Land Use Only	Shallow Soil Gas Human Health Screening Levels (µg/m³) Commercial/Industrial Land Use Only	Laboratory Detection Limit			Highest Known Concentration		
					Soil	Air	Water	Soil	Air	Water
Antimony	0.006	4.1 E+02	NA	NA	3.0mg/kg	NA	50µg/L	<5.0mg/kg	NA	22µg/L
Arsenic	0.010♦	2.5 E-01 (CAL-Modified)	NA	NA	5.0 mg/kg	NA	50µg/L	44 mg/kg	NA	72µg/L
Lead	NA	8.0 E+02	NA	NA	3.0 mg/kg	NA	50µg/L	350 mg/kg	NA	16µg/L
Mercury	0.002	3.1 E+02	1.31 E-01	1.25 E+02	0.10 mg/kg	NA	0.50µg/L	<0.10mg/kg	NA	7.3µg/L
Benzene	0.001	1.4 E+00	1.41 E-01	1.22 E+02	5.0 µg/kg	1.0 µg/L	0.50µg/L	580 µg/kg	NA	88µg/L
Ethylbenzene	0.3	4.0 E+02	Postponed*	Postponed*	5.0 µg/kg	1.0 µg/L	0.50µg/L	290 µg/kg	NA	0.9µg/L
Toluene	0.15	5.2 E+02	4.38 E+02	3.78 E+05	5.0 µg/kg	1.0 µg/L	0.50 µg/L	45 µg/kg	NA	0.50µg/L
m,p-Xylene	1.750	4.2 E+02	1.02 E+03	8.87 E+05	5.0 µg/kg	2.0 µg/L	1.0 µg/L	520 µg/kg	NA	2.4µg/L
o-Xylene	1.750	4.2 E+02	1.02 E+03	8.79 E+05	5.0 µg/kg	1.0 µg/L	0.50µg/L	87 µg/kg	NA	2.4µg/L
Gasoline Range Hydrocarbons	NA	NA	NA	NA	10 mg/kg	50 µg/L	0.050mg/L	53mg/kg	NA	0.38µg/L
Total Petroleum Hydrocarbons	NA	NA	NA	NA	10 mg/kg	50 µg/L	0.50mg/L	95,000mg/kg	NA	16 mg/L
Naphthalene	NA	4.2 E+00(CAL-Modified)	1.2 E-01	NA	5.0 µg/kg	1.0 µg/L	5.0µg/L	8,700µg/kg	NA	<5.0µg/L
Benzo(a)pyrene	NA	2.1 E-01	NA	NA	300µg/kg	NA	10µg/L	400 µg/kg	NA	<10µg/L
Methane	NA	NA	NA	NA	NA	10 ppmv	NA	NA	83%	NA

Notes:

MCL – Maximum contaminant level (California Department of Health Services, 2007)
iPRG – Preliminary remediation goal for industrial soil (EPA Region 9, October 2004)
mg/L – Milligrams per liter
mg/kg - milligrams per kilogram
µg/m^3 – micrograms per meter cubed
ppmv - parts per million by volume
µg/kg– micrograms per kilogram
µg/l – micrograms per liter
♦ - Federal MCL (U.S. EPA, January 2006)
NA – Not applicable
° - only total xylenes were reported
* - Calculation of a screening number for the chemical has been postponed until the toxicity criterion currently being developed by OEHHA is published as a final document (CHHSLS, January 2005)

Laboratory Instrument Calibration

Analytical instruments will be calibrated in accordance with the procedures specified in the applicable method. All analytes that are reported should be present in the initial and continuing calibrations, and these calibrations must meet the acceptance criteria specified in the reference method. Records of standard preparation and instrument calibration will be maintained. Records should unambiguously trace the preparation of standards and their use in calibration and quantization of sample results. Calibration records will be traceable to standard materials.

At the onset of analysis, instrument calibrations will be checked using all of the analytes of interest. This applies equally to multi-response analytes. At a minimum, calibration criteria will satisfy method requirements. Analyte concentrations can be determined with either calibration curves or response factors, as defined in the method. Guidance provided in SW-846 should be considered to determine appropriate evaluation procedures (EPA 1996).

Mobile-Laboratory Calibration

An initial calibration curve is performed for all target compounds as follows:

- at the start of the project
- when the gas-chromatograph column or operating conditions have changed
- when the daily mid-point calibration check cannot meet the specified requirements

A linearity check of the calibration curve for each compound is performed by computing a correlation coefficient and an average response factor. If a correlation coefficient of 0.99 or a percent relative standard deviation of ±20 percent (±30 percent for vinyl chloride) is obtained, an average response factor is used over the entire calibration range. If the linearity criteria are not obtained, quantization for that analyte can be performed using a calibration curve.

Continuing calibration standards are analyzed at the beginning of each day. Acceptable continuing calibration agreement is set at ±20 percent to the average response factor from the calibration curve, except for vinyl chloride, which requires a 30 percent agreement. When calibration checks fall outside this acceptable range for analytes detected on the Site, the on-site chemist will perform a corrective action consisting of verification of the standard and/or a new calibration curve for the analytes out of specifications. The continuing calibration includes all compounds expected at the Site and compounds specified in the workplan.

Evaluation of Tentatively Identified Compounds

No tentatively identified VOCs ("tentatively identified compounds," or TICs) are anticipated to be detected during sample analysis. However, should TICs be reported by the laboratory, depending on the reported concentrations of the TICs identified, LFR will either address TICs in the data evaluation (EPA 1989) or, if a significant number of TICs are identified during the investigation, the use of these data in the data evaluation will be discussed with the regulatory toxicologist for the project, should one be designated.

Quality Objectives and Criteria for Measurement Data

The following sections describe the outputs of the Data Quality Objective (DQO) planning process and the performance or acceptance criteria established for the project data.

Identification of Data Uses and Definition of Project DQOs

Decisions will be made based on data obtained from sampling and analysis programs. Data collected through implementation of this QAPP should satisfy federal, state, and local data quality guidelines. These data may be used to characterize the nature and extent of affected soil gas, soil, surface water, groundwater, and ambient air to support the evaluation of corrective/remedial action, and/or to assist in determining the need for additional actions.

The presence of environmental contaminants will be established by the extent of valid detectable concentrations of the chemicals of potential concern (COPCs). DQOs have been developed to ensure that the data quality meets project objectives.

The work will be conducted and documented so that the data collected are of sufficient quality for their intended use (U.S. EPA 1998). DQOs specify the data type, quality, quantity, and uses needed to make decisions, and are the basis for designing data collection activities. DQOs have been used to design the data collection activities presented in the work orders. The DQOs for the project are discussed below.

The project DQOs developed specifically for the planned sampling and analysis program have been determined based on U.S. EPA's seven-step DQO process (U.S. EPA 1994a). The Project Manager will evaluate the project DQOs to establish if the quantitative and qualitative needs of the sampling and analysis program have been met. The project definition associated with each step of the DQO process can be summarized as follows:

1. State the Problem: Previous investigations indicated that soil gas, soil, and groundwater in the site vicinity have been affected by COPCs. Additional sampling programs should provide additional characterization in addition to subsequent sampling programs to provide confirmation that remediation activities have been completed and remaining soils meet project RAOs.

2. Identify the Decision: The data will be used to evaluate the soil gas, soil, and groundwater, to evaluate risk, and provide confirmation that remedial activities meet project RAOs or to assist in determining the need for other actions to be conducted at the Site. Data will also be used to determine the source(s) of contamination as well as the nature and extent of contaminants found.

3. Identify Inputs to the Decision: Inputs to the decision will include results of analytical testing of soil gas, soil, and groundwater samples from selected locations at the project site and the data validation results. Each of these matrices will be tested for the specified analytes as presented in an activity specific field sampling and analysis plans, work plans or monitoring plans.

4. Define the Study Boundaries: The boundaries of the field sampling and analysis program will be the perimeter of the project Site.

5. Develop a Decision Rule: Decisions will be based on laboratory results for the target constituents for each respective matrix tested. If no valid detectable concentrations of target compounds are reported for the given samples, a decision will be made whether or not the Site has been fully characterized/remediated with respect to the compounds tested and no further sampling will be required as part of this assessment. The method reporting limit will be reviewed for each target compound to establish if it is sufficiently low to make an accurate determination. If target compounds are detected above analytical reporting limits, then a decision will be made as to the validity of the analytical results. Other observations will be used in conjunction with analytical results to establish whether sufficient number or location of samples has been collected.

6. Specify Limits on Decision Error: All analytical testing results will be subjected to data validation. Data are considered valid if the specified limits on precision, accuracy, representativeness, comparability, and completeness are achieved. The results of detected target constituents will be considered in evaluating the need for additional sampling of site soil gas, soil, and groundwater.

7. Optimize the Design: Field sampling programs are designed to provide the type and quantity of data needed to satisfy each of the aforementioned objectives. Separate field sampling plans, work plans and monitoring plans provide the specifications for the data collection activities, including the numbers of samples, respective locations, and sampling techniques. The quality of the data will be assessed through the procedures further described in this QAPP.

The quality of the field data, which will be generated using portable instruments that must be calibrated following the procedures described in this QAPP, must be sufficient to allow proper evaluation of the results. The quality of the laboratory data will be such that the data can be evaluated using the process defined in the *Risk Assessment Guidance for Superfund* (EPA 1989) and *Laboratory Data Validation Functional Guidelines* (EPA 1994a and 1994b). Using this process will allow data quality to be evaluated for all of the uses identified above.

Data Acceptance Criteria

The laboratory data generated during the project implementation will be evaluated for precision, accuracy, completeness, comparability, and representativeness. Precision and accuracy are the primary parameters used in evaluating the quality of the data. Data evaluation will be conducted in accordance with the guidance entitled *Laboratory Data Validation Functional Guidelines* (EPA 1994a and 1994b).

Precision and Accuracy

Precision criteria allow evaluation of the reproducibility of measurements under a given set of conditions. They quantitatively measure the variability of a group of measurements. Data precision is measured by calculating relative percent differences (RPDs) of the analytical results for field and laboratory splits.

Analytical precision is a measurement of the variability associated with duplicate or replicate analyses of the same sample in the laboratory, and is determined by analysis of laboratory QC samples, such as duplicate control samples, matrix spike duplicates, or sample duplicates. If the recoveries of analytes in the specified control samples are comparable within established control limits, then precision is within limits.

Total precision is a measurement of the variability associated with the entire sampling and analytical process. It is determined by analysis of duplicate or replicate field samples, and measures variability introduced by both the laboratory and field operations. Field duplicate samples are analyzed to assess field and analytical precision.

Duplicate results are assessed using the RPD between duplicate measurements. If the RPD for laboratory QC samples exceeds established laboratory RPD criteria, data will be qualified as described in the applicable validation procedure. If the RPD between primary and duplicate field samples exceeds 30 percent for groundwater or 100 percent for soil, data will be qualified as described in the applicable validation procedure. The RPD will be calculated as follows:

$$RPD = 100 \times \frac{|X_2 - X_1|}{\frac{X_2 + X_1}{2}}$$

where:

X_1 and X_2 are the two observed values

Accuracy is a statistical measurement of correctness and includes components of random error (variability because of imprecision) and systematic error. It reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard.

Accuracy of laboratory analyses will be assessed by laboratory control samples, surrogate standards, matrix spikes, and initial and continuing calibrations of instruments. Laboratory accuracy is expressed as the percent recovery (%R). Accuracy limits are statistically generated by the laboratory or required by specified U.S. EPA methods. If the percent recovery is determined to be outside of acceptance criteria, data will be qualified as described in the applicable validation procedure. The calculation of %R is provided below:

$$\%R = 100 \times \frac{X_s - X}{T}$$

where:

X_S is the measured value of the spiked sample
X is the measured value of the unspiked sample
T is the true value of the spike solution added

Field accuracy will be assessed through the analysis of field equipment and trip blanks. Analysis of blanks will monitor errors associated with the sampling process, field contamination, sample preservation, and sample handling. The DQO for field equipment and trip blanks is that all values are less than the reporting limit for each target constituent. If contamination is reported in the field equipment or trip blanks, data will be qualified as described in the applicable validation procedure.

Because the precision and accuracy of any data obtained will depend on the type of measurement and the type of medium sampled (solid, liquid, or vapor), the data acceptance criteria for precision and accuracy should be site- and measurement-specific. Initially, laboratory data acceptance criteria for precision and accuracy will be based on control limits used by the analytical laboratory.

If deemed necessary, site-specific data acceptance criteria will be developed after sufficient data are collected to perform valid statistical calculations to determine project data-based acceptance criteria. The results of the precision and accuracy evaluation of the initial data will be used to assess the appropriateness of the initial data acceptance criteria. Corrective action to be taken if precision and accuracy data acceptance criteria are not met may include additional sampling and/or reanalysis.

Representativeness

Representativeness is the degree to which data accurately and precisely represent selected characteristics of the media sampled. Representativeness of data collection is addressed by careful preparation of sampling and analysis programs. This QAPP, together with the WORKPLAN, addresses representativeness by specifying the numbers and locations of samples; incorporating appropriate sampling methodologies; specifying proper sample collection techniques and decontamination procedures; selecting appropriate laboratory

methods to prepare and analyze soil gas, soil, and groundwater; and establishing proper field and laboratory QA/QC procedures.

Comparability

Comparability is an expression of confidence with which one data set can be compared to another. The objective of comparability is to verify that data developed during the investigation are comparable to site knowledge and adequately address applicable criteria or standards established by the U.S. EPA and California Department of Health Services (DHS). This QAPP addresses comparability by specifying laboratory methods that are consistent with the current standards of practice as approved by the U.S. EPA and DHS.

Special Training Requirements/Certification

All project staff working on the site must be health and safety trained and must follow requirements specified in the HSP for the project. The HSP describes the specialized training required for personnel on this project and the documentation and tracking of this training.

Documentation and Records

The most current QAPP will be included in the WORKPLAN. Updates and modifications will be incorporated in the QAPP as necessary. The Project QA/QC officer will be responsible for distributing the updates and modification to the analytical laboratory and Project Manager.

Data Reporting Format

Analytical records will include standard operating procedures for sample receipt, preparation, analysis and report generation as well as the actual data reports with all specified supporting information (e.g. run logs, case narratives). The amount of supporting information is determined by data validation needs and the need for the documents to stand alone. Analytical QA/QC issues that should be documented include standard traceability, frequency, and results of QC samples such as method and instrument blanks, spiked samples, replicates, calibration check standards and detection limit studies.

Data Management Plan

LFR maintains a document management policy that supports project activities by creating and retaining records that document project activities in an accurate and transparent manner that will allow for reviews and data usability assessments. These records will include the following as a minimum:

- LFR will maintain training and certification records, which include enough detail to verify the suitability and relevance of the training and certifications. Training files will contain enough detail to support a demonstration of competency of all personnel performing project-related activities.
- Sample collection records will include sampling procedures, the names of the persons conducting the activity, sample number, sample collection points, maps and diagrams, equipment/method used, climatic conditions, and unusual observations. Bound notebooks, pre-printed forms, or computerized notebooks can serve as the recording media.
- COC records document the progression of samples as they travel from the original sampling location to the laboratory and finally to their disposal or archival. These records should contain the project name, signatures of the sample collector, the lab custodian and other custodians. The records should document any sample anomalies.
- Quality control records will include documentation on field QA/QC issues such as field, trip, and equipment rinsate blanks, collocated and field-spiked samples, and sample preservation.

Office Documentation

Samples will be tracked and data archived at LFR's Costa Mesa office. LFR's QA/QC Officer will be responsible for ensuring that documentation is in order and that all results are obtained for the analyses requested on the COC and that sample identifications on the laboratory reports match those on the COCs. The project file will be used in data tracking and documentation, as discussed below.

The project file is the common location for all information required in data evaluation and report preparation. It contains documents including work plans, sampling plans, assessment reports, correspondence, field activities logbooks, COCs, and sampling information forms. The file is organized for easy retrieval and long-term storage of information (two years or more). The LFR project manager will direct the maintenance of the project file.

Laboratory Custody

The fixed laboratory will designate a sample custodian who will accept custody of the shipped samples and check that the information on the sample labels matches that on the COC. The custodian will then enter the appropriate data into the laboratory's sample tracking system. The custodian will use the sample number on the sample label or will assign a unique laboratory number to each sample. As a record of sample receipt, the analytical laboratory will return a copy of the COC, with the assigned laboratory numbers, to the sampler. The custodian will then transfer the sample(s) to the proper analyst(s) or store the sample(s) under refrigeration until they are analyzed.

The samples designated for field analyses will be handed directly to the on-site chemist immediately after collection. The on-site chemist will document receipt of the sample and prior to analysis. The on-site chemist will maintain analytical records including data and time of analysis, sampler's name, chemist's name, sample identification number, sample depth, concentrations of compounds detected, calibration data, and any unusual conditions.

Both fixed and mobile laboratory personnel are responsible for the care and custody of samples from the time they are received until the sample is exhausted or disposed. Disposal of unused samples must comply with all applicable federal, state, and local environmental regulations. Data sheets and laboratory records will be retained as permanent documentation.

Quality Control

This section presents QC requirements relevant to the analysis of environmental samples that will be followed during all project analytical activities. The purpose of the QC program is to produce data of known quality that satisfy the project objectives and that meet or exceed the requirements of the standard methods of analysis. This program provides a mechanism for ongoing control and evaluation of data quality measurements through the use of QC materials.

The chemical data to be collected for this effort will be used to assess the potential extent of affected media, to assess possible remedial action(s) that may be necessary, or to assist in determining the need for other actions to be conducted at the Site. As such, it is critical that the chemical data be of the highest confidence and quality. Consequently, the following strict QA/QC procedures will be adhered to:

- strict protocols for field sampling and decontamination procedures
- collection and laboratory analysis of appropriate field equipment blanks to monitor for contamination of samples in the field or the laboratory
- collection and laboratory analysis of matrix spike, matrix spike duplicate, and blind split samples to evaluate analytical precision and accuracy
- attainment of completeness goals

Standards

Current laboratory standards will be used to calibrate laboratory equipment or to prepare samples and will be certified by National Institute of Standards and Technology, U.S. EPA, or other equivalent source. The expiration date will be established by the manufacturer, or based on chemical stability, the possibility of contamination, and environmental and storage conditions. Standards will be labeled with expiration dates, and will reference primary standard sources if applicable. The laboratory will discard expired standards.

Holding Time Compliance

Sample preparation and analysis will be completed within the required method holding time (Table 1). Holding time begins at the time of sample collection. If holding times are exceeded and the analyses are performed, the associated results will be qualified as described in the applicable validation procedure. The following definitions of extraction and analysis compliance are used to assess holding times:

- preparation or extraction completion: completion of the sample preparation process as described in the applicable method, before any necessary extract cleanup
- analysis completion: completion of all analytical runs, including dilutions, second-column confirmations, and any required re-analyses

Preventive Maintenance

The LFR Field Manager is responsible for documenting the maintenance of all field equipment prescribed by the manufacturer's specifications. Scheduled maintenance will be performed by trained personnel. The analytical laboratory is responsible for all analytical equipment calibration and maintenance as described in its laboratory QA plan. Subcontractors are responsible for maintenance of all equipment needed to implement subcontracted duties.

Organic Vapor Meter

Field measurements may be collected using portable organic vapor meters that feature hydrocarbon detection by photoionization (e.g., Mini-RAE 2000 PID) or flame ionization (e.g., Thermo TVA1000B FID). The PID and FID is used to measure organic gases and vapors in soil gas as well as in ambient air.

In addition, O_2, CO_2, CH_4, and H_2S will be collected in Tedlar bags for on site monitoring using a Landtec GEM 2000 Plus portable gas analyzer or similar gas analyzer.

With the PID or FID and gas analyzer, manufacturer-supplied calibration standard span gas will be used for calibration. Calibration of the PID or FID and gas analyzer will be performed before each day's sampling activities begin and as needed throughout the day if irregularities in the readings become apparent.

LFR will maintain a logbook containing calibration data for each PID and gas analyzer, including time and date of the previous calibration, who performed the calibration, and how it was performed.

Supplies and Consumables

Supplies will be checked before they are used in the field or laboratory. The descriptions for sample collection and analysis are presented in the activity specific sampling plans and will be used as a guideline for establishing the acceptance criteria for supplies. A current inventory and appropriate storage system for these materials will verify their integrity before use. Efficiency and purity of supplies will be monitored through the use of standards and blank samples.

PERFORMANCE AND SYSTEM AUDITS

Audit programs are established and directed by the LFR QA staff to verify that field and laboratory activities are performed in compliance with project controlling documents. This section describes responsibilities, requirements, and methods for scheduling, conducting, and documenting audits of field and laboratory activities.

Field Audits

Field audits focus on appropriateness of personnel assignments and expertise, availability of field equipment, adherence to project controlling documents for sample collection and identification, sample handling and transport, use of QA samples, COC procedures, equipment decontamination, and documentation. Field audits are not required, but may be performed in the event that significant discrepancies are identified that warrant evaluation of field practices.

Laboratory Audits

Laboratory audits include reviews of sample handling procedures, internal sample tracking, standard operating procedures, analytical data documentation, QA/QC protocols, and data reporting. Any selected mobile or off-site (stationary) laboratory will be licensed by the State of California as a certified testing laboratory, and will participate in the Water Pollution and Water Supply Performance Program for hazardous waste, wastewater, and drinking water analyses.

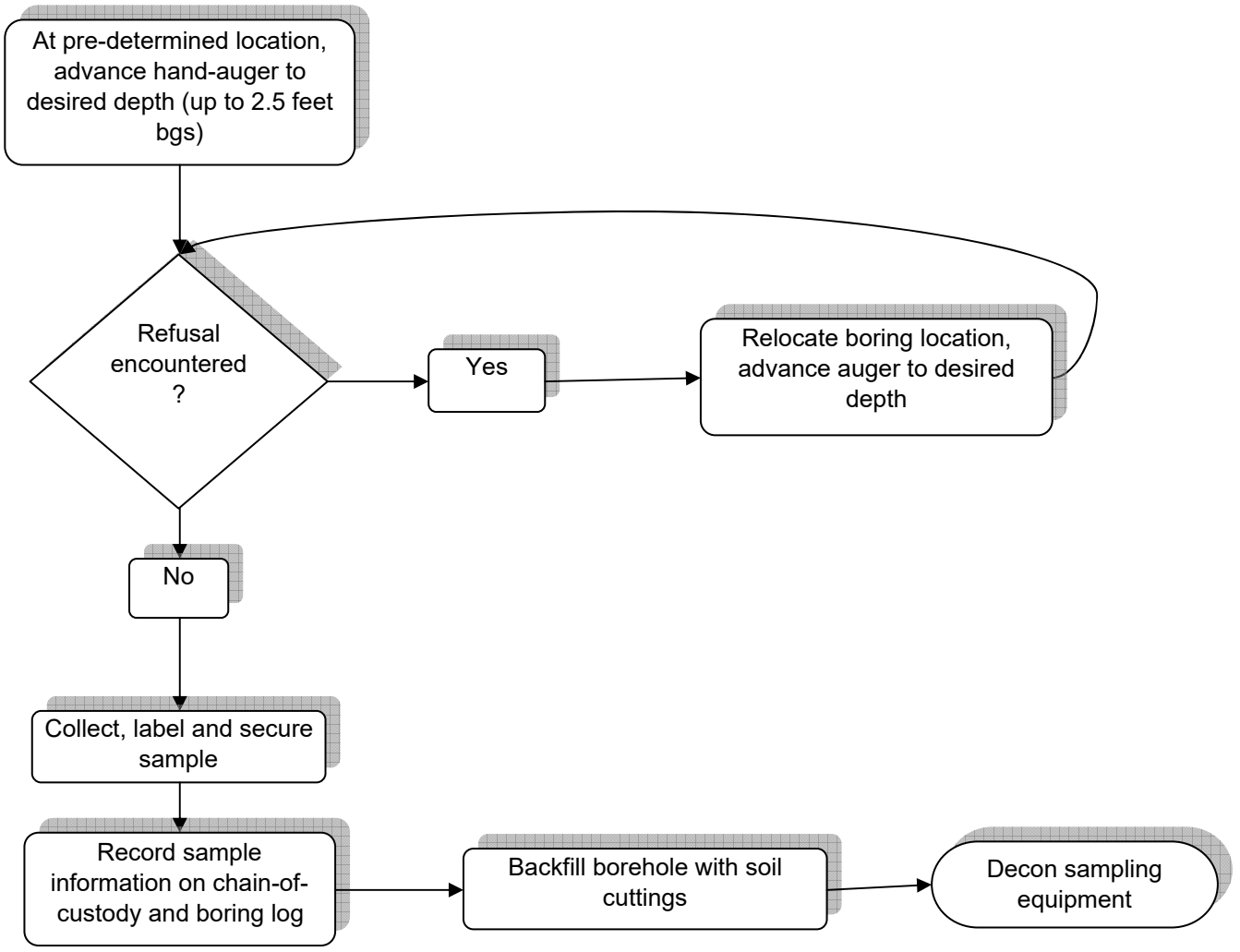
QAPP MODIFICATIONS

Changes to procedures described in this QAPP will be reported as an addendum this QAPP. The addendum will be distributed to project and laboratory personnel as appropriate.

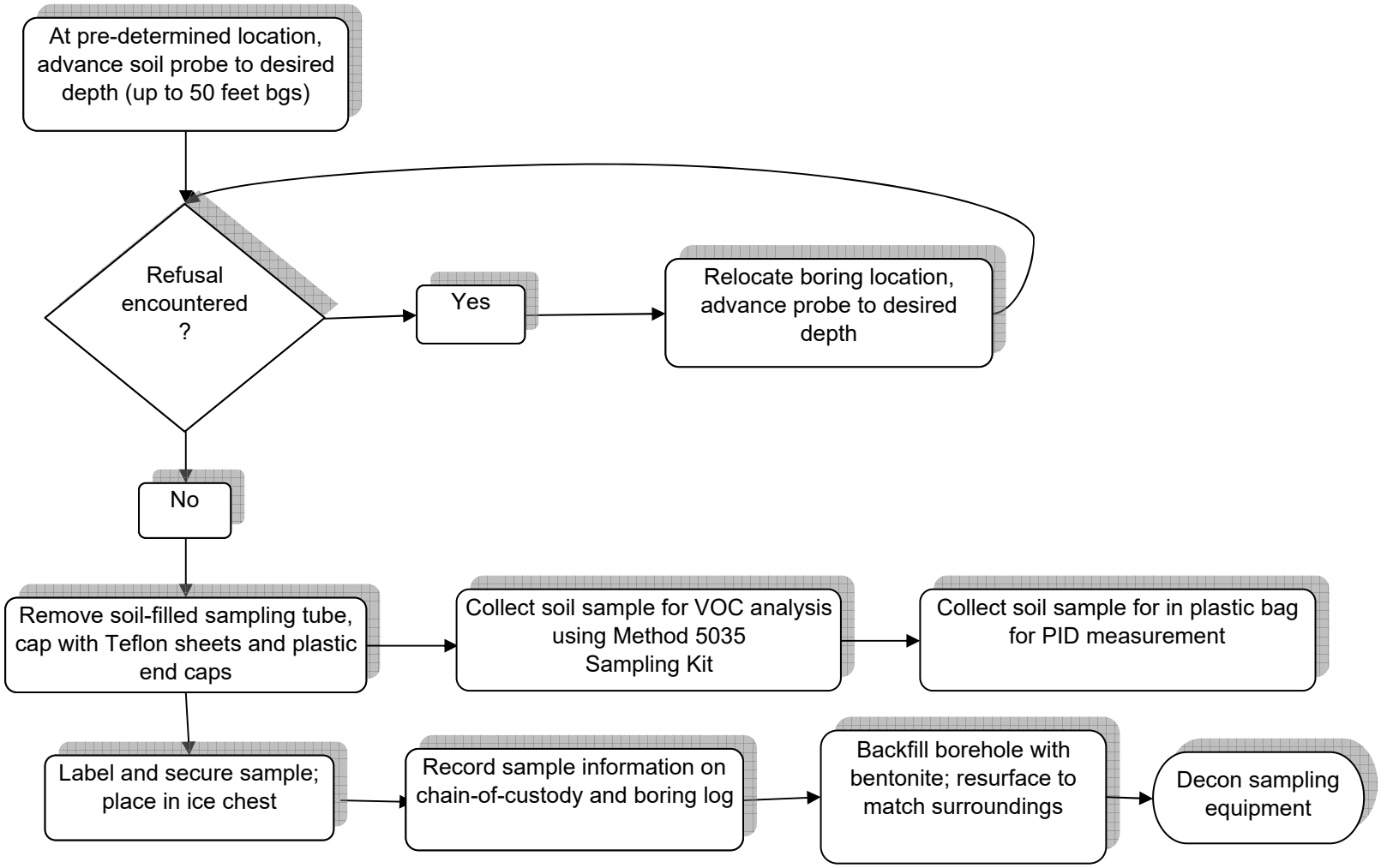
FIELD SAMPLING

FLOW DIAGRAM DECISION TREE

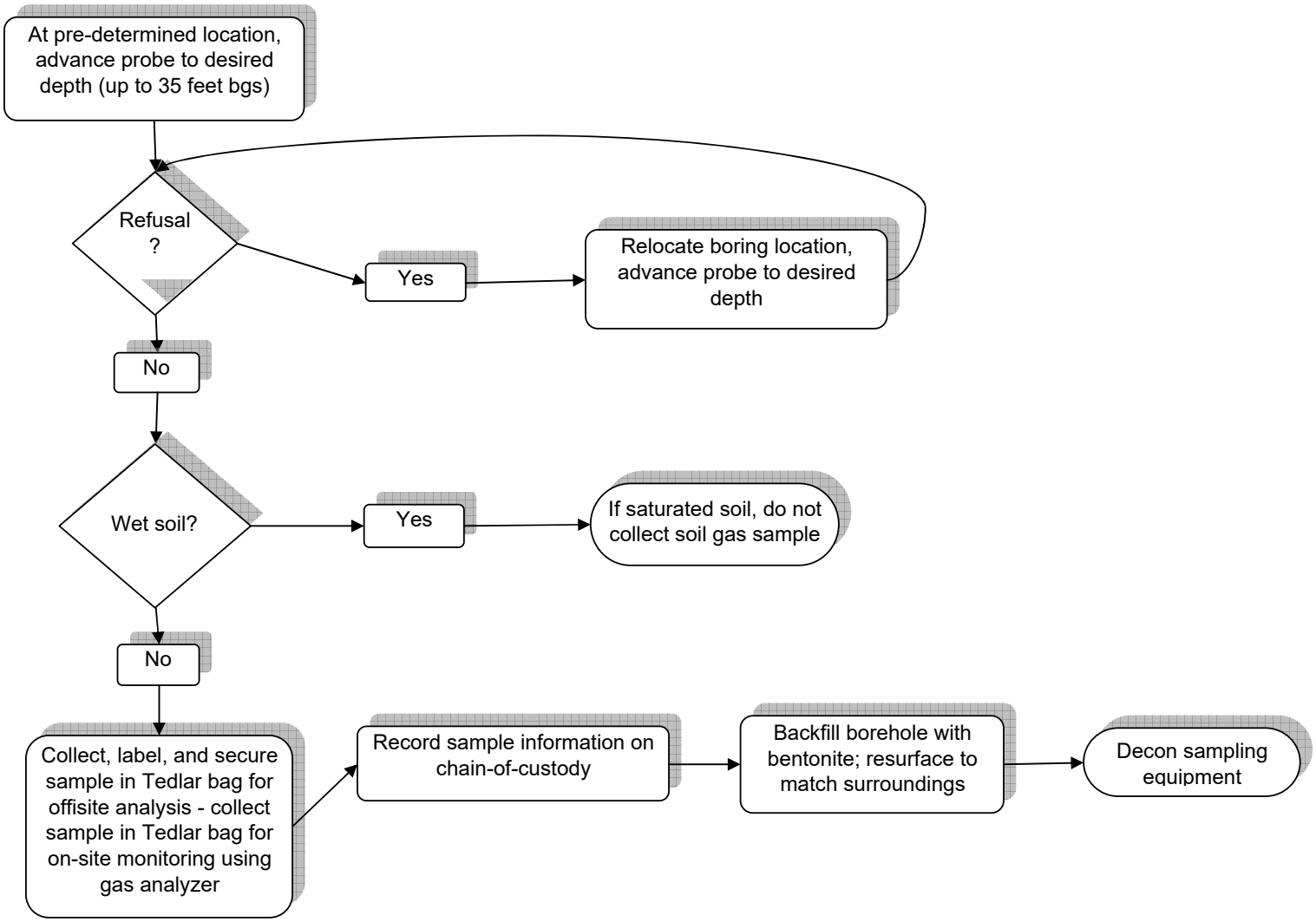
Off-Site Soil Sampling



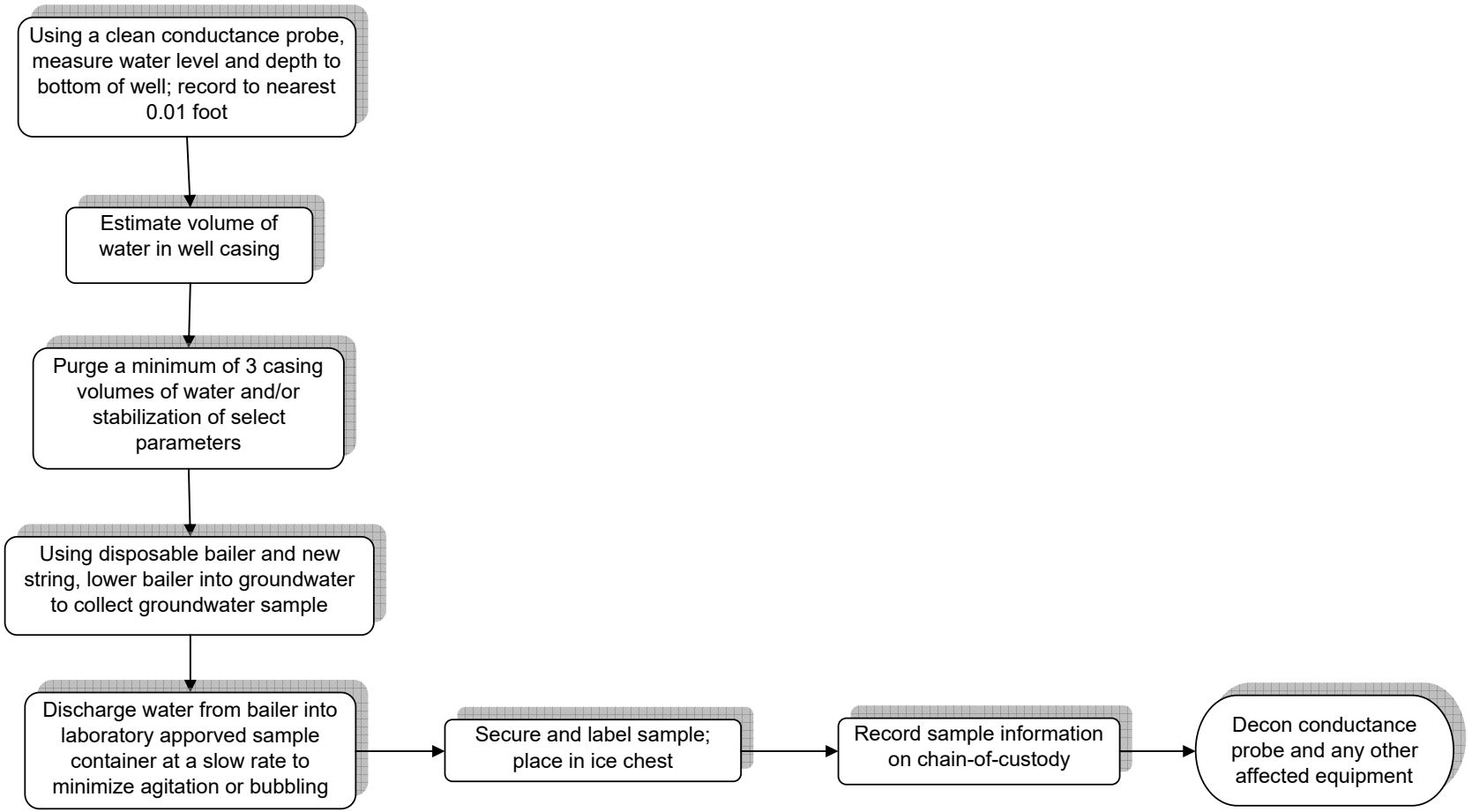
On-Site Soil Sampling



Soil Gas Sampling



Groundwater Sampling



Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

September 6, 2007

Charles E. Robinson, P.E.
LFR for CRG Properties, Ltd.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324

FINAL REMEDIAL INVESTIGATION (RI) WORKPLAN FOR FORMER OIL OPERATORS NORTH SITE, 3701 PACIFIC PLACE, LONG BEACH

Dear Mr. Robinson:

The Department of Toxic Substances Control (DTSC) has reviewed the subject document for the Former Oil Operators Site in the City of Long Beach, California. DTSC approves the Final RI Workplan dated August 29, 2007.

Additional investigations may be required to collect a sufficient number of samples that are statistically valid for soil and groundwater, in order to assure that all the potential "hot spot" areas are fully investigated.

Please notify us at least 72 hours prior to the field work, such that we can arrange for DTSC staff to be present to witness the sampling events. Please submit a schedule of work along with your notice. If you have any questions, please contact me at (714) 484-5461, or the project manager Ms. Loni Adams at (714) 484-5324.

Sincerely,

Greg Holmes, Unit Chief
Southern California Cleanup Operations Branch – Cypress

Printed on Recycled Paper

APPENDIX J

Summary of Background Metals Concentrations

TABLE 4
SUMMARY OF BACKGROUND METALS CONCENTRATIONS
Long Beach, California

LBUSD Site:		Dooley's Hardware Mart			
Sample ID:		BG-01	BG-02	BG-03	BG-04
Sample Date:		11/21/2001	11/21/2001	11/21/2001	11/21/2001
Sample Depth (ft.):		1.5-2.0	1.5-2.0	1.5-2.0	1.5-2.0
ANALYTE	Units	CONC	CONC	CONC	CONC
Antimony	mg/kg	< 2.0	< 2.0	< 2.0	< 2.0
Arsenic	mg/kg	6.8	5.5	11	5.3
Barium	mg/kg	160	140	160	170
Beryllium	mg/kg	< 0.50	0.59	0.58	0.51
Cadmium	mg/kg	0.66	0.68	0.59	0.63
Chromium (Total)	mg/kg	25	23	25	27
Cobalt	mg/kg	14	13	14	14
Copper	mg/kg	32	38	42	32
Lead	mg/kg	5.6	11	6.1	5.9
Mercury	mg/kg	< 0.10	0.10	0.16	< 0.10
Molybdenum	mg/kg	<1.0	<1.0	<1.0	<1.0
Nickel	mg/kg	21	18	19	20
Selenium	mg/kg	< 5.0	< 5.0	< 5.0	< 5.0
Silver	mg/kg	< 2.0	< 2.0	< 2.0	< 2.0
Thallium	mg/kg	< 5.0	< 5.0	< 5.0	< 5.0
Vanadium	mg/kg	47	45	47	44
Zinc	mg/kg	72	84	66	79

John A. Sutter Elementary
5075 Daisey Ave. Long Beach

mg/kg = milligrams per kilogram
ft. = feet
J = Estimated concentration (concentration is below laboratory detection limits)

APPENDIX K

Boring Logs – Additional Remedial Investigation

PROJECT NAME Former Oil Operators North Site
CLIENT CRG

WELL NUMBER MW-7

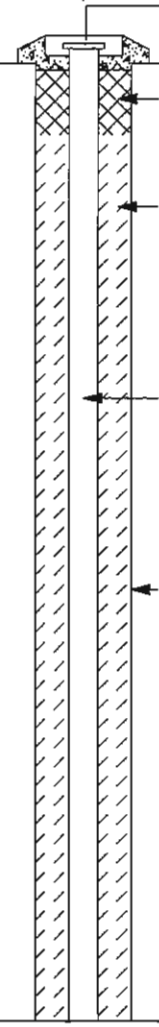
PROJECT LOCATION Long Beach Golf Learning Center
PROJECT NUMBER 002-10231-13
LOCATION 3701 Pacific Place
OVA EQUIPMENT Mini Rae 2000
GROUND ELEVATION ~51 AMSL HOLE DIAMETER 5 inches
TOP OF CASING ELEVATION 51.90 ft HOLE DEPTH 61 ft
▽ FIRST ENCOUNTERED WATER 50 ft below ground surface
▼ STABILIZED WATER 49 ft below ground surface.
LOGGED BY Dana Brodie DATE 10/26/07

DRILLING CONTRACTOR Gregg Drilling
DRILLING METHOD Hollow Stem Auger
STAMP (IF APPLICABLE) AND/OR NOTES

PROFESSIONAL GEOLOGIST
ANTHONY MARINO
No. 8304
Exp. 7/31/09
STATE OF CALIFORNIA

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)
1–5				GM		7.8	SILTY SANDY GRAVEL (GM), brown(10YR-5/3), damp, medium dense, fine to coarse grained, well graded, subrounded to subangular.		
6–10	MW-7-5		12 14						0.4
7–10				ML		12.8	CLAYEY SILT(ML), yellow brown(10YR-6/8), moist, medium dense, trace fine grained sand, low plasticity.		
10–11	MW-7-10		11 13						0.5
13–15				SM		17.8	SILTY SAND(SM), greenish gray(5G-6/1), moist, loose, fine to coarse grained sand, trace clay, moderately graded, stains, slight hydrocarbon odor.		
15–16	MW-7-15		7 10						0.5
18–20				ML			SANDY SILT (ML), light brown(40YR-8/3), moist, fine grained sand, low to no plasticity.		

WELL DIAGRAM



DEPTH (feet)

(Continued Next Page)

COMMENTS

APPROVED BY: [signature] DATE: 2/18/08

LFR

PROJECT NAME Former Oil Operators North Site
CLIENT CRG

WELL NUMBER MW-7

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
21	MW-7-20		8 12				SANDY SILT (ML), light brown(40YR-8/3), moist, fine grained sand, low to no plasticity. *(continued)*		0.5		21
22										Bentonite grout	22
23											23
24											24
25											25
26	MW-7-25		5 11				CLAYEY SILT(ML), mostly reddish brown and brown(10R-3/6) some greenish gray (5G-6/1) mottled, moist, stiff, trace fine grained sand,low to non plastic.		0.5	2-in. dia. SCH40 PVC Blank Casing	26
27				ML							27
28											28
29											29
30											30
31	MW-7-30		4 9				- as above, gray (N5), low plasticity.		1.4	5-in. dia. Borehole	31
32											32
33						32.8					33
34							SILTY SAND(SM), greenish gray (5G-6/1), moist, loose, fine to coarse grained sand, moderately graded.				34
35											35
36	MW-7-35		4 5	SM					27		36
37											37
38						37.8					38
39							SANDY SILT(ML), greenish gray(SG-6/1), moist, poorly graded, little to no plasticity.				39
40											40
41	MW-7-40		5 6				CLAYEY SILT(ML), greenish gray (5G-6/1), moist, stiff, trace fine grained sand, low plasticity.		1.8	Bentonite chips	41
42				ML							42
43										#2/12 Sand	43
44											44
45						45.0					45
46	MW-7-45		5 8				SAND(SW), light brown(10YR-8/3), moist, loose, fine to coarse grained sand, well graded, subrounded to rounded.		2.4	2-in. dia. SCH40 PVC Well Screen (0.02")	46
47				SW							47
48						48.5					48
49							SILTY SAND(SM), greenish green(5G-6/1), wet, poorly graded, fine grained sand.				49
50				SM							50

(Continued Next Page)

COMMENTS

APPROVED BY: _____ DATE: 2/18/08

LFR

BORING+WELL 2006 002-10231-13.GPJ LFR SEPT 2006.GDT 12/6/07

PROJECT NAME Former Oil Operators North Site

CLIENT CRG

WELL NUMBER MW-7

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
51	MW-7-50		4 7				SILTY SAND(SM), greenish green(5G-6/1), wet, poorly graded, fine grained sand. *(continued)*		1.3	5-in. dia. Borehole	51
52											52
53											53
54											54
55										#2/12 Sand	55
56	MW-7-55		5 8	SM			SILTY SAND(SM), grayish green (5G-6/1), wet, loose, moderately graded,fine to coarse grained sand.		3.0		56
57											57
58											58
59											59
60										Slip Cap	60
61	MW-7-60		4 6			61.0	SILTY SAND(SM), greenish gray (5G-6/1), wet, loose, well graded, fine to coarse grained sand.		1.7		61
							Bottom of boring at 61 feet bgs.				

COMMENTS

APPROVED BY: Sue Lucas DATE: 2/18/08

LFR

BORING+WELL 2006 002-10231-13 GPJ LFR SEPT 2006 GDT 12/6/07

PROJECT NAME Former Oil Operators North Site
CLIENT CRG

BORING NUMBER B6A

PROJECT LOCATION Long Beach Golf Learning Center
PROJECT NUMBER 002-10231-13
LOCATION 3701 Pacific Place
OVA EQUIPMENT Landtec GEN 200 Plus
GROUND ELEVATION ~40 AMSL HOLE DIAMETER 2 inches
TOP OF CASING ELEVATION -- HOLE DEPTH 25 ft
FIRST ENCOUNTERED WATER ---
STABILIZED WATER ---
LOGGED BY Dana Brodie DATE 11/13/07

DRILLING CONTRACTOR EST Inc.
DRILLING METHOD Direct Push
STAMP (IF APPLICABLE) AND/OR NOTES

PROFESSIONAL GEOLOGIST
ANTHONY MARINO
No. 8304
Exp. 7/31/09
STATE OF CALIFORNIA

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	DEPTH (feet)
1–5						Soil not logged- straight drilled to 14 feet.		1–5
6–10								6–10
11–14					14 0			11–14
15	B6A-15		ML			Silt (ML), black(N1), damp, fine sand(30%), oily with hydrocarbon odor.		15
16–19								16–19
20	B6A-20					- as above.		20

(Continued Next Page)

COMMENTS

APPROVED BY: [signature] DATE: 2/18/08

LFR

BORING+WELL 2006 002-10231-13.GPJ LFR SEPT 2006.GDT 12/6/07

PROJECT NAME Former Oil Operators North Site
CLIENT CRG

BORING NUMBER B6A

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	DEPTH (feet)
21								21
22								22
23			ML					23
24								24
25	B6A-25				25.0	- as above		25
						Bottom of boring at 25 feet bgs. Backfilled with hydrated bentonite chips. No ground water encountered during drilling.		

COMMENTS

APPROVED BY: _____ DATE: 2/18/08

LFR

BORING+WELL 2006 002-10231-13.GPJ LFR SEPT 2006.GDT 12/6/07

Site

PROJECT NAME Former Oil Operators North Side
CLIENT CRG

BORING NUMBER B6A

PROJECT LOCATION Long Beach Golf Learning Center
PROJECT NUMBER 002-10231-02 3
LOCATION 3701 Pacific Place
OVA EQUIPMENT Landtec GEM GCM 2000 Plus
GROUND ELEVATION ~40 50 ft AMSL HOLE DIAMETER 2 inches
TOP OF CASING ELEVATION -- HOLE DEPTH 25.0 ft
FIRST ENCOUNTERED WATER ---
STABILIZED WATER ---
LOGGED BY Dana Brodie DATE 11/13/07

DRILLING CONTRACTOR EST Inc.
DRILLING METHOD Direct Push
STAMP (IF APPLICABLE) AND/OR NOTES

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	DEPTH (feet)
1–14						Soil not logged- straight drilled to 14 feet.		1–14
14					14.0		36.0	14
15	B6A-15		ML			Silt (ML), black(N1), damp, fine sand(30%), oily with hydrocarbon odor.		15
16–19			ML					16–19
20	B6A-20		ML			- as above.		20

(Continued Next Page)

COMMENTS

APPROVED BY: [signature] DATE: 2/18/08

LFR

BORING+WELL 2006 002-10231-02.GPJ LFR SEPT 2006.GDT 11/27/07

PROJECT NAME Former Oil Operators North Side
CLIENT CRG

BORING NUMBER B6A

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	DEPTH (feet)
21								21
22								22
23			ML					23
24								24
25	B6A-25	X			25.0	- as above	25.0	25
						Bottom of boring at 25 feet bgs. Backfilled with hydrated bentonite chips. No ground water encountered during drilling.		

COMMENTS

APPROVED BY: [signature] DATE: 2/18/08

LFR

BORING+WELL 2006 002-10231-02 GPJ LFR SEPT 2006 GDT 11/27/07

PROJECT NAME Former Oil Operators North Site
CLIENT CRG

BORING NUMBER B7A

PROJECT LOCATION Long Beach Golf Learning Center
PROJECT NUMBER 002-10231-13
LOCATION 3701 Pacific Place
OVA EQUIPMENT Landtec GEN 200 Plus
GROUND ELEVATION ~44 AMSL HOLE DIAMETER 2 inches
TOP OF CASING ELEVATION -- HOLE DEPTH 50 ft
FIRST ENCOUNTERED WATER ---
STABILIZED WATER ---
LOGGED BY Dana Brodie DATE 11/13/07

DRILLING CONTRACTOR EST Inc.
DRILLING METHOD Direct Push
STAMP (IF APPLICABLE) AND/OR NOTES

PROFESSIONAL GEOLOGIST
ANTHONY MARINO
No. 8304
Exp. 7/31/09
STATE OF CALIFORNIA

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	DEPTH (feet)
1						SANDY SILT(ML), light brown(10YR-8/3), damp, fine grained sand.		1
2								2
3								3
4								4
5	B7A-5							5
6								6
7								7
8								8
9								9
10	B7A-10		ML			CLAYEY SILT(ML), dark brown (10YR-3/3), damp, oil stains and odor.		10
11								11
12								12
13								13
14								14
15								15
16								16
17								17
18								18
19								19
20	B7A-20					- as above, black (N1), oily.		20

(Continued Next Page)

COMMENTS

APPROVED BY: [signature] DATE: 2/18/08

LFR

BORING+WELL 2005 002-10231-13.GPJ LFR SEPT 2006.GDT 12/6/07

PROJECT NAME Former Oil Operators North Site
CLIENT CRG

BORING NUMBER B7A

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	DEPTH (feet)
21						SANDY SILT(ML), light brown(10YR-8/3), damp, fine grained sand. *(continued)*		21
22								22
23								23
24								24
25								25
26								26
27								27
28								28
29								29
30	B7A-30					- as above.		30
31								31
32								32
33								33
34								34
35			ML					35
36								36
37								37
38								38
39								39
40	B7A-40					- as above, highly plastic.		40
41								41
42								42
43								43
44								44
45								45
46								46
47								47
48								48
49								49
50	B7A-50				50.0	SANDY SILT (ML), dark brown(10YR-3/3) with mottled black stains, damp, oil stains and odor.		50

(Continued Next Page)

COMMENTS

APPROVED BY: _____ DATE: 2/18/08

LFR

BORING+WELL 2006 002-10231-13.GPJ LFR SEPT 2006.GDT 12/6/07

PROJECT NAME Former Oil Operators North Site

CLIENT CRG

BORING NUMBER B7A

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	DEPTH (feet)
						Bottom of boring at 50 feet bgs. Backfilled with hydrated bentonite chips. No ground water encountered during drilling.		

COMMENTS

APPROVED BY: [signature] DATE: 2/18/08

LFR

BORING+WELL 2006 002-10231-13.GPJ LFR SEPT 2006.GDT 12/6/07

APPENDIX L

Well Permit, Field Reports, Non-Hazardous Waste Manifest, and Survey Data

CITY OF LONG BEACH

DEPARTMENT OF HEALTH & HUMAN SERVICES

2525 Grand Avenue Long Beach, CA 90815-1765 (562) 570-4134 FAX (562) 570-4038

WELL PERMIT

Permit # 1399

Date: October 5, 2007

All work must be completed in accordance with Water Well Bulletin 74-81 and 74-90

Site Address:	3701 Pacific Place, Long Beach, CA
Owner:	CRG Properties, Ltd.
Owner Address:	4010 W Chandler Ave., Santa Ana, CA
Consulting Firm:	LFR, Inc.
Consulting Firm Address:	3150 Bristol St., Suite 250, Costa Mesa, CA 92626 714-444-0111
Drilling Company:	Gregg Drilling & Testing
Drilling Company Address:	2726 Walnut Ave., Signal Hill, CA 90755
Method of Construction/Destruction:	see attached
Number of Wells/Borings:	Monitoring

This permit valid for one year from date above

Steven M. Nakauchi

Steven Nakauchi, REHS IV
Cross-Connection/Water Program

Daily Field Report

LFR

Project Number: 002-10231-03

Page 1 of 1

Project Name: CRG Long Beach

Date: 10/26/07

Project Location: 3701 Pacific Place, L.B. CA

Day: M T W Th (F) S S

Site Conditions/Weather: blue sky, breeze, hazy

LFR Staff: DPB/DCB

Job Description: well installation

Contractors: Gregg drilling

Equipment: HSA

Field Work:

0700 Health and Safety Meeting
Start drilling
0800-0920 Sample, log lithology
0930 Start installing well
1030 Pulled up 5' of PVC with drill
1050 Begin redrilling/reboring

1320 Drillers Stopped for lunch
1405 Resume work

continue on second sheet as needed

Reviewed by: D. Marino Signed: Date: 10/29/07

CRG - Well Development MW-7 11/6/07

0730 Conducted H&S meeting
Crew - 30 min late - rig problems

MW-7 DTW 49.02
TD 58.00

0920 Bailed, surged, bailed (~45 gallons)
~~After bailing~~
DTW 51.00
TD 60.74

5 soil drums
1 water drum

Diversified Well Supply

Daily Field Report

LFR

Project Number: 002-10231-03 Page 1 of 1

Project Name: CRG Date: 12-3-07

Project Location: Long Beach, CA Day: (M) T W Th F S S

Site Conditions/Weather: Sunny, ~65°F LFR Staff: DCB/JJD

Job Description: groundwater sampling

Contractors:

Equipment:

Field Work:

0530 Leave office
0600 Arrive at Site, meet AIS and unload drums, prep
0700 Start sampling, sampled MW-3, MW-5, MW-6, MW-7 and a duplicate of MW-7 (labeled DUP-1) each had 6-VOAs, 1-1L amber, and 1-plastic for 6010
1050 DTSC visit
1110 finish sampling, clean up
1130 Left Site, got ice,
1215 return U-10, drop off samples at lab
1250 arrive at office

DRUMS AT SITE:
* 5 soil
* 1 empty
* 3 water

continue on second sheet as needed

Reviewed by: A. Marino Signed: [signature] Date: 12/4/07

Water-Quality Sampling Information

LFR LEVINE-FRICKE

Project Number: 002-10231-03 Page 1 of 1

Project Name: CRG Date: 12/3/07

Project Location: Long Beach Day: (M) T W Th F S S

Site Conditions/Weather: clear skies, ~50°F LFR Staff: DCB/JJD

Comments :

SAMPLING METHOD

- [ ] Centrifugal Pump
- [x] Submersible Pump
- [ ] Hand Bail
- [x] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW-3

- [ ] FB:
- [ ] DUP:

Analysis Requested: See COC

Number and Types of Bottle Used: 6-VOAs, 1-1L Amber, 1-plastic for Nitrate

Method of shipment: Sunstar (lab name)

- [ ] Courier
- [x] Hand Deliver

Well Number: MW-3
Depth of Water: 48.93
Well Depth: 85.45
Height of Water Column: 36.52
Volume in Well: (gallons) 23.74
3 Well Volumes: (gallons) 71.2

Well Diameter: 4"

- [ ] 2" (0.16 gallon / feet)
- [x] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 56.23

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °C	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0710		0	/	20.5	6.18	13.1	/	static
0713		23		21.8	6.52	5.40		
0718		46		21.9	6.38	9.52		
0723		71		22.1	6.35	15.8		
0745		Sample Time						

Inlet Depth:

Reviewed by: A. MARINO Signed: [signature] Date: 12/4/07

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-03 Page 1 of 1

Project Name: CRA Date: 12/3/07

Project Location: Long Beach Day: (M) T W Th F S S

Site Conditions/Weather: Sunny, ~52°F LFR Staff: DCB/JJO

Comments :

SAMPLING METHOD

- [ ] Centrifugal Pump
- [x] Submersible Pump
- [x] Hand Bail
- [x] Disposable Bailer
- [ ] Teflon Bailer
- [ ] _____ (other)

Sample Number: MW-5

- [ ] FB:
- [ ] DUP:

Analysis Requested

See COC

Number and Types of Bottle Used

6 - VOAs
1 - 1L Amber
1 - plastic bottle 6010

Method of shipment

SunStar (lab name)

- [ ] Courier
- [x] Hand Deliver

Well Number: MW-5
Depth of Water: 32.60
Well Depth: 55.50
Height of Water Column: 22.90
Volume in Well: (gallons) 3.5
3 Well Volumes: (gallons) 10.5

Well Diameter: 2"

- [x] 2" (0.16 gallon / feet)
- [ ] 4" (0.65 gallon/ feet)
- [ ] 5" (1.02 gallon/ feet)
- [ ] 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 37.18

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °C	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0815		0		19.7	7.33	2.04		static
0822		3.5		20.4	7.08	2.00		
0830		7.0		20.5	7.10	1.97		
0840		10.5		20.6	7.13	1.97		
0850		Sample Time						

Inlet Depth:

Reviewed by: A. Marino Signed: [signature] Date: 12/4/07

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-03

Page 1 of 1

Project Name: CRC

Date: 12/3/07

Project Location: Long Beach

Day: (M) T W Th F S S

Site Conditions/Weather: Sunny, ~58°F, breezy

LFR Staff: DUB/JJO

Comments :

SAMPLING METHOD

- ☐ Centrifugal Pump
- ☐ Submersible Pump
- ☒ Hand Bail
- ☒ Disposable Bailer
- ☐ Teflon Bailer
- ☐ _____ (other)

Sample Number: MW-6

- ☐ FB: _____
- ☐ DUP: _____

Analysis Requested: See COC

Number and Types of Bottle Used: 6-VOAs, 1-1L Amber, 1-plastic bottle (6010)

Method of shipment: Sunstar (lab name)

- ☐ Courier
- ☒ Hand Deliver

Well Number: MW-6

Depth of Water: 29.56

Well Depth: 54.80

Height of Water Column: 25.24

Volume in Well: (gallons) 4

3 Well Volumes: (gallons) 12

Well Diameter: 2"

- ☒ 2" (0.16 gallon / feet)
- ☐ 4" (0.65 gallon/ feet)
- ☐ 5" (1.02 gallon/ feet)
- ☐ 6" (1.47 gallon/ feet)

Calculation Area
Height of water column = Depth to water =
Height x .2 + Depth
80% DTW 34.6

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °C	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
0928		0	/	21.0	6.90	3.66	/	static
0935		4		20.9	6.85	4.13		
0942		8		20.8	6.83	4.18		
0948		12		20.7	6.84	4.13		
0955		Sample Time						

Inlet Depth: _____

Reviewed by: [signature] Signed: [signature] Date: 12/4/07

Water-Quality Sampling Information

LFR LEVINE • FRICKE

Project Number: 002-10231-03 Page 1 of 1

Project Name: CRG Date: 12/3/07

Project Location: Long Beach Day: (M) T W Th F S S

Site Conditions/Weather: Sunny, breezy, ~60°F LFR Staff: DCB/JJO

Comments :

SAMPLING METHOD

- ☐ Centrifugal Pump
- ☐ Submersible Pump
- ☒ Hand Bail
- ☒ Disposable Bailer
- ☐ Teflon Bailer
- ☐ _____ (other)

Sample Number: MW-7

- ☐ FB: _____
- ☒ DUP: DUP-1

Analysis Requested

See COC

Number and Types of Bottle Used

6 - VOAs
1 - 1L amber
1 - plastic bottle

Method of shipment

Sunstar (lab name)

- ☐ Courier
- ☒ Hand Deliver

Well Number: MW-7
Depth of Water: 49.32
Well Depth: 100.55
Height of Water Column: 11.23
Volume in Well: (gallons) 1.79 ~2
3 Well Volumes: (gallons) 6

Well Diameter: 2"

- ☒ 2" (0.16 gallon / feet)
- ☐ 4" (0.65 gallon/ feet)
- ☐ 5" (1.02 gallon/ feet)
- ☐ 6" (1.47 gallon/ feet)

Calculation Area
Height of water column =
Depth to water =
80% DTW 51.56

Time	Depth to Water	Volume Purged (gallons)	Totalizer Reading	Temperature °C	pH	Cond. ms/ cm	Turbidity (NTU)	Remarks
1030		0	/	21.0	6.78	18.6	/	Static
1032		2		21.0	6.71	20.2		
1035		4		21.2	6.73	20.7		
1037		6		21.4	6.74	21.0		
1050		Sample Time						

Inlet Depth: _____

Reviewed by: A. Marino Signed: [signature] Date: 12/4/07

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
NOT REQUIRED		888-423-6060	008176

GENERATOR

5. Generator's Name and Mailing Address
CRG Properties
4010 W. Chandler Ave.
Santa Ana, CA 92704 USA
Generator's Phone: 714-540-5351

Generator's Site Address (if different than mailing address)
3701 Pacific Place
Long Beach, CA USA

6. Transporter 1 Company Name
American Integrated Services Inc

U.S. EPA ID Number
CAR000148338

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Crosby & Overton
1630 W 16th Street
Long Beach, CA 90813 USA
Facility's Phone: 562-432-5445

U.S. EPA ID Number
CAD028409818

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazerd Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Totel Quantity	12. Unit Wt./Vol.	
	1. Non-Hazardous Waste Liquid	13	DM TT	165	G	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
Wear appropriate PPE when handling materials. Weights or volumes are approximate.

Job #26001-21 Profile #27578

INT'L

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: John O Malley
Signature:
Month: 1 Day: 8 Year: 08

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Roberto Valencia
Signature:
Month: 01 Day: 08 Year: 08

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

H-135

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Maureen Smith
Signature:
Month: 1 Day: 10 Year: 08

169-BLC-O 6 10498

TRANSPORTER #1

TPST Soil Recyclers of CA

Non-Hazardous Soils

Date of Shipment	Responsible for Transport	Designated Truck #	Facility #	Load #
	Transporter		407	20542 001

Generator/Arranger Consultant

Generator's Name and Billing Address CHG Properties 4010 W. Chandler Ave. Santa Ana, CA 92704	Generator's Phone # (714) 540-5361	Generator's US EPA ID No.
	Person to Contact	
	Email	Customer Account Number with TPST
Consultant's Name and Billing Address	Consultant's Phone #	
	Person to Contact	
	Email	Customer Account Number with TPST
Generator Site (Transport from) Name & Address Golf Learning Center 3701 Pacific Place Long Beach, CA	Site Phone #	RTDF Levels
	Person to Contact	TPH Levels
	Email	ADL Levels
Designated Facility (Transport to) Name & Address TPS Technologies 12329 Hibiscus Rd. Adelanto, CA 92301-1700	Facility Phone # (909) 862-8001	Facility Permit Number
	Person to Contact DeBeste Jeffrey	
	Email (760) 246-8004	
Transporter Name and Mailing Address American Integrated Services, Inc. P.O. Box 92316 Long Beach, CA 90809-2316	Transporter's Phone # (310) 522-1188	Transporter's US EPA ID No. CAR000148128
	Person to Contact Melgoza Domingo	Transporter's DOT No.
	Email (310) 532-0474	Customer Account Number with TPST 770400

Description of Soil	Moisture Content	Contaminated by	Approx. Qty.	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 25% ☐ 25% - over ☐	Gas ☐ Diesel ☐ Other ☐	5 CM	Solids	2600	LES	
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 25% ☐ 25% - over ☐	Gas ☐ Diesel ☐ Other ☐			6040	2880	316

Soil originated in the following State: CA

AIS Project # 29001-21

Total Tonnage: 51.60 31.58

Generator's and/or consultant's certification: I/We certify that the soil represented herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generator Site shown above and nothing has been added or done to such soil that would alter it in any way.

Printed/Typed Name: Generator ☐ Consultant ☐ Signature and date: Month 1 Day 8 Year 22

Transporter

Transporter's certification: I/We acknowledge receipt of the soil described above and will deliver such soil as being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generator Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Printed/Typed Name: Roberto Valencia Signature and date: Month 1 Day 8 Year 22

Recycling Facility

Designated

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above.

Printed/Typed Name: Signature and date: 1 16 22

TRANSPORTER COPY

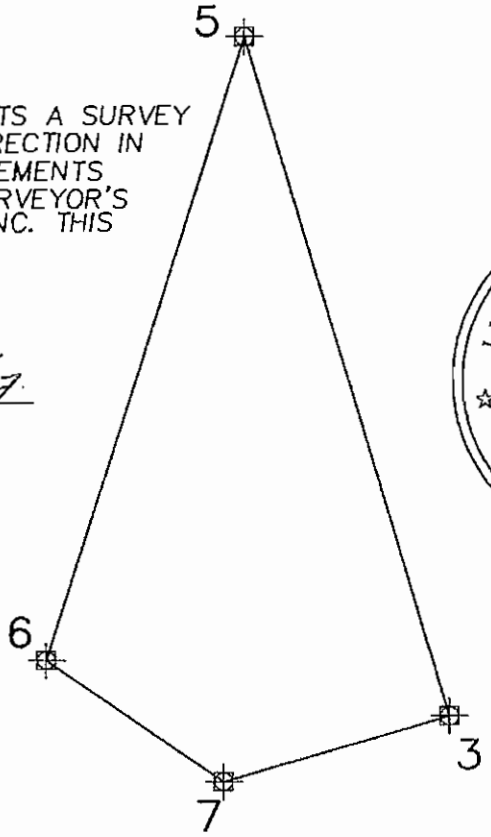
WELL LOCATIONS
GOLF PRACTICE RANGE

LOCATED AT 3701 PACIFIC PLACE
LONG BEACH, CA.

SURVEYOR'S STATEMENT:
THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY MEOR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS REQUIREMENTS OF THE LAND SURVEYOR'S ACT AT THE REQUEST OF LFR, INC. THIS 6TH DAY OF NOVEMBER, 2007.

11/11/07

KELVIN K. KITAOKA P.L.S. 6178
KELSURVEYS, INC.
JOB NO. : 2007-838





SCALE: 1"=100'



MW #	LATITUDE NORTH	LONGITUDE WEST
3	33° 49' 34.98775"	118° 12' 06.67505"
5	33° 49' 47.22293"	118° 12' 11.05603"
6	33° 49' 35.97207"	118° 12' 15.20885"
7	33° 49' 34.21724"	118° 12' 10.97769"

MW #	ORTHO HT.	GRID NORTHING	GRID EASTING
3	50.925	536223.9360	1981312.9460
5	36.903	536601.1590	1981201.0470
6	32.041	536254.7090	1981093.5540
7	51.300	536187.1200	1981189.9710

MW #	ORTHO HT. RIM EL @ WELL
3	51.002
5	37.413
6	32.191
7	51.900

PREPARED FOR:
LFR, INC.
3150 BRISTOL ST., #250
COSTA MESA, CA. 92626

PREPARED BY:
KELSURVEYS, INC.
3100 AIRWAY AVE., #125
COSTA MESA, CA. 92626
PHONE# 714-708-3301
FAX# 714-708-3318
E-MAIL: Exhibit@KelSurveys.com

JOB NO.: 2007-838 SCALE: 1"=100' DATE:11-11-07

APPENDIX M

EST Soil Gas Installation and Monitoring Forms – Additional Remedial Investigation

Environmental Support Technologies, Inc.

Soil Gas Probe Installation and Monitoring Form

Client: LFR

Project Name: Long Beach

Project Location: Long Beach

Project Number: 2894

Installer: Pedro Garcia

Sampler: Brian Built

Monitoring Instrument: LANTECH GEM2000+

Page: 1 of 1

Probe ID	Probe Depth (feet)	Probe Installation Date/Time	Probe Monitoring Date/Time	Oxygen (percent)	Carbon Dioxide (percent)	Hydrogen Sulfide (percent)	Methane (percent by volume)	Comments
SG15-10	10	11/14/07 0960	11/12/07 1229	7.0	14.2	0.0	13.78 0.0	Bal. 78.8
SG14-5	5	0920	1247	14.9	4.0	0.0	0.0	81.1
SG14-10	10	0930	1305	12.3	5.6	0.0	0.1	82.9
SG-12-5	5	0730	1324	14.7	4.0	0.0	0.1	80.9
SG-12-10	10	0745	1329	0.6	20.2	0.0	12.2	67.3
SG-15-[illegible]	5	0915	1333	9.0	9.7	0.0	0.1	81.2
SG-15-5 DUP	5	0916	1334	9.0	9.8	0.0	0.1	81.1
SG-10-5	5	0840	1337	16.2	4.3	0.0	0.0	79.5
SG-10-10	10	0830	1340	15.5	4.9	0.0	0.0	79.7
SG-7-5	5	0815	1343	19.1	1.1	0.0	0.1	79.7
SG11-5	5	0900	1346	0.8	14.6	0.0	5.5	79.0
SG-11-10	10	↓ 0855	↓ 1350	0.6	5.4	0.0	19.6	79.3

Note: 0.1 percent methane = 1,000 ppm

Environmental Support Technologies, Inc.

Soil Gas Probe Installation and Monitoring Form

Client: LFR

Project Name: Long Beach

Project Location: Long Beach

Project Number: 2694

Installer: PG & CH

Sampler: BP

Monitoring Instrument: LandTec GEM 2000+

Page: 1 of

Probe ID	Probe Depth (feet)	Probe Installation Date/Time	Probe Monitoring Date/Time	Oxygen (percent)	Carbon Dioxide (percent)	Hydrogen Sulfide (percent)	Methane (percent by volume)	Comments Bal
SG-6-5	5	111207 1030	111307 0747	13.0	7.2	0.0	6.0	79.5
SG-6-10	10	1045	0817	3.1	19.3	0.0	2.3	77.8
SG-1-5	5	1350	0835	14.5	5.7	0.0	0.0	79.8
SG-1-10	10	1340	0853	10.6	10.8	0.0	0.2	78.6
SG-2-5	5	1200	0910	13.5	7.8	0.0	0.0	78.9
SG-2-10	10	1150	0925	11.1	10.9	0.0	0.0	78.0
SG-3-5	5	1230	0946	5.7	14.5	0.0	0.0	79.9
SG-3-10	10	1220	1003	3.7	16.5	0.0	0.0	79.8
SG-5-5	5	111307 0708	1107	3.1	10.7	0.0	16.9	74.5
SG-4-5	5	111207 1300	1341	4.5	17.6	0.0	0.1	78.4

Note: 0.1 percent methane = 1,000 ppm

11/14/07

Environmental Support Technologies, Inc.

Soil Gas Probe Installation and Monitoring Form

Client: LFR

Project Name: Long Beach Golf Learning Center

Project Location: Long Beach

Project Number: 2694

Installer: P&C

Sampler: DN

Monitoring Instrument: Land Tech GEM 2000+

Page: 1 of

Probe ID	Probe Depth (feet)	Probe Installation Date/Time	Probe Monitoring Date/Time	Oxygen (percent)	Carbon Dioxide (percent)	Hydrogen Sulfide (percent)	Methane (percent by volume)	Comments
SG8A-5'	5'	11/13/07 07:48	11/14/07 6:16	16.8	4.2	0	7.0	Balance. 71.7
-10'	10'							
SG9-5'	5	11/13/07 0800	11/14/07 714	12.0	6.6	0	0	81.5
-10'	10	11/13/07 0815	11/14/07 716	0.1	16.8	0	5.4	77.6
SG3-5'	5	11/13/07 900	11/14/07 840	14.7	3.8	0	0	81.2
-10'	10	11/13/07 845	11/14/07 843	8.4	2.3	0	0	89.1
SG5-5'	5'	11/13/07 708Am	11/14/07 1028	2.0	12.2	0 10.4	10.4	75.3
SG3-5	5'	11/12/07 1220	11/14/07 1228	4.5	15.0	0	0	80.3
-10	10'	11/12/07 1230	11/14/07 1231	2.9	17.0	0	0	80.3
SG2-5'	5'	11/12/07 1200	11/14/07 1235	4.3	9.1	0	0	79.5
-10'	10'	11/12/07 1150	11/14/07 1238	9.7	11.2	0	0	78.8

Note: 0.1 percent methane = 1,000 ppm

APPENDIX N

Laboratory Reports and Chain-of-Custody Documentation – Additional Remedial Investigation

28 December 2007

Darren Burgett
LFR Inc.
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: CRG Properties

Enclosed are the results of analyses for samples received by the laboratory on 10/26/07 16:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Albert Vargas For Ben Beauchaine
Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-7-15	T701382-03	Soil	10/25/07 08:10	10/26/07 16:35
MW-7-25	T701382-05	Soil	10/25/07 08:25	10/26/07 16:35
MW-7-35	T701382-07	Soil	10/25/07 08:45	10/26/07 16:35

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-15

T701382-03(Soil)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C29-C40 (MORO)	ND		10	mg/kg	1	7102905	10/29/07	10/29/07	EPA 8015B	
C6-C12 (GRO)	ND		10	"	"	"	"	"	"	
C13-C28 (DRO)	ND		10	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*99.4 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B										
Lead	ND	0.23	3.0	mg/kg	1	7102907	10/29/07	10/30/07	EPA 6010B	
Antimony	**0.64**	0.052	3.0	"	"	"	"	"	"	J
Arsenic	**6.4**	0.22	5.0	"	"	"	"	"	"	
Barium	**140**	0.27	1.0	"	"	"	"	"	"	
Beryllium	**0.34**	0.25	1.0	"	"	"	"	"	"	J
Cadmium	ND	0.21	2.0	"	"	"	"	"	"	
Chromium	**18**	0.40	2.0	"	"	"	"	"	"	
Copper	**10**	0.25	1.0	"	"	"	"	"	"	
Molybdenum	ND	0.16	1.0	"	"	"	"	"	"	
Nickel	**14**	0.20	2.0	"	"	"	"	"	"	
Selenium	ND	0.23	5.0	"	"	"	"	"	"	
Silver	ND	0.24	2.0	"	"	"	"	"	"	
Thallium	ND	0.21	2.0	"	"	"	"	"	"	
Vanadium	**34**	0.21	5.0	"	"	"	"	"	"	
Zinc	**18**	0.22	1.0	"	"	"	"	"	"	
Cobalt	**9.7**	0.20	2.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471										
Mercury	ND		0.10	mg/kg	1	7102906	10/29/07	10/30/07	EPA 7471A Soil	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-15

T701382-03(Soil)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bromochloromethane	ND		5.0	ug/kg	1	7102901	10/29/07	10/29/07	EPA 8260B	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		5.0	"	"	"	"	"	"	
Chloromethane	ND		5.0	"	"	"	"	"	"	
Bromobenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
Bromodichloromethane	ND		5.0	"	"	"	"	"	"	
Bromoform	ND		5.0	"	"	"	"	"	"	
Bromomethane	ND		5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		5.0	"	"	"	"	"	"	
Chlorobenzene	ND		5.0	"	"	"	"	"	"	
Chloroethane	ND		5.0	"	"	"	"	"	"	
Chloroform	ND		5.0	"	"	"	"	"	"	
Benzene	ND		5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		5.0	"	"	"	"	"	"	
Toluene	ND		5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-15

T701382-03(Soil)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Trichloroethene	ND		5.0	ug/kg	1	7102901	10/29/07	10/29/07	EPA 8260B	
Trichlorofluoromethane	ND		5.0	"	"	"	"	"	"	
Vinyl chloride	ND		5.0	"	"	"	"	"	"	
Tetrachloroethene	ND		5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		5.0	"	"	"	"	"	"	
Dibromochloromethane	ND		5.0	"	"	"	"	"	"	
Dibromomethane	ND		5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		5.0	"	"	"	"	"	"	
Ethylbenzene	ND		5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND		5.0	"	"	"	"	"	"	
Isopropylbenzene	ND		5.0	"	"	"	"	"	"	
Styrene	ND		5.0	"	"	"	"	"	"	
Methylene chloride	ND		5.0	"	"	"	"	"	"	
n-Butylbenzene	ND		5.0	"	"	"	"	"	"	
n-Propylbenzene	ND		5.0	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
o-Xylene	ND		5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		5.0	"	"	"	"	"	"	
m,p-Xylene	ND		5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*111 %*		*81-118*	"	"	"	"	
Surrogate: Toluene-d8			*103 %*		*85-115*	"	"	"	"	
Surrogate: Dibromofluoromethane			*120 %*		*73-127*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-15

T701382-03(Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bis(2-chloroethoxy)methane	ND		300	ug/kg	1	7102904	10/29/07	11/01/07	EPA 8270C	
Acenaphthylene	ND		300	"	"	"	"	"	"	
Aniline	ND		300	"	"	"	"	"	"	
Anthracene	ND		300	"	"	"	"	"	"	
Benzo (a) anthracene	ND		300	"	"	"	"	"	"	
Benzo (a) pyrene	ND		300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND		300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		1000	"	"	"	"	"	"	
Benzyl alcohol	ND		300	"	"	"	"	"	"	
4-Nitroaniline	ND		300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		300	"	"	"	"	"	"	
Carbazole	ND		300	"	"	"	"	"	"	
Chrysene	ND		300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		300	"	"	"	"	"	"	
2-Nitrophenol	ND		1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND		300	"	"	"	"	"	"	
2-Chlorophenol	ND		1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND		300	"	"	"	"	"	"	
Acenaphthene	ND		300	"	"	"	"	"	"	
2-Nitroaniline	ND		300	"	"	"	"	"	"	
4-Nitrophenol	ND		1000	"	"	"	"	"	"	
3-Nitroaniline	ND		300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		1000	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		1000	"	"	"	"	"	"	
4-Chloroaniline	ND		300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		300	"	"	"	"	"	"	
4-Methylphenol	ND		1000	"	"	"	"	"	"	
Dimethyl phthalate	ND		300	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-15

T701382-03(Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Methylphenol	ND		1000	ug/kg	1	7102904	10/29/07	11/01/07	EPA 8270C	
Dibenz (a,h) anthracene	ND		300	"	"	"	"	"	"	
Pyrene	ND		300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		300	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		300	"	"	"	"	"	"	
Fluoranthene	ND		300	"	"	"	"	"	"	
Fluorene	ND		300	"	"	"	"	"	"	
Hexachlorobenzene	ND		1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND		300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		1000	"	"	"	"	"	"	
Hexachloroethane	ND		300	"	"	"	"	"	"	
Isophorone	ND		300	"	"	"	"	"	"	
Diethyl phthalate	ND		300	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		300	"	"	"	"	"	"	
Naphthalene	ND		300	"	"	"	"	"	"	
Nitrobenzene	ND		1000	"	"	"	"	"	"	
Pentachlorophenol	ND		1000	"	"	"	"	"	"	
Phenanthrene	ND		300	"	"	"	"	"	"	
Phenol	ND		1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		300	"	"	"	"	"	"	
Dibenzofuran	ND		300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		300	"	"	"	"	"	"	
1-Methylnaphthalene	ND		300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		1000	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		1000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		300	"	"	"	"	"	"	
Surrogate: 2-Fluorobiphenyl			*78.0 %*	*32.4-102*		"	"	"	"	
Surrogate: 2-Fluorophenol			*58.3 %*	*14.3-83.1*		"	"	"	"	
Surrogate: Phenol-d6			*68.6 %*	*12-95.6*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-15

T701382-03(Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Surrogate: Terphenyl-dl4	*88.3 %*	*29.1-130*	*7102904*	*10/29/07*	*11/01/07*	*EPA 8270C*	
Surrogate: Nitrobenzene-d5	*72.3 %*	*21.3-119*	*"*	*"*	*"*	*"*	
Surrogate: 2,4,6-Tribromophenol	*79.7 %*	*18.1-101*	*"*	*"*	*"*	*"*	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-25

T701382-05(Soil)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C13-C28 (DRO)	ND		10	mg/kg	1	7102905	10/29/07	10/29/07	EPA 8015B	
C6-C12 (GRO)	ND		10	"	"	"	"	"	"	
C29-C40 (MORO)	**55**		10	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*99.1 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B										
Zinc	**26**	0.22	1.0	mg/kg	1	7102907	10/29/07	10/30/07	EPA 6010B	
Cobalt	**11**	0.20	2.0	"	"	"	"	"	"	
Vanadium	**51**	0.21	5.0	"	"	"	"	"	"	
Thallium	ND	0.21	2.0	"	"	"	"	"	"	
Silver	ND	0.24	2.0	"	"	"	"	"	"	
Selenium	ND	0.23	5.0	"	"	"	"	"	"	
Nickel	**18**	0.20	2.0	"	"	"	"	"	"	
Molybdenum	ND	0.16	1.0	"	"	"	"	"	"	
Copper	**16**	0.25	1.0	"	"	"	"	"	"	
Chromium	**26**	0.40	2.0	"	"	"	"	"	"	
Cadmium	ND	0.21	2.0	"	"	"	"	"	"	
Beryllium	**0.74**	0.25	1.0	"	"	"	"	"	"	J
Barium	**130**	0.27	1.0	"	"	"	"	"	"	
Arsenic	**2.8**	0.22	5.0	"	"	"	"	"	"	J
Antimony	**1.5**	0.052	3.0	"	"	"	"	"	"	J
Lead	**9.1**	0.23	3.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471										
Mercury	ND		0.10	mg/kg	1	7102906	10/29/07	10/30/07	EPA 7471A Soil	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-25

T701382-05(Soil)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methylene chloride	ND		5.0	ug/kg	1	7102901	10/29/07	10/29/07	EPA 8260B	
n-Butylbenzene	ND		5.0	"	"	"	"	"	"	
n-Propylbenzene	ND		5.0	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
o-Xylene	ND		5.0	"	"	"	"	"	"	
m,p-Xylene	ND		5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		5.0	"	"	"	"	"	"	
Dibromomethane	ND		5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		5.0	"	"	"	"	"	"	
Isopropylbenzene	ND		5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND		5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		5.0	"	"	"	"	"	"	
Dibromochloromethane	ND		5.0	"	"	"	"	"	"	
Styrene	ND		5.0	"	"	"	"	"	"	
Ethylbenzene	ND		5.0	"	"	"	"	"	"	
Chloromethane	ND		5.0	"	"	"	"	"	"	
Vinyl chloride	ND		5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		5.0	"	"	"	"	"	"	
Trichloroethene	ND		5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		5.0	"	"	"	"	"	"	
Toluene	ND		5.0	"	"	"	"	"	"	
Tetrachloroethene	ND		5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

MW-7-25

T701382-05(Soil)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1-Trichloroethane	ND		5.0	ug/kg	1	7102901	10/29/07	10/29/07	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND		5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		5.0	"	"	"	"	"	"	
Chloroethane	ND		5.0	"	"	"	"	"	"	
Chlorobenzene	ND		5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		5.0	"	"	"	"	"	"	
Bromomethane	ND		5.0	"	"	"	"	"	"	
Bromoform	ND		5.0	"	"	"	"	"	"	
Bromodichloromethane	ND		5.0	"	"	"	"	"	"	
Bromochloromethane	ND		5.0	"	"	"	"	"	"	
Bromobenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		5.0	"	"	"	"	"	"	
Chloroform	ND		5.0	"	"	"	"	"	"	
Benzene	ND		5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane			*121 %*	*73-127*		"	"	"	"	
Surrogate: Toluene-d8			*102 %*	*85-115*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*108 %*	*81-118*		"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-25

T701382-05(Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dichlorobenzene	ND		300	ug/kg	1	7102904	10/29/07	11/01/07	EPA 8270C	
2,4,6-Trichlorophenol	ND		1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		1000	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		300	"	"	"	"	"	"	
1-Methylnaphthalene	ND		300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		1000	"	"	"	"	"	"	
Hexachloroethane	ND		300	"	"	"	"	"	"	
Nitrobenzene	ND		1000	"	"	"	"	"	"	
Naphthalene	ND		300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		300	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		300	"	"	"	"	"	"	
Dibenzofuran	ND		300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		300	"	"	"	"	"	"	
Pyrene	ND		300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		1000	"	"	"	"	"	"	
Hexachlorobutadiene	ND		300	"	"	"	"	"	"	
Hexachlorobenzene	ND		1500	"	"	"	"	"	"	
Fluorene	ND		300	"	"	"	"	"	"	
Fluoranthene	ND		300	"	"	"	"	"	"	
Dimethyl phthalate	ND		300	"	"	"	"	"	"	
Diethyl phthalate	ND		300	"	"	"	"	"	"	
Isophorone	ND		300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		1000	"	"	"	"	"	"	
Phenanthrene	ND		300	"	"	"	"	"	"	
Pentachlorophenol	ND		1000	"	"	"	"	"	"	
2-Nitroaniline	ND		300	"	"	"	"	"	"	
4-Nitrophenol	ND		1000	"	"	"	"	"	"	
4-Nitroaniline	ND		300	"	"	"	"	"	"	
4-Methylphenol	ND		1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-25

T701382-05(Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
4-Chloroaniline	ND		300	ug/kg	1	7102904	10/29/07	11/01/07	EPA 8270C	
4-Chloro-3-methylphenol	ND		1000	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		300	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		300	"	"	"	"	"	"	
3-Nitroaniline	ND		300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		1000	"	"	"	"	"	"	
2-Methylphenol	ND		1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND		300	"	"	"	"	"	"	
2-Chlorophenol	ND		1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND		300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		300	"	"	"	"	"	"	
Phenol	ND		1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		300	"	"	"	"	"	"	
2-Nitrophenol	ND		1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		300	"	"	"	"	"	"	
Acenaphthene	ND		300	"	"	"	"	"	"	
Chrysene	ND		300	"	"	"	"	"	"	
Carbazole	ND		300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		300	"	"	"	"	"	"	
Aniline	ND		300	"	"	"	"	"	"	
Acenaphthylene	ND		300	"	"	"	"	"	"	
Anthracene	ND		300	"	"	"	"	"	"	
Benzo (a) anthracene	ND		300	"	"	"	"	"	"	
Benzo (a) pyrene	ND		300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND		300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		300	"	"	"	"	"	"	
Benzyl alcohol	ND		300	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol			*86.1 %*	*18.1-101*		"	"	"	"	
Surrogate: Nitrobenzene-d5			*66.8 %*	*21.3-119*		"	"	"	"	
Surrogate: Phenol-d6			*63.8 %*	*12-95.6*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-25

T701382-05(Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Surrogate: Terphenyl-dl4	*85.4 %*	*29.1-130*	*7102904*	*10/29/07*	*11/01/07*	*EPA 8270C*	
Surrogate: 2-Fluorophenol	*54.8 %*	*14.3-83.1*	*"*	*"*	*"*	*"*	
Surrogate: 2-Fluorobiphenyl	*74.1 %*	*32.4-102*	*"*	*"*	*"*	*"*	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-35

T701382-07(Soil)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C13-C28 (DRO)	ND		10	mg/kg	1	7102905	10/29/07	10/29/07	EPA 8015B	
C29-C40 (MORO)	ND		10	"	"	"	"	"	"	
C6-C12 (GRO)	ND		10	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*117 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B										
Copper	**17**	0.25	1.0	mg/kg	1	7102907	10/29/07	10/30/07	EPA 6010B	
Antimony	ND	0.052	3.0	"	"	"	"	"	"	
Arsenic	**1.6**	0.22	5.0	"	"	"	"	"	"	J
Barium	**53**	0.27	1.0	"	"	"	"	"	"	
Beryllium	ND	0.25	1.0	"	"	"	"	"	"	
Cadmium	ND	0.21	2.0	"	"	"	"	"	"	
Thallium	ND	0.21	2.0	"	"	"	"	"	"	
Cobalt	**7.3**	0.20	2.0	"	"	"	"	"	"	
Lead	ND	0.23	3.0	"	"	"	"	"	"	
Molybdenum	ND	0.16	1.0	"	"	"	"	"	"	
Nickel	**9.3**	0.20	2.0	"	"	"	"	"	"	
Selenium	ND	0.23	5.0	"	"	"	"	"	"	
Silver	ND	0.24	2.0	"	"	"	"	"	"	
Vanadium	**23**	0.21	5.0	"	"	"	"	"	"	
Chromium	**12**	0.40	2.0	"	"	"	"	"	"	
Zinc	**12**	0.22	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471										
Mercury	ND		0.10	mg/kg	1	7102906	10/29/07	10/30/07	EPA 7471A Soil	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-35

T701382-07(Soil)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloroform	ND		5.0	ug/kg	1	7102901	10/29/07	10/29/07	EPA 8260B	
Benzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		5.0	"	"	"	"	"	"	
Bromobenzene	ND		5.0	"	"	"	"	"	"	
Bromochloromethane	ND		5.0	"	"	"	"	"	"	
Bromodichloromethane	ND		5.0	"	"	"	"	"	"	
Bromoform	ND		5.0	"	"	"	"	"	"	
Bromomethane	ND		5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		5.0	"	"	"	"	"	"	
Chlorobenzene	ND		5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		5.0	"	"	"	"	"	"	
Chloromethane	ND		5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		5.0	"	"	"	"	"	"	
Chloroethane	ND		5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

MW-7-35

T701382-07(Soil)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
trans-1,3-Dichloropropene	ND		5.0	ug/kg	1	7102901	10/29/07	10/29/07	EPA 8260B	
Trichloroethene	ND		5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		5.0	"	"	"	"	"	"	
Vinyl chloride	ND		5.0	"	"	"	"	"	"	
Tetrachloroethene	ND		5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		5.0	"	"	"	"	"	"	
m,p-Xylene	ND		5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		5.0	"	"	"	"	"	"	
Dibromochloromethane	ND		5.0	"	"	"	"	"	"	
Dibromomethane	ND		5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		5.0	"	"	"	"	"	"	
Ethylbenzene	ND		5.0	"	"	"	"	"	"	
Toluene	ND		5.0	"	"	"	"	"	"	
Isopropylbenzene	ND		5.0	"	"	"	"	"	"	
Methylene chloride	ND		5.0	"	"	"	"	"	"	
n-Butylbenzene	ND		5.0	"	"	"	"	"	"	
n-Propylbenzene	ND		5.0	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
o-Xylene	ND		5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		5.0	"	"	"	"	"	"	
Styrene	ND		5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND		5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*111 %*		*81-118*		*"*	*"*	*"*	*"*
Surrogate: Toluene-d8			*102 %*		*85-115*		*"*	*"*	*"*	*"*
Surrogate: Dibromofluoromethane			*118 %*		*73-127*		*"*	*"*	*"*	*"*

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-35

T701382-07(Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Butyl benzyl phthalate	ND		300	ug/kg	1	7102904	10/29/07	11/01/07	EPA 8270C	
Benzo (k) fluoranthene	ND		300	"	"	"	"	"	"	
Aniline	ND		300	"	"	"	"	"	"	
Anthracene	ND		300	"	"	"	"	"	"	
Benzo (a) anthracene	ND		300	"	"	"	"	"	"	
Benzo (a) pyrene	ND		300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND		300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		1000	"	"	"	"	"	"	
Acenaphthylene	ND		300	"	"	"	"	"	"	
Benzyl alcohol	ND		300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		300	"	"	"	"	"	"	
Acenaphthene	ND		300	"	"	"	"	"	"	
Carbazole	ND		300	"	"	"	"	"	"	
Chrysene	ND		300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		300	"	"	"	"	"	"	
2-Nitrophenol	ND		1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		300	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		300	"	"	"	"	"	"	
2-Chloronaphthalene	ND		300	"	"	"	"	"	"	
2-Chlorophenol	ND		1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND		300	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		1000	"	"	"	"	"	"	
2-Nitroaniline	ND		300	"	"	"	"	"	"	
4-Nitrophenol	ND		1000	"	"	"	"	"	"	
3-Nitroaniline	ND		300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		1000	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		1000	"	"	"	"	"	"	
4-Chloroaniline	ND		300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		300	"	"	"	"	"	"	
4-Methylphenol	ND		1000	"	"	"	"	"	"	
4-Nitroaniline	ND		300	"	"	"	"	"	"	
2-Methylphenol	ND		1000	"	"	"	"	"	"	

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-35

T701382-07(Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pyrene	ND		300	ug/kg	1	7102904	10/29/07	11/01/07	EPA 8270C	
Phenanthrene	ND		300	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		1000	"	"	"	"	"	"	
Isophorone	ND		300	"	"	"	"	"	"	
Dibenzofuran	ND		300	"	"	"	"	"	"	
Diethyl phthalate	ND		300	"	"	"	"	"	"	
Dimethyl phthalate	ND		300	"	"	"	"	"	"	
Fluoranthene	ND		300	"	"	"	"	"	"	
Fluorene	ND		300	"	"	"	"	"	"	
Hexachlorobenzene	ND		1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND		300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		300	"	"	"	"	"	"	
Phenol	ND		1000	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		300	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		300	"	"	"	"	"	"	
Naphthalene	ND		300	"	"	"	"	"	"	
Nitrobenzene	ND		1000	"	"	"	"	"	"	
Pentachlorophenol	ND		1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		300	"	"	"	"	"	"	
Hexachloroethane	ND		300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		300	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		300	"	"	"	"	"	"	
1-Methylnaphthalene	ND		300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		1000	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		1000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		1000	"	"	"	"	"	"	
Surrogate: 2-Fluorobiphenyl			*70.8 %*	*32.4-102*		"	"	"	"	
Surrogate: 2-Fluorophenol			*56.1 %*	*14.3-83.1*		"	"	"	"	
Surrogate: Terphenyl-dl4			*79.7 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG Properties	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Darren Burgett	12/28/07 14:28

MW-7-35

T701382-07(Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Surrogate: Phenol-d6	*63.2 %*	*12-95.6*	*7102904*	*10/29/07*	*11/01/07*	*EPA 8270C*	
Surrogate: Nitrobenzene-d5	*65.1 %*	*21.3-119*	*"*	*"*	*"*	*"*	
Surrogate: 2,4,6-Tribromophenol	*71.3 %*	*18.1-101*	*"*	*"*	*"*	*"*	

Extractable Petroleum Hydrocarbons by 8015B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102905 - EPA 3550B GC											
Blank (7102905-BLK1)					Prepared & Analyzed: 10/29/07						
Surrogate: p-Terphenyl	*98.1*			*mg/kg*	*100*		*98.1*	*65-135*			
C6-C12 (GRO)	ND		10	"							
C13-C28 (DRO)	ND		10	"							
C29-C40 (MORO)	ND		10	"							
LCS (7102905-BS1)					Prepared & Analyzed: 10/29/07						
Surrogate: p-Terphenyl	*94.7*			*mg/kg*	*100*		*94.7*	*65-135*			
C13-C28 (DRO)	430		10	"	500		86.7	75-125			
Matrix Spike (7102905-MS1)		**Source: T701328-42**			Prepared & Analyzed: 10/29/07						
Surrogate: p-Terphenyl	*114*			*mg/kg*	*100*		*114*	*65-135*			
C13-C28 (DRO)	560		10	"	500	88	95.2	75-125			
Matrix Spike Dup (7102905-MSD1)		**Source: T701328-42**			Prepared & Analyzed: 10/29/07						
Surrogate: p-Terphenyl	*109*			*mg/kg*	*100*		*109*	*65-135*			
C13-C28 (DRO)	530		10	"	500	88	88.9	75-125	5.68	20	

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102907 - EPA 3051											
Blank (7102907-BLK1)					Prepared: 10/29/07 Analyzed: 10/30/07						
Antimony	ND	0.052	3.0	mg/kg							
Silver	ND	0.24	2.0	"							
Arsenic	0.893	0.22	5.0	"							J
Barium	ND	0.27	1.0	"							
Beryllium	ND	0.25	1.0	"							
Cadmium	ND	0.21	2.0	"							
Chromium	ND	0.40	2.0	"							
Cobalt	ND	0.20	2.0	"							
Copper	ND	0.25	1.0	"							
Lead	ND	0.23	3.0	"							
Molybdenum	ND	0.16	1.0	"							
Nickel	ND	0.20	2.0	"							
Selenium	ND	0.23	5.0	"							
Thallium	ND	0.21	2.0	"							
Vanadium	ND	0.21	5.0	"							
Zinc	ND	0.22	1.0	"							
LCS (7102907-BS1)					Prepared: 10/29/07 Analyzed: 10/30/07						
Arsenic	95.1	0.22	5.0	mg/kg	100		95.1	75-125			
Barium	91.5	0.27	1.0	"	100		91.5	75-125			
Cadmium	86.2	0.21	2.0	"	100		86.2	75-125			
Chromium	93.5	0.40	2.0	"	100		93.5	75-125			
Lead	94.3	0.23	3.0	"	100		94.3	75-125			
Matrix Spike (7102907-MS1)		**Source: T701328-44**			Prepared: 10/29/07 Analyzed: 10/30/07						
Arsenic	113	0.22	5.0	mg/kg	100	7.38	106	75-125			
Barium	427	0.27	1.0	"	100	230	197	75-125			QM-07
Cadmium	104	0.21	2.0	"	100	ND	104	75-125			
Chromium	204	0.40	2.0	"	100	91.4	113	75-125			
Lead	129	0.23	3.0	"	100	9.39	119	75-125			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Albert Vargas

Albert Vargas For Ben Beauchaine, Laboratory Supervisor

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102907 - EPA 3051											
Matrix Spike Dup (7102907-MSD1)		**Source: T701328-44**			Prepared: 10/29/07		Analyzed: 10/30/07				
Arsenic	120	0.22	5.0	mg/kg	100	7.38	112	75-125	5.77	20	
Barium	442	0.27	1.0	"	100	230	213	75-125	3.57	20	QM-07
Cadmium	109	0.21	2.0	"	100	ND	109	75-125	4.01	20	
Chromium	209	0.40	2.0	"	100	91.4	118	75-125	2.56	20	
Lead	135	0.23	3.0	"	100	9.39	126	75-125	4.99	20	QM-07

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102906 - EPA 7471A Soil											
Blank (7102906-BLK1)					Prepared: 10/29/07 Analyzed: 10/30/07						
Mercury	ND		0.10	mg/kg							
LCS (7102906-BS1)					Prepared: 10/29/07 Analyzed: 10/30/07						
Mercury	0.386		0.10	mg/kg	0.417		92.8	80-120			
Matrix Spike (7102906-MS1)		**Source: T701382-03**			Prepared: 10/29/07 Analyzed: 10/30/07						
Mercury	0.435		0.10	mg/kg	0.417	0.0459	93.4	75-125			
Matrix Spike Dup (7102906-MSD1)		**Source: T701382-03**			Prepared: 10/29/07 Analyzed: 10/30/07						
Mercury	0.433		0.10	mg/kg	0.417	0.0459	93.0	75-125	0.461	20	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102901 - EPA 5035 GCMS											
Blank (7102901-BLK1)				Prepared & Analyzed: 10/29/07							
Surrogate: 4-Bromofluorobenzene	*43.0*			*ug/kg*	*40.0*		*108*	*81-118*			
Surrogate: Dibromofluoromethane	*40.0*			*"*	*40.0*		*100*	*73-127*			
Surrogate: Toluene-d8	*40.1*			*"*	*40.0*		*100*	*85-115*			
Bromobenzene	ND		5.0	"							
Bromochloromethane	ND		5.0	"							
Bromodichloromethane	ND		5.0	"							
Bromoform	ND		5.0	"							
Bromomethane	ND		5.0	"							
n-Butylbenzene	ND		5.0	"							
sec-Butylbenzene	ND		5.0	"							
tert-Butylbenzene	ND		5.0	"							
Carbon tetrachloride	ND		5.0	"							
Chlorobenzene	ND		5.0	"							
Chloroethane	ND		5.0	"							
Chloroform	ND		5.0	"							
Chloromethane	ND		5.0	"							
2-Chlorotoluene	ND		5.0	"							
4-Chlorotoluene	ND		5.0	"							
Dibromochloromethane	ND		5.0	"							
1,2-Dibromo-3-chloropropane	ND		5.0	"							
1,2-Dibromoethane (EDB)	ND		5.0	"							
Dibromomethane	ND		5.0	"							
1,2-Dichlorobenzene	ND		5.0	"							
1,3-Dichlorobenzene	ND		5.0	"							
1,4-Dichlorobenzene	ND		5.0	"							
Dichlorodifluoromethane	ND		5.0	"							
1,1-Dichloroethane	ND		5.0	"							
1,2-Dichloroethane	ND		5.0	"							
1,1-Dichloroethene	ND		5.0	"							
cis-1,2-Dichloroethene	ND		5.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102901 - EPA 5035 GCMS											
Blank (7102901-BLK1)					Prepared & Analyzed: 10/29/07						
trans-1,2-Dichloroethene	ND		5.0	ug/kg							
1,2-Dichloropropane	ND		5.0	"							
1,3-Dichloropropane	ND		5.0	"							
2,2-Dichloropropane	ND		5.0	"							
1,1-Dichloropropene	ND		5.0	"							
cis-1,3-Dichloropropene	ND		5.0	"							
trans-1,3-Dichloropropene	ND		5.0	"							
Hexachlorobutadiene	ND		5.0	"							
Isopropylbenzene	ND		5.0	"							
p-Isopropyltoluene	ND		5.0	"							
Methylene chloride	ND		5.0	"							
Naphthalene	ND		5.0	"							
n-Propylbenzene	ND		5.0	"							
Styrene	ND		5.0	"							
1,1,2,2-Tetrachloroethane	ND		5.0	"							
1,1,1,2-Tetrachloroethane	ND		5.0	"							
Tetrachloroethene	ND		5.0	"							
1,2,3-Trichlorobenzene	ND		5.0	"							
1,2,4-Trichlorobenzene	ND		5.0	"							
1,1,2-Trichloroethane	ND		5.0	"							
1,1,1-Trichloroethane	ND		5.0	"							
Trichloroethene	ND		5.0	"							
Trichlorofluoromethane	ND		5.0	"							
1,2,3-Trichloropropane	ND		5.0	"							
1,3,5-Trimethylbenzene	ND		5.0	"							
1,2,4-Trimethylbenzene	ND		5.0	"							
Vinyl chloride	ND		5.0	"							
Benzene	ND		5.0	"							
Toluene	ND		5.0	"							
Ethylbenzene	ND		5.0	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102901 - EPA 5035 GCMS											
Blank (7102901-BLK1)					Prepared & Analyzed: 10/29/07						
m,p-Xylene	ND		5.0	ug/kg							
o-Xylene	ND		5.0	"							
LCS (7102901-BS1)					Prepared & Analyzed: 10/29/07						
Surrogate: 4-Bromofluorobenzene	*42.4*			*ug/kg*	*40.0*		*106*	*81-118*			
Surrogate: Dibromofluoromethane	*40.4*			*"*	*40.0*		*101*	*73-127*			
Surrogate: Toluene-d8	*40.8*			*"*	*40.0*		*102*	*85-115*			
Chlorobenzene	80.0		5.0	"	100		80.0	75-125			
1,1-Dichloroethene	76.0		5.0	"	100		76.0	75-125			
Trichloroethene	85.3		5.0	"	100		85.3	75-125			
Benzene	75.8		5.0	"	100		75.8	75-125			
Toluene	76.4		5.0	"	100		76.4	75-125			
LCS Dup (7102901-BSD1)					Prepared & Analyzed: 10/29/07						
Surrogate: 4-Bromofluorobenzene	*41.5*			*ug/kg*	*40.0*		*104*	*81-118*			
Surrogate: Dibromofluoromethane	*39.2*			*"*	*40.0*		*98.0*	*73-127*			
Surrogate: Toluene-d8	*40.6*			*"*	*40.0*		*102*	*85-115*			
Chlorobenzene	89.0		5.0	"	100		89.0	75-125	10.6	20	
1,1-Dichloroethene	90.4		5.0	"	100		90.4	75-125	17.3	20	
Trichloroethene	99.9		5.0	"	100		99.9	75-125	15.8	20	
Benzene	85.2		5.0	"	100		85.2	75-125	11.7	20	
Toluene	87.3		5.0	"	100		87.3	75-125	13.3	20	

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102904 - EPA 3550 ECD/GCMS											
Blank (7102904-BLK1)					Prepared: 10/29/07 Analyzed: 11/01/07						
Surrogate: 2-Fluorophenol	*938*			*ug/kg*	*1670*		*56.3*	*14.3-83.1*			
Surrogate: Phenol-d6	*1040*			*"*	*1670*		*62.4*	*12-95.6*			
Surrogate: Nitrobenzene-d5	*1070*			*"*	*1670*		*64.4*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*1170*			*"*	*1670*		*70.1*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*1160*			*"*	*1670*		*69.8*	*18.1-101*			
Surrogate: Terphenyl-dl4	*1430*			*"*	*1670*		*85.9*	*29.1-130*			
Carbazole	ND		300	"							
Phenol	ND		1000	"							
Aniline	ND		300	"							
2-Chlorophenol	ND		1000	"							
1,4-Dichlorobenzene	ND		300	"							
N-Nitrosodi-n-propylamine	ND		300	"							
1,2,4-Trichlorobenzene	ND		300	"							
4-Chloro-3-methylphenol	ND		1000	"							
2-Methylnaphthalene	ND		300	"							
1-Methylnaphthalene	ND		300	"							
Acenaphthene	ND		300	"							
4-Nitrophenol	ND		1000	"							
2,4-Dinitrotoluene	ND		300	"							
Pentachlorophenol	ND		1000	"							
Pyrene	ND		300	"							
Acenaphthylene	ND		300	"							
Anthracene	ND		300	"							
Benzo (a) anthracene	ND		300	"							
Benzo (b) fluoranthene	ND		300	"							
Benzo (k) fluoranthene	ND		300	"							
Benzo (g,h,i) perylene	ND		1000	"							
Benzo (a) pyrene	ND		300	"							
Benzyl alcohol	ND		300	"							
Bis(2-chloroethoxy)methane	ND		300	"							
Bis(2-chloroethyl)ether	ND		300	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102904 - EPA 3550 ECD/GCMS											
Blank (7102904-BLK1)					Prepared: 10/29/07 Analyzed: 11/01/07						
Bis(2-chloroisopropyl)ether	ND		300	ug/kg							
Bis(2-ethylhexyl)phthalate	ND		300	"							
4-Bromophenyl phenyl ether	ND		300	"							
Butyl benzyl phthalate	ND		300	"							
4-Chloroaniline	ND		300	"							
2-Chloronaphthalene	ND		300	"							
4-Chlorophenyl phenyl ether	ND		300	"							
Chrysene	ND		300	"							
Dibenz (a,h) anthracene	ND		300	"							
Dibenzofuran	ND		300	"							
Di-n-butyl phthalate	ND		300	"							
1,2-Dichlorobenzene	ND		300	"							
1,3-Dichlorobenzene	ND		300	"							
2,4-Dichlorophenol	ND		1000	"							
Diethyl phthalate	ND		300	"							
2,4-Dimethylphenol	ND		1000	"							
Dimethyl phthalate	ND		300	"							
4,6-Dinitro-2-methylphenol	ND		1000	"							
2,4-Dinitrophenol	ND		1000	"							
2,6-Dinitrotoluene	ND		1000	"							
Di-n-octyl phthalate	ND		300	"							
Fluoranthene	ND		300	"							
Fluorene	ND		300	"							
Hexachlorobenzene	ND		1500	"							
Hexachlorobutadiene	ND		300	"							
Hexachlorocyclopentadiene	ND		1000	"							
Hexachloroethane	ND		300	"							
Indeno (1,2,3-cd) pyrene	ND		300	"							
Isophorone	ND		300	"							
2-Methylphenol	ND		1000	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102904 - EPA 3550 ECD/GCMS											
Blank (7102904-BLK1)					Prepared: 10/29/07 Analyzed: 11/01/07						
4-Methylphenol	ND		1000	ug/kg							
Naphthalene	ND		300	"							
2-Nitroaniline	ND		300	"							
3-Nitroaniline	ND		300	"							
4-Nitroaniline	ND		300	"							
Nitrobenzene	ND		1000	"							
2-Nitrophenol	ND		1000	"							
N-Nitrosodimethylamine	ND		300	"							
N-Nitrosodiphenylamine	ND		300	"							
2,3,5,6-Tetrachlorophenol	ND		300	"							
2,3,4,6-Tetrachlorophenol	ND		300	"							
Phenanthrene	ND		300	"							
2,4,5-Trichlorophenol	ND		1000	"							
2,4,6-Trichlorophenol	ND		1000	"							
LCS (7102904-BS1)					Prepared: 10/29/07 Analyzed: 11/01/07						
Surrogate: 2-Fluorophenol	*1010*			*ug/kg*	*1670*		*60.4*	*14.3-83.1*			
Surrogate: Phenol-d6	*1150*			*"*	*1670*		*69.0*	*12-95.6*			
Surrogate: Nitrobenzene-d5	*1190*			*"*	*1670*		*71.4*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*1360*			*"*	*1670*		*81.8*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*1500*			*"*	*1670*		*90.1*	*18.1-101*			
Surrogate: Terphenyl-dl4	*1510*			*"*	*1670*		*90.3*	*29.1-130*			
Phenol	1180		1000	"	1670		70.5	25.9-102			
2-Chlorophenol	1150		1000	"	1670		68.9	37.1-110			
1,4-Dichlorobenzene	1070		300	"	1670		64.4	36-97			
N-Nitrosodi-n-propylamine	1320		300	"	1670		79.2	30.8-81.8			
1,2,4-Trichlorobenzene	1200		300	"	1670		72.1	39-98			
4-Chloro-3-methylphenol	1360		1000	"	1670		81.6	33.1-109			
Acenaphthene	1340		300	"	1670		80.3	38.9-79.4			QM-Hi
4-Nitrophenol	1420		1000	"	1670		84.9	14-103			
2,4-Dinitrotoluene	1480		300	"	1670		88.9	24-96			

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7102904 - EPA 3550 ECD/GCMS											
LCS (7102904-BS1)					Prepared: 10/29/07 Analyzed: 11/01/07						
Pentachlorophenol	1530		1000	ug/kg	1670		92.0	8.05-120			
Pyrene	1450		300	"	1670		87.2	25-85.2			QM-Hi
LCS Dup (7102904-BSD1)					Prepared: 10/29/07 Analyzed: 11/01/07						
Surrogate: 2-Fluorophenol	*876*			*ug/kg*	*1670*		*52.6*	*14.3-83.1*			
Surrogate: Phenol-d6	*1030*			*"*	*1670*		*62.0*	*12-95.6*			
Surrogate: Nitrobenzene-d5	*1100*			*"*	*1670*		*65.8*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*1210*			*"*	*1670*		*72.8*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*1320*			*"*	*1670*		*79.0*	*18.1-101*			
Surrogate: Terphenyl-dl4	*1390*			*"*	*1670*		*83.6*	*29.1-130*			
Phenol	1050		1000	"	1670		62.8	25.9-102	11.6	42	
2-Chlorophenol	999		1000	"	1670		59.9	37.1-110	14.0	40	
1,4-Dichlorobenzene	949		300	"	1670		56.9	36-97	12.3	28	
N-Nitrosodi-n-propylamine	1230		300	"	1670		73.6	30.8-81.8	7.33	38	
1,2,4-Trichlorobenzene	1080		300	"	1670		65.0	39-98	10.3	28	
4-Chloro-3-methylphenol	1250		1000	"	1670		74.8	33.1-109	8.64	42	
Acenaphthene	1200		300	"	1670		71.7	38.9-79.4	11.2	31	
4-Nitrophenol	1310		1000	"	1670		78.8	14-103	7.43	50	
2,4-Dinitrotoluene	1330		300	"	1670		79.5	24-96	11.1	38	
Pentachlorophenol	1440		1000	"	1670		86.6	8.05-120	6.02	50	
Pyrene	1330		300	"	1670		79.9	25-85.2	8.76	31	

Notes and Definitions

QM-Hi	Spike recovery was high for specified analyte. Data was accepted because samples associated with batch were non detect for analyte in question.
QM-07	The spike recovery and or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
J	Detected but below the Standard Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

T70382

SAMPLE COLLECTOR:	PROJECT NO.:	SECTION NO.:	DATE:	SAMPLER'S INITIALS:	SERIAL NO.:
LFR 3150 Bristol Street, Suite 250, Costa Mesa, California 92626, (714) 444-0111, Fax (714) 444-0117	002-10231-03		10/26/07		04789
	PROJECT NAME: CRG		SAMPLER (Signature):		

	Sample ID.	Date	Time	Lab Sample No.	No. of Containers	TYPE: Soil	TYPE: Water	TPHd (EPA 8015M)	TPHg (EPA 8015M)	TPHcc (EPA 8015M)	VOCs (EPA 8260)*	BTEX / MTBE (8260)	BTEX / MTBE (8021)	Metals (6010/7000)*	Pesticides (EPA 8080/8081)	PCBs (EPA 8080/8082)	SVOCs	TAT: Standard	TAT: RUSH:	TAT: HOLD	REMARKS
1	MW-7-5	10/26/07	0800		4	X											01			X	
2	-10		0805														02			X	
3	-15		0810							X	X		X			X	03	X			
4	-20		0820														04			X	
5	-25		0825							X	X		X			X	05	X			
6	-30		0840														06			X	
7	-35		0845							X	X		X			X	07	X			
8	-40		0850														08			X	
9	-45		0900														09			X	
10	-50		0910														10			X	
11	-55		0915														11			X	
12	-60		0920														12			X	
13																					
14																					
15																					

SAMPLE RECEIPT:	Cooler Temp:	METHOD OF SHIPMENT:	RELINQUISHED BY: 1	RELINQUISHED BY: 2	RELINQUISHED BY: 3
☐ Intact ☑ Cold ☐ On Ice ☐ Ambient	Cooler No:	LAB REPORT NO.:	(SIGNATURE) (DATE) 10/26/07	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
Preservative Correct? ☑ Yes ☐ No ☐ N/A		FAX COC CONFIRMATION TO: Darren Burgett	(PRINTED NAME) (TIME) Darren P. Burgett 1635	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
			(COMPANY) LFR	(COMPANY)	(COMPANY)
ANALYTICAL LABORATORY:		FAX RESULTS TO: "	RECEIVED BY: 1	RECEIVED BY: 2	RECEIVED BY (LABORATORY): 3
		SEND HARDCOPY TO: "	(SIGNATURE) (DATE) 10/26/07	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
		SEND EDD TO: "	(PRINTED NAME) (TIME) Ben Beaudoin 1635	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
			(COMPANY) Sunstar	(COMPANY)	(LABORATORY)

Lab/Shipping Copy (White) File Copy (Yellow) Field Copy (Pink) FORM NO: 2001/COC/TWT

November 27, 2007

Tony Marino
LFR Levine Fricke, Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7234

RE: 3701 Pacific Place, Long Beach

Enclosed are the results of analyses for soil gas samples received by Environmental Support Technologies, Inc. laboratory on 11/12/07 17:00-11/14/07 16:41. The analyses were performed according to the prescribed method as outlined by EPA. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ragi W. Abraham

Ragi W. Abraham
Laboratory Director

Environmental Support Technologies, Inc. laboratories are certified by the California Department of Health Services (CDHS), Environmental Laboratory Accreditation Program (ELAP) No's. 1996, 2511, and 2631.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

LFR Levine Fricke, Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7234

Project: 3701 Pacific Place, Long Beach
Project Number: EST2694
Project Manager: Tony Marino

Reported:
27-Nov-07 14:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Analyzed
SG8A-5	3K71401-01	Air	14-Nov-07 06:50	14-Nov-07 07:18
SG9-5	3K71401-02	Air	14-Nov-07 07:55	14-Nov-07 08:09
SG9-10	3K71401-03	Air	14-Nov-07 08:20	14-Nov-07 08:35
SG13-5	3K71401-04	Air	14-Nov-07 08:45	14-Nov-07 09:01
SG13-10	3K71401-05	Air	14-Nov-07 09:13	14-Nov-07 09:27
SG13-5 (1PV)	3K71401-06	Air	14-Nov-07 10:00	14-Nov-07 10:10
SG13-5 (7PV)	3K71401-07	Air	14-Nov-07 10:22	14-Nov-07 10:36
SG5-5	3K71401-08	Air	14-Nov-07 10:50	14-Nov-07 11:03
SG3-5	3K71401-09	Air	14-Nov-07 11:15	14-Nov-07 11:30
SG3-10	3K71401-10	Air	14-Nov-07 11:42	14-Nov-07 11:58
SG2-5	3K71401-11	Air	14-Nov-07 12:10	14-Nov-07 12:26
SG2-10	3K71401-12	Air	14-Nov-07 12:38	14-Nov-07 12:54
SG12-10 (1PV)	4K72001-01	Air	12-Nov-07 08:02	12-Nov-07 08:20
SG12-10 (3PV)	4K72001-02	Air	12-Nov-07 08:09	12-Nov-07 08:44
SG12-10 (3PV)	4K72001-03	Air	12-Nov-07 08:18	12-Nov-07 09:09
SG12-5	4K72001-04	Air	12-Nov-07 09:26	12-Nov-07 09:41
SG7-5	4K72001-05	Air	12-Nov-07 09:49	12-Nov-07 10:29
SG10-5	4K72001-06	Air	12-Nov-07 10:04	12-Nov-07 10:53
SG10-10	4K72001-07	Air	12-Nov-07 10:19	12-Nov-07 11:19
SG11-5	4K72001-08	Air	12-Nov-07 10:38	12-Nov-07 11:44
SG11-10	4K72001-09	Air	12-Nov-07 11:41	12-Nov-07 12:33
SG15-5	4K72001-10	Air	12-Nov-07 12:04	12-Nov-07 12:58
SG15-5	4K72001-11	Air	12-Nov-07 12:28	12-Nov-07 13:28
SG6-5	4K72002-01	Air	13-Nov-07 07:46	13-Nov-07 08:13
SG6-10	4K72002-02	Air	13-Nov-07 08:16	13-Nov-07 09:01
SG1-5	4K72002-03	Air	13-Nov-07 08:34	13-Nov-07 09:25
SG1-10	4K72002-04	Air	13-Nov-07 08:52	13-Nov-07 09:50
SG3-5	4K72002-07	Air	13-Nov-07 09:45	13-Nov-07 11:28
SG3-10	4K72002-08	Air	13-Nov-07 10:02	13-Nov-07 11:53

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7234

Project: 3701 Pacific Place, Long Beach
Project Number: EST2694
Project Manager: Tony Marino

Reported:
27-Nov-07 14:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Analyzed
SG2-5	4K72002-10	Air	13-Nov-07 12:08	13-Nov-07 12:42
SG2-10	4K72002-11	Air	13-Nov-07 12:23	13-Nov-07 13:06
SG14-5	4K72002-12	Air	13-Nov-07 12:39	13-Nov-07 13:31
SG14-10	4K72002-13	Air	13-Nov-07 12:51	13-Nov-07 13:55
SG16-5	4K72002-14	Air	13-Nov-07 13:40	13-Nov-07 14:19
SG5-5	4K72002-15	Air	13-Nov-07 13:59	13-Nov-07 14:44

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG8A-5 (3K71401-01) Air Sampled: 11/14/07 06:50 Analyzed: 11/14/07 07:18									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	**1.2**	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG8A-5 (3K71401-01) Air Sampled: 11/14/07 06:50 Analyzed: 11/14/07 07:18									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	**1.3**	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**5.6**	1.0	"	"	"	"	"	"	
Toluene	**1.5**	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**2.0**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*92.0 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.5 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG9-5 (3K71401-02) Air Sampled: 11/14/07 07:55 Analyzed: 11/14/07 08:09									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG9-5 (3K71401-02) Air Sampled: 11/14/07 07:55 Analyzed: 11/14/07 08:09									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	**1.3**	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**5.4**	1.0	"	"	"	"	"	"	
Toluene	**1.5**	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**2.0**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*93.3 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.8 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG9-10 (3K71401-03) Air Sampled: 11/14/07 08:20 Analyzed: 11/14/07 08:35									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG9-10 (3K71401-03) Air Sampled: 11/14/07 08:20 Analyzed: 11/14/07 08:35									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	**1.2**	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**5.3**	1.0	"	"	"	"	"	"	
Toluene	**1.6**	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.5**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*93.6 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.9 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-5 (3K71401-04) Air Sampled: 11/14/07 08:45 Analyzed: 11/14/07 09:01									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-5 (3K71401-04) Air Sampled: 11/14/07 08:45 Analyzed: 11/14/07 09:01									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	**1.2**	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**7.1**	1.0	"	"	"	"	"	"	
Toluene	**1.5**	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.8**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*105 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*93.7 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.0 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-10 (3K71401-05) Air Sampled: 11/14/07 09:13 Analyzed: 11/14/07 09:27									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-10 (3K71401-05) Air Sampled: 11/14/07 09:13 Analyzed: 11/14/07 09:27									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	**1.2**	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**6.2**	1.0	"	"	"	"	"	"	
Toluene	**1.6**	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.2**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*94.4 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.9 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-5 (1PV) (3K71401-06) Air Sampled: 11/14/07 10:00 Analyzed: 11/14/07 10:10									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-5 (1PV) (3K71401-06) Air Sampled: 11/14/07 10:00 Analyzed: 11/14/07 10:10									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**9.1**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.9**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*105 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*93.6 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-5 (7PV) (3K71401-07) Air Sampled: 11/14/07 10:22 Analyzed: 11/14/07 10:36									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-5 (7PV) (3K71401-07) Air Sampled: 11/14/07 10:22 Analyzed: 11/14/07 10:36									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**7.0**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.9**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*94.4 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG5-5 (3K71401-08) Air Sampled: 11/14/07 10:50 Analyzed: 11/14/07 11:03									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG5-5 (3K71401-08) Air Sampled: 11/14/07 10:50 Analyzed: 11/14/07 11:03									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**8.4**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.9**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*94.7 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.7 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG3-5 (3K71401-09) Air Sampled: 11/14/07 11:15 Analyzed: 11/14/07 11:30									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG3-5 (3K71401-09) Air Sampled: 11/14/07 11:15 Analyzed: 11/14/07 11:30									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**8.3**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.8**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*93.1 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.5 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG3-10 (3K71401-10) Air Sampled: 11/14/07 11:42 Analyzed: 11/14/07 11:58									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG3-10 (3K71401-10) Air Sampled: 11/14/07 11:42 Analyzed: 11/14/07 11:58									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**5.6**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.1**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*93.6 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG2-5 (3K71401-11) Air Sampled: 11/14/07 12:10 Analyzed: 11/14/07 12:26									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG2-5 (3K71401-11) Air Sampled: 11/14/07 12:10 Analyzed: 11/14/07 12:26									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**7.6**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.7**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*92.4 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG2-10 (3K71401-12) Air Sampled: 11/14/07 12:38 Analyzed: 11/14/07 12:54									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG2-10 (3K71401-12) Air Sampled: 11/14/07 12:38 Analyzed: 11/14/07 12:54									
Dibromomethane	ND	1.0	ug/l	1	37K1401	11/14/07	11/14/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	**6.8**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.7**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*90.3 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-10 (1PV) (4K72001-01) Air Sampled: 11/12/07 08:02 Analyzed: 11/12/07 08:20									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-10 (1PV) (4K72001-01) Air Sampled: 11/12/07 08:02 Analyzed: 11/12/07 08:20									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-10 (3PV) (4K72001-02) Air Sampled: 11/12/07 08:09 Analyzed: 11/12/07 08:44									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-10 (3PV) (4K72001-02) Air Sampled: 11/12/07 08:09 Analyzed: 11/12/07 08:44									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*102 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-10 (3PV) (4K72001-03) Air Sampled: 11/12/07 08:18 Analyzed: 11/12/07 09:09									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-10 (3PV) (4K72001-03) Air Sampled: 11/12/07 08:18 Analyzed: 11/12/07 09:09									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*99.7 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*101 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-5 (4K72001-04) Air Sampled: 11/12/07 09:26 Analyzed: 11/12/07 09:41									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-5 (4K72001-04) Air Sampled: 11/12/07 09:26 Analyzed: 11/12/07 09:41									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*105 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*117 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG7-5 (4K72001-05) Air Sampled: 11/12/07 09:49 Analyzed: 11/12/07 10:29									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG7-5 (4K72001-05) Air Sampled: 11/12/07 09:49 Analyzed: 11/12/07 10:29									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG10-5 (4K72001-06) Air Sampled: 11/12/07 10:04 Analyzed: 11/12/07 10:53									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG10-5 (4K72001-06) Air Sampled: 11/12/07 10:04 Analyzed: 11/12/07 10:53									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*99.8 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG10-10 (4K72001-07) Air Sampled: 11/12/07 10:19 Analyzed: 11/12/07 11:19									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG10-10 (4K72001-07) Air Sampled: 11/12/07 10:19 Analyzed: 11/12/07 11:19									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*90.6 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*118 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG11-5 (4K72001-08) Air Sampled: 11/12/07 10:38 Analyzed: 11/12/07 11:44									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG11-5 (4K72001-08) Air Sampled: 11/12/07 10:38 Analyzed: 11/12/07 11:44									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*80.4 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*123 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG11-10 (4K72001-09) Air Sampled: 11/12/07 11:41 Analyzed: 11/12/07 12:33									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG11-10 (4K72001-09) Air Sampled: 11/12/07 11:41 Analyzed: 11/12/07 12:33									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG15-5 (4K72001-10) Air Sampled: 11/12/07 12:04 Analyzed: 11/12/07 12:58									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG15-5 (4K72001-10) Air Sampled: 11/12/07 12:04 Analyzed: 11/12/07 12:58									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*114 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG15-5 (4K72001-11) Air Sampled: 11/12/07 12:28 Analyzed: 11/12/07 13:28									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG15-5 (4K72001-11) Air Sampled: 11/12/07 12:28 Analyzed: 11/12/07 13:28									
Dibromomethane	ND	1.0	ug/l	1	47K2001	11/12/07	11/12/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*98.5 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*115 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG6-5 (4K72002-01) Air Sampled: 11/13/07 07:46 Analyzed: 11/13/07 08:13									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG6-5 (4K72002-01) Air Sampled: 11/13/07 07:46 Analyzed: 11/13/07 08:13									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG6-10 (4K72002-02) Air Sampled: 11/13/07 08:16 Analyzed: 11/13/07 09:01									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG6-10 (4K72002-02) Air Sampled: 11/13/07 08:16 Analyzed: 11/13/07 09:01									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*98.3 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.3 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG1-5 (4K72002-03) Air Sampled: 11/13/07 08:34 Analyzed: 11/13/07 09:25									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG1-5 (4K72002-03) Air Sampled: 11/13/07 08:34 Analyzed: 11/13/07 09:25									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.1 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG1-10 (4K72002-04) Air Sampled: 11/13/07 08:52 Analyzed: 11/13/07 09:50									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG1-10 (4K72002-04) Air Sampled: 11/13/07 08:52 Analyzed: 11/13/07 09:50									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.8 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG3-5 (4K72002-07) Air Sampled: 11/13/07 09:45 Analyzed: 11/13/07 11:28									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG3-5 (4K72002-07) Air Sampled: 11/13/07 09:45 Analyzed: 11/13/07 11:28									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*102 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.2 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG3-10 (4K72002-08) Air Sampled: 11/13/07 10:02 Analyzed: 11/13/07 11:53									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG3-10 (4K72002-08) Air Sampled: 11/13/07 10:02 Analyzed: 11/13/07 11:53									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG2-5 (4K72002-10) Air Sampled: 11/13/07 12:08 Analyzed: 11/13/07 12:42									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG2-5 (4K72002-10) Air Sampled: 11/13/07 12:08 Analyzed: 11/13/07 12:42									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG2-10 (4K72002-11) Air Sampled: 11/13/07 12:23 Analyzed: 11/13/07 13:06									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG2-10 (4K72002-11) Air Sampled: 11/13/07 12:23 Analyzed: 11/13/07 13:06									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*102 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG14-5 (4K72002-12) Air Sampled: 11/13/07 12:39 Analyzed: 11/13/07 13:31									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG14-5 (4K72002-12) Air Sampled: 11/13/07 12:39 Analyzed: 11/13/07 13:31									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG14-10 (4K72002-13) Air Sampled: 11/13/07 12:51 Analyzed: 11/13/07 13:55									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG14-10 (4K72002-13) Air Sampled: 11/13/07 12:51 Analyzed: 11/13/07 13:55									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*105 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG16-5 (4K72002-14) Air Sampled: 11/13/07 13:40 Analyzed: 11/13/07 14:19									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG16-5 (4K72002-14) Air Sampled: 11/13/07 13:40 Analyzed: 11/13/07 14:19									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*102 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG5-5 (4K72002-15) Air Sampled: 11/13/07 13:59 Analyzed: 11/13/07 14:44									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG5-5 (4K72002-15) Air Sampled: 11/13/07 13:59 Analyzed: 11/13/07 14:44									
Dibromomethane	ND	1.0	ug/l	1	47K2002	11/13/07	11/13/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
2-Propanol	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*		*75-125*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 37K1401 - Volatiles										
Blank (37K1401-BLK1)				Prepared & Analyzed: 11/14/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l							
1,1,1-Trichloroethane	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,2-Trichloro-trifluoroethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Benzene	ND	1.0	"							
Bromobenzene	ND	1.0	"							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
Carbon disulfide	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 37K1401 - Volatiles										
Blank (37K1401-BLK1)				Prepared & Analyzed: 11/14/07						
Chloromethane	ND	1.0	ug/l							
cis-1,2-Dichloroethene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
Dibromomethane	ND	1.0	"							
Dichlorodifluoromethane	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							
meta- and para-Xylenes	ND	1.0	"							
Methylene Chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
ortho-Xylene	ND	1.0	"							
p-Isopropyltoluene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
Toluene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
Vinyl Chloride	ND	1.0	"							
2-Propanol	ND	10	"							
Surrogate: Dibromofluoromethane	*23.4*		*"*	*25.0*		*93.4*	*75-125*			
Surrogate: Toluene-d8	*23.8*		*"*	*25.0*		*95.2*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*21.7*		*"*	*25.0*		*86.9*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7234

Project: 3701 Pacific Place, Long Beach
Project Number: EST2694
Project Manager: Tony Marino

Reported:
27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 37K1401 - Volatiles										
Duplicate (37K1401-DUP1)		**Source: 3K71401-01**		Prepared & Analyzed: 11/14/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l		ND				50	
1,1,1-Trichloroethane	ND	1.0	"		0.180				50	
1,1,2,2-Tetrachloroethane	ND	1.0	"		ND				50	
1,1,2-Trichloroethane	ND	1.0	"		ND				50	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"		ND				50	
1,1-Dichloroethane	ND	1.0	"		ND				50	
1,1-Dichloroethene	ND	1.0	"		ND				50	
1,1-Dichloropropene	ND	1.0	"		ND				50	
1,2,3-Trichlorobenzene	ND	1.0	"		ND				50	
1,2,3-Trichloropropane	ND	1.0	"		ND				50	
1,2,4-Trichlorobenzene	ND	1.0	"		ND				50	
1,2,4-Trimethylbenzene	0.410	1.0	"		0.380			7.59	50	
1,2-Dibromo-3-chloropropane	ND	1.0	"		ND				50	
1,2-Dibromoethane	ND	1.0	"		ND				50	
1,2-Dichlorobenzene	ND	1.0	"		ND				50	
1,2-Dichloroethane	ND	1.0	"		ND				50	
1,2-Dichloropropane	ND	1.0	"		ND				50	
1,3,5-Trimethylbenzene	0.110	1.0	"		0.110			0.00	50	
1,3-Dichlorobenzene	ND	1.0	"		ND				50	
1,3-Dichloropropane	ND	1.0	"		ND				50	
1,4-Dichlorobenzene	ND	1.0	"		ND				50	
2,2-Dichloropropane	ND	1.0	"		ND				50	
2-Chlorotoluene	ND	1.0	"		ND				50	
4-Chlorotoluene	ND	1.0	"		ND				50	
Benzene	0.940	1.0	"		0.960			2.11	50	
Bromobenzene	ND	1.0	"		ND				50	
Bromochloromethane	ND	1.0	"		ND				50	
Bromodichloromethane	ND	1.0	"		ND				50	
Bromoform	ND	1.0	"		ND				50	
Bromomethane	ND	1.0	"		ND				50	
Carbon disulfide	ND	1.0	"		ND				50	
Carbon tetrachloride	ND	1.0	"		ND				50	
Chlorobenzene	ND	1.0	"		ND				50	
Chloroethane	ND	1.0	"		ND				50	
Chloroform	ND	1.0	"		ND				50	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 37K1401 - Volatiles										
Duplicate (37K1401-DUP1)	**Source: 3K71401-01**		Prepared & Analyzed: 11/14/07							
Chloromethane	2.80	1.0	ug/l		1.19			80.7	50	QR-04
cis-1,2-Dichloroethene	ND	1.0	"		ND				50	
cis-1,3-Dichloropropene	ND	1.0	"		ND				50	
Dibromochloromethane	ND	1.0	"		ND				50	
Dibromomethane	ND	1.0	"		ND				50	
Dichlorodifluoromethane	ND	1.0	"		ND				50	
Ethylbenzene	0.420	1.0	"		0.410			2.41	50	
Hexachlorobutadiene	ND	1.0	"		ND				50	
Isopropylbenzene	ND	1.0	"		ND				50	
meta- and para-Xylenes	1.34	1.0	"		1.34			0.00	50	
Methylene Chloride	ND	1.0	"		ND				50	
Naphthalene	ND	1.0	"		ND				50	
n-Butylbenzene	ND	1.0	"		ND				50	
n-Propylbenzene	ND	1.0	"		ND				50	
ortho-Xylene	0.420	1.0	"		0.450			6.90	50	
p-Isopropyltoluene	ND	1.0	"		ND				50	
sec-Butylbenzene	ND	1.0	"		ND				50	
Styrene	ND	1.0	"		ND				50	
tert-Butylbenzene	ND	1.0	"		ND				50	
Tetrachloroethene	4.99	1.0	"		5.58			11.2	50	
Toluene	1.57	1.0	"		1.52			3.24	50	
trans-1,2-Dichloroethene	ND	1.0	"		ND				50	
trans-1,3-Dichloropropene	ND	1.0	"		ND				50	
Trichloroethene	2.37	1.0	"		2.02			15.9	50	
Trichlorofluoromethane	ND	1.0	"		ND				50	
Vinyl Chloride	ND	1.0	"		ND				50	
2-Propanol	ND	10	"		ND				200	
Surrogate: Dibromofluoromethane	*26.6*		*"*	*25.0*		*106*	*75-125*			
Surrogate: Toluene-d8	*23.4*		*"*	*25.0*		*93.8*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*24.8*		*"*	*25.0*		*99.4*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2001 - Volatiles										
Blank (47K2001-BLK1)				Prepared & Analyzed: 11/12/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l							
1,1,1-Trichloroethane	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,2-Trichloro-trifluoroethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Benzene	ND	1.0	"							
Bromobenzene	ND	1.0	"							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
Carbon disulfide	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2001 - Volatiles										
Blank (47K2001-BLK1)				Prepared & Analyzed: 11/12/07						
Chloromethane	ND	1.0	ug/l							
cis-1,2-Dichloroethene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
Dibromomethane	ND	1.0	"							
Dichlorodifluoromethane	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							
meta- and para-Xylenes	ND	1.0	"							
Methylene Chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
ortho-Xylene	ND	1.0	"							
p-Isopropyltoluene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
Toluene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
Vinyl Chloride	ND	1.0	"							
2-Propanol	ND	10	"							
Surrogate: Dibromofluoromethane	*25.6*		*"*	*25.0*		*102*	*75-125*			
Surrogate: Toluene-d8	*26.7*		*"*	*25.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*27.7*		*"*	*25.0*		*111*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2001 - Volatiles										
LCS (47K2001-BS1)				Prepared & Analyzed: 11/12/07						
1,1,1,2-Tetrachloroethane	1.05	1.0	ug/l				50-150			
1,1,1-Trichloroethane	1.27	1.0	"	1.00		127	50-150			
1,1,2,2-Tetrachloroethane	1.67	1.0	"	1.00		167	50-150			QL-H
1,1,2-Trichloroethane	1.35	1.0	"	1.00		135	50-150			
1,1,2-Trichloro-trifluoroethane	0.920	1.0	"				50-150			
1,1-Dichloroethane	1.48	1.0	"	1.00		148	50-150			
1,1-Dichloroethene	1.04	1.0	"	1.00		104	50-150			
1,1-Dichloropropene	1.41	1.0	"	1.00		141	50-150			
1,2,3-Trichlorobenzene	1.16	1.0	"	1.00		116	50-150			
1,2,3-Trichloropropane	1.92	1.0	"	1.00		192	50-150			QL-H
1,2,4-Trichlorobenzene	1.18	1.0	"	1.00		118	50-150			
1,2,4-Trimethylbenzene	1.63	1.0	"	1.00		163	50-150			QL-H
1,2-Dibromo-3-chloropropane	ND	1.0	"	1.00			50-150			QM-01
1,2-Dibromoethane	1.31	1.0	"				50-150			
1,2-Dichlorobenzene	1.32	1.0	"	1.00		132	50-150			
1,2-Dichloroethane	1.70	1.0	"	1.00		170	50-150			QL-H
1,2-Dichloropropane	1.63	1.0	"	1.00		163	50-150			QL-H
1,3,5-Trimethylbenzene	1.55	1.0	"	1.00		155	50-150			QL-H
1,3-Dichlorobenzene	1.24	1.0	"	1.00		124	50-150			
1,3-Dichloropropane	1.67	1.0	"	1.00		167	50-150			QL-H
1,4-Dichlorobenzene	1.25	1.0	"	1.00		125	50-150			
2,2-Dichloropropane	1.13	1.0	"	1.00		113	50-150			
2-Chlorotoluene	1.60	1.0	"	1.00		160	50-150			QL-H
4-Chlorotoluene	1.77	1.0	"	1.00		177	50-150			QL-H
Benzene	1.42	1.0	"	1.00		142	50-150			
Bromobenzene	1.14	1.0	"	1.00		114	50-150			
Bromochloromethane	0.890	1.0	"	1.00		89.0	50-150			
Bromodichloromethane	1.37	1.0	"	1.00		137	50-150			
Bromoform	0.870	1.0	"	1.00		87.0	50-150			
Bromomethane	6.08	1.0	"	1.00		608	50-150			QM-01
Carbon disulfide	1.13	1.0	"	1.00		113	50-150			
Carbon tetrachloride	1.06	1.0	"	1.00		106	50-150			
Chlorobenzene	1.28	1.0	"	1.00		128	50-150			
Chloroethane	1.47	1.0	"	1.00		147	50-150			
Chloroform	1.26	1.0	"	1.00		126	50-150			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2001 - Volatiles										
LCS (47K2001-BS1)				Prepared & Analyzed: 11/12/07						
Chloromethane	1.63	1.0	ug/l	1.00		163	50-150			QL-H
cis-1,2-Dichloroethene	1.18	1.0	"	1.00		118	50-150			
cis-1,3-Dichloropropene	1.46	1.0	"	1.00		146	50-150			
Dibromochloromethane	1.04	1.0	"	1.00		104	50-150			
Dibromomethane	1.36	1.0	"	1.00		136	50-150			
Dichlorodifluoromethane	1.14	1.0	"	1.00		114	50-150			
Ethylbenzene	1.48	1.0	"	1.00		148	50-150			
Hexachlorobutadiene	1.08	1.0	"	1.00		108	50-150			
Isopropylbenzene	1.57	1.0	"	1.00		157	50-150			QL-H
meta- and para-Xylenes	2.93	1.0	"				50-150			
Methylene Chloride	1.15	1.0	"	1.00		115	50-150			
Naphthalene	1.36	1.0	"	1.00		136	50-150			
n-Butylbenzene	1.80	1.0	"	1.00		180	50-150			QL-H
n-Propylbenzene	1.76	1.0	"	1.00		176	50-150			QL-H
ortho-Xylene	1.34	1.0	"				50-150			
p-Isopropyltoluene	1.50	1.0	"	1.00		150	50-150			
sec-Butylbenzene	1.67	1.0	"	1.00		167	50-150			QL-H
Styrene	1.26	1.0	"	1.00		126	50-150			
tert-Butylbenzene	1.38	1.0	"	1.00		138	50-150			
Tetrachloroethene	0.870	1.0	"	1.00		87.0	50-150			
Toluene	1.37	1.0	"	1.00		137	50-150			
trans-1,2-Dichloroethene	1.11	1.0	"	1.00		111	50-150			
trans-1,3-Dichloropropene	1.40	1.0	"	1.00		140	50-150			
Trichloroethene	0.990	1.0	"	1.00		99.0	50-150			
Trichlorofluoromethane	1.09	1.0	"	1.00		109	50-150			
Vinyl Chloride	1.48	1.0	"	1.00		148	50-150			
Surrogate: Dibromofluoromethane	*22.5*		*"*	*25.0*		*89.8*	*75-125*			
Surrogate: Toluene-d8	*26.8*		*"*	*25.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*29.6*		*"*	*25.0*		*118*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2001 - Volatiles										
LCS Dup (47K2001-BSD1)				Prepared & Analyzed: 11/12/07						
1,1,1,2-Tetrachloroethane	1.01	1.0	ug/l				50-150	3.88	200	
1,1,1-Trichloroethane	1.27	1.0	"	1.00		127	50-150	0.00	200	
1,1,2,2-Tetrachloroethane	1.78	1.0	"	1.00		178	50-150	6.38	200	QL-H
1,1,2-Trichloroethane	1.37	1.0	"	1.00		137	50-150	1.47	200	
1,1,2-Trichloro-trifluoroethane	0.660	1.0	"				50-150	32.9	200	
1,1-Dichloroethane	1.44	1.0	"	1.00		144	50-150	2.74	200	
1,1-Dichloroethene	1.03	1.0	"	1.00		103	50-150	0.966	200	
1,1-Dichloropropene	1.38	1.0	"	1.00		138	50-150	2.15	200	
1,2,3-Trichlorobenzene	1.00	1.0	"	1.00		100	50-150	14.8	200	
1,2,3-Trichloropropane	1.81	1.0	"	1.00		181	50-150	5.90	200	QL-H
1,2,4-Trichlorobenzene	1.08	1.0	"	1.00		108	50-150	8.85	200	
1,2,4-Trimethylbenzene	1.51	1.0	"	1.00		151	50-150	7.64	200	QL-H
1,2-Dibromo-3-chloropropane	ND	1.0	"	1.00			50-150		200	QM-01
1,2-Dibromoethane	1.11	1.0	"				50-150	16.5	200	
1,2-Dichlorobenzene	1.19	1.0	"	1.00		119	50-150	10.4	200	
1,2-Dichloroethane	1.63	1.0	"	1.00		163	50-150	4.20	200	QL-H
1,2-Dichloropropane	1.52	1.0	"	1.00		152	50-150	6.98	200	QL-H
1,3,5-Trimethylbenzene	1.34	1.0	"	1.00		134	50-150	14.5	200	
1,3-Dichlorobenzene	1.14	1.0	"	1.00		114	50-150	8.40	200	
1,3-Dichloropropane	1.33	1.0	"	1.00		133	50-150	22.7	200	
1,4-Dichlorobenzene	1.08	1.0	"	1.00		108	50-150	14.6	200	
2,2-Dichloropropane	1.07	1.0	"	1.00		107	50-150	5.45	200	
2-Chlorotoluene	1.41	1.0	"	1.00		141	50-150	12.6	200	
4-Chlorotoluene	1.56	1.0	"	1.00		156	50-150	12.6	200	QL-H
Benzene	1.37	1.0	"	1.00		137	50-150	3.58	200	
Bromobenzene	1.00	1.0	"	1.00		100	50-150	13.1	200	
Bromochloromethane	0.730	1.0	"	1.00		73.0	50-150	19.8	200	
Bromodichloromethane	1.24	1.0	"	1.00		124	50-150	9.96	200	
Bromoform	0.850	1.0	"	1.00		85.0	50-150	2.33	200	
Bromomethane	5.76	1.0	"	1.00		576	50-150	5.41	200	QM-01
Carbon disulfide	1.09	1.0	"	1.00		109	50-150	3.60	200	
Carbon tetrachloride	1.04	1.0	"	1.00		104	50-150	1.90	200	
Chlorobenzene	1.20	1.0	"	1.00		120	50-150	6.45	200	
Chloroethane	1.47	1.0	"	1.00		147	50-150	0.00	200	
Chloroform	1.23	1.0	"	1.00		123	50-150	2.41	200	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2001 - Volatiles										
LCS Dup (47K2001-BSD1)				Prepared & Analyzed: 11/12/07						
Chloromethane	1.68	1.0	ug/l	1.00		168	50-150	3.02	200	QL-H
cis-1,2-Dichloroethene	1.21	1.0	"	1.00		121	50-150	2.51	200	
cis-1,3-Dichloropropene	1.31	1.0	"	1.00		131	50-150	10.8	200	
Dibromochloromethane	0.960	1.0	"	1.00		96.0	50-150	8.00	200	
Dibromomethane	0.980	1.0	"	1.00		98.0	50-150	32.5	200	
Dichlorodifluoromethane	1.25	1.0	"	1.00		125	50-150	9.21	200	
Ethylbenzene	1.39	1.0	"	1.00		139	50-150	6.27	200	
Hexachlorobutadiene	0.930	1.0	"	1.00		93.0	50-150	14.9	200	
Isopropylbenzene	1.43	1.0	"	1.00		143	50-150	9.33	200	
meta- and para-Xylenes	2.76	1.0	"				50-150	5.98	200	
Methylene Chloride	1.20	1.0	"	1.00		120	50-150	4.26	200	
Naphthalene	1.26	1.0	"	1.00		126	50-150	7.63	200	
n-Butylbenzene	1.51	1.0	"	1.00		151	50-150	17.5	200	QL-H
n-Propylbenzene	1.53	1.0	"	1.00		153	50-150	14.0	200	QL-H
ortho-Xylene	1.27	1.0	"				50-150	5.36	200	
p-Isopropyltoluene	1.25	1.0	"	1.00		125	50-150	18.2	200	
sec-Butylbenzene	1.46	1.0	"	1.00		146	50-150	13.4	200	
Styrene	1.19	1.0	"	1.00		119	50-150	5.71	200	
tert-Butylbenzene	1.30	1.0	"	1.00		130	50-150	5.97	200	
Tetrachloroethene	1.01	1.0	"	1.00		101	50-150	14.9	200	
Toluene	1.36	1.0	"	1.00		136	50-150	0.733	200	
trans-1,2-Dichloroethene	1.20	1.0	"	1.00		120	50-150	7.79	200	
trans-1,3-Dichloropropene	1.23	1.0	"	1.00		123	50-150	12.9	200	
Trichloroethene	0.830	1.0	"	1.00		83.0	50-150	17.6	200	
Trichlorofluoromethane	1.06	1.0	"	1.00		106	50-150	2.79	200	
Vinyl Chloride	1.48	1.0	"	1.00		148	50-150	0.00	200	
Surrogate: Dibromofluoromethane	*22.9*		*"*	*25.0*		*91.7*	*75-125*			
Surrogate: Toluene-d8	*27.0*		*"*	*25.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*29.3*		*"*	*25.0*		*117*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7234

Project: 3701 Pacific Place, Long Beach
Project Number: EST2694
Project Manager: Tony Marino

Reported:
27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2001 - Volatiles										
Duplicate (47K2001-DUP1)		**Source: 4K72001-08**		Prepared & Analyzed: 11/12/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l		ND				50	
1,1,1-Trichloroethane	ND	1.0	"		ND				50	
1,1,2,2-Tetrachloroethane	ND	1.0	"		ND				50	
1,1,2-Trichloroethane	ND	1.0	"		ND				50	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"		ND				50	
1,1-Dichloroethane	ND	1.0	"		ND				50	
1,1-Dichloroethene	ND	1.0	"		ND				50	
1,1-Dichloropropene	ND	1.0	"		ND				50	
1,2,3-Trichlorobenzene	ND	1.0	"		ND				50	
1,2,3-Trichloropropane	ND	1.0	"		ND				50	
1,2,4-Trichlorobenzene	ND	1.0	"		ND				50	
1,2,4-Trimethylbenzene	ND	1.0	"		ND				50	
1,2-Dibromo-3-chloropropane	ND	1.0	"		ND				50	
1,2-Dibromoethane	ND	1.0	"		ND				50	
1,2-Dichlorobenzene	ND	1.0	"		ND				50	
1,2-Dichloroethane	ND	1.0	"		ND				50	
1,2-Dichloropropane	ND	1.0	"		ND				50	
1,3,5-Trimethylbenzene	ND	1.0	"		ND				50	
1,3-Dichlorobenzene	ND	1.0	"		ND				50	
1,3-Dichloropropane	ND	1.0	"		ND				50	
1,4-Dichlorobenzene	ND	1.0	"		ND				50	
2,2-Dichloropropane	ND	1.0	"		ND				50	
2-Chlorotoluene	ND	1.0	"		ND				50	
4-Chlorotoluene	ND	1.0	"		ND				50	
Benzene	0.120	1.0	"		ND				50	
Bromobenzene	ND	1.0	"		ND				50	
Bromochloromethane	ND	1.0	"		ND				50	
Bromodichloromethane	ND	1.0	"		ND				50	
Bromoform	ND	1.0	"		ND				50	
Bromomethane	ND	1.0	"		ND				50	
Carbon disulfide	ND	1.0	"		ND				50	
Carbon tetrachloride	ND	1.0	"		ND				50	
Chlorobenzene	ND	1.0	"		ND				50	
Chloroethane	ND	1.0	"		ND				50	
Chloroform	ND	1.0	"		ND				50	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2001 - Volatiles										
Duplicate (47K2001-DUP1)		**Source: 4K72001-08**		Prepared & Analyzed: 11/12/07						
Chloromethane	ND	1.0	ug/l		ND				50	
cis-1,2-Dichloroethene	ND	1.0	"		ND				50	
cis-1,3-Dichloropropene	ND	1.0	"		ND				50	
Dibromochloromethane	ND	1.0	"		ND				50	
Dibromomethane	ND	1.0	"		ND				50	
Dichlorodifluoromethane	ND	1.0	"		ND				50	
Ethylbenzene	ND	1.0	"		ND				50	
Hexachlorobutadiene	ND	1.0	"		ND				50	
Isopropylbenzene	ND	1.0	"		ND				50	
meta- and para-Xylenes	ND	1.0	"		ND				50	
Methylene Chloride	ND	1.0	"		ND				50	
Naphthalene	ND	1.0	"		ND				50	
n-Butylbenzene	ND	1.0	"		ND				50	
n-Propylbenzene	ND	1.0	"		ND				50	
ortho-Xylene	ND	1.0	"		ND				50	
p-Isopropyltoluene	ND	1.0	"		ND				50	
sec-Butylbenzene	ND	1.0	"		ND				50	
Styrene	ND	1.0	"		ND				50	
tert-Butylbenzene	ND	1.0	"		ND				50	
Tetrachloroethene	ND	1.0	"		0.280				50	
Toluene	0.200	1.0	"		0.180			10.5	50	
trans-1,2-Dichloroethene	ND	1.0	"		ND				50	
trans-1,3-Dichloropropene	ND	1.0	"		ND				50	
Trichloroethene	ND	1.0	"		ND				50	
Trichlorofluoromethane	ND	1.0	"		ND				50	
Vinyl Chloride	ND	1.0	"		ND				50	
2-Propanol	ND	10	"		ND				200	
Surrogate: Dibromofluoromethane	*25.6*		*"*	*25.0*		*103*	*75-125*			
Surrogate: Toluene-d8	*25.9*		*"*	*25.0*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*28.8*		*"*	*25.0*		*115*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2002 - Volatiles										
Blank (47K2002-BLK1)				Prepared & Analyzed: 11/13/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l							
1,1,1-Trichloroethane	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,2-Trichloro-trifluoroethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Benzene	ND	1.0	"							
Bromobenzene	ND	1.0	"							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
Carbon disulfide	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2002 - Volatiles										
Blank (47K2002-BLK1)				Prepared & Analyzed: 11/13/07						
Chloromethane	ND	1.0	ug/l							
cis-1,2-Dichloroethene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
Dibromomethane	ND	1.0	"							
Dichlorodifluoromethane	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							
meta- and para-Xylenes	ND	1.0	"							
Methylene Chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
ortho-Xylene	ND	1.0	"							
p-Isopropyltoluene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
Toluene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
Vinyl Chloride	ND	1.0	"							
2-Propanol	ND	10	"							
Surrogate: Dibromofluoromethane	*24.2*		*"*	*25.0*		*96.9*	*75-125*			
Surrogate: Toluene-d8	*25.2*		*"*	*25.0*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*23.9*		*"*	*25.0*		*95.6*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2002 - Volatiles										
LCS (47K2002-BS1)				Prepared & Analyzed: 11/13/07						
1,1,1,2-Tetrachloroethane	1.06	1.0	ug/l				50-150			
1,1,1-Trichloroethane	0.930	1.0	"	1.00		93.0	50-150			
1,1,2,2-Tetrachloroethane	1.04	1.0	"	1.00		104	50-150			
1,1,2-Trichloroethane	1.03	1.0	"	1.00		103	50-150			
1,1,2-Trichloro-trifluoroethane	0.800	1.0	"				50-150			
1,1-Dichloroethane	0.940	1.0	"	1.00		94.0	50-150			
1,1-Dichloroethene	0.900	1.0	"	1.00		90.0	50-150			
1,1-Dichloropropene	1.00	1.0	"	1.00		100	50-150			
1,2,3-Trichlorobenzene	1.19	1.0	"	1.00		119	50-150			
1,2,3-Trichloropropane	1.15	1.0	"	1.00		115	50-150			
1,2,4-Trichlorobenzene	1.06	1.0	"	1.00		106	50-150			
1,2,4-Trimethylbenzene	0.930	1.0	"	1.00		93.0	50-150			
1,2-Dibromo-3-chloropropane	1.63	1.0	"	1.00		163	50-150			QM-01
1,2-Dibromoethane	0.900	1.0	"				50-150			
1,2-Dichlorobenzene	0.990	1.0	"	1.00		99.0	50-150			
1,2-Dichloroethane	1.02	1.0	"	1.00		102	50-150			
1,2-Dichloropropane	1.07	1.0	"	1.00		107	50-150			
1,3,5-Trimethylbenzene	0.960	1.0	"	1.00		96.0	50-150			
1,3-Dichlorobenzene	0.990	1.0	"	1.00		99.0	50-150			
1,3-Dichloropropane	1.04	1.0	"	1.00		104	50-150			
1,4-Dichlorobenzene	1.00	1.0	"	1.00		100	50-150			
2,2-Dichloropropane	0.480	1.0	"	1.00		48.0	50-150			QM-01
2-Chlorotoluene	1.02	1.0	"	1.00		102	50-150			
4-Chlorotoluene	0.960	1.0	"	1.00		96.0	50-150			
Benzene	0.980	1.0	"	1.00		98.0	50-150			
Bromobenzene	0.900	1.0	"	1.00		90.0	50-150			
Bromochloromethane	1.28	1.0	"	1.00		128	50-150			
Bromodichloromethane	1.02	1.0	"	1.00		102	50-150			
Bromoform	0.940	1.0	"	1.00		94.0	50-150			
Bromomethane	5.66	1.0	"	1.00		566	50-150			QM-01
Carbon disulfide	1.00	1.0	"	1.00		100	50-150			
Carbon tetrachloride	0.890	1.0	"	1.00		89.0	50-150			
Chlorobenzene	0.970	1.0	"	1.00		97.0	50-150			
Chloroethane	1.10	1.0	"	1.00		110	50-150			
Chloroform	0.970	1.0	"	1.00		97.0	50-150			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2002 - Volatiles										
LCS (47K2002-BS1)				Prepared & Analyzed: 11/13/07						
Chloromethane	0.330	1.0	ug/l	1.00		33.0	50-150			QM-01
cis-1,2-Dichloroethene	0.950	1.0	"	1.00		95.0	50-150			
cis-1,3-Dichloropropene	0.960	1.0	"	1.00		96.0	50-150			
Dibromochloromethane	0.910	1.0	"	1.00		91.0	50-150			
Dibromomethane	1.05	1.0	"	1.00		105	50-150			
Dichlorodifluoromethane	0.880	1.0	"	1.00		88.0	50-150			
Ethylbenzene	0.990	1.0	"	1.00		99.0	50-150			
Hexachlorobutadiene	1.09	1.0	"	1.00		109	50-150			
Isopropylbenzene	0.950	1.0	"	1.00		95.0	50-150			
meta- and para-Xylenes	1.99	1.0	"				50-150			
Methylene Chloride	0.920	1.0	"	1.00		92.0	50-150			
Naphthalene	1.16	1.0	"	1.00		116	50-150			
n-Butylbenzene	1.01	1.0	"	1.00		101	50-150			
n-Propylbenzene	0.970	1.0	"	1.00		97.0	50-150			
ortho-Xylene	1.06	1.0	"				50-150			
p-Isopropyltoluene	1.00	1.0	"	1.00		100	50-150			
sec-Butylbenzene	0.950	1.0	"	1.00		95.0	50-150			
Styrene	1.03	1.0	"	1.00		103	50-150			
tert-Butylbenzene	1.02	1.0	"	1.00		102	50-150			
Tetrachloroethene	1.03	1.0	"	1.00		103	50-150			
Toluene	1.04	1.0	"	1.00		104	50-150			
trans-1,2-Dichloroethene	0.980	1.0	"	1.00		98.0	50-150			
trans-1,3-Dichloropropene	0.990	1.0	"	1.00		99.0	50-150			
Trichloroethene	0.960	1.0	"	1.00		96.0	50-150			
Trichlorofluoromethane	0.830	1.0	"	1.00		83.0	50-150			
Vinyl Chloride	0.900	1.0	"	1.00		90.0	50-150			
Surrogate: Dibromofluoromethane	*25.2*		*"*	*25.0*		*101*	*75-125*			
Surrogate: Toluene-d8	*25.7*		*"*	*25.0*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*25.3*		*"*	*25.0*		*101*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2002 - Volatiles										
Duplicate (47K2002-DUP1)		**Source: 4K72002-01**		Prepared & Analyzed: 11/13/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l		ND				50	
1,1,1-Trichloroethane	ND	1.0	"		ND				50	
1,1,2,2-Tetrachloroethane	ND	1.0	"		ND				50	
1,1,2-Trichloroethane	ND	1.0	"		ND				50	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"		ND				50	
1,1-Dichloroethane	ND	1.0	"		ND				50	
1,1-Dichloroethene	ND	1.0	"		ND				50	
1,1-Dichloropropene	ND	1.0	"		ND				50	
1,2,3-Trichlorobenzene	ND	1.0	"		ND				50	
1,2,3-Trichloropropane	ND	1.0	"		ND				50	
1,2,4-Trichlorobenzene	ND	1.0	"		ND				50	
1,2,4-Trimethylbenzene	ND	1.0	"		ND				50	
1,2-Dibromo-3-chloropropane	ND	1.0	"		ND				50	
1,2-Dibromoethane	ND	1.0	"		ND				50	
1,2-Dichlorobenzene	ND	1.0	"		ND				50	
1,2-Dichloroethane	ND	1.0	"		ND				50	
1,2-Dichloropropane	ND	1.0	"		ND				50	
1,3,5-Trimethylbenzene	ND	1.0	"		ND				50	
1,3-Dichlorobenzene	ND	1.0	"		ND				50	
1,3-Dichloropropane	ND	1.0	"		ND				50	
1,4-Dichlorobenzene	ND	1.0	"		ND				50	
2,2-Dichloropropane	ND	1.0	"		ND				50	
2-Chlorotoluene	ND	1.0	"		ND				50	
4-Chlorotoluene	ND	1.0	"		ND				50	
Benzene	0.110	1.0	"		0.120			8.70	50	
Bromobenzene	ND	1.0	"		ND				50	
Bromochloromethane	ND	1.0	"		ND				50	
Bromodichloromethane	ND	1.0	"		ND				50	
Bromoform	ND	1.0	"		ND				50	
Bromomethane	ND	1.0	"		ND				50	
Carbon disulfide	ND	1.0	"		ND				50	
Carbon tetrachloride	ND	1.0	"		ND				50	
Chlorobenzene	ND	1.0	"		ND				50	
Chloroethane	ND	1.0	"		ND				50	
Chloroform	ND	1.0	"		ND				50	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:32

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 47K2002 - Volatiles										
Duplicate (47K2002-DUP1)	**Source: 4K72002-01**		Prepared & Analyzed: 11/13/07							
Chloromethane	ND	1.0	ug/l		ND				50	
cis-1,2-Dichloroethene	ND	1.0	"		ND				50	
cis-1,3-Dichloropropene	ND	1.0	"		ND				50	
Dibromochloromethane	ND	1.0	"		ND				50	
Dibromomethane	ND	1.0	"		ND				50	
Dichlorodifluoromethane	ND	1.0	"		ND				50	
Ethylbenzene	0.220	1.0	"		ND				50	
Hexachlorobutadiene	ND	1.0	"		ND				50	
Isopropylbenzene	ND	1.0	"		ND				50	
meta- and para-Xylenes	0.190	1.0	"		0.220			14.6	50	
Methylene Chloride	ND	1.0	"		ND				50	
Naphthalene	ND	1.0	"		ND				50	
n-Butylbenzene	ND	1.0	"		ND				50	
n-Propylbenzene	ND	1.0	"		ND				50	
ortho-Xylene	ND	1.0	"		ND				50	
p-Isopropyltoluene	ND	1.0	"		ND				50	
sec-Butylbenzene	ND	1.0	"		ND				50	
Styrene	ND	1.0	"		ND				50	
tert-Butylbenzene	ND	1.0	"		ND				50	
Tetrachloroethene	ND	1.0	"		ND				50	
Toluene	0.580	1.0	"		0.590			1.71	50	
trans-1,2-Dichloroethene	ND	1.0	"		ND				50	
trans-1,3-Dichloropropene	ND	1.0	"		ND				50	
Trichloroethene	ND	1.0	"		ND				50	
Trichlorofluoromethane	ND	1.0	"		ND				50	
Vinyl Chloride	ND	1.0	"		ND				50	
2-Propanol	ND	10	"		ND				200	
Surrogate: Dibromofluoromethane	*25.3*		*"*	*25.0*		*101*	*75-125*			
Surrogate: Toluene-d8	*26.6*		*"*	*25.0*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*24.3*		*"*	*25.0*		*97.0*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc. 3150 Bristol Street, Suite 250 Costa Mesa, California 92626-7234	Project: 3701 Pacific Place, Long Beach Project Number: EST2694 Project Manager: Tony Marino	**Reported:** 27-Nov-07 14:32

Notes and Definitions

QR-04	The RPD result for this analyte in the sample exceeded the QC control limits; however, the RPD for other analytes were within the QC control limits.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
QL-H	The spike recovery was out high for the LCS and/or the LCSD; however the analyte was not detected in any of the analyzed samples.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Environmental Support Technologies, Inc.
360 Goddard
Irvine, California 92618
(949) 679-9500
(949) 679-9501 fax

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Client Name/Address: LFR / Long Beach, 3701 Pacific Pl, Long Beach, Ca

Project: LFR Long Beach

Project Manager: Rag Abraham

Sampler: Dien Nguyen

Sample Description	Sample matrix	Container type	# of Containers	Sampling Date/Time	Preservative Type	ANALYSIS REQUIRED: Methane					Special Instructions
SG2-5	AIR	TEDLAR	1	11/14/07 1454	NA	X					
1 -10				1450		X					
SG1-5				1443		X					
1 -10				1446		X					
SG16-5				1520		X					
SG3-5				1456		X					
1 -10				1500		X					
SG13-5				1332		X					
1 -10				1336		X					
SG7-5				1401		X					

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/14/07 1702	Raj Abraham	11/14/07 1702
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

Turnaround Time: (check)
same day ____ 48 hours ____ normal ____
24 hours ____ 72 hours ____

Sample Integrity: (check)
intact ____ cooled ____ warm ____

Environmental Support Technologies, Inc.
360 Goddard
Irvine, California 92618
(949) 679-9500
(949) 679-9501 fax

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Client Name/Address: LFR / Long Beach 3701 Pacific Pl Long Beach, Ca	Project: LFR Long Beach	ANALYSIS REQUIRED
Project Manager: Raji Abraham	Sampler: Dien Nguyen	Methane

Sample Description	Sample matrix	Container type	# of Containers	Sampling Date/Time	Preservative Type	Special Instructions
SG9-5	AIR	TEDLAR	1	11/14/07 1323	NA	
-10				1325		
SG15-5				1342		
-10				1345		
SG8-5				1320		
SG5-5				1421		

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (check)
	11/14/07 1702	Raj Abraham	11/14/07 1702	same day ___ 48 hours ___ normal ___
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ___ 72 hours ___
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Integrity: (check) Intact ___ cooled ___ warm ___

714 444 0117 LFR Inc. 11:13:26 11-27-2007 2/2

November 27, 2007

Tony Marino
LFR Levine Fricke, Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7234

RE: 3701 Pacific Place, Long Beach

Enclosed are the results of analyses for samples received by the laboratory on 11/14/07 17:42. The samples were received by Environmental Support Technologies, Inc. laboratory with a chain of custody record. The analyses were performed according to the prescribed method as outlined by EPA. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ragi W. Abraham

Ragi W. Abraham
Laboratory Director

Environmental Support Technologies, Inc. laboratories are certified by the California Department of Health Services (CDHS), Environmental Laboratory Accreditation Program (ELAP) No's. 1996, 2511, and 2631.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SG12-5	2K71402-01	Air	14-Nov-07 12:28	14-Nov-07 17:42
SG12-10	2K71402-02	Air	14-Nov-07 12:30	14-Nov-07 17:42
SG6-5	2K71402-03	Air	14-Nov-07 14:07	14-Nov-07 17:42
SG6-10	2K71402-04	Air	14-Nov-07 14:10	14-Nov-07 17:42
SG14-5	2K71402-05	Air	14-Nov-07 13:38	14-Nov-07 17:42
SG14-10	2K71402-06	Air	14-Nov-07 13:40	14-Nov-07 17:42
SG11-5	2K71402-07	Air	14-Nov-07 13:48	14-Nov-07 17:42
SG11-10	2K71402-08	Air	14-Nov-07 13:51	14-Nov-07 17:42
SG10-5	2K71402-09	Air	14-Nov-07 13:54	14-Nov-07 17:42
SG10-10	2K71402-10	Air	14-Nov-07 13:58	14-Nov-07 17:42
SG2-5	2K71402-11	Air	14-Nov-07 14:54	14-Nov-07 17:42
SG2-10	2K71402-12	Air	14-Nov-07 14:50	14-Nov-07 17:42
SG1-5	2K71402-13	Air	14-Nov-07 14:43	14-Nov-07 17:42
SG1-10	2K71402-14	Air	14-Nov-07 14:46	14-Nov-07 17:42
SG16-5	2K71402-15	Air	14-Nov-07 15:20	14-Nov-07 17:42
SG3-5	2K71402-16	Air	14-Nov-07 14:56	14-Nov-07 17:42
SG3-10	2K71402-17	Air	14-Nov-07 15:00	14-Nov-07 17:42
SG13-5	2K71402-18	Air	14-Nov-07 13:32	14-Nov-07 17:42
SG13-10	2K71402-19	Air	14-Nov-07 13:36	14-Nov-07 17:42
SG7-5	2K71402-20	Air	14-Nov-07 14:01	14-Nov-07 17:42
SG9-5	2K71402-21	Air	14-Nov-07 13:23	14-Nov-07 17:42
SG9-10	2K71402-22	Air	14-Nov-07 13:25	14-Nov-07 17:42
SG15-5	2K71402-23	Air	14-Nov-07 13:42	14-Nov-07 17:42
SG15-10	2K71402-24	Air	14-Nov-07 13:45	14-Nov-07 17:42
SG8A-5	2K71402-25	Air	14-Nov-07 13:20	14-Nov-07 17:42
SG5-5	2K71402-26	Air	14-Nov-07 14:21	14-Nov-07 17:42

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:41

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG12-5 (2K71402-01) Air Sampled: 11/14/07 12:28 Received: 11/14/07 17:42									
Methane	**1900**	20	ppmv	2	27K1402	11/14/07	11/14/07	8015M	
SG12-10 (2K71402-02) Air Sampled: 11/14/07 12:30 Received: 11/14/07 17:42									
Methane	**160000**	2000	ppmv	200	27K1501	11/15/07	11/15/07	8015M	
SG6-5 (2K71402-03) Air Sampled: 11/14/07 14:07 Received: 11/14/07 17:42									
Methane	**110**	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG6-10 (2K71402-04) Air Sampled: 11/14/07 14:10 Received: 11/14/07 17:42									
Methane	ND	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG14-5 (2K71402-05) Air Sampled: 11/14/07 13:38 Received: 11/14/07 17:42									
Methane	**12**	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG14-10 (2K71402-06) Air Sampled: 11/14/07 13:40 Received: 11/14/07 17:42									
Methane	ND	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG11-5 (2K71402-07) Air Sampled: 11/14/07 13:48 Received: 11/14/07 17:42									
Methane	**180000**	2000	ppmv	200	27K1501	11/15/07	11/15/07	8015M	
SG11-10 (2K71402-08) Air Sampled: 11/14/07 13:51 Received: 11/14/07 17:42									
Methane	**300000**	5000	ppmv	500	27K1501	11/15/07	11/15/07	8015M	
SG10-5 (2K71402-09) Air Sampled: 11/14/07 13:54 Received: 11/14/07 17:42									
Methane	**1400**	20	ppmv	2	27K1402	11/14/07	11/14/07	8015M	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:41

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG10-10 (2K71402-10) Air Sampled: 11/14/07 13:58 Received: 11/14/07 17:42									
Methane	**27**	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG2-5 (2K71402-11) Air Sampled: 11/14/07 14:54 Received: 11/14/07 17:42									
Methane	ND	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG2-10 (2K71402-12) Air Sampled: 11/14/07 14:50 Received: 11/14/07 17:42									
Methane	**36**	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG1-5 (2K71402-13) Air Sampled: 11/14/07 14:43 Received: 11/14/07 17:42									
Methane	**1600**	20	ppmv	2	27K1402	11/14/07	11/14/07	8015M	
SG1-10 (2K71402-14) Air Sampled: 11/14/07 14:46 Received: 11/14/07 17:42									
Methane	**32**	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG16-5 (2K71402-15) Air Sampled: 11/14/07 15:20 Received: 11/14/07 17:42									
Methane	**3300**	50	ppmv	5	27K1402	11/14/07	11/14/07	8015M	
SG3-5 (2K71402-16) Air Sampled: 11/14/07 14:56 Received: 11/14/07 17:42									
Methane	**21**	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG3-10 (2K71402-17) Air Sampled: 11/14/07 15:00 Received: 11/14/07 17:42									
Methane	ND	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG13-5 (2K71402-18) Air Sampled: 11/14/07 13:32 Received: 11/14/07 17:42									
Methane	ND	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:41

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG13-10 (2K71402-19) Air Sampled: 11/14/07 13:36 Received: 11/14/07 17:42									
Methane	**560**	10	ppmv	1	27K1402	11/14/07	11/14/07	8015M	
SG7-5 (2K71402-20) Air Sampled: 11/14/07 14:01 Received: 11/14/07 17:42									
Methane	**32000**	1000	ppmv	100	27K1501	11/15/07	11/15/07	8015M	
SG9-5 (2K71402-21) Air Sampled: 11/14/07 13:23 Received: 11/14/07 17:42									
Methane	**490**	10	ppmv	1	27K1501	11/15/07	11/15/07	8015M	
SG9-10 (2K71402-22) Air Sampled: 11/14/07 13:25 Received: 11/14/07 17:42									
Methane	**72000**	2000	ppmv	200	27K1501	11/15/07	11/15/07	8015M	
SG15-5 (2K71402-23) Air Sampled: 11/14/07 13:42 Received: 11/14/07 17:42									
Methane	ND	10	ppmv	1	27K1501	11/15/07	11/15/07	8015M	
SG15-10 (2K71402-24) Air Sampled: 11/14/07 13:45 Received: 11/14/07 17:42									
Methane	ND	10	ppmv	1	27K1501	11/15/07	11/15/07	8015M	
SG8A-5 (2K71402-25) Air Sampled: 11/14/07 13:20 Received: 11/14/07 17:42									
Methane	**150000**	2000	ppmv	200	27K1501	11/15/07	11/15/07	8015M	
SG5-5 (2K71402-26) Air Sampled: 11/14/07 14:21 Received: 11/14/07 17:42									
Methane	**170000**	5000	ppmv	500	27K1501	11/15/07	11/15/07	8015M	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:41

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K1402 - Volatiles										
Blank (27K1402-BLK1)				Prepared & Analyzed: 11/14/07						
Methane	ND	10	ppmv							
LCS (27K1402-BS1)				Prepared & Analyzed: 11/14/07						
Methane	121	10	ppmv	100		121	70-130			
LCS Dup (27K1402-BSD1)				Prepared & Analyzed: 11/14/07						
Methane	114	10	ppmv	100		114	70-130	5.40	20	
Duplicate (27K1402-DUP1)		**Source: 2K71402-13**		Prepared & Analyzed: 11/14/07						
Methane	1680	20	ppmv		1650			1.76	20	
Batch 27K1501 - Volatiles										
Blank (27K1501-BLK1)				Prepared & Analyzed: 11/15/07						
Methane	ND	10	ppmv							
LCS (27K1501-BS1)				Prepared & Analyzed: 11/15/07						
Methane	95.1	10	ppmv	100		95.1	70-130			
LCS Dup (27K1501-BSD1)				Prepared & Analyzed: 11/15/07						
Methane	88.4	10	ppmv	100		88.4	70-130	7.23	20	
Duplicate (27K1501-DUP1)		**Source: 2K71402-08**		Prepared & Analyzed: 11/15/07						
Methane	246000	5000	ppmv		300000			19.8	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 3701 Pacific Place, Long Beach	
3150 Bristol Street, Suite 250	Project Number: EST2694	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	27-Nov-07 14:41

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

Environmental Support Technologies, Inc.
360 Goddard
Irvine, California 92618
(949) 679-9500
(949) 679-9501 fax

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Client Name/Address:	Project:	ANALYSIS REQUIRED					
LFR / Long Beach 3701 Pacific Pl Long Beach, Ca	LFR Long Beach	Methane					
Project Manager:	**Sampler:**						
Ray Abraham	Dien Nguyen						

Sample Description	Sample matrix	Container type	# of Containers	Sampling Date/Time	Preservative Type	Methane					Special Instructions
SG 12-5	AIR	TEDLAR	1	11/14/07 1228	NA	X					
" -10	"	"	"	1230	"	X					
SG 6-5	"	"	"	1407	"	X					
" -10	"	"	"	1410	"	X					
SG 14-5	"	"	"	1338	"	X					
" -10	"	"	"	1340	"	X					
SG 11-5	"	"	"	1348	"	X					
" -10	"	"	"	1351	"	X					
SG 10-5	"	"	"	1354	"	X					
" -10	"	"	"	1358	"	X					

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	11/14/07 1702	Ray Abraham	11/14/07 1702
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

Turnaround Time: (check)
same day ____ 48 hours ____ normal ____
24 hours ____ 72 hours ____

Sample Integrity: (check)
intact ____ cooled ____ warm ____

Environmental Support Technologies, Inc.
360 Goddard
Irvine, California 92618
(949) 679-9500
(949) 679-9501 fax

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Client Name/Address: LFR / Long Beach, 3701 Pacific Pl, Long Beach, Ca

Project: LFR Long Beach

Project Manager: Rag Abraham

Sampler: Dien Nguyen

Sample Description	Sample matrix	Container type	# of Containers	Sampling Date/Time	Preservative Type	ANALYSIS REQUIRED: Methane					Special Instructions
SG2-5	AIR	TEDLAR	1	11/14/07 1454	NA	X					
1 -10				1450		X					
SG1-5				1443		X					
1 -10				1446		X					
SG16-5				1520		X					
SG3-5				1456		X					
1 -10				1500		X					
SG13-5				1332		X					
1 -10				1336		X					
SG7-5				1401		X					

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/14/07 1702	Raj Abraham	11/14/07 1702
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

Turnaround Time: (check)
same day ____ 48 hours ____ normal ____
24 hours ____ 72 hours ____

Sample Integrity: (check)
intact ____ cooled ____ warm ____

Environmental Support Technologies, Inc.
360 Goddard
Irvine, California 92618
(949) 679-9500
(949) 679-9501 fax

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Client Name/Address: LFR / Long Beach 3701 Pacific Pl Long Beach, Ca	Project: LFR Long Beach	ANALYSIS REQUIRED
Project Manager: Raji Abraham	Sampler: Dien Nguyen	Methane

Sample Description	Sample matrix	Container type	# of Containers	Sampling Date/Time	Preservative Type	Special Instructions
SG9-5	AIR	TEDLAR	1	11/14/07 1323	NA	
-10				1325		
SG15-5				1342		
-10				1345		
SG8-5				1320		
SG5-5				1421		

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (check)
	11/14/07 1702	Raj Abraham	11/14/07 1702	same day ___ 48 hours ___ normal ___
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ___ 72 hours ___
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Integrity: (check) Intact ___ cooled ___ warm ___

714 444 0117 LFR Inc. 11:13:26 11-27-2007 2/2

Ace Laboratories, Inc.

November 29, 2007

Ragi Abraham
Environmental Support Technologies, Inc.
360 Goddard
Irvine, CA. 92618

RE: Long Beach Golf Center / #2694

Dear Ragi:

The following report includes analytical results for the samples received on November 16, 2007. The samples were received intact and in good condition. Ace Laboratories, Inc is certified by the State of New York ELAP, Cert.# 11849, for the analytes listed in Appendix A. All analyses were performed following quality control requirements of Ace Laboratories, Inc., and each analytical method. For your convenience, your project has been assigned Analytical Request number A07111602. Please let us know if there is any additional information you may need.

Sincerely,

Stuart Sigman
Project Chemist

2985 E. Hillcrest Drive #105. Thousand Oaks, CA 91362 Phone: (805) 750-9024

Ace Laboratories, Inc.

Analytical Report

Client: Environmental Support Technologies, Inc.
Project Name: Long Beach Golf Center
Project #: 2694
Matrix: Air

ALI AR#: A07111602
Date Collected: 11/14/07
Date Received: 11/16/07

VOCs By GC/MS
EPA Method TO-15
Units: ug/L

	Client ID	SG13-5	SG13-10	SG9-5	SG9-10
	Lab ID	A0711602-01	A0711602-02	A0711602-03	A0711602-04
	Date Analyzed	11/17/07	11/17/07	11/17/07	11/17/07
	Dilution Factor	1	1	1	1
	Result Notes				*
Analyte	**MRL**				
Propene	0.01	ND	ND	ND	ND
Dichlorodifluoromethane	0.01	ND	ND	ND	ND
Chloromethane	0.01	ND	ND	ND	0.01
Dichlorotetrafluoroethane	0.01	ND	ND	ND	ND
Vinyl Chloride	0.01	ND	ND	ND	ND
1,3-Butadiene	0.01	ND	ND	ND	ND
Bromomethane	0.01	ND	ND	ND	ND
Chloroethane	0.01	ND	ND	ND	ND
Bromoethene	0.01	ND	ND	ND	ND
Trichlorofluoromethane	0.01	ND	ND	ND	ND
Acetone	0.01	0.12	0.09	0.06	0.02
Isopropyl Alcohol	0.01	ND	ND	ND	ND
1,1-Dichloroethene	0.01	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.01	ND	ND	ND	ND
Allyl Chloride	0.01	ND	ND	ND	ND
Methylene Chloride	0.01	ND	ND	ND	ND
Carbon Disulfide	0.01	0.02	0.06	ND	ND
trans-1,2-Dichloroethene	0.01	ND	ND	ND	ND
Methyl tert-Butyl Ether	0.01	ND	ND	ND	ND
Vinyl Acetate	0.01	ND	ND	ND	ND
1,1-Dichloroethane	0.01	ND	ND	ND	ND
2-Butanone	0.01	0.09	0.02	ND	0.06
Hexane	0.01	0.05	0.21	ND	6.8 E
cis-1,2-Dichloroethene	0.01	ND	ND	ND	ND
Ethyl Acetate	0.01	ND	ND	ND	ND
Chloroform	0.01	ND	ND	0.04	0.05
Tetrahydrofuran	0.01	ND	ND	ND	ND
1,1,1-Trichloroethane	0.01	ND	ND	ND	ND
1,2-Dichloroethane	0.01	ND	ND	ND	ND
Benzene	0.01	0.02	0.04	0.02	0.20
Carbon Tetrachloride	0.01	ND	ND	ND	ND
Cyclohexane	0.01	ND	0.02	ND	2.9
2,2,4-Trimethylpentane	0.01	0.01	0.04	0.02	0.08
Heptane	0.01	0.01	0.03	ND	0.20
Trichloroethene	0.01	ND	ND	ND	0.02
1,2-Dichloropropane	0.01	ND	ND	ND	ND
1,4-Dioxane	0.01	ND	ND	ND	ND

Ace Laboratories, Inc.

Analytical Report

Client: Environmental Support Technologies, Inc.
Project Name: Long Beach Golf Center
Project #: 2694
Matrix: Air

ALI AR#: A07111602
Date Collected: 11/14/07
Date Received: 11/16/07

VOCs By GC/MS
EPA Method TO-15
Units: ug/L

	Client ID	SG13-5	SG13-10	SG9-5	SG9-10
	Lab ID	A0711602-01	A0711602-02	A0711602-03	A0711602-04
	Date Analyzed	11/17/07	11/17/07	11/17/07	11/17/07
	Dilution Factor	1	1	1	1
	Result Notes				*
Analyte	**MRL**				
Bromodichloromethane	0.01	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.01	ND	ND	ND	ND
4-Methyl-2-pentanone	0.01	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.01	ND	ND	ND	ND
Toluene	0.01	0.12	0.11	0.14	0.19
1,1,2-Trichloroethane	0.01	ND	ND	ND	ND
2-Hexanone	0.01	0.01	ND	ND	ND
Dibromochloromethane	0.01	ND	ND	ND	ND
Tetrachloroethene	0.01	ND	ND	0.13	ND
1,2-Dibromoethane	0.01	ND	ND	ND	ND
Chlorobenzene	0.01	ND	ND	ND	ND
Ethylbenzene	0.01	0.01	ND	0.02	0.03
m,p-Xylenes	0.01	0.04	0.03	0.10	0.09
o-Xylene	0.01	0.01	0.01	0.03	0.03
Styrene	0.01	ND	ND	ND	ND
Bromoform	0.01	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.01	ND	ND	ND	ND
4-Ethyltoluene	0.01	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.01	ND	ND	ND	0.01
1,2,4-Trimethylbenzene	0.01	ND	0.01	0.02	0.02
1,3-Dichlorobenzene	0.01	ND	ND	ND	ND
Benzyl Chloride	0.01	ND	ND	ND	ND
1,4-Dichlorobenzene	0.01	ND	ND	ND	ND
1,2-Dichlorobenzene	0.01	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.01	ND	ND	ND	ND
Hexachlorobutadiene	0.01	ND	ND	ND	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit
* Hexane and Cyclohexane were analyzed with a dilution factor of 10.
E Estimated result. The concentration exceeded the linear calibration of the instrument.

Approved By: _____ **Date:** 11/29/07

Ace Laboratories, Inc.

Analytical Report

Client: Environmental Support Technologies, Inc.
Project Name: Long Beach Golf Center
Project #: 2694
Matrix: Air

ALI AR#: A07111602
Date Collected: 11/14/07
Date Received: 11/16/07

VOCs By GC/MS
EPA Method TO-15
Units: ug/L

Client ID		SG8A-5	SG3-5	Trip Blank
Lab ID		A0711602-05	A0711602-06	A0711602-07
Date Analyzed		11/17/07	11/17/07	11/17/07
Dilution Factor		1	1	1
Result Notes		*		
Analyte	**MRL**			
Propene	0.01	ND	ND	ND
Dichlorodifluoromethane	0.01	ND	ND	ND
Chloromethane	0.01	0.02	ND	ND
Dichlorotetrafluoroethane	0.01	ND	ND	ND
Vinyl Chloride	0.01	ND	ND	ND
1,3-Butadiene	0.01	ND	ND	ND
Bromomethane	0.01	ND	ND	ND
Chloroethane	0.01	ND	ND	ND
Bromoethene	0.01	ND	ND	ND
Trichlorofluoromethane	0.01	ND	ND	ND
Acetone	0.01	0.03	0.17	ND
Isopropyl Alcohol	0.01	ND	ND	ND
1,1-Dichloroethene	0.01	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.01	ND	ND	ND
Allyl Chloride	0.01	ND	ND	ND
Methylene Chloride	0.01	ND	ND	ND
Carbon Disulfide	0.01	0.08	ND	ND
trans-1,2-Dichloroethene	0.01	ND	ND	ND
Methyl tert-Butyl Ether	0.01	ND	ND	ND
Vinyl Acetate	0.01	ND	ND	ND
1,1-Dichloroethane	0.01	ND	ND	ND
2-Butanone	0.01	0.07	0.02	ND
Hexane	0.01	1.6	ND	ND
cis-1,2-Dichloroethene	0.01	ND	ND	ND
Ethyl Acetate	0.01	ND	ND	ND
Chloroform	0.01	0.03	ND	ND
Tetrahydrofuran	0.01	ND	ND	ND
1,1,1-Trichloroethane	0.01	ND	ND	ND
1,2-Dichloroethane	0.01	ND	ND	ND
Benzene	0.01	0.33	ND	ND
Carbon Tetrachloride	0.01	ND	ND	ND
Cyclohexane	0.01	1.4	ND	ND
2,2,4-Trimethylpentane	0.01	0.03	ND	ND
Heptane	0.01	0.30	ND	ND
Trichloroethene	0.01	0.01	ND	ND
1,2-Dichloropropane	0.01	ND	ND	ND
1,4-Dioxane	0.01	ND	ND	ND

Ace Laboratories, Inc.

Analytical Report

Client: Environmental Support Technologies, Inc.
Project Name: Long Beach Golf Center
Project #: 2694
Matrix: Air

ALI AR#: A07111602
Date Collected: 11/14/07
Date Received: 11/16/07

VOCs By GC/MS
EPA Method TO-15
Units: ug/L

		Client ID	SG8A-5	SG3-5	Trip Blank
		Lab ID	A0711602-05	A0711602-06	A0711602-07
		Date Analyzed	11/17/07	11/17/07	11/17/07
		Dilution Factor	1	1	1
		Result Notes	*		
Analyte	**MRL**				
Bromodichloromethane	0.01		ND	ND	ND
cis-1,3-Dichloropropene	0.01		ND	ND	ND
4-Methyl-2-pentanone	0.01		ND	ND	ND
trans-1,3-Dichloropropene	0.01		ND	ND	ND
Toluene	0.01		0.35	0.04	ND
1,1,2-Trichloroethane	0.01		ND	ND	ND
2-Hexanone	0.01		ND	ND	ND
Dibromochloromethane	0.01		ND	ND	ND
Tetrachloroethene	0.01		0.03	ND	ND
1,2-Dibromoethane	0.01		ND	ND	ND
Chlorobenzene	0.01		ND	ND	ND
Ethylbenzene	0.01		0.13	ND	ND
m,p-Xylenes	0.01		0.47	0.02	ND
o-Xylene	0.01		0.14	ND	ND
Styrene	0.01		ND	ND	ND
Bromoform	0.01		ND	ND	ND
1,1,2,2-Tetrachloroethane	0.01		ND	ND	ND
4-Ethyltoluene	0.01		0.05	ND	ND
1,3,5-Trimethylbenzene	0.01		0.04	ND	ND
1,2,4-Trimethylbenzene	0.01		0.13	ND	ND
1,3-Dichlorobenzene	0.01		ND	ND	ND
Benzyl Chloride	0.01		ND	ND	ND
1,4-Dichlorobenzene	0.01		ND	ND	ND
1,2-Dichlorobenzene	0.01		ND	ND	ND
1,2,4-Trichlorobenzene	0.01		ND	ND	ND
Hexachlorobutadiene	0.01		ND	ND	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit
* Hexane and Cyclohexane were analyzed with a dilution factor of 10.

Approved By: Stuart Sin **Date:** 11/24/07

Ace Laboratories, Inc.

Quality Control / Quality Assurance Report

Client: Environmental Support Technologies, Inc.
Project Name: Long Beach Golf Center
Project #: 2694
Matrix: Air

ALI AR#: A07111602
Date Collected: NA
Date Received: NA

VOCs By GC/MS
EPA Method TO-15
Units: ug/L

	Method Blank
Lab ID	A1116-MB
Date Analyzed	11/16/07
Dilution Factor	1
Result Notes	

Analyte	MRL	
Propene	0.01	ND
Dichlorodifluoromethane	0.01	ND
Chloromethane	0.01	ND
Dichlorotetrafluoroethane	0.01	ND
Vinyl Chloride	0.01	ND
1,3-Butadiene	0.01	ND
Bromomethane	0.01	ND
Chloroethane	0.01	ND
Bromoethene	0.01	ND
Trichlorofluoromethane	0.01	ND
Acetone	0.01	ND
Isopropyl Alcohol	0.01	ND
1,1-Dichloroethene	0.01	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.01	ND
Allyl Chloride	0.01	ND
Methylene Chloride	0.01	ND
Carbon Disulfide	0.01	ND
trans-1,2-Dichloroethene	0.01	ND
Methyl tert-Butyl Ether	0.01	ND
Vinyl Acetate	0.01	ND
1,1-Dichloroethane	0.01	ND
2-Butanone	0.01	ND
Hexane	0.01	ND
cis-1,2-Dichloroethene	0.01	ND
Ethyl Acetate	0.01	ND
Chloroform	0.01	ND
Tetrahydrofuran	0.01	ND
1,1,1-Trichloroethane	0.01	ND
1,2-Dichloroethane	0.01	ND
Benzene	0.01	ND
Carbon Tetrachloride	0.01	ND
Cyclohexane	0.01	ND
2,2,4-Trimethylpentane	0.01	ND
Heptane	0.01	ND
Trichloroethene	0.01	ND
1,2-Dichloropropane	0.01	ND
1,4-Dioxane	0.01	ND

Ace Laboratories, Inc.

Quality Control / Quality Assurance Report

Client: Environmental Support Technologies, Inc.
Project Name: Long Beach Golf Center
Project #: 2694
Matrix: Air

ALI AR#: A07111602
Date Collected: NA
Date Received: NA

VOCs By GC/MS
EPA Method TO-15
Units: ug/L

Client ID	Method Blank
Lab ID	A1116-MB
Date Analyzed	11/16/07
Dilution Factor	1
Result Notes	

Analyte	MRL	
Bromodichloromethane	0.01	ND
cis-1,3-Dichloropropene	0.01	ND
4-Methyl-2-pentanone	0.01	ND
trans-1,3-Dichloropropene	0.01	ND
Toluene	0.01	ND
1,1,2-Trichloroethane	0.01	ND
2-Hexanone	0.01	ND
Dibromochloromethane	0.01	ND
Tetrachloroethene	0.01	ND
1,2-Dibromoethane	0.01	ND
Chlorobenzene	0.01	ND
Ethylbenzene	0.01	ND
m,p-Xylenes	0.01	ND
o-Xylene	0.01	ND
Styrene	0.01	ND
Bromoform	0.01	ND
1,1,2,2-Tetrachloroethane	0.01	ND
4-Ethyltoluene	0.01	ND
1,3,5-Trimethylbenzene	0.01	ND
1,2,4-Trimethylbenzene	0.01	ND
1,3-Dichlorobenzene	0.01	ND
Benzyl Chloride	0.01	ND
1,4-Dichlorobenzene	0.01	ND
1,2-Dichlorobenzene	0.01	ND
1,2,4-Trichlorobenzene	0.01	ND
Hexachlorobutadiene	0.01	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit

Approved By: _____ **Date:** 11/29/07

Ace Laboratories, Inc.

Quality Control / Quality Assurance Report

Client: Environmental Support Technologies, Inc.
Project Name: Long Beach Golf Center
Project #: 2694
Matrix: Air

ALI AR#: A07111602
Date Collected: 11/14/07
Date Received: 11/16/07

VOCs By GC/MS
EPA Method TO-15
Units: ug/L

	Sample	Duplicate
Client ID	SG8A-5	SG8A-5
Lab ID	A0711602-05	A0711602-05D
Date Analyzed	11/17/07	11/17/07

Analyte	MRL			RPD	
Propene	0.01	ND	ND	NA	
Dichlorodifluoromethane	0.01	ND	ND	NA	
Chloromethane	0.01	0.017	0.016	6	
Dichlorotetrafluoroethane	0.01	ND	ND	NA	
Vinyl Chloride	0.01	ND	ND	NA	
1,3-Butadiene	0.01	ND	ND	NA	
Bromomethane	0.01	ND	ND	NA	
Chloroethane	0.01	ND	ND	NA	
Bromoethene	0.01	ND	ND	NA	
Trichlorofluoromethane	0.01	ND	ND	NA	
Acetone	0.01	0.026	0.024	8	
Isopropyl Alcohol	0.01	ND	ND	NA	
1,1-Dichloroethene	0.01	ND	ND	NA	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.01	ND	ND	NA	
Allyl Chloride	0.01	ND	ND	NA	
Methylene Chloride	0.01	ND	ND	NA	
Carbon Disulfide	0.01	0.080	0.080	<1	
trans-1,2-Dichloroethene	0.01	ND	ND	NA	
Methyl tert-Butyl Ether	0.01	ND	ND	NA	
Vinyl Acetate	0.01	ND	ND	NA	
1,1-Dichloroethane	0.01	ND	ND	NA	
2-Butanone	0.01	0.069	0.069	<1	
Hexane	0.01	0.92 E	0.94 E	2	*
cis-1,2-Dichloroethene	0.01	ND	ND	NA	
Ethyl Acetate	0.01	ND	ND	NA	
Chloroform	0.01	0.031	0.030	3	
Tetrahydrofuran	0.01	ND	ND	NA	
1,1,1-Trichloroethane	0.01	ND	ND	NA	
1,2-Dichloroethane	0.01	ND	ND	NA	
Benzene	0.01	0.33	0.33	<1	
Carbon Tetrachloride	0.01	ND	ND	NA	
Cyclohexane	0.01	0.83 E	0.80 E	4	*
2,2,4-Trimethylpentane	0.01	0.029	0.030	3	
Heptane	0.01	0.30	0.29	1	
Trichloroethene	0.01	0.011	0.011	<1	
1,2-Dichloropropane	0.01	ND	ND	NA	
1,4-Dioxane	0.01	ND	ND	NA	

Ace Laboratories, Inc.

Quality Control / Quality Assurance Report

Client: Environmental Support Technologies, Inc.
Project Name: Long Beach Golf Center
Project #: 2694
Matrix: Air

ALI AR#: A07111602
Date Collected: 11/14/07
Date Received: 11/16/07

VOCs By GC/MS
EPA Method TO-15
Units: ug/L

	Sample	Duplicate
Client ID	SG8A-5	SG8A-5
Lab ID	A0711602-05	A0711602-05D
Date Analyzed	11/17/07	11/17/07

Analyte	MRL			RPD
Bromodichloromethane	0.01	ND	ND	NA
cis-1,3-Dichloropropene	0.01	ND	ND	NA
4-Methyl-2-pentanone	0.01	ND	ND	NA
trans-1,3-Dichloropropene	0.01	ND	ND	NA
Toluene	0.01	0.35	0.34	3
1,1,2-Trichloroethane	0.01	ND	ND	NA
2-Hexanone	0.01	ND	ND	NA
Dibromochloromethane	0.01	ND	ND	NA
Tetrachloroethene	0.01	0.033	0.033	<1
1,2-Dibromoethane	0.01	ND	ND	NA
Chlorobenzene	0.01	ND	ND	NA
Ethylbenzene	0.01	0.13	0.13	<1
m,p-Xylenes	0.01	0.47	0.47	<1
o-Xylene	0.01	0.14	0.14	<1
Styrene	0.01	ND	ND	NA
Bromoform	0.01	ND	ND	NA
1,1,2,2-Tetrachloroethane	0.01	ND	ND	NA
4-Ethyltoluene	0.01	0.052	0.051	2
1,3,5-Trimethylbenzene	0.01	0.043	0.043	<1
1,2,4-Trimethylbenzene	0.01	0.13	0.12	8
1,3-Dichlorobenzene	0.01	ND	ND	NA
Benzyl Chloride	0.01	ND	ND	NA
1,4-Dichlorobenzene	0.01	ND	ND	NA
1,2-Dichlorobenzene	0.01	ND	ND	NA
1,2,4-Trichlorobenzene	0.01	ND	ND	NA
Hexachlorobutadiene	0.01	ND	ND	NA

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit
* The result is taken from the non-dilluted sample analysis, and is used for QC purposes only. The actual result is reported on the analytical report page.
E Estimated result. The concentration exceeded the linear calibration of the instrument.

Approved By: _____ **Date:** 11/29/07

Ace Laboratories, Inc.
2985 E. Hillcrest Dr. #105 Thousand Oaks, CA. 91362
Main#: 805-497-1962 Fax#: 805-497-2204

Chain of Custody

Project Name: Long Beach Golf Center
Project Number: ~~EGT 2694~~ 2694
Project Manager: Tony Marino
Company Name: LFR
Company Address: 3150 Bristol St. Suite 250
Costa Mesa, CA. 92626
Phone Number: 714 444-0111
Fax Number: 714 444.0117
E-Mail: WWW.LFR.COM

ALI. AR#: AO7111602

Turnaround Time: ____ **Days / Normal**

QC Tier Level: ____

Sample ID	Lab ID	Matrix	Date Collected / Time	Canister SN#	Analyses	Notes
SG13-5	AO7111602-01	Air	11/14/07 0952	02096		
↓ -10	-02	↓	0956	02191		
SG9-5	-03		1210	02198		
↓ -10	-04		1216	02214		
SG8A-5	-05		1153 AM	02259		
~~SG5-5 MK~~		→			I.D.	correction per R. Abraham 11/20/07
SG3-5	-06	Air	11/14/07 1430	02231		
Trip Blank	-07			02268		Added per Req: Abraham 11/20/07

Collected by: Dien Nguyen 11/14/07

Relinquished by: _____ Date: 11/14/07 1702 — Received by: Raf Abrahan Date: 11/14/07 17:04

Relinquished by: _____ Date: _____ — Received by: Thomas X. Abe Date: 11/16/07

Relinquished by: _____ Date: _____ — Received by: _____ Date: _____

010

Ace Laboratories, Inc.

SAMPLE RECEIPT FORM

LABORATORY # A0711602 CLIENT EST

Chain of Custody is complete and clear?	(Yes)	No (see comments)
Client sample Ids agree with C.O.C.?	(Yes)	No (see comments)
Samples are Intact?	(Yes)	No (see comments)
Custody Seals are Intact?	Yes	No (NA)
Short Hold Times or TAT?	Yes	(No)

If Yes, Specify:

Cooler Temp_____ °C Ambient ✓

Sample Type/Quantity: 0.4 Liter Canister / 7*

Canister Ids: See C.O.C. for Serial #'s

Comments * Trip Blank Received Not Listed on C.O.C. (SN# 2268)
Added per R. Abraham 11/20/07

Initials: SS Date: 11/16/07

Appendix A

New York ELAP Certified Analyte List For Method TO-15

Chloromethane
Vinyl Chloride
Bromomethane
Chloroethane
1,1-Dichloroethene
Methylene Chloride
trans-1,2-Dichloroethene
Methyl-tert-Butyl Ether
Vinyl Acetate
1,1-Dichloroethane
2-Butanone
Hexane
cis-1,2-Dichloroethene
Chloroform
1,1,1-Trichloroethane
1,2-Dichloroethane
Benzene
Carbon Tetrachloride
2,2,4-Trimethylpentane
Trichloroethene
1,2-Dichloropropane
cis-1,3-Dichloropropene
4-Methyl-2-Pentanone
trans-1,3-Dichloropropene
Toluene
1,1,2-Trichloroethane
Tetrachloroethene
Chlorobenzene
Ethylbenzene
m,p-Xylenes
Styrene
o-Xylene
Bromoform
1,1,2,2-Tetrachloroethane
Benzyl Chloride
1,4-Dichlorobenzene
1,2-Dichlobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene
Formaldehyde

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900 FAX 714/538-1209

CLIENT LFR Levine-Fricke (2635)
ATTN: Tony M.
3150 S. Bristol
Suite 250
Costa Mesa, CA 92626

LAB REQUEST 200999
REPORTED 12/03/2007
RECEIVED 11/13/2007

PROJECT CRG - LBGLC
#002-10231-03

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
848022	EQ-1
848023	FB-1
848024	Travel Blank
848025	Laboratory Method Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing , all samples will be discarded by appropriate disposal protocol 30 days from date reported.

The reports of the Associated Laboratories are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

TESTING & CONSULTING
Chemical
Microbiological
Environmental

Order #: 848022
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 14:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: EQ-1

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	0.031	1	0.020	mg/L	11/16/07	KN
Arsenic	0.027	1	0.010	mg/L	11/16/07	KN
Barium	0.011	1	0.010	mg/L	11/16/07	KN
Beryllium	ND	1	0.005	mg/L	11/16/07	KN
Cadmium	ND	1	0.005	mg/L	11/16/07	KN
Chromium	ND	1	0.010	mg/L	11/16/07	KN
Cobalt	ND	1	0.005	mg/L	11/16/07	KN
Copper	0.002	1	0.010	mg/L	11/16/07	KN
Lead	0.004	1	0.005	mg/L	11/16/07	KN
Molybdenum	0.028	1	0.010	mg/L	11/16/07	KN
Nickel	ND	1	0.020	mg/L	11/16/07	KN
Selenium	ND	1	0.010	mg/L	11/16/07	KN
Silver	ND	1	0.005	mg/L	11/16/07	KN
Thallium	ND	1	0.005	mg/L	11/16/07	KN
Vanadium	ND	1	0.005	mg/L	11/16/07	KN
Zinc	0.095	1	0.020	mg/L	11/16/07	KN
7470A Mercury in Water						
Mercury	ND	1	0.0004	mg/L	11/16/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	1	0.2	mg/L	11/16/07	AF
C10 - C22	ND	1	0.2	mg/L	11/16/07	AF
C22 - C36	ND	1	0.3	mg/L	11/16/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	85			%	55 - 200	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	2	0.12	ug/L	11/24/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848022
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 14:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: EQ-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8081A - Organochlorine Pesticides by GC					
4,4-DDE	ND	2	0.1	ug/L	11/24/07 RB
4,4-DDT	ND	2	0.12	ug/L	11/24/07 RB
Aldrin	ND	2	0.22	ug/L	11/24/07 RB
Alpha BHC	ND	2	0.08	ug/L	11/24/07 RB
Beta BHC	ND	2	0.06	ug/L	11/24/07 RB
Chlordane	ND	2	0.5	ug/L	11/24/07 RB
Delta BHC	ND	2	0.06	ug/L	11/24/07 RB
Dieldrin	ND	2	0.12	ug/L	11/24/07 RB
Endosulfan I	ND	2	0.06	ug/L	11/24/07 RB
Endosulfan II	ND	2	0.12	ug/L	11/24/07 RB
Endosulfan sulfate	ND	2	0.12	ug/L	11/24/07 RB
Endrin	ND	2	0.12	ug/L	11/24/07 RB
Endrin aldehyde	ND	2	0.26	ug/L	11/24/07 RB
Heptachlor	ND	2	0.16	ug/L	11/24/07 RB
Heptachlor epoxide	ND	2	0.1	ug/L	11/24/07 RB
Lindane	ND	2	0.06	ug/L	11/24/07 RB
Methoxychlor	ND	2	1.14	ug/L	11/24/07 RB
Toxaphene	ND	2	6.26	ug/L	11/24/07 RB
Surrogates				**Units**	**Control Limits**
DCB(Sur2)	113			%	55 - 130
TCMX (Sur1)	88			%	50 - 125
8082 - Polychlorinated Biphenyls (PCBs) by GC					
PCB-1016	ND	2	1.0	ug/L	11/24/07 RB
PCB-1221	ND	2	1.0	ug/L	11/24/07 RB
PCB-1232	ND	2	1.0	ug/L	11/24/07 RB
PCB-1242	ND	2	1.0	ug/L	11/24/07 RB
PCB-1248	ND	2	1.0	ug/L	11/24/07 RB
PCB-1254	ND	2	1.0	ug/L	11/24/07 RB
PCB-1260	ND	2	1.0	ug/L	11/24/07 RB
Surrogates				**Units**	**Control Limits**

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848022
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 14:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: EQ-1

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
DCB(Sur)	120			%	60 - 130	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/L	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/L	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/L	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/L	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/L	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/L	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/L	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/L	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/L	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/L	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/L	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/L	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/L	11/16/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/L	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/L	11/16/07	LZ
1,3-Dichloropropane	ND	1	5	ug/L	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/L	11/16/07	LZ
2,2-Dichloropropane	ND	1	5	ug/L	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/L	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/L	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/L	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/L	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	10	ug/L	11/16/07	LZ
Acetone	ND	1	100	ug/L	11/16/07	LZ
Allyl chloride	ND	1	5	ug/L	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848022
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 14:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: EQ-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B Volatile Organic Compounds					
Benzene	ND	1	1	ug/L	11/16/07 LZ
Bromobenzene	ND	1	5	ug/L	11/16/07 LZ
Bromochloromethane	ND	1	5	ug/L	11/16/07 LZ
Bromodichloromethane	ND	1	5	ug/L	11/16/07 LZ
Bromoform	ND	1	5	ug/L	11/16/07 LZ
Bromomethane	ND	1	5	ug/L	11/16/07 LZ
Carbon tetrachloride	ND	1	5	ug/L	11/16/07 LZ
Chlorobenzene	ND	1	5	ug/L	11/16/07 LZ
Chloroethane	ND	1	5	ug/L	11/16/07 LZ
Chloroform	ND	1	5	ug/L	11/16/07 LZ
Chloromethane	ND	1	5	ug/L	11/16/07 LZ
cis-1,2-Dichloroethene	ND	1	5	ug/L	11/16/07 LZ
cis-1,3-Dichloropropene	ND	1	5	ug/L	11/16/07 LZ
cis-1,4-Dichloro-2-butene	ND	1	20	ug/L	11/16/07 LZ
Dibromochloromethane	ND	1	5	ug/L	11/16/07 LZ
Dibromomethane	ND	1	5	ug/L	11/16/07 LZ
Dichlorodifluoromethane	ND	1	5	ug/L	11/16/07 LZ
Ethyl benzene	ND	1	5	ug/L	11/16/07 LZ
Hexachlorobutadiene	ND	1	5	ug/L	11/16/07 LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/L	11/16/07 LZ
m and p-Xylene	ND	1	5	ug/L	11/16/07 LZ
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	11/16/07 LZ
Methylene chloride	ND	1	5	ug/L	11/16/07 LZ
n-Butylbenzene	ND	1	5	ug/L	11/16/07 LZ
n-Propylbenzene	ND	1	5	ug/L	11/16/07 LZ
Naphthalene	ND	1	5	ug/L	11/16/07 LZ
o-Xylene	ND	1	5	ug/L	11/16/07 LZ
p-Isopropyltoluene	ND	1	5	ug/L	11/16/07 LZ
sec-Butylbenzene	ND	1	5	ug/L	11/16/07 LZ
Styrene	ND	1	5	ug/L	11/16/07 LZ
tert-Butylbenzene	ND	1	5	ug/L	11/16/07 LZ
Tetrachloroethene	ND	1	5	ug/L	11/16/07 LZ
Toluene	ND	1	5	ug/L	11/16/07 LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848022
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 14:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: EQ-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B Volatile Organic Compounds					
trans-1,2-Dichloroethene	ND	1	5	ug/L	11/16/07 LZ
trans-1,3-Dichloropropene	ND	1	5	ug/L	11/16/07 LZ
trans-1,4-Dichloro-2-butene	ND	1	20	ug/L	11/16/07 LZ
Trichloroethene	ND	1	5	ug/L	11/16/07 LZ
Trichlorofluoromethane	ND	1	5	ug/L	11/16/07 LZ
Vinyl chloride	ND	1	5	ug/L	11/16/07 LZ
Xylenes, total	ND	1	5	ug/L	11/16/07 LZ
Di-isopropyl ether (DIPE)	ND	1	1.0	ug/L	11/16/07 LZ
Ethyl-tertbutylether (ETBE)	ND	1	1.0	ug/L	11/16/07 LZ
Tert-amylmethylether (TAME)	ND	1	1.0	ug/L	11/16/07 LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	11/16/07 LZ
Surrogates				**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	109			%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	109			%	70 - 135
Surr3 - Toluene-d8	104			%	70 - 135
Surr4 - p-Bromofluorobenzene	99			%	70 - 135
8270C Acid/Base/Neutral Extractables					
1,2,4-Trichlorobenzene	ND	2	20.0	ug/L	11/22/07 SD
1,2-Dichlorobenzene	ND	2	20.0	ug/L	11/22/07 SD
1,3-Dichlorobenzene	ND	2	20.0	ug/L	11/22/07 SD
1,4-Dichlorobenzene	ND	2	20.0	ug/L	11/22/07 SD
2,4,5-Trichlorophenol	ND	2	20.0	ug/L	11/22/07 SD
2,4,6-Trichlorophenol	ND	2	20.0	ug/L	11/22/07 SD
2,4-Dichlorophenol	ND	2	20.0	ug/L	11/22/07 SD
2,4-Dimethylphenol	ND	2	20.0	ug/L	11/22/07 SD
2,4-Dinitrophenol	ND	2	20.0	ug/L	11/22/07 SD
2,4-Dinitrotoluene	ND	2	20.0	ug/L	11/22/07 SD
2,6-Dinitrotoluene	ND	2	20.0	ug/L	11/22/07 SD
2-Chloronaphthalene	ND	2	20.0	ug/L	11/22/07 SD
2-Chlorophenol	ND	2	20.0	ug/L	11/22/07 SD
2-Methylnaphthalene	ND	2	20.0	ug/L	11/22/07 SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848022
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 14:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: EQ-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Methylphenol	ND	2	20.0	ug/L	11/22/07 SD
2-Nitroaniline	ND	2	100.0	ug/L	11/22/07 SD
2-Nitrophenol	ND	2	20.0	ug/L	11/22/07 SD
3,3-Dichlorobenzidine	ND	2	20.0	ug/L	11/22/07 SD
3-Methylphenol	ND	2	20.0	ug/L	11/22/07 SD
3-Nitroaniline	ND	2	20.0	ug/L	11/22/07 SD
4,6-Dinitro-2-methylphenol	ND	2	20.0	ug/L	11/22/07 SD
4-Bromophenyl-phenylether	ND	2	20.0	ug/L	11/22/07 SD
4-Chloro-3-methylphenol	ND	2	20.0	ug/L	11/22/07 SD
4-Chloroaniline	ND	2	20.0	ug/L	11/22/07 SD
4-Chlorophenyl-phenylether	ND	2	20.0	ug/L	11/22/07 SD
4-Methylphenol	ND	2	20.0	ug/L	11/22/07 SD
4-Nitroaniline	ND	2	20.0	ug/L	11/22/07 SD
4-Nitrophenol	ND	2	20.0	ug/L	11/22/07 SD
Acenaphthene	ND	2	20.0	ug/L	11/22/07 SD
Acenaphthylene	ND	2	20.0	ug/L	11/22/07 SD
Anthracene	ND	2	20.0	ug/L	11/22/07 SD
Benzidine	ND	2	20.0	ug/L	11/22/07 SD
Benzo(a)anthracene	ND	2	20.0	ug/L	11/22/07 SD
Benzo(a)pyrene	ND	2	20.0	ug/L	11/22/07 SD
Benzo(b)fluoranthene	ND	2	20.0	ug/L	11/22/07 SD
Benzo(g,h,i)perylene	ND	2	20.0	ug/L	11/22/07 SD
Benzo(k)fluoranthene	ND	2	20.0	ug/L	11/22/07 SD
Benzoic Acid	ND	2	20.0	ug/L	11/22/07 SD
Benzyl alcohol	ND	2	20.0	ug/L	11/22/07 SD
bis(2-Chloroethoxy)methane	ND	2	20.0	ug/L	11/22/07 SD
bis(2-Chloroethyl)ether	ND	2	20.0	ug/L	11/22/07 SD
bis(2-Chloroisopropyl) ether	ND	2	20.0	ug/L	11/22/07 SD
bis(2-Ethylhexyl)phthalate	ND	2	20.0	ug/L	11/22/07 SD
Butylbenzylphthalate	ND	2	20.0	ug/L	11/22/07 SD
Chrysene	ND	2	20.0	ug/L	11/22/07 SD
Di-n-butylphthalate	ND	2	20.0	ug/L	11/22/07 SD
Di-n-octylphthalate	ND	2	20.0	ug/L	11/22/07 SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848022
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 14:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: EQ-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Dibenz(a,h)anthracene	ND	2	20.0	ug/L	11/22/07 SD
Dibenzofuran	ND	2	20.0	ug/L	11/22/07 SD
Diethylphthalate	ND	2	20.0	ug/L	11/22/07 SD
Dimethylphthalate	ND	2	20.0	ug/L	11/22/07 SD
Fluoranthene	ND	2	20.0	ug/L	11/22/07 SD
Fluorene	ND	2	20.0	ug/L	11/22/07 SD
Hexachlorobenzene	ND	2	20.0	ug/L	11/22/07 SD
Hexachlorobutadiene	ND	2	20.0	ug/L	11/22/07 SD
Hexachlorocyclopentadiene	ND	2	20.0	ug/L	11/22/07 SD
Hexachloroethane	ND	2	20.0	ug/L	11/22/07 SD
Indeno(1,2,3-c,d)pyrene	ND	2	20.0	ug/L	11/22/07 SD
Isophorone	ND	2	20.0	ug/L	11/22/07 SD
N-Nitroso-di-n-propylamine	ND	2	20.0	ug/L	11/22/07 SD
N-Nitrosodiphenylamine	ND	2	20.0	ug/L	11/22/07 SD
Naphthalene	ND	2	20.0	ug/L	11/22/07 SD
Nitrobenzene	ND	2	20.0	ug/L	11/22/07 SD
Pentachlorophenol	ND	2	20.0	ug/L	11/22/07 SD
Phenanthrene	ND	2	20.0	ug/L	11/22/07 SD
Phenol	ND	2	20.0	ug/L	11/22/07 SD
Pyrene	ND	2	20.0	ug/L	11/22/07 SD
Surrogates				**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	72			%	10 - 123
2-Fluorobiphenyl (sur)	61			%	43 - 116
2-Fluorophenol (sur)	51			%	21 - 110
Nitrobenzene-d5 (sur)	68			%	34 - 114
Phenol-d5 (sur)	40			%	10 - 110
Terphenyl-d14 (sur)	91			%	33 - 141

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848023
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 06:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: FB-1

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	0.015	1	0.02	mg/L	11/16/07	KN
Arsenic	0.006	1	0.01	mg/L	11/16/07	KN
Barium	0.012	1	0.01	mg/L	11/16/07	KN
Beryllium	ND	1	0.005	mg/L	11/16/07	KN
Cadmium	ND	1	0.005	mg/L	11/16/07	KN
Chromium	ND	1	0.01	mg/L	11/16/07	KN
Cobalt	ND	1	0.005	mg/L	11/16/07	KN
Copper	0.004	1	0.01	mg/L	11/16/07	KN
Lead	ND	1	0.005	mg/L	11/16/07	KN
Molybdenum	0.011	1	0.01	mg/L	11/16/07	KN
Nickel	ND	1	0.02	mg/L	11/16/07	KN
Selenium	ND	1	0.01	mg/L	11/16/07	KN
Silver	ND	1	0.005	mg/L	11/16/07	KN
Thallium	ND	1	0.005	mg/L	11/16/07	KN
Vanadium	ND	1	0.005	mg/L	11/16/07	KN
Zinc	0.067	1	0.02	mg/L	11/16/07	KN
7470A Mercury in Water						
Mercury	ND	1	0.0004	mg/L	11/16/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	1	0.2	mg/L	11/16/07	AF
C10 - C22	ND	1	0.2	mg/L	11/16/07	AF
C22 - C36	ND	1	0.3	mg/L	11/16/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	60			%	55 - 200	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	2	0.12	ug/L	11/24/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848023
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 06:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: FB-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8081A - Organochlorine Pesticides by GC					
4,4-DDE	ND	2	0.1	ug/L	11/24/07 RB
4,4-DDT	ND	2	0.12	ug/L	11/24/07 RB
Aldrin	ND	2	0.22	ug/L	11/24/07 RB
Alpha BHC	ND	2	0.08	ug/L	11/24/07 RB
Beta BHC	ND	2	0.06	ug/L	11/24/07 RB
Chlordane	ND	2	0.5	ug/L	11/24/07 RB
Delta BHC	ND	2	0.06	ug/L	11/24/07 RB
Dieldrin	ND	2	0.12	ug/L	11/24/07 RB
Endosulfan I	ND	2	0.06	ug/L	11/24/07 RB
Endosulfan II	ND	2	0.12	ug/L	11/24/07 RB
Endosulfan sulfate	ND	2	0.12	ug/L	11/24/07 RB
Endrin	ND	2	0.12	ug/L	11/24/07 RB
Endrin aldehyde	ND	2	0.26	ug/L	11/24/07 RB
Heptachlor	ND	2	0.16	ug/L	11/24/07 RB
Heptachlor epoxide	ND	2	0.1	ug/L	11/24/07 RB
Lindane	ND	2	0.06	ug/L	11/24/07 RB
Methoxychlor	ND	2	1.14	ug/L	11/24/07 RB
Toxaphene	ND	2	6.26	ug/L	11/24/07 RB
Surrogates				**Units**	**Control Limits**
DCB(Sur2)	120			%	55 - 130
TCMX (Sur1)	73			%	50 - 125
8082 - Polychlorinated Biphenyls (PCBs) by GC					
PCB-1016	ND	2	1.0	ug/L	11/24/07 RB
PCB-1221	ND	2	1.0	ug/L	11/24/07 RB
PCB-1232	ND	2	1.0	ug/L	11/24/07 RB
PCB-1242	ND	2	1.0	ug/L	11/24/07 RB
PCB-1248	ND	2	1.0	ug/L	11/24/07 RB
PCB-1254	ND	2	1.0	ug/L	11/24/07 RB
PCB-1260	ND	2	1.0	ug/L	11/24/07 RB
Surrogates				**Units**	**Control Limits**

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848023 **Client:** LFR Levine-Fricke
Matrix: WATER **Client Sample ID:** FB-1
Date Sampled: 11/13/2007
Time Sampled: 06:30
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
8082 - Polychlorinated Biphenyls (PCBs) by GC					
DCB(Sur)	113			%	60 - 130
8260B Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L	11/16/07 LZ
1,1,1-Trichloroethane	ND	1	5	ug/L	11/16/07 LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L	11/16/07 LZ
1,1,2-Trichloroethane	ND	1	5	ug/L	11/16/07 LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L	11/16/07 LZ
1,1-Dichloroethane	ND	1	5	ug/L	11/16/07 LZ
1,1-Dichloroethene	ND	1	5	ug/L	11/16/07 LZ
1,1-Dichloropropene	ND	1	5	ug/L	11/16/07 LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/L	11/16/07 LZ
1,2,3-Trichloropropane	ND	1	5	ug/L	11/16/07 LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/L	11/16/07 LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/L	11/16/07 LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L	11/16/07 LZ
1,2-Dibromoethane	ND	1	5	ug/L	11/16/07 LZ
1,2-Dichlorobenzene	ND	1	5	ug/L	11/16/07 LZ
1,2-Dichloroethane	ND	1	5	ug/L	11/16/07 LZ
1,2-Dichloropropane	ND	1	5	ug/L	11/16/07 LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/L	11/16/07 LZ
1,3-Dichlorobenzene	ND	1	5	ug/L	11/16/07 LZ
1,3-Dichloropropane	ND	1	5	ug/L	11/16/07 LZ
1,4-Dichlorobenzene	ND	1	5	ug/L	11/16/07 LZ
2,2-Dichloropropane	ND	1	5	ug/L	11/16/07 LZ
2-Butanone (MEK)	ND	1	100	ug/L	11/16/07 LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/L	11/16/07 LZ
2-Chlorotoluene	ND	1	5	ug/L	11/16/07 LZ
4-Chlorotoluene	ND	1	5	ug/L	11/16/07 LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	10	ug/L	11/16/07 LZ
Acetone	ND	1	100	ug/L	11/16/07 LZ
Allyl chloride	ND	1	5	ug/L	11/16/07 LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848023
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 06:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: FB-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B Volatile Organic Compounds					
Benzene	ND	1	1	ug/L	11/16/07 LZ
Bromobenzene	ND	1	5	ug/L	11/16/07 LZ
Bromochloromethane	ND	1	5	ug/L	11/16/07 LZ
Bromodichloromethane	ND	1	5	ug/L	11/16/07 LZ
Bromoform	ND	1	5	ug/L	11/16/07 LZ
Bromomethane	ND	1	5	ug/L	11/16/07 LZ
Carbon tetrachloride	ND	1	5	ug/L	11/16/07 LZ
Chlorobenzene	ND	1	5	ug/L	11/16/07 LZ
Chloroethane	ND	1	5	ug/L	11/16/07 LZ
Chloroform	ND	1	5	ug/L	11/16/07 LZ
Chloromethane	ND	1	5	ug/L	11/16/07 LZ
cis-1,2-Dichloroethene	ND	1	5	ug/L	11/16/07 LZ
cis-1,3-Dichloropropene	ND	1	5	ug/L	11/16/07 LZ
cis-1,4-Dichloro-2-butene	ND	1	20	ug/L	11/16/07 LZ
Dibromochloromethane	ND	1	5	ug/L	11/16/07 LZ
Dibromomethane	ND	1	5	ug/L	11/16/07 LZ
Dichlorodifluoromethane	ND	1	5	ug/L	11/16/07 LZ
Ethyl benzene	ND	1	5	ug/L	11/16/07 LZ
Hexachlorobutadiene	ND	1	5	ug/L	11/16/07 LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/L	11/16/07 LZ
m and p-Xylene	ND	1	5	ug/L	11/16/07 LZ
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	11/16/07 LZ
Methylene chloride	ND	1	5	ug/L	11/16/07 LZ
n-Butylbenzene	ND	1	5	ug/L	11/16/07 LZ
n-Propylbenzene	ND	1	5	ug/L	11/16/07 LZ
Naphthalene	ND	1	5	ug/L	11/16/07 LZ
o-Xylene	ND	1	5	ug/L	11/16/07 LZ
p-Isopropyltoluene	ND	1	5	ug/L	11/16/07 LZ
sec-Butylbenzene	ND	1	5	ug/L	11/16/07 LZ
Styrene	ND	1	5	ug/L	11/16/07 LZ
tert-Butylbenzene	ND	1	5	ug/L	11/16/07 LZ
Tetrachloroethene	ND	1	5	ug/L	11/16/07 LZ
Toluene	ND	1	5	ug/L	11/16/07 LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848023 **Client:** LFR Levine-Fricke
Matrix: WATER **Client Sample ID:** FB-1
Date Sampled: 11/13/2007
Time Sampled: 06:30
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
trans-1,2-Dichloroethene	ND	1	5	ug/L	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/L	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	20	ug/L	11/16/07	LZ
Trichloroethene	ND	1	5	ug/L	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/L	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/L	11/16/07	LZ
Xylenes, total	ND	1	5	ug/L	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	1.0	ug/L	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	1.0	ug/L	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	1.0	ug/L	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	11/16/07	LZ
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	109			%	70 - 135	
Surr2 - 1,2-Dichloroethane-d4	110			%	70 - 135	
Surr3 - Toluene-d8	103			%	70 - 135	
Surr4 - p-Bromofluorobenzene	102			%	70 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	2	20.0	ug/L	11/22/07	SD
1,2-Dichlorobenzene	ND	2	20.0	ug/L	11/22/07	SD
1,3-Dichlorobenzene	ND	2	20.0	ug/L	11/22/07	SD
1,4-Dichlorobenzene	ND	2	20.0	ug/L	11/22/07	SD
2,4,5-Trichlorophenol	ND	2	20.0	ug/L	11/22/07	SD
2,4,6-Trichlorophenol	ND	2	20.0	ug/L	11/22/07	SD
2,4-Dichlorophenol	ND	2	20.0	ug/L	11/22/07	SD
2,4-Dimethylphenol	ND	2	20.0	ug/L	11/22/07	SD
2,4-Dinitrophenol	ND	2	20.0	ug/L	11/22/07	SD
2,4-Dinitrotoluene	ND	2	20.0	ug/L	11/22/07	SD
2,6-Dinitrotoluene	ND	2	20.0	ug/L	11/22/07	SD
2-Chloronaphthalene	ND	2	20.0	ug/L	11/22/07	SD
2-Chlorophenol	ND	2	20.0	ug/L	11/22/07	SD
2-Methylnaphthalene	ND	2	20.0	ug/L	11/22/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848023
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 06:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: FB-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Methylphenol	ND	2	20.0	ug/L	11/22/07 SD
2-Nitroaniline	ND	2	100.0	ug/L	11/22/07 SD
2-Nitrophenol	ND	2	20.0	ug/L	11/22/07 SD
3,3-Dichlorobenzidine	ND	2	20.0	ug/L	11/22/07 SD
3-Methylphenol	ND	2	20.0	ug/L	11/22/07 SD
3-Nitroaniline	ND	2	20.0	ug/L	11/22/07 SD
4,6-Dinitro-2-methylphenol	ND	2	20.0	ug/L	11/22/07 SD
4-Bromophenyl-phenylether	ND	2	20.0	ug/L	11/22/07 SD
4-Chloro-3-methylphenol	ND	2	20.0	ug/L	11/22/07 SD
4-Chloroaniline	ND	2	20.0	ug/L	11/22/07 SD
4-Chlorophenyl-phenylether	ND	2	20.0	ug/L	11/22/07 SD
4-Methylphenol	ND	2	20.0	ug/L	11/22/07 SD
4-Nitroaniline	ND	2	20.0	ug/L	11/22/07 SD
4-Nitrophenol	ND	2	20.0	ug/L	11/22/07 SD
Acenaphthene	ND	2	20.0	ug/L	11/22/07 SD
Acenaphthylene	ND	2	20.0	ug/L	11/22/07 SD
Anthracene	ND	2	20.0	ug/L	11/22/07 SD
Benzidine	ND	2	20.0	ug/L	11/22/07 SD
Benzo(a)anthracene	ND	2	20.0	ug/L	11/22/07 SD
Benzo(a)pyrene	ND	2	20.0	ug/L	11/22/07 SD
Benzo(b)fluoranthene	ND	2	20.0	ug/L	11/22/07 SD
Benzo(g,h,i)perylene	ND	2	20.0	ug/L	11/22/07 SD
Benzo(k)fluoranthene	ND	2	20.0	ug/L	11/22/07 SD
Benzoic Acid	ND	2	20.0	ug/L	11/22/07 SD
Benzyl alcohol	ND	2	20.0	ug/L	11/22/07 SD
bis(2-Chloroethoxy)methane	ND	2	20.0	ug/L	11/22/07 SD
bis(2-Chloroethyl)ether	ND	2	20.0	ug/L	11/22/07 SD
bis(2-Chloroisopropyl) ether	ND	2	20.0	ug/L	11/22/07 SD
bis(2-Ethylhexyl)phthalate	ND	2	20.0	ug/L	11/22/07 SD
Butylbenzylphthalate	ND	2	20.0	ug/L	11/22/07 SD
Chrysene	ND	2	20.0	ug/L	11/22/07 SD
Di-n-butylphthalate	ND	2	20.0	ug/L	11/22/07 SD
Di-n-octylphthalate	ND	2	20.0	ug/L	11/22/07 SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848023
Matrix: WATER
Date Sampled: 11/13/2007
Time Sampled: 06:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: FB-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Dibenz(a,h)anthracene	ND	2	20.0	ug/L	11/22/07 SD
Dibenzofuran	ND	2	20.0	ug/L	11/22/07 SD
Diethylphthalate	ND	2	20.0	ug/L	11/22/07 SD
Dimethylphthalate	ND	2	20.0	ug/L	11/22/07 SD
Fluoranthene	ND	2	20.0	ug/L	11/22/07 SD
Fluorene	ND	2	20.0	ug/L	11/22/07 SD
Hexachlorobenzene	ND	2	20.0	ug/L	11/22/07 SD
Hexachlorobutadiene	ND	2	20.0	ug/L	11/22/07 SD
Hexachlorocyclopentadiene	ND	2	20.0	ug/L	11/22/07 SD
Hexachloroethane	ND	2	20.0	ug/L	11/22/07 SD
Indeno(1,2,3-c,d)pyrene	ND	2	20.0	ug/L	11/22/07 SD
Isophorone	ND	2	20.0	ug/L	11/22/07 SD
N-Nitroso-di-n-propylamine	ND	2	20.0	ug/L	11/22/07 SD
N-Nitrosodiphenylamine	ND	2	20.0	ug/L	11/22/07 SD
Naphthalene	ND	2	20.0	ug/L	11/22/07 SD
Nitrobenzene	ND	2	20.0	ug/L	11/22/07 SD
Pentachlorophenol	ND	2	20.0	ug/L	11/22/07 SD
Phenanthrene	ND	2	20.0	ug/L	11/22/07 SD
Phenol	ND	2	20.0	ug/L	11/22/07 SD
Pyrene	ND	2	20.0	ug/L	11/22/07 SD
Surrogates				**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	80			%	10 - 123
2-Fluorobiphenyl (sur)	67			%	43 - 116
2-Fluorophenol (sur)	54			%	21 - 110
Nitrobenzene-d5 (sur)	70			%	34 - 114
Phenol-d5 (sur)	42			%	10 - 110
Terphenyl-d14 (sur)	100			%	33 - 141

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848025
Matrix: WATER
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	0.020	mg/L	11/16/07	KN
Arsenic	ND	1	0.010	mg/L	11/16/07	KN
Barium	ND	1	0.010	mg/L	11/16/07	KN
Beryllium	ND	1	0.005	mg/L	11/16/07	KN
Cadmium	ND	1	0.005	mg/L	11/16/07	KN
Chromium	ND	1	0.010	mg/L	11/16/07	KN
Cobalt	ND	1	0.005	mg/L	11/16/07	KN
Copper	ND	1	0.010	mg/L	11/16/07	KN
Lead	ND	1	0.005	mg/L	11/16/07	KN
Molybdenum	ND	1	0.010	mg/L	11/16/07	KN
Nickel	ND	1	0.020	mg/L	11/16/07	KN
Selenium	ND	1	0.010	mg/L	11/16/07	KN
Silver	ND	1	0.005	mg/L	11/16/07	KN
Thallium	ND	1	0.005	mg/L	11/16/07	KN
Vanadium	ND	1	0.005	mg/L	11/16/07	KN
Zinc	ND	1	0.020	mg/L	11/16/07	KN
7470A Mercury in Water						
Mercury	ND	1	0.0004	mg/L	11/16/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	1	0.2	mg/L	11/17/07	AF
C10 - C22	ND	1	0.2	mg/L	11/17/07	AF
C22 - C36	ND	1	0.3	mg/L	11/17/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	65			%	55 - 200	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.06	ug/L	11/24/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848025
Matrix: WATER
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst
8081A - Organochlorine Pesticides by GC					
4,4-DDE	ND	1	0.05	ug/L	11/24/07 RB
4,4-DDT	ND	1	0.06	ug/L	11/24/07 RB
Aldrin	ND	1	0.11	ug/L	11/24/07 RB
Alpha BHC	ND	1	0.04	ug/L	11/24/07 RB
Beta BHC	ND	1	0.03	ug/L	11/24/07 RB
Chlordane	ND	1	0.25	ug/L	11/24/07 RB
Delta BHC	ND	1	0.03	ug/L	11/24/07 RB
Dieldrin	ND	1	0.06	ug/L	11/24/07 RB
Endosulfan I	ND	1	0.03	ug/L	11/24/07 RB
Endosulfan II	ND	1	0.06	ug/L	11/24/07 RB
Endosulfan sulfate	ND	1	0.06	ug/L	11/24/07 RB
Endrin	ND	1	0.06	ug/L	11/24/07 RB
Endrin aldehyde	ND	1	0.13	ug/L	11/24/07 RB
Heptachlor	ND	1	0.08	ug/L	11/24/07 RB
Heptachlor epoxide	ND	1	0.05	ug/L	11/24/07 RB
Lindane	ND	1	0.03	ug/L	11/24/07 RB
Methoxychlor	ND	1	0.57	ug/L	11/24/07 RB
Toxaphene	ND	1	3.13	ug/L	11/24/07 RB
Surrogates				**Units**	**Control Limits**
DCB(Sur2)	102			%	55 - 130
TCMX (Sur1)	84			%	50 - 125
8082 - Polychlorinated Biphenyls (PCBs) by GC					
PCB-1016	ND	1	0.5	ug/L	11/24/07 RB
PCB-1221	ND	1	0.5	ug/L	11/24/07 RB
PCB-1232	ND	1	0.5	ug/L	11/24/07 RB
PCB-1242	ND	1	0.5	ug/L	11/24/07 RB
PCB-1248	ND	1	0.5	ug/L	11/24/07 RB
PCB-1254	ND	1	0.5	ug/L	11/24/07 RB
PCB-1260	ND	1	0.5	ug/L	11/24/07 RB
Surrogates				**Units**	**Control Limits**

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848025 **Client:** LFR Levine-Fricke

Matrix: WATER **Client Sample ID:** Laboratory Method Blank

Date Sampled:

Time Sampled:

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
DCB(Sur)	105			%	60 - 130	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L	11/15/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/L	11/15/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L	11/15/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/L	11/15/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L	11/15/07	LZ
1,1-Dichloroethane	ND	1	5	ug/L	11/15/07	LZ
1,1-Dichloroethene	ND	1	5	ug/L	11/15/07	LZ
1,1-Dichloropropene	ND	1	5	ug/L	11/15/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/L	11/15/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/L	11/15/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/L	11/15/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/L	11/15/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L	11/15/07	LZ
1,2-Dibromoethane	ND	1	5	ug/L	11/15/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/L	11/15/07	LZ
1,2-Dichloroethane	ND	1	5	ug/L	11/15/07	LZ
1,2-Dichloropropane	ND	1	5	ug/L	11/15/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/L	11/15/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/L	11/15/07	LZ
1,3-Dichloropropane	ND	1	5	ug/L	11/15/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/L	11/15/07	LZ
2,2-Dichloropropane	ND	1	5	ug/L	11/15/07	LZ
2-Butanone (MEK)	ND	1	100	ug/L	11/15/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/L	11/15/07	LZ
2-Chlorotoluene	ND	1	5	ug/L	11/15/07	LZ
4-Chlorotoluene	ND	1	5	ug/L	11/15/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	10	ug/L	11/15/07	LZ
Acetone	ND	1	100	ug/L	11/15/07	LZ
Allyl chloride	ND	1	5	ug/L	11/15/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848025
Matrix: WATER
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
Benzene	ND	1	1	ug/L	11/15/07	LZ
Bromobenzene	ND	1	5	ug/L	11/15/07	LZ
Bromochloromethane	ND	1	5	ug/L	11/15/07	LZ
Bromodichloromethane	ND	1	5	ug/L	11/15/07	LZ
Bromoform	ND	1	5	ug/L	11/15/07	LZ
Bromomethane	ND	1	5	ug/L	11/15/07	LZ
Carbon tetrachloride	ND	1	5	ug/L	11/15/07	LZ
Chlorobenzene	ND	1	5	ug/L	11/15/07	LZ
Chloroethane	ND	1	5	ug/L	11/15/07	LZ
Chloroform	ND	1	5	ug/L	11/15/07	LZ
Chloromethane	ND	1	5	ug/L	11/15/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/L	11/15/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/L	11/15/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	20	ug/L	11/15/07	LZ
Dibromochloromethane	ND	1	5	ug/L	11/15/07	LZ
Dibromomethane	ND	1	5	ug/L	11/15/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/L	11/15/07	LZ
Ethyl benzene	ND	1	5	ug/L	11/15/07	LZ
Hexachlorobutadiene	ND	1	5	ug/L	11/15/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/L	11/15/07	LZ
m and p-Xylene	ND	1	5	ug/L	11/15/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	11/15/07	LZ
Methylene chloride	ND	1	5	ug/L	11/15/07	LZ
n-Butylbenzene	ND	1	5	ug/L	11/15/07	LZ
n-Propylbenzene	ND	1	5	ug/L	11/15/07	LZ
Naphthalene	ND	1	5	ug/L	11/15/07	LZ
o-Xylene	ND	1	5	ug/L	11/15/07	LZ
p-Isopropyltoluene	ND	1	5	ug/L	11/15/07	LZ
sec-Butylbenzene	ND	1	5	ug/L	11/15/07	LZ
Styrene	ND	1	5	ug/L	11/15/07	LZ
tert-Butylbenzene	ND	1	5	ug/L	11/15/07	LZ
Tetrachloroethene	ND	1	5	ug/L	11/15/07	LZ
Toluene	ND	1	5	ug/L	11/15/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848025
Matrix: WATER
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B Volatile Organic Compounds					
trans-1,2-Dichloroethene	ND	1	5	ug/L	11/15/07 LZ
trans-1,3-Dichloropropene	ND	1	5	ug/L	11/15/07 LZ
trans-1,4-Dichloro-2-butene	ND	1	20	ug/L	11/15/07 LZ
Trichloroethene	ND	1	5	ug/L	11/15/07 LZ
Trichlorofluoromethane	ND	1	5	ug/L	11/15/07 LZ
Vinyl chloride	ND	1	5	ug/L	11/15/07 LZ
Xylenes, total	ND	1	5	ug/L	11/15/07 LZ
Di-isopropyl ether (DIPE)	ND	1	1.0	ug/L	11/15/07 LZ
Ethyl-tertbutylether (ETBE)	ND	1	1.0	ug/L	11/15/07 LZ
Tert-amylmethylether (TAME)	ND	1	1.0	ug/L	11/15/07 LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	11/15/07 LZ
Surrogates				**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	106			%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	107			%	70 - 135
Surr3 - Toluene-d8	105			%	70 - 135
Surr4 - p-Bromofluorobenzene	100			%	70 - 135
8270C Acid/Base/Neutral Extractables					
1,2,4-Trichlorobenzene	ND	1	10	ug/L	11/22/07 SD
1,2-Dichlorobenzene	ND	1	10	ug/L	11/22/07 SD
1,3-Dichlorobenzene	ND	1	10	ug/L	11/22/07 SD
1,4-Dichlorobenzene	ND	1	10	ug/L	11/22/07 SD
2,4,5-Trichlorophenol	ND	1	10	ug/L	11/22/07 SD
2,4,6-Trichlorophenol	ND	1	10	ug/L	11/22/07 SD
2,4-Dichlorophenol	ND	1	10	ug/L	11/22/07 SD
2,4-Dimethylphenol	ND	1	10	ug/L	11/22/07 SD
2,4-Dinitrophenol	ND	1	10	ug/L	11/22/07 SD
2,4-Dinitrotoluene	ND	1	10	ug/L	11/22/07 SD
2,6-Dinitrotoluene	ND	1	10	ug/L	11/22/07 SD
2-Chloronaphthalene	ND	1	10	ug/L	11/22/07 SD
2-Chlorophenol	ND	1	10	ug/L	11/22/07 SD
2-Methylnaphthalene	ND	1	10	ug/L	11/22/07 SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848025
Matrix: WATER
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Methylphenol	ND	1	10	ug/L	11/22/07 SD
2-Nitroaniline	ND	1	50	ug/L	11/22/07 SD
2-Nitrophenol	ND	1	10	ug/L	11/22/07 SD
3,3-Dichlorobenzidine	ND	1	10	ug/L	11/22/07 SD
3-Methylphenol	ND	1	10	ug/L	11/22/07 SD
3-Nitroaniline	ND	1	10	ug/L	11/22/07 SD
4,6-Dinitro-2-methylphenol	ND	1	10	ug/L	11/22/07 SD
4-Bromophenyl-phenylether	ND	1	10	ug/L	11/22/07 SD
4-Chloro-3-methylphenol	ND	1	10	ug/L	11/22/07 SD
4-Chloroaniline	ND	1	10	ug/L	11/22/07 SD
4-Chlorophenyl-phenylether	ND	1	10	ug/L	11/22/07 SD
4-Methylphenol	ND	1	10	ug/L	11/22/07 SD
4-Nitroaniline	ND	1	10	ug/L	11/22/07 SD
4-Nitrophenol	ND	1	10	ug/L	11/22/07 SD
Acenaphthene	ND	1	10	ug/L	11/22/07 SD
Acenaphthylene	ND	1	10	ug/L	11/22/07 SD
Anthracene	ND	1	10	ug/L	11/22/07 SD
Benzidine	ND	1	10	ug/L	11/22/07 SD
Benzo(a)anthracene	ND	1	10	ug/L	11/22/07 SD
Benzo(a)pyrene	ND	1	10	ug/L	11/22/07 SD
Benzo(b)fluoranthene	ND	1	10	ug/L	11/22/07 SD
Benzo(g,h,i)perylene	ND	1	10	ug/L	11/22/07 SD
Benzo(k)fluoranthene	ND	1	10	ug/L	11/22/07 SD
Benzoic Acid	ND	1	10	ug/L	11/22/07 SD
Benzyl alcohol	ND	1	10	ug/L	11/22/07 SD
bis(2-Chloroethoxy)methane	ND	1	10	ug/L	11/22/07 SD
bis(2-Chloroethyl)ether	ND	1	10	ug/L	11/22/07 SD
bis(2-Chloroisopropyl) ether	ND	1	10	ug/L	11/22/07 SD
bis(2-Ethylhexyl)phthalate	ND	1	10	ug/L	11/22/07 SD
Butylbenzylphthalate	ND	1	10	ug/L	11/22/07 SD
Chrysene	ND	1	10	ug/L	11/22/07 SD
Di-n-butylphthalate	ND	1	10	ug/L	11/22/07 SD
Di-n-octylphthalate	ND	1	10	ug/L	11/22/07 SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848025
Matrix: WATER
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Dibenz(a,h)anthracene	ND	1	10	ug/L	11/22/07 SD
Dibenzofuran	ND	1	10	ug/L	11/22/07 SD
Diethylphthalate	ND	1	10	ug/L	11/22/07 SD
Dimethylphthalate	ND	1	10	ug/L	11/22/07 SD
Fluoranthene	ND	1	10	ug/L	11/22/07 SD
Fluorene	ND	1	10	ug/L	11/22/07 SD
Hexachlorobenzene	ND	1	10	ug/L	11/22/07 SD
Hexachlorobutadiene	ND	1	10	ug/L	11/22/07 SD
Hexachlorocyclopentadiene	ND	1	10	ug/L	11/22/07 SD
Hexachloroethane	ND	1	10	ug/L	11/22/07 SD
Indeno(1,2,3-c,d)pyrene	ND	1	10	ug/L	11/22/07 SD
Isophorone	ND	1	10	ug/L	11/22/07 SD
N-Nitroso-di-n-propylamine	ND	1	10	ug/L	11/22/07 SD
N-Nitrosodiphenylamine	ND	1	10	ug/L	11/22/07 SD
Naphthalene	ND	1	10	ug/L	11/22/07 SD
Nitrobenzene	ND	1	10	ug/L	11/22/07 SD
Pentachlorophenol	ND	1	10	ug/L	11/22/07 SD
Phenanthrene	ND	1	10	ug/L	11/22/07 SD
Phenol	ND	1	10	ug/L	11/22/07 SD
Pyrene	ND	1	10	ug/L	11/22/07 SD

Surrogates		Units	Control Limits
2,4,6-Tribromophenol (sur)	83	%	10 - 123
2-Fluorobiphenyl (sur)	60	%	43 - 116
2-Fluorophenol (sur)	48	%	21 - 110
Nitrobenzene-d5 (sur)	67	%	34 - 114
Phenol-d5 (sur)	32	%	10 - 110
Terphenyl-d14 (sur)	100	%	33 - 141

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Chain of Custody Record

ASSOCIATED LABORATORIES
806 North Batavia ▪ Orange, CA 92868
Phone: (714) 771-6900 ▪ Fax: (714) 538-1209

Company: LFR - Costa Mesa | Phone: (714) 444-0111
Project Manager: Tony Marone | Fax: -0117
Project Name: CRG - LBGLC | Project #: 002-10231-03
Site Name and Address:

A.L. Job No. 200999 | Page 1 of 1

	Sample ID	Lab ID	Date	Time	Matrix	Container Number/Size	Pres.	CAM 17	TPH	VOCs	SVOCs	OCH (8081A)	PCBs	Test Instructions & Comments
1	EQ-1		11/13/07	1440	W	6		X	X	X	X	X	X	
2	FB-1		11/13/07	0630	W	6		X	X	X	X	X	X	
3	2 Trave	Blank	Received											
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														

Analysis Requested

Sample Receipt - To Be Filled By Laboratory

Total Number of Containers	12	Properly Cooled Y / N / NA	
Custody Seals Y / N / NA		Samples Intact Y / N / NA	
Received in Good Condition Y / N		Samples Accepted Y / N	

Turn Around Time

☒ Normal ☐ Rush ☐ Same Day ☐ 24 hrs. ☐ 48 hrs. ☐ 72 hrs.

Relinquished by Sampler: 1.	Relinquished by 2.	Relinquished by 3.
Signature:	Signature:	Signature:
Printed Name: Darren Bryett	Printed Name: FRANCISCO	Printed Name:
Date: 11/13/07 Time: 1505	Date: Time:	Date: Time:
Received By: 1.	**Received By: 2.**	**Received By: 3.**
Signature:	Signature:	Signature:
Printed Name: FRANCISCO	Printed Name:	Printed Name:
Date: 11-13-07 Time: 15:05	Date: 11/13/07 Time: 16:50	Date: Time:
	11-13-07 8:05	

Distribution: White - Laboratory Canary - Laboratory Pink - Project/Account Manager

ASSOCIATED LABORATORIES
806 North Batavia – Orange, California 92868 – 714-771-6900 *FAX 714-538-1209*

SAMPLE ACCEPTANCE CHECKLIST

Section 1
Client: LFR Project: _____
Date Received: 11-13-07
Sample(s) received in cooler: (Yes) No (Skip Section 2)

Section 2
Was the cooler packed with: X Ice ___ Ice Packs ___ Bubble Wrap ___ Styrofoam
___ Paper ___ None ___ Other _____
Cooler or box temperature: _____
(Acceptance range is 2 to 6 Deg. C.) 3.7

Section 3	YES	NO	N/A
Was a COC received?	✓		
Were custody seals present?		✓	
If Yes – were they intact?	✓		
Were all samples sealed in plastic bags?	✓		
Did all samples arrive intact? If no, indicate below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were correct containers used for the tests required?	✓		
Was a sufficient amount of sample sent for tests indicated?	✓		
No head space in VOA vials?		✓	
Were the correct preservatives used?	✓		
Were the samples scanned for presence of radioactivity?		✓	
Was total residual chlorine measured (Fish Bioassay samples only)? *			✓

*: If the answer is no, please inform Fish Bioassay Dept. immediately.

Section 4
Explanations/Comments

Section 5
Was Project Manager notified of discrepancies: Y / N N/A

Completed By: _____ Date: 11/13/07

14 February 2008

Tony Marino
LFR Inc.
3150 Bristol Street #250
Costa Mesa, CA 92626

RE: CRG-Long Beach

Enclosed are the results of analyses for samples received by the laboratory on 12/03/07 12:22. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Ben Beauchaine
Laboratory Supervisor

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EB	T701575-01	Water	12/03/07 07:00	12/03/07 12:22
MW-3	T701575-02	Water	12/03/07 07:45	12/03/07 12:22
MW-5	T701575-04	Water	12/03/07 08:50	12/03/07 12:22
MW-6	T701575-05	Water	12/03/07 09:55	12/03/07 12:22
MW-7	T701575-06	Water	12/03/07 10:50	12/03/07 12:22
DUP-1	T701575-07	Water	12/03/07 10:50	12/03/07 12:22

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

EB

T701575-01(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C13-C28 (DRO)	ND		0.50	mg/l	1	7120409	12/04/07	12/07/07	EPA 8015B	
C6-C12 (GRO)	ND		0.50	"	"	"	"	"	"	
C29-C40 (MORO)	ND		0.50	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*94.5 %*	*65-135*		"	"	"	"	
Volatile Organic Compounds by EPA Method 8260B										
Methyl tert-butyl ether	ND		1.0	ug/l	1	7120408	12/04/07	12/04/07	EPA 8260B	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND		1.0	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND		2.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND		2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Chloromethane	ND		1.0	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	
Tetrachloroethene	ND		1.0	"	"	"	"	"	"	
Vinyl chloride	ND		1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
Toluene	ND		0.50	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND		10	"	"	"	"	"	"	
Tert-amyl methyl ether	ND		2.0	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

EB

T701575-01(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND		1.0	ug/l	1	7120408	12/04/07	12/04/07	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Bromoform	ND		1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND		1.0	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Bromobenzene	ND		1.0	"	"	"	"	"	"	
Benzene	ND		0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane			*82.2 %*	*66.3-111*		"	"	"	"	
Surrogate: Toluene-d8			*98.0 %*	*90.9-105*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*104 %*	*77.1-110*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-3

T701575-02(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C13-C28 (DRO)	ND		0.50	mg/l	1	7120409	12/04/07	12/07/07	EPA 8015B	
C29-C40 (MORO)	ND		0.50	"	"	"	"	"	"	
C6-C12 (GRO)	ND		0.50	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*97.4 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B										
Silver	ND	5.0	50	ug/l	1	7120410	12/04/07	12/06/07	EPA 6010B	
Copper	**43**	3.6	50	"	"	"	"	"	"	J
Antimony	ND	10	50	"	"	"	"	"	"	
Arsenic	ND	20	50	"	"	"	"	"	"	
Barium	**29**	1.4	50	"	"	"	"	"	"	J
Nickel	ND	3.3	50	"	"	"	"	"	"	
Cobalt	ND	1.3	50	"	"	"	"	"	"	
Lead	ND	8.6	50	"	"	"	"	"	"	
Molybdenum	ND	5.7	50	"	"	"	"	"	"	
Selenium	ND	31	50	"	"	"	"	"	"	
Beryllium	ND	4.1	50	"	"	"	"	12/06/07	"	
Thallium	ND	14	50	"	"	"	"	12/06/07	"	
Vanadium	**3.9**	3.1	50	"	"	"	"	"	"	J
Zinc	**33**	2.2	50	"	"	"	"	"	"	J
Cadmium	ND	1.9	50	"	"	"	"	"	"	
Chromium	**2.1**	1.9	50	"	"	"	"	"	"	J
Cold Vapor Extraction EPA 7470/7471										
Mercury	**0.74**		0.50	ug/l	1	7120411	"	12/05/07	EPA 7470A Water	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-3

T701575-02(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bromobenzene	ND		1.0	ug/l	1	7120408	12/04/07	12/04/07	EPA 8260B	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
Chloromethane	ND		1.0	"	"	"	"	"	"	
Benzene	ND		0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		1.0	"	"	"	"	"	"	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Bromoform	ND		1.0	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND		10	"	"	"	"	"	"	
tert-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Tetrachloroethene	ND		1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-3

T701575-02(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Toluene	ND		0.50	ug/l	1	7120408	12/04/07	12/04/07	EPA 8260B	
trans-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND		2.0	"	"	"	"	"	"	
Vinyl chloride	ND		1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND		2.0	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND		2.0	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND		1.0	"	"	"	"	"	"	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND		1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	
Naphthalene	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*102 %*	*77.1-110*		"	"	"	"	
Surrogate: Toluene-d8			*97.6 %*	*90.9-105*		"	"	"	"	
Surrogate: Dibromofluoromethane			*81.0 %*	*66.3-111*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-3

T701575-02(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (b) fluoranthene	ND		10	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
Benzo (a) pyrene	ND		10	"	"	"	"	"	"	
Benzo (a) anthracene	ND		10	"	"	"	"	"	"	
Anthracene	ND		10	"	"	"	"	"	"	
Aniline	ND		10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		20	"	"	"	"	"	"	
Acenaphthene	ND		10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		20	"	"	"	"	"	"	
4-Nitrophenol	ND		10	"	"	"	"	"	"	
Acenaphthylene	ND		10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		10	"	"	"	"	"	"	
Benzyl alcohol	ND		50	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		5.0	"	"	"	"	"	"	
4-Nitroaniline	ND		20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		10	"	"	"	"	"	"	
Chrysene	ND		10	"	"	"	"	"	"	
Carbazole	ND		10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		10	"	"	"	"	"	"	
2-Methylphenol	ND		10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		5.0	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		5.0	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		20	"	"	"	"	"	"	
2-Chloronaphthalene	ND		10	"	"	"	"	"	"	
2-Chlorophenol	ND		10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		10	"	"	"	"	"	"	
2-Methylnaphthalene	ND		20	"	"	"	"	"	"	
4-Methylphenol	ND		20	"	"	"	"	"	"	
2-Nitroaniline	ND		10	"	"	"	"	"	"	
2-Nitrophenol	ND		10	"	"	"	"	"	"	
3-Nitroaniline	ND		10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		5.0	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		10	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-3

T701575-02(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
4-Chloroaniline	ND		20	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
4-Chlorophenyl phenyl ether	ND		20	"	"	"	"	"	"	
Pyrene	ND		10	"	"	"	"	"	"	
Pyridine	ND		10	"	"	"	"	"	"	
Pentachlorophenol	ND		10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		10	"	"	"	"	"	"	
Dibenzofuran	ND		20	"	"	"	"	"	"	
Diethyl phthalate	ND		10	"	"	"	"	"	"	
Dimethyl phthalate	ND		10	"	"	"	"	"	"	
Fluoranthene	ND		5.0	"	"	"	"	"	"	
Fluorene	ND		10	"	"	"	"	"	"	
Hexachlorobenzene	ND		20	"	"	"	"	"	"	
Hexachlorobutadiene	ND		10	"	"	"	"	"	"	
Phenol	ND		10	"	"	"	"	"	"	
Hexachloroethane	ND		5.0	"	"	"	"	"	"	
Phenanthrene	ND		10	"	"	"	"	"	"	
Isophorone	ND		10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		5.0	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		25	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		10	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
Nitrobenzene	ND		20	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND		10	"	"	"	"	"	"	
1-Methylnaphthalene	ND		10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		20	"	"	"	"	"	"	
Surrogate: 2-Fluorobiphenyl			*70.4 %*	*33.3-110*		*"*	*"*	*"*	*"*	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

MW-3

T701575-02(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol			*24.2 %*	*9.97-110*		*7120703*	*12/13/07*	*12/19/07*	*EPA 8270C*	
Surrogate: Phenol-d6			*17.0 %*	*8.4-110*		*"*	*"*	*"*	*"*	
Surrogate: Terphenyl-dl4			*58.6 %*	*15.8-136*		*"*	*"*	*"*	*"*	
Surrogate: Nitrobenzene-d5			*64.3 %*	*14.7-110*		*"*	*"*	*"*	*"*	
Surrogate: 2,4,6-Tribromophenol			*67.5 %*	*12.9-110*		*"*	*"*	*"*	*"*	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-5

T701575-04(Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.										
Extractable Petroleum Hydrocarbons by 8015B										
C13-C28 (DRO)	ND		0.50	mg/l	1	7120409	12/04/07	12/07/07	EPA 8015B	
C29-C40 (MORO)	ND		0.50	"	"	"	"	"	"	
C6-C12 (GRO)	ND		0.50	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*116 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B										
Lead	ND	8.6	50	ug/l	1	7120410	12/04/07	12/06/07	EPA 6010B	
Antimony	ND	10	50	"	"	"	"	"	"	
Arsenic	ND	20	50	"	"	"	"	"	"	
Barium	**86**	1.4	50	"	"	"	"	"	"	
Beryllium	ND	4.1	50	"	"	"	"	12/06/07	"	
Cadmium	ND	1.9	50	"	"	"	"	12/06/07	"	
Chromium	ND	1.9	50	"	"	"	"	"	"	
Thallium	ND	14	50	"	"	"	"	"	"	
Copper	**28**	3.6	50	"	"	"	"	"	"	J
Molybdenum	ND	5.7	50	"	"	"	"	"	"	
Nickel	ND	3.3	50	"	"	"	"	"	"	
Selenium	ND	31	50	"	"	"	"	"	"	
Silver	ND	5.0	50	"	"	"	"	"	"	
Vanadium	ND	3.1	50	"	"	"	"	"	"	
Zinc	**15**	2.2	50	"	"	"	"	"	"	J
Cobalt	ND	1.3	50	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471										
Mercury	ND		0.50	ug/l	1	7120411	"	12/05/07	EPA 7470A Water	

MW-5

T701575-04(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
tert-Butylbenzene	ND		1.0	ug/l	1	7120408	12/04/07	12/04/07	EPA 8260B	
Bromobenzene	ND		1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
Chloromethane	ND		1.0	"	"	"	"	"	"	
Benzene	ND		0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Bromoform	ND		1.0	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
Toluene	ND		0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND		10	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-5

T701575-04(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Tetrachloroethene	ND		1.0	ug/l	1	7120408	12/04/07	12/04/07	EPA 8260B	
trans-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND		2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
Vinyl chloride	ND		1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND		2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND		2.0	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Naphthalene	ND		1.0	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND		1.0	"	"	"	"	"	"	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*102 %*	*77.1-110*		"	"	"	"	
Surrogate: Toluene-d8			*98.1 %*	*90.9-105*		"	"	"	"	
Surrogate: Dibromofluoromethane			*80.0 %*	*66.3-111*		"	"	"	"	

MW-5

T701575-04(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bis(2-chloroethyl)ether	ND		5.0	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
Benzo (b) fluoranthene	ND		10	"	"	"	"	"	"	
Aniline	ND		10	"	"	"	"	"	"	
Anthracene	ND		10	"	"	"	"	"	"	
Acenaphthene	ND		10	"	"	"	"	"	"	
Benzo (a) anthracene	ND		10	"	"	"	"	"	"	
Benzo (a) pyrene	ND		10	"	"	"	"	"	"	
Acenaphthylene	ND		10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		20	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		10	"	"	"	"	"	"	
Carbazole	ND		10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		10	"	"	"	"	"	"	
Chrysene	ND		10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		5.0	"	"	"	"	"	"	
4-Nitrophenol	ND		10	"	"	"	"	"	"	
Benzyl alcohol	ND		50	"	"	"	"	"	"	
2-Nitroaniline	ND		10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		20	"	"	"	"	"	"	
2-Chloronaphthalene	ND		10	"	"	"	"	"	"	
2-Chlorophenol	ND		10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		10	"	"	"	"	"	"	
2-Methylphenol	ND		10	"	"	"	"	"	"	
4-Nitroaniline	ND		20	"	"	"	"	"	"	
2-Nitrophenol	ND		10	"	"	"	"	"	"	
3-Nitroaniline	ND		10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		5.0	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		10	"	"	"	"	"	"	
4-Chloroaniline	ND		20	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		20	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-5

T701575-04(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
4-Methylphenol	ND		20	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
2-Methylnaphthalene	ND		20	"	"	"	"	"	"	
Pyridine	ND		10	"	"	"	"	"	"	
Phenol	ND		10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		10	"	"	"	"	"	"	
Isophorone	ND		10	"	"	"	"	"	"	
Dibenzofuran	ND		20	"	"	"	"	"	"	
Diethyl phthalate	ND		10	"	"	"	"	"	"	
Dimethyl phthalate	ND		10	"	"	"	"	"	"	
Fluoranthene	ND		5.0	"	"	"	"	"	"	
Fluorene	ND		10	"	"	"	"	"	"	
Hexachlorobenzene	ND		20	"	"	"	"	"	"	
Hexachlorobutadiene	ND		10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		20	"	"	"	"	"	"	
Pyrene	ND		10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		5.0	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		25	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		10	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
Nitrobenzene	ND		20	"	"	"	"	"	"	
Pentachlorophenol	ND		10	"	"	"	"	"	"	
Phenanthrene	ND		10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		10	"	"	"	"	"	"	
Hexachloroethane	ND		5.0	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND		10	"	"	"	"	"	"	
1-Methylnaphthalene	ND		10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		20	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		10	"	"	"	"	"	"	
Surrogate: 2-Fluorobiphenyl			*66.1 %*	*33.3-110*		*"*	*"*	*"*	*"*	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

MW-5

T701575-04(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol			*28.6 %*	*9.97-110*		*7120703*	*12/13/07*	*12/19/07*	*EPA 8270C*	
Surrogate: Terphenyl-dl4			*64.1 %*	*15.8-136*		"	"	"	"	
Surrogate: Phenol-d6			*22.7 %*	*8.4-110*		"	"	"	"	
Surrogate: Nitrobenzene-d5			*60.1 %*	*14.7-110*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol			*63.1 %*	*12.9-110*		"	"	"	"	

MW-6

T701575-05(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C29-C40 (MORO)	ND		0.50	mg/l	1	7120409	12/04/07	12/07/07	EPA 8015B	
C13-C28 (DRO)	ND		0.50	"	"	"	"	"	"	
C6-C12 (GRO)	ND		0.50	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*103 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B										
Barium	**100**	1.4	50	ug/l	1	7120410	12/04/07	12/06/07	EPA 6010B	
Zinc	**12**	2.2	50	"	"	"	"	12/06/07	"	J
Vanadium	**8.8**	3.1	50	"	"	"	"	12/06/07	"	J
Thallium	ND	14	50	"	"	"	"	12/06/07	"	
Silver	ND	5.0	50	"	"	"	"	12/06/07	"	
Selenium	ND	31	50	"	"	"	"	12/06/07	"	
Nickel	ND	3.3	50	"	"	"	"	"	"	
Molybdenum	ND	5.7	50	"	"	"	"	"	"	
Lead	ND	8.6	50	"	"	"	"	"	"	
Copper	**28**	3.6	50	"	"	"	"	12/06/07	"	J
Cobalt	ND	1.3	50	"	"	"	"	12/06/07	"	
Chromium	ND	1.9	50	"	"	"	"	"	"	
Beryllium	ND	4.1	50	"	"	"	"	12/06/07	"	
Arsenic	ND	20	50	"	"	"	"	12/06/07	"	
Antimony	ND	10	50	"	"	"	"	"	"	
Cadmium	ND	1.9	50	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471										
Mercury	**5.6**		0.50	ug/l	1	7120411	"	12/05/07	EPA 7470A Water	

MW-6

T701575-05(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bromoform	ND		1.0	ug/l	1	7120408	12/04/07	12/04/07	EPA 8260B	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
Bromobenzene	ND		1.0	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Benzene	ND		0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
Chloromethane	ND		1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND		2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND		2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-6

T701575-05(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dichloropropane	ND		1.0	ug/l	1	7120408	12/04/07	12/04/07	EPA 8260B	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
Vinyl chloride	ND		1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Toluene	ND		0.50	"	"	"	"	"	"	
Tetrachloroethene	ND		1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND		2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
Naphthalene	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND		1.0	"	"	"	"	"	"	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND		1.0	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND		10	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*102 %*		*77.1-110*	"	"	"	"	
Surrogate: Dibromofluoromethane			*80.5 %*		*66.3-111*	"	"	"	"	
Surrogate: Toluene-d8			*98.2 %*		*90.9-105*	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-6

T701575-05(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Butyl benzyl phthalate	ND		10	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
Hexachloroethane	ND		5.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		20	"	"	"	"	"	"	
Hexachlorobutadiene	ND		10	"	"	"	"	"	"	
Hexachlorobenzene	ND		20	"	"	"	"	"	"	
Fluorene	ND		10	"	"	"	"	"	"	
Fluoranthene	ND		5.0	"	"	"	"	"	"	
Dimethyl phthalate	ND		10	"	"	"	"	"	"	
Diethyl phthalate	ND		10	"	"	"	"	"	"	
Dibenzofuran	ND		20	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		5.0	"	"	"	"	"	"	
Acenaphthylene	ND		10	"	"	"	"	"	"	
Carbazole	ND		10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		5.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		20	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		5.0	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		10	"	"	"	"	"	"	
Benzyl alcohol	ND		50	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		20	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND		10	"	"	"	"	"	"	
Benzo (a) pyrene	ND		10	"	"	"	"	"	"	
Benzo (a) anthracene	ND		10	"	"	"	"	"	"	
Anthracene	ND		10	"	"	"	"	"	"	
Aniline	ND		10	"	"	"	"	"	"	
Chrysene	ND		10	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		10	"	"	"	"	"	"	
Isophorone	ND		10	"	"	"	"	"	"	
Pyridine	ND		10	"	"	"	"	"	"	
Phenol	ND		10	"	"	"	"	"	"	
Phenanthrene	ND		10	"	"	"	"	"	"	
Pentachlorophenol	ND		10	"	"	"	"	"	"	
Nitrobenzene	ND		20	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-6

T701575-05(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND		5.0	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
N-Nitrosodiphenylamine	ND		10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		25	"	"	"	"	"	"	
Pyrene	ND		10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		10	"	"	"	"	"	"	
Acenaphthene	ND		10	"	"	"	"	"	"	
4-Chloroaniline	ND		20	"	"	"	"	"	"	
2-Methylnaphthalene	ND		20	"	"	"	"	"	"	
2-Methylphenol	ND		10	"	"	"	"	"	"	
2-Nitroaniline	ND		10	"	"	"	"	"	"	
3-Nitroaniline	ND		10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		10	"	"	"	"	"	"	
2-Nitrophenol	ND		10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		20	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND		10	"	"	"	"	"	"	
4-Methylphenol	ND		20	"	"	"	"	"	"	
4-Nitroaniline	ND		20	"	"	"	"	"	"	
4-Nitrophenol	ND		10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		20	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		5.0	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2-Chlorophenol	ND		10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		5.0	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		10	"	"	"	"	"	"	
1-Methylnaphthalene	ND		10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		20	"	"	"	"	"	"	
2-Chloronaphthalene	ND		10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		10	"	"	"	"	"	"	
Surrogate: Phenol-d6			*21.5 %*	*8.4-110*		*"*	*"*	*"*	*"*	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

MW-6

T701575-05(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5			*63.4 %*	*14.7-110*		*7120703*	*12/13/07*	*12/19/07*	*EPA 8270C*	
Surrogate: Terphenyl-dl4			*65.1 %*	*15.8-136*		*"*	*"*	*"*	*"*	
Surrogate: 2-Fluorophenol			*26.8 %*	*9.97-110*		*"*	*"*	*"*	*"*	
Surrogate: 2-Fluorobiphenyl			*69.0 %*	*33.3-110*		*"*	*"*	*"*	*"*	
Surrogate: 2,4,6-Tribromophenol			*71.7 %*	*12.9-110*		*"*	*"*	*"*	*"*	

MW-7

T701575-06(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C13-C28 (DRO)	**1.1**		0.50	mg/l	1	7120409	12/04/07	12/07/07	EPA 8015B	
C29-C40 (MORO)	ND		0.50	"	"	"	"	"	"	
C6-C12 (GRO)	ND		0.50	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*113 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B										
Thallium	ND	14	50	ug/l	1	7120410	12/04/07	12/06/07	EPA 6010B	
Chromium	ND	1.9	50	"	"	"	"	"	"	
Antimony	ND	10	50	"	"	"	"	"	"	
Arsenic	**210**	20	50	"	"	"	"	"	"	
Barium	**1100**	1.4	50	"	"	"	"	"	"	
Zinc	**16**	2.2	50	"	"	"	"	"	"	J
Cadmium	ND	1.9	50	"	"	"	"	"	"	
Vanadium	ND	3.1	50	"	"	"	"	"	"	
Cobalt	**4.1**	1.3	50	"	"	"	"	"	"	J
Copper	**32**	3.6	50	"	"	"	"	"	"	J
Lead	ND	8.6	50	"	"	"	"	"	"	
Molybdenum	**29**	5.7	50	"	"	"	"	"	"	J
Nickel	**6.3**	3.3	50	"	"	"	"	"	"	J
Selenium	ND	31	50	"	"	"	"	"	"	
Silver	ND	5.0	50	"	"	"	"	"	"	
Beryllium	ND	4.1	50	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471										
Mercury	ND		0.50	ug/l	1	7120411	"	12/05/07	EPA 7470A Water	

MW-7

T701575-06(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,2,2-Tetrachloroethane	ND		1.0	ug/l	1	7120408	12/04/07	12/05/07	EPA 8260B	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
Naphthalene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND		10	"	"	"	"	"	"	
Tert-amyl methyl ether	ND		2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND		2.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
Chloromethane	ND		1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND		2.0	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND		1.0	"	"	"	"	"	"	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND		1.0	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

MW-7

T701575-06(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2,2-Dichloropropane	ND		1.0	ug/l	1	7120408	12/04/07	12/05/07	EPA 8260B	
1,2,4-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
Benzene	ND		0.50	"	"	"	"	"	"	
Bromobenzene	ND		1.0	"	"	"	"	"	"	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Bromoform	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
Vinyl chloride	ND		1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Toluene	**0.95**		0.50	"	"	"	"	"	"	
Tetrachloroethene	ND		1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane			*93.2 %*		*66.3-111*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*95.2 %*		*77.1-110*	"	"	"	"	
Surrogate: Toluene-d8			*98.1 %*		*90.9-105*	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

MW-7

T701575-06(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Hexachlorobutadiene	ND		10	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
Fluoranthene	ND		5.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		20	"	"	"	"	"	"	
Hexachlorobenzene	ND		20	"	"	"	"	"	"	
Hexachloroethane	ND		5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		10	"	"	"	"	"	"	
Fluorene	ND		10	"	"	"	"	"	"	
Dimethyl phthalate	ND		10	"	"	"	"	"	"	
Diethyl phthalate	ND		10	"	"	"	"	"	"	
Isophorone	ND		10	"	"	"	"	"	"	
Pyridine	ND		10	"	"	"	"	"	"	
Pyrene	ND		10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		5.0	"	"	"	"	"	"	
Phenol	ND		10	"	"	"	"	"	"	
Phenanthrene	ND		10	"	"	"	"	"	"	
Pentachlorophenol	ND		10	"	"	"	"	"	"	
Nitrobenzene	ND		20	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		25	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		5.0	"	"	"	"	"	"	
Benzyl alcohol	ND		50	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		10	"	"	"	"	"	"	
Chrysene	ND		10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		20	"	"	"	"	"	"	
Acenaphthene	ND		10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		20	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND		10	"	"	"	"	"	"	
Benzo (a) pyrene	ND		10	"	"	"	"	"	"	
Benzo (a) anthracene	ND		10	"	"	"	"	"	"	
Anthracene	ND		10	"	"	"	"	"	"	

MW-7

T701575-06(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Aniline	ND		10	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
Carbazole	ND		10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		5.0	"	"	"	"	"	"	
4-Nitrophenol	ND		10	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		20	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
1-Methylnaphthalene	ND		10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND		10	"	"	"	"	"	"	
Acenaphthylene	ND		10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
Dibenzofuran	ND		20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		10	"	"	"	"	"	"	
2-Methylphenol	ND		10	"	"	"	"	"	"	
4-Nitroaniline	ND		20	"	"	"	"	"	"	
4-Methylphenol	ND		20	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		20	"	"	"	"	"	"	
4-Chloroaniline	ND		20	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		5.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		5.0	"	"	"	"	"	"	
3-Nitroaniline	ND		10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		5.0	"	"	"	"	"	"	
2-Nitroaniline	ND		10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		10	"	"	"	"	"	"	
2-Methylnaphthalene	ND		20	"	"	"	"	"	"	
2-Chlorophenol	ND		10	"	"	"	"	"	"	
2-Chloronaphthalene	ND		10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND		20	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND		10	"	"	"	"	"	"	
2-Nitrophenol	ND		10	"	"	"	"	"	"	
Surrogate: Phenol-d6			*19.8 %*	*8.4-110*		*"*	*"*	*"*	*"*	

MW-7

T701575-06(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5			*57.7 %*	*14.7-110*		*7120703*	*12/13/07*	*12/19/07*	*EPA 8270C*	
Surrogate: Terphenyl-dl4			*43.7 %*	*15.8-136*		*"*	*"*	*"*	*"*	
Surrogate: 2,4,6-Tribromophenol			*87.4 %*	*12.9-110*		*"*	*"*	*"*	*"*	
Surrogate: 2-Fluorophenol			*30.8 %*	*9.97-110*		*"*	*"*	*"*	*"*	
Surrogate: 2-Fluorobiphenyl			*65.5 %*	*33.3-110*		*"*	*"*	*"*	*"*	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

DUP-1

T701575-07(Water)

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B										
C6-C12 (GRO)	ND		0.50	mg/l	1	7120409	12/04/07	12/07/07	EPA 8015B	
C29-C40 (MORO)	ND		0.50	"	"	"	"	"	"	
C13-C28 (DRO)	**0.76**		0.50	"	"	"	"	"	"	
Surrogate: p-Terphenyl			*112 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B										
Cobalt	**4.3**	1.3	50	ug/l	1	7120410	12/04/07	12/06/07	EPA 6010B	J
Lead	ND	8.6	50	"	"	"	"	"	"	
Cadmium	ND	1.9	50	"	"	"	"	"	"	
Antimony	ND	10	50	"	"	"	"	"	"	
Arsenic	**190**	20	50	"	"	"	"	"	"	
Beryllium	ND	4.1	50	"	"	"	"	12/06/07	"	
Chromium	ND	1.9	50	"	"	"	"	12/06/07	"	
Copper	**17**	3.6	50	"	"	"	"	"	"	J
Molybdenum	**30**	5.7	50	"	"	"	"	"	"	J
Nickel	**6.6**	3.3	50	"	"	"	"	"	"	J
Selenium	**32**	31	50	"	"	"	"	"	"	J
Silver	ND	5.0	50	"	"	"	"	"	"	
Thallium	ND	14	50	"	"	"	"	"	"	
Vanadium	ND	3.1	50	"	"	"	"	"	"	
Barium	**1100**	1.4	50	"	"	"	"	"	"	
Zinc	**11**	2.2	50	"	"	"	"	"	"	J
Cold Vapor Extraction EPA 7470/7471										
Mercury	ND		0.50	ug/l	1	7120411	"	12/05/07	EPA 7470A Water	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

DUP-1

T701575-07(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bromoform	ND		1.0	ug/l	1	7120408	12/04/07	12/05/07	EPA 8260B	
Methyl tert-butyl ether	ND		1.0	"	"	"	"	"	"	
m,p-Xylene	ND		1.0	"	"	"	"	"	"	
Isopropylbenzene	ND		1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND		1.0	"	"	"	"	"	"	
Ethylbenzene	ND		0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND		2.0	"	"	"	"	"	"	
Chloroethane	ND		1.0	"	"	"	"	"	"	
Dibromomethane	ND		1.0	"	"	"	"	"	"	
n-Propylbenzene	ND		1.0	"	"	"	"	"	"	
Dibromochloromethane	ND		1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND		2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Chloromethane	ND		1.0	"	"	"	"	"	"	
Bromochloromethane	ND		1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND		0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND		10	"	"	"	"	"	"	
Trichlorofluoromethane	ND		1.0	"	"	"	"	"	"	
Trichloroethene	ND		1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND		0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND		1.0	"	"	"	"	"	"	
Toluene	**0.81**		0.50	"	"	"	"	"	"	
Methylene chloride	ND		1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND		1.0	"	"	"	"	"	"	
n-Butylbenzene	ND		1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND		2.0	"	"	"	"	"	"	
Styrene	ND		1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND		1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND		1.0	"	"	"	"	"	"	
o-Xylene	ND		0.50	"	"	"	"	"	"	
Naphthalene	ND		1.0	"	"	"	"	"	"	
Chlorobenzene	ND		1.0	"	"	"	"	"	"	
Tetrachloroethene	ND		1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND		1.0	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

DUP-1

T701575-07(Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2,4-Trimethylbenzene	ND		1.0	ug/l	1	7120408	12/04/07	12/05/07	EPA 8260B	
1,2,4-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND		1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND		1.0	"	"	"	"	"	"	
Chloroform	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND		1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND		0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND		1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND		1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND		1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND		0.50	"	"	"	"	"	"	
Bromomethane	ND		1.0	"	"	"	"	"	"	
Bromodichloromethane	ND		1.0	"	"	"	"	"	"	
Bromobenzene	ND		1.0	"	"	"	"	"	"	
Benzene	ND		0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND		1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND		1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND		1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND		1.0	"	"	"	"	"	"	
Vinyl chloride	ND		1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane			*94.0 %*	*66.3-111*		"	"	"	"	
Surrogate: Toluene-d8			*97.6 %*	*90.9-105*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene			*98.2 %*	*77.1-110*		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

DUP-1

T701575-07(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthylene	ND		10	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
2-Nitrophenol	ND		10	"	"	"	"	"	"	
3-Nitroaniline	ND		10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND		5.0	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND		5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND		10	"	"	"	"	"	"	
4-Chloroaniline	ND		20	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND		20	"	"	"	"	"	"	
4-Methylphenol	ND		20	"	"	"	"	"	"	
4-Nitroaniline	ND		20	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND		5.0	"	"	"	"	"	"	
Acenaphthene	ND		10	"	"	"	"	"	"	
2-Methylnaphthalene	ND		20	"	"	"	"	"	"	
Aniline	ND		10	"	"	"	"	"	"	
Anthracene	ND		10	"	"	"	"	"	"	
Benzo (a) anthracene	ND		10	"	"	"	"	"	"	
Benzo (a) pyrene	ND		10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND		10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND		20	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND		10	"	"	"	"	"	"	
Benzyl alcohol	ND		50	"	"	"	"	"	"	
4-Nitrophenol	ND		10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND		10	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND		5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND		10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND		10	"	"	"	"	"	"	
1-Methylnaphthalene	ND		10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND		10	"	"	"	"	"	"	
2-Nitroaniline	ND		10	"	"	"	"	"	"	
2-Methylphenol	ND		10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND		10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND		5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND		10	"	"	"	"	"	"	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

DUP-1

T701575-07(Water)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2,4-Dinitrotoluene	ND		10	ug/l	1	7120703	12/13/07	12/19/07	EPA 8270C	
2,6-Dinitrotoluene	ND		20	"	"	"	"	"	"	
2-Chloronaphthalene	ND		10	"	"	"	"	"	"	
2-Chlorophenol	ND		10	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND		20	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND		20	"	"	"	"	"	"	
Pentachlorophenol	ND		10	"	"	"	"	"	"	
Phenanthrene	ND		10	"	"	"	"	"	"	
Phenol	ND		10	"	"	"	"	"	"	
Pyrene	ND		10	"	"	"	"	"	"	
Pyridine	ND		10	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND		10	"	"	"	"	"	"	
Naphthalene	ND		5.0	"	"	"	"	"	"	
Fluorene	ND		10	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND		10	"	"	"	"	"	"	
Butyl benzyl phthalate	ND		10	"	"	"	"	"	"	
Carbazole	ND		10	"	"	"	"	"	"	
Chrysene	ND		10	"	"	"	"	"	"	
Di-n-butyl phthalate	ND		5.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND		10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND		10	"	"	"	"	"	"	
Dibenzofuran	ND		20	"	"	"	"	"	"	
Diethyl phthalate	ND		10	"	"	"	"	"	"	
Fluoranthene	ND		5.0	"	"	"	"	"	"	
Nitrobenzene	ND		20	"	"	"	"	"	"	
Hexachlorobenzene	ND		20	"	"	"	"	"	"	
Hexachlorobutadiene	ND		10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND		20	"	"	"	"	"	"	
Hexachloroethane	ND		5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		10	"	"	"	"	"	"	
Isophorone	ND		10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND		5.0	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND		25	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND		10	"	"	"	"	"	"	
Dimethyl phthalate	ND		10	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol			*91.2 %*	*12.9-110*		*"*	*"*	*"*	*"*	

LFR Inc.	Project: CRG-Long Beach	
3150 Bristol Street #250	Project Number: 002-10231-03	**Reported:**
Costa Mesa CA, 92626	Project Manager: Tony Marino	02/14/08 16:44

DUP-1

T701575-07(Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Surrogate: 2-Fluorobiphenyl			*68.9 %*	*33.3-110*	*7120703*	*12/13/07*	*12/19/07*	*EPA 8270C*	
Surrogate: 2-Fluorophenol			*35.9 %*	*9.97-110*	*"*	*"*	*"*	*"*	
Surrogate: Phenol-d6			*28.8 %*	*8.4-110*	*"*	*"*	*"*	*"*	
Surrogate: Terphenyl-dl4			*49.4 %*	*15.8-136*	*"*	*"*	*"*	*"*	
Surrogate: Nitrobenzene-d5			*60.8 %*	*14.7-110*	*"*	*"*	*"*	*"*	

Extractable Petroleum Hydrocarbons by 8015B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120409 - EPA 3510C GC											
Blank (7120409-BLK1)					Prepared: 12/04/07 Analyzed: 12/07/07						
Surrogate: p-Terphenyl	*4.43*			*mg/l*	*4.00*		*111*	*65-135*			
C6-C12 (GRO)	ND		0.50	"							
C13-C28 (DRO)	ND		0.50	"							
C29-C40 (MORO)	ND		0.50	"							
LCS (7120409-BS1)					Prepared: 12/04/07 Analyzed: 12/07/07						
Surrogate: p-Terphenyl	*3.91*			*mg/l*	*4.00*		*97.9*	*65-135*			
C13-C28 (DRO)	17.0		0.50	"	20.0		85.1	75-125			
Matrix Spike (7120409-MS1)		**Source: T701575-05**			Prepared: 12/04/07 Analyzed: 12/07/07						
Surrogate: p-Terphenyl	*4.58*			*mg/l*	*4.00*		*114*	*65-135*			
C13-C28 (DRO)	18.6		0.50	"	20.0	ND	93.2	75-125			
Matrix Spike Dup (7120409-MSD1)		**Source: T701575-05**			Prepared: 12/04/07 Analyzed: 12/07/07						
Surrogate: p-Terphenyl	*3.59*			*mg/l*	*4.00*		*89.9*	*65-135*			
C13-C28 (DRO)	16.7		0.50	"	20.0	ND	83.4	75-125	11.1	20	

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120410 - EPA 3010A											
Blank (7120410-BLK1)					Prepared: 12/04/07 Analyzed: 12/06/07						
Antimony	ND	10	50	ug/l							
Silver	ND	5.0	50	"							
Arsenic	ND	20	50	"							
Barium	ND	1.4	50	"							
Beryllium	ND	4.1	50	"							
Cadmium	ND	1.9	50	"							
Chromium	ND	1.9	50	"							
Cobalt	ND	1.3	50	"							
Copper	15.2	3.6	50	"							J
Lead	ND	8.6	50	"							
Molybdenum	ND	5.7	50	"							
Nickel	ND	3.3	50	"							
Selenium	ND	31	50	"							
Thallium	ND	14	50	"							
Vanadium	ND	3.1	50	"							
Zinc	11.4	2.2	50	"							J
LCS (7120410-BS1)					Prepared: 12/04/07 Analyzed: 12/06/07						
Arsenic	492	20	50	ug/l	500		98.4	75-125			
Barium	478	1.4	50	"	500		95.6	75-125			
Cadmium	469	1.9	50	"	500		93.7	75-125			
Chromium	480	1.9	50	"	500		95.9	75-125			
Lead	472	8.6	50	"	500		94.5	75-125			
LCS Dup (7120410-BSD1)					Prepared: 12/04/07 Analyzed: 12/06/07						
Arsenic	489	20	50	ug/l	500		97.8	75-125	0.634	20	
Barium	484	1.4	50	"	500		96.7	75-125	1.14	20	
Cadmium	475	1.9	50	"	500		95.0	75-125	1.32	20	
Chromium	483	1.9	50	"	500		96.5	75-125	0.612	20	
Lead	471	8.6	50	"	500		94.3	75-125	0.227	20	

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120411 - EPA 7470A Water											
Blank (7120411-BLK1)					Prepared: 12/04/07 Analyzed: 12/05/07						
Mercury	ND		0.50	ug/l							
LCS (7120411-BS1)					Prepared: 12/04/07 Analyzed: 12/05/07						
Mercury	4.60		0.50	ug/l	5.00		92.0	75-125			
LCS Dup (7120411-BSD1)					Prepared: 12/04/07 Analyzed: 12/05/07						
Mercury	4.58		0.50	ug/l	5.00		91.5	75-125	0.545	20	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120408 - EPA 5030 GCMS											
Blank (7120408-BLK1)				Prepared & Analyzed: 12/04/07							
Surrogate: 4-Bromofluorobenzene	*8.36*			*ug/l*	*8.00*		*104*	*84-118*			
Surrogate: Dibromofluoromethane	*6.77*			*"*	*8.00*		*84.6*	*66-124*			
Surrogate: Toluene-d8	*7.85*			*"*	*8.00*		*98.1*	*85-115*			
Bromobenzene	ND		0.20	"							
Bromochloromethane	ND		0.20	"							
Bromodichloromethane	ND		0.20	"							
Bromoform	ND		0.20	"							
Bromomethane	ND		0.20	"							
n-Butylbenzene	ND		0.20	"							
sec-Butylbenzene	ND		0.20	"							
tert-Butylbenzene	ND		0.20	"							
Carbon tetrachloride	ND		0.10	"							
Chlorobenzene	ND		0.20	"							
Chloroethane	ND		1.0	"							
Chloroform	ND		0.20	"							
Chloromethane	ND		0.20	"							
2-Chlorotoluene	ND		0.20	"							
4-Chlorotoluene	ND		0.20	"							
Dibromochloromethane	ND		0.20	"							
1,2-Dibromo-3-chloropropane	ND		1.0	"							
1,2-Dibromoethane (EDB)	ND		0.20	"							
Dibromomethane	ND		0.20	"							
1,2-Dichlorobenzene	ND		0.20	"							
1,3-Dichlorobenzene	ND		0.20	"							
1,4-Dichlorobenzene	ND		0.20	"							
Dichlorodifluoromethane	ND		0.10	"							
1,1-Dichloroethane	ND		0.20	"							
1,2-Dichloroethane	ND		0.10	"							
1,1-Dichloroethene	ND		0.12	"							
cis-1,2-Dichloroethene	ND		0.10	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120408 - EPA 5030 GCMS											
Blank (7120408-BLK1)					Prepared & Analyzed: 12/04/07						
trans-1,2-Dichloroethene	ND		0.10	ug/l							
1,2-Dichloropropane	ND		0.20	"							
1,3-Dichloropropane	ND		0.20	"							
2,2-Dichloropropane	ND		0.20	"							
1,1-Dichloropropene	ND		0.20	"							
cis-1,3-Dichloropropene	ND		0.10	"							
trans-1,3-Dichloropropene	ND		0.10	"							
Hexachlorobutadiene	ND		0.20	"							
Isopropylbenzene	ND		0.20	"							
p-Isopropyltoluene	ND		0.20	"							
Methylene chloride	ND		0.10	"							
Naphthalene	ND		0.20	"							
n-Propylbenzene	ND		0.20	"							
Styrene	ND		0.20	"							
1,1,2,2-Tetrachloroethane	ND		0.20	"							
1,1,1,2-Tetrachloroethane	ND		0.20	"							
Tetrachloroethene	ND		0.13	"							
1,2,3-Trichlorobenzene	ND		0.20	"							
1,2,4-Trichlorobenzene	ND		0.20	"							
1,1,2-Trichloroethane	ND		0.20	"							
1,1,1-Trichloroethane	ND		0.20	"							
Trichloroethene	ND		0.10	"							
Trichlorofluoromethane	ND		0.20	"							
1,2,3-Trichloropropane	ND		0.20	"							
1,3,5-Trimethylbenzene	ND		0.20	"							
1,2,4-Trimethylbenzene	ND		0.20	"							
Vinyl chloride	ND		0.10	"							
Benzene	ND		0.10	"							
Toluene	ND		0.10	"							
Ethylbenzene	ND		0.10	"							

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120408 - EPA 5030 GCMS											
Blank (7120408-BLK1)					Prepared & Analyzed: 12/04/07						
m,p-Xylene	ND		0.20	ug/l							
o-Xylene	ND		0.10	"							
Tert-amyl methyl ether	ND		0.40	"							
Tert-butyl alcohol	ND		2.0	"							
Di-isopropyl ether	ND		0.40	"							
Ethyl tert-butyl ether	ND		0.40	"							
Methyl tert-butyl ether	ND		0.10	"							
LCS (7120408-BS1)					Prepared: 12/04/07 Analyzed: 12/05/07						
Surrogate: 4-Bromofluorobenzene	*7.73*			*ug/l*	*8.00*		*96.6*	*77.1-110*			
Surrogate: Dibromofluoromethane	*6.78*			*"*	*8.00*		*84.8*	*66.3-111*			
Surrogate: Toluene-d8	*7.85*			*"*	*8.00*		*98.1*	*90.9-105*			
Chlorobenzene	19.4		1.0	"	20.0		96.9	75-125			
1,1-Dichloroethene	19.7		1.0	"	20.0		98.3	75-125			
Trichloroethene	21.3		1.0	"	20.0		106	75-125			
Benzene	19.0		0.50	"	20.0		95.0	75-125			
Toluene	19.4		0.50	"	20.0		96.9	75-125			
Matrix Spike (7120408-MS1)		**Source: T701575-02**			Prepared: 12/04/07 Analyzed: 12/06/07						
Surrogate: 4-Bromofluorobenzene	*7.60*			*ug/l*	*8.00*		*95.0*	*77.1-110*			
Surrogate: Dibromofluoromethane	*6.57*			*"*	*8.00*		*82.1*	*66.3-111*			
Surrogate: Toluene-d8	*7.98*			*"*	*8.00*		*99.8*	*90.9-105*			
Chlorobenzene	19.4		1.0	"	20.0	ND	97.0	75-125			
1,1-Dichloroethene	18.5		1.0	"	20.0	ND	92.6	75-125			
Trichloroethene	19.7		1.0	"	20.0	ND	98.6	75-125			
Benzene	19.1		0.50	"	20.0	ND	95.4	75-125			
Toluene	19.2		0.50	"	20.0	ND	96.0	75-125			

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120408 - EPA 5030 GCMS											
Matrix Spike Dup (7120408-MSD1)		**Source: T701575-02**			Prepared: 12/04/07 Analyzed: 12/06/07						
Surrogate: 4-Bromofluorobenzene	*7.47*			*ug/l*	*8.00*		*93.4*	*77.1-110*			
Surrogate: Dibromofluoromethane	*6.53*			*"*	*8.00*		*81.6*	*66.3-111*			
Surrogate: Toluene-d8	*7.95*			*"*	*8.00*		*99.4*	*90.9-105*			
Chlorobenzene	18.2		1.0	"	20.0	ND	91.2	75-125	6.27	20	
1,1-Dichloroethene	18.0		1.0	"	20.0	ND	89.9	75-125	3.01	20	
Trichloroethene	18.8		1.0	"	20.0	ND	93.9	75-125	4.93	20	
Benzene	18.4		0.50	"	20.0	ND	91.8	75-125	3.85	20	
Toluene	18.5		0.50	"	20.0	ND	92.6	75-125	3.71	20	

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120703 - EPA 3510C GCMS/ECD											
Blank (7120703-BLK1)				Prepared: 12/13/07 Analyzed: 12/19/07							
Surrogate: 2-Fluorophenol	*35.9*			*ug/l*	*100*		*35.9*	*9.97-110*			
Surrogate: Phenol-d6	*26.4*			*"*	*100*		*26.4*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*60.4*			*"*	*100*		*60.4*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*67.0*			*"*	*100*		*67.0*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*63.2*			*"*	*100*		*63.2*	*12.9-110*			
Surrogate: Terphenyl-dl4	*55.9*			*"*	*100*		*55.9*	*15.8-136*			
Carbazole	ND		10	"							
Phenol	ND		10	"							
Aniline	ND		10	"							
2-Chlorophenol	ND		10	"							
Acenaphthylene	ND		10	"							
1,4-Dichlorobenzene	ND		10	"							
N-Nitrosodi-n-propylamine	ND		5.0	"							
Anthracene	ND		10	"							
1,2,4-Trichlorobenzene	ND		5.0	"							
2-Methylnaphthalene	ND		20	"							
1-Methylnaphthalene	ND		10	"							
4-Chloro-3-methylphenol	ND		10	"							
Benzo (a) anthracene	ND		10	"							
Acenaphthene	ND		10	"							
4-Nitrophenol	ND		10	"							
Benzo (b) fluoranthene	ND		10	"							
2,4-Dinitrotoluene	ND		10	"							
Benzo (k) fluoranthene	ND		10	"							
Pentachlorophenol	ND		10	"							
Benzo (g,h,i) perylene	ND		20	"							
Pyrene	ND		10	"							
Benzo (a) pyrene	ND		10	"							
Benzyl alcohol	ND		50	"							
Bis(2-chloroethoxy)methane	ND		10	"							
Bis(2-chloroethyl)ether	ND		5.0	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120703 - EPA 3510C GCMS/ECD											
Blank (7120703-BLK1)					Prepared: 12/13/07 Analyzed: 12/19/07						
Bis(2-chloroisopropyl)ether	ND		20	ug/l							
Bis(2-ethylhexyl)phthalate	ND		10	"							
4-Bromophenyl phenyl ether	ND		5.0	"							
Butyl benzyl phthalate	ND		10	"							
4-Chloroaniline	ND		20	"							
2-Chloronaphthalene	ND		10	"							
4-Chlorophenyl phenyl ether	ND		20	"							
Chrysene	ND		10	"							
Dibenz (a,h) anthracene	ND		10	"							
Dibenzofuran	ND		20	"							
Di-n-butyl phthalate	ND		5.0	"							
1,2-Dichlorobenzene	ND		5.0	"							
1,3-Dichlorobenzene	ND		5.0	"							
2,4-Dichlorophenol	ND		10	"							
Diethyl phthalate	ND		10	"							
2,4-Dimethylphenol	ND		5.0	"							
Dimethyl phthalate	ND		10	"							
4,6-Dinitro-2-methylphenol	ND		5.0	"							
2,4-Dinitrophenol	ND		10	"							
2,6-Dinitrotoluene	ND		20	"							
Di-n-octyl phthalate	ND		10	"							
Fluoranthene	ND		5.0	"							
Fluorene	ND		10	"							
Hexachlorobenzene	ND		20	"							
Hexachlorobutadiene	ND		10	"							
Hexachlorocyclopentadiene	ND		20	"							
Hexachloroethane	ND		5.0	"							
Indeno (1,2,3-cd) pyrene	ND		10	"							
Isophorone	ND		10	"							
2-Methylphenol	ND		10	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120703 - EPA 3510C GCMS/ECD											
Blank (7120703-BLK1)					Prepared: 12/13/07 Analyzed: 12/19/07						
4-Methylphenol	ND		20	ug/l							
Naphthalene	ND		5.0	"							
2-Nitroaniline	ND		10	"							
3-Nitroaniline	ND		10	"							
4-Nitroaniline	ND		20	"							
Nitrobenzene	ND		20	"							
2-Nitrophenol	ND		10	"							
N-Nitrosodiphenylamine	ND		10	"							
N-Nitrosodimethylamine	ND		25	"							
Phenanthrene	ND		10	"							
2,4,5-Trichlorophenol	ND		20	"							
2,4,6-Trichlorophenol	ND		10	"							
2,3,4,6-Tetrachlorophenol	ND		10	"							
2,3,5,6-Tetrachlorophenol	ND		10	"							
1,4-Dinitrobenzene	ND		10	"							
Pyridine	ND		10	"							
LCS (7120703-BS1)					Prepared: 12/13/07 Analyzed: 12/19/07						
Surrogate: 2-Fluorophenol	*29.6*			*ug/l*	*100*		*29.6*	*9.97-110*			
Surrogate: Phenol-d6	*25.1*			*"*	*100*		*25.1*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*65.3*			*"*	*100*		*65.3*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*74.0*			*"*	*100*		*74.0*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*77.2*			*"*	*100*		*77.2*	*12.9-110*			
Surrogate: Terphenyl-dl4	*43.3*			*"*	*100*		*43.3*	*15.8-136*			
Phenol	16.9		10	"	100		16.9	12-89			
2-Chlorophenol	62.7		10	"	100		62.7	27-123			
1,4-Dichlorobenzene	60.0		10	"	100		60.0	36-97			
N-Nitrosodi-n-propylamine	72.4		5.0	"	100		72.4	41-116			
1,2,4-Trichlorobenzene	64.6		5.0	"	100		64.6	39-98			
4-Chloro-3-methylphenol	72.6		10	"	100		72.6	23-97			
Acenaphthene	71.5		10	"	100		71.5	46-118			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ben Beauchaine, Laboratory Supervisor

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7120703 - EPA 3510C GCMS/ECD											
LCS (7120703-BS1)					Prepared: 12/13/07 Analyzed: 12/19/07						
4-Nitrophenol	20.5		10	ug/l	100		20.5	10-80			
2,4-Dinitrotoluene	75.0		10	"	100		75.0	24-96			
Pentachlorophenol	70.6		10	"	100		70.6	9-103			
Pyrene	54.5		10	"	100		54.5	26-127			
LCS Dup (7120703-BSD1)					Prepared: 12/13/07 Analyzed: 12/19/07						
Surrogate: 2-Fluorophenol	*29.3*			*ug/l*	*100*		*29.3*	*9.97-110*			
Surrogate: Phenol-d6	*23.3*			*"*	*100*		*23.3*	*8.4-110*			
Surrogate: Nitrobenzene-d5	*59.5*			*"*	*100*		*59.5*	*14.7-110*			
Surrogate: 2-Fluorobiphenyl	*68.7*			*"*	*100*		*68.7*	*33.3-110*			
Surrogate: 2,4,6-Tribromophenol	*73.5*			*"*	*100*		*73.5*	*12.9-110*			
Surrogate: Terphenyl-dl4	*33.1*			*"*	*100*		*33.1*	*15.8-136*			
Phenol	14.8		10	"	100		14.8	12-89	13.2	42	
2-Chlorophenol	58.7		10	"	100		58.7	27-123	6.55	40	
1,4-Dichlorobenzene	54.4		10	"	100		54.4	36-97	9.76	28	
N-Nitrosodi-n-propylamine	66.8		5.0	"	100		66.8	41-116	8.10	38	
1,2,4-Trichlorobenzene	59.6		5.0	"	100		59.6	39-98	8.08	28	
4-Chloro-3-methylphenol	67.5		10	"	100		67.5	23-97	7.31	42	
Acenaphthene	67.5		10	"	100		67.5	46-118	5.84	31	
4-Nitrophenol	17.3		10	"	100		17.3	10-80	17.0	50	
2,4-Dinitrotoluene	71.7		10	"	100		71.7	24-96	4.58	38	
Pentachlorophenol	72.0		10	"	100		72.0	9-103	1.94	50	
Pyrene	51.0		10	"	100		51.0	26-127	6.75	31	

Notes and Definitions

J	Detected but below the Standard Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

T701575

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

SAMPLE COLLECTOR	PROJECT NO.	SECTION NO.	DATE	SAMPLER'S INITIALS	SERIAL NO.
LFR 3150 Bristol Street, Suite 250 Costa Mesa, California 92626 (714) 444-0111, Fax (714) 444-0117	002-10231-03	0017	12/3/07	DCB	04708
	PROJECT NAME: CRG - Long Beach		SAMPLER (Signature): Dana Brodie		

	Sample ID.	Date	Time	Lab Sample No.	No. of Containers	TYPE: Soil	TYPE: Water	TPHd (EPA 8015M)	TPHg (EPA 8015M)	TPHcc (EPA 8015M)	VOCs (EPA 8260)*	BTEX / MTBE (8260)	BTEX / MTBE (8021)	Metals (6010/7000)*	Pesticides (EPA 8080/8081)	PCBs (EPA 8080/8082)	SVOCs (8270)	Lab I.D.	TAT: Standard	TAT: RUSH:	TAT: HOLD	REMARKS
1	EB	12/3/07	0700		3		X	X			X			X			X	01	X			
2	MW-3		0745		8		X	X			X			X			X	02	X			
3	TB		—		2		X											03			X	
4	MW-5		0850		8		X	X			X			X			X	04	X			RESULTS TO:
5	MW-6		0955		8		X	X			X			X			X	05	X			TONY MARINO
6	MW-7		1050		8		X	X			X			X			X	06	X			
7	DUP-1		—		8		X	X			X			X			X	07	X			
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

SAMPLE RECEIPT	Cooler Temp:	METHOD OF SHIPMENT	RELINQUISHED BY: 1	RELINQUISHED BY: 2	RELINQUISHED BY: 3
☐ Intact ☐ Cold ☒ On Ice ☐ Ambient	12C		Dana Brodie 12/3/07		
	Cooler No:	LAB REPORT NO:	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
Preservative Correct? ☑ Yes ☐ No ☐ N/A		FAX COC CONFIRMATION TO:	Dana Brodie 12:22		
			(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
			LFR		
			(COMPANY)	(COMPANY)	(COMPANY)
ANALYTICAL LABORATORY		FAX RESULTS TO:	RECEIVED BY: 1	RECEIVED BY 2	RECEIVED BY (LABORATORY): 3
			12/03/07		
		SEND HARDCOPY TO.	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
			Ben Beauchaine 12:22		
		SEND EDD TO	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
			Sunstar		
			(COMPANY)	(COMPANY)	(LABORATORY)

Lab/Shipping Copy (White) File Copy (Yellow) Field Copy (Pink) FORM NO: 2001/COC/TWT

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900 *FAX 714/538-1209*

CLIENT LFR Levine-Fricke (2635)
ATTN: Tony Marino
3150 S. Bristol
Suite 250
Costa Mesa, CA 92626

LAB REQUEST 200998
REPORTED 12/11/2007
RECEIVED 11/13/2007

PROJECT P.O. #002-10231-03

SUBMITTER Client

COMMENTS * Matrix Interference.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
847990	SG9-0.5
847991	SG9-5
847992	SG9-5-Dup
847993	SG9-10
847994	SG13-0.5
847995	SG-13-5
847996	SG-13-10
847997	B7A-5
847998	B7A-10
847999	B7A-20
848000	B7A-30

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing , all samples will be discarded by appropriate disposal protocol 30 days from date reported.

The reports of the Associated Laboratories are confidential property of our clients may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves

TESTING & CONSULTING
Chemical
Microbiological
Environmental

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900 *FAX 714/538-1209*

CLIENT LFR Levine-Fricke (2635)
ATTN: Tony Marino
3150 S. Bristol
Suite 250
Costa Mesa, CA 92626

LAB REQUEST 200998
REPORTED 12/11/2007
RECEIVED 11/13/2007

PROJECT P.O. #002-10231-03

SUBMITTER Client

COMMENTS * Matrix Interference.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
848001	B7A-40
848002	B7A-50
848003	B6A-15
848004	B6A-20
848005	B6A-20-DUP
848006	B6A-25
848007	SG14-0.5
848008	SG14-5
848009	SG14-10
848010	SG15-0.5
848011	SG15-5

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing , all samples will be discarded by appropriate disposal protocol 30 days from date reported.

The reports of the Associated Laboratories are confidential property of our clients may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves

TESTING & CONSULTING
Chemical
Microbiological
Environmental

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900 *FAX 714/538-1209*

CLIENT LFR Levine-Fricke (2635)
ATTN: Tony Marino
3150 S. Bristol
Suite 250
Costa Mesa, CA 92626

LAB REQUEST 200998
REPORTED 12/11/2007
RECEIVED 11/13/2007

PROJECT P.O. #002-10231-03

SUBMITTER Client

COMMENTS * Matrix Interference.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
848012	SG15-10
848013	SG2-0.5
848014	SG2-5
848015	SG2-10
848016	SG3-0.5
848017	SG3-5
848018	SG3-10
848019	SG3-10-Dup
848020	Laboratory Method Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing , all samples will be discarded by appropriate disposal protocol 30 days from date reported.

The reports of the Associated Laboratories are confidential property of our clients may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves

TESTING & CONSULTING
Chemical
Microbiological
Environmental

Order #: 847990
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:04
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	5.66	1	1.0	mg/Kg	11/15/07	KN
Barium	197	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.844	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.533	1	0.5	mg/Kg	11/15/07	KN
Chromium	27.2	1	1.0	mg/Kg	11/15/07	KN
Cobalt	14.5	1	0.5	mg/Kg	11/15/07	KN
Copper	29.9	1	1.0	mg/Kg	11/15/07	KN
Lead	32.5	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	20.8	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	50.5	1	0.5	mg/Kg	11/15/07	KN
Zinc	107	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/20/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/20/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/20/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/20/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/20/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/20/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/20/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/20/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847990
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:04
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/20/07	RB
Lindane	ND	1	0.003	mg/Kg	11/20/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/20/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	103			%	55 - 135	
TCMX (Sur1)	73			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	95			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847990
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:04
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847990
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:04
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	89	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847990
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:04
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	91			%	30 - 115
2-Fluorophenol (sur)	63			%	25 - 121
Nitrobenzene-d5 (sur)	68			%	23 - 120
Phenol-d5 (sur)	65			%	24 - 113
Terphenyl-d14 (sur)	104			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847991
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	4.73	1	1.0	mg/Kg	11/15/07	KN
Barium	142	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.843	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.608	1	0.5	mg/Kg	11/15/07	KN
Chromium	24.3	1	1.0	mg/Kg	11/15/07	KN
Cobalt	15.1	1	0.5	mg/Kg	11/15/07	KN
Copper	21.9	1	1.0	mg/Kg	11/15/07	KN
Lead	8.93	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	19.2	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	48.4	1	0.5	mg/Kg	11/15/07	KN
Zinc	61.3	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/20/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/20/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/20/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/20/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/20/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/20/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/20/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/20/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847991
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/20/07	RB
Lindane	ND	1	0.003	mg/Kg	11/20/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/20/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	84			%	55 - 135	
TCMX (Sur1)	64			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	95			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847991
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847991
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	94	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847991
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	72			%	30 - 115
2-Fluorophenol (sur)	62			%	25 - 121
Nitrobenzene-d5 (sur)	71			%	23 - 120
Phenol-d5 (sur)	60			%	24 - 113
Terphenyl-d14 (sur)	106			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847992
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	6.67	1	1.0	mg/Kg	11/15/07	KN
Barium	170	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.992	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.574	1	0.5	mg/Kg	11/15/07	KN
Chromium	31.1	1	1.0	mg/Kg	11/15/07	KN
Cobalt	15.7	1	0.5	mg/Kg	11/15/07	KN
Copper	28.9	1	1.0	mg/Kg	11/15/07	KN
Lead	8.21	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	25.3	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	55.0	1	0.5	mg/Kg	11/15/07	KN
Zinc	73.4	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.011	1	0.005	mg/Kg	11/20/07	RB
4,4-DDE	0.006	1	0.004	mg/Kg	11/20/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/20/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/20/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/20/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/20/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/20/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/20/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847992
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/20/07	RB
Lindane	ND	1	0.003	mg/Kg	11/20/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/20/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	101			%	55 - 135	
TCMX (Sur1)	82			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	92			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847992
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847992
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	72	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847992
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-5-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	70			%	30 - 115
2-Fluorophenol (sur)	56			%	25 - 121
Nitrobenzene-d5 (sur)	64			%	23 - 120
Phenol-d5 (sur)	52			%	24 - 113
Terphenyl-d14 (sur)	105			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847993
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010 STLC (16 ICP Metals)						
Lead, STLC	3.22	10	0.05	mg/L	11/29/07	NVK
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	10.1	1	1.0	mg/Kg	11/15/07	KN
Barium	267	1	1.0	mg/Kg	11/15/07	KN
Beryllium	ND	1	0.5	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.5	mg/Kg	11/15/07	KN
Chromium	20.3	1	1.0	mg/Kg	11/15/07	KN
Cobalt	4.82	1	0.5	mg/Kg	11/15/07	KN
Copper	10.8	1	1.0	mg/Kg	11/15/07	KN
Lead	86.0	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	28.1	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	19.8	1	0.5	mg/Kg	11/15/07	KN
Zinc	117	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	0.14	1	0.14	mg/Kg	11/15/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/20/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/20/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/20/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/20/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847993
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Beta BHC	ND	1	0.003	mg/Kg	11/20/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/20/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/20/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/20/07	RB
Endosulfan I	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/20/07	RB
Lindane	ND	1	0.003	mg/Kg	11/20/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/20/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	96			%	55 - 135	
TCMX (Sur1)	56			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	0.13	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	0.038	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	75			%	50 - 135	
8270C Acid/Base/Neutral Extractables						

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847993
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847993
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847993
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG9-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Surrogates				**Units**	**Control Limits**	
2,4,6-Tribromophenol (sur)	99			%	17 - 122	
2-Fluorobiphenyl (sur)	86			%	30 - 115	
2-Fluorophenol (sur)	69			%	25 - 121	
Nitrobenzene-d5 (sur)	79			%	23 - 120	
Phenol-d5 (sur)	69			%	24 - 113	
Terphenyl-d14 (sur)	102			%	18 - 137	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847994
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG13-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	11.5	1	1.0	mg/Kg	11/15/07	KN
Barium	382	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.942	1	0.5	mg/Kg	11/15/07	KN
Cadmium	1.16	1	0.5	mg/Kg	11/15/07	KN
Chromium	35.9	1	1.0	mg/Kg	11/15/07	KN
Cobalt	13.8	1	0.5	mg/Kg	11/15/07	KN
Copper	33.5	1	1.0	mg/Kg	11/15/07	KN
Lead	14.1	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	29.6	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	67.2	1	0.5	mg/Kg	11/15/07	KN
Zinc	78.5	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/20/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/20/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/20/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/20/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/20/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/20/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/20/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/20/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847994
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG13-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/20/07	RB
Lindane	ND	1	0.003	mg/Kg	11/20/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/20/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	94			%	55 - 135	
TCMX (Sur1)	70			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	93			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847994
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG13-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847994
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG13-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	77	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847994
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG13-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	78			%	30 - 115
2-Fluorophenol (sur)	63			%	25 - 121
Nitrobenzene-d5 (sur)	70			%	23 - 120
Phenol-d5 (sur)	61			%	24 - 113
Terphenyl-d14 (sur)	107			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847995
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:50
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	7.61	1	1.0	mg/Kg	11/15/07	KN
Barium	266	1	1.0	mg/Kg	11/15/07	KN
Beryllium	1.04	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.754	1	0.5	mg/Kg	11/15/07	KN
Chromium	32.9	1	1.0	mg/Kg	11/15/07	KN
Cobalt	16.1	1	0.5	mg/Kg	11/15/07	KN
Copper	35.7	1	1.0	mg/Kg	11/15/07	KN
Lead	15.3	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	26.0	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	62.9	1	0.5	mg/Kg	11/15/07	KN
Zinc	84.6	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/20/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/20/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/20/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/20/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/20/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/20/07	RB
Chlordane	0.041	1	0.025	mg/Kg	11/20/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/20/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847995
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:50
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/20/07	RB
Lindane	ND	1	0.003	mg/Kg	11/20/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/20/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	110			%	55 - 135	
TCMX (Sur1)	75			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	97			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847995
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:50
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847995
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:50
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	86	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847995
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:50
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	68			%	30 - 115
2-Fluorophenol (sur)	55			%	25 - 121
Nitrobenzene-d5 (sur)	69			%	23 - 120
Phenol-d5 (sur)	56			%	24 - 113
Terphenyl-d14 (sur)	107			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847996
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:55
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	4.28	1	1.0	mg/Kg	11/15/07	KN
Barium	122	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.961	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.629	1	0.5	mg/Kg	11/15/07	KN
Chromium	30.8	1	1.0	mg/Kg	11/15/07	KN
Cobalt	13.0	1	0.5	mg/Kg	11/15/07	KN
Copper	26.3	1	1.0	mg/Kg	11/15/07	KN
Lead	6.95	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	21.1	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	50.7	1	0.5	mg/Kg	11/15/07	KN
Zinc	69.3	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/20/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/20/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/20/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/20/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/20/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/20/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/20/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/20/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847996
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:55
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/20/07	RB
Lindane	ND	1	0.003	mg/Kg	11/20/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/20/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	110			%	55 - 135	
TCMX (Sur1)	83			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	100			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847996
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:55
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847996
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:55
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	77	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847996
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 08:55
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG-13-10

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	55			%	30 - 115
2-Fluorophenol (sur)	64			%	25 - 121
Nitrobenzene-d5 (sur)	64			%	23 - 120
Phenol-d5 (sur)	52			%	24 - 113
Terphenyl-d14 (sur)	110			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847997
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	9.19	1	1.0	mg/Kg	11/15/07	KN
Barium	194	1	1.0	mg/Kg	11/15/07	KN
Beryllium	1.01	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.504	1	0.5	mg/Kg	11/15/07	KN
Chromium	34.6	1	1.0	mg/Kg	11/15/07	KN
Cobalt	17.1	1	0.5	mg/Kg	11/15/07	KN
Copper	37.9	1	1.0	mg/Kg	11/15/07	KN
Lead	11.9	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	1.11	1	1.0	mg/Kg	11/15/07	KN
Nickel	26.6	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	55.7	1	0.5	mg/Kg	11/15/07	KN
Zinc	79.2	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	1	3	mg/Kg	11/16/07	AF
C10 - C22	ND	1	3	mg/Kg	11/16/07	AF
C22 - C36	24	1	5	mg/Kg	11/16/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	64			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847997
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	104			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847997
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
2,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	5	ug/Kg	11/16/07	LZ
Acetone	ND	1	50	ug/Kg	11/16/07	LZ
Allyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Benzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromoform	ND	1	5	ug/Kg	11/16/07	LZ
Bromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	1	5	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Chloroethane	ND	1	5	ug/Kg	11/16/07	LZ
Chloroform	ND	1	5	ug/Kg	11/16/07	LZ
Chloromethane	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Dibromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Ethyl benzene	ND	1	5	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	1	5	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/16/07	LZ
Methylene chloride	ND	1	5	ug/Kg	11/16/07	LZ
n-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
n-Propylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Naphthalene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847997
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
p-Isopropyltoluene	ND	1	5	ug/Kg	11/16/07	LZ
sec-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Styrene	ND	1	5	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Toluene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Trichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Xylenes, total	ND	1	5	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/Kg	11/16/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	114	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	117	%	70 - 135
Surr3 - Toluene-d8	102	%	70 - 135
Surr4 - p-Bromofluorobenzene	103	%	70 - 135

8270C Acid/Base/Neutral Extractables

1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847997
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847997
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	67	%	17 - 122
2-Fluorobiphenyl (sur)	59	%	30 - 115
2-Fluorophenol (sur)	48	%	25 - 121
Nitrobenzene-d5 (sur)	56	%	23 - 120

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847997
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Phenol-d5 (sur)	46			%	24 - 113
Terphenyl-d14 (sur)	105			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847998
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010 STLC (16 ICP Metals)						
Lead, STLC	2.58	10	0.05	mg/L	11/29/07	NVK
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	6.84	1	1.0	mg/Kg	11/15/07	KN
Barium	427	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.663	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.518	1	0.5	mg/Kg	11/15/07	KN
Chromium	30.3	1	1.0	mg/Kg	11/15/07	KN
Cobalt	10.8	1	0.5	mg/Kg	11/15/07	KN
Copper	35.1	1	1.0	mg/Kg	11/15/07	KN
Lead	61.3	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	18.6	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	38.9	1	0.5	mg/Kg	11/15/07	KN
Zinc	131	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8015B Carbon Chain I						
C06 - C10	5.0	1	3	mg/Kg	11/16/07	AF
C10 - C22	16	1	3	mg/Kg	11/16/07	AF
C22 - C36	203	20	100.0	mg/Kg	11/16/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	154			%	55 - 200	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847998
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-10

8015B Carbon Chain I

8082 - Polychlorinated Biphenyls (PCBs) by GC

Analyte	Result	DF	DLR	Units	Date/Analyst	
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB

Surrogates		Units	Control Limits
DCB(Sur)	86	%	50 - 135

8260B Volatile Organic Compounds

1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847998
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
2,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	5	ug/Kg	11/16/07	LZ
Acetone	58	1	50	ug/Kg	11/16/07	LZ
Allyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Benzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromoform	ND	1	5	ug/Kg	11/16/07	LZ
Bromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	1	5	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Chloroethane	ND	1	5	ug/Kg	11/16/07	LZ
Chloroform	ND	1	5	ug/Kg	11/16/07	LZ
Chloromethane	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Dibromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Ethyl benzene	ND	1	5	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	1	5	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847998
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
Methylene chloride	ND	1	5	ug/Kg	11/16/07	LZ
n-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
n-Propylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Naphthalene	ND	1	5	ug/Kg	11/16/07	LZ
p-Isopropyltoluene	ND	1	5	ug/Kg	11/16/07	LZ
sec-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Styrene	ND	1	5	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Toluene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Trichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Xylenes, total	ND	1	5	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/Kg	11/16/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	111	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	116	%	70 - 135
Surr3 - Toluene-d8	105	%	70 - 135
Surr4 - p-Bromofluorobenzene	100	%	70 - 135

8270C Acid/Base/Neutral Extractables

1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847998
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847998
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates	Units	Control Limits

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847998
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-10

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2,4,6-Tribromophenol (sur)	99			%	17 - 122
2-Fluorobiphenyl (sur)	74			%	30 - 115
2-Fluorophenol (sur)	64			%	25 - 121
Nitrobenzene-d5 (sur)	59			%	23 - 120
Phenol-d5 (sur)	64			%	24 - 113
Terphenyl-d14 (sur)	110			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847999
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	ND	1	1.0	mg/Kg	11/15/07	KN
Barium	152	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.978	1	0.5	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.5	mg/Kg	11/15/07	KN
Chromium	29.6	1	1.0	mg/Kg	11/15/07	KN
Cobalt	15.6	1	0.5	mg/Kg	11/15/07	KN
Copper	27.4	1	1.0	mg/Kg	11/15/07	KN
Lead	7.05	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	22.9	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	58.8	1	0.5	mg/Kg	11/15/07	KN
Zinc	65.9	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	1	3	mg/Kg	11/16/07	AF
C10 - C22	ND	1	3	mg/Kg	11/16/07	AF
C22 - C36	149	20	100.0	mg/Kg	11/16/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	74			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847999
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	91			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847999
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
2,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	5	ug/Kg	11/16/07	LZ
Acetone	ND	1	50	ug/Kg	11/16/07	LZ
Allyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Benzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromoform	ND	1	5	ug/Kg	11/16/07	LZ
Bromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	1	5	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Chloroethane	ND	1	5	ug/Kg	11/16/07	LZ
Chloroform	ND	1	5	ug/Kg	11/16/07	LZ
Chloromethane	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Dibromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Ethyl benzene	ND	1	5	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	1	5	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/16/07	LZ
Methylene chloride	ND	1	5	ug/Kg	11/16/07	LZ
n-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
n-Propylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Naphthalene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847999
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
p-Isopropyltoluene	ND	1	5	ug/Kg	11/16/07	LZ
sec-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Styrene	ND	1	5	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Toluene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Trichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Xylenes, total	ND	1	5	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/Kg	11/16/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	116	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	123	%	70 - 135
Surr3 - Toluene-d8	105	%	70 - 135
Surr4 - p-Bromofluorobenzene	102	%	70 - 135

8270C Acid/Base/Neutral Extractables

1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847999
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847999
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	88	%	17 - 122
2-Fluorobiphenyl (sur)	70	%	30 - 115
2-Fluorophenol (sur)	67	%	25 - 121
Nitrobenzene-d5 (sur)	73	%	23 - 120

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 847999
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-20

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Phenol-d5 (sur)	61			%	24 - 113
Terphenyl-d14 (sur)	112			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848000
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-30

Analyte	Result	DF	DLR	Units	Date/Analyst	
1312/8015 SPLP Carbon Chain I						
C06 - C10	ND	20	4.0	mg/L	11/23/07	AF
C10 - C22	8.0	20	4.0	mg/L	11/23/07	AF
C22 - C36	7.0	20	6.0	mg/L	11/23/07	AF
6010 STLC (16 ICP Metals)						
Barium, STLC	35.4	10	0.1	mg/L	11/29/07	NVK
Lead, STLC	8.54	10	0.05	mg/L	11/29/07	NVK
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	28.6	1	1.0	mg/Kg	11/15/07	KN
Barium	1560	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.622	1	0.5	mg/Kg	11/15/07	KN
Cadmium	1.09	1	0.5	mg/Kg	11/15/07	KN
Chromium	39.2	1	1.0	mg/Kg	11/15/07	KN
Cobalt	12.1	1	0.5	mg/Kg	11/15/07	KN
Copper	59.9	1	1.0	mg/Kg	11/15/07	KN
Lead	376	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	1.58	1	1.0	mg/Kg	11/15/07	KN
Nickel	33.5	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	45.8	1	0.5	mg/Kg	11/15/07	KN
Zinc	174	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	0.59	1	0.14	mg/Kg	11/15/07	MDJ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848000
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-30

Analyte	Result	DF	DLR	Units	Date/Analyst	
8015B Carbon Chain I						
C06 - C10	ND	400	1200.0	mg/Kg	11/15/07	AF
C10 - C22	2700	400	1200.0	mg/Kg	11/15/07	AF
C22 - C36	4740	400	2000.0	mg/Kg	11/15/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	121			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/22/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/22/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/22/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/22/07	RB
PCB-1248	0.41	1	0.08	mg/Kg	11/22/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/22/07	RB
PCB-1260	0.11	1	0.03	mg/Kg	11/22/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	63			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1,1-Trichloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1,2,2-Tetrachloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1,2-Trichloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1-Dichloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1-Dichloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1-Dichloropropene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2,3-Trichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2,3-Trichloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2,4-Trichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2,4-Trimethylbenzene	13500	50	250.0	ug/Kg	11/17/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848000
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-30

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2-Dibromoethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2-Dichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2-Dichloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2-Dichloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,3,5-Trimethylbenzene	3120	50	250.0	ug/Kg	11/17/07	LZ
1,3-Dichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,3-Dichloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,4-Dichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
2,2-Dichloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
2-Butanone (MEK)	ND	50	5000.0	ug/Kg	11/17/07	LZ
2-Chloroethyl vinyl ether	ND	50	250.0	ug/Kg	11/17/07	LZ
2-Chlorotoluene	ND	50	250.0	ug/Kg	11/17/07	LZ
4-Chlorotoluene	ND	50	250.0	ug/Kg	11/17/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	50	250.0	ug/Kg	11/17/07	LZ
Acetone	ND	50	2500.0	ug/Kg	11/17/07	LZ
Allyl chloride	ND	50	250.0	ug/Kg	11/17/07	LZ
Benzene	824	50	250.0	ug/Kg	11/17/07	LZ
Bromobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromochloromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromodichloromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromoform	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromomethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Carbon tetrachloride	ND	50	250.0	ug/Kg	11/17/07	LZ
Chlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
Chloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Chloroform	ND	50	250.0	ug/Kg	11/17/07	LZ
Chloromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
cis-1,2-Dichloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
cis-1,3-Dichloropropene	ND	50	250.0	ug/Kg	11/17/07	LZ
cis-1,4-Dichloro-2-butene	ND	50	250.0	ug/Kg	11/17/07	LZ
Dibromochloromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Dibromomethane	ND	50	250.0	ug/Kg	11/17/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848000
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-30

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
Dichlorodifluoromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Ethyl benzene	2960	50	250.0	ug/Kg	11/17/07	LZ
Hexachlorobutadiene	ND	50	250.0	ug/Kg	11/17/07	LZ
Isopropylbenzene (Cumene)	1680	50	250.0	ug/Kg	11/17/07	LZ
Methyl-tert-butylether (MTBE)	ND	50	250.0	ug/Kg	11/17/07	LZ
Methylene chloride	ND	50	250.0	ug/Kg	11/17/07	LZ
n-Butylbenzene	1400	50	250.0	ug/Kg	11/17/07	LZ
n-Propylbenzene	2560	50	250.0	ug/Kg	11/17/07	LZ
Naphthalene	8310	50	250.0	ug/Kg	11/17/07	LZ
p-Isopropyltoluene	1330	50	250.0	ug/Kg	11/17/07	LZ
sec-Butylbenzene	1640	50	250.0	ug/Kg	11/17/07	LZ
Styrene	ND	50	250.0	ug/Kg	11/17/07	LZ
tert-Butylbenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
Tetrachloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
Toluene	ND	50	250.0	ug/Kg	11/17/07	LZ
trans-1,2-Dichloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
trans-1,3-Dichloropropene	ND	50	250.0	ug/Kg	11/17/07	LZ
trans-1,4-Dichloro-2-butene	ND	50	250.0	ug/Kg	11/17/07	LZ
Trichloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
Trichlorofluoromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Vinyl chloride	ND	50	250.0	ug/Kg	11/17/07	LZ
Xylenes, total	8210	50	250.0	ug/Kg	11/17/07	LZ
Di-isopropyl ether (DIPE)	ND	50	100.0	ug/Kg	11/17/07	LZ
Ethyl-tertbutylether (ETBE)	ND	50	100.0	ug/Kg	11/17/07	LZ
Tert-amylmethylether (TAME)	ND	50	100.0	ug/Kg	11/17/07	LZ
Tertiary butyl alcohol (TBA)	ND	50	500.0	ug/Kg	11/17/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	111	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	86	%	70 - 135
Surr3 - Toluene-d8	93	%	70 - 135
Surr4 - p-Bromofluorobenzene	151*	%	70 - 135

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848000
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-30

8270C Acid/Base/Neutral Extractables

Analyte	Result	DF	DLR	Units	Date/Analyst	
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	34700	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	3680	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848000
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-30

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	8450	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848000
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-30

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Surrogates				**Units**	**Control Limits**	
2,4,6-Tribromophenol (sur)	98			%	17 - 122	
2-Fluorobiphenyl (sur)	79			%	30 - 115	
2-Fluorophenol (sur)	45			%	25 - 121	
Nitrobenzene-d5 (sur)	58			%	23 - 120	
Phenol-d5 (sur)	48			%	24 - 113	
Terphenyl-d14 (sur)	96			%	18 - 137	
9045 pH						
pH	7.82	1		NA	12/10/07	AE
MADEP EPH 03-1						
(1) C09-C18 Aliphatic Hydrocarbons	2500	50		mg/Kg	11/26/07	AF
(2) C19-C36 Aliphatic Hydrocarbons	3530	50		mg/Kg	11/26/07	AF
(3) C11-C22 Aromatic Hydrocarbons	4020	50		mg/Kg	11/26/07	AF
Aliphatic Fract Sur - 2-Bromonaphthalene	105	50		%	11/26/07	AF
Aromatic Frac Sur - 2-Fluorobiphenyl	105	50		%	11/26/07	AF
EPH Aliphatic Sur - COD	135	50		%	11/26/07	AF
EPH Aromatic Sur - OTP	145*	50		%	11/26/07	AF
MADEP VPH 03-1						
(1) C5-C8 Unadj. Aliphatic Hydrocarbons	102	100	10.0	mg/Kg	12/01/07	LD
(2) C9-C12 Unadj. Aliphatic Hydrocarbons	322	500	50.0	mg/Kg	12/01/07	LD
(3) C9-C10 Aromatic Hydrocarbons	176	500	50.0	mg/Kg	12/01/07	LD
FID Sur 2,5-Dibromotoluene	1090*	500		%	12/01/07	LD
PID Sur 2,5-Dibromotoluene	91	500		%	12/01/07	LD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848001
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-40

Analyte	Result	DF	DLR	Units	Date/Analyst	
1312/8015 SPLP Carbon Chain I						
C06 - C10	ND	10	2.0	mg/L	11/23/07	AF
C10 - C22	4.0	10	2.0	mg/L	11/23/07	AF
C22 - C36	3.6	10	3.0	mg/L	11/23/07	AF
6010 STLC (16 ICP Metals)						
Barium, STLC	40.7	10	0.1	mg/L	11/29/07	NVK
Lead, STLC	12.5	10	0.05	mg/L	11/29/07	NVK
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	28.5	1	1.0	mg/Kg	11/15/07	KN
Barium	1600	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.571	1	0.5	mg/Kg	11/15/07	KN
Cadmium	1.04	1	0.5	mg/Kg	11/15/07	KN
Chromium	37.9	1	1.0	mg/Kg	11/15/07	KN
Cobalt	11.4	1	0.5	mg/Kg	11/15/07	KN
Copper	48.8	1	1.0	mg/Kg	11/15/07	KN
Lead	309	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	1.47	1	1.0	mg/Kg	11/15/07	KN
Nickel	33.3	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	42.5	1	0.5	mg/Kg	11/15/07	KN
Zinc	157	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	0.46	1	0.14	mg/Kg	11/15/07	MDJ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848001
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-40

Analyte	Result	DF	DLR	Units	Date/Analyst	
8015B Carbon Chain I						
C06 - C10	ND	400	1200.0	mg/Kg	11/15/07	AF
C10 - C22	4070	400	1200.0	mg/Kg	11/15/07	AF
C22 - C36	8970	400	2000.0	mg/Kg	11/15/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	146			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/22/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/22/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/22/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/22/07	RB
PCB-1248	0.42	1	0.08	mg/Kg	11/22/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/22/07	RB
PCB-1260	0.12	1	0.03	mg/Kg	11/22/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	66			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	50	250.0	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	50	250.0	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	50	250.0	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	50	250.0	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	7780	50	250.0	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848001
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-40

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	50	250.0	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,3,5-Trimethylbenzene	2240	50	250.0	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	50	250.0	ug/Kg	11/16/07	LZ
1,3-Dichloropropane	ND	50	250.0	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	50	250.0	ug/Kg	11/16/07	LZ
2,2-Dichloropropane	ND	50	250.0	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	50	5000.0	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	50	250.0	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	50	250.0	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	50	250.0	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	50	250.0	ug/Kg	11/16/07	LZ
Acetone	ND	50	2500.0	ug/Kg	11/16/07	LZ
Allyl chloride	ND	50	250.0	ug/Kg	11/16/07	LZ
Benzene	ND	50	250.0	ug/Kg	11/16/07	LZ
Bromobenzene	ND	50	250.0	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	50	250.0	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	50	250.0	ug/Kg	11/16/07	LZ
Bromoform	ND	50	250.0	ug/Kg	11/16/07	LZ
Bromomethane	ND	50	250.0	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	50	250.0	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	50	250.0	ug/Kg	11/16/07	LZ
Chloroethane	ND	50	250.0	ug/Kg	11/16/07	LZ
Chloroform	ND	50	250.0	ug/Kg	11/16/07	LZ
Chloromethane	ND	50	250.0	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	50	250.0	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	50	250.0	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	50	250.0	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	50	250.0	ug/Kg	11/16/07	LZ
Dibromomethane	ND	50	250.0	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848001
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-40

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
Dichlorodifluoromethane	ND	50	250.0	ug/Kg	11/16/07	LZ
Ethyl benzene	944	50	250.0	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	50	250.0	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	782	50	250.0	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	50	250.0	ug/Kg	11/16/07	LZ
Methylene chloride	ND	50	250.0	ug/Kg	11/16/07	LZ
n-Butylbenzene	994	50	250.0	ug/Kg	11/16/07	LZ
n-Propylbenzene	1170	50	250.0	ug/Kg	11/16/07	LZ
Naphthalene	6150	50	250.0	ug/Kg	11/16/07	LZ
p-Isopropyltoluene	1680	50	250.0	ug/Kg	11/16/07	LZ
sec-Butylbenzene	1110	50	250.0	ug/Kg	11/16/07	LZ
Styrene	ND	50	250.0	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	50	250.0	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	50	250.0	ug/Kg	11/16/07	LZ
Toluene	307	50	250.0	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	50	250.0	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	50	250.0	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	50	250.0	ug/Kg	11/16/07	LZ
Trichloroethene	ND	50	250.0	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	50	250.0	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	50	250.0	ug/Kg	11/16/07	LZ
Xylenes, total	5490	50	250.0	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	50	100.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	50	100.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	50	100.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	50	500.0	ug/Kg	11/16/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	117	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	104	%	70 - 135
Surr3 - Toluene-d8	99	%	70 - 135
Surr4 - p-Bromofluorobenzene	151	%	70 - 135

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848001
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-40

8270C Acid/Base/Neutral Extractables

Analyte	Result	DF	DLR	Units	Date/Analyst	
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	26300	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	6150	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848001
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-40

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848001
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-40

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Surrogates				**Units**	**Control Limits**	
2,4,6-Tribromophenol (sur)	91			%	17 - 122	
2-Fluorobiphenyl (sur)	78			%	30 - 115	
2-Fluorophenol (sur)	75			%	25 - 121	
Nitrobenzene-d5 (sur)	87			%	23 - 120	
Phenol-d5 (sur)	78			%	24 - 113	
Terphenyl-d14 (sur)	93			%	18 - 137	
9045 pH						
pH	7.79	1		NA	12/10/07	AE
MADEP EPH 03-1						
(1) C09-C18 Aliphatic Hydrocarbons	5290	100		mg/Kg	11/26/07	AF
(2) C19-C36 Aliphatic Hydrocarbons	7850	100		mg/Kg	11/26/07	AF
(3) C11-C22 Aromatic Hydrocarbons	6580	100		mg/Kg	11/26/07	AF
Aliphatic Fract Sur - 2-Bromonaphthalene	120	100		%	11/26/07	AF
Aromatic Frac Sur - 2-Fluorobiphenyl	80	100		%	11/26/07	AF
EPH Aliphatic Sur - COD	185*	100		%	11/26/07	AF
EPH Aromatic Sur - OTP	120	100		%	11/26/07	AF
MADEP VPH 03-1						
(1) C5-C8 Unadj. Aliphatic Hydrocarbons	54	100	10.0	mg/Kg	12/01/07	LD
(2) C9-C12 Unadj. Aliphatic Hydrocarbons	152	100	10.0	mg/Kg	12/01/07	LD
(3) C9-C10 Aromatic Hydrocarbons	106	100	10.0	mg/Kg	12/01/07	LD
FID Sur 2,5-Dibromotoluene	1760*	100		%	12/01/07	LD
PID Sur 2,5-Dibromotoluene	73	100		%	12/01/07	LD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848002
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-50

Analyte	Result	DF	DLR	Units	Date/Analyst	
1312/8015 SPLP Carbon Chain I						
C06 - C10	ND	20	4.0	mg/L	11/23/07	AF
C10 - C22	18	20	4.0	mg/L	11/23/07	AF
C22 - C36	22	20	6.0	mg/L	11/23/07	AF
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	8.33	1	1.0	mg/Kg	11/15/07	KN
Barium	258	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.909	1	0.5	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.5	mg/Kg	11/15/07	KN
Chromium	30.2	1	1.0	mg/Kg	11/15/07	KN
Cobalt	13.7	1	0.5	mg/Kg	11/15/07	KN
Copper	25.0	1	1.0	mg/Kg	11/15/07	KN
Lead	7.35	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	27.2	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	50.3	1	0.5	mg/Kg	11/15/07	KN
Zinc	59.4	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	400	1200.0	mg/Kg	11/15/07	AF
C10 - C22	2580	400	1200.0	mg/Kg	11/15/07	AF
C22 - C36	4400	400	2000.0	mg/Kg	11/15/07	AF

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848002
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-50

Analyte	Result	DF	DLR	Units	Date/Analyst	
8015B Carbon Chain I						
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	156			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/22/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/22/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/22/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/22/07	RB
PCB-1248	0.19	1	0.08	mg/Kg	11/22/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/22/07	RB
PCB-1260	0.046	1	0.03	mg/Kg	11/22/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	69			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1,1-Trichloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1,2,2-Tetrachloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1,2-Trichloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1-Dichloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1-Dichloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,1-Dichloropropene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2,3-Trichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2,3-Trichloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2,4-Trichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2,4-Trimethylbenzene	10000	50	250.0	ug/Kg	11/17/07	LZ
1,2-Dibromo-3-chloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2-Dibromoethane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2-Dichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,2-Dichloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848002
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-50

8260B Volatile Organic Compounds

Analyte	Result	DF	DLR	Units	Date/Analyst	
1,2-Dichloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,3,5-Trimethylbenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,3-Dichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
1,3-Dichloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
1,4-Dichlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
2,2-Dichloropropane	ND	50	250.0	ug/Kg	11/17/07	LZ
2-Butanone (MEK)	ND	50	5000.0	ug/Kg	11/17/07	LZ
2-Chloroethyl vinyl ether	ND	50	250.0	ug/Kg	11/17/07	LZ
2-Chlorotoluene	ND	50	250.0	ug/Kg	11/17/07	LZ
4-Chlorotoluene	ND	50	250.0	ug/Kg	11/17/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	50	250.0	ug/Kg	11/17/07	LZ
Acetone	ND	50	2500.0	ug/Kg	11/17/07	LZ
Allyl chloride	ND	50	250.0	ug/Kg	11/17/07	LZ
Benzene	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromochloromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromodichloromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromoform	ND	50	250.0	ug/Kg	11/17/07	LZ
Bromomethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Carbon tetrachloride	ND	50	250.0	ug/Kg	11/17/07	LZ
Chlorobenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
Chloroethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Chloroform	ND	50	250.0	ug/Kg	11/17/07	LZ
Chloromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
cis-1,2-Dichloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
cis-1,3-Dichloropropene	ND	50	250.0	ug/Kg	11/17/07	LZ
cis-1,4-Dichloro-2-butene	ND	50	250.0	ug/Kg	11/17/07	LZ
Dibromochloromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Dibromomethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Dichlorodifluoromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Ethyl benzene	2080	50	250.0	ug/Kg	11/17/07	LZ
Hexachlorobutadiene	ND	50	250.0	ug/Kg	11/17/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848002
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-50

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
Isopropylbenzene (Cumene)	1330	50	250.0	ug/Kg	11/17/07	LZ
Methyl-tert-butylether (MTBE)	ND	50	250.0	ug/Kg	11/17/07	LZ
Methylene chloride	ND	50	250.0	ug/Kg	11/17/07	LZ
n-Butylbenzene	1050	50	250.0	ug/Kg	11/17/07	LZ
n-Propylbenzene	2080	50	250.0	ug/Kg	11/17/07	LZ
Naphthalene	5980	50	250.0	ug/Kg	11/17/07	LZ
p-Isopropyltoluene	1660	50	250.0	ug/Kg	11/17/07	LZ
sec-Butylbenzene	1140	50	250.0	ug/Kg	11/17/07	LZ
Styrene	ND	50	250.0	ug/Kg	11/17/07	LZ
tert-Butylbenzene	ND	50	250.0	ug/Kg	11/17/07	LZ
Tetrachloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
Toluene	ND	50	250.0	ug/Kg	11/17/07	LZ
trans-1,2-Dichloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
trans-1,3-Dichloropropene	ND	50	250.0	ug/Kg	11/17/07	LZ
trans-1,4-Dichloro-2-butene	ND	50	250.0	ug/Kg	11/17/07	LZ
Trichloroethene	ND	50	250.0	ug/Kg	11/17/07	LZ
Trichlorofluoromethane	ND	50	250.0	ug/Kg	11/17/07	LZ
Vinyl chloride	ND	50	250.0	ug/Kg	11/17/07	LZ
Xylenes, total	677	50	250.0	ug/Kg	11/17/07	LZ
Di-isopropyl ether (DIPE)	ND	50	100.0	ug/Kg	11/17/07	LZ
Ethyl-tertbutylether (ETBE)	ND	50	100.0	ug/Kg	11/17/07	LZ
Tert-amylmethylether (TAME)	ND	50	100.0	ug/Kg	11/17/07	LZ
Tertiary butyl alcohol (TBA)	ND	50	500.0	ug/Kg	11/17/07	LZ
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	115			%	70 - 135	
Surr2 - 1,2-Dichloroethane-d4	100			%	70 - 135	
Surr3 - Toluene-d8	97			%	70 - 135	
Surr4 - p-Bromofluorobenzene	144*			%	70 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848002
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-50

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	26000	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848002
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-50

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	7540	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848002
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 09:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B7A-50

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Surrogates				**Units**	**Control Limits**	
2,4,6-Tribromophenol (sur)	101			%	17 - 122	
2-Fluorobiphenyl (sur)	86			%	30 - 115	
2-Fluorophenol (sur)	76			%	25 - 121	
Nitrobenzene-d5 (sur)	86			%	23 - 120	
Phenol-d5 (sur)	79			%	24 - 113	
Terphenyl-d14 (sur)	102			%	18 - 137	
MADEP EPH 03-1						
(1) C09-C18 Aliphatic Hydrocarbons	2210	50		mg/Kg	11/26/07	AF
(2) C19-C36 Aliphatic Hydrocarbons	3390	50		mg/Kg	11/26/07	AF
(3) C11-C22 Aromatic Hydrocarbons	2960	50		mg/Kg	11/26/07	AF
Aliphatic Fract Sur - 2-Bromonaphthalene	105	50		%	11/26/07	AF
Aromatic Frac Sur - 2-Fluorobiphenyl	80	50		%	11/26/07	AF
EPH Aliphatic Sur - COD	150*	50		%	11/26/07	AF
EPH Aromatic Sur - OTP	95	50		%	11/26/07	AF
MADEP VPH 03-1						
(1) C5-C8 Unadj. Aliphatic Hydrocarbons	84.9	100	10.0	mg/Kg	12/01/07	LD
(2) C9-C12 Unadj. Aliphatic Hydrocarbons	140	100	10.0	mg/Kg	12/01/07	LD
(3) C9-C10 Aromatic Hydrocarbons	82	100	10.0	mg/Kg	12/01/07	LD
FID Sur 2,5-Dibromotoluene	1700*	100		%	12/01/07	LD
PID Sur 2,5-Dibromotoluene	72	100		%	12/01/07	LD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848003
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-15

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	8.86	1	1.0	mg/Kg	11/15/07	KN
Barium	161	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.977	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.531	1	0.5	mg/Kg	11/15/07	KN
Chromium	32.8	1	1.0	mg/Kg	11/15/07	KN
Cobalt	15.8	1	0.5	mg/Kg	11/15/07	KN
Copper	32.8	1	1.0	mg/Kg	11/15/07	KN
Lead	6.45	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	25.7	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	62.0	1	0.5	mg/Kg	11/15/07	KN
Zinc	75.6	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	1	3	mg/Kg	11/16/07	AF
C10 - C22	ND	1	3	mg/Kg	11/16/07	AF
C22 - C36	42	1	5	mg/Kg	11/16/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	60			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848003
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-15

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	93			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848003
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-15

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
2,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	5	ug/Kg	11/16/07	LZ
Acetone	ND	1	50	ug/Kg	11/16/07	LZ
Allyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Benzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromoform	ND	1	5	ug/Kg	11/16/07	LZ
Bromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	1	5	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Chloroethane	ND	1	5	ug/Kg	11/16/07	LZ
Chloroform	ND	1	5	ug/Kg	11/16/07	LZ
Chloromethane	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Dibromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Ethyl benzene	ND	1	5	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	1	5	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/16/07	LZ
Methylene chloride	ND	1	5	ug/Kg	11/16/07	LZ
n-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
n-Propylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Naphthalene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848003
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-15

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
p-Isopropyltoluene	ND	1	5	ug/Kg	11/16/07	LZ
sec-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Styrene	ND	1	5	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Toluene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Trichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Xylenes, total	ND	1	5	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/Kg	11/16/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	113	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	112	%	70 - 135
Surr3 - Toluene-d8	110	%	70 - 135
Surr4 - p-Bromofluorobenzene	102	%	70 - 135

8270C Acid/Base/Neutral Extractables

1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848003
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-15

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848003
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-15

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	78	%	17 - 122
2-Fluorobiphenyl (sur)	69	%	30 - 115
2-Fluorophenol (sur)	60	%	25 - 121
Nitrobenzene-d5 (sur)	70	%	23 - 120

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848003
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-15

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Phenol-d5 (sur)	58			%	24 - 113
Terphenyl-d14 (sur)	101			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848004
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/23/07	KN
Arsenic	3.51	1	1.0	mg/Kg	11/23/07	KN
Barium	154	1	1.0	mg/Kg	11/23/07	KN
Beryllium	0.809	1	0.5	mg/Kg	11/23/07	KN
Cadmium	0.798	1	0.5	mg/Kg	11/23/07	KN
Chromium	35.3	1	1.0	mg/Kg	11/23/07	KN
Cobalt	13.3	1	0.5	mg/Kg	11/23/07	KN
Copper	21.9	1	1.0	mg/Kg	11/23/07	KN
Lead	10.8	1	0.5	mg/Kg	11/23/07	KN
Molybdenum	1.19	1	1.0	mg/Kg	11/23/07	KN
Nickel	22.5	1	1.5	mg/Kg	11/23/07	KN
Selenium	ND	1	1.0	mg/Kg	11/23/07	KN
Silver	ND	1	0.5	mg/Kg	11/23/07	KN
Thallium	ND	1	1.0	mg/Kg	11/23/07	KN
Vanadium	56.8	1	0.5	mg/Kg	11/23/07	KN
Zinc	65.8	1	5.0	mg/Kg	11/23/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	1	3	mg/Kg	11/17/07	AF
C10 - C22	ND	1	3	mg/Kg	11/17/07	AF
C22 - C36	68	1	5	mg/Kg	11/17/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	64			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848004
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	87			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848004
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
2,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	5	ug/Kg	11/16/07	LZ
Acetone	ND	1	50	ug/Kg	11/16/07	LZ
Allyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Benzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromoform	ND	1	5	ug/Kg	11/16/07	LZ
Bromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	1	5	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Chloroethane	ND	1	5	ug/Kg	11/16/07	LZ
Chloroform	ND	1	5	ug/Kg	11/16/07	LZ
Chloromethane	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Dibromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Ethyl benzene	ND	1	5	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	1	5	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/16/07	LZ
Methylene chloride	ND	1	5	ug/Kg	11/16/07	LZ
n-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
n-Propylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Naphthalene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848004
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
p-Isopropyltoluene	ND	1	5	ug/Kg	11/16/07	LZ
sec-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Styrene	ND	1	5	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Toluene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Trichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Xylenes, total	ND	1	5	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/Kg	11/16/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	115	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	121	%	70 - 135
Surr3 - Toluene-d8	104	%	70 - 135
Surr4 - p-Bromofluorobenzene	99	%	70 - 135

8270C Acid/Base/Neutral Extractables

1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848004
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848004
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	98	%	17 - 122
2-Fluorobiphenyl (sur)	76	%	30 - 115
2-Fluorophenol (sur)	65	%	25 - 121
Nitrobenzene-d5 (sur)	72	%	23 - 120

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848004
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Phenol-d5 (sur)	65			%	24 - 113
Terphenyl-d14 (sur)	106			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848005
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20-DUP

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/23/07	KN
Arsenic	5.43	1	1.0	mg/Kg	11/23/07	KN
Barium	249	1	1.0	mg/Kg	11/23/07	KN
Beryllium	1.08	1	0.5	mg/Kg	11/23/07	KN
Cadmium	0.903	1	0.5	mg/Kg	11/23/07	KN
Chromium	37.0	1	1.0	mg/Kg	11/23/07	KN
Cobalt	16.4	1	0.5	mg/Kg	11/23/07	KN
Copper	31.9	1	1.0	mg/Kg	11/23/07	KN
Lead	7.29	1	0.5	mg/Kg	11/23/07	KN
Molybdenum	1.18	1	1.0	mg/Kg	11/23/07	KN
Nickel	24.7	1	1.5	mg/Kg	11/23/07	KN
Selenium	ND	1	1.0	mg/Kg	11/23/07	KN
Silver	ND	1	0.5	mg/Kg	11/23/07	KN
Thallium	ND	1	1.0	mg/Kg	11/23/07	KN
Vanadium	67.8	1	0.5	mg/Kg	11/23/07	KN
Zinc	92.0	1	5.0	mg/Kg	11/23/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	1	3	mg/Kg	11/17/07	AF
C10 - C22	ND	1	3	mg/Kg	11/17/07	AF
C22 - C36	105	1	5	mg/Kg	11/17/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	61			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848005
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20-DUP

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	91			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848005
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20-DUP

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
2,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	5	ug/Kg	11/16/07	LZ
Acetone	ND	1	50	ug/Kg	11/16/07	LZ
Allyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Benzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromoform	ND	1	5	ug/Kg	11/16/07	LZ
Bromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	1	5	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Chloroethane	ND	1	5	ug/Kg	11/16/07	LZ
Chloroform	ND	1	5	ug/Kg	11/16/07	LZ
Chloromethane	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Dibromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Ethyl benzene	ND	1	5	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	1	5	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/16/07	LZ
Methylene chloride	ND	1	5	ug/Kg	11/16/07	LZ
n-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
n-Propylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Naphthalene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848005
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20-DUP

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
p-Isopropyltoluene	ND	1	5	ug/Kg	11/16/07	LZ
sec-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Styrene	ND	1	5	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Toluene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Trichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Xylenes, total	ND	1	5	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/Kg	11/16/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	122	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	127	%	70 - 135
Surr3 - Toluene-d8	106	%	70 - 135
Surr4 - p-Bromofluorobenzene	106	%	70 - 135

8270C Acid/Base/Neutral Extractables

1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848005
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20-DUP

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848005
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20-DUP

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	86	%	17 - 122
2-Fluorobiphenyl (sur)	75	%	30 - 115
2-Fluorophenol (sur)	69	%	25 - 121
Nitrobenzene-d5 (sur)	78	%	23 - 120

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848005
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:10
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-20-DUP

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Phenol-d5 (sur)	65			%	24 - 113
Terphenyl-d14 (sur)	106			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848006
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-25

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/19/07	KN
Arsenic	2.34	1	1.0	mg/Kg	11/19/07	KN
Barium	113	1	1.0	mg/Kg	11/19/07	KN
Beryllium	0.890	1	0.5	mg/Kg	11/19/07	KN
Cadmium	0.597	1	0.5	mg/Kg	11/19/07	KN
Chromium	30.9	1	1.0	mg/Kg	11/19/07	KN
Cobalt	11.4	1	0.5	mg/Kg	11/19/07	KN
Copper	19.4	1	1.0	mg/Kg	11/19/07	KN
Lead	5.20	1	0.5	mg/Kg	11/19/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/19/07	KN
Nickel	16.9	1	1.5	mg/Kg	11/19/07	KN
Selenium	ND	1	1.0	mg/Kg	11/19/07	KN
Silver	ND	1	0.5	mg/Kg	11/19/07	KN
Thallium	ND	1	1.0	mg/Kg	11/19/07	KN
Vanadium	43.6	1	0.5	mg/Kg	11/19/07	KN
Zinc	66.2	1	5.0	mg/Kg	11/19/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8015B Carbon Chain I						
C06 - C10	ND	5	15.0	mg/Kg	11/16/07	AF
C10 - C22	ND	5	15.0	mg/Kg	11/16/07	AF
C22 - C36	526	20	100.0	mg/Kg	11/16/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	89			%	55 - 200	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848006
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-25

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	90			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848006
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-25

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
2,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	5	ug/Kg	11/16/07	LZ
Acetone	ND	1	50	ug/Kg	11/16/07	LZ
Allyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Benzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromoform	ND	1	5	ug/Kg	11/16/07	LZ
Bromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	1	5	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Chloroethane	ND	1	5	ug/Kg	11/16/07	LZ
Chloroform	ND	1	5	ug/Kg	11/16/07	LZ
Chloromethane	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Dibromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Ethyl benzene	ND	1	5	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	1	5	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/16/07	LZ
Methylene chloride	ND	1	5	ug/Kg	11/16/07	LZ
n-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
n-Propylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Naphthalene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848006
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-25

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
p-Isopropyltoluene	ND	1	5	ug/Kg	11/16/07	LZ
sec-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Styrene	ND	1	5	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Toluene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Trichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Xylenes, total	ND	1	5	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/Kg	11/16/07	LZ

Surrogates		**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	118	%	70 - 135
Surr2 - 1,2-Dichloroethane-d4	126	%	70 - 135
Surr3 - Toluene-d8	108	%	70 - 135
Surr4 - p-Bromofluorobenzene	99	%	70 - 135

8270C Acid/Base/Neutral Extractables

1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848006
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-25

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848006
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-25

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	88	%	17 - 122
2-Fluorobiphenyl (sur)	78	%	30 - 115
2-Fluorophenol (sur)	67	%	25 - 121
Nitrobenzene-d5 (sur)	74	%	23 - 120

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848006
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: B6A-25

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
Phenol-d5 (sur)	56			%	24 - 113
Terphenyl-d14 (sur)	108			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848007
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	13.7	1	1.0	mg/Kg	11/15/07	KN
Barium	280	1	1.0	mg/Kg	11/15/07	KN
Beryllium	1.10	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.586	1	0.5	mg/Kg	11/15/07	KN
Chromium	35.0	1	1.0	mg/Kg	11/15/07	KN
Cobalt	17.1	1	0.5	mg/Kg	11/15/07	KN
Copper	37.9	1	1.0	mg/Kg	11/15/07	KN
Lead	15.2	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	27.4	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	62.8	1	0.5	mg/Kg	11/15/07	KN
Zinc	85.0	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	0.007	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848007
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	132			%	55 - 135	
TCMX (Sur1)	85			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	91			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848007
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848007
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	92	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848007
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	77			%	30 - 115
2-Fluorophenol (sur)	61			%	25 - 121
Nitrobenzene-d5 (sur)	75			%	23 - 120
Phenol-d5 (sur)	60			%	24 - 113
Terphenyl-d14 (sur)	102			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848008
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	5.96	1	1.0	mg/Kg	11/15/07	KN
Barium	224	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.743	1	0.5	mg/Kg	11/15/07	KN
Cadmium	0.971	1	0.5	mg/Kg	11/15/07	KN
Chromium	23.7	1	1.0	mg/Kg	11/15/07	KN
Cobalt	12.6	1	0.5	mg/Kg	11/15/07	KN
Copper	30.1	1	1.0	mg/Kg	11/15/07	KN
Lead	49.0	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	19.9	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	46.6	1	0.5	mg/Kg	11/15/07	KN
Zinc	320	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848008
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	116			%	55 - 135	
TCMX (Sur1)	84			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/22/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/22/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/22/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/22/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/22/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/22/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/22/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	100			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848008
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848008
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	94	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848008
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:15
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	73			%	30 - 115
2-Fluorophenol (sur)	62			%	25 - 121
Nitrobenzene-d5 (sur)	69			%	23 - 120
Phenol-d5 (sur)	63			%	24 - 113
Terphenyl-d14 (sur)	106			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848009
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.0	mg/Kg	11/15/07	KN
Arsenic	4.37	1	1.0	mg/Kg	11/15/07	KN
Barium	197	1	1.0	mg/Kg	11/15/07	KN
Beryllium	0.928	1	0.5	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.5	mg/Kg	11/15/07	KN
Chromium	30.8	1	1.0	mg/Kg	11/15/07	KN
Cobalt	16.7	1	0.5	mg/Kg	11/15/07	KN
Copper	36.6	1	1.0	mg/Kg	11/15/07	KN
Lead	9.07	1	0.5	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.0	mg/Kg	11/15/07	KN
Nickel	23.6	1	1.5	mg/Kg	11/15/07	KN
Selenium	ND	1	1.0	mg/Kg	11/15/07	KN
Silver	ND	1	0.5	mg/Kg	11/15/07	KN
Thallium	ND	1	1.0	mg/Kg	11/15/07	KN
Vanadium	59.1	1	0.5	mg/Kg	11/15/07	KN
Zinc	70.3	1	5.0	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848009
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	112			%	55 - 135	
TCMX (Sur1)	73			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	93			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848009
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/24/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848009
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/24/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/24/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/24/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/24/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/24/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/24/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/24/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/24/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/24/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	81	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848009
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 12:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG14-10

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	60			%	30 - 115
2-Fluorophenol (sur)	59			%	25 - 121
Nitrobenzene-d5 (sur)	64			%	23 - 120
Phenol-d5 (sur)	57			%	24 - 113
Terphenyl-d14 (sur)	94			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848010
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	7.64	1	1.00	mg/Kg	11/15/07	KN
Barium	203	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.870	1	0.50	mg/Kg	11/15/07	KN
Cadmium	0.556	1	0.50	mg/Kg	11/15/07	KN
Chromium	27.7	1	1.00	mg/Kg	11/15/07	KN
Cobalt	14.5	1	0.50	mg/Kg	11/15/07	KN
Copper	29.9	1	1.00	mg/Kg	11/15/07	KN
Lead	44.0	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	1.45	1	1.00	mg/Kg	11/15/07	KN
Nickel	20.8	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	51.4	1	0.50	mg/Kg	11/15/07	KN
Zinc	97.9	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848010
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	118			%	55 - 135	
TCMX (Sur1)	83			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	104			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848010
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848010
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	80	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848010
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:30
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	67			%	30 - 115
2-Fluorophenol (sur)	48			%	25 - 121
Nitrobenzene-d5 (sur)	59			%	23 - 120
Phenol-d5 (sur)	37			%	24 - 113
Terphenyl-d14 (sur)	100			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848011
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	4.62	1	1.00	mg/Kg	11/15/07	KN
Barium	168	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.779	1	0.50	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.50	mg/Kg	11/15/07	KN
Chromium	25.0	1	1.00	mg/Kg	11/15/07	KN
Cobalt	13.6	1	0.50	mg/Kg	11/15/07	KN
Copper	25.9	1	1.00	mg/Kg	11/15/07	KN
Lead	13.2	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.00	mg/Kg	11/15/07	KN
Nickel	18.5	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	47.1	1	0.50	mg/Kg	11/15/07	KN
Zinc	77.2	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848011
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	96			%	55 - 135	
TCMX (Sur1)	70			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	104			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848011
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848011
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	72	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848011
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:35
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	72			%	30 - 115
2-Fluorophenol (sur)	51			%	25 - 121
Nitrobenzene-d5 (sur)	67			%	23 - 120
Phenol-d5 (sur)	54			%	24 - 113
Terphenyl-d14 (sur)	103			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848012
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	6.80	1	1.00	mg/Kg	11/15/07	KN
Barium	176	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.750	1	0.50	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.50	mg/Kg	11/15/07	KN
Chromium	25.2	1	1.00	mg/Kg	11/15/07	KN
Cobalt	13.4	1	0.50	mg/Kg	11/15/07	KN
Copper	26.4	1	1.00	mg/Kg	11/15/07	KN
Lead	6.91	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.00	mg/Kg	11/15/07	KN
Nickel	19.1	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	46.3	1	0.50	mg/Kg	11/15/07	KN
Zinc	66.3	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848012
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	114			%	55 - 135	
TCMX (Sur1)	74			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	104			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848012
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848012
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	82	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848012
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 13:40
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG15-10

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	71			%	30 - 115
2-Fluorophenol (sur)	52			%	25 - 121
Nitrobenzene-d5 (sur)	64			%	23 - 120
Phenol-d5 (sur)	50			%	24 - 113
Terphenyl-d14 (sur)	108			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848013
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	3.40	1	1.00	mg/Kg	11/15/07	KN
Barium	109	1	1.00	mg/Kg	11/15/07	KN
Beryllium	ND	1	0.50	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.50	mg/Kg	11/15/07	KN
Chromium	18.2	1	1.00	mg/Kg	11/15/07	KN
Cobalt	8.93	1	0.50	mg/Kg	11/15/07	KN
Copper	16.3	1	1.00	mg/Kg	11/15/07	KN
Lead	5.85	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	1.29	1	1.00	mg/Kg	11/15/07	KN
Nickel	15.2	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	29.9	1	0.50	mg/Kg	11/15/07	KN
Zinc	48.5	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	1.69	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848013
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	106			%	55 - 135	
TCMX (Sur1)	61			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	70			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848013
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848013
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	97	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848013
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	79			%	30 - 115
2-Fluorophenol (sur)	63			%	25 - 121
Nitrobenzene-d5 (sur)	73			%	23 - 120
Phenol-d5 (sur)	61			%	24 - 113
Terphenyl-d14 (sur)	99			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848014
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	4.66	1	1.00	mg/Kg	11/15/07	KN
Barium	117	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.644	1	0.50	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.50	mg/Kg	11/15/07	KN
Chromium	21.2	1	1.00	mg/Kg	11/15/07	KN
Cobalt	10.8	1	0.50	mg/Kg	11/15/07	KN
Copper	17.8	1	1.00	mg/Kg	11/15/07	KN
Lead	9.28	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.00	mg/Kg	11/15/07	KN
Nickel	16.7	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	38.3	1	0.50	mg/Kg	11/15/07	KN
Zinc	56.4	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848014
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	90			%	55 - 135	
TCMX (Sur1)	65			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	99			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848014
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848014
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	75	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848014
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:00
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	75			%	30 - 115
2-Fluorophenol (sur)	58			%	25 - 121
Nitrobenzene-d5 (sur)	72			%	23 - 120
Phenol-d5 (sur)	57			%	24 - 113
Terphenyl-d14 (sur)	107			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848015
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:05
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	4.07	1	1.00	mg/Kg	11/15/07	KN
Barium	99.1	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.582	1	0.50	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.50	mg/Kg	11/15/07	KN
Chromium	19.0	1	1.00	mg/Kg	11/15/07	KN
Cobalt	8.89	1	0.50	mg/Kg	11/15/07	KN
Copper	15.0	1	1.00	mg/Kg	11/15/07	KN
Lead	5.13	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.00	mg/Kg	11/15/07	KN
Nickel	14.1	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	36.4	1	0.50	mg/Kg	11/15/07	KN
Zinc	45.4	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	0.013	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848015
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:05
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	109			%	55 - 135	
TCMX (Sur1)	68			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	97			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848015
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:05
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848015
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:05
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	73	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848015
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:05
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG2-10

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	68			%	30 - 115
2-Fluorophenol (sur)	50			%	25 - 121
Nitrobenzene-d5 (sur)	64			%	23 - 120
Phenol-d5 (sur)	50			%	24 - 113
Terphenyl-d14 (sur)	103			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848016
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	7.09	1	1.00	mg/Kg	11/15/07	KN
Barium	170	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.912	1	0.50	mg/Kg	11/15/07	KN
Cadmium	0.677	1	0.50	mg/Kg	11/15/07	KN
Chromium	27.3	1	1.00	mg/Kg	11/15/07	KN
Cobalt	14.6	1	0.50	mg/Kg	11/15/07	KN
Copper	22.5	1	1.00	mg/Kg	11/15/07	KN
Lead	19.0	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	1.52	1	1.00	mg/Kg	11/15/07	KN
Nickel	21.5	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	57.8	1	0.50	mg/Kg	11/15/07	KN
Zinc	103	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848016
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	106			%	55 - 135	
TCMX (Sur1)	82			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	101			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848016
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848016
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	101	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848016
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	78			%	30 - 115
2-Fluorophenol (sur)	61			%	25 - 121
Nitrobenzene-d5 (sur)	65			%	23 - 120
Phenol-d5 (sur)	62			%	24 - 113
Terphenyl-d14 (sur)	109			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848017
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	10.1	1	1.00	mg/Kg	11/15/07	KN
Barium	211	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.807	1	0.50	mg/Kg	11/15/07	KN
Cadmium	0.593	1	0.50	mg/Kg	11/15/07	KN
Chromium	29.2	1	1.00	mg/Kg	11/15/07	KN
Cobalt	13.1	1	0.50	mg/Kg	11/15/07	KN
Copper	40.6	1	1.00	mg/Kg	11/15/07	KN
Lead	34.3	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.00	mg/Kg	11/15/07	KN
Nickel	21.9	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	48.3	1	0.50	mg/Kg	11/15/07	KN
Zinc	96.4	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	0.21	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848017
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	116			%	55 - 135	
TCMX (Sur1)	72			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/20/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/20/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/20/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/20/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	78			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848017
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848017
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	96	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848017
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:20
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-5

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	80			%	30 - 115
2-Fluorophenol (sur)	57			%	25 - 121
Nitrobenzene-d5 (sur)	66			%	23 - 120
Phenol-d5 (sur)	61			%	24 - 113
Terphenyl-d14 (sur)	106			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848018
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	1.71	1	1.00	mg/Kg	11/15/07	KN
Barium	74.0	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.625	1	0.50	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.50	mg/Kg	11/15/07	KN
Chromium	18.1	1	1.00	mg/Kg	11/15/07	KN
Cobalt	8.06	1	0.50	mg/Kg	11/15/07	KN
Copper	10.3	1	1.00	mg/Kg	11/15/07	KN
Lead	5.23	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.00	mg/Kg	11/15/07	KN
Nickel	11.0	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	31.6	1	0.50	mg/Kg	11/15/07	KN
Zinc	91.2	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	0.035	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848018
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	108			%	55 - 135	
TCMX (Sur1)	79			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	101			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848018
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848018
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	88	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848018
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	71			%	30 - 115
2-Fluorophenol (sur)	52			%	25 - 121
Nitrobenzene-d5 (sur)	66			%	23 - 120
Phenol-d5 (sur)	53			%	24 - 113
Terphenyl-d14 (sur)	104			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848019
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	1.13	1	1.00	mg/Kg	11/15/07	KN
Barium	81.1	1	1.00	mg/Kg	11/15/07	KN
Beryllium	0.531	1	0.50	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.50	mg/Kg	11/15/07	KN
Chromium	17.4	1	1.00	mg/Kg	11/15/07	KN
Cobalt	7.94	1	0.50	mg/Kg	11/15/07	KN
Copper	9.12	1	1.00	mg/Kg	11/15/07	KN
Lead	5.99	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.00	mg/Kg	11/15/07	KN
Nickel	12.3	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	28.8	1	0.50	mg/Kg	11/15/07	KN
Zinc	42.1	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/16/07	MDJ
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/21/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/21/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/21/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/21/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/21/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/21/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/21/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/21/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/21/07	RB

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848019
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
Endosulfan I	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/21/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin	ND	1	0.004	mg/Kg	11/21/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/21/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/21/07	RB
Lindane	ND	1	0.003	mg/Kg	11/21/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/21/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/21/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	96			%	55 - 135	
TCMX (Sur1)	72			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	97			%	50 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,2-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,3-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
1,4-Dichlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848019
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,5-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4,6-Trichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dichlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dimethylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2,4-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2,6-Dinitrotoluene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chloronaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Chlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylnaphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
2-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
3,3-Dichlorobenzidine	ND	10	3000.0	ug/Kg	11/25/07	SD
3-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
3-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4,6-Dinitro-2-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Bromophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloro-3-methylphenol	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chloroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Chlorophenyl-phenylether	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Methylphenol	ND	10	5000.0	ug/Kg	11/25/07	SD
4-Nitroaniline	ND	10	3000.0	ug/Kg	11/25/07	SD
4-Nitrophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Acenaphthylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzidine	ND	10	15000.0	ug/Kg	11/25/07	SD
Benzo(a)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(a)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(b)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(g,h,i)perylene	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzo(k)fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848019
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzoic Acid	ND	10	3000.0	ug/Kg	11/25/07	SD
Benzyl alcohol	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethoxy)methane	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroethyl)ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Chloroisopropyl) ether	ND	10	3000.0	ug/Kg	11/25/07	SD
bis(2-Ethylhexyl)phthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Butylbenzylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Chrysene	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-butylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Di-n-octylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenz(a,h)anthracene	ND	10	3000.0	ug/Kg	11/25/07	SD
Dibenzofuran	ND	10	3000.0	ug/Kg	11/25/07	SD
Diethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Dimethylphthalate	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluoranthene	ND	10	3000.0	ug/Kg	11/25/07	SD
Fluorene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorobutadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachlorocyclopentadiene	ND	10	3000.0	ug/Kg	11/25/07	SD
Hexachloroethane	ND	10	3000.0	ug/Kg	11/25/07	SD
Indeno(1,2,3-c,d)pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Isophorone	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitroso-di-n-propylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
N-Nitrosodiphenylamine	ND	10	3000.0	ug/Kg	11/25/07	SD
Naphthalene	ND	10	3000.0	ug/Kg	11/25/07	SD
Nitrobenzene	ND	10	3000.0	ug/Kg	11/25/07	SD
Pentachlorophenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenanthrene	ND	10	3000.0	ug/Kg	11/25/07	SD
Phenol	ND	10	3000.0	ug/Kg	11/25/07	SD
Pyrene	ND	10	3000.0	ug/Kg	11/25/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	82	%	17 - 122

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848019
Matrix: SOLID
Date Sampled: 11/13/2007
Time Sampled: 14:25
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: SG3-10-Dup

Analyte	Result	DF	DLR	Units	Date/Analyst
8270C Acid/Base/Neutral Extractables					
2-Fluorobiphenyl (sur)	76			%	30 - 115
2-Fluorophenol (sur)	56			%	25 - 121
Nitrobenzene-d5 (sur)	70			%	23 - 120
Phenol-d5 (sur)	56			%	24 - 113
Terphenyl-d14 (sur)	105			%	18 - 137

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848020
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
1312/8015 SPLP Carbon Chain I						
C06 - C10	ND	1	0.2	mg/L	11/22/07	AF
C10 - C22	ND	1	0.2	mg/L	11/22/07	AF
C22 - C36	ND	1	0.3	mg/L	11/22/07	AF
6010 STLC (16 ICP Metals)						
Barium, STLC	ND	1	0.010	mg/L	11/29/07	NVK
Lead, STLC	ND	1	0.005	mg/L	11/29/07	NVK
6010B ICP CAM Metals Only (W/S/W)						
Antimony	ND	1	3.00	mg/Kg	11/15/07	KN
Arsenic	ND	1	1.00	mg/Kg	11/15/07	KN
Barium	ND	1	1.00	mg/Kg	11/15/07	KN
Beryllium	ND	1	0.50	mg/Kg	11/15/07	KN
Cadmium	ND	1	0.50	mg/Kg	11/15/07	KN
Chromium	ND	1	1.00	mg/Kg	11/15/07	KN
Cobalt	ND	1	0.50	mg/Kg	11/15/07	KN
Copper	ND	1	1.00	mg/Kg	11/15/07	KN
Lead	ND	1	0.50	mg/Kg	11/15/07	KN
Molybdenum	ND	1	1.00	mg/Kg	11/15/07	KN
Nickel	ND	1	1.50	mg/Kg	11/15/07	KN
Selenium	ND	1	1.00	mg/Kg	11/15/07	KN
Silver	ND	1	0.50	mg/Kg	11/15/07	KN
Thallium	ND	1	1.00	mg/Kg	11/15/07	KN
Vanadium	ND	1	0.50	mg/Kg	11/15/07	KN
Zinc	ND	1	5.00	mg/Kg	11/15/07	KN
7471A Mercury in Solid/Wipe						
Mercury	ND	1	0.14	mg/Kg	11/15/07	MDJ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848020
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8015B Carbon Chain I						
C06 - C10	ND	1	3	mg/Kg	11/16/07	AF
C10 - C22	ND	1	3	mg/Kg	11/16/07	AF
C22 - C36	ND	1	5	mg/Kg	11/16/07	AF
Surrogates				**Units**	**Control Limits**	
Sur-o-Terphenyl	89			%	55 - 200	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	11/20/07	RB
4,4-DDE	ND	1	0.004	mg/Kg	11/20/07	RB
4,4-DDT	ND	1	0.005	mg/Kg	11/20/07	RB
Aldrin	ND	1	0.004	mg/Kg	11/20/07	RB
Alpha BHC	ND	1	0.002	mg/Kg	11/20/07	RB
Beta BHC	ND	1	0.003	mg/Kg	11/20/07	RB
Chlordane	ND	1	0.025	mg/Kg	11/20/07	RB
Delta BHC	ND	1	0.005	mg/Kg	11/20/07	RB
Dieldrin	ND	1	0.003	mg/Kg	11/20/07	RB
Endosulfan I	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan II	ND	1	0.004	mg/Kg	11/20/07	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin	ND	1	0.004	mg/Kg	11/20/07	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor	ND	1	0.004	mg/Kg	11/20/07	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	11/20/07	RB
Lindane	ND	1	0.003	mg/Kg	11/20/07	RB
Methoxychlor	ND	1	0.025	mg/Kg	11/20/07	RB
Toxaphene	ND	1	0.250	mg/Kg	11/20/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur2)	106			%	55 - 135	
TCMX (Sur1)	93			%	50 - 125	
8082 - Polychlorinated Biphenyls (PCBs) by GC						

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848020
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8082 - Polychlorinated Biphenyls (PCBs) by GC						
PCB-1016	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1221	ND	1	0.06	mg/Kg	11/19/07	RB
PCB-1232	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1242	ND	1	0.05	mg/Kg	11/19/07	RB
PCB-1248	ND	1	0.08	mg/Kg	11/19/07	RB
PCB-1254	ND	1	0.03	mg/Kg	11/19/07	RB
PCB-1260	ND	1	0.03	mg/Kg	11/19/07	RB
Surrogates				**Units**	**Control Limits**	
DCB(Sur)	104			%	50 - 135	
8260B Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg	11/16/07	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848020
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,3-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
2,2-Dichloropropane	ND	1	5	ug/Kg	11/16/07	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg	11/16/07	LZ
2-Chloroethyl vinyl ether	ND	1	5	ug/Kg	11/16/07	LZ
2-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Chlorotoluene	ND	1	5	ug/Kg	11/16/07	LZ
4-Methyl -2- Pentanone (MIBK)	ND	1	5	ug/Kg	11/16/07	LZ
Acetone	ND	1	50	ug/Kg	11/16/07	LZ
Allyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Benzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Bromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromodichloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Bromoform	ND	1	5	ug/Kg	11/16/07	LZ
Bromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Carbon tetrachloride	ND	1	5	ug/Kg	11/16/07	LZ
Chlorobenzene	ND	1	5	ug/Kg	11/16/07	LZ
Chloroethane	ND	1	5	ug/Kg	11/16/07	LZ
Chloroform	ND	1	5	ug/Kg	11/16/07	LZ
Chloromethane	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
cis-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Dibromochloromethane	ND	1	5	ug/Kg	11/16/07	LZ
Dibromomethane	ND	1	5	ug/Kg	11/16/07	LZ
Dichlorodifluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Ethyl benzene	ND	1	5	ug/Kg	11/16/07	LZ
Hexachlorobutadiene	ND	1	5	ug/Kg	11/16/07	LZ
Isopropylbenzene (Cumene)	ND	1	5	ug/Kg	11/16/07	LZ
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/16/07	LZ
Methylene chloride	ND	1	5	ug/Kg	11/16/07	LZ
n-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848020
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
n-Propylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Naphthalene	ND	1	5	ug/Kg	11/16/07	LZ
p-Isopropyltoluene	ND	1	5	ug/Kg	11/16/07	LZ
sec-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Styrene	ND	1	5	ug/Kg	11/16/07	LZ
tert-Butylbenzene	ND	1	5	ug/Kg	11/16/07	LZ
Tetrachloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Toluene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,2-Dichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,3-Dichloropropene	ND	1	5	ug/Kg	11/16/07	LZ
trans-1,4-Dichloro-2-butene	ND	1	5	ug/Kg	11/16/07	LZ
Trichloroethene	ND	1	5	ug/Kg	11/16/07	LZ
Trichlorofluoromethane	ND	1	5	ug/Kg	11/16/07	LZ
Vinyl chloride	ND	1	5	ug/Kg	11/16/07	LZ
Xylenes, total	ND	1	5	ug/Kg	11/16/07	LZ
Di-isopropyl ether (DIPE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Ethyl-tertbutylether (ETBE)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tert-amylmethylether (TAME)	ND	1	2.0	ug/Kg	11/16/07	LZ
Tertiary butyl alcohol (TBA)	ND	1	10	ug/Kg	11/16/07	LZ
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	110			%	70 - 135	
Surr2 - 1,2-Dichloroethane-d4	108			%	70 - 135	
Surr3 - Toluene-d8	113			%	70 - 135	
Surr4 - p-Bromofluorobenzene	105			%	70 - 135	
8270C Acid/Base/Neutral Extractables						
1,2,4-Trichlorobenzene	ND	1	300	ug/Kg	11/24/07	SD
1,2-Dichlorobenzene	ND	1	300	ug/Kg	11/24/07	SD
1,3-Dichlorobenzene	ND	1	300	ug/Kg	11/24/07	SD
1,4-Dichlorobenzene	ND	1	300	ug/Kg	11/24/07	SD
2,4,5-Trichlorophenol	ND	1	300	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848020
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2,4,6-Trichlorophenol	ND	1	300	ug/Kg	11/24/07	SD
2,4-Dichlorophenol	ND	1	300	ug/Kg	11/24/07	SD
2,4-Dimethylphenol	ND	1	300	ug/Kg	11/24/07	SD
2,4-Dinitrophenol	ND	1	300	ug/Kg	11/24/07	SD
2,4-Dinitrotoluene	ND	1	300	ug/Kg	11/24/07	SD
2,6-Dinitrotoluene	ND	1	300	ug/Kg	11/24/07	SD
2-Chloronaphthalene	ND	1	300	ug/Kg	11/24/07	SD
2-Chlorophenol	ND	1	300	ug/Kg	11/24/07	SD
2-Methylnaphthalene	ND	1	300	ug/Kg	11/24/07	SD
2-Methylphenol	ND	1	300	ug/Kg	11/24/07	SD
2-Nitroaniline	ND	1	300	ug/Kg	11/24/07	SD
2-Nitrophenol	ND	1	300	ug/Kg	11/24/07	SD
3,3-Dichlorobenzidine	ND	1	300	ug/Kg	11/24/07	SD
3-Methylphenol	ND	1	500	ug/Kg	11/24/07	SD
3-Nitroaniline	ND	1	300	ug/Kg	11/24/07	SD
4,6-Dinitro-2-methylphenol	ND	1	300	ug/Kg	11/24/07	SD
4-Bromophenyl-phenylether	ND	1	300	ug/Kg	11/24/07	SD
4-Chloro-3-methylphenol	ND	1	300	ug/Kg	11/24/07	SD
4-Chloroaniline	ND	1	300	ug/Kg	11/24/07	SD
4-Chlorophenyl-phenylether	ND	1	300	ug/Kg	11/24/07	SD
4-Methylphenol	ND	1	500	ug/Kg	11/24/07	SD
4-Nitroaniline	ND	1	300	ug/Kg	11/24/07	SD
4-Nitrophenol	ND	1	300	ug/Kg	11/24/07	SD
Acenaphthene	ND	1	300	ug/Kg	11/24/07	SD
Acenaphthylene	ND	1	300	ug/Kg	11/24/07	SD
Anthracene	ND	1	300	ug/Kg	11/24/07	SD
Benzidine	ND	1	1500	ug/Kg	11/24/07	SD
Benzo(a)anthracene	ND	1	300	ug/Kg	11/24/07	SD
Benzo(a)pyrene	ND	1	300	ug/Kg	11/24/07	SD
Benzo(b)fluoranthene	ND	1	300	ug/Kg	11/24/07	SD
Benzo(g,h,i)perylene	ND	1	300	ug/Kg	11/24/07	SD
Benzo(k)fluoranthene	ND	1	300	ug/Kg	11/24/07	SD
Benzoic Acid	ND	1	300	ug/Kg	11/24/07	SD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848020
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
Benzyl alcohol	ND	1	300	ug/Kg	11/24/07	SD
bis(2-Chloroethoxy)methane	ND	1	300	ug/Kg	11/24/07	SD
bis(2-Chloroethyl)ether	ND	1	300	ug/Kg	11/24/07	SD
bis(2-Chloroisopropyl) ether	ND	1	300	ug/Kg	11/24/07	SD
bis(2-Ethylhexyl)phthalate	ND	1	300	ug/Kg	11/24/07	SD
Butylbenzylphthalate	ND	1	300	ug/Kg	11/24/07	SD
Chrysene	ND	1	300	ug/Kg	11/24/07	SD
Di-n-butylphthalate	ND	1	300	ug/Kg	11/24/07	SD
Di-n-octylphthalate	ND	1	300	ug/Kg	11/24/07	SD
Dibenz(a,h)anthracene	ND	1	300	ug/Kg	11/24/07	SD
Dibenzofuran	ND	1	300	ug/Kg	11/24/07	SD
Diethylphthalate	ND	1	300	ug/Kg	11/24/07	SD
Dimethylphthalate	ND	1	300	ug/Kg	11/24/07	SD
Fluoranthene	ND	1	300	ug/Kg	11/24/07	SD
Fluorene	ND	1	300	ug/Kg	11/24/07	SD
Hexachlorobenzene	ND	1	300	ug/Kg	11/24/07	SD
Hexachlorobutadiene	ND	1	300	ug/Kg	11/24/07	SD
Hexachlorocyclopentadiene	ND	1	300	ug/Kg	11/24/07	SD
Hexachloroethane	ND	1	300	ug/Kg	11/24/07	SD
Indeno(1,2,3-c,d)pyrene	ND	1	300	ug/Kg	11/24/07	SD
Isophorone	ND	1	300	ug/Kg	11/24/07	SD
N-Nitroso-di-n-propylamine	ND	1	300	ug/Kg	11/24/07	SD
N-Nitrosodiphenylamine	ND	1	300	ug/Kg	11/24/07	SD
Naphthalene	ND	1	300	ug/Kg	11/24/07	SD
Nitrobenzene	ND	1	300	ug/Kg	11/24/07	SD
Pentachlorophenol	ND	1	300	ug/Kg	11/24/07	SD
Phenanthrene	ND	1	300	ug/Kg	11/24/07	SD
Phenol	ND	1	300	ug/Kg	11/24/07	SD
Pyrene	ND	1	300	ug/Kg	11/24/07	SD

Surrogates		**Units**	**Control Limits**
2,4,6-Tribromophenol (sur)	60	%	17 - 122
2-Fluorobiphenyl (sur)	63	%	30 - 115

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 848020
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: LFR Levine-Fricke
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8270C Acid/Base/Neutral Extractables						
2-Fluorophenol (sur)	57			%	25 - 121	
Nitrobenzene-d5 (sur)	67			%	23 - 120	
Phenol-d5 (sur)	53			%	24 - 113	
Terphenyl-d14 (sur)	88			%	18 - 137	
9045 pH						
pH	6.20	1		NA	12/10/07	LN
MADEP EPH 03-1						
(1) C09-C18 Aliphatic Hydrocarbons	ND	1		mg/Kg	11/21/07	AF
(2) C19-C36 Aliphatic Hydrocarbons	ND	1		mg/Kg	11/21/07	AF
(3) C11-C22 Aromatic Hydrocarbons	ND	1		mg/Kg	11/21/07	AF
Aliphatic Fract Sur - 2-Bromonaphthalene	47	1		%	11/21/07	AF
Aromatic Frac Sur - 2-Fluorobiphenyl	117	1		%	11/21/07	AF
EPH Aliphatic Sur - COD	80	1		%	11/21/07	AF
EPH Aromatic Sur - OTP	115	1		%	11/21/07	AF
MADEP VPH 03-1						
(1) C5-C8 Unadj. Aliphatic Hydrocarbons	ND	1	0.1	mg/Kg	12/01/07	LD
(2) C9-C12 Unadj. Aliphatic Hydrocarbons	ND	1	0.1	mg/Kg	12/01/07	LD
(3) C9-C10 Aromatic Hydrocarbons	ND	1	0.1	mg/Kg	12/01/07	LD
FID Sur 2,5-Dibromotoluene	84	1		%	12/01/07	LD
PID Sur 2,5-Dibromotoluene	76	1		%	12/01/07	LD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868
714/771-6900 FAX 714/538-1209

CHAIN OF CUSTODY RECORD

Date 11/13/07 Page 1 of 3

Assigned LR# 260998

CLIENT: LFR

ADDRESS: 3150 Bristol Street, Suite 250
Costa Mesa, CA 92626

Is this the address the final report is to be sent to? Yes ✓ No ___
If "No" list mailing address in "Special Instructions" section at the bottom of this Chain of Custody.

PROJECT IDENTIFICATION/LOCATION:

PURCHASE ORDER #: 002-10231-03

SAMPLER: (Print AND Sign) Darren Burgett

SAMPLE TURNAROUND TIME:

Requested Turnaround Time (CIRCLE ONE)*
Priority Charges Apply to Rush Turn Around Times
RUSH: Same Day 24 Hr 48 Hr 72 Hr
STANDARD: Standard TAT **(5 to 10 Working Days)
Other ___
* Availability of Same Day/24/48/72 Hr TAT Varies Based Upon Test Method Requirements.
**Standard TAT Varies According to Analyses.

CONTACT PERSON: Tony Marino

SAMPLED BY (Circle One): (Client) Assoc. Lab Personnel

PHONE #: (714) 444-0111

FAX #: (714) 444-0117

SAMPLE CONDITION INFO - *FOR LAB USE ONLY:*
Samples Intact: Yes ___ No ___
Sample Seals Intact: Yes ___ No ___ N/A ___
Cooler Seals Intact: Yes ___ No ___ N/A ___

	SAMPLE ID	SAMPLE OR LOCATION DESCRIPTION	DATE	TIME	MATRIX (See Codes Below)	# OF CONTAINERS	TEST REQUIRED
1	SG9 - 0.5	LBGLC	11/13/07	0804	S	1	CAM17, OCP(8081A), PCBs, SVOCs
2	SG9 - 5			0810			
3	SG9 - 5-Dup			0810			
4	SG9 - 10			0815			
5	SG13 - 0.5			0840			
6	- 5			0850			
7	- 10			0855			
8	B7A - 5			0915		5	TPH, PCBs, VOCs, SVOCs, CAM17
9	- 10			0920		5	
10	- 20			0925		5	

MATRIX: GW=Ground Water DW=Drinking Water WW=Waste Water SW=Storm Water S=Solid/Soil A=Air L=Liquid F=Food (Use the codes shown here to identify the matrix above)

Relinquished by: (Print AND Sign)*** Darren Burgett	Received By: (Print AND Sign)	Date Time: 11/13/07 1305
Relinquished by: (Print AND Sign)***	Received By: (Print AND Sign) 16:50	Date Time: 11/13/07
Relinquished by: (Print AND Sign)***	Received by Lab for Analysis: (Print AND Sign)	Date Time:

***By signing this Chain of Custody you are authorizing the analyses shown above. Darren Burgett (Print AND Sign)

Special Instructions:
From B6A, B7A ~~&~~ 3 worst case samples analyze SPLP and TPH including aliphatic and aromatic chain lengths (MADEP)

COC DISTRIBUTION:
White with report. Yellow to AL. Pink to Client's Courier.

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868
714/771-6900 FAX 714/538-1209

CHAIN OF CUSTODY RECORD

Date 11/13/07 Page 2 of 3

Assigned LR# 201948

CLIENT: LFR

ADDRESS: 3150 Bristol St. Ste 250
Costa Mesa, CA 92626

Is this the address the final report is to be sent to? Yes ✓ No ___
If "No" list mailing address in "Special Instructions" section at the bottom of this Chain of Custody.

PROJECT IDENTIFICATION/LOCATION:

PURCHASE ORDER #: 002-10231-03

SAMPLER: (Print AND Sign) Dawn Bright

SAMPLE TURNAROUND TIME:

Requested Turnaround Time (CIRCLE ONE)*
Priority Charges Apply to Rush Turn Around Times
RUSH: Same Day 24 Hr 48 Hr 72 Hr
STANDARD: Standard TAT **(5 to 10 Working Days)
Other ___
* Availability of Same Day/24/48/72 Hr TAT Varies Based Upon Test Method Requirements.
**Standard TAT Varies According to Analyses.

CONTACT PERSON: Tony Marino

SAMPLED BY (Circle One): Client Assoc. Lab Personnel

PHONE #: ( )

FAX #: ( )

SAMPLE CONDITION INFO - *FOR LAB USE ONLY:*
Samples Intact: Yes ___ No ___
Sample Seals Intact: Yes ___ No ___ N/A ___
Cooler Seals Intact: Yes ___ No ___ N/A ___

	SAMPLE ID	SAMPLE OR LOCATION DESCRIPTION	DATE	TIME	MATRIX (See Codes Below)	# OF CONTAINERS	TEST REQUIRED
1	B7A-30	LBG1C	11/13/07	0930	S	5	TPH, PCBs, VOCs, SVOCs, CAM17
2	-40			0935			
3	-50			0940			
4	B6A-15			1300			
5	-20			1310			
6	-20-Dup			1310			
7	-25			1315			
8	SG14-0.5			1215	S	1	CAM17, OCP(8081A), PCBs, SVOCs
9	-5			1215			
10	-10			1220			

MATRIX: GW=Ground Water DW=Drinking Water WW=Waste Water SW=Storm Water S=Solid/Soil A=Air L=Liquid F=Food (Use the codes shown here to identify the matrix above)

Relinquished by: (Print AND Sign)***	Received By: (Print AND Sign)	Date Time:
Dawn Bright		11/13/07 1505
Relinquished by (Print AND Sign)***	Received By: (Print AND Sign)	Date Time:
		11/13/07 1615
Relinquished by: (Print AND Sign)***	Received by Lab for Analysis: (Print AND Sign)	Date Time:

Special Instructions:
see pg 1

***By signing this Chain of Custody you are authorizing the analyses shown above. Dawn Bright (Print AND Sign)

COC DISTRIBUTION:
White with report Yellow to AL. Pink to Client's Courier.

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868
714/771-6900 FAX 714/538-1209

CHAIN OF CUSTODY RECORD

Date 11/13/07 Page 3 of 3

Assigned LR# 260998

CLIENT: LFR

ADDRESS: See pg 1

Is this the address the final report is to be sent to? Yes____ No____
If "No" list mailing address in "Special Instructions" section at the bottom of this Chain of Custody.

PROJECT IDENTIFICATION/LOCATION:

PURCHASE ORDER #: See pg 1

SAMPLER: (Print AND Sign)

SAMPLE TURNAROUND TIME:

Requested Turnaround Time (CIRCLE ONE)*
Priority Charges Apply to Rush Turn Around Times
RUSH: Same Day 24 Hr 48 Hr 72 Hr
STANDARD: Standard TAT **(5 to 10 Working Days)
Other

* Availability of Same Day/24/48/72 Hr TAT Varies Based Upon Test Method Requirements.
**Standard TAT Varies According to Analyses.

CONTACT PERSON: Tony Marino

SAMPLED BY (Circle One): (Client) Assoc. Lab Personnel

PHONE #: ( )

FAX #: ( )

SAMPLE CONDITION INFO - *FOR LAB USE ONLY:*
Samples Intact: Yes____ No____
Sample Seals Intact: Yes____ No____ N/A____
Cooler Seals Intact: Yes____ No____ N/A____

	SAMPLE ID	SAMPLE OR LOCATION DESCRIPTION	DATE	TIME	MATRIX (See Codes Below)	# OF CONTAINERS	TEST REQUIRED
1	SG15-0.5	LBGLC	11/13/07	1330	S	1	CAM 17, OCP(8081A), PCBs, SVOCs
2	-5			1335			
3	-10			1340			
4	SG2-0.5			1400			
5	-5			1400			
6	-10			1405			
7	SG3-0.5			1420			
8	-5			1420			
9	-10			1425			
10	-10-Dup			1425			

MATRIX: GW=Ground Water DW=Drinking Water WW=Waste Water SW=Storm Water S=Solid/Soil A=Air L=Liquid F=Food (Use the codes shown here to identify the matrix above)

Relinquished by: (Print AND Sign)*** Darren Burgett	Received By: (Print AND Sign)	Date/Time: 11/13/07 1505
Relinquished by: (Print AND Sign)***	Received By: (Print AND Sign)	Date/Time: 11/13/07 16:50
Relinquished by: (Print AND Sign)***	Received by Lab for Analysis: (Print AND Sign)	Date/Time

Special Instructions: See pg 1

***By signing this Chain of Custody you are authorizing the analyses shown above. Darren P. Burgett (Print AND Sign)

COC DISTRIBUTION: White with report Yellow to AL. Pink to Client's Courier.

APPENDIX O

Response to DTSC Comments – LFR Letter Dated October 10, 2008

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

October 10, 2008 002-10231-05

Mr. Greg Holmes
Unit Chief
Southern California Cleanup Operations, Cypress Branch
California Department of Toxic Substances Control (DTSC)
5796 Corporate Avenue
Cypress, California 90630

Subject: Response to Department of Toxic Substances Control's Comments dated April 23, 2008 and Request for Remedial Investigation Approval to Commence Work on a Health Risk Assessment and Feasibility Study for the Former Oil Operators North Site, Long Beach, California

Dear Mr. Holmes:

On behalf of CRG Properties, LFR submits this letter to facilitate remedial consideration of the subject Site. As we discussed in our September 10, 2008 telephone conversation with Tony Marino and Dave Murchison, LFR Inc. (LFR) is writing this letter to summarize the understandings reached to further progress on the Remedial Investigation (RI) and Feasibility Study (FS) for the Former Oil Operators North Site in Long Beach, California ("the Site"). Based on our conversation, we hope to gain the Department of Toxic Substances Control's (DTSC) concurrence that sufficient characterization has been completed on the Site to conduct a Human Health Risk Assessment (HHRA) and FS for the subject property. The final RI will integrate DTSC comments and responses contained herein and provided previously, as well as any additional data generated through the on-going monitoring, proposed groundwater treatability studies, and the HHRA, as requested by DTSC, with submission of this document at the completion of the HHRA and groundwater treatability study.

In addition to the original RI dated March 4, 2008, in partial response to DTSC's April 23, 2008 RI comments, LFR submitted a July 9, 2008 Summary of Groundwater Conditions and met with yourself and David Backarowski of the Regional Water Quality Control Board (RWQCB) on July 23, 2008 to discuss groundwater issues. This letter summarizes understandings reached in those discussions, and directs the focus of the FS within the overall context of the DTSC's April 23, 2008 comments on the RI.

DTSC's comments are presented below, followed by LFR's responses.

714.444.0111 m
714.444.0117 f
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324
Offices Nationwide
www.lfr.com

LFR

DTSC Human and Ecological Risk Division (HERD) Comments dated April 23, 2008

1. *The method detection limits for water sample analyses by Sun Star (electronic file T701575 CRG rev-02) for antimony, arsenic, thallium, vinyl chloride exceed the MCLs. HERD also notes that the reporting limits for analysis of ground water samples (electronic file gw) exceed the MCLs for most metals. The RI states that while ground water is not currently being used primarily due to high salinity and total dissolved solids, the Regional Water Quality Control Board has designated the ground water for beneficial uses.*

LFR Response: Groundwater sampling will continue in the future, and will use methods to attain MCLs or lower for detection limits.

2. *HERD had recommended that if feasible, background soil samples be collected from the same parent materials as found on the site and analyzed for concentrations of metals to compare to on site concentrations, The revised RI indicates that 10 soil samples were collected and analyzed for metals to establish site specific background concentrations. The revised RI does not include tables or figures showing the sample results and sample locations. HERD recommends that tables and figures be included.*

LFR Response: The requested tables and figures will be included in the Final RI and HHRA Work Plan. Please note that Dave Murchison's opinion concurred that Dooley's Hardware Mart soils data provided representative background soil data to evaluate metals (see 9. below).

3. *Risk Assessment Work Plan recommendations*

LFR will incorporate DTSC's recommendations for implementation of a HHRA into the requested work plan and into the HHRA.

DTSC's Geologic/Hydrogeologic Response Comments dated April 23, 2008

1. *GSU is concerned that the vertical and lateral extent of petroleum hydrocarbons, arsenic, lead, naphthalene, and 2-methylnaphthalene are not characterized in the vicinity of boring B-7/B7A in the northwestern part of the site. Concentrations of these analytes are substantially above probable ARARs from 25 to 50 feet bgs, and the extent of these contaminants is not defined by the available data. The contractor should propose additional soil matrix sampling to find the extent of these contaminants in this area of the site.*

LFR Response: LFR and DTSC discussed this comment, and agreed that further characterization of the sludge materials would likely not provide information of value, given that the Site will likely be capped and the nature of the sludge. Sludge materials are largely heterogeneous, making

additional characterization of limited value. Subsequent submittals to DTSC will consider the nature of the sludge with assumptions that include the inherent uncertainty of the sludge characterization.

2. *GSU is concerned that waste is in contact with groundwater at the site, and will continue to degrade groundwater for the foreseeable future. The contractor should propose to address this condition.*

LFR Response: LFR, DTSC, and the RWQCB discussed the nature of the sludge, the regional water quality degradation, the nature of degradation from past Site operations, and the objective to minimize future degradation. LFR also included additional regional groundwater information in the July 9, 2008 submittal which demonstrated the regional complexity of water quality. Preliminary discussions indicate general agreement that limited degradation may be occurring periodically, while options to eliminate all degradation appear limited. Within the overall context of regionally degraded water quality, and the remedial limitations posed by the Site, control of future groundwater degradation will be considered in the FS.

Ongoing monitoring will allow observation of water quality, and should significant future degradation be observed, CRG appreciated that DTSC could elect to have additional evaluation and mitigation implemented to address associated water quality concerns.

3. *GSU concurs that methane mitigation will probably be required at the site.*

LFR Response: Methane mitigation will be incorporated into the FS.

4. *GSU does not concur that regional groundwater degradation can account for the groundwater contamination at the site. There is clear evidence of onsite releases of arsenic, barium, mercury, and total dissolved solids. There is, in addition, a credible threat to groundwater from TPH, VOCs, and SVOCs originating at the site. The contractor should include these analytes as contaminants of concern at the site.*

LFR Response: LFR, DTSC, and the RWQCB discussed the nature of the sludge, the regional water quality degradation, the nature of degradation from past Site operation, and the objective to minimize any future degradation. LFR also included additional regional groundwater quality information in the July 9, 2008 submittal. Based on preliminary discussions, there is general agreement that degradation appears to be occurring periodically, while options to eliminate all degradation appear limited given the regionally degraded water quality; however, control of groundwater degradation will be considered in the FS. In addition, ongoing groundwater monitoring will serve to facilitate recognition of when and if groundwater quality degrades significantly further, and allow consideration of additional abatement measures, as appropriate. Lastly, the FS will include an evaluation and/or treatability study of remedial measures including, but not limited to:

- Capping of the Site to minimize infiltration and associated leaching and

- Potential application of potentially applicable chemical injection reagents which could affect groundwater chemistry and minimize future Site releases.

5. *GSU does not concur that increased TDS at the site is likely to be a result of seawater intrusion. The site was used to handle brine, which is a far more likely source of the TDS. The degradation of groundwater by TDS is a concern at the site.*

LFR Response: LFR and DTSC discussed the interpretation of the historic saline and other releases at the Site as a result of the on-site oil decanting operation. It was agreed that options to eliminate all future releases are limited, but still need evaluation, with full excavation of the affected materials highly problematic as well as costly. It was also agreed that the presumed remedy of capping the Site to limit future infiltration would likely minimize future leaching of salts and other compounds of concern. Given the regional salt water degradation from other sources, the parties agreed that the presumptive capping remedy would be expected to significantly diminish future Site impacts to water quality; therefore, while other remedies should still be considered, capping appears reasonable and appropriate for the overall Site condition, and will be considered more fully in the FS. Lastly, given the proposed remedy, the California Environmental Protection Agency (Cal-EPA) agreed to not pursue additional enforcement of historic discharges, with abatement of any current releases the objective moving forward.

6. *GSU is concerned that the predominance of fine-grained organic-rich soils and high methane concentrations at the site may have masked the detection of VOCs in the soil gas survey of the site. See next comment.*

LFR Response: LFR believes that the dominant waste product, petroleum, would not be expected to contain high levels of VOCs, and because of the age of the discharge, that VOCs would be expected to have degraded to low levels. While this is in itself non-definitive, given the nature of any potential threat, as well as the presumptive capping remedy with vapor mitigation, risks that may be present would essentially be mitigated.

7. *GSU is concerned that soil matrix sampling found VOCs in shallow soil at boring B3, 10 feet bgs. The sample contained a variety of gasoline-range VOCs including benzene, ethylbenzene, toluene, xylenes, and trimethylbenzenes. In addition, field photoionization detector readings were very high, above 1000 ppm VOCs. GSU defers to HERD on matters of risk, but points out that the sampling performed to date may be under-estimating the actual concentrations of VOCs present in the subsurface.*

LFR Response: LFR believes that the dominant waste product, petroleum, would not be expected to contain high levels of VOCs, and because of the age of the discharge, that VOCs would be

expected to have degraded to low levels. While limited pockes of sludge may contain VOCs, these would be attenuated into the petroleum matrix. While this is in itself non-definitive, given the nature of any potential threat, as well as the presumptive capping remedy with vapor mitigation, any risks that may be present would essentially be mitigated.

8. *GSU points out that the water sample taken at MW-3 in February 2008, downgradient of the former main sumps, contained 29 µg/L of cadmium. The MCL for cadmium is 5 µg/L. The contractor should discuss this observation.*

LFR Response: The presumptive remedy would minimize future infiltration and any future leaching, which would in turn minimize and control future cadmium and other metal releases.

9. *GSU concurs with the decision to use soil analysis from the former Dooley's Hardware Mart site to provide background metal concentration data.*

LFR Response: With DTSC's concurrence, LFR will employ soil data from the former Dooley's Hardware Mart site in the Final RI and HRA for the Former Oil Operators North Site.

LFR hopes that our responses to DTSC's comments on the RI for the Site are sufficient to gain DTSC's concurrence that adequate characterization has been completed to conduct a HHRA and FS for the Site.

If you have any further questions, please contact me at 714-444-0111.

Sincerely,



Charles E. Robinson, P.E.
Vice President
California Professional Engineer #C035368

cc: Steve Sukut

APPENDIX P

Response to LFR Letter –
DTSC Letter Dated December 18, 2008

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

December 18, 2008

Mr. Charles Robinson
LFR Environmental Management and Consulting Engineering
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324

RESPONSE TO LFR LETTER DATED OCTOBER 10, 2008 FOR FORMER OIL OPERATORS NORTH SITE (AKA LONG BEACH INDUSTRIAL PARK), 3701 PACIFIC PLACE, LONG BEACH, LOS ANGELES COUNTY, CALIFORNIA

Dear Mr. Robinson:

The Department of Toxic Substances Control (DTSC) has reviewed your letter dated October 10, 2008 in response to DTSC comments dated April 23, 2008 and Request for Remedial Investigation Approval to Commence Work on a Health Risk Assessment and Feasibility Study for the above site.

DTSC accepts the responses presented in your letter. Please submit a final version of the RI report within sixty (60) days, and a draft Feasibility Study and Health Risk Assessment (HRA) within ninety (90) days. If you would like to discuss the HRA approach before starting work on it, please let me know.

If you have any questions, please contact me at (714) 484-5461.

Sincerely,

Greg Holmes
Unit Chief
Brownfields and Environmental Restoration Program - Cypress Office

cc: See next page.

cc: Mr. David Murchison, P.G.
Engineering Geologist
Site Mitigation - Cypress
Geological Services Unit

Ms. Fran Collier, M.S.
Associate Toxicologist
Human and Ecological Risk Division

Mr. David Bacharowski
Assistant Executive Officer
Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013

APPENDIX B

Health and Safety Plan (HASP)

Health and Safety Plan

3701 North Pacific Place
Long Beach, CA 90807

October 11, 2019

Prepared for:

Artesia Acquisition Company, LLC

Prepared by:

Roux Associates, Inc.
5150 East Pacific Coast Highway, Suite 450
Long Beach, California 90804

Environmental Consulting
& Management
+1.800.322.ROUX
rouxinc.com

3370.0001L.104/HSP

Table of Contents

Site-Specific Emergency Information 1
Emergency Phone Numbers 1

1. Introduction 5
1.1 Roles and Responsibilities 5

2. Background 7
2.1 Site Description 7

3. Scope of Work 8

4. Site Control 9
4.1 Site Map 9
4.2 Site Access 9
4.3 Buddy System 9
4.4 Site Communications 9
4.5 Site Work Zones 9

5. Job Hazard Evaluation 11
5.1 Employee Notification of Hazards and Overall Site Information Program 12

6. Emergency Response Plan 13
6.1 Emergency Response 13
6.2 Emergency Alerting and Evacuation 13
6.3 Emergency Medical Treatment and First Aid 13
6.4 Adverse Weather Conditions 15
6.5 Electrical Storm Guidelines 15

7. Safety Procedures 16
7.1 Training 16
7.2 Site-Specific Safety Briefings for Visitors 16
7.3 HASP Information and Site-Specific Briefings for Workers 16
7.4 Medical Surveillance 17
7.4.1 Site Medical Surveillance Program 17
7.4.2 Medical Recordkeeping Procedures 17
7.4.3 Program Review 18
7.5 Personnel Protection 18
7.6 Monitoring 19
7.7 Tailgate Safety Meetings 19
7.8 Spill Containment 20
7.8.1 Initial Spill Notification and Response 20
7.8.2 Spill Evaluation and Response 20
7.9 Decontamination 20
7.9.1 Decontamination Procedures for Personnel and PPE 20
7.9.2 Decontamination Procedures for Equipment 21
7.9.3 Monitoring the Effectiveness of Decontamination Procedures 21
7.10 Confined Space Entry 22

Table of Contents (Continued)

7.11 Client and Site-Specific 22
7.12 Unusual or Significant Risks 22
7.13 Activity-Specific 23

8. Field Team Review 24

9. Approvals 25

Tables

1. Toxicological Properties of Hazardous Substances Present at the Site

Figures

1. Site Location Map
2. Site Plan

Appendices

A. Job Safety Analysis (JSA) Forms
B. Site-Specific Emergency Response Plan & Routes to Urgent Care and Emergency Medical Facilities
C. SDSs for Chemicals Used
D. Incident Investigation and Reporting Program
E. Subsurface Utility Clearance Management Program
F. Personal Protective Equipment Management Program
G. Injury and Illness Prevention Program

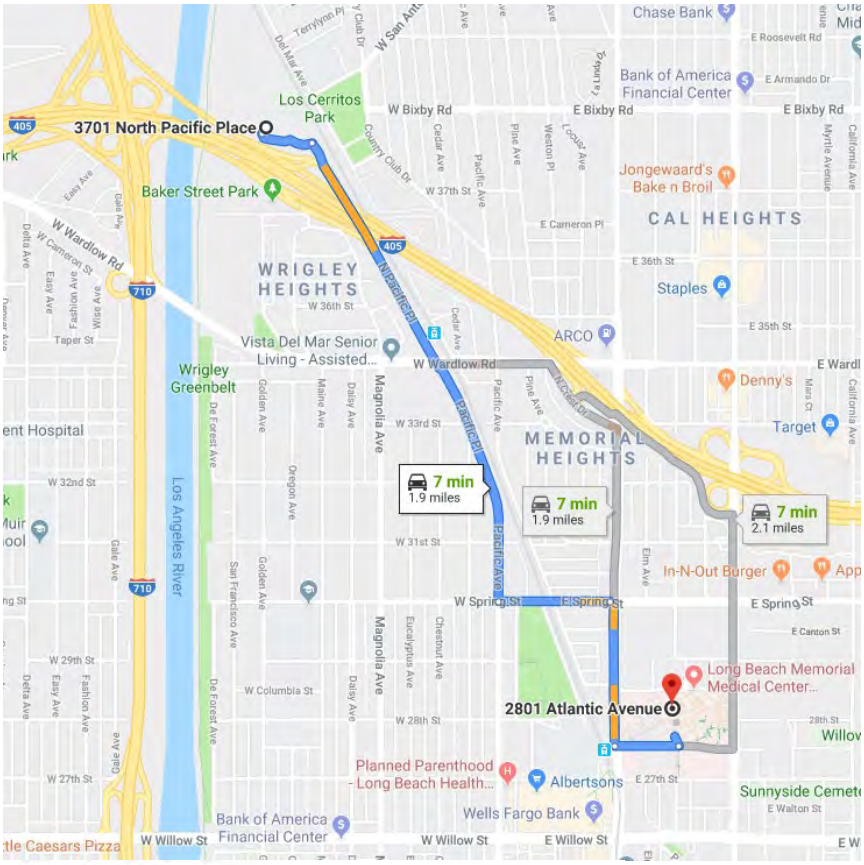
Site-Specific Emergency Information

Emergency Phone Numbers

Most emergency services can be obtained by calling **911**. Where 911 service is not available, use the telephone numbers provided in the below table. The following is a master emergency phone list for use by the project management personnel. A more condensed version of the emergency numbers listed below will be posted throughout project work areas. Emergencies encountered on the site will be responded to by a combination of off-site emergency services and site personnel.

Emergency Contact Information			
Site Personnel			
Title	Contact		Telephone
Project Manager (PM)	Andrea Berlinghof		Direct: (562) 446-8623 Mobile: (215) 350-4010
Site Health and Safety Officer (SHSO); Site Supervisor	Peter Shimer		Direct: (310) 879-4929 Mobile: (925) 818-6276
SHSO Alternate	Andrea Berlinghof		Direct: (562) 446-8623 Mobile: (215) 350-4010
Outside Assistance			
Agency	Contact	Telephone	Address/Location
Ambulance/EMS	Ambulnz	(877) 311-5555	1059 E. Bedmar Street, Carson, CA 90746
Police	Signal Hill Police Department	(562) 989-7200	2745 Walnut Avenue Signal Hill, CA 90755
Fire	Long Beach Fire Department No. 13	(562) 591-7631	2475 Adriatic Ave, Long Beach, CA 90810

Route to Hospital: Memorial Care Long Beach Medical Center; 2801 Atlantic Ave, Long Beach, CA 90806



3701 N Pacific Pl
Long Beach, CA 90806

Head south on N Pacific Pl toward Amebco Rd
Restricted usage road
0.1 mi

Turn right to stay on N Pacific Pl
1.1 mi

Turn left onto W Spring St
0.2 mi

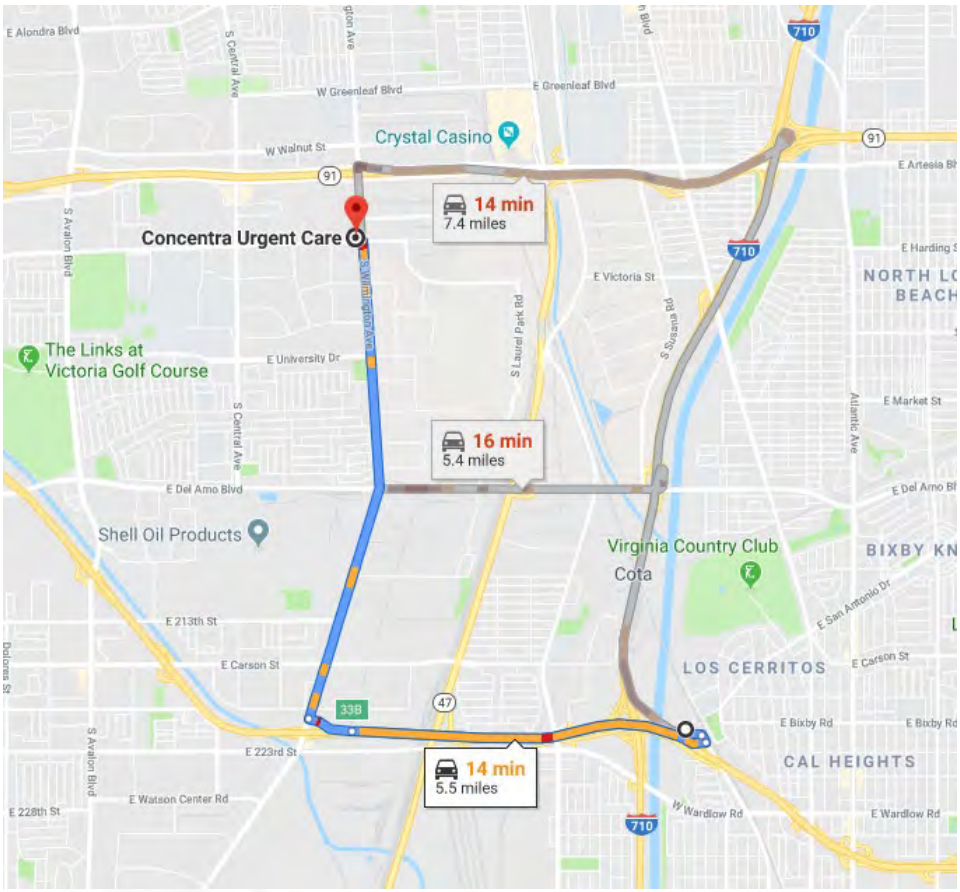
Turn right onto Long Beach Blvd
0.8 mi

Turn left onto Memorial Medical Center
0.1 mi

Turn left at N Pasadena Ave
112 ft

2801 Atlantic Ave
Long Beach, CA 90806

Route to Urgent Care Facility: Concentra Urgent Care, Compton – Rancho Dominguez; 3701 N Pacific Pl, Long Beach, CA 90806



3701 N Pacific Pl
Long Beach, CA 90806

Take I-405 N and S Wilmington Ave to your destination in Carson

12 min (5.5 mi)

Turn right

Destination will be on the right

34 s (59 ft)

Concentra Urgent Care
1499 S Wilmington Ave, Compton, CA 90220

Emergency Response Site Map



1. Introduction

This site-specific Health and Safety Plan (HASP) has been prepared by Roux Associates, Inc. (Roux) for use during the Phase II Supplemental Investigation at the approximately 14-acre parcel ("the Site"), located at 3701 North Pacific Place, Long Beach, California 90806 (see Figure 1). These activities fall within the scope of operations covered by the Occupational Safety and Health Administration (OSHA) standards promulgated at 29 CFR 1910.120 and 29 CFR 1926.65, both commonly referred to as the Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard. In accordance with the HAZWOPER Standard, this site-specific HASP was prepared to address the safety and health hazards associated with the soil vapor probe installation and soil vapor, soil, and groundwater sampling activities being performed at the Site by Roux and to provide requirements and procedures for the protection of Roux employees, subcontractor personnel, government oversight personnel, Site personnel, and the general public. It also addresses client- and Site-specific requirements for health and safety.

Implementation of this HASP is the joint responsibilities of the project manager, the site health and safety officer, and all field staff, with assistance from the project principal and the office health and safety manager. The project manager for this project is Andrea Berlinghof; the site health and safety officer and the site supervisor is Peter Shimer.

1.1 Roles and Responsibilities

Overall Roles and Responsibilities (R&Rs) of Roux personnel are provided in Roux's Policies and Procedures Manual. Only those R&Rs specific to HASP requirements are listed below.

Project Manager (PM)
The PM has responsibility and authority to direct all work operations. The PM coordinates safety and health functions with the Site Health and Safety Officer (SHSO), has the authority to oversee and monitor the performance of the SHSO, and bears ultimate responsibility for the proper implementation of this HASP. The specific duties of the PM are:

- preparing and coordinating the site work plan;
- providing site supervisor(s) with work assignments and overseeing their performance; Coordinating safety and health efforts with the SSHO;
- ensuring effective emergency response through coordination with the Emergency Response Coordinator (ERC);
- serving as primary site liaison with public agencies and officials and site contractors.

Site Health and Safety Officer (SHSO)
The SHSO has full responsibility and authority to develop and implement this HASP and to verify compliance. The SHSO reports to the Project Manager. The SHSO is on site or readily accessible to the site during all work operations and has the authority to halt site work if unsafe conditions are detected. The specific responsibilities of the SHSO include:

- managing the safety and health functions on this site;
- serving as the site's point of contact for safety and health matters;
- ensuring site monitoring, worker training, and effective selection and use of PPE;

- assessing site conditions for unsafe acts and conditions and providing corrective action;
- assisting the preparation and review of this HASP;
- maintaining effective safety and health records as described in this HASP;
- coordinating with the Site Supervisor(s) and others as necessary for safety and health efforts.

Site Supervisor

The Site Supervisor is responsible for field operations and reports to the Project Manager (PM). The Site Supervisor ensures the implementation of the HASP requirements and procedures in the field. The specific responsibilities of the Site Supervisor include:

- executing the work plan and schedule as detailed by the PM;
- coordination with the SHSO on safety and health; and
- ensuring site work compliance with the requirements of this HASP.

Site Workers

Site workers are responsible for complying with this HASP, using the proper PPE, reporting unsafe acts and conditions, and following the work and safety and health instructions of the Project Manager (PM), SHSO, and Site Supervisor.

2. Background

Relevant background information is provided below, including a general description of the Site; a brief review of the Site's history with respect to hazardous material use, handling, and/or storage; and a review of known and potential releases of hazardous substances at the Site.

2.1 Site Description

The Site is located at 3701 North Pacific Place in the city of Long Beach. The Site is bordered by the Pacific Electric railroad to the north and northeast, by the 405 freeway to the south, and by the Los Angeles River to the west. The Site last operated as a golf driving range and is currently vacant and undeveloped.

The Site was formerly a small portion of a co-op that received oil production waste materials, including oil brines and drilling mud, from surrounding oil well drilling operations. The waste material was spread into infiltration and evaporation ponds that included the Site and extended a significant distance off-Site to the south. The co-op ceased operations in the late 1950's and early 1960's. According to historical reports for the Site, an estimated 390,000 to 490,000 cubic yards of potentially impacted sump materials/sump fills may be present on-Site from past sump ponds operations.

In the 1960's, the former sump ponds were bisected by the construction of Interstate 405; the Site then became known as the Oil Operators, Inc. North Site (OOI North). According to historical environmental reports prepared for the Site, limited remediation reportedly occurred in the 1970's and 1980's and a "10-foot cap" that reportedly came from the Los Angeles River was placed over the on-site sump materials. Site assessment was conducted by the owners between approximately 2005 and 2008 and overseen by the DTSC through a voluntary agreement. In 2009, the DTSC approved a Final Remedial Investigation Report (LFR, May 27, 2009; 2009 RI Report) and directed the owner to perform a Human Health Risk Assessment (HHRA) to allow for a feasibility analysis and selection of remedial alternative(s). The HHRA was never completed; additional work has not occurred at the Site since that time.

Based on the 2009 RI Report, primary chemicals of potential concern (COPCs) include heavy-range petroleum hydrocarbons, methane, and possibly metals. Sludge material is reportedly confined to the central and northern portions of the Site at depths between 10 to 50 feet below ground surface (bgs). Geotechnical properties and suitability of sludge materials for construction are unknown at this time. Fill material reportedly exists over sludge (maximum of 10 foot thickness). However, no data was found on the origin and environmental condition of these materials. Also, there is no clear confirmation of thickness and coverage of these materials at the Site.

3. Scope of Work

The objective of the Phase II investigation is to verify current environmental conditions at the Site in soil, soil vapor, and groundwater. In general, the following work will be performed:

- Geophysical survey and utility clearance for all tentative sampling locations;
- Advance up to 35 soil borings to the depth of the bottom of the fill soils
- Collect soil samples are regular intervals and submit to a California state-certified fixed laboratory to be analyzed for:
    - Title 22 Metals via United States Environmental Protection Agency (USEPA) Method 6000/7000;
    - Total Petroleum Hydrocarbons (TPH) for gasoline, oil, and diesel range organics via USEPA Method 8015B;
    - Volatile Organic Compounds (VOCs) by USEPA Method 8260B;
    - Semi-VOCs (SVOCs) by USEPA Method 8270C;
    - Polychlorinated biphenyls (PCBs) by USEPA Method 8082; and
    - Organochlorine pesticides (OCPs) via USEPA Method 8081A.
- Install 15 temporary dual-nested soil vapor probes at 5 and 15 feet bgs
- Collect soil vapor samples from the fill soils and submit to a California state-accredited mobile laboratory to be analyzed for:
    - VOCs via USEPA Method 8260B; and
    - Methane via USEPA Method 8015M.
- Inspect conditions of the four (4) existing groundwater wells.
- Collect groundwater samples from each well, if groundwater wells are in usable condition, and submit to a California state-certified fixed laboratory to be analyzed for:
    - VOCs via USEPA Method 8260B;
    - SVOCs via USEPA Method 8270C;
    - Title 22 Metals via USEPA Method 6000/7000;
    - TPH for gasoline, oil, and diesel range organics via USEPA Method 8015B; and
    - Cation-Anion balance via various methods.

There are no non-routine activities that may be performed by Roux personnel.

If there are any changes with the scope, a revision of the HASP will be required to address any new hazards.

4. Site Control

This site control program is designed to reduce the spread of hazardous substances from contaminated areas to clean areas, to identify and isolate contaminated areas of the site, to facilitate emergency evacuation and medical care, to prevent unauthorized entry to the site, and to deter vandalism and theft.

4.1 Site Map

A map of this site, showing site boundaries, designated work zones, and points of entry and exit is provided in Figure 2.

4.2 Site Access

Access to the site is restricted to reduce the potential for exposure to its safety and health hazards. During hours of site operation, site entry and exit is authorized only at the points identified in Figure 2.

4.3 Buddy System

This section is not applicable with this scope of work.

While working in the Exclusion Zone, site workers use the buddy system. The buddy system means that personnel work in pairs and stay in close visual contact to be able to observe one another and summon rapid assistance in case of an emergency. The responsibilities of workers using the buddy system include:

- Remaining in close visual contact with partner,
- Providing partner with assistance as needed or requested,
- Observing partner for signs of heat stress or other difficulties,
- Periodically checking the integrity of partner's PPE, and
- Notifying the site manager or other site personnel if emergency assistance is needed.

4.4 Site Communications

The following communication equipment is used to support on-site communication: visual hand signals, verbal cues, and cell phones.

A current list of emergency contact numbers is posted in the beginning of this HASP.

4.5 Site Work Zones

This section is not applicable with this scope of work.

This site is divided into three (3) major zones, described below. These zones are characterized by presence or absence of biological and chemical hazards and the activities performed within them. Zone boundaries are clearly marked at all times and the flow of personnel among the zones is controlled. The site is monitored for changing conditions that may warrant adjustment of zone boundaries. Zone boundaries are adjusted as necessary to protect personnel and clean areas. Whenever boundaries are adjusted, zone markings are also changed and workers are immediately notified of the change.

Exclusion Zone

The area where contamination exists is the Exclusion Zone (EZ). All areas where excavation and handling of contaminated materials take place are considered the EZ. This zone will be clearly delineated by orange high visibility fencing. Safety tape may be used as a secondary delineation within the EZ. The zone delineation markings may be opened in areas for varying lengths of time to accommodate equipment operation or specific construction activities. The SHSO may establish more than one EZ where different levels of protection may be employed or where different hazards exist. Personnel are not allowed in the EZ without:

- A buddy (co-worker)
- Required minimum level PPE
- Medical Authorization
- Training certification
- Requirement to be in the zone

Contamination Reduction Zone

A Contamination Reduction Zone (CRZ) is established between the exclusion zone and the support zone. The CRZ contains the Contamination Reduction Corridor (CRC) and provides an area for decontamination of personnel and equipment. The CRZ will be used for general Site entry and egress in addition to access for heavy equipment and emergency support services. Personnel are not allowed in the CRZ without:

- A buddy (co-worker)
- Appropriate PPE
- Medical authorization
- Training certification
- Requirement to be in the zone

Support Zone

The Support Zone (SZ) is an uncontaminated area that will be the field support area for the Site operations. Appropriate sanitary facilities and safety equipment will be located in this zone. Potentially contaminated personnel or materials are not allowed in this zone. The only exception will be appropriately packaged/decontaminated and labeled samples.

5. Job Hazard Evaluation

Roux's work at the Site is expected to entail a variety of physical, chemical, and biological hazards, all of which must be sufficiently managed to allow the work to be performed safely. Some of the hazards are Site-specific, i.e., they are associated with the nature, physical characteristics, and/or routine operation of the Site itself, while others are activity-specific, i.e., they are associated with (or arise from) the particular activity being performed. The various hazards can be grouped into the following categories:

Caught/Crushed – the potential to become caught in, under, between, or by an object or parts of an object, such as equipment with parts that open and close or move up and down ("pinch points") or equipment that rotates, and the accompanying potential to have body parts cut, mangled, or crushed thereby.

Contact – the potential to be struck by or against moving or stationary objects that can cause physical injury, such as heavy machinery, overhead piping, moving vehicles, falling objects, and equipment (including tools and hand-held equipment) or infrastructure with the ability to cut or impale.

Energy Sources – the potential for bodily harm associated with energy sources, most notably electricity, but also including latent energy sources such as compressed air and equipment under tension (which when released could cause injurious contact or a fall).

Ergonomics – the potential for musculoskeletal injury associated with lifting/carrying, pushing/pulling, bending, reaching, and other physical activity attributable to poor body position/mechanics, repetitive motion, and/or vibration.

Exposure – the potential for injury/illness due to physical, chemical, or biological exposures in the work environment, including but not limited to temperature extremes, solar radiation, and noise (physical), chemical splashes and hazardous atmospheres (chemical), and animal/insect bites and poisonous plants (biological).

Falls – the potential to slip or trip and thus fall or drop a load, resulting in bodily injury to oneself or others

The foregoing is intended to provide Roux employees with a general awareness of the hazards involved with Site work. A more detailed review of the potential hazards associated with each specific activity planned for the Site (or ongoing activity, as the case may be) is provided in the activity-specific Job Safety Analysis (JSA) forms in Appendix A. As can be seen in the JSA forms, the hazards are identified by category per the above, and specific measures designed to mitigate/manage those hazards are also identified. In preparing the JSA forms, all categories of hazards were considered, and all anticipated potential hazards were identified to the extent possible based on the experience of the personnel preparing and reviewing the JSA forms. However, there is always the possibility for an unanticipated hazard to arise, potentially as condition change over the course of the workday. Roux personnel must maintain a continual awareness of potential hazards in the work zone, regardless of whether the hazard is identified in the JSA form. Particular attention should be paid to hazards associated with exposure to hazardous substances (see Table 1 for a listing of the hazardous substances most likely to be encountered in environmental media at the Site) and to Site personnel being located "in the line of fire" with respect to moving equipment, pinch points, and latent energy, e.g., being located or having body parts located within the swing radius of an excavator, between two sections of pipe being connected, below a piece of suspended equipment, or adjacent to a compressed air line.

5.1 Employee Notification of Hazards and Overall Site Information Program

The information in the JSAs and safety data sheets is made available to all employees and subcontractors who could be affected by it prior to the time they begin their work activities. Modifications to JSAs are communicated during routine pre-work briefings.

6. Emergency Response Plan

This emergency response plan details actions to be taken in the event of site emergencies. The PM and SHSO is responsible for the implementation of emergency response procedures onsite. The SHSO/PM provides specific direction for emergency action based upon information available regarding the incident and response capabilities and initiates emergency procedures and notification of appropriate authorities. In the event of an emergency, site personnel are evacuated and do not participate in emergency response activities, response is facilitated through external emergency services.

6.1 Emergency Response

The SHSO, after investigating the incident and relevant information, shall determine the level of response required for containment, rescue and medical care. Limited on-site emergency response activities could occur therefore the SHSO is responsible for notifying external emergency response agencies. The SHSO provides relevant information to the responding organizations, including but not limited to the hazards associated with the emergency incident, potential containment problems, and missing site personnel.

6.2 Emergency Alerting and Evacuation

If evacuation notice is given, site workers leave the worksite, if possible, by way of the nearest exit. Appropriate primary and alternate evacuation routes and assembly areas have been identified and are shown on the Emergency Response Site Map Figure 2. The routes and assembly area will be determined by conditions at the time of the evacuation based on wind direction, the location of the hazard source, and other factors as determined by SHSO/PM.

Personnel exiting the site gather at a designated assembly point. To determine that everyone has successfully exited the site, personnel will be accounted for at the assembly site. If any worker cannot be accounted for, notification is given to so that appropriate action can be initiated. Subcontractors on this site have coordinated their emergency response plans to ensure that these plans are compatible and potential emergencies are recognized, alarm systems are clearly understood, and evacuation routes are accessible to all personnel relying upon them.

6.3 Emergency Medical Treatment and First Aid

In the event of a work-related injury or illness, employees are required to follow procedures outlined below. All work-place injury and illness situations require Roux's Project and Corporate Management Team to be notified when an injury / illness incident occurs, and communication with the contracted Occupational Health Care Management Provider, AllOne Health, is initiated. The Injury/Illness Notification Flowchart is provided below and within Roux's Incident Investigation and Reporting program included as Appendix D.

If onsite personnel require any medical treatment, the following steps will be taken:

a. Notify Roux's Project and Corporate Management Team for any work-related injury and/or illness occurrence, and communicate with the contracted Occupational Health Care Management Provider, AllOne Health, immediately following the notifications provided above.

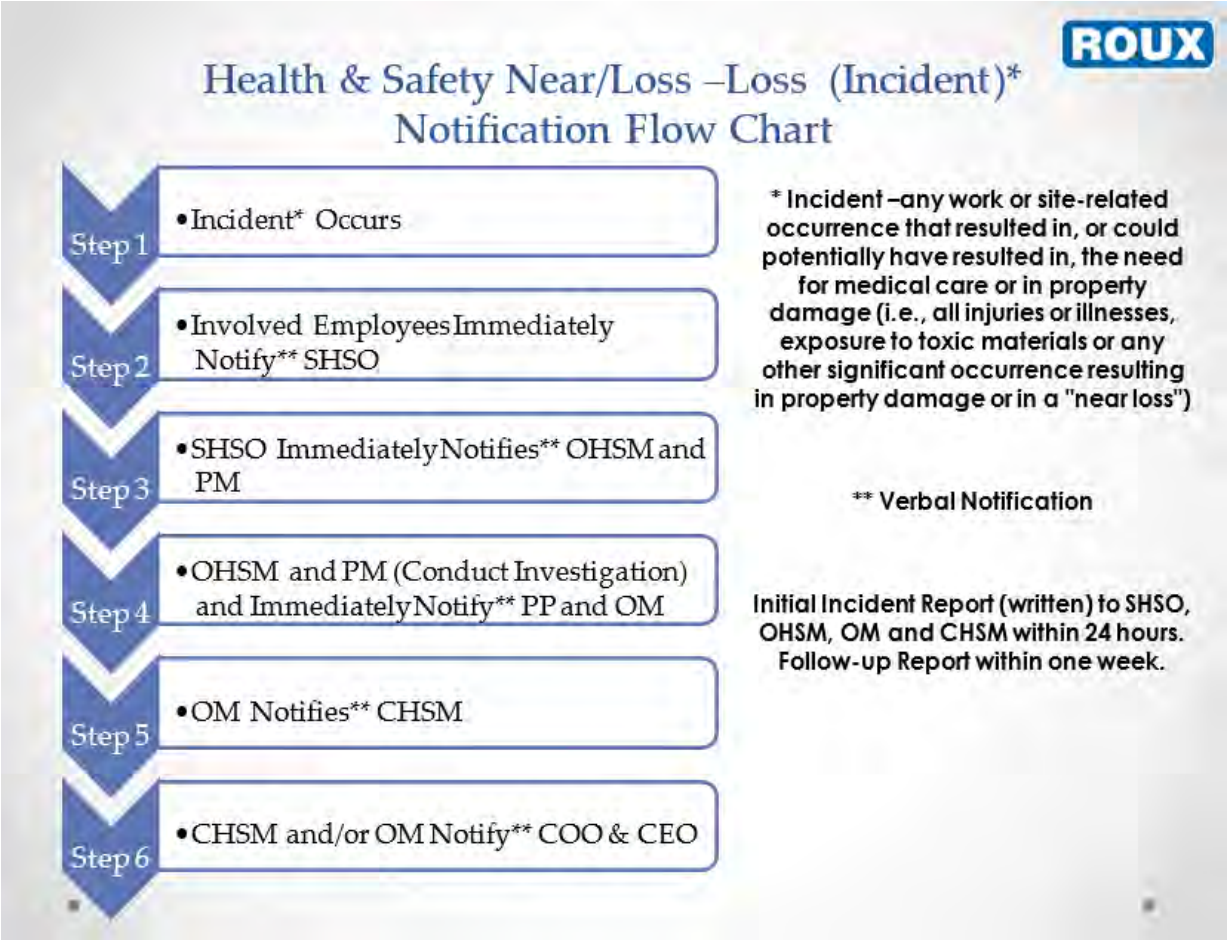
b. Based on discussions with the Project Team, Corporate Management and the AOH evaluation, if medical attention beyond onsite First Aid is warranted, transport the injured / ill person (IP) to the

Urgent Care Center, or notify the Fire Department or Ambulance Emergency service and request an ambulance or transport the victim to the hospital, and continue communications with Corporate Management Team. An Urgent Care/Hospital Route map with location to Memorial Care Long Beach Medical Center/Concentra Urgent Care – Compton Rancho Dominguez is included as Appendix B.

c. Decontaminate to the extent possible prior to administration of first aid or movement to medical or emergency facilities.

d. First aid medical support will be provided by onsite personnel trained and certified in First Aid, Cardio Pulmonary Resuscitation (CPR), Automatic External Defibrillation (AED), and Blood-Borne Pathogens (BBP) Awareness, until relieved by emergency medical services (EMS).

e. The SHSO and Project Manager will perform a Loss Investigation (LI) and the Project Team will complete the final Loss Report. If a Roux employee is involved in a vehicular incident, the employee must also complete the Acord Automobile Loss Notice.



6.4 Adverse Weather Conditions

In the event of adverse weather conditions, the SHSO or project principal will determine if work can continue without sacrificing the health and safety of all field workers. Some of the items to be considered prior to determining if work should continue are:

- Potential for heat stress and heat-related injuries.
- Potential for cold stress and cold-related injuries.
- Treacherous weather-related conditions.
- Limited visibility.
- Electrical storm potential.

Site activities will be limited to daylight hours and acceptable weather conditions. Inclement working conditions include heavy rain, fog, high winds, and lightning. Observe daily weather reports and evacuate if necessary in case of inclement weather conditions.

6.5 Electrical Storm Guidelines

In the event that lightning and/or thunder are observed while working onsite, all onsite activities shall stop and personnel shall seek proper shelter (e.g., substantial building, enclosed vehicle, etc.). Work shall not resume until the threat of lighting has subsided and no lightning or thunder has been observed for 30 minutes. If the possibility of lightning is forecast for the day, advise the onsite personnel on the risks and proper procedure at the pre-work safety briefing. Continuously monitor for changing weather conditions and allow enough time to properly stop work if lightning is forecast.

7. Safety Procedures

This section of the HASP presents the specific safety procedures to be implemented during Roux's activities at the Site in order to protect the health and safety of various on-site personnel. Minimum OSHA-mandated procedures are presented first, followed by client- and Site-specific procedures. Lastly, activity-specific procedures are discussed. These Site- and activity-specific procedures supplement the general safety procedures included in Roux's Corporate Health and Safety Manual, which also must be followed in their entirely.

7.1 Training

At a minimum, Site personnel who will perform work in areas where there exists the potential for toxic exposure will be health and safety-trained prior to performing work on site per OSHA 29 CFR 1910.120(e) and 29 CFR 1926.65(e). More specifically, all Roux, subcontractor, and other personnel engaged in sampling and remedial activities at the Site and who are exposed or potentially exposed to hazardous substances, health hazards, or safety hazards must have received at a minimum the 40 hour initial HAZWOPER training consistent with the requirements of 29CFR 1910.120(e)(3)(i) training and a minimum of 3 days' actual field experience under the direct supervision of a trained experienced supervisor, plus 8 hours of refresher training on an annual basis. Depending on tasks performed, less training may be permitted. Evidence of such training must be maintained at the Site at all times. Furthermore, all on-site management and supervisory personnel directly responsible for or who supervise the employees engaged in Site remedial operations, must have received an additional 8 hours of specialized training at the time of job assignment on topics including, but not limited to, the employer's safety and health program and the associated employee training program, personal protective equipment program, spill containment program, and health hazard monitoring procedure and techniques, plus 8 hours of refresher training on an annual basis.

Roux personnel training records are maintained in a corporate database with records available upon request from either the OHSM/SHSO/CHSM or Human Resources Department.

7.2 Site-Specific Safety Briefings for Visitors

A site-specific briefing is provided to all site visitors who enter this site beyond the site entry point. For visitors, the site-specific briefing provides information about site hazards, the site lay-out including work zones and places of refuge, the emergency alarm system and emergency evacuation procedures, and other pertinent safety and health requirements as appropriate.

7.3 HASP Information and Site-Specific Briefings for Workers

Site personnel review this HASP and are provided a site-specific tailgate briefing prior to the commencement of work to ensure that employees are familiar with this HASP and the information and requirements it contains as well as relevant JSAs. Additional briefings are provided as necessary to notify employees of any changes to this HASP as a result of information gathered during ongoing site characterization and analysis. Conditions for which we schedule additional briefings include, but are not limited to: changes in site conditions, changes in the work schedule/plan, newly discovered hazards, and incidents occurring during site work.

7.4 Medical Surveillance

The medical surveillance section of the Health and Safety Plan describes how worker health status is monitored at this site. Medical surveillance is used when there is the potential for worker exposure to hazardous substance at levels above OSHA permissible exposure limits or other published limits. The purpose of a medical surveillance program is to medically monitor worker health to ensure that personnel are not adversely affected by site hazards. The provisions for medical surveillance at this site are based on the site characterization and job hazard analysis found in Section 4 of this HASP and are consistent with OSHA requirements in 29 CFR 1910.120(f).

7.4.1 Site Medical Surveillance Program

Medical surveillance requirements are based on a worker's potential for exposure as determined by the site characterization and job hazard analysis documented in Section 4 and JSAs within Appendix A of this HASP and in compliance with the requirements of 29 CFR 1910.120(f)(2). Based on site information and use of direct reading instruments, limited use of respirators (less than 30 days per year), and the absence of an employee-staffed HAZMAT team, a limited medical surveillance program is required and implemented at this site. The medical surveillance program provides that:

1. Workers assigned to tasks requiring the use of respirators receive medical examinations in accordance with 29 CFR 1910.134(e) to ensure they are physically capable to perform the work and use the equipment, and

2. If a worker is injured, becomes ill, or develops signs or symptoms of possible over-exposure to hazardous substance or health hazards, medical examinations are provided to that worker as soon as possible after the occurrence and as required by the attending physician.

3. These medical examinations and procedures are performed by or under the supervision of a licensed physician and are provided to workers free of cost, without loss of pay, and at a reasonable time and place. In addition, the need to implement a more comprehensive medical surveillance program will be re-evaluated after any apparent over-exposure.

7.4.2 Medical Recordkeeping Procedures

Medical recordkeeping procedures are consistent with the requirements of 29 CFR 1910.1020 and are described in the company's overall safety and health program. A copy of that program is available at our Islandia, NY office.

The following items are maintained in worker medical records:

- Respirator fit test and selection
- Physician's medical opinion of fitness for duty (pre-placement, periodic, termination)
- Physician's medical opinion of fitness for respirator protection (pre-placement, periodic)
- Exposure monitoring results

7.4.3 Program Review

The medical program is reviewed to ensure its effectiveness. The Corporate Health and Safety Manager in coordination with the Human Resources Director is responsible for this review. At minimum, this review consists of:

- Review of accident and injury records and medical records to determine whether the causes of accidents and illness were promptly investigated and whether corrective measures were taken wherever possible,
- Evaluation of the appropriateness of required medical tests based on site exposures,
- Review of emergency treatment procedures and emergency contacts list to ensure they were site-specific, effective, and current.

7.5 Personnel Protection

Site safety and health hazards are eliminated or reduced to the greatest extent possible through engineering controls and work practices. Where hazards are still present, a combination of engineering controls, work practices and PPE are used to protect employees. Appropriate personal protective equipment (PPE) shall be worn by Site personnel when there is a potential exposure to chemical hazards or physical hazards (e.g., falling objects, flying particles, sharp edges, electricity and noise), as determined by the SHSO. The level of personal protection, type and kind of equipment selected will depend on the hazardous conditions and in some cases cost, availability, compatibility with other equipment, and performance. An accurate assessment of all these factors will be made before work can be safely executed.

Roux maintains a comprehensive written PPE program that addresses proper PPE selection, use, maintenance, storage, fit and inspection. PPE to be used at the Site will meet the appropriate American National Standards Institute (ANSI) standards and the following OSHA (General Industry) standards for minimum PPE requirements.

The minimum level of PPE for entry onto the Site is Level D. The following equipment shall be worn:

- Work uniform (long pants, sleeved shirt)
- Hard hat
- Steel or composite toe work boots
- Safety Glasses (must comply with one of the following ANSI/ISEA Z87.1-2010, ANSI Z87.1-2003, ANSI Z87.1-2003)
- Boot Covers (as needed)
- Hearing Protection (as needed)
- High visibility clothing (shirt/vest)
- Hand Protection (e.g., minimum cut resistance meeting ANSI 105-2000 Level 2)

Note that jewelry shall be removed or appropriately secured to prevent it from becoming caught in rotating equipment or unexpectedly snagged on a fixed object. (e.g., wrist watches bracelets, rings, chains and necklaces, open earrings). Do not wear loose clothing and all shoulder length hair should be tied back.

Site specific PPE ensembles and materials are identified within task specific JSAs located within **Appendix A**, and any upgrades or downgrades of the level of protection (i.e., not specified in the JSA) must be immediately communicated to all Roux personnel and subcontractors as applicable. PPE is used in accordance with manufacturer's recommendations.

7.6 Monitoring

An air monitoring program is important to the safety of on- and off-Site personnel. A preliminary survey, to establish background conditions in the immediate sampling area, may be made prior to the initiation of Site work including, but not limited to, monitoring wind direction and approximate temperature during all invasive site activities. This survey will be conducted with the appropriate air monitoring instrument(s) as warranted by the field activity. Once this survey has been complete, any change in the type of PPE will be determined.

Air monitoring may be performed to verify that the proper level of equipment is used and to determine if increased protection or work stoppage is required.

Monitoring equipment will be calibrated in accordance with applicable regulatory requirements and manufacturer specifications.

Below are monitoring action levels for Site-specific chemicals of concern. In the event that PID readings above the thresholds identified below are sustained for 5 minutes in the breathing zone, worker protection will require upgrading following notification to the OHSM and applicable parties (e.g., client, board of health, regulators, etc.).

OVM/Multi-gas Meter Action Levels

Action Levels for Respiratory Protection	
OVM Reading in Breathing Zone (ppm)	
<5	No Action
≥5 - <25	Level C
≥25	Cease Field Operations
Multi-gas Reading in Breathing Zone (%)	
LEL ≥2	Cease Field Operations
O_2 <19.5 or >21.5	Cease Field Operations

7.7 Tailgate Safety Meetings

A designated Site worker will provide daily safety briefings (e.g., tailgate meetings) including, but not limited to, the following scenarios:

- When new operations are to be conducted;
- Whenever changes in work practices must be implemented; and
- When new conditions are identified and/or information becomes available.

Daily safety briefings shall be recorded on the Roux Daily Tailgate Health and Safety Meeting Log/Daily Site Safety Checklist, and all completed forms will become a part of the project file.

7.8 Spill Containment

Spill containment equipment and procedures should, at a minimum, meet the requirements of the facility's Spill Prevention, Control and Countermeasure Plan, if applicable. Otherwise, spill containment equipment and procedures must be considered depending on the task including, but no limited to, chemical/product transfer points and handling.

7.8.1 Initial Spill Notification and Response

Any worker who discovers a hazardous substance spill will immediately notify Peter Shimer, P.G. The worker will, to his/her best ability, report the hazardous substance involved, the location of the spill, the estimated quantity of material spilled, the direction/flow of the spill material, related fire/explosion incidents, and any associated injuries without compromising their own safety.

7.8.2 Spill Evaluation and Response

Peter Shimer, P.G., is responsible for evaluating spills and determining the appropriate response. When this evaluation is being made, the spill area will be isolated and demarcated to the extent possible. If necessary to protect nearby community members, notification of the appropriate authorities is made by the PM as appropriate. On-site response is limited to small spills (e.g., <10 gallons), large spills require external emergency responders who will be contacted by the SHSO.

7.9 Decontamination

The decontamination section of the HASP describes how personnel and equipment are decontaminated when they leave the Exclusion Zone. This section also describes how residual waste from decontamination processes is disposed. The site decontamination procedures are designed to achieve an orderly, controlled removal or neutralization of contaminants that may accumulate on personnel or equipment. These procedures minimize worker contact with contaminants and protect against the transfer of contaminants to clean areas of the site and off-site. They also extend the useful life of PPE by reducing the amount of time that contaminants contact and can permeate PPE surfaces. Decontamination is facilitated within the contamination reduction zone at this site.

7.9.1 Decontamination Procedures for Personnel and PPE

The following are general decontamination procedures established and implemented at this site.

1. Decontamination is required for all workers exiting a contaminated area. Personnel may re-enter the Support Zone only after undergoing the decontamination procedures described below in the next section.

2. Protective clothing is decontaminated, cleaned, laundered, maintained and/or replaced as needed to ensure its effectiveness.

3. PPE used at this site that requires maintenance or parts replacement is decontaminated prior to repairs or

4. PPE used at this site is decontaminated or prepared for disposal on the premises. Personnel who handle contaminated equipment have been trained in the proper means to do so to avoid hazardous exposure.

5. This site uses an off-site laundry for decontamination of PPE. The site has informed that facility of the hazards associated with contaminated PPE from this site.

6. The site requires and trains workers that if their permeable clothing is splashed or becomes wetted with a hazardous substance, they will immediately exit the work zone, perform applicable decontamination procedures, shower, and change into uncontaminated clothing.

7. Procedures for disposal of decontamination waste meet applicable local, State, and Federal regulations.

7.9.2 Decontamination Procedures for Equipment

All tools, equipment, and machinery from the Exclusion Zone or CRZ are decontaminated in the CRZ prior to removal to the Support Zone. Equipment decontamination procedures are designed to minimize the potential for hazardous skin or inhalation exposure and to avoid cross-contamination and chemical incompatibilities.

General Equipment Decontamination Procedures:

1. Decontamination is required for all equipment exiting a contaminated area. Equipment may re-enter the Support Zone only after undergoing the equipment decontamination procedures.

2. Vehicles that travel regularly between the contaminated and clean areas of the site are carefully decontaminated each time they exit the Exclusion Zone and the effectiveness of that decontamination is monitored to reduce the likelihood that contamination will be spread to other parts of the site.

3. Particular attention is given to decontaminating tires, scoops, and other parts of heavy equipment that are directly exposed to contaminants and contaminated soil.

The following items may be used to decontaminate equipment:

- Fresh water rinse;
- Non-phosphorus detergent wash;
- Distilled water rinse;
- Acetone rinse;
- Distilled water rinse; and
- A steam cleaner or pressure washer (heavy equipment only)

7.9.3 Monitoring the Effectiveness of Decontamination Procedures

Visual examination and sampling are used to evaluate the effectiveness of decontamination procedures. Visual examination is used to ensure that procedures are implemented as described and that they appear to control the spread of contaminants under changing site conditions. Visual examination is also used to inspect for signs of residual contamination or for contaminant permeation of PPE.

Personnel who work in contaminated areas of the site, either the Contamination Reduction Zone (CRZ) or the Exclusion Zone, are trained in the principles and practices of decontamination described in this section

of the HASP and in related SOPs. If site procedures are changed as a result of inspection and monitoring, all affected employees are notified of these changes.

7.10 Confined Space Entry

Confined space entry will not be performed.

The following is a list of the safety requirements for confined space entry at the Site:

- **ROUX PERSONNEL ARE NOT AUTHORIZED TO ENTER AN OSHA PERMIT REQUIRED CONFINED SPACE;**
- Currently the scope of work **DOES NOT** require personnel to enter permitted confined space for this project; and
- Any changes to the field activities that may necessitate confined space entry will be reported to the Project Principal and OHSM.

Confined space is defined as any space, depression, or enclosure that:

- Has limited opening for entry and egress;
- Is large enough for and employee to enter and perform assigned work; and
- Is not intended for continuous occupancy.

A permit required confined space is one that meets the definition of a confined space and has one or more of the following characteristics:

- May contain or produce life-threatening atmospheres due to oxygen deficiency the presence of toxic, flammable, or corrosive contaminants;
- Contains a material that has the potential for engulfment;
- Has an internal configuration that may cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross-section; and
- Contains any other serious safety or health hazards.

Although Roux personnel will not perform confined space entry, it is expected that subcontractors performing cleaning and mitigation and/or remedial measures activities may be required to enter structures that are considered to be a permit required confined space. Permitting of the confined space as well as hazard mitigation for entry will be completed by the subcontractor in accordance with 1910.146.

7.11 Client and Site-Specific

In addition to the OSHA-specific procedures discussed above, there may be client and site-specific safety procedures that must be adhered to during the performance of remedial activities at the Site.

There are no client and site-specific requirements here.

7.12 Unusual or Significant Risks

Field activities that appear to have unusual or significant risks that cannot be adequately managed with existing risk tools such as LPS, HASPs, traffic safety plans, work permits, design and O&M practices,

equipment HAZOPS or other safety tools must be referred to the CHSM to help with the assessment and management of the associated potential safety risks. Examples include the use of explosives for demolition, use of firearms to control wildlife, rappelling, demolition over water, etc.

7.13 Activity-Specific

In addition to the general hazards discussed above, there are activity-specific hazards associated with each work activity planned for the Site. An activity-specific JSA has been completed for each of the activities planned for the Site. JSAs are provided in **Appendix A**. In the event that new work activities or tasks are planned, JSAs will be developed and implemented prior to performing the new activities. In the absence of a JSA, the personnel performing work must prepare a field JSA and receive clearance from a designated competent safety official prior to performing any task with significant risk. In emergency situations where time is critical SPSAs will be utilized to identify the task, associated hazards and mitigative actions to take. For lower risk activities (as deemed by the discretion of a Competent Person) where a JSA is determined to not be needed, the individual(s) conducting the activities must perform SPSAs prior to and during the work.

8. Field Team Review

Each person performing work at or visiting this site shall sign this section after site-specific training is completed and before being permitted to access the CRZ or Exclusion Zone.

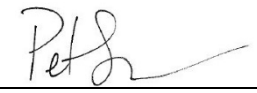
I have read and understand this Site-Specific Health and Safety Plan. I will comply with the provision contained therein.

Site/Project: InSite Property Group – 3701 North Pacific Place

Name Printed	Signature	Date

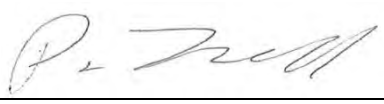
9. Approvals

By their signature, the undersigned certify that this HASP is approved and will be utilized at the InSite Property Group – 3701 North Pacific Place Facility.



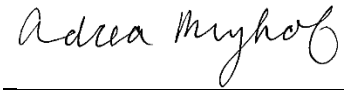
August 7, 2019

Peter Shimer, P.G. – Site Health and Safety Officer — Date



August 7, 2019

Paige Farrell - Office Health and Safety Manager — Date



August 7, 2019

Andrea Berlinghof, P.E. – Project Manager — Date



August 7, 2019

Jaydeep Purandare, P.E. – Senior Engineer — Date



August 7, 2019

Mauricio H. Escobar, P.G. – Project Principal — Date

TABLES

1. Toxicological Properties of Hazardous Substances Present at the Site

Table 1. Toxicological, Physical, and Chemical Properties of Compounds

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	CAL/OSHA	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Antimony	7440-36-0	TWA 0.5 mg/m^3	TWA 0.5 mg/m^3	TWA 0.5 mg/m^3	TWA 0.5 mg/m^3	50 mg/m^3 (as Sb)	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat, mouth; cough; dizziness; headache; nausea, vomiting, diarrhea; stomach cramps; insomnia; anorexia; unable to smell properly	Eyes, skin, respiratory system, cardiovascular system	Silver-white, lustrous, hard, brittle solid; scale-like crystals; or a dark-gray, lustrous powder. BP: 2975°F
Arsenic (inorganic)	7440-38-2 (metal)	TWA 0.01 mg/m3	Ca C 0.002 mg/m3 [15-min]	TWA 0.010 mg/m3	0.01 mg/m^3	Ca [5 mg/m3 (as As)]	Inhalation; ingestion; skin absorption; skin and/or eye contact	Ulceration of nasal septum, dermatitis, GI disturbances, peripheral neuropathy, resp irritation, hyperpigmentation of skin, [potential occupational carcinogen]	Liver, kidneys, skin, lung cancer, lymphatic sys	Metal: sliver-gray or tin-white, brittle, odorless solid BP: sublimes
Barium	7440-39-3	TWA 0.5 mg/m3	None established	TWA 0.5 mg/m3	0.5 mg/m^3	None established	Inhalation, ingestion, skin contact	Irritation skin, respiratory system, digestive system	Skin, eyes, respiratory system, GI irr., muscular stim.	Yellow white powder BP: 1640 C
Benzene	71-43-2	TWA 0.5 ppm STEL = 2.5 ppm	Ca TWA 0.1 ppm STEL 1 ppm	TWA 1 ppm ST 5 ppm	1 ppm STEL 5 ppm	Ca [500 ppm]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lassitude (weakness, exhaustion); dermatitis; bone marrow depression; [potential occupational carcinogen], leukemia	Eyes, skin, respiratory system, blood, central nervous system, bone marrow	Colorless to light yellow liquid with an aromatic odor [Note: Solid below 42 °F] BP: 176°F Fl.Pt. = 12°F LEL: 1.2% UEL: 7.8% Class B Flammable liquid
Beryllium	7440-41-7 (metal)	TWA 0.00005 mg/m^3	Ca C 0.0005 mg/m^3	TWA 0.002 mg/m^3 C 0.005 mg/m^3 0.025 mg/m^3 (30-minute)	0.0002 mg/m^3 0.025 mg/m^3 C	Ca [4 mg/m^3 (as Be)]	inhalation, skin and/or eye contact	Berylliosis (chronic exposure): anorexia, weight loss, lassitude (weakness, exhaustion), chest pain, cough, clubbing of fingers, cyanosis, pulmonary insufficiency; irritation eyes; dermatitis; [potential occupational carcinogen]	Eyes, skin, respiratory system, beryllium sens.	Metal: A hard, brittle, gray-white solid. BP: 4532°F
Butane	106-97-8	STEL 1000 ppm	TWA 800 ppm (1900 mg/m^3)	None established	800 ppm (1900 mg/m^3)	None established	inhalation, skin and/or eye contact (liquid)	Drowsiness, narcosis, asphyxia; liquid: frostbite	CNS impair, card.sens.	Colorless gas with a gasoline-like or natural gas odor. BP: 31°F UEL: 8.4% LEL: 1.6% Flammable Gas
Cadmium	7440-43-9 (metal)	TWA 0.01 mg/m^3	Ca	TWA 0.005 mg/m^3	0.005 mg/m^3	Ca [9 mg/m^3 (as Cd)]	inhalation, ingestion	Pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild	respiratory system, kidneys, prostate, blood	Metal: Silver-white, blue-tinged lustrous, odorless solid. BP: 1409°F
Chromium, Hexavalent	7440-47-3	TWA = 0.01 mg/m^3 (Water insol), STEL = 0.05 mg/m3 (Water sol)	TWA 0.5 mg/m^3(Chromium II/III Compounds as Cr) TWA 0.0002 mg/m^3 (Chromium VI Compounds as Cr)	0.5 mg/m^3 (Chromium II Compounds as Cr) 0.5 mg/m^3 (Chromium III Compounds as Cr) 1.0 mg/m^3 (Chromium VI Compounds as Cr)	0.5 mg/m^3 (Chromium II Compounds as Cr) 0.5 mg/m^3 (Chromium III Compounds as Cr) 0.005 mg/m^3 (Chromium VI Compounds as Cr); STEL 0.1 mg/m^3	250 mg/m^3 (as Cr)	inhalation, ingestion, skin and/or eye contact	irritation eyes, skin, lung fibrosis (histologic)	eyes, skin, respiratory system	Blue-white to steel-gray, lustrous, brittle, hard, odorless solid. BP: 4788°F
Cobalt	7440-48-4	TWA = 0.02 mg/m^3 A3 - suspected human carcinogen	TWA = 0.05 mg/m^3	TWA 0.1 mg/m^3 (Dust of Fume)	0.020 mg/m^3	20 mg/m^3 (as Co)	inhalation, ingestion, skin and/or eye contact	Cough, dyspnea (breathing difficulty), wheezing, decreased pulmonary function; weight loss; dermatitis; diffuse nodular fibrosis; resp hypersensitivity, asthma	Skin, respiratory system	Odorless, silver-gray to black solid. BP: 5612 °F Fl.P: NA UEL: NA LEL: NA
Copper	7440-50-8	TWA 0.2mg/m^3 (fume) 1 mg/m^3 (dusts and mists)	TWA 1 mg/m^3	TWA 1 mg/m^3 (Dusts and mists) TWA 0.1 mg/m3 (Fume)	0.1 mg/m^3	100 mg/m^3 (as Cu)	Inhalation, ingestion, skin and/or eye contact	Irritation eyes, respiratory system; cough, dyspnea (breathing difficulty), wheezing	Eyes, skin, respiratory system, liver, kidneys (increase(d) risk with Wilson's disease), metal fume fever	Noncombustible Solid in bulk form, but powdered form may ignite. BP: 4703°F
Dieldrin	60-57-1	TWA = 0.1 mg/m^3 A3 - suspected human carcinogen	Ca TWA 0.25 mg/m^3 [skin]	TWA 0.25 mg/m^3 [skin]	0.25 mg/m^3	Ca (50 mg/m^3)	inhalation, skin absorption, ingestion, skin and/or eye contact	Headave, dizziness, nausea, vomiting, malaise (vague feeling of discomfort); myoclonic jerks of limbs; clonic, tonic convulsions; coma; [potential occupational carcnogen]	Central nervous system, liver, kidneys, skin	Colorless to light-tan crystals with a mild, chemical odor. BP: Decomposes Fl.P: NA UEL: NA LEL: NA
Diesel Fuel #2	68476-34-6	TWA + 100 mg/m^3	None established	Designated as an OSHA Select Carcinogen	None established	None established	ingestion, skin and/or eye contact	Kidney damage; potential lung damage; suspected carcinogen; irritation of eyes, skin, respiratory tract; dizziness, headache, nausea; chemical pneumonitis (from aspiration of liquid); dry, red skin; irritant contact dermatitis; eye redness, pain.	Eyes, skin, kidneys	Clear yellow brown combustible liquid; floats on water; distinct diesel petroleum hydrocarbon odor. BP: 356-716°F Fl.P: 154.4-165.2°F LEL: 0.6% UEL: 7.0%
Ethylbenzene	100-41-4	TWA 20 ppm	TWA 100 ppm (435 mg/m^3) STEL 125 ppm (545 mg/m^3)	TWA 100 ppm (435 mg/m^3)	100 ppm (435 mg/m^3) STEL 125 ppm (545 mg/m^3)	800 ppm [10%LEL]	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, mucous membrane; headache; dermatitis; narcosis, coma	Eyes, skin, respiratory system, central nervous system, kidney damage, cochlear impair	Colorless liquid with an aromatic odor. BP: 277°F Fl.P: 55°F UEL: 6.7% LEL: 0.8% Class IB Flammable Liquid
Gasoline	86290-81-5	TWA 300 ppm STEL 500 ppm	Carcinogen	None established	300 ppm (900 mg/m^3) STEL 500 ppm (1500 mg/m^3)	Ca [IDLH value has not been determined]	Skin absorption; inhalation; ingestion; skin and/or eye contact	Eyes and skin irritation, mucous membrane; dermatitis; headache; listlessness, blurred vision, dizziness, slurred speech, confusion, convulsions; chemical pneumonitis; possible liver, kidney damage [Potential occupational carcinogen]	Eyes, skin, respiratory system, CNS, Liver, Kidneys	Clear liquid with a characteristic odor, aromatic Fl.Pt. = -45°F LEL = 1.4% UEL = 7.6% Class 1B Flammable Liquid
Hexachlorobutadiene	87-68-3	TWA 0.02 ppm	Ca TWA 0.02 ppm (0.24 mg/m^3) [skin]	None established	0.02 ppm (0.24 mg/m^3)	Ca [N.D.]	inhalation, skin absorption, ingestion, skin and/or eye contact	In animals: irritation eyes, skin, respiratory system; kidney damage; [potential occupational carcinogen]	Eyes, skin, respiratory system, kidneys	Clear, colorless liquid with a mild, turpentine-like odor. BP: 419°F

Table 1. Toxicological, Physical, and Chemical Properties of Compounds

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	CAL/OSHA	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Lead	7439-92-1	TWA 0.05 mg/m^3	TWA (8-hour) 0.050 mg/m^3	TWA 0.050 mg/m^3	TWA 0.050 mg/m^3	100 mg/m^3 (as Pb)	inhalation, ingestion, skin and/or eye contact	Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension	Eyes, gastrointestinal tract, central nervous system, PNS impair, kidneys, blood, gingival tissue	A heavy, ductile, soft, gray solid. BP: 3164°F Noncombustible Solid in bulk form
Manganese	7439-96-5 (metal)	TWA 0.02 mg/m^3	TWA 1 mg/m^3 STEL 3 mg/m^3	C 5 mg/m^3	0.2 mg/m^3 STEL 3 mg/m^3	500 mg/m^3 (as Mn)	inhalation, ingestion	Manganism; asthenia, insomnia, mental confusion; metal fume fever: dry throat, cough, chest tightness, dyspnea (breathing difficulty), rales, flu-like fever; low-back pain; vomiting; malaise (vague feeling of discomfort); lassitude (weakness, exhaustion); kidney damage	respiratory system, central nervous system, blood, kidneys	A lustrous, brittle, silvery solid. BP: 3564°F
Mercury (organo) alkyl compounds (as Hg)+A45	7439-97-6	TWA 0.01 mg/m^3 STEL 0.03 mg/m^3 [skin]	TWA 0.01 mg/m^3 STEL 0.03 mg/m^3 [skin]	TWA 0.01 mg/m^3	0.01 mg/m^3 0.04 mg/m^3 C STEL 0.03 mg/m^3	2 mg/m^3 (as Hg)	inhalation, skin absorption, ingestion, skin and/or eye contact	Paresthesia; ataxia, dysarthria; vision, hearing disturbance; spasticity, jerking limbs; dizziness; salivation; lacrimation (discharge of tears); nausea, vomiting, diarrhea, constipation; skin	Eyes, skin, central nervous system, peripheral nervous	Appearance and odor vary depending upon the specific (organo) alkyl mercury compound
Mercury compounds [except (organo) alkyls] (as Hg) Mercury	7439-97-6	TWA 0.025 mg/m^3 (elemental and inorganic forms) TWA 0.1 mg/m^3 (aryl compunds)	Hg Vapor: TWA 0.05 mg/m^3 [skin] Other: C 0.1 mg/m3 [skin]	TWA 0.1 mg/m^3	0.025 mg/m^3 0.1 mg/m^3 C	10 mg/m^3 (as Hg)	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria	Eyes, skin, respiratory system, central nervous system, kidneys	Metal: Silver-white, heavy, odorless liquid. [Note: "Other" Hg compounds include all inorganic & aryl Hg compounds except (organo) alkyls.] BP: 674°F
Methane	74-82-8	TWA 1000 ppm	TWA 1000 ppm	NA	NA	NA	inhalation	Headache, nausea, dizziness, or drowsiness	respiratory system	Colorless, odorless gas
Nickel	7440-02-0 (Metal)	TWA 1.5 mg/m^3 (elemental) TWA 0.1 mg/m^3 (soluble inorganic compounds) TWA 0.2 mg/m^3 (insoluble inorganic compounds) TWA 0.1 mg/m^3 (Nickel subsulfide)	Ca TWA 0.015 mg/m^3	TWA 1 mg/m^3 (soluble) TWA 1 mg/m3 (insoluble)	0.5 mg/m^3	Ca [10 mg/m^3 (as Ni)]	inhalation, ingestion, skin and/or eye contact	Sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen]	Nasal cavities, lungs, skin	Metal: Lustrous, silvery, odorless solid. BP: 5139°F
Petroleum hydrocarbons(Petroleum distillates)	8002-05-9	None established	TWA 350 mg/m^3 C 1800 mg/m^3 [15 min]	TWA 500 ppm (2000 mg/m^3)	None established	1,100 [10% LEL]	Inhalation; ingestion; skin and/or eye contact	Irritation eyes, skin, nose, throat; dizziness, drowsiness, headache, nausea; dried/cracked skin; chemical pneumonitis	CNS, eyes, respiratory system, skin	Colorless liquid with a gasoline or kerosene-like odor BP: 86-460°F Fl. Pt = -40 to -86°F UEL: 5.9% LEL: 1.1% Flammable liquid
Selenium	7782-49-2	TWA 0.2 mg/m^3	TWA 0.2 mg/m^3	TWA 0.2 mg/m^3	TWA 0.2 mg/m^3	1 mg/m^3 (as Se)	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat; visual disturbance; headache; chills, fever; dyspnea (breathing difficulty), bronchitis; metallic taste, garlic breath, gastrointestinal disturbance; dermatitis; eye, skin burns; in animals: anemia; liver necrosis, cirrhosis; kidney, spleen damage	Eyes, skin, respiratory system, liver, kidneys, blood, spleen	Amorphous or crystalline, red to gray solid. [Note: Occurs as an impurity in most sulfide ores.] BP: 1265°F
Silver	7440-22-4 (metal)	TWA 0.1 mg/m^3 (metal, dust, fume) TWA 0.01 mg/m^3 (Soluble compounds, as Ag)	TWA 0.01 mg/m^3	TWA 0.01 mg/m^3	0.01 mg/m^3	10 mg/m^3 (as Ag)	inhalation, ingestion, skin and/or eye contact	Blue-gray eyes, nasal septum, throat, skin; irritation, ulceration skin; gastrointestinal disturbance	Nasal septum, skin, eyes, blue/gray skin	Metal: White, lustrous solid BP: 3632°F
Toluene	108-88-3	TWA 20 ppm	TWA 100 ppm (375 mg/m^3) STEL 150 ppm (560 mg/m^3)	TWA 200 ppm C 300 ppm 500 ppm (10-minute maximum peak)	10 ppm (37 mg/m^3) 500 ppm C STEL 150 ppm (560 mg/m^3)	500 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, nose; lassitude (weakness, exhaustion), confusion, euphoria, dizziness, headache; dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, insomnia; paresthesia; dermatitis; liver, kidney damage	Eyes, skin, respiratory system, central nervous system, liver, kidneys, female repro., pregnancy loss	Colorless liquid with a sweet, pungent, benzene-like odor. BP: 232°F Fl.P: 40°F UEL: 7.1% LEL: 1.1% Class IB Flammable Liquid
Zinc (oxide)	1314-13-2	TWA = 2 mg/m^3 (Resp.), STEL = 10 mg/m^3 (Resp.)	Dust: TWA 5mg/m^3 C 15mg/m^3 Fume: TWA 5 mg/m^3 ST 10 mg/m^3	15 mg/m^3 (V2O5) as Total Dust 5 mg/m^3 (V2O5) as Respirable Fraction	5 mg/m^3 STEL 10 mg/m^3	500 mg/m^3	Inhalation	Metal fume fever: chills, muscle ache, nausea, fever, dry throat, cough; lassitude (weakness, exhaustion); metallic taste; headached; blurred vision; low back pain; vomiting; malaise (vague feeling of discomfort); chest tightness; dyspnea (breathing difficulty), rales, decreased pulmonary function	Respiratory system	Non combustible solid

References:
U.S. Department of Labor. 1990. OSHA Regulated Hazardous Substances, industrial Exposure and Control Technologies Government Institutes, Inc.
Hawley's Condensed Chemical Dictionary, Sax, N. Van Nostrand and Reinhold Company, 11th Edition, 1987.
Proctor, N.H., J.P. Hughes and M.L. Fischman, 1989. Chemical Hazards of the Workplace. Van Nostrand Reinhold. New York.
Sax, N.I. and R.J. Lewis. 1989. Dangerous Properties of Industrial Materials. 7th Edition. Van Nostrand Reinhold. New York.
2014 TLVs® and BEIs®. American Conference of Governmental Industrial Hygienists (ACGIH).
Applicable Material Safety Data Sheets

Abbreviations:
ACGIH – American Conference of Governmental Industrial Hygienists
BP – boiling point at 1 atmosphere, °F
C – Ceiling, is a concentration that should not be exceeded during and part of the working exposure
Ca – NIOSH considers substance to be a potential occupational carcinogen
CAL/OSHA – California Occupational Safety and Health Administration
CAS# – Chemical Abstracts Service registry number which is unique for each chemical
Ft Pt. – Flash point
IDLH – Immediately Dangerous to Life and Health concentrations represent the maximum concentration from which, in the event of respirator failure, one could escape within 30 minutes without a respirator and without experiencing any escape-impairing or irreversible health effects
LEL – Lower explosive (flammable) limit in air, % by volume (at room temperature)
MP – Melting Point

Table 1. Toxicological, Physical, and Chemical Properties of Compounds

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	CAL/OSHA	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties

mg/m^3 – Milligrams of substance per cubic meter of air
NIOSH – National Institute for Occupational Safety and Health
OSHA – Occupational Safety and Health Administration
PEL – OSHA Permissible Exposure Limit (usually) a time weighted average concentration that must not be exceeded during any 8 hour work shift of a 40 hr work week
ppm – parts per million
REL – NIOSH Recommended Limit indicated a time weighted average concentration that must not be exceeded during any 10 hour work shift of a 40 hr work week
STEL – Short-term exposure limit (ST)
TLV – ACGIH Threshold Limit Values (usually 8 hour time weighted average concentrations)
TWA – 8-hour, time-weighted average
UEL – Upper explosive (flammable) limit in air, % by volume (at room temperature)

FIGURES

1. Site Location Map
2. Site Plan


THE SITE


RESIDENCES
LOS ANGELES RIVER
PACIFIC ELECTRIC RAILROAD
ELEMENTARY SCHOOL
EMERGENCY EVACUATION POINT
405 FREEWAY
ENTRY & EXIT

APPENDICES

A. Job Safety Analysis (JSA) Forms
B. Site-Specific Emergency Response Plan & Routes to Urgent Care and Emergency Medical Facilities
C. SDSs for Chemicals Used
D. Incident Investigation and Reporting Program
E. Subsurface Utility Clearance Management Program
F. Personal Protective Equipment Management Program
G. Injury and Illness Prevention Program

APPENDIX A

Job Safety Analysis (JSA) Forms

JOB SAFETY ANALYSIS	Ctrl. No. GEN-007	DATE 8/6/2018	☐ NEW ☒ REVISED	PAGE 1 of 2

JSA TYPE CATEGORY	WORK TYPE	WORK ACTIVITY (Description)
GENERIC	**General Site Activity**	**Driving**

DEVELOPMENT TEAM	POSITION / TITLE	REVIEWED BY:	POSITION / TITLE
Valerie Sabatasso	Staff Scientist	Brian Hobbs	Corporate Health & Safety Manager

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST	☐ GOGGLES	☐ AIR PURIFYING RESPIRATOR	☒ GLOVES: Leather/ cut-resistant level 2
☒ HARD HAT: when outside vehicle	☐ FACE SHIELD	☐ SUPPLIED RESPIRATOR	☐ OTHER _____
☐ LIFELINE / BODY HARNESS	☒ HEARING PROTECTION	☒ PPE CLOTHING: high visibility vest, when outside vehicle	
☒ SAFETY GLASSES:when outside vehicle	☒ SAFETY TOE BOOTS: when outside vehicle		

REQUIRED AND / OR RECOMMENDED EQUIPMENT

Motor Vehicle (i.e. car, truck, SUV)

COMMITMENT TO SAFETY- All personnel onsite will actively participate in hazard recognition and mitigation throughout the day by verbalizing SPSAs

EXCLUSION ZONE: A 10' minimum exclusion zone will be maintained around motor vehicles when operating.

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Driving to/leaving Site	**1a. CONTACT:** Severe injury/disability, property damage, monetary loss (insurance premiums, deductibles, loss of license/job) caused by collision with or struck by other vehicles, obstructions, pedestrians, animals, etc. *Common factors that may lead to CONTACT incident, but not limited to: • distracted driving (cell phone, GPS, radio, billboards, "rubber necking") • lack of situational awareness • unfamiliarity with traffic patterns/road layout • weather conditions (wet/icy roads, hydroplaning, black ice) • weariness • high speeds • obstructed vision (solar glare, debris on windshield, blind spots) • changes in travel pathway (construction, snow banks, non-operational signals, potholes, detours, special events) • improper vehicle maintenance (non-operational signal light, worn tires, cracked windshield, ineffective wipers) • loose or unsecure objects	1a. PLAN AHEAD – review/make yourself familiar with maps and driving directions before beginning the drive to the Site. Do not attempt to drive and review maps/directions at the same time. Pull over and stop your vehicle before looking at maps/directions. 1a. Complete a basic vehicle inspection before driving. Verify Inspection and Registration are current, tires and wipers are in good condition, all lights are functional, all glass/mirrors are undamaged, the horn is functional, roof/hood/trunk are free from accumulated snow and visibility is not impaired due to snow/ice/frost/fog on windows. 1a. Do not hang items in car that can obstruct your view or become projectiles in a collision. 1a. Do not get distracted using touch screen radios or GPS units built into newer models. Keep your eyes on the road and stay alert. 1a. Follow posted speed limits and obey traffic signals and roadway signs. 1a. Always wear your seat belt and shoulder harness when driving. 1a. When driving around large vehicles and trucks, maintain extra space as these vehicles may not be able to see a smaller car too close. 1a. Follow the "Rules of the Road" including: using your turn signals, coming to a complete stop, and allowing vehicles the right of way (yield) when they are when traffic laws require. 1a. Apply the Smith Five Keys® of safe driving • Aim High in Steering® - Expand eye lead time to a minimum of 15 seconds • Get the Big Picture® - Maintain proper a 4 second minimum following distance at all times - Scan mirrors every 5-8 seconds to achieve a circle of awareness - Position your vehicle so you can see relevant/non-relevant objects • Keep Your Eyes Moving® - Try to maintain about 180 degrees of visibility - Avoid blank and fixed stares. Avoid focusing on one object for more than 2 seconds • Leave Yourself an Out® - Avoid traveling in traffic clusters - Surround yourself with space - Anticipate the actions of others

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Driving to/leaving Site (cont'd)	**1a. CONTACT:** Severe injury/disability, property damage, monetary loss (insurance premiums, deductibles, loss of license/job) caused by collision with or struck by other vehicles, obstructions, pedestrians, animals, etc.	• Make Sure They See You® - Maintain eye contact with on-coming vehicles/pedestrians - Use warning devices (e.g., hand signals, high-lights, horns etc.) - Proper timing is essential 1a. Do not perform reconnaissance or inspections while driving. Your vehicle should be parked in a safe location when viewing or surveying the Site and vicinity 1a. Avoid sudden turns and stops. Don't drive recklessly – be in control of vehicle at all times. 1a. In inclement weather, first determine if work can be POSTPONED. Otherwise, plan according to weather conditions including checking forecast along entirety of travel route (especially, for long distances). Reduce speed as road conditions warrant. Travelling with winter car equipment, in the winter, is strongly recommended (i.e., shovel, scraper, brush, blanket, extra clothing, flashlight, bag of sand). If your vehicle has 4-wheel drive, review to operators manual and understand operating procedure prior to engaging 4-wheel drive. If at any point on your drive weather becomes too severe to proceed safely pull over if safe to do so or seek nearest cover (e.g., overpass) 1a. If feeling drowsy or sleepy, do not drive. Pull over in a safe place to rest if you experience any signs of drowsiness. Make sure to get adequate sleep the night before an early drive. 1a. Never operate a vehicle under the influence of alcohol or illegal substances or medications affecting your performance. 1a. Keep your eyes on the road. Do not call or talk on cellular phones. Pull over to a safe location if you must answer or make a call. (Legal requirement in: CA, CT, DE, D.C., HI, IL, LA*, MD, NV, NH*, NJ, NM, NY, OK*, OR, TX*, VT, WA, WV as of 01/20/15; per www.IIHS.org) * = Applicable to some drivers, situations or to be implemented in 2015 1a. When parking, pull-through when possible. If backing is required visually inspect area to ensure it is free from obstructions prior to backing in and relying solely on mirrors; use spotters when available.
2. Entering/Exiting Vehicle.	**2a. CAUGHT:** Personal injury (broken fingers/hand) while entering or exiting vehicles **2b. FALL:** Personal injury (twisted ankle, deep contusion, concussion, broken wrist/arm, etc.) from slip/fall on uneven or unstable or slippery surface while exiting/entering vehicle **2c. CONTACT:** Severe injury/disability, property damage, monetary loss (insurance premiums, deductibles, loss of license/job) caused by collision with or struck by other vehicles, obstructions, pedestrians, animals, etc.	2a. Open and close doors slowly. Never put hands or feet in between door and vehicle to avoid pinch points. 2b. When exiting the vehicle make sure your feet are on firm footing and weight is evenly distributed before exiting/standing. In inclement weather use hands to support yourself, by holding the car door and/or steering wheel, when exiting the vehicle. 2c. Check both directions for traffic before opening door. Do not exit vehicle if traffic does not permit you to exit safely 2c. Check anticipated path of door prior to opening, do not open door into any obstructions (e.g., bollards, high curbing)

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

JOB SAFETY ANALYSIS	Ctrl. No. GEN-019	DATE: 8/6/2018	☐NEW ☒REVISED	PAGE 1 of 2

JSA TYPE CATEGORY	WORK TYPE	WORK ACTIVITY (Description)
GENERIC	**Site Recon**	**Site Walk and Inspection**

DEVELOPMENT TEAM	POSITION / TITLE	REVIEWED BY:	POSITION / TITLE
Sara Barrientos	Staff Geologist	Brian Hobbs	Corporate Health and Safety Manager
		Joe Duminuco	Vice President

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST ☒ HARD HAT ☐ LIFELINE / BODY HARNESS ☒ SAFETY GLASSES	☐ GOGGLES ☐ FACE SHIELD ☒ HEARING PROTECTION: ear plugs as necessary ☒ SAFETY SHOES: Steel or composite toed	☐ AIR PURIFYING RESPIRATOR ☐ SUPPLIED RESPIRATOR ☒ PPE CLOTHING: High-visibility vest or high-vis outerwear	☒ GLOVES: Leather/cut-resistant/chemical resistant ☒ OTHER: Tyvek and rubber boots as necessary, dust mask as necessary

REQUIRED AND / OR RECOMMENDED EQUIPMENT

Required Equipment: Site map, emergency contact list, documentation of urgent care/hospital routes and / or guide familiar with Site, operating cell phone or walkie-talkie if Site allows.

Commitment to Safety – All personnel onsite will actively participate in SPSA performance by verbalizing SPSAs throughout the day.

EXCLUSION ZONE (EZ): A minimum 10' exclusion zone will be maintained around equipment.

SITE SECURITY: Prior to site inspection verify appropriate method to address Site Security concerns as it relates to potential criminal activity, homeless population, and/or isolation concerns. Work with the Project Principal and/or Project Manager to address appropriately.

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Check in with Site contact.	**1a. CONTACT/EXPOSURE/FALL:** Personal injury caused by lack of site specific hazards.	1a. Inquire about hazards and other activities taking place at the Site. 1a. Inform Site contact of work scope, timeline and location(s). 1a. Discuss emergency evacuation procedures and muster points with Site contact.
2. Traversing the Site	**2a. CONTACT:** Property damage and personal injury caused by obstructions/vehicles or unauthorized personnel at remote Sites.	2a. All equipment must be stowed and secured prior to moving. 2a. Maintain speed limit as posted on-site. 2a. When possible drive on established roadways. 2a. Yield to all pedestrians. 2a. Use pull-through spots or back into parking spots. 2a. Don high visibility clothing/safety vest. If working at remote Site, add orange accessories during hunting season.
	2b. FALL: Uneven terrain and weather conditions. Overgrown shrubs and vines. Equipment in the work zone.	2b. Inspect walking path for uneven terrain, weather-related hazards (i.e., ice, puddles, snow, etc.), and obstructions prior to mobilizing equipment. 2b. When possible, use established pathways and walk on stable, secure ground. 2b. Communicate traversing hazards with others.
	2c. OVEREXERTION: Muscle strain while carrying equipment.	2c. When carrying equipment to/from work area, use proper lifting techniques; keep back straight, lift with legs, keep load close to body, never reach with a load. Ensure that loads are balanced to reduce the potential for muscle strain. Use mechanical assistance or make multiple trips to carry equipment.
	2d. EXPOSURE: Biological hazards – ticks; bees/wasps; poison ivy; insects; (Ticks are most active any time the temperature is above freezing, typically from March to November.)	2d. Inspect area to avoid contact with biological hazards. 2d. Ticks: • Treat outer clothing including pants, shirts, socks, boots and hats the evening before with Permethrin (allowing at least two hours before use). • Apply DEET to exposed skin before travelling to the Site and reapply after two hours. • Check for ticks during and after work. 2d. Bees: • Use bee spray as appropriate to deter/eliminate bees. • Protect exposed skin with insect repellent. 2d. Poison Ivy:

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

	2e. EXPOSURE: Heat Stress & Cold Stress. Personal injury from working in inclement weather conditions.	• Identify areas of poison ivy and spray with weed killer. Don Tyvek and rubber boots while traversing poison ivy areas. • If skin contacts poison ivy, wash skin thoroughly with soap and water. 2e. Wear sunscreen with SPF 15 or greater on exposed skin whenever 30 minutes or more of sun exposure is expected. 2e. Watch for heat stress symptoms (muscle cramping, exhaustion, dizziness, rapid and shallow breathing). Take breaks as needed. 2e. Watch for cold stress symptoms (severe shivering, slowing of body movement, weakness, stumbling or inability to walk, collapse). Take breaks as needed. 2e. Wear appropriate rain gear as needed. 2e. Take frequent breaks if tired, wet, or cold/hot. Drink water. 2e. If lightning is observed, wait 30 minutes after last thunder boom/lightning bolt in a sheltered location (car acceptable) before starting work again.
3. Walking near heavy equipment and machinery.	**3a. CONTACT:** Personal injury from Site and roadway traffic. Personal injury from flying debris **3b. OVEREXERTION:** Personal injury from lifting/moving/rotating equipment. **3c. EXPOSURE:** Hearing damage from noise generating equipment/processes. Inhalation/exposure to hazardous vapors and or dust. **3d. EXPOSURE:** Working in a remote area.	3a. See 2a. 3a. Maintain an exclusion zone of at least 10'-25' feet from all engaged equipment. 3a. Keep body parts out of the line of fire of pinch points. 3a. Wear appropriate PPE always. 3b. See 2c. 3c. Wear hearing protection if >85 dBA. (i.e. noise levels which require you to raise your voice to communicate) 3c. Always wear leather gloves when handling any tools or equipment. 3c. Always wear appropriate PPE based off chemicals present. 3d. Use the "buddy system" whenever possible. If working alone, contact PM upon arrival/departure, as well as during work activities prior to commencing work if applicable. 3d. Always carry a communication (i.e., cell phone, walkie-talkie) or directional (i.e., map, compass, etc.) device when traversing remote areas.
4. Working in adverse weather conditions.	**4a. EXPOSURE:** Heat Stress & Cold Stress. Personal injury from working in inclement weather conditions.	4a. Watch for heat stress symptoms (muscle cramping, exhaustion, dizziness, rapid and shallow breathing). Take breaks as needed. 4a. Watch for cold stress symptoms (severe shivering, slowing of body movement, weakness, stumbling or inability to walk, collapse). Take breaks as needed. 4a. Wear appropriate rain gear as needed. 4a. Take frequent breaks if tired, wet, or cold/hot. Drink water. 4a. If lightning is observed, wait 30 minutes after last thunder boom/lightning bolt in a sheltered location (car acceptable) before starting work again.
5. Departing Site.	**5a. EXPOSURE:** Exposure to unnecessary hazards should personnel believe Roux is on-Site during an emergency and conduct a search.	5a. Sign out or notify Site contact and Roux Project Manager of your departure.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

JOB SAFETY ANALYSIS	Ctrl. No. GEN-015	DATE: 8/6/2018	☐NEW ☒REVISED	PAGE 1 of 2

JSA TYPE CATEGORY	WORK TYPE	WORK ACTIVITY (Description)	
GENERIC	**Site Recon**	**Mobilization/Demobilization**	
DEVELOPMENT TEAM	**POSITION / TITLE**	**REVIEWED BY:**	**POSITION / TITLE**
Rebecca Lowy	Staff Assistant Geologist	Brian Hobbs	Corporate Health & Safety Manager
Tally Sodre	OHSM		

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST ☒ HARD HAT ☐ LIFELINE / BODY HARNESS ☒ SAFETY GLASSES	☐ GOGGLES ☐ FACE SHIELD ☒ HEARING PROTECTION (as needed) ☒ SAFETY SHOES: Steel Toe or composite toe	☐ AIR PURIFYING RESPIRATOR ☐ SUPPLIED RESPIRATOR ☒ PPE CLOTHING: Fluorescent reflective vest of high-visibility clothing; long sleeve shirt; long pants	☒ GLOVES: Leather, nitrile, and cut resistant (as needed) ☐ OTHER

REQUIRED AND / OR RECOMMENDED EQUIPMENT

Required Equipment: Varies

COMMITMENT TO SAFETY- All personnel onsite will actively participate in hazard recognition and mitigation throughout the day by verbalizing SPSAs

EXCLUSION ZONE (EZ): A 10-foot exclusion zone will be maintained around equipment in use..

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Mobilize/demobilize and establish work area	**1a. FALL:** Slip/trips/falls from obstructions, uneven terrain, weather conditions, heavy loads, and/or poor housekeeping.	1a. Use 3 points-of-contact/ensure secure footing when entering and exiting vehicle. 1a. Inspect walking path for uneven terrain, steep hills, obstructions, and/or weather-related hazards (i.e., ice, snow, and puddles) prior to mobilizing equipment. Use established pathways. Walk on stable/secure ground. 1a. Do not climb over stored materials/equipment; walk around. Practice good housekeeping; organize and store equipment neatly in one area at its lowest potential energy. 1a. Wear boots with adequate treads. 1a. Delineate unsafe areas with 42” cones, caution tape and/or flagging.
	1b. CONTACT: Personal injury and/or property damage caused by being struck by Site traffic or equipment used in Site activities.	1b. Observe and maintain the posted speed limits. 1b. When first arriving onsite, park vehicles in designated parking space and/or out of the way locations. Use parking brake on all vehicles and tire chocks on work trucks and trailers. 1b. Check in with Site Manager/Supervisor to ensure coordination with other Site activities and to discuss any special hazards. Ensure that short-service employees (SSE) are identified. 1b. Identify potential traffic sources. 1b. Wear PPE including high visibility clothing or reflective vest. 1b. Use a spotter while moving work vehicles; plan ahead to avoid backing whenever possible. 1b. Maintain a minimum 10’ exclusion zone when vehicles are in motion. When backing up truck rig with an attached trailer use a second spotter if there is tight clearance simultaneously on multiple sides of the equipment or if turning angles limit driver-to-spotter visibility. 1b. Delineate work area with 42” cones, flags, caution tape, and/or other barriers. 1b. Position “Work Area” signs at Site entrances, if possible, or at either side of work area.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift." Avoid general statements such as, "be careful."

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
		1b. Position largest vehicle to protect against oncoming traffic. 1b. Face traffic, maintain eye contact with oncoming vehicles, use a spotter, and establish a safe exit route. 1b. Observe potential overhead and ground surface features that may interfere with moving equipment. Clear the path of physical hazards prior to initiating mobilization.
	1c. CAUGHT: Personal injury from pinch points and being in line-of-fire of vehicle and/or equipment.	1c. Make sure driver has engaged parking brake and placed wheel chocks in a position to prevent movement. Be sure that vehicle is parked in front/down gradient (positioned to best block oncoming traffic) of work area. 1c. Wear leather gloves when handling any tools or equipment. Wear cut-resistant gloves (Kevlar or similar) when handling sharp objects/cutting tools/glass. 1c. Keep body parts away from line-of-fire of equipment. 1c. Always carry tools by the handles and/or designated carrier. Ensure sharp-edged tools are sheathed/secure. 1c. Remove any loose jewelry. Avoid wearing loose clothing and/or ensure loose clothing is secure. 1c. Secure all items on the equipment, tighten up any items or features that have potential to shift or break during mobilization.
	1d. OVEREXERTION: Muscle strains while lifting/carrying equipment.	1d. Use body positioning and lifting techniques that avoid muscle strain; keep back straight, lift with legs, turn with whole body, keep load close to body, and never reach with a load. 1d. Ensure that loads are balanced. Use assistance (mechanical or additional person) to carry equipment that is either unwieldy or over 50 lbs.
	1e. EXPOSURE: Personal injury from exposure to biological and environmental hazards.	1e. Inspect area to avoid contact with biological hazards (i.e. poisonous plants, stinging insects, ticks, etc.). 1e. Wear long sleeved clothes treated with Permethrin, apply insect repellant containing DEET to exposed skin, and inspect clothes and skin for ticks during and after work. 1e. Apply sunscreen (SPF 15+) if exposure to sun for 30 minutes or more is expected.
	1f. EXPOSURE: Weather related injuries.	1f. Watch for heat stress symptoms (muscle cramping, exhaustion, dizziness, nausea, rapid and shallow breathing). Take breaks in cool places and hydrate as needed. 1f. Watch for cold stress symptoms (severe shivering, slowing of body movement, weakness, stumbling or inability to walk, collapse). Take breaks in warm areas as needed. 1f. Wear clothing appropriate for weather and temperature conditions (e.g., rain jackets, snow pants, multiple layers). 1f. If lightning is observed, wait 30 minutes in a sheltered location (car is acceptable) before resuming work.
	1g. EXPOSURE: Personal injury from noise hazards.	1g. Wear hearing protection if sound levels exceed 85 dBA (if you must raise your voice for normal conversation).

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

JOB SAFETY ANALYSIS	Ctrl. No. LA 003	DATE: 8/30/2013	☐ NEW ☒ REVISED	PAGE 1 of 3

JSA TYPE CATEGORY	WORK TYPE:	WORK ACTIVITY (Description):
Office Specific Office: Los Angeles	**Drilling, Gauging and Sampling**	**Soil Vapor Point Installation by Direct Push**

DEVELOPMENT TEAM	POSITION / TITLE	REVIEWED BY:	POSITION / TITLE
Kyle Higgs	Project Geologist	Mauricio Escobar	Principal Geologist

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST ☒ HARD HAT ☐ LIFELINE / BODY HARNESS ☒ SAFETY GLASSES	☐ GOGGLES ☐ FACE SHIELD ☒ HEARING PROTECTION: (as needed) ☒ SAFETY SHOES steel or composite toe	☐ AIR PURIFYING RESPIRATOR ☐ SUPPLIED RESPIRATOR ☒ PPE CLOTHING: reflective safety vest (as needed)	☒ GLOVES: Leather, Nitrile or cut resistant ☒ OTHER: Insect Repellant, sunscreen (as needed)

REQUIRED AND / OR RECOMMENDED EQUIPMENT

Geoprobe Rig or Truck-Mounted Direct Push Rig, Saw, Hand Tools, Macrocore Liner Cutter, Soil Vapor Screens, Teflon lined tubing (.17x1/4), three-way valves, Photoionization Detector, Fire Extinguisher, Traffic Cones and/or Flagging.

EXCLUSION ZONE POLICY: All non-essential personnel will maintain a 10' exclusion zone during any invasive work

"SHOW ME YOUR HANDS"
Driller and helper should show that hands are clear from controls and moving parts

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Verify pre-clearance protocol and Subsurface Clearance Procedures	1a. **CONTACT:** Underground utility damage; property damage; personal injury	1a. Confirm that local utility companies were contacted prior to drilling. 1a. Walk the Site to evaluate utility markings and review maps. 1a. Pre-clearing of the drilling location must be conducted by a certified geophysical utility clearance contractor with a 5-foot radius verified free of subsurface obstructions by GPR.
2. Mobilize/demobilize and establish Exclusion Zone	2a. **FALL:** tripping/falling due to uneven terrain, weather conditions, and materials/equipment stored at the Site 2b. **CONTACT:** with traffic (including any unintended movement of the work truck), Contact / Interference with Other Site Activities	2a. Inspect walking path for uneven terrain, weather-related hazards (i.e., ice, puddles, snow, etc.), and obstructions prior to mobilizing equipment. 2a. Do not climb over stored materials/equipment; walk around. Practice good housekeeping. 2a. Use established pathways and walk on stable, secure ground. 2b. When first arriving onsite park vehicles in designated parking space and/or out of the way locations. Use parking brake on all vehicles. Use tire chocks on all vehicles and trailers parked on a slope. 2b. Check in with Site Manager/Supervisor to ensure coordination with other site activities, if applicable. 2b. Identify potential traffic sources. 2b. Wear required PPE including high visibility clothing or reflective vest, when applicable. 2b. **Maintain 10 foot exclusion zone** for workers, non-essential personnel and pedestrians. 2b. Use a spotter while moving work vehicles; plan ahead to avoid backing up when unnecessary. 2b. Set-up the work area / position equipment in a manner that eliminates or reduces the need for backing of trucks and trailers. 2b. Use a spotter for required backing operations. 2b. Delineate work area with cones, flags, caution tape, and/or other barriers. 2b. Position largest vehicle to protect against oncoming traffic. 2b. Face traffic, maintain eye contact with oncoming vehicles, use a spotter, and establish a safe exit route.
Assess [1]JOB STEPS	**Analyze [2]POTENTIAL HAZARDS**	**Act [3]CRITICAL ACTIONS**
	2c. **EXERTION:** during moving of equipment (cones and signage) into work area	2c. Keep back straight, lift with legs, keep load close to body, and never reach with a load. 2c. Ensure that loads are balanced to reduce the potential for muscle strain.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

	2d. **EXPOSURE:** To biological hazards: ticks, bees/wasps, poison ivy, poisin oak, insects, etc. (ticks are most active any time the temperature is above freezing from March to November)	2d. Inspect area to avoid contact with biological hazards. 2d. Wear long sleeved clothing (mandatory PPE) to protect skin and apply insect repellant containing DEET when working in overgrown areas of the Site. 2d. Personnel shall examine themselves for ticks, when in a region where ticks are likely to live. 2d. If skin comes in contact with poison ivy or poisin oak, wash skin thoroughly with soap and water as soon as possible.
	2e. **EXPOSURE:** Sun, possibly causing sunburn	2e. Wear sunscreen with an SPF of at least 15 whenever 30 minutes or more of exposure is expected.
	2f. **EXPOSURE:** Noise hazards (certain sites operate heavy machinery)	2f. Wear hearing protection if necessary.
3. Setting up drilling rig/work area	3a. **FALL**: Slip/trip/fall hazards in the work zone including those associated with drilling equipment and tools	3a. See 2a
	3b. **EXERTION**: Lifting equipment	3b. Keep back straight, lift with legs, keep load close to body, and never reach with a load. Keep load balanced and use buddy system over 50 lbs.
4. Raising tower/derrick of drilling rig	4a. **CONTACT**: Personnel and Overhead hazards	4a. Prior to raising the tower/derrick, the area above the drilling rig will be inspected for wires, tree limbs, piping, or other structures, that could come in contact with the rig's tower and/or drilling rods or tools. If indoors, measure ceiling height before extending the rig's tower. 4a. The tower/derrick must not be raised beneath overhead power lines unless approved by Roux PM and SHSO. 4a. **Maintain the 10 foot exclusion zone** during drill rig operations. Maintain a safe distance from overhead structures. 4a. Do not move the rig while the tower/derrick is raised.
5. Drilling activity including advancement of direct push rods and soil vapor point installation	5a. **CONTACT**: Flying debris	5a. Wear PPE (especially hand, eye, ear and respiratory protection). 5a. Be aware of and avoid potential lines of fire. 5a. Maintain a 10' exclusion zone for non-essential personnel during drilling operations.
	5b. **EXPOSURE**: Noise and dust	5b. Wet borehole area with sprayer and/or use vacuum to minimize dust. 5b. Stand upwind and keep body away from rig. 5b. Wear hearing protection when the drill rig is in operation.
	5c. **CAUGHT**: Limb/extremity pinching; abrasion/crushing	5c. Always wear leather gloves when making connections and using hand tools. 5c. Inspect the equipment prior to use for potential pinch points. 5c. Test all emergency shutdown devices prior to drilling. 5c. Inspect drill rods for worn or bent surface; replace if damaged or blunt. 5c. Ensure all jewelry is removed, loose clothing is secured, and PPE is secured close to the body. 5c. All non-essential personnel should stay away from the immediate work area; position body out of the line-of-fire of equipment. **Maintain 10 foot exclusion zone.**

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

	5d. **CONTACT**: Equipment imbalance during advancement drill equipment/soi sampling	5d. Drillers will advance the borehole with caution to avoid causing the rig to become imbalanced and/or tip. 5d. The blocking and leveling devices used to secure the rig will be inspected by drillers and Roux personnel regularly to see if shifting has occurred. 5d. In addition, personnel and equipment that are non-essential to the advancement of the borehole will be positioned away from the rig at a distance that is 10 feet or at least as far as the boom is high. For example, if the boom is ten feet high, non-essential personnel and equipment will be positioned at least ten feet away from the rig in case the rig tips over. 5d. Use the approved liner cutter when opening acetate sample liner. Do not use a utility knife or any other knife to open sample liners. Wear cut proof gloves when opening liners.
	5e. **EXPOSURE**: Inhalation of contamination/vapors	5e. Air monitoring using a calibrated photoionization detector (PID) will be used to periodically monitor the breathing zone of the work area. 5e. The Action Level for breathing zone air is five parts per million (sustained) as detected by the PID. 5e. If a reading of >5ppm is recorded, the Roux field personnel must temporarily cease work, instruct all Site personnel to step away from the area of elevated readings and inform the Roux PM of the condition. The Roux PM will then recommend additional precautions in accordance with the site specific health and safety plan.
	5f. **FALL**: Slip/trip/fall hazards	5f. See 2a.
6. Decontaminate equipment	6a. **CONTACT/EXPOSURE**: To contamination (e.g., Separate Phase Hydrocarbons (SPH), contaminated groundwater, vapors)	6a. Wear chemical-resistant disposable gloves and safety glasses. 6a. Contain decontamination water so that it does not spill; store in designated container. 6a. Use an absorbent pad to clean spills, if necessary.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

JOB SAFETY ANALYSIS	Ctrl. No. GEN-021	DATE: 8/6/2018	☐ NEW ☒ REVISED	PAGE 1 of 2

JSA TYPE CATEGORY:	WORK TYPE	WORK ACTIVITY (Description)	
GENERIC	**Gauging and Sampling**	**Soil Vapor Sampling (Permanent Monitoring Points)**	
DEVELOPMENT TEAM	**POSITION / TITLE**	**REVIEWED BY:**	**POSITION / TITLE**
Jeff Wills	Project Hydrogeologist	Brian Hobbs	Corporate Health and Safety Manager
Julie Moriarity	Project Scientist		

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST	☐ GOGGLES	☐ AIR PURIFYING RESPIRATOR	☒ GLOVES: Cut-resistant & Nitriles
☒ HARD HAT	☐ FACE SHIELD	☐ SUPPLIED RESPIRATOR	☒ OTHER: Bug Spray, Sun Screen, Knee Pads or kneeling pad
☐ LIFELINE / BODY HARNESS	☐ HEARING PROTECTION	☒ PPE CLOTHING: Fluorescent reflective vest or high visibility clothing	
☒ SAFETY GLASSES	☒ SAFETY SHOES: Steel-toe boots		

REQUIRED AND / OR RECOMMENDED EQUIPMENT

9/16" Socket and Wrench, Non-Toxic Clay, Teflon-Lined Tubing, Masterflex Tubing, Air Pump with Low Flow, Dry Cal, Enclosure (Bucket with 2 holes), Helium Gas Canister, Summa Canisters and Flow Controllers, MultiRae Photo Ionization Detector (PID), Helium Detector, Tubing Cutter, 42-inch Safety Cones, Caution Tape or Retractable Cone Bars

COMMITMENT TO SAFETY- All personnel onsite will actively participate in hazard recognition and mitigation throughout the day by verbalizing SPSAs.

EXCLUSION ZONE (EZ): A 5-foot exclusion zone will be maintained for non-essential personnel.

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Define and secure work area.	**1a. FALL:** Potential tripping hazards.	1a. Ensure work area is secure and inform others (third party) of work activity. 1a. Remove tripping hazards and inspect walking path for uneven terrain, weather-related hazards (i.e., ice, puddles, snow, etc.), and obstructions prior to mobilizing equipment.
	1b. CONTACT: Potential contact with moving vehicles or pedestrians.	1b. If working alongside roads, look both ways before entering roadways, face traffic, and utilize work vehicle to protect employees. 1b. Delineate work area (including vehicles) with traffic safety cones and caution tape or retractable cone bars. 1b. Maintain a 5-foot exclusion zone. 1b. Wear high visibility clothing or reflective safety vest.
	1c. EXERTION: Muscle strain while lifting and carrying equipment.	1c. When carrying equipment to/from work area, keep back straight, lift with legs, keep load close to body, never reach with a load. Ensure that loads are balanced. Use mechanical assistance/make multiple trips to carry equipment.
2. Remove well cover / close well cover.	**2a. CONTACT/CAUGHT:** Pinch points and scrapes associated with hand tools and well covers.	2a. Keep hands away from pinch points. 2a. Use hand tools with extensions to remove and replace well covers. 2a. Wear cut-resistant gloves. 2a. Use knee pads or kneeling pad when repetitive kneeling on rough ground is anticipated.
	2b. FALL: Potential tripping hazards associated with installing bolts.	2b. Place security bolts in secure location so not to create tripping hazards. Replace security bolts so that they fit flush with monitoring well covers.
	2c. EXERTION: Physical exertion to remove bolts that were over torqued or stripped.	2c. Replace any security bolts that show signs of stripping. Do not over tighten. 2c. Use body positioning and bending techniques that minimize muscle strain; keep back straight, bend at the knees. 2c. See 2a.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – Electricity, pressure, tension/compression, torque.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
3. Screen vapor point with PID.	**3a. FALL:** Potential tripping hazards associated with equipment. **3b. EXPOSURE:** Inhalation of soil vapor	3a. Place equipment in one area close to the sampling location. 3b. Identify area where equipment is to be stored within the work area (away from main walking path). 3a. Don't leave equipment on the ground. Return equipment to storage area between uses. 3b. Replace brass caps immediately upon completion to avoid soil vapors migrating to the surface through sample tubing. 3b. Stand upwind of sample point during screening activities.
4. Remove / replace brass caps at the end of the sam`ple tubing.	**4a. CONTACT:** Pinch points associated with hand tools and brass caps. **4b. EXPOSURE:** Potential pathway for vapors to migrate to land surface.	4a. Use wrench to remove and replace brass caps. 4a. Wear cut-resistant gloves to protect against pinch points and scrapes. 4b. See 3b. 4b. Stand up wind of sample point location.
5. Set up soil vapor sampling equipment and calibration of meters.	**5a. FALL:** Potential tripping hazards associated with equipment and tubing.5b. **5b. CONTACT:** Pinch points associated with handling equipment. **5c. EXPOSURE:** Inhalation of calibration gas and helium.	5a. See 3a. 5a. Keep tubing slack to a minimum and locate the summa canister as close to the sampling location as possible. 5a. Avoid stepping over equipment and tubing. 5b. Do not place fingers/hands under sampling equipment. 5b. Make multiple trips when unloading equipment in work area. 5b. Wear cut-resistant gloves to protect against pinch points while handling sampling equipment. 5c. Review SDS for each type of calibration gas used before calibrating. 5c. Calibrate meters in a well-ventilated area and keep air flow regulator away from face. 5c. Close valve on canisters after use to avoid inhalation of excess helium or calibration gas. 5c. Stand up wind of bucket during helium tracer gas test.
6. Cleaning Work Area.	**6a. FALL:** Potential tripping hazards associated with equipment and tubing. **6b. CONTACT:** Storing and transport of equipment in car.	6a. See 3a. 6a. See 3b. 6b. Ensure that equipment is placed securely in the vehicle. Do not stack equipment on top of each other. Secure equipment so that it will not slide while being transported. 6b. Wear cut-resistant gloves while handling/loading equipment.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – Electricity, pressure, tension/compression, torque.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

JOB SAFETYANALYSIS Ctrl. No. GEN-020	DATE: 8/6/2018	☐NEW ☒REVISED	PAGE 1 of 2

JSA TYPE CATEGORY:	WORK TYPE:	WORK ACTIVITY (Description):
GENERIC	**Gauging & Sampling**	**Soil Sampling**

DEVELOPMENT TEAM	POSITION / TITLE	REVIEWED BY:	POSITION / TITLE
MaryBeth Lyons	Project Scientist	Brian Hobbs	Corporate Health and Safety Manager

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST	☐ GOGGLES	☐ AIR PURIFYING RESPIRATOR	☒ GLOVES: Leather, Nitrile and cut resistant
☒ HARD HAT	☐ FACE SHIELD:	☐ SUPPLIED RESPIRATOR	
☐ LIFELINE / BODY HARNESS	☒ HEARING PROTECTION: (as needed)	☒ PPE CLOTHING: Fluorescent reflective vest or high visibility clothing	☒ OTHER: Insect repellant, sunscreen (as needed)
☒ SAFETY GLASSES	☒ SAFETY SHOES: Composite-toe or steel toe boots		
☒ FLAME RESISTANT CLOTHING (as needed)			

REQUIRED AND / OR RECOMMENDED EQUIPMENT

Recommended Equipment: 42" traffic cones, caution tape, trowel

COMMITMENT TO SAFETY- All personnel onsite will actively participate in hazard recognition and mitigation throughout the day by verbalizing SPSAs.

EXCLUSION ZONE (EZ): A 10-foot exclusion zone will be maintained around moving equipment, if present.

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Secure location	**1a. CONTACT:** Personnel and vehicular traffic may enter the work area.	1a. If in an area with foot or vehicle traffic, delineate the work area with 42" traffic cones and/or caution tape to prevent exposure to traffic and inform others of work activity. 1a. Wear reflective vest and/or high visibility clothing. 1a. Face the direction of any vehicular traffic. Position vehicle to protect worker from traffic. 1a. Communicate work activity with adjacent work areas.
	1b. FALL: Tripping/falling due to uneven terrain or entry/exit from excavations.	1b. Inspect pathways and work area for uneven terrain, weather-related hazards (i.e., ice, puddles, snow, etc.), and obstructions. 1b. Use established pathways and walk on stable, secure ground. 1b. Stage equipment and tools in a convenient, stable, and orderly manner. Store equipment at lowest potential energy. 1b. Roux employees should stay 5 feet from in-progress excavations and trenches. Should entry to an excavation be required (when stabilization is complete), ladders must be employed for steep embankments, excavations, pits, and trenches.
	1c. EXPOSURE: Exposure to sun and excessive heat, possibly causing sunburn, heat exhaustion or heat stroke. Exposure to cold temperatures possibly causing cold stress. Skin burn as a result of fire, if applicable. Exposure to explosive vapors due to tank farm operations. Exposure to airborne dust due to high wind speeds. Biological hazards - ticks, bees/wasps, poison ivy, thorns, insects, etc.	1c. Wear sunscreen with an SPF 15 or greater whenever 30 minutes or more of exposure is expected. 1c. Use a tent to shade the work area from direct sunlight particularly when warm temperatures are expected. 1c. Be aware of the location of all Site personnel. 1c. Watch for heat stress symptoms (muscle cramping, exhaustion, dizziness, rapid and shallow breathing). 1c. Watch for cold stress symptoms (severe shivering, slowing of body movement, weakness, stumbling or inability to walk, collapse). 1c. Take breaks for rest and water as necessary. Move to an area that is well shaded or a climate controlled area (i.e., car, site trailer, etc.). 1c. No open flames/heat sources. 1c. Flame retardant clothing must be worn when specified by Site policy. 1c. Cell phones should be disabled when specified by Site policy. 1c. Pre-treat field clothing with Permethrin prior to site visit to kill ticks and insects. 1c. Wear long sleeved shirts and tuck in (or tape) pant legs into socks or boots to prevent ticks from reaching skin. 1c. Spray insect repellant containing DEET on exposed skin when working in overgrown areas of the Site. 1c. Inspect area to avoid contact with biological hazards. 1c. Wear cut-resistant gloves when handling branches, shrubs, etc. that may lie within the walking path. 1c. Wear spoggles if the average wind speeds are above 15 mph. 1c. Personnel shall examine themselves and co-worker's outer clothing for ticks periodically when onsite. 1c. If skin comes in contact with poison ivy, wash skin thoroughly with soap and water. If rash persists after washing, immediately notify your supervisor, the OM and OHSM for possible consultation with a physician at an approved Occupational Health Clinic.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
2. Collect Soil Sample	**2a. CONTACT:** Personal injury from pinch points, cuts, and abrasions from sampling equipment tools, and material within soil sample. Personal injury from contact with moving equipment while sampling. Personal injury from contact with glass sample jars.	2a. Wear cut-resistant (i.e., Kevlar) gloves under chemical-resistant (nitrile) disposable gloves when handling soil samples and sampling jars. 2a. Where possible, use trowel or equivalent tool to avoid contact with soil. 2a. If sampling from bucket of heavy equipment, ensure all equipment is off and operator utilizes the “show me your hands” policy. 2a. See 1a.
	2b. EXPOSURE: Exposure to contamination (impacted soil) and/or lab preservatives.	2b. Wear chemical-resistant (nitrile) disposable gloves over cut resistant gloves to protect hands when handling samples; use containment material or plastic sheeting to protect surrounding areas. 2b. Wear safety glasses to protect eyes from dust or air-borne contaminants that may results from disturbing the soil. 2b. Where possible, remain upgradient from sample location if collecting soil sample from stockpile, drill rig, etc. to avoid breathing contaminant vapors, if they are present. 2b. When collecting soil sample from hand auger, put large zip lock bag over entire auger to prevent spillage of soil on to the ground. 2b. Open sample jars slowly and fill carefully to avoid contact with preservatives.
	2c. EXERTION: Exertion due to repetitive motion and ergonomics.	2c. Utilize a table or raised surface for soil sampling if multiple soil samples are going to be taken to minimize repetitive bending motion.
3. Decontaminate equipment	**3a. EXPOSURE/CONTACT:** Contamination (e.g., Separate Phase Hydrocarbons (SPH), contaminated vapors and/or soil).	3a. Wear chemical-resistant (nitrile) disposable gloves and safety glasses. 3a. Use an absorbent pad to clean spills. 3a. Properly dispose of used materials/PPE in provided drums in designated drum storage area. 3a. Remain upwind of sample and avoid breathing contaminant vapors, if they are present.
	3b. EXPOSURE: Chemicals in cleaning solution including ammonia.	3b. Wear chemical-resistant (nitrile) disposable gloves and safety glasses. 3b. Work on the upwind side of decontamination area. 3b. Use an absorbent pad to clean spills. 3b. Properly dispose of used materials/PPE in provided drums in designated drum storage area. Ensure that all drums are properly labeled and secured.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

JOB SAFETY ANALYSIS	Ctrl. No. GEN-006	DATE 8/6/2018	☐ NEW ☒ REVISED	PAGE 1 of 2

JSA TYPE CATEGORY:	WORK TYPE:	WORK ACTIVITY (Description):	
Generic	**Drilling**	**Direct Push Soil Borings / Well Installation**	
DEVELOPMENT TEAM	**POSITION / TITLE**	**REVIEWED BY:**	**POSITION / TITLE**
Timothy Zei	Project Hydrogeologist	Raymond Olson	Staff Assistant Geologist
		Christine Pietrzyk	Office Health & Safety Manager
		Brian Hobbs	Corporate Health & Safety Manager

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST ☒ HARD HAT ☐ LIFELINE / BODY HARNESS ☒ SAFETY GLASSES	☐ GOGGLES ☐ FACE SHIELD ☒ HEARING PROTECTION: (as needed) ☒ SAFETY SHOES: Composite-toe or steel toe boots	☐ AIR PURIFYING RESPIRATOR ☐ SUPPLIED RESPIRATOR ☒ PPE CLOTHING: Fluorescent reflective vest or high visibility clothing, Long Sleeve Shirt	☒ GLOVES: Leather, Nitrile and cut resistant ☒ OTHER: Insect Repellant, sunscreen (as needed)

REQUIRED AND / OR RECOMMENDED EQUIPMENT

Geoprobe or Truck-Mounted Direct Push Drill Rig, Hand Tools, Photoionization Detector, Multi-Gas Meter (or equivalent), Macrocore liners, Liner Opening Tool, 20 lb. Type ABC Fire Extinguisher, 42" Cones & Flags, "Work Area" Signs, Water

COMMITMENT TO SAFETY- All personnel onsite will actively participate in hazard recognition and mitigation throughout the day by verbalizing SPSAs

EXCLUSION ZONE (EZ) – All non-essential personnel will maintain a distance of 10 feet from drilling equipment while equipment is moving/engaged

"SHOW ME YOUR HANDS"
Driller and helper should show that hands are clear from controls and moving parts

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Mobilization of drilling rig (ensure the Subsurface Clearance Protocol and Drill Rig Checklist are completed)	**1a. CONTACT:** Equipment/property damage.	1a. The drill rig's tower/derrick will be lowered and secured prior to mobilization. 1a. A spotter should be utilized while moving the drill rig. If personnel move into the path of the drill rig, the drill rig will be stopped until the path is again clear. Use a spotter for all required backing operations. 1a. Set-up the work area and position equipment in a manner that eliminates or reduces the need for backing of support trucks and trailers. 1a. When backing up truck rig with an attached trailer use a second spotter if there is tight clearance simultaneously on multiple sides of the equipment or if turning angles limit driver visibility. 1a. Inspect the driving path for uneven terrain. Level or avoid if needed. 1a. Drill rig should have a minimum **exclusion zone of 10 feet** for non-essential personnel (i.e., driller helper, geologist) when the rig is moving/ in operation.
	1b. FALL: Slip/trip/fall hazards.	1b. Inspect walking path for uneven terrain, weather-related hazards (i.e., ice, puddles, snow, etc.), and obstructions prior to mobilizing equipment. 1b. Do not climb over stored materials/equipment; walk around. Practice good housekeeping. 1b. Use established pathways and walk on stable, secure ground.
	1c. CONTACT: Crushing from roll-over.	1c Geoprobe should cross all hills/obstructions head on with the mast down to reduce risk of roll-over.
2. Raising tower/derrick of drill rig	**2a. CONTACT:** Overhead hazards.	2a. Prior to raising the tower/derrick, the area above the drilling rig will be inspected for wires, tree limbs, piping, or other structures, that could come in contact with the rig's tower and/or drilling rods or tools. 2a. Maintain a safe distance of 10' from overhead structures.
	2b. CONTACT: Pinch Points/Amputation Points when raising the rig and instability of rig	2b. Inspect the equipment prior to use and avoid pinch/amputation points. 2b. Lower outriggers to ensure stability prior to raising rig tower/derrick. 2b. If the rig needs to be mounted, be sure to use three points of contact.
3. Advancement of drilling equipment and well installation	**3a. CONTACT:** Flying debris	3a. Be aware of and avoid potential lines of fire and wear required PPE such as eye, ear, and hand protection.
	3b. EXPOSURE: Noise and dust.	3b. Wet borehole area with sprayer to minimize dust. 3b. Stand upwind and keep body away from rig. 3b. Dust mask should be worn if conditions warrant. 3b. Wear hearing protection when the drill rig is in operation.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
3. Advancement of drilling equipment and well installation (Continued)	**3a. CONTACT:** Flying debris	3c. Contain drill cuttings and drilling water to prevent fall hazards from developing in work area. 3c. See 1b.
	3b. EXPOSURE: Noise and dust.	3d. Ensure all Emergency Safety Stop buttons function properly. 3d. Always wear leather gloves when making connections and using hand tools; wear cut-resistant (i.e., Kevlar) gloves when handling cutting tools.
	3c. FALL: Slip/trip/fall hazards.	3d. Inspect the equipment prior to use for potential pinch/amputation points. Keep hands away from pinch/amputation points and use of tools is preferable compared to fingers and hands.
	3d. CAUGHT: Limb/extremity pinching; abrasion/crushing.	3d. Inspect drill head for worn surface or missing teeth; replace if damaged or blunt. 3d. Ensure all jewelry is removed, loose clothing is secured, and PPE is secured close to the body. 3d. All non-essential personnel should stay away from the immediate work area; position body out of the line-of-fire of equipment. 3d. Drillers and helpers will understand and use the "Show Me Your Hands" Policy. 3d. Spinning rods/casing have an **exclusion zone of 10 feet** while in operation.
	3e. CONTACT: Equipment imbalance during advancement of drill equipment.	3e. Drillers will advance the borehole with caution to avoid causing the rig to become imbalanced and/or tip. 3e. The blocking and leveling devices used to secure the rig will be inspected by drillers and Roux personnel regularly to see if shifting has occurred. 3e. In addition, personnel and equipment that are non-essential to the advancement of the borehole will be positioned away from the rig at a distance that is at least as far as the boom is high (**minimum exclusion zone of 10 feet**).
	3f. EXPOSURE: Inhalation of contamination/vapors.	3f. Monitor ambient air for dangerous conditions using a calibrated photoionization detector (PID) to periodically monitor the breathing zone of the work area. 3f. If a reading of >5ppm is recorded, the Roux field personnel must temporarily cease work, instruct all Site personnel to step away from the area of elevated readings and inform the Roux PM of the condition. The Roux PM will then recommend additional precautions in accordance with the site specific health and safety plan. 3f. Use a multi-gas meter to monitor ambient air for dangerous conditions (i.e. unsafe levels of carbon monoxide when drilling indoors or the presence of explosive vapors).
	3g. EXERTION: Potential for muscle strain/injury while lifting and installing well casings, lifting sand bags, and/or lifting rods.	3g. Keep back straight and bend at the knees. 3g. Utilize team lifting for objects over 50lbs. 3g. Use mechanical lifting device for odd shaped objects.
4. Remove sample liner.	**4a. EXERTION:** Potential for muscle strain/injury while removing liner from probe rod.	4a Utilize team lifting for objects over 50lbs. 4a. Use hydraulic liner extruder if available.
	4b. CONTACT: Pinch points and cuts	4b. Place liner on sturdy surface when opening. 4b. Don cut-resistant gloves and use appropriate liner cutter when opening liners. 4b. Always cut away from the body.
	4c. EXPOSURE: Inhalation and/or dermal contact with contaminants.	4c. Wear chemical-resistant disposable gloves when handling liners. 4c. See 3e.
5. Decontaminate equipment.	**5a. EXPOSURE/CONTACT**: To contamination (e.g., Separate Phase Hydrocarbons (SPH), contaminated groundwater, vapors).	5a. Wear chemical-resistant disposable gloves and safety glasses. 5a. Contain decontamination water so that it does not spill. 5a. Use an absorbent pad to clean spills, if necessary. 5a. Spray equipment from side angle, not straight on, to avoid backsplash. 5a. See 3b.
	5b. EXPOSURE: To chemicals in cleaning solution including ammonia.	5b. See 4a. Review SDS to ensure appropriate precautions are taken and understood.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.
[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

JOB SAFETY ANALYSIS Ctrl. No. GEN-013	DATE 8/6/2018	☐ NEW ☒ REVISED	PAGE 1 of 2

JSA TYPE CATEGORY	WORK TYPE:	WORK ACTIVITY (Description):	
Generic	**Gauging and Sampling**	**Gauging and Sampling**	
DEVELOPMENT TEAM	**POSITION / TITLE**	**REVIEWED BY:**	**POSITION / TITLE**
Brandon Tufano	Staff Geologist	Brian Hobbs	Corporate Health & Safety Manager

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☒ LIFE VEST ☒ HARD HAT ☐ LIFELINE / BODY HARNESS ☒ SAFETY GLASSES	☐ GOGGLES ☐ FACE SHIELD ☐ HEARING PROTECTION ☒ SAFETY SHOES: Composite-toe or steel toe boots	☐ AIR PURIFYING RESPIRATOR ☐ SUPPLIED RESPIRATOR ☒ PPE CLOTHING: Fluorescent reflective vest or high visibility clothing	☒ GLOVES: Leather, Nitrile and cut resistant ☒ OTHER: Knee pads, Insect Repellant, sunscreen (as needed)

REQUIRED AND / OR RECOMMENDED EQUIPMENT

42-inch Safety Cones, Caution Tape, Interface Probe and/or Water Level Meter, 20-lb., Type ABC Fire Extinguisher, Buckets. Tools as needed: Socket Wrench, Screw Driver, Crow Bar, Mallet, and Wire Brush.

COMMITMENT TO SAFETY- All personnel onsite will actively participate in hazard recognition and mitigation throughout the day by verbalizing SPSAs

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Mobilization to monitoring well(s).	**1a. FALL:** Personal injury from slip/trip/fall due to uneven terrain and/or obstructions.	1a. Inspect pathway and plan for most suitable designated pathway prior to mobilization. 1a. Use established pathways, walk and/or drive on stable, secure ground and avoid steep hills or uneven terrain. 1a. If working near open water with an unguarded edge, wear life vest.
	1b. CONTACT: With traffic/third parties.	1b. Identify potential traffic sources and delineate work area with 42-inch traffic safety cones. Position vehicle to protect against oncoming traffic. Use caution tape to provide a more visible delineation of the work area if necessary. 1b. Wear appropriate PPE including high visibility clothing or reflective vest. 1b. Face traffic, maintain eye contact with oncoming vehicles, and establish a safe exit route.
	1c. EXERTION: Muscle strain from lifting equipment	1c. Use proper lifting techniques when handling/moving equipment; bend knees and keep back straight. 4c. Use mechanical assistance or team lifting techniques when equipment is 50 lbs. or heavier. 4c. Make multiple trips to carry equipment.
	1d. EXPOSURE: To biological hazards.	1d. Inspect work area for bees and insects. 1d. Use insect/tick repellent as necessary.
2. Open/close well.	**2a. EXERTION:** Muscle strain.	2a. Use proper lifting techniques; keep back straight, lift with legs and bend knees when reaching to open/close well.
	2b. CAUGHT: Pinch/crush points associated with removing/replacing manholes and working with hand tools.	2b. Wear leather gloves or cut resistant gloves when working with well cover and hand tools. 2b. Use proper tools (ratchet and pry bar for well cover) and inspect before use. 2b. Do not put fingers under well cover.
	2c. CAUGHT: Pinch points associated with placing J-plug back onto PVC pipe.	2c. See 2b. 2c. Keep fingers out of line-of-fire when securing cap.
	2d. EXPOSURE: To potential hazardous vapors.	2d. No open flames/heat sources. 2d. To minimize exposure to vapors, allow well to vent after opening it and before sampling activities begin. 2d. Stand up-wind, if possible, to avoid inhaling vapors.
3. Gauge well.	**3a. CONTACT:** With contamination (e.g. contaminated groundwater).	3a. Wear chemical-resistant disposable gloves (over cut-resistant gloves) and safety glasses when gauging well. 3a. Insert and remove probe slowly to avoid splashing. 3a. Use an absorbent pad to clean probe.
	3b. CONTACT: With traffic.	3b. See 1b.
Assess **[1]JOB STEPS**	**Analyze** **[2]POTENTIAL HAZARDS**	**Act** **[3]CRITICAL ACTIONS**

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

4. Purge and sample well	**4a. EXPOSURE/CONTACT:** To contamination (e.g., SPH, contaminated groundwater, vapors) and/or sample preservatives.	4a. Open and fill sample jars slowly to avoid splashing and contact with preservatives. 4a. Wear cut-resistant gloves and chemical-resistant disposable gloves when sampling. 4a. Fill sample containers over purge container to avoid spilling water onto the ground. 4a. Use an absorbent pad to clean spills. 4a. When using a bailer to purge a well, pull the bailer slowly from the well to avoid splash hazards. 4a. When sampling or purging the water using a bailer, pour out water slowly to reduce the potential for splash hazards with groundwater. 4a. When using a tubing valve always remove the valve slowly after sample collection to release any pressure and avoid pressurized splash hazards. 4a. When collecting a groundwater sample always point sampling apparatus (tubing, bailer, etc.) away from face and body.
	4b. CONTACT: Personal injury from cuts, abrasions, or punctures by glassware or sharp objects.	4b. To avoid spills or breakage, place sample ware on even surface. 4b. Do not over tighten caps on glass sample ware. 4b. Wear chemical-resistant nitrile disposable gloves over cut-resistant (i.e., Kevlar) gloves when sampling and handling glassware (i.e., VOA vials) or when using cutting tools.
	4c. EXERTION: Muscle strain while carrying equipment.	4c. Use proper lifting techniques when handling/moving equipment, bend knees and keep back straight. 4c. Use mechanical assistance or team lifting techniques when equipment is 50 lbs. or heavier. 4c. Make multiple trips to carry equipment.
	4d. CONTACT: With traffic.	4d. See 1b.
	4e. CONTACT: Pinch points with groundwater pump components (i.e., wheel, line, clamps).	4e. Wear leather gloves when working with groundwater pumps. 4e. Never place hands on or near pinch points such as the wheel, clamps or other moving parts during pump operations. 4e. Use the correct mechanisms, such as a pump reel, to lower pump into well. 4e. Never attempt to manually stop any moving part of equipment including hose reels and/or tubing.
	4f. EXERTION: Muscle strain from repetitive motion of bailing and sampling a well.	4f. See 4c. 4f. Include a stretch break when repetitive motions are part of the task.
5. Management of purge water.	**5a. EXPOSURE/CONTACT:** To contamination (e.g., SPH, contaminated groundwater, vapors).	5a. Do not overfill container and pour liquids slowly so that they do not splash. 5a. Properly dispose of used materials/PPE in appropriate container in designated storage area.
	5b. EXERTION: Muscle strain from lifting/carrying and moving containers.	5b. Use proper lifting techniques when lifting / carrying or moving container(s) (see 4c.). 5b. Do not overfill container(s).
6. Decontaminate equipment.	**6a. EXPOSURE/CONTACT:** To contamination (e.g., SPH, contaminated groundwater, vapors).	6a. Work on the upwind side, where possible, of decon area. 6a. Wear chemical-resistant disposable gloves and safety glasses. 6a. Use an absorbent pad to clean spills.
	6b. CAUGHT: Pinch points associated with handling hand tools	6b. See 2b. 6b. Inspect hand tools for sharp edges before decontaminating.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

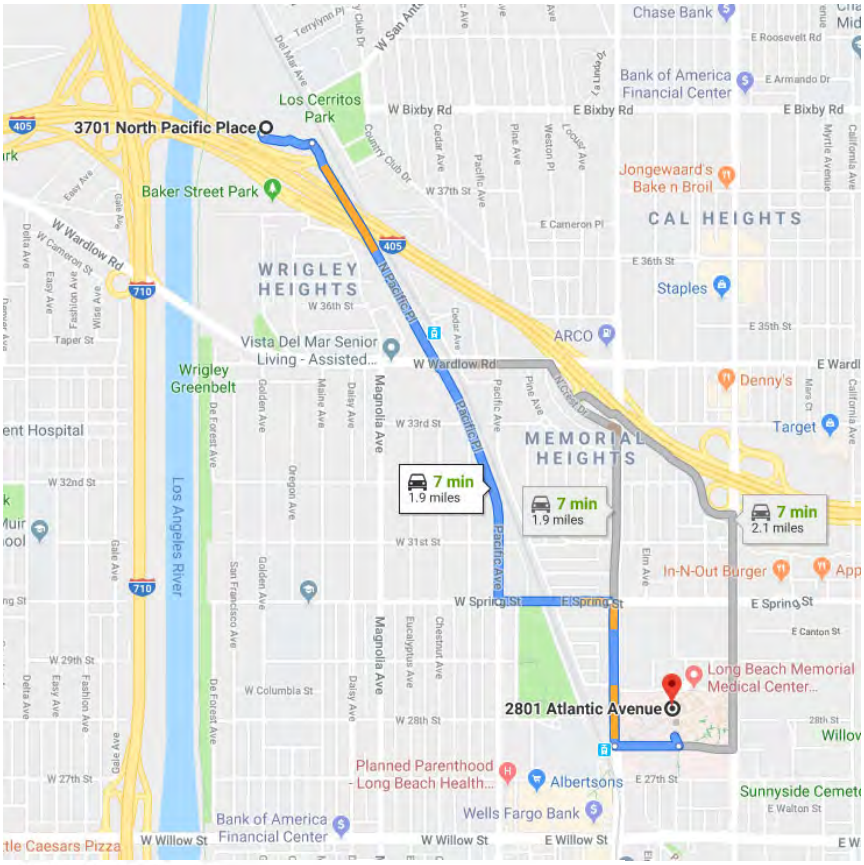
[2] A hazard is a potential danger. Break hazards into six types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

APPENDIX B

Site-Specific Emergency Response Plan & Routes to Urgent Care and Emergency Medical Facilities

Route to Hospital: Memorial Care Long Beach Medical Center; 2801 Atlantic Ave, Long Beach, CA 90806



3701 N Pacific Pl
Long Beach, CA 90806

Head south on N Pacific Pl toward Amebco Rd
Restricted usage road
0.1 mi

Turn right to stay on N Pacific Pl
1.1 mi

Turn left onto W Spring St
0.2 mi

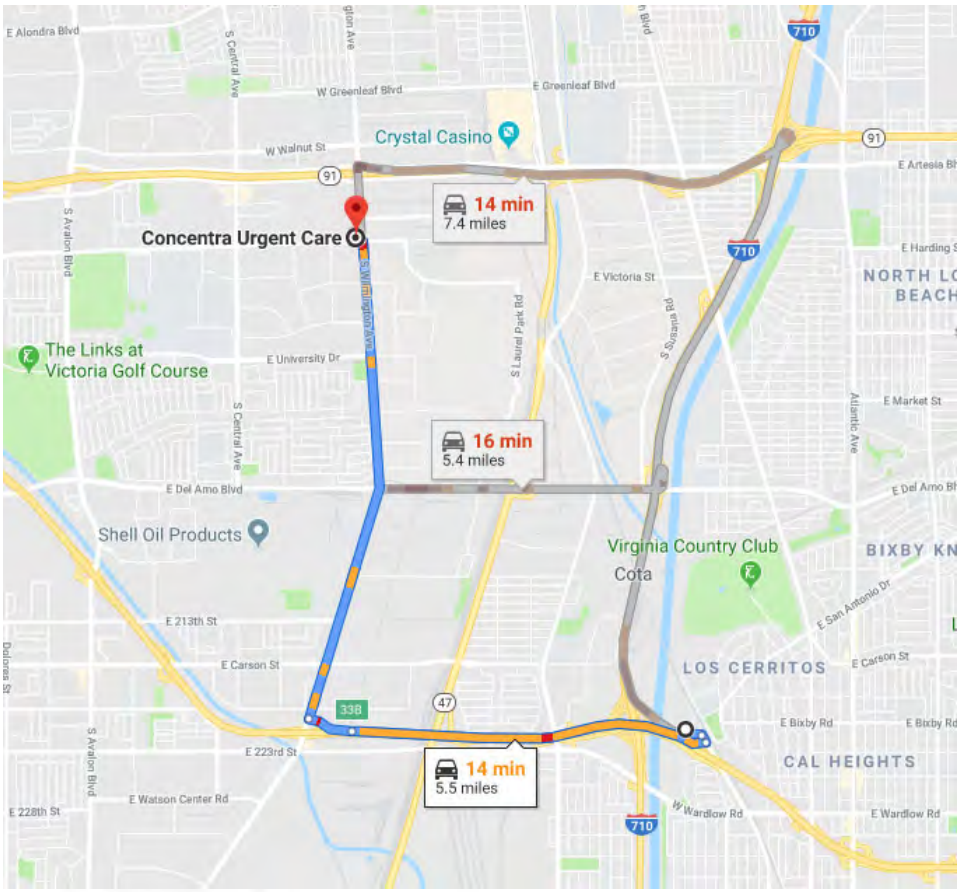
Turn right onto Long Beach Blvd
0.8 mi

Turn left onto Memorial Medical Center
0.1 mi

Turn left at N Pasadena Ave
112 ft

2801 Atlantic Ave
Long Beach, CA 90806

Route to Urgent Care Facility: Concentra Urgent Care, Compton – Rancho Dominguez; 3701 N Pacific Pl, Long Beach, CA 90806



3701 N Pacific Pl
Long Beach, CA 90806

Take I-405 N and S Wilmington Ave to your destination in Carson

12 min (5.5 mi)

Turn right

Destination will be on the right

34 s (59 ft)

Concentra Urgent Care
1499 S Wilmington Ave, Compton, CA 90220

Emergency Response Site Map



APPENDIX C

SDSs for Chemicals Used

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

1 Identification of the substance/mixture and of the supplier

1.1 Product identifier

Trade Name: Alconox
Synonyms:
Product number: Alconox

1.2 Application of the substance / the mixture : Cleaning material/Detergent

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer
Alconox, Inc.
30 Glenn Street
White Plains, NY 10603
1-914-948-4040

Supplier
Not Applicable

Emergency telephone number:
ChemTel Inc
North America: 1-800-255-3924
International: 01-813-248-0585

2 Hazards identification

2.1 Classification of the substance or mixture:

In compliance with EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments.

Hazard-determining components of labeling:
Tetrasodium Pyrophosphate
Sodium tripolyphosphate
Sodium Alkylbenzene Sulfonate

2.2 Label elements:

Skin irritation, category 2.
Eye irritation, category 2A.

Hazard pictograms:



Signal word: Warning

Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P501 Dispose of contents and container as instructed in Section 13.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

Additional information: None.

Hazard description

Hazards Not Otherwise Classified (HNOC): None

Information concerning particular hazards for humans and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients

3.1 Chemical characterization : None

3.2 Description : None

3.3 Hazardous components (percentages by weight)

Identification	Chemical Name	Classification	Wt. %
CAS number: 7758-29-4	Sodium tripolyphosphate	Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	12-28
CAS number: 68081-81-2	Sodium Alkylbenzene Sulfonate	Acute Tox. 4; H303 Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	8-22
CAS number: 7722-88-5	Tetrasodium Pyrophosphate	Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	2-16

3.4 Additional Information : None.

4 First aid measures

4.1 Description of first aid measures

General information: None.

After inhalation:

Maintain an unobstructed airway.
Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:

Wash affected area with soap and water.
Seek medical attention if symptoms develop or persist.

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.
Remove contact lens(es) if able to do so during rinsing.
Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly.
Seek medical attention if irritation, discomfort, or vomiting persists.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

4.2 Most important symptoms and effects, both acute and delayed

None

4.3 Indication of any immediate medical attention and special treatment needed:

No additional information.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons unsuitable extinguishing agents : None

5.2 Special hazards arising from the substance or mixture :

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Protective equipment:

Wear protective eye wear, gloves and clothing.
Refer to Section 8.

5.4 Additional information :

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols.
Avoid contact with skin, eyes and clothing.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures :

Ensure adequate ventilation.
Ensure air handling systems are operational.

6.2 Environmental precautions :

Should not be released into the environment.
Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up :

Wear protective eye wear, gloves and clothing.

6.4 Reference to other sections : None

7 Handling and storage

7.1 Precautions for safe handling :

Avoid breathing mist or vapor.
Do not eat, drink, smoke or use personal products when handling chemical substances.

7.2 Conditions for safe storage, including any incompatibilities :

Store in a cool, well-ventilated area.

7.3 Specific end use(s):

No additional information.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

8 Exposure controls/personal protection





8.1 Control parameters :

7722-88-5, Tetrasodium Pyrophosphate, OSHA TWA 5 mg/m3.

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory protection:

Not needed under normal conditions.

Protection of skin:

Select glove material impermeable and resistant to the substance.

Eye protection:

Safety goggles or glasses, or appropriate eye protection.

General hygienic measures:

Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.

9 Physical and chemical properties

Appearance (physical state, color):	White and cream colored flakes - powder	**Explosion limit lower**: **Explosion limit upper**:	Not determined or not available. Not determined or not available.
Odor:	Not determined or not available.	**Vapor pressure at 20°C**:	Not determined or not available.
Odor threshold:	Not determined or not available.	**Vapor density**:	Not determined or not available.
pH-value:	9.5 (aqueous solution)	**Relative density**:	Not determined or not available.
Melting/Freezing point:	Not determined or not available.	**Solubilities**:	Not determined or not available.
Boiling point/Boiling range:	Not determined or not available.	**Partition coefficient (n-octanol/water)**:	Not determined or not available.
Flash point (closed cup):	Not determined or not available.	**Auto/Self-ignition temperature**:	Not determined or not available.
Evaporation rate:	Not determined or not available.	**Decomposition temperature**:	Not determined or not available.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

Flammability (solid, gaseous):	Not determined or not available.	**Viscosity**:	a. Kinematic: Not determined or not available. b. Dynamic: Not determined or not available.
Density at 20°C:	Not determined or not available.		

10 Stability and reactivity

10.1 Reactivity : None

10.2 Chemical stability : None

10.3 Possibility hazardous reactions : None

10.4 Conditions to avoid : None

10.5 Incompatible materials : None

10.6 Hazardous decomposition products : None

11 Toxicological information

11.1 Information on toxicological effects :

Acute Toxicity:

Oral:

: LD50 > 5000 mg/kg oral rat - Product .

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Sodium Alkylbenzene Sulfonate: Causes skin irritation. .

Serious eye damage/irritation:

Sodium Alkylbenzene Sulfonate: Causes serious eye irritation .

Tetrasodium Pyrophosphate: Rabbit - Risk of serious damage to eyes .

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

IARC (International Agency for Research on Cancer): None of the ingredients are listed.

NTP (National Toxicology Program): None of the ingredients are listed.

Germ cell mutagenicity: No additional information.

Reproductive toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

12 Ecological information

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

12.1 Toxicity:

Sodium Alkylbenzene Sulfonate: Fish, LC50 1.67 mg/l, 96 hours.
Sodium Alkylbenzene Sulfonate: Aquatic invertebrates, EC50 Daphnia 2.4 mg/l, 48 hours.
Sodium Alkylbenzene Sulfonate: Aquatic Plants, EC50 Algae 29 mg/l, 96 hours.
Tetrasodium Pyrophosphate: Fish, LC50 - other fish - 1,380 mg/l - 96 h.
Tetrasodium Pyrophosphate: Aquatic invertebrates, EC50 - Daphnia magna (Water flea) - 391 mg/l - 48 h.

12.2 Persistence and degradability: No additional information.

12.3 Bioaccumulative potential: No additional information.

12.4 Mobility in soil: No additional information.

General notes: No additional information.

12.5 Results of PBT and vPvB assessment:

PBT: No additional information.

vPvB: No additional information.

12.6 Other adverse effects: No additional information.

13 Disposal considerations

13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal)

Relevant Information:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14 Transport information

14.1 UN Number: None
ADR, ADN, DOT, IMDG, IATA

14.2 UN Proper shipping name: None
ADR, ADN, DOT, IMDG, IATA

14.3 Transport hazard classes:
ADR, ADN, DOT, IMDG, IATA

Class: None
Label: None
LTD. QTY: None

US DOT
Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.

Non Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

	Comments: None	**Comments:** None
14.4	**Packing group:** ADR, ADN, DOT, IMDG, IATA	None
14.5	**Environmental hazards** :	None
14.6	**Special precautions for user:**	None
	Danger code (Kemler):	None
	EMS number:	None
	Segregation groups:	None
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**	Not applicable.
14.8	**Transport/Additional information:**	
	Transport category:	None
	Tunnel restriction code:	None
	UN "Model Regulation":	None

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

North American

SARA

Section 313 (specific toxic chemical listings): None of the ingredients are listed.
Section 302 (extremely hazardous substances): None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Clean up and Liability Act) Reportable

Spill Quantity: None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed.
Rules and Orders: Not applicable.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Canadian

Canadian Domestic Substances List (DSL):
All ingredients are listed.

EU

REACH Article 57 (SVHC): None of the ingredients are listed.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

Germany MAK: Not classified.

Asia Pacific

Australia

Australian Inventory of Chemical Substances (AICS): All ingredients are listed.

China

Inventory of Existing Chemical Substances in China (IECSC): All ingredients are listed.

Japan

Inventory of Existing and New Chemical Substances (ENCS): All ingredients are listed.

Korea

Existing Chemicals List (ECL): All ingredients are listed.

New Zealand

New Zealand Inventory of Chemicals (NZOIC): All ingredients are listed.

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients are listed.

Taiwan

Taiwan Chemical Substance Inventory (TSCI): All ingredients are listed.

16 Other information

Abbreviations and Acronyms: None

Summary of Phrases

Hazard statements:

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P501 Dispose of contents and container as instructed in Section 13.

Manufacturer Statement:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

NFPA: 1-0-0

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

HMIS: 1-0-0

APPENDIX D

Incident Investigation and Reporting Program

INCIDENT INVESTIGATION AND REPORTING MANAGEMENT PROGRAM

CORPORATE HEALTH AND SAFETY MANAGER	:	**Brian Hobbs, CIH, CSP**
EFFECTIVE DATE	:	**01/19**
REVISION NUMBER	:	**4**

TABLE OF CONTENTS

1. PURPOSE 1

2. SCOPE AND APPLICABILITY 1

3. RESPONSIBILITIES 1
   3.1 Corporate Health and Safety Manager (CHSM) 1
   3.2 Office Manager (OM) 1
   3.3 Office Health and Safety Manager (OHSM) 1
   3.4 Project Manager (PM) 2
   3.5 Site Health and Safety Officer (SHSO) 2
   3.6 All Personnel 2

4. PROCEDURE 2
   4.1 Incident Investigation 2
   4.2 Incident Report 3

Appendix A – Accident Report and Investigation Form 1

Appendix B – Near Loss Form 1

Appendix C – Injury Illness Reporting Flow Chart 1

APPENDICES

Appendix A – Accident Report and Investigation Form

Appendix B – Near Loss Form

Appendix C – Injury Illness Reporting Flow Chart

1. PURPOSE

Roux Associates, Inc. and its affiliated companies, Roux Environmental Engineering and Geology, D.P.C, and Remedial Engineering (collectively, "Roux") has instituted the following management program for reporting Environmental Health and Safety (EHS) incidents and near losses, investigation and correcting the causes of incidents, tracking incidents and corrective actions taken, and sharing the cause and corrective actions with Roux personnel. These practices and procedures establish a method to track progress and improvements to the company EHS performance.

2. SCOPE AND APPLICABILITY

These procedures apply to all Roux employees. Employees are required to follow these procedures for all incidents involving Roux personnel, or other personnel (e.g., subcontractors) working for Roux, regardless of the specific work activity or work location.

This program is intended, in part, to fulfill the Occupational Safety and Health Administration (OSHA) occupational injury and illness reporting and recording requirements cited in the Code of Federal Regulations (CFR) at 29 CFR 1904.

3. RESPONSIBILITIES

It shall be the responsibility of all Roux employees to report all incidents as soon as possible to the PM (or Administrative Manager for office-related incidents), SHSO, OHSM and OM, regardless of severity. Additionally, the following positions have specific responsibilities for implementing this specific SOP.

3.1 Corporate Health and Safety Manager (CHSM)

- The CHSM has the responsibility of ensuring that a system is in place for reporting, investigation, correction, and communicating of EHS incidents and near losses.
- The CHSM has the overall responsibility of implementing and communicating the contents of this program to Office Health and Safety Managers (OHSMs).
- The CHSM will review all incidents and corrective actions taken. The CHSM will provide a summary of serious incidents to the Board of Directors.
- The CHSM will communicate learnings from incidents and corrective actions taken to all personnel, through quarterly communications.
- The CHSM will periodically review and evaluate the effectiveness of this procedure.

3.2 Office Manager (OM)

- The OM will designate the individual to serve as the OHSM responsibility for ensuring that requirements in this procedure are met.
- The OM will ensure that sufficient resources are allocated to fulfill the requirements of this procedure.
- The OM will conduct final review of all incident reports prepared under this procedure.

3.3 Office Health and Safety Manager (OHSM)

- It is the responsibility of the OHSM to review draft incident reports and assist the OM in finalizing reports of all accidents, illnesses and incidents related to work activity, and to assist the SHSO when necessary.

- The OHSM may not approve a site-specific HASP unless the HASP includes incident reporting procedures and forms.
- The OHSM will suggest and implement corrective actions to prevent the same type of incident from re-occurring.
- The OHSM will keep all incident reports, corrective action taken, and follow-up forms on file. The OHSM will provide copies of all final reports and forms to the CHSM within one week of the incident. If a serious incident occurs, the CHSM will be notified as soon as possible.
- The occurrence of a serious incident will trigger an EHS audit by the OHSM.

3.4 Project Manager (PM)

- It shall be the PM's responsibility to promptly correct any deficiencies that were determined to cause or contribute to the incident investigated.
- If a site-specific HASP is not utilized, the PM must ensure that field personnel have copies of the Roux Accident Reporting and Investigation Forms.
- The PM has the responsibility of ensuring that the SHSO and other field personnel understand the need for timely incident reporting.
- In the event of an incident, the PM will determine the root cause of the incident with the assistance of the SHSO and/or OHSM. The PM should provide input as to corrective preventative measures.

3.5 Site Health and Safety Officer (SHSO)

- The SHSO shall provide the details of the incident to the OHSM, PM and OM. The OM or his delegate will provide additional notifications, such as, in the event of a work-related motor vehicle accident, to include Roux Legal.
- It is the SHSO's responsibility to immediately notify the OHSM and the PM when any incident occurs. Such notification should take place immediately following the completion of any emergency actions required by the HASP.
- The SHSO should provide input as to corrective preventative measures.
- The SHSO must ensure that corrective actions proposed by the OHSM or OM are carried out.

3.6 All Personnel

- All personnel are responsible for reporting and describing the details of any incident in which they are involved to the SHSO and PM. Such notification should take place immediately following the completion of any emergency actions required by the HASP and after the loss and before the scene is disturbed or vehicles moved.

4. PROCEDURE

4.1 Incident Investigation

On receiving a report of incident or near loss occurrence from a Roux employee, the SHSO or OHSM shall immediately investigate the circumstances and shall make appropriate recommendations to prevent recurrence. The Incident Report form can be found in **Appendix A**, and Near Loss form can be found in **Appendix B**. The OHSM may participate in the investigation of more serious accidents and incidents that occur on-site. The Corporate Health and Safety Manager (CHSM) shall also be immediately notified by telephone on occurrence of a serious accident or incident. At the CHSM's discretion, he may also participate in the investigation.

4.2 Incident Report

Details of the incident shall be documented using the Accident Report and Investigation Forms (Appendix A) within twenty-four (24) hours of the incident and shall be distributed to the SHSO, the OHSM, PM, OM and the CHSM. The CHSM will update OSHA Forms 301 and the 300 log when necessary.

Appendix A – Accident Report and Investigation Form

☐ Roux Environmental Engineering and Geology, D.P.C.
☐ Roux Associates, Inc. ☐ Remedial Engineering, P.C.

ACCIDENT REPORT

Brian Hobbs, Corporate Health and Safety Manager
Cell: (631) 807-0193; Office: (631) 630-2416

PART 1: ADMINISTRATIVE INFORMATION

Project #: _____
Project Name: _____
Project Location (street address/city/state)**:**
_____
_____
Client Corporate Name / Contact / Address / Phone #:
_____
_____
_____
_____
_____

Immediate Verbal Notifications Given To:

Corporate Health & Safety	☐Yes	☐No
Office Health & Safety	☐Yes	☐No
Office Manager	☐Yes	☐No
Project Principal	☐Yes	☐No
Project Manager	☐Yes	☐No
Client Contact	☐Yes	☐No

REPORT STATUS (time due):
☐ Initial (24 hr) Date: _____
☐ Final (5-10 days) Date: _____

Accident Report Delivered To:

Corporate Health & Safety	☐Yes	☐No
Office Health & Safety	☐Yes	☐No
Office Manager	☐Yes	☐No
Project Principal	☐Yes	☐No
Project Manager	☐Yes	☐No

REPORT TYPE: ☐ Loss ☐ Near Loss Estimated Costs: $ _____

OSHA CASE # Assigned by Corporate Health & Safety if Applicable:

Corporate Health & Safety Confirmed Final Accident Report
☐Yes ☐No

DATE OF INCIDENT: _____

TIME INCIDENT OCCURRED: _____ ☐AM ☐PM

INCIDENT LOCATION – City, State, and Country (If outside U.S.A.) _____

INCIDENT TYPES: (Select most appropriate if Loss occurred.)
From lists below, please select the option that best categories the incident. When selecting an injury or illness, also indicate the severity level.

☐**INJURY** ☐**ILLNESS**

----------**Severity Level**----------

☐Fatality ☐First Aid ☐Medical
☐Restricted Work ☐Lost Time Treatment

OTHER INCIDENT TYPES

☐Spill / Release
Material involved: _____
Quantity (U.S. Gallons): _____

☐Misdirected Waste ☐Consent Order ☐NOV
☐Property Damage ☐Exceedance
☐Motor Vehicle ☐Fine / Penalty

ACTIVITY TYPE (Check most appropriate one.)

☐CAMP	☐Gauging	☐Subsurface Clearance
☐Construction	☐O&M	☐Trucking
☐Drilling	☐Other Soil Work (e.g. Compaction)	☐Waste Mgmt.
☐Driving	☐Sampling	☐Work Area Prep.
☐Excavation / Trenching	☐Site Walk/Inspection	☐Other

INJURY TYPE (Check all applicable.)

☐Abrasion	☐Occupational Illness
☐Amputation	☐Puncture
☐Burn	☐Rash
☐Cold/Heat Stress	☐Repetitive Motion
☐Inflammation	☐Sprain/Strain
☐Laceration	☐Other_____

BODY PART AFFECTED (Check all applicable.)

☐Respiratory	☐Shoulder	☐Face
☐Neck	☐Arm	☐Leg
☐Chest	☐Wrist	☐Knee
☐Abdomen	☐Hand/Fingers	☐Ankle
☐Groin	☐Eye	☐Foot/Toes
☐Back	☐Head	☐Other_____

I. PERSON(S) DIRECTLY / INDIRECTLY INVOLVED IN INCIDENT (Attach additional information as necessary/applicable.)

Name/Phone # of Each Person Directly/Indirectly Involved in Incident:	Designate: Roux/Remedial Employee Roux/Remedial Subcontractor Client Employee Client Contractor Third Party	As applicable, Current Occupation; Yrs in Current Occupation; Current Position; and Yrs in Current Position:	As applicable, Employer Name; Address; and Phone #:	As applicable, Supervisor Name; and Phone #:
1)				
2)				

II. PERSONS INJURED IN INCIDENT (Attach additional information as necessary/applicable.)

Name/Phone # of Each Person Injured in Incident:	Designate: Roux/Remedial Employee Roux/Remedial Subcontractor Client Employee Client Contractor Third Party	As applicable, Current Occupation; Yrs in Current Occupation; Current Position; and Yrs in Current Position:	As applicable, Employer Name; Address; and Phone #:	As applicable, Supervisor Name; and Phone #:	Description of Injury:
1)					
2)					

III. PROPERTY DAMAGED IN INCIDENT (Attach additional information as necessary/applicable.)

Property Damaged:	Property Location:	Owner Name, Address & Phone #:	Description of Damage:	Estimated Cost:
1)				
2)				$

IV. WITNESSES TO INCIDENT (Attach additional information as necessary/applicable.)

Witness Name:	Address:	Phone #:
1)		
2)		

PART 2: WHAT HAPPENED AND INCIDENT DETAILS

PROVIDE FACTUAL DESCRIPTION OF INCIDENT (e.g., describe loss/near loss, injury, response / treatment).

I. AUTHORITIES/GOVERNMENTAL AGENCIES NOTIFIED (Attach additional information as necessary/applicable.)

Authority/Agency Notified:	Name/Phone #/Fax # of Person Notified:	Address of Person Notified:	Date & Time of Notification:	Exact Information Reported/Provided:

II. PUBLIC RESPONSES TO INCIDENT (if applicable)

Response/Inquiry By: (check one)	Entity Name:	Name/Phone # of Respondent/ Inquirer:	Address of Entity/Person:	Date & Time of Response/Inquiry:
☐Newspaper ☐Television ☐Community Group ☐Neighbors ☐Other _____				

Describe Response/Inquiry:

Roux/Remedial Response:

(Check all that apply.) (Attach photos, drawings, etc. to help illustrate the incident.)
ATTACHED INFORMATION: ☐Photo ☐Sketches ☐Vehicle Acord Form ☐Police Report ☐Other

Name(s) of person(s) who prepared Initial and Final Report:	**Title(s):**	**Phone number(s):**

PART 3: INVESTIGATION TEAM ANALYSIS

Date Investigation Started (MM/DD/YYYY):

Factors, Root Causes, and Solution (FRCS): Complete FRCS form and answer all 7 factor questions. If answering NO to Factors 1 – 4 identify root cause(s) and explain why QIs) occurred. If answering YES to Factors 5 – 7 circle the root cause(s). Transfer the solutions guidance that addresses each root cause from the FRCS form to this form. Attach your completed FRCS Worksheet. If Factors 1-7 do not apply to the incident, write "External Cause" in the Factor column below and leave the remaining fields blank.

DESCRIPTION OF UNDESIRABLE BEHAVIOR/CONDITION

1.

2.

FACTOR(S) AND SOLUTION(S): HOW TO REDUCE POSSIBILITY OF INCIDENT RECURRING
Selection of factors and solutions reflects the analysis of investigation team and is not meant to be a legally binding conclusion as to the Root Cause and/or solution.

CAUSAL FACTOR/ BEHAVIOR/ CONDITION	ROOT CAUSE	SOLUTION(S) [Must Match Root Cause(s)]	PERSON RESPONSIBLE	AGREED DUE DATE	ACTUAL COMPLETION DATE

INVESTIGATION TEAM:

PRINT NAME	JOB POSITION	DATE	SIGNATURE

QUALITY REVIEW Correct root cause(s) identified? Do root cause(s) and solution(s) match? Are solution(s) feasible / maintainable?

Name: **Job Title:**

PART 4: Date Solutions were Implemented & Validated (Were Solutions Effective?)

Date	Solution	Verifier / Validator Name and Job Title	**Details** (of I & V performed)

Appendix B – Near Loss Form

HEALTH & SAFETY NEAR LOSS
ROUX REPORT FORM

☐ **Roux Environmental Engineering and Geology, D.P.C.**
☐ **Roux Associates, Inc.** ☐ **Remedial Engineering, P.C.**

(Check applicable company name)

PART 1: ADMINISTRATIVE INFORMATION

Office: ☐ New York ☐ Massachusetts ☐ New Jersey ☐ Illinois ☐ CA - Los Angeles ☐ CA - Oakland

Project Manager:	**Project Principal:**
Project Name:	**Project Location:**

PART 2: NEAR LOSS INCIDENT DETAILS

Date\Time Occurred (MM/DD/YYYY HH:MM)**:**	**Date\Time Submitted** (MM/DD/YYYY HH:MM)**:**

NEAR LOSS INCIDENT TYPE - What could have happened? - Select all that apply (1-7)

1. ☐ Fire / Explosion
2. ☐ Injury / Illness
3. ☐ Security (e.g., theft, trespassing, vandalism)
4. ☐ Environmental (Spill, permit exceedance, etc.)
5. ☐ Transportation of personnel (vehicle accident)
6. ☐ Property/Equipment Damage
7. ☐ Business Interruption

Event Leading to Potential Injury/Illness:

Job Task*:	**Equipment Involved*:**

WHAT HAPPENED? Do not include individuals' names. Ensure photos, sketches, etc. are not personally identifiable unless written consent has been obtained.

Summary (1-2 sentences. Provide brief description of the incident. Provide facts only, no speculation or opinion)**:**

Incident Details (Brief factual details of what, where, when; include photos, sketches, etc. as attachments)**:**

Immediate Corrective Actions Taken:

SERIOUS INJURY OR FATALITY (SIF): IF AN ACTUAL SIF, USE EXISTING ROUX ACCIDENT REPORTING FORM

Could this have resulted in a SIF? ☐ **Yes** ☐ **No**

A potential SIF is defined as likely to have caused an injury resulting in significant physical body damage with probable long term and/or life altering complications.

INCIDENT INVOLVED:

Roux Employee: ☐ **Yes** ☐ **No** **Subcontractor Company Name:**

INVESTIGATION TEAM

NAME	JOB TITLE	NAME	JOB TITLE

PART 3: INCIDENT INVESTIGATION FINDINGS AND REPORT QUALITY REVIEW

Date Investigation Started (mm/dd/yyyy):

Factors, Root Causes, and Solution (FRCS): Complete FRCS form and answer all 7 factor questions. If answering NO to Factors 1 – 4 identify root cause(s) and explain why QIs) occurred. If answering YES to Factors 5 – 7 circle the root cause(s). Transfer the solutions guidance that addresses each root cause from the FRCS form to this form. Attach your completed FRCS Worksheet. If Factors 1-7 do not apply to the incident, write "External Cause" in the Factor column below and leave the remaining fields blank. Do not include individuals' names.

DESCRIPTION OF UNDESIRABLE BEHAVIOR/CONDITION

1.

2.

FACTOR(S) AND SOLUTION(S): HOW TO REDUCE POSSIBILITY OF INCIDENT RECURRING
Selection of factors and solutions reflects the analysis of investigation team and is not meant to be a legally binding conclusion as to the Root Cause and/or solution.

Behavior / Condition	Root Cause	Solution(s) (Must Match Root Cause)	Person Responsible for Completion	Completion Target Date	Completion Actual Date

QUALITY REVIEW Correct root cause(s) identified? Do root cause(s) and solution(s) match? Are solution(s) feasible / maintainable?

Name: **Job Title:**

PART 4: Date Solutions were Implemented & Validated (Were Solutions Effective?)

Date	Solution	Verifier / Validator Name and Job Title	**Details** (of I & V performed)

***JOB TASK - Select the most appropriate one** (primary job associated with incident-related work activity, avoid "Other" if possible)

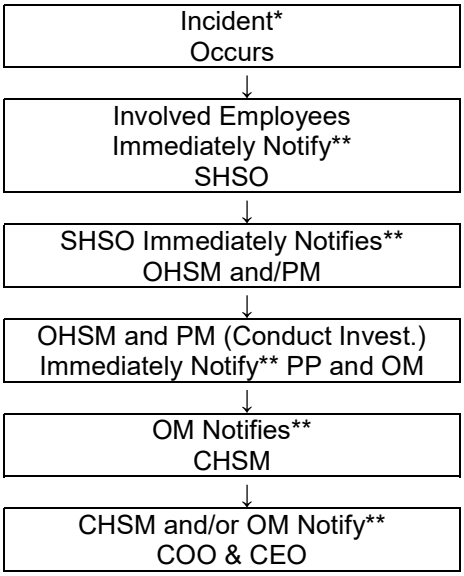
1. CAMP
2. Construction
3. Drilling
4. Driving
5. Excavation/Trenching
6. Gauging
7. O&M
8. Other Soil Work (e.g. Compaction)
9. Sampling
10. Site Walk/ Inspection
11. Subsurface Clearance
12. Trucking
13. Waste Management
14. Work Area Preparation
15. Other

***EQUIPMENT INVOLVED THAT CONTRIBUTED TO H&S NEAR LOSS - Select all that apply**

1. Air Stripper
2. API Separator
3. Automobile
4. Boom Material
5. Bulldozer
6. Cable
7. Carbon Drum / Vessel
8. Chain Block
9. Compressor, Air
10. Control Panel (local)
11. Crane (mobile)
12. Drill Rig
13. Drilling Equipment, Vacuum
14. Drum, Vertical
15. Dump Truck
16. Electric Heater
17. Electrical Power Supply
18. Engine, Combustion
19. Equipment Safety Grounding
20. Excavator / Power Shovel
21. Exclusion Zone Equipment
22 Fan / Blower
23 Fencing
24 Filter
25. Fire Extinguisher
26. Forklift
27. Front End Loader
28. Grader
29. Hammer
30. Knife
31. Non-Powered Equipment
32. Powered Equipment
33. Drill
34. Grinder
35. Hydraulic Torque Wrench
36. Powered Saw
37. Impact Wrench
38. Saw
39. Screwdriver
40. Shears
41. Shovel
42. Snip
43. Wrench
44. Hoist
45, Hook/Clamp/Buckle, etc.
46. Jack
47. Ladder, Extension
48. Ladder, Platform
49. Ladder, Step
50. Lock Out / Tag Out
51. Maintenance Tool, General
52. Manifold
53, Manlift/Basket/Cherry Picker
54. Motor, Electric
55. Oxidizer
56. Pallet
57. Piping
58. Piping, Hose
59. Piping, Injection/Mixing Point
60. Hydrojet
61. Centrifugal Pump
62. Diaphragm Pump
63. Reciprocating Pump
64. Regenerative Pump
65. Rotary Pump
66. Transfer Pump
67. Submersible Pump
68. Face Shield
69. Fall Protection
70. Gloves
71. Hard Hat / Helmet
72. Hearing Protection
73. Respiratory PPE (Chemical)
74. Respiratory PPE (Particulate)
75. Safety Glasses
76. Safety Goggles
77. Safety Shoes / Boots
78. Safety Vest / Clothing
79. Rope
80. Bailer
81. Geoprobe
82. Hand Auger
83. PID
84. Multi-Gas Meter
85. Sample Container
86. Split-Spoon Sampler
87. Sling
88. Snow Blower
89. Snow Plow
90. Space Heater
91. Air Sparging System
92. Carbon Treatment Sys
93. Chemical Oxidation Sy
94. Dual Phase Product Recovery System
95. Groundwater Pump and Treat System
96. POET System
97. Shed or Trailer
98. Vapor Extraction System
99. Vapor-Phase Treatment System
100. Other System, Type:___
101. Surge Tank
102. Underground Tank
103. Telemetry System
104. Testing Devices
105. Tractor Trailer
106. Truck, Flatbed
107. Truck, Pickup
108. Truck, Tank Truck
109. Truck, Vacuum
110. Safety Valve
111. Block Valve
112. Extraction Well
113. Monitoring Well
114. Recovery Well
115. Winch
116. Wire Rope
117. No Equipment Involved
118. MPT – Traffic Control Devices
118. Not in List (describe):___

Appendix C – Injury Illness Reporting Flow Chart

Health & Safety Near/Loss – Loss (Incident)*
Notification Flow Chart



* Incident – any work or site-related occurrence that resulted in, or could potentially have resulted in, the need for medical care or in property damage (i.e., all injuries or illnesses, exposure to toxic materials or any other significant occurrence resulting in property damage or in a "near loss")

** Verbal Notification

Initial Incident Report (written) to SHSO, OHSM, OM and CHSM within 24 hours
Follow-up Report within one week.

APPENDIX E

Subsurface Utility Clearance Management Program

SUBSURFACE UTILITY CLEARANCE MANAGEMENT PROGRAM

CORPORATE HEALTH AND SAFETY MANAGER	**:**	**Brian Hobbs, CIH, CSP**
EFFECTIVE DATE	**:**	**01/19**
REVISION NUMBER	**:**	**2**

TABLE OF CONTENTS

1. PURPOSE 1
2. SCOPE AND APPLICABILITY 1
3. PROCEDURES 1
   3.1 Before Intrusive Activities 1
   3.2 During Intrusive Activities 2
   3.3 Stop Work Authority 3

APPENDICES

Appendix A – Definitions

Appendix B – Example of Completed One Call

Appendix C – Roux Subsurface Utility Clearance Checklist

Appendix D – Utility Verification/Site Walkthrough Record

1. PURPOSE

Roux Associates, Inc. and its affiliated companies, Roux Environmental Engineering and Geology, D.P.C, and Remedial Engineering (collectively, "Roux") has instituted the following program for completing proper utility mark-outs and for conducting subsurface clearance activities. This establishes a method to ensure, to the greatest extent possible, that utilities have been identified and contact and/or damage to underground utilities and other subsurface structures will be avoided.

2. SCOPE AND APPLICABILITY

The Subsurface Utility Clearance Management Program applies to all Roux employees, its contractors and subcontractors. Employees are expected to follow this program for all intrusive work involving Roux or other personnel (e.g., contractors/subcontractors) working for Roux unless the client's requirements are more stringent. Deviation from the program regardless of the specific work activity or work location must be pre-approved based on client's site knowledge, site experience and client's willingness for the use of this program. Any and all exceptions shall be documented and pre-approved by the Project Principal and the Office Manager.

3. PROCEDURES

3.1 Before Intrusive Activities

During the project kick-off meeting for intrusive activities the PM will review the Roux Subsurface Utility Clearance Checklist and Utility Verification (Appendix C) / Site Walkthrough Record (Appendix D) and the below bullet points with the project field team:

(Please note that these are intended as general reminders only and should not be solely relied upon.)

- Ensure the Mark-out / Stake-out Request Information Sheet (or one-call report) is complete and accurate for the site including address and cross streets and review for missing utilities. (Note: utility mark-out organizations do not have contracts with all utilities and it is often necessary to contact certain utilities separately such as the local water and sewer authorities).
- Have written confirmation prior to mobilizing to the site that the firm or Roux personnel performing the intrusive activity has correctly completed the mark-out notification process including requesting mark-outs, waiting for mark-outs to be applied to ground surfaces at the site, and receiving written confirmation of findings (via fax or email) from utility operators for all known or suspected utilities in the proposed area of intrusive activity, and provided utility owner written confirmation to Roux personnel for review and project files documentation.
- Do not begin any intrusive activity until all utilities mark-out has been completed (i.e., did all utilities mark-out the site?) and any unresolved mark-out issues are finalized. Perform a site walk to review the existing utilities and determine if said utilities have been located by the utility locators.

  (Note: The Tolerance Zone is defined as two feet plus half of the diameter or half of the greatest dimension (for elliptical sewers, duct banks and other non-cylindrical utilities) of a utility and two feet from the outside edge of any subsurface structure.)
- Install Pre-Clearance exploratory test holes (e.g., hand-dug test holes or other soft digging techniques) for the first 5-ft below land surface (BLS) at each location prior to conducting mechanized intrusive activities. The size of the pre-clearance exploratory test hole should be at a minimum twice the diameter of any downhole tool or boring device. (Note: Pre-Clearance exploratory test holes should be defined in the SOW/proposal provided to the client to prevent project delays and to allow adequate time for PM and PP to evaluate alternative approaches for the project. Alternative approaches will need to be pre-approved by the OM.

- For excavations, all utilities need to be marked and then exposed by hand following the protocols in this program. Pre-clearing for excavations may be performed by the "moat" technique (i.e., soft digging around the perimeter). In these cases, dig in small lifts (<12" for first 5 feet) using a dedicated spotter.) For Tolerance Zone work, unless otherwise agreed upon with the Utility Operator, work within the tolerance zone requires verification by means of hand-dug test holes performed to expose the utility. Once structures have been verified a minimum clearance of two feet must be maintained between the utility and any powered equipment.
- In addition, the following activities should be conducted:
  - Review the work scope to be performed with the site owner/tenant to determine if it may impact any utilities;
  - Attempt to procure any utility maps or historic drawings of subsurface conditions of the site;
  - **Determine the need for utility owner companies to be contacted or to have their representatives on site**;
  - Where mark-outs terminate at the property boundary, consider the use of private utility locating / GPR / geophysical-type services which may be helpful in locating utilities. Use of private utility locating firms, however, does not eliminate the legal requirement for the Excavator firm to submit a request for Public Utility Mark-outs. Also, the information provided by the service may be inaccurate and unable to locate subsurface utilities and structures in urban areas, landfills, urban fill areas and below reinforced slabs, etc. They should not be relied upon as the only means of performing utility clearance;
  - Documented description of the dig site which is included in the projects Health and Safety Plan (HASP) and one call report will be maintained in the field and distributed amongst Roux personnel its contractors and subcontractors; and
  - Documentation of the actual placement of mark outs in the field shall be collected using dated pictures, videos and/or sketches with distance from markings to fixed objects. All documentation shall be maintained within the project file.

3.2 During Intrusive Activities

The PM, field team lead or personnel performing oversight is to:

- Ensure the mark-out remains valid. (In certain states there are limits regarding the duration of time after the mark-out was applied to the ground surface work can be started or interrupted.) Additionally, the mark-outs must be maintained, documented, and in many cases refreshed periodically to be considered valid, this will be accomplished through calls to the one call center.
- Ensure intrusive activities are only performed within the safe boundaries of the mark-out as detailed in the One-Call Report.
- Halt all work if intrusive activities have resulted in discovery of an unmarked utility. Roux personnel shall notify the facility owner/operator and the one call center. All incidents such as this will be reported as per Roux Incident Investigation and Reporting Management Program.
- Halt all work if intrusive activities must take place outside of the safe boundaries of a mark-out and only proceed after new mark-outs are performed.
- Halt the intrusive activities and immediately consult with the PP if an unmarked utility is encountered.
- Completing any subsurface utility clearance incident reports that are necessary.

- If a utility cannot be found as marked Roux personnel shall notify the facility owner/operator directly or through the one call center. Following notification, the excavation may continue, unless otherwise specified in state law.
- Contractors/subcontractors must contact the one-call center to refresh the ticket when the excavation continues past the life of the ticket. Ticket life shall be dictated by state law however at a maximum ticket life shall not exceed 20 working days.

3.3 Stop Work Authority

Each Roux employee has Stop Work Authority which he or she will execute upon determination of any imminent safety hazard, emergency situation, or other potentially dangerous situation, such as hazardous weather conditions. This Stop Work Authority includes subsurface clearance issues such as the adequacy of a mark-out or identification during intrusive operations of an unexpected underground utility. Authorization to proceed with work will be issued by the PM/PP after such action is reviewed and resolved. The PM will initiate and execute all management notifications and contact with emergency facilities and personnel when this action is appropriate.

Appendix A - Definitions

Intrusive Work Activities	All activities such as digging or scraping the surface, including but not limited to, excavation, test pitting or trenching, soil vapor sampling or the installation of soil borings, soil vapor monitoring points and wells, or monitoring wells, and drilling within the basement slab of a recently demolished building.
Mark-out / Stake Out	The process of contracting with a competent and qualified company to confirm the presence or absence of underground utilities and structures. This process will clearly mark-out and delineate utilities that are identified so that intrusive work activities can be performed without causing disturbance or damage to the subsurface utilities and structures. After utility mark-outs are completed the soft digging will be completed prior to intrusive work.
Tolerance Zone	Defined as two feet on either side of the designated centerline of an identified utility, plus half of the diameter or half of the greatest dimension (for elliptical sewers, duct backs and other non-cylindrical utilities) of that utility and two feet from the outside edge of any subsurface structure.
Structure	For the purpose of this program a structure is defined as any underground feature that may a present potential source(s) of energy such as, but not limited to, utility vaults, bunkers, piping, electrical boxes, wires, conduits, culverts, utility lines, underground tanks and ducts.
Soft Digging	The safest way to remove material from unknown obstructions or services is by using tools such as a vactor or air knife, non-mechanical tools, or hand tools. The methods are clean and non-evasive and used for uncovering and exposing buried services, excavating and for providing a quick method of soil removal from sensitive areas.
Verification	Exploratory test-hole dug with hand tools within the Tolerance Zone to expose and verify the location, type, size, direction-of-run and depth of a utility or subsurface structure. Vacuum excavation (soft dig) methods can further facilitate exposure of a subsurface utility and accurately provide its location and identification prior to intrusive work approaching the Tolerance Zone.

Appendix B - Example of Completed One Call Report

Example Completed One-Call Report

New York 811

Send To: C_EMAIL Seq No: 744

Ticket No: 133451007 ROUTINE

Start Date: 12/16/13 Time: 7:00 AM Lead Time: 20

State: NY County: QUEENS Place: QUEENS
Dig Street: 46TH AVE Address:
Nearest Intersecting Street: VERNON BLVD
Second Intersecting Street: 11TH ST

Type of Work: SOIL BORINGS
Type of Equipment: GEOPROBE
Work Being Done For: ROUX

In Street: X On Sidewalk: X Private Property: Other:
On Property Location if Private: Front: Rear: Side:

Location of Work: MARK THE ENTIRE NORTH SIDE OF THE STREET AND SIDEWALK OF: 46TH AVE BETWEEN VERNON BLVD AND 11TH STREET

Remarks:

Nad: Lat: Lon: Zone:
ExCoord NW Lat: 40.7475399 Lon: -73.9534811 SE Lat: 40.7457406 Lon: -73.9493680

Company : ZEBRA ENVIROMENTAL Best Time: 6AM-5PM
Contact Name: DAVID VINES Phone: (516)596-6300
Field Contact: DAVID VINES Phone: (516)596-6300
Caller Address: 30 N PROSPECT AVE Fax Phone: (516)596-4422
LYNBROOK, NY 11563
Email Address: david@zebraenv.com

Additional Operators Notified:
ATTNY01 AT&T CORPORATION (903)753-3145
CEQ CONSOLIDATED EDISON CO. OF N.Y (800)778-9140
MCINY01 MCI (800)289-3427
PANYNJ01 PORT AUTHORITY OF NY & NJ (201)595-4841
VZQ VERIZON COMMUNICATIONS (516)297-1602

Link to Map for C_EMAIL: http://ny.itic.occinc.com/XGMZ-DF2-L23-YAY

Original Call Date: 12/11/13 Time: 1:15 PM Op: webusr
IMPORTANT NOTE: YOU MUST CONTACT ANY OTHER UTILITIES DIRECTLY

Appendix C - Roux Subsurface Utility Clearance Checklist

Roux Subsurface Utility Clearance Checklist ***Date of Revision – 12/3/14***

Work site set-up and work execution

ACTIVITY	Yes	No	N/A	COMMENTS INCLUDING JUSTIFICATION IF RESPONSE IS NO OR NOT APPLICABLE
Daily site safety meeting conducted, SPSAs performed, JSAs reviewed, appropriate work permits obtained.				
HASP is available and reviewed by site workers / visitors.				
Subsurface Utility Clearance Procedure has been reviewed with all site workers.				
Work area secured; traffic control established as needed. Emergency shut-off switch located. Fire extinguishers / other safety equipment available as needed.				
Utility mark-outs (public / private) clear and visible. Provide Excavator's Stake-Out Reference Number / Request Date / Time.				
Tolerance zone work identified.				
Work execution plan reviewed and adhered to (ground disturbance methods, clearance depths, any special utility protection requirements, or any other execution requirements; especially for Tolerance Zone work).				
Verbal endorsement received from Roux PM for any required field deviations to work execution plan.				

Key reminders for execution:

The Subsurface Utility Clearance Protocol should be referenced to determine all requirements while executing subsurface work. The bullet points below are intended as general reminders only and should not be solely relied upon.

- Tolerance zone is defined as two feet plus half of the diameter or half of the greatest dimension (for elliptical sewers, duct banks and other non-cylindrical utilities) of a utility and two feet from the outside of any subsurface structure.
- Install Pre-Clearance exploratory test holes (e.g., hand-dug test holes or vacuum excavation) must be performed for the first five feet below land surface (BLS) at each location prior to conducting mechanized intrusive activities. The size of the pre-clearance exploratory test hole should be at a minimum twice the diameter of any downhole tool or boring device. (Note: Pre-clearance exploratory test holes should be defined in the SOW/proposal provided to the client to prevent project delays and to allow adequate time for PM and PP to evaluate alternative approaches for the project. Alternate approaches will need to be pre-approved by the OM.
- For excavations, all utilities need to be marked and then exposed by hand following the protocols in this program. Pre-clearing for excavations may be performed by the "moat" technique (i.e., soft

digging around the perimeter). In these cases, dig in small lifts (<12" for first five feet) using a dedicated spotter.) For Tolerance Zone work, unless otherwise agreed upon with the Utility Operator, work within the tolerance zone requires verification by means of hand-dug test holes to expose the utility. Once structures have been verified a minimum clearance of two feet must be maintained between the utility and any powered equipment.

Appendix D - Utility Verification/Site Walkthrough Record

Employee Name: _____

Date: _____

Instructions: For each utility suspected at the job site, indicate location on the job site, approximate burial depth, and means of detecting the utility. Leave blank if that utility is not believed to be present.

Utility	Description of Utility Location Identified Onsite	Approx. Depth (bls)	Method / Instrumentation used to determine Utility Location	Utility Owner Response (Date/Time)	Mark Out Indicates (Clear / Conflict)
Electrical Lines					
Gas Lines					
Pipelines					
Steam Lines					
Water Lines					
Sanitary and Stormwater Sewer lines					
Pressured Air-Lines					
Tank Vent Lines					
Fiber Optic Lines					
Underground Storage Tanks					
Phone Lines/ Other					

* bls - below land surface

Site Sketch Showing Utilities:



Other Comments / Findings:

Completed by: _____

Signature: _____ Date: _____

APPENDIX F

Personal Protective Equipment Management Program

PERSONAL PROTECTIVE EQUIPMENT MANAGEMENT PROGRAM

CORPORATE HEALTH AND SAFETY MANAGER	:	**Brian Hobbs, CIH, CSP**
EFFECTIVE DATE	:	**01/19**
REVISION NUMBER	:	**4**

TABLE OF CONTENTS

1. PURPOSE 1
2. SCOPE AND APPLICABILITY 1
3. PROCEDURES 1
   3.1 Introduction 1
   3.2 Types of PPE 1
   3.3 Protective Clothing Selection Criteria 2
      3.3.1 Chemicals Present 2
      3.3.2 Concentration of the Chemical(s) 2
      3.3.3 Physical State 3
      3.3.4 Length of Exposure 3
      3.3.5 Abrasion 3
      3.3.6 Dexterity 3
      3.3.7 Ability to Decontaminate 3
      3.3.8 Climactic Conditions 3
      3.3.9 Work Load 4
   3.4 Types of Protective Materials 4
   3.5 Protection Levels 4
      3.5.1 Level A Protection 4
      3.5.2 Level B Protection 5
      3.5.3 Level C Protection 6
      3.5.4 Level D Protection 6
      3.5.5 Level E Protection 6
      3.5.6 Additional Considerations 7

1. PURPOSE

Roux Associates, Inc. and its affiliated companies, Roux Environmental Engineering and Geology, D.P.C, and Remedial Engineering (collectively, "Roux") has instituted the following program to establish guidelines for the selection of personal protective equipment (PPE) for use by Roux personnel performing field activities in hazardous environments. PPE is not meant to be a substitute for engineering, work practice, and/or administrative controls, but PPE should be used in conjunction with these controls to protect the employees in the work place. Clothing, body coverings, and other accessories designed to prevent worker exposure to workplace hazards are all types of PPE. To ensure adequate PPE employee-owned PPE is evaluated on a case-by-case basis to insure its adequacy, maintenance and sanitation.

2. SCOPE AND APPLICABILITY

These guidelines apply to all PPE selection decisions to be made in implementing the Roux program. The foundations for this program are the numerous Occupational Health and Safety Administration (OSHA) standards related to PPE cited in 29 CFR 1910 Subpart I, 29 CFR 1926 Subpart E, and the hazardous environment work employee protection requirements under the OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) standard at 29 CFR 1910.120 and 1926.65. To ensure hazard assessments are documented the levels of protection, types of protection and tasks requiring protection are covered in site-specific Health and Safety Plans (HASPs) and Job Safety Analyses (JSAs).

3. PROCEDURES

Due to the varied nature of site activities and the different potential hazards associated with different sites, several aspects must be considered when selecting PPE. The following text describes PPE selection logic and provides guidelines and requirements for the appropriate selection and use of PPE.

3.1 Introduction

To harm the body, chemicals must first gain entrance. The intact skin and the respiratory tract are usually the first body tissues attacked by chemical contaminants. These tissues provide barriers to some chemicals but in many cases, are damaged themselves or are highly permeable by certain chemical compounds. Personal protective equipment therefore is used to minimize or eliminate chemical compounds coming into contact with these first barrier tissues.

The proper selection of equipment is important in preventing exposures. The PM making the selection will have to take several factors into consideration. The level of protection, type and kind of equipment selected depends on the hazardous conditions and in some cases cost, availability, compatibility with other equipment, and performance. An accurate assessment of all these factors must be made before work can be safely carried out.

3.2 Types of PPE

The type and selection of PPE must meet certain general criteria and requirements as required under OSHA 29 CFR 1910.132 and 1926.95. In addition to these general requirements, specific requirements and specifications exist for some types of PPE that form the basis of the protective clothing scheme. Following is a list of the common types of specific PPE and the specific requirements for the PPE type, where applicable:

1. Hard Hats - Regulated by 29 CFR 1910.135 and 1926.100; and, specified in ANSI Z89.1.

2. Face Shields and Safety Glasses - Regulated by 29 CFR 1910.133 and 1926.102; and, specified in ANSI Z87.1.
3. Respiratory Protection - Regulated by 29 CFR 1910.134 and 1926.103.
4. Hand Protection - Not specifically regulated.
5. Foot Protection - Regulated by 29 CFR 1910.136 and 1926.96; and, specified in ANSI Z41.1.
6. Protective Clothing (e.g., fully encapsulated suits, aprons) - Not specifically regulated.

3.3 Protective Clothing Selection Criteria

3.3.1 Chemicals Present

The most important factor in selecting PPE is the determination of what chemicals the employee may be exposed to. On field investigations, the number of chemicals may range from a few to several hundred. The exact chemicals or group of chemicals present at the site (certain groups tend to require similar protection) can be determined by collecting and analyzing samples of the air, soil, water, or other site media. When data are lacking, research into the materials used or stored at the site can be used to infer chemicals possibly on the site.

Once the known or suspected chemicals have been identified, and taking into consideration the type of work to be performed, the most appropriate clothing shall be selected.

Protective garments are made of several different substances for protection against specific chemicals. There is no universal protective material. All will decompose, be permeated by, or otherwise fail to protect under given circumstances. Fortunately, most manufacturers make guides to the use of their products (i.e., Dupont's Tyvek™ Permeation Guide). These guides are usually for gloves and coveralls and typically provide information regarding chemical degradation rates (failure of the material to maintain structural integrity when in contact with the chemical), and may provide information on the permeation rate (whether or not the material allows the chemical to pass through). When permeation tables are available, they shall be used in conjunction with degradation tables to determine the most appropriate protective material.

During most site work, chemicals are usually in mixed combinations and the protective materials are not in continuous contact with pure chemicals for long periods of time; therefore, the selected material may be adequate for the particular chemical and type of work being performed, yet not the "best" protecting material for all site chemicals and activities. Selection shall depend upon the most hazardous chemicals based on their hazards and concentrations. Sometimes layering, using several different layers of protective materials, affords the best protection.

3.3.2 Concentration of the Chemical(s)

One of the major criteria for selecting protective material is the concentration of the chemical(s) in air, liquid, and/or solid state. Airborne and liquid chemical concentrations should be compared to the OSHA standards and/or American Conference of Governmental Industrial Hygienists (ACGIH) and National Institute for Occupational Safety and Health (NIOSH) guidelines to determine the level of skin or other absorptive surface (e.g., eyes) protection needed. While these standards are not designed specifically for skin exposed directly to the liquid, they may provide skin designations indicative of chemicals known to have significant skin or dermal absorption effects. For example, airborne levels of PCB on-site may be

low because it is not very volatile, so the inhalation hazard may be minimal; however, PCB-containing liquid coming in direct contact with the skin may cause overexposure. Thus, PCB has been assigned a skin designation in both the OSHA and ACGIH exposure limit tables.

3.3.3 Physical State

The characteristics of a chemical may range from nontoxic to extremely toxic depending on its physical state. Inorganic lead in soil would not be considered toxic to site personnel, unless it became airborne, since it is generally not absorbed through the intact skin. Organic lead in a liquid could be readily absorbed. Soil is frequently contaminated with hazardous materials. Concentrations will vary from a few parts per million to nearly one hundred percent. The degree of hazard is dependent on the type of soil and concentration of the chemical. Generally speaking, "dry" soils do not cause a hazard to site personnel if they take minimal precautions such as wearing some type of lightweight gloves.

3.3.4 Length of Exposure

The length of time a material is exposed to a chemical increases the probability of breakthrough. Determinations of actual breakthrough times for short-term exposures indicate that several different materials can be used which would be considered inadequate under long-term exposures. It should be kept in mind that during testing, a pure (100% composition) liquid is usually placed in direct contact with the material producing a worst-case situation.

3.3.5 Abrasion

When selecting protective clothing, the job the employee is engaged in must be taken into consideration. Persons moving drums or performing other manual tasks may require added protection for their hands, lower chest and thighs. The use of leather gloves and a heavy apron over the other normal protective clothing will help prevent damage to the normal PPE and thus reduce worker exposures.

3.3.6 Dexterity

Although protection from skin and inhalation hazards is the primary concern when selecting PPE, the ability to perform the assigned task must be maintained. For example, personnel cannot be expected to perform work that requires fine dexterity if they must wear a thick glove. Therefore, the PPE selection process must consider the task being performed and provide PPE alternatives or techniques that allow dexterity to be maintained while still protecting the worker (e.g., wearing tight latex gloves over more bulky hand protection to increase dexterity).

3.3.7 Ability to Decontaminate

If disposable clothing cannot be used, the ability to decontaminate the materials selected must be taken into consideration. Once a chemical contacts the material, it must be cleaned before it can be reused. If the chemical has completely permeated the material, it is unlikely that the clothing can be adequately decontaminated and the material should be discarded.

3.3.8 Climactic Conditions

The human body works best with few restraints from clothing. Protective clothing adds a burden by adding weight and restricting movement as well as preventing the natural cooling process. In severe situations, a modified work program must be used.

Some materials act differently when they are very hot and very cold. For example, PVC becomes almost brittle in very cold temperatures. If there are any questions about the stability of the protective materials under different conditions, the manufacturer should be contacted.

3.3.9 Work Load

Like climactic conditions, the type of work activity may affect work duration and the ability or personnel to perform certain tasks. Similarly, the amount of protective materials a person wears will affect their ability to perform certain tasks. For example, a person in a total encapsulating suit, even at 72 ^{o}F, cannot work for more than a short period of time without requiring a break.

The work schedule should be adjusted to maintain the health of the employees. Special consideration should be given to the selection of clothing that both protects and adds the least burden when personnel are required to perform strenuous tasks. Excessive bodily stress frequently represents the most significant hazard encountered during field work.

3.4 Types of Protective Materials

1. Cellulose or Paper
2. Natural and Synthetic Fibers
    a. Tyvek™
    b. Nomex™
3. Elastomers
    a. Polyethylene
    b. Saran
    c. Polyvinyl Chloride (PVC)
    d. Neoprene
    e. Butyl Rubber
    f. Viton

3.5 Protection Levels

3.5.1 Level A Protection

Level A protection (a fully encapsulated suit) is used when skin hazards exist or when there is no known data that positively rule out skin and other absorption hazards. Since Level A protection is extremely physiologically and psychologically stressful, the decision to use this protection must be carefully considered. At no time will Level A work be performed without the consent of the OM. The following conditions suggest a need for Level A protection:

- confined facilities where probability of skin contact is high;
- sites containing known skin hazards;
- sites with no established history to rule out skin and other absorption hazards;
- atmosphere immediately dangerous to life and health (IDLH) through the skin absorption route;
- site exhibiting signs of acute mammalian toxicity (e.g., dead animals, illnesses associated with past entry into site by humans);

- sites at which sealed drums of unknown materials must be opened;
- total atmospheric readings on the Photoionization Detector (PID), Flame Ionization Detector (FID), and similar instruments indicate 500 to 1,000 ppm of unidentified substances; and
- extremely hazardous substances (e.g., cyanide compounds, concentrated pesticides, Department of Transportation Poison "A" materials, suspected carcinogens and infectious substances) are known or suspected to be present and skin contact is possible.

The following items constitute Level A protection:

- open circuit, pressure-demand self-contained breathing apparatus (SCBA);
- totally encapsulated suit;
- gloves, inner (surgical type);
- gloves, outer;
- chemical protective;
- boots, chemical protective, steel toe and shank;
- radiation detector (if applicable); and
- communications.

3.5.2 Level B Protection

Level B protection is utilized when the highest level of respiratory protection is needed but hazardous material exposure to the few unprotected areas of the body is unlikely.

The following conditions suggest a need for Level B protection:

- the type and atmospheric concentration of toxic substances have been identified and they require the highest level of respiratory protection;
- IDLH atmospheres where the substance or concentration in the air does not present a severe skin hazard;
- the type and concentrations of toxic substances do not meet the selection criteria permitting the use of air purifying respirators; and
- it is highly unlikely that the work being done will generate high concentrations of vapors, gases or particulates, or splashes of materials that will affect the skin of personnel.

Personal protective equipment for Level B includes:

- open circuit, pressure-demand SCBA;
- chemical protective clothing:
- overalls and long-sleeve jacket; or
- coveralls;
- gloves, inner (surgical type); gloves, outer, chemical protective;
- boots, chemical protective, steel toe and shank; and
- communications optional.

3.5.3 Level C Protection

Level C protection is utilized when both skin and respiratory hazards are well defined and the criteria for the use of negative pressure respirators have been fulfilled (i.e., known contaminants and contaminant concentrations, acceptable oxygen levels, approved filter/cartridge available, known cartridge service life, etc.). Level C protection may require carrying an emergency escape respirator during certain initial entry and site reconnaissance situations, or when applicable thereafter.

Personal protective equipment for Level C typically includes:

- full facepiece air-purifying respirator;
- emergency escape respirator (optional);
- chemical protective clothing:
  - overalls and long-sleeved jacket; or
  - coveralls;
- gloves, inner (surgical type);
- gloves, outer, chemical protective; and
- boots, chemical protective, steel toe and shank.

3.5.4 Level D Protection

Level D is the basic work uniform. Personal protective equipment for Level D includes:

- coveralls;
- safety boots/shoes;
- eye protection;
- hand protection;
- reflective traffic safety vest (mandatory for traffic areas or railyard);
- hard hat (with face shield is optional); and
- emergency escape respirator is optional.

3.5.5 Level E Protection

Level E protection is used when radioactivity above 10 mr/hr is detected at the site. Personal protective equipment for Level E includes:

- coveralls;
- air purifying respirator;
- time limits on exposure;
- appropriate dermal protection for the type of radiation present; and
- radiation dosage monitoring.

3.5.6 Additional Considerations

Field work will contain a variety of situations due to chemicals in various concentrations and combinations. These situations may be partially ameliorated by following the work practices listed below:

1. Some sort of foot protection is needed on a site. If the ground to be worked on is contaminated with liquid and it is necessary to walk in the chemicals, some sort of protective "booties" can be worn over the boots. This cuts down on decontamination requirements. They are designed with soles to help prevent them from slipping around. If non-liquids are to be encountered, a Tyvek™ bootie could be used. If the ground contains any sharp objects, the advantage of booties is questionable. Boots should be worn with either cotton or wool socks to help absorb the perspiration.
2. If the site situation requires the use of hard hats, chin straps should be used if a person will be stooping over where his/her hat may fall off. Respirator straps should not be placed over the hard hats. This will affect the fit of the respirator.

   Some types of protective materials conduct heat and cold readily. In cold conditions, natural material clothing should be worn under the protective clothing. Protective clothing should be removed prior to allowing a person "to get warm". Applying heat, such as a space heater, to the outside of the protective clothing may drive the contaminants through. In hot weather, under clothing will absorb sweat. It is recommended that workers use all cotton undergarments.
3. Body protection should be worn and taped to prevent anything from running into the top of the boot. Gloves should be worn and taped to prevent substances from entering the top of the glove. Duct tape is preferred, but masking tape can be used. When aprons are used, they should be taped across the back for added protection. However, this should be done in such a way that the person has mobility.
4. Atmospheric conditions such as precipitation, temperature, wind direction, wind velocity, and pressure determine the behavior of contaminants in air or the potential for volatile material getting into the air. These parameters should be considered in determining the need for and the level of protection.
5. A program must be established for periodic monitoring of the air during site operations. Without an air monitoring program, any changes would go undetected and might jeopardize response personnel. Monitoring can be done with various types of air pumps and filtering devices followed by analysis of the filtration media; personnel dosimeters; and periodic walk-throughs by personnel carrying real-time survey instruments.
6. For operations in the exclusion zone, different levels of protection may be selected, and various types of chemical-resistant clothing may be worn. This selection should be based on the job function, reason for being in the area, and the potential for skin contact with, or inhalation of, the chemicals present.
7. Escape masks must be readily available when levels of respiratory protection do not include a SCBA and the possibility of an IDLH atmosphere exists. Their use can be made on a case-by-case basis. Escape masks could be strategically located at the site in areas that have higher possibilities of vapors, gases or particulates.

APPENDIX G

Injury and Illness Prevention Program

INURY AND ILLNESS
PREVENTION PROGRAM

CORPORATE HEALTH AND SAFETY MANAGER	**:**	**Brian Hobbs, CIH, CSP**
EFFECTIVE DATE	**:**	**10/18**
REVISION NUMBER	**:**	**1**

TABLE OF CONTENTS

1. PURPOSE 1
2. SCOPE AND APPLICABILITY 1
3. ROLES AND RESPONSIBILITIES 1
4. COMMUNICATION 2
5. HAZARD IDENTIFICATION AND ASSESSMENT 3
6. ACCIDENT INVESTIGATION 5
7. TRAINING AND INSTRUCTION 6
8. RECORDKEEPING AND DOCUMENTATION 7
Appendix B – Example Job Safety Analysis Form i
Appendix C – Accident Report and Investigation Form i
Appendix D – Near Loss Form i

APPENDICES

Appendix A – Safe Work Practices

Appendix B – Example Job Safety Analysis Form

Appendix C – Accident Report Form

Appendix D – Near Loss Form

Appendix E – Factors, Root Causes and Solutions Form™

1. PURPOSE

Roux Associates, Inc. and its affiliated companies, Roux Environmental Engineering and Geology, D.P.C, and Remedial Engineering (collectively, "Roux") has established this Injury and Illness Prevention Program (IIPP) to assist in preventing workplace accidents, injuries and illnesses. Additionally, this program has been developed to ensure compliance with Title 8 of the California Code of Regulations, Sections 1509 (T8 CCR 1509) and 3203 (T8 CCR 3203).

2. SCOPE AND APPLICABILITY

The Roux IIPP program applies to all employees working in the State of California and to all operations performed in the State of California.

3. ROLES AND RESPONSIBILITIES

The Injury and Illness Prevention Program Administrator for Roux is the Corporate Health and Safety Manager (CHSM), Brian Hobbs, CIH, CSP. The daily administration of the IIPP is delegated to the Office Manager (OM). The CHSM has the authority and responsibility and overall accountability for the comprehensive implementation of this IIPP.

All managers and supervisors shall implement and maintain the IIPP in work areas and for answering worker questions regarding the IIPP as well as encouraging employee input regarding safety issues and possible corrective actions. A copy of the IIPP will be maintained on the Roux intranet site as well as posted at job sites.

All employees, including management, are responsible for complying with safe and healthful work practices, actively participating in the safety program, and implementing all directives, policies and procedures. Roux ensures that all workers comply through implementation of the following:

- Informing workers of the provisions of our IIPP.
- Evaluating the safety performance of all workers during annual performance reviews.
- Promoting and recognizing employees who perform safe and healthful work practices.
- Providing further coaching and training to workers whose safety performance is deemed deficient.
- Disciplining workers for failure to comply with safe and healthful work practices, as appropriate.

Employee Responsibilities

Employees are expected to actively participate in the organization's IIPP, which includes the following responsibilities:

- Follow safety and health procedures, including:
  - General safety rules as stated in Appendix A: Safe Work Practices.
  - Protective measures outlined on JSAs (Appendix B) and in training.
  - Standard operating procedures and JSAs.
  - The organization's drug and alcohol policy.
  - Applicable standards of Cal/OSHA.
- Learn about the potential hazards in your workplace.
- Immediately report all hazardous conditions, injuries, and near misses to management or a safety committee representative.

- Provide recommendations to your Office Health and Safety Manager (OHSM) or OM for improving the safety and health of the work environment.
- Cooperate with workplace inspections and incident investigations.

Management Responsibilities

Management must provide the following to promote compliance and foster a good safety culture:

- Comply with applicable standards of Cal/OSHA.
- Inform employees of the provisions of the IIPP and ensure understanding.
- Model and enforce safe work practices for employees and everyone in the work area.
- Communicate with all employees about occupational health and safety on an ongoing basis, including conducting routine program meetings which include discussions on safety issues.
- Encourage employees to report hazardous conditions, injuries, near misses, and all incidents.
- Ensure that positive incentives are in place for continued safety performance and adherence to safety rules.
- Follow disciplinary procedures for employees or management who disregard workplace safety requirements.
- Train employees in the hazards and respective controls associated with their work area.
- Provide recommendations for improving the safety and health of the work environment to the safety committee or upper-level management.
- Ensure resolution of safety issues discovered through incident reports, the safety committee, or inspections in a timely manner.
- Ensure periodic, documented inspections of work sites.
- Conduct performance reviews for employees and managers that include safety performance. The reviews include adherence to the safety rules and procedures outlined in Job Safety Analysis (JSA) and emphasize the positive contributions which employees have made to the safety program.
- If given citations by Cal/OSHA, correct the hazards by the given deadline.

4. COMMUNICATION

Open communication regarding safety must flow both ways, from management down to employees and from employees up through management channels. At Roux, we encourage all employees to communicate work place hazards to peers and management without the fear of reprisal. Each Roux employee has Stop Work Authority which they will execute upon determination of any imminent safety hazard, emergency situation, or other potentially dangerous situation, such as hazardous weather conditions. Once initiated, workers contact the Project Manager (PM) and/or Project Principal (PP) to provide an immediate update to the situation at hand. Authorization to proceed with work will be issued by the PM/PP after such action is reviewed and resolved accordingly.

Roux will use a variety of means to communicate with employees on safety and health issues. The most significant are noted below:

- New employee orientation, including discussing Roux H&S policy and philosophy, review of H&S Corporate Management programs, and office emergency preparedness training.
- Safety meetings are held monthly. The format of the meetings includes near losses, incidents and other safety messages since the previous monthly meeting, followed by a specified topic, then a Q&A session to clarify information that was presented and to share experiences.
- An incident notification flow chart was developed to provide a framework for staff on what to do in the event

of a near loss or loss. This process includes immediate notifications of safety related issues all the way up from staff to the COO and CEO of the organization.

- Safety tailgate meetings shall occur daily before any work activity, when new operations are conducted, whenever changes in work practices must be implemented, and when new conditions are identified and/or information becomes available.
- Open discussions on safety and health are held during program management meetings amongst staff as it relates to ongoing field activities.
- Required Cal/OSHA safety notifications shall be posted at each office and jobsite that has a company trailer. Various other items of safety value will be posted as appropriate, including quarterly Health and Safety Newsletters written by various levels of employees throughout the organization.

5. HAZARD IDENTIFICATION AND ASSESSMENT

JSAs and inspections of work sites shall be used to identify and evaluate occupational hazards.

Job Safety Analysis (JSA)

JSAs are used to evaluate each job step to identify uncontrolled hazards and establish a means and methods to mitigate these potential uncontrolled hazards. Developing and implementing JSAs aide in reducing the likelihood of incidents and injuries at a job site. Roux has adopted a formal process for the development and review of JSAs which are used by Roux staff in the field. This formal process is outlined within the Job Safety Analysis (JSA) Management Program 2.14, which is found within Roux's Corporate Health and Safety Manual.

The JSA development process can be broken into three steps. These steps are provided below in further detail.

Step 1 – List Job Steps

The first step in developing a JSA is to identify each job step in order of occurrence. Job steps should be concise and clearly describe the individual safety critical tasks for the collective operation. *For example, a monitoring well gauging and sampling task may include the following job steps: 1) access well with hand tools, 2) gauge well using interface* probe*, 3) purge well with bailer, etc. Whereas, an example of a job step that is too generalized is "gauge and sample well."*

Step 2 – Identify Potential Hazards

Next, for each job step, determine potential hazards that may exist or occur while performing the associated job step. In helping determine safety critical job steps, the following questions should be assessed:

- "What could go wrong?"
- "What's the worst that can happen?"
- "What are the consequences?"

Potential hazards should be identified by the following categories:

- Contact – struck by or against an object.
- Caught – caught on, in, or between objects.
- Falls – slips, trips, or falls to the ground or a lower level.
- Exertion – repetitive motion, excessive strain/stress, ergonomics, lifting/bending.
- Exposure – inhalation/ingestion/injection, cold/heat stress, noise/vibration.

- Energy Sources – electric lines or mechanical energy, including stored energy.

For each hazard category, the potential hazard should be further described. *For instance, with the example described in Step 1 above, a potential hazard associated with the monitoring well gauging and sampling task – specifically, the job step to "access well with hand tools" – may include CAUGHT – pinch points when handling well cover.*

Step 3 – Determine Mitigative Actions

After the potential hazard(s) have been identified, evaluate if the job step can be performed in a manner where the hazard is eliminated, reduced or controlled. Common methods to eliminate, reduce or control potential hazards which follow the hierarchy of controls may include, but are not limited to, one or a combination of the following:

- Eliminating or substituting a job step with a less hazardous operation.
- Combining job steps or changing the sequence.
- Instituting engineering controls.
- Obtaining other tools or redesigning equipment.
- Performing ambient monitoring or screening.
- Obtaining additional safety equipment including personal protective equipment (PPE).
- Adding warning devices.

Mitigative actions should be specific and avoid using generalizations such as, "be careful" or "use caution." There must be at least one mitigative action for each potential hazard. PPE should never be the only mitigative action. It is the last line of defense. *Taking the example illustrated in Steps 1 & 2 above, mitigative actions for the potential hazard "CAUGHT – pinch points when handling well cover" may include 1) wear leather gloves, 2) use pry bar when accessing well cover, 3) keep hands/fingers clear between cover and collar, … etc.*

Inspections (Field Audits)

Roux provides a variety of health and safety tools, including two inspection processes which are Roux Peer Observations (RPOs) and Field Audits. These tools are available to all employees and provides opportunities for both peer to peer and management to peer inspections of job sites. These scheduled periodic inspections assist in identifying unsafe behaviors, work practices, and conditions.

RPOs are scheduled activities where one individual observes another completing a task. The purpose of the RPO is to ensure individuals perform work tasks according to standard operating procedures, and in a safe and healthy work environment. During this type of inspection, the observer is focused on the work process, not the individual (worker remains anonymous). The goal of RPOs is to positively reinforce correct behaviors and to identify and eliminate undesirable behaviors and conditions.

Field audits are performed by Roux Associates personnel from peers to senior management to not only check that health and safety requirements are being met but also to demonstrate management leadership in the health and safety program. The audits focus on how our health and safety tools are being implemented, and when we are providing oversight of Subcontractor operations, to ensure the Subcontractor is meeting our health and safety requirements.

At any time during a Field Audit or RPO, if an imminent safety hazard, emergency situation, or other potentially dangerous situation arises, the auditor is instructed to implement Stop Work Authority until the hazard can be mitigated appropriately.

Audit findings are documented on a Field Audit Checklist or RPO Form and any recommended corrective actions are discussed with the field personnel and their project management immediately following the audit/observation. The results of the audit/observation are entered into our internal digital application so that trends can be tracked and communicated throughout Roux to ensure that the corrective actions are effective and implemented. Once these digital forms are submitted, there are immediate notifications to the OHSM and CHSM. The OHSM, in coordination with the CHSM, assigns the severity level, which determines the appropriate response in order to provide resolution and to verify and validate that the solutions are effective.

In addition to scheduled inspections and ongoing review, the CHSM, OM, and OHSM will arrange for unscheduled inspections. The times and locations are to be chosen by the person performing the inspection.

Inspection Records

Inspection records shall be maintained for a minimum one year following the inspection.

Hazard Correction

All unsafe or unhealthy work conditions, practices and procedures shall be corrected in a timely manner based on the severity of the hazards. Hazards shall be corrected according to the following procedures:

- When observed or discovered
- When an imminent hazard exists, which cannot be immediately abated without endangering employee(s) and/or property, we will remove all exposed workers from the area except those necessary to correct the existing condition. Workers who are required to correct the hazardous condition shall be provided with the proper training and necessary protection to perform the work to the safest extent.

All employees are empowered to share their hazard identifications in the field through regular communication with their PM as well as a digital form submission. Electronic submittals are able to provide real time data to not only their PMs but also the OHSM and CHSM regarding the specific activity type, type of hazard identified, whether or not Stop Work authority was implemented, a brief description of the hazard, and the mitigating actions which were implemented to reduce the potential for an incident.

6. ACCIDENT INVESTIGATION

It is the policy of Roux that all work-related accidents, injuries and illnesses are to be conducted in a professional manner to identify probable causes and are used to develop specific management actions for the prevention of future accidents. Every minor or non-disabling injury will be investigated with the same vigor and thoroughness as serious injuries. Proper and complete investigation of these injuries can be an effective injury prevention tool.

It shall be the responsibility of all Roux employees to report all incidents as soon as possible to the PM (or Administrative Manager for office-related incidents), Site Health and Safety Officer (SHSO), OHSM, OM, and CHSM regardless of severity. Additional notifications to the COO and CEO shall be made based on the severity of the incident.

On receiving a report of incident (or “near-loss”) occurrence from a Roux employee, the SHSO or OHSM shall immediately investigate the circumstances and shall make appropriate recommendations to prevent recurrence.

The Incident Report form can be found in Appendix C, and Near Loss form can be found in Appendix D. The Factors, Root Causes and Solutions Form ™ can be found in Appendix E. Management shall participate in the investigation of more serious accidents and incidents that occur on-site. The CHSM shall also be immediately notified by telephone on occurrence of a serious accident or incident.

Details of the incident shall be documented using the Accident Report and Investigation Forms within twenty-four (24) hours of the incident and shall be distributed to the SHSO, the OHSM, PM, OM and the CHSM. The CHSM will update OSHA Forms 301 and the 300 log when necessary.

A satisfactory accident report shall answer the following questions:

1. What happened? The investigation report should begin by describing the accident, the injury sustained, the eyewitnesses, the date, time, and location of the incident and the date and time of the report. Remember: who, what, when, where, and how are the questions that the report must answer.
2. Why did the accident occur? The ultimate cause of the accident may not be known for several days after all the data is collected and analyzed. Roux shall formally go through the Factors, Root Cause, and Solutions Form following an accident to determine root cause.
3. What should be done? Once a report determines the cause of an incident, it should provide a means and method for mitigating future incidents of similar character. This is a decision by the CHSM, PM, as well as upper management. Once a solution has been adopted, it is everyone's responsibility to implement it.
4. What has been done? Verification and validation will take place of the solution. In the first step, one will verify the solution has been implemented and the second action will determine whether the solution that has been implemented works to reduce the likelihood of a reoccurring incident.

7. TRAINING AND INSTRUCTION

All workers, including managers and supervisors, shall have training and instruction on general and job-specific health and safety practices. Training instruction shall be provided:

- When the IIPP is first established
- To all new employees
- To all employees given new job assignments for which training has not previously been provided
- Whenever new substances, processes or procedures or equipment are introduced and present a new hazard
- Whenever the employer is made aware of a new or previously unrecognized hazard
- To all workers with respect to the hazards specific to each employee's job assignment

Employee Training Documentation

Roux maintains documentation of health and safety training for each employee, including employee name, training dates, type(s) of training and training providers (as applicable). Documentation of training will be maintained for three (3) years.

Training records of employees who have worked for less than one (1) year for the company will not be retained beyond the term of employment if they are provided to the employee upon termination of employment.

Training records are maintained at the office level with the OHSM, as well as within a Corporate Training Database.

8. RECORDKEEPING AND DOCUMENTATION

Copies of required accident investigations and certification of employee training shall be maintained at the office level with the OHSM, as well as within a Corporate Database.

Roux keeps records of its employee fatalities, injuries, and illnesses that are work-related, are a new case, or meet one or more of the general recording criteria of Title 8 Sections 14300-14300.48.

Each recordable injury or illness is entered on OSHA 300 Log of Work-Related Injuries and Illnesses, OSHA 301Form Injury and Illness Incident Report, and a separate, confidential list of privacy-concern cases, if any, within (7) calendar days calendar days of receiving information that a recordable injury or illness has occurred. The CHSM keeps these records up to date.

If there is a privacy-concern case, we have the option to not enter the employee's name on OSHA 300 Log of Work-Related Injuries and Illnesses. Instead, the text “Privacy Case” is entered in the space normally used for the employee's name. This will protect the privacy of the injured or ill employee when another employee, a former employee, or an authorized employee representative is provided access to the OSHA 300 Log. The company will keep a separate, confidential list of the case numbers and employee names for your privacy concern cases so that we can update the cases and provide the information to the government if asked to do so.

At the end of the calendar year, the CHSM performs the following steps:

1. Reviews OSHA 300 Log of Work-Related Injuries and Illnesses to verify that the entries are complete and accurate.
2. Creates an annual summary of injuries and illnesses recorded on OSHA 300 Log of Work-Related Injuries and Illnesses.
3. Company Executive signs annual summary certifying they have examined the documentation and that to the best of my knowledge the entries are true, accurate and complete.
4. OHSM posts OSHA 300A Summary of Work-Related Injuries and Illnesses on their main office bulletin board from February 1 of the year following the year covered by the records and kept in place until April 30th for a total of three (3) months.

The CHSM saves the following records for a minimum of five (5) years following the end of the calendar year that these records cover:

- OSHA 300 Log, privacy case list (if one exists)
- OSHA 300A Annual Summary
- OSHA 301 Incident Report Forms or equivalent Accident Report Forms

APPENDIX A – SAFE WORK PRACTICES

The following safe work practices have been developed to provide a general framework for our employees. This is not considered an all-inclusive list, for more detailed specific work practices please refer to the Corporate Health and Safety Manual.

Safe Behaviors

- Never work under the influence of drugs or alcohol. We are a drug-free work environment. Anyone known to be under the influence of drugs or intoxicating substances that impair their ability to safely perform the assigned duties shall not be allowed on the job while in that condition.
- Report the use of prescription drugs that might cause drowsiness to management at the start of every shift.
- Do not engage in horseplay or any activities that may have an adverse influence on the safety or well-being of other employees.
- Do not crowd or push others when boarding or leaving any workplace vehicle or other conveyance.
- Do not run in the workplace.
- Never walk across any moving parts or place any body part in a hazard zone of machinery or equipment (e.g., a point of operation).
- Never stand under or near any suspended load (e.g., on a crane or lift).
- Do not smoke in any area of the office or field sites.
- Do not enter confined spaces (i.e., manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation).
- Coordinate work to minimize working alone at field sites.
- Never distract a coworker when they are operating equipment.
- Never throw materials, tools, or other objects from buildings or structures until proper precautions are taken to protect others located below from the falling objects.

Emergency and Injury Response

- Call 911 in the event of a medical emergency. Then initiate company emergency response procedures by following the Roux Incident Notification Flowchart.
- Report all injuries to management, even if they are not emergencies, so that arrangements can be made for medical or first aid treatment.
- Do not drive yourself if you are injured. Report to management and they will determine the proper means of transportation.
- Evacuate in the event of a fire. If possible, pull the fire alarm and warn those around you as you exit the building. Do not attempt to fight the fire unless you are a trained responder.
- Notify management of any chemical spills or emergencies. **Never** try to clean up a material unless you are properly trained and equipped as part of a hazardous material responder team.
- Never block a fire door.
- Know the following:
    - Your emergency evacuation route.
    - Your assembly point to meet up after an evacuation.

  - The location of emergency evacuation maps, emergency eyewash stations, the closest fire extinguishers, and the closest first aid supplies.
  - Who the first aid providers are.

- First aid providers will provide necessary treatment, monitor the progress of injuries, and assure that injuries are properly treated to the level of their ability.

Reporting

- Report all incidents and near misses to management, even if they do not result in an injury.
- Report unsafe working conditions, unsafe practices, or defective tools and equipment to management immediately. Red tag and remove defective tools and equipment from service immediately, so nobody else will use them.

Ergonomics

- Follow safe lifting precautions.
  - Lift with your legs, not your back.
  - Use neutral posture without twisting or overextending.
  - Plan out your route and make sure that it is clear before you begin to carry the load.
  - For heavy loads, use material handling equipment whenever possible or obtain help for heavy or cumbersome loads if there is no material handling equipment present.

Housekeeping

- Keep all exits, aisles, emergency equipment and electrical panels unblocked (36-inch clearance is required).
- Help to prevent slip, trip and fall hazards by:
  - Doing a pre-break clean up and keeping your work area organized throughout the day.
  - Responding when you see a hazard rather than just walking on.
  - Cleaning up clutter and trip hazards from walkways as soon as you see them and, at a minimum, before each break.
  - Keeping tools and equipment in their proper places.
  - Cleaning up spills of non-hazardous materials right away.

Personal Protective Equipment

- Properly wear all required personal protective equipment (PPE) at all times when you are in the work area.
- Inspect your PPE regularly for wear or defects.
- Clean PPE after use, and store it in a clean, designated area.
- If your PPE is damaged, inform your supervisor and inquire about a replacement.
- Wear enclosed-top, anti-slip soled shoes. Do not wear shoes with thin or badly worn soles.
- Do not use compressed air to clean your clothing.

Machine Safety, Electrical Safety, and Equipment Care

- If you work around machinery, do not wear loose clothing or have loose hair or jewelry, as they can get caught in the machinery and pull you in.

- Do not handle or tamper with any utilities associated with electrical equipment, machinery, or air or water lines in a manner not within the scope of your duties, unless you are trained, authorized, and utilizing established lockout/tagout procedures for the specific equipment in question.
- Do not remove guards or other protective devices.
- Never operate machinery without guards or safeguards in place. If guards or protective devices are not properly in place or firmly adjusted, report deficiencies promptly to management.
- Technician personnel are the only people authorized and trained to perform work involving lockout/tagout.
  - **Do not** try to repair or de-jam any equipment without authorization.
  - If you are authorized to make repairs, make sure that all equipment is locked and tagged out.
- Report any safety issues or needs to management.
- Do not use defective or out-of-specification tool or machinery. It must be immediately removed from service and repaired or replaced.
- Only licensed electricians are authorized to work on electrical equipment. The following rules pertain to electrical equipment:
  - Keep electrical panels closed. Keep the ground intact.
  - Consider all electrical equipment being assembled or tested “live.”
  - Use ground fault circuit interrupters (GFCI) in wet areas.
  - Assure that electrical panels are clearly marked to indicate equipment/circuits controlled by specific breakers.
- When working with electrical hand tools, make sure the ground is intact and that all insulation is sound.

Ladder Safety

When using ladders:

- Utilize the proper type and size of ladder for the job.
- For extension ladders, maintain the 4:1 rule (vertical rise to horizontal slope), and secure the top of the ladder.
- Do not utilize the top two rungs on a stepladder.
- Ensure that they are sturdy and in good condition. Immediately red tag and remove from service if this is not the case.
- Fix them in place to assure stability.
- Use three points of contact when ascending and descending.
- Do not carry items while ascending or descending (except on a tool belt).
- Only one person may climb the ladder at a time.

Chemical Use

- Only use chemicals if you have been trained on their safe use.
- Know the SDS content and location for all chemicals you work with or around.
- Always wear the proper PPE.
- Always add acid to water; **never** add water to acid.
- Always wash hands with soap and water after handling any chemicals.

- **Do not** scratch or rub any part of your body while working with chemicals.
- Ensure that all containers are labeled with the identity of the contents and general hazards (following GHS requirements).
- All piping systems must also be clearly labeled with contents, flow, and concentration.
- **Do not** use any chemical unless the container is clearly and correctly labeled.
- **Do not** taste or sniff chemicals, solvents, or any processing solution.
- **Do not** work alone when handling chemicals.
- Use all chemicals under proper ventilation. Always check ventilation gauges, if present, to be sure of proper function prior to operating/charging.
- Tightly close all chemical containers after use and return them to the proper storage cabinet (i.e., acid, base, peroxide, or flammable).
- Ensure that chemical products are stored with compatible chemicals (e.g. avoid storing acids near bases or flammables near oxidizers).
- **Do not** store chemical containers on floors; they should be stored in spill containment receptacles that can contain the full capacity of any spill.
- Use proper procedures and labeled waste containers for disposal of all chemicals.
- Eating, drinking, or smoking is not permitted in any chemical use/storage area.

Appendix B – Example Job Safety Analysis Form

JOB SAFETY ANALYSIS	Ctrl. No.	DATE:	☐ NEW ☒ REVISED	PAGE i of 2
JSA TYPE CATEGORY	WORK TYPE	WORK ACTIVITY (Description)		

DEVELOPMENT TEAM	POSITION / TITLE	REVIEWED BY:	POSITION / TITLE

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST	☐ GOGGLES	☐ AIR PURIFYING RESPIRATOR	☐ GLOVES:
☐ HARD HAT	☐ FACE SHIELD		☐ OTHER
☐ LIFELINE / BODY HARNESS	☐ HEARING PROTECTION	☐ SUPPLIED RESPIRATOR	
☐ SAFETY GLASSES	☐ SAFETY SHOES:	☐ PPE CLOTHING:	

REQUIRED AND / OR RECOMMENDED EQUIPMENT

Required Equipment:

COMMITMENT TO SAFETY- All personnel onsite will actively participate in hazard recognition and mitigation throughout the day by verbalizing SPSAs.

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.	***A hazard is a potential danger.*** ***Break hazards into six types:*** 1. *Contact - victim is struck by or strikes an object;* 2. *Caught - victim is caught on, caught in or caught between objects;* 3. *Fall - victim falls to ground or lower level (includes slips and trips);* 4. *Exertion - excessive strain or stress / ergonomics / lifting techniques;* 5. *Exposure - inhalation/skin hazards;* 6. *Energy Source – electricity, pressure, compression/tension.*	***Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift." Avoid general statements such as, "be careful."***

Appendix C – Accident Report and Investigation Form

☐ Roux Environmental Engineering and Geology, D.P.C.
☐ Roux Associates, Inc. ☐ Remedial Engineering, P.C.

ACCIDENT REPORT

Brian Hobbs, Corporate Health and Safety Manager
Cell: (631) 807-0193; Office: (631) 630-2416

PART 1: ADMINISTRATIVE INFORMATION

Project #: _____
Project Name: _____
Project Location (street address/city/state)**:**
_____
_____
Client Corporate Name / Contact / Address / Phone #:
_____
_____
_____
_____
_____

Immediate Verbal Notifications Given To:

Corporate Health & Safety	☐Yes	☐No
Office Health & Safety	☐Yes	☐No
Office Manager	☐Yes	☐No
Project Principal	☐Yes	☐No
Project Manager	☐Yes	☐No
Client Contact	☐Yes	☐No

REPORT STATUS (time due):
☐ Initial (24 hr) Date: _____
☐ Final (5-10 days) Date: _____

Accident Report Delivered To:

Corporate Health & Safety	☐Yes	☐No
Office Health & Safety	☐Yes	☐No
Office Manager	☐Yes	☐No
Project Principal	☐Yes	☐No
Project Manager	☐Yes	☐No

REPORT TYPE: ☐ Loss ☐ Near Loss Estimated Costs: $ _____

OSHA CASE # Assigned by Corporate Health & Safety if Applicable:

Corporate Health & Safety Confirmed Final Accident Report
☐Yes ☐No

DATE OF INCIDENT: _____

TIME INCIDENT OCCURRED: _____ ☐AM ☐PM

INCIDENT LOCATION – City, State, and Country (If outside U.S.A.) _____

INCIDENT TYPES: (Select most appropriate if Loss occurred.)
From lists below, please select the option that best categories the incident. When selecting an injury or illness, also indicate the severity level.

☐**INJURY** ☐**ILLNESS**

----------**Severity Level**----------

☐Fatality ☐First Aid ☐Medical
☐Restricted Work ☐Lost Time Treatment

OTHER INCIDENT TYPES

☐Spill / Release ☐Misdirected Waste ☐Consent Order ☐NOV
Material involved:_____ ☐Property Damage ☐Exceedance
Quantity (U.S. Gallons): _____ ☐Motor Vehicle ☐Fine / Penalty

ACTIVITY TYPE (Check most appropriate one.)

☐CAMP	☐Gauging	☐Subsurface Clearance
☐Construction	☐O&M	☐Trucking
☐Drilling	☐Other Soil Work (e.g. Compaction)	☐Waste Mgmt.
☐Driving	☐Sampling	☐Work Area Prep.
☐Excavation / Trenching	☐Site Walk/Inspection	☐Other

INJURY TYPE (Check all applicable.)

☐Abrasion	☐Occupational Illness
☐Amputation	☐Puncture
☐Burn	☐Rash
☐Cold/Heat Stress	☐Repetitive Motion
☐Inflammation	☐Sprain/Strain
☐Laceration	☐Other_____

BODY PART AFFECTED (Check all applicable.)

☐Respiratory	☐Shoulder	☐Face
☐Neck	☐Arm	☐Leg
☐Chest	☐Wrist	☐Knee
☐Abdomen	☐Hand/Fingers	☐Ankle
☐Groin	☐Eye	☐Foot/Toes
☐Back	☐Head	☐Other_____

I. PERSON(S) DIRECTLY / INDIRECTLY INVOLVED IN INCIDENT (Attach additional information as necessary/applicable.)

Name/Phone # of Each Person Directly/Indirectly Involved in Incident:	Designate: Roux/Remedial Employee Roux/Remedial Subcontractor Client Employee Client Contractor Third Party	As applicable, Current Occupation; Yrs in Current Occupation; Current Position; and Yrs in Current Position:	As applicable, Employer Name; Address; and Phone #:	As applicable, Supervisor Name; and Phone #:
1)				
2)				

II. PERSONS INJURED IN INCIDENT (Attach additional information as necessary/applicable.)					
Name/Phone # of Each Person Injured in Incident:	Designate: Roux/Remedial Employee Roux/Remedial Subcontractor Client Employee Client Contractor Third Party	As applicable, Current Occupation; Yrs in Current Occupation; Current Position; and Yrs in Current Position:	As applicable, Employer Name; Address; and Phone #:	As applicable, Supervisor Name; and Phone #:	Description of Injury:
1)					
2)					

III. PROPERTY DAMAGED IN INCIDENT (Attach additional information as necessary/applicable.)				
Property Damaged:	Property Location:	Owner Name, Address & Phone #:	Description of Damage:	Estimated Cost:
1)				
2)				$

IV. WITNESSES TO INCIDENT (Attach additional information as necessary/applicable.)		
Witness Name:	Address:	Phone #:
1)		
2)		

PART 2: WHAT HAPPENED AND INCIDENT DETAILS

PROVIDE FACTUAL DESCRIPTION OF INCIDENT (e.g., describe loss/near loss, injury, response / treatment).

I. AUTHORITIES/GOVERNMENTAL AGENCIES NOTIFIED (Attach additional information as necessary/applicable.)				
Authority/Agency Notified:	Name/Phone #/Fax # of Person Notified:	Address of Person Notified:	Date & Time of Notification:	Exact Information Reported/Provided:

II. PUBLIC RESPONSES TO INCIDENT (if applicable)				
Response/Inquiry By: (check one)	Entity Name:	Name/Phone # of Respondent/ Inquirer:	Address of Entity/Person:	Date & Time of Response/Inquiry:
☐Newspaper ☐Television ☐Community Group ☐Neighbors ☐Other _____				

Describe Response/Inquiry:

Roux/Remedial Response:

(Check all that apply.) (Attach photos, drawings, etc. to help illustrate the incident.)
ATTACHED INFORMATION: ☐Photo ☐Sketches ☐Vehicle Acord Form ☐Police Report ☐Other

Name(s) of person(s) who prepared Initial and Final Report:	**Title(s):**	**Phone number(s):**

PART 3: INVESTIGATION TEAM ANALYSIS

Date Investigation Started (MM/DD/YYYY):
Factors, Root Causes, and Solution (FRCS): Complete FRCS form and answer all 7 factor questions. If answering NO to Factors 1 – 4 identify root cause(s) and explain why QIs) occurred. If answering YES to Factors 5 – 7 circle the root cause(s). Transfer the solutions guidance that addresses each root cause from the FRCS form to this form. Attach your completed FRCS Worksheet. If Factors 1-7 do not apply to the incident, write "External Cause" in the Factor column below and leave the remaining fields blank.
DESCRIPTION OF UNDESIRABLE BEHAVIOR/CONDITION
1.
2.

FACTOR(S) AND SOLUTION(S): HOW TO REDUCE POSSIBILITY OF INCIDENT RECURRING
Selection of factors and solutions reflects the analysis of investigation team and is not meant to be a legally binding conclusion as to the Root Cause and/or solution.

CAUSAL FACTOR/ BEHAVIOR/ CONDITION	ROOT CAUSE	SOLUTION(S) [Must Match Root Cause(s)]	PERSON RESPONSIBLE	AGREED DUE DATE	ACTUAL COMPLETION DATE

INVESTIGATION TEAM:

PRINT NAME	JOB POSITION	DATE	SIGNATURE

QUALITY REVIEW Correct root cause(s) identified? Do root cause(s) and solution(s) match? Are solution(s) feasible / maintainable?

Name: **Job Title:**

PART 4: Date Solutions were Implemented & Validated (Were Solutions Effective?)

Date	Solution	Verifier / Validator Name and Job Title	**Details** (of I & V performed)

Appendix D – Near Loss Form

HEALTH & SAFETY NEAR LOSS
ROUX REPORT FORM

☐ **Roux Environmental Engineering and Geology, D.P.C.**
☐ **Roux Associates, Inc.** ☐ **Remedial Engineering, P.C.**

(Check applicable company name)

PART 1: ADMINISTRATIVE INFORMATION	
Office: ☐ New York ☐ Massachusetts ☐ New Jersey ☐ Illinois ☐ CA - Los Angeles ☐ CA - Oakland	
Project Manager:	**Project Principal:**
Project Name:	**Project Location:**

PART 2: NEAR LOSS INCIDENT DETAILS	
Date\Time Occurred (MM/DD/YYYY HH:MM)**:**	**Date\Time Submitted** (MM/DD/YYYY HH:MM)**:**

NEAR LOSS INCIDENT TYPE - What could have happened? - Select all that apply (1-7)

1. ☐ Fire / Explosion
2. ☐ Injury / Illness
3. ☐ Security (e.g., theft, trespassing, vandalism)
4. ☐ Environmental (Spill, permit exceedance, etc.)
5. ☐ Transportation of personnel (vehicle accident)
6. ☐ Property/Equipment Damage
7. ☐ Business Interruption

Event Leading to Potential Injury/Illness:

Job Task*:	**Equipment Involved*:**

WHAT HAPPENED? Do not include individuals' names. Ensure photos, sketches, etc. are not personally identifiable unless written consent has been obtained.

Summary (1-2 sentences. Provide brief description of the incident. Provide facts only, no speculation or opinion)**:**

Incident Details (Brief factual details of what, where, when; include photos, sketches, etc. as attachments)**:**

Immediate Corrective Actions Taken:

SERIOUS INJURY OR FATALITY (SIF): IF AN ACTUAL SIF, USE EXISTING ROUX ACCIDENT REPORTING FORM

Could this have resulted in a SIF? ☐ **Yes** ☐ **No**

A potential SIF is defined as likely to have caused an injury resulting in significant physical body damage with probable long term and/or life altering complications.

INCIDENT INVOLVED:

Roux Employee: ☐ **Yes** ☐ **No** **Subcontractor Company Name:**

INVESTIGATION TEAM

NAME	**JOB TITLE**	**NAME**	**JOB TITLE**

PART 3: INCIDENT INVESTIGATION FINDINGS AND REPORT QUALITY REVIEW

Date Investigation Started (mm/dd/yyyy):

Factors, Root Causes, and Solution (FRCS): Complete FRCS form and answer all 7 factor questions. If answering NO to Factors 1 – 4 identify root cause(s) and explain why QIs) occurred. If answering YES to Factors 5 – 7 circle the root cause(s). Transfer the solutions guidance that addresses each root cause from the FRCS form to this form. Attach your completed FRCS Worksheet. If Factors 1-7 do not apply to the incident, write "External Cause" in the Factor column below and leave the remaining fields blank. Do not include individuals' names.

DESCRIPTION OF UNDESIRABLE BEHAVIOR/CONDITION

1.

2.

FACTOR(S) AND SOLUTION(S): HOW TO REDUCE POSSIBILITY OF INCIDENT RECURRING
Selection of factors and solutions reflects the analysis of investigation team and is not meant to be a legally binding conclusion as to the Root Cause and/or solution.

Behavior / Condition	Root Cause	Solution(s) (Must Match Root Cause)	Person Responsible for Completion	Completion Target Date	Completion Actual Date

QUALITY REVIEW Correct root cause(s) identified? Do root cause(s) and solution(s) match? Are solution(s) feasible / maintainable?

Name: **Job Title:**

PART 4: Date Solutions were Implemented & Validated (Were Solutions Effective?)

Date	Solution	Verifier / Validator Name and Job Title	**Details** (of I & V performed)

***JOB TASK - Select the most appropriate one** (primary job associated with incident-related work activity, avoid "Other" if possible)

1. CAMP
2. Construction
3. Drilling
4. Driving
5. Excavation/Trenching
6. Gauging
7. O&M
8. Other Soil Work (e.g. Compaction)
9. Sampling
10. Site Walk/ Inspection
11. Subsurface Clearance
12. Trucking
13. Waste Management
14. Work Area Preparation
15. Other

***EQUIPMENT INVOLVED THAT CONTRIBUTED TO H&S NEAR LOSS - Select all that apply**

1. Air Stripper
2. API Separator
3. Automobile
4. Boom Material
5. Bulldozer
6. Cable
7. Carbon Drum / Vessel
8. Chain Block
9. Compressor, Air
10. Control Panel (local)
11. Crane (mobile)
12. Drill Rig
13. Drilling Equipment, Vacuum
14. Drum, Vertical
15. Dump Truck
16. Electric Heater
17. Electrical Power Supply
18. Engine, Combustion
19. Equipment Safety Grounding
20. Excavator / Power Shovel
21. Exclusion Zone Equipment
22 Fan / Blower
23 Fencing
24 Filter
25. Fire Extinguisher
26. Forklift
27. Front End Loader
28. Grader
29. Hammer
30. Knife
31. Non-Powered Equipment
32. Powered Equipment
33. Drill
34. Grinder
35. Hydraulic Torque Wrench
36. Powered Saw
37. Impact Wrench
38. Saw
39. Screwdriver
40. Shears
41. Shovel
42. Snip
43. Wrench
44. Hoist
45, Hook/Clamp/Buckle, etc.
46. Jack
47. Ladder, Extension
48. Ladder, Platform
49. Ladder, Step
50. Lock Out / Tag Out
51. Maintenance Tool, General
52. Manifold
53, Manlift/Basket/Cherry Picker
54. Motor, Electric
55. Oxidizer
56. Pallet
57. Piping
58. Piping, Hose
59. Piping, Injection/Mixing Point
60. Hydrojet
61. Centrifugal Pump
62. Diaphragm Pump
63. Reciprocating Pump
64. Regenerative Pump
65. Rotary Pump
66. Transfer Pump
67. Submersible Pump
68. Face Shield
69. Fall Protection
70. Gloves
71. Hard Hat / Helmet
72. Hearing Protection
73. Respiratory PPE (Chemical)
74. Respiratory PPE (Particulate)
75. Safety Glasses
76. Safety Goggles
77. Safety Shoes / Boots
78. Safety Vest / Clothing
79. Rope
80. Bailer
81. Geoprobe
82. Hand Auger
83. PID
84. Multi-Gas Meter
85. Sample Container
86. Split-Spoon Sampler
87. Sling
88. Snow Blower
89. Snow Plow
90. Space Heater
91. Air Sparging System
92. Carbon Treatment Sys
93. Chemical Oxidation Sy
94. Dual Phase Product Recovery System
95. Groundwater Pump and Treat System
96. POET System
97. Shed or Trailer
98. Vapor Extraction Syste
99. Vapor-Phase Treatment System
100. Other System, Type:_
101. Surge Tank
102. Underground Tank
103. Telemetry System
104. Testing Devices
105. Tractor Trailer
106. Truck, Flatbed
107. Truck, Pickup
108. Truck, Tank Truck
109. Truck, Vacuum
110. Safety Valve
111. Block Valve
112. Extraction Well
113. Monitoring Well
114. Recovery Well
115. Winch
116. Wire Rope
117. No Equipment Involve
118. MPT – Traffic Control Devices
118. Not in List (describe):_

Appendix E- Factors, Root Causes, Solutions Form ™

Factors, Root Causes, Solutions (FRCS) ™

Report Type (circle one): Loss / Near Loss / RPO Project: Project Manager/Principal:

List questionable item or NLI/LI equivalent of questionable item:

To determine root cause(s) of losses, near losses and questionable items & develop solutions to prevent recurrence, answer ALL the following questions.

Factor 1
Is there adequate documentation explaining how to do this task? — if conscious decision not to have documentation, verify decision and continue to Factor 2.

YES → Verify there is a procedure, & JSA for this task.

NO → Why doesn't adequate documentation exist for this task?
Identify root cause(s).

Solution(s): Explain who will develop procedure, or JSA for this task (who writes, reviews, & approves, due date, etc.).

Factor 2
If tools are needed for task, are they available, operable, safely maintained & is there proper workplace design?

YES → Have person explain specifically what tools/equipment are needed and how they are accessed.

NO → Why aren't tools available, operable, safely maintained and/or why isn't there proper workplace design?
Identify root cause(s).

Solution(s): Explain specifically how tools will be made available, operable, safely maintained for task (who makes available, due date, etc.) and/or how workplace design will be made proper (who is responsible, due date, etc.).

Factor 3
Has your supervisor consistently told you to do this task, as well as ALL tasks, according to procedures or acceptable practices?

YES → Have person give an example of how this face-to-face communication occurred/occurs consistently.

NO → Why didn't this face-to-face communication occur consistently?
Identify root cause(s).

Solution(s): Explain how supervisor/PM will consistently communicate face-to-face with person to do this task, as well as ALL tasks, according to procedures or acceptable practices.

Factor 4
Are you familiar with task documentation & do you know how to do task according to documentation or acceptable practices?

YES → Have person verbalize how to do task according to documentation or acceptable practices.

NO → Why doesn't person know how to do task according to documentation or acceptable practices?
Identify root cause(s).

Solution(s): Explain how person will be shown how to do task according to documentation or acceptable practices (who will show person, due date, etc.).

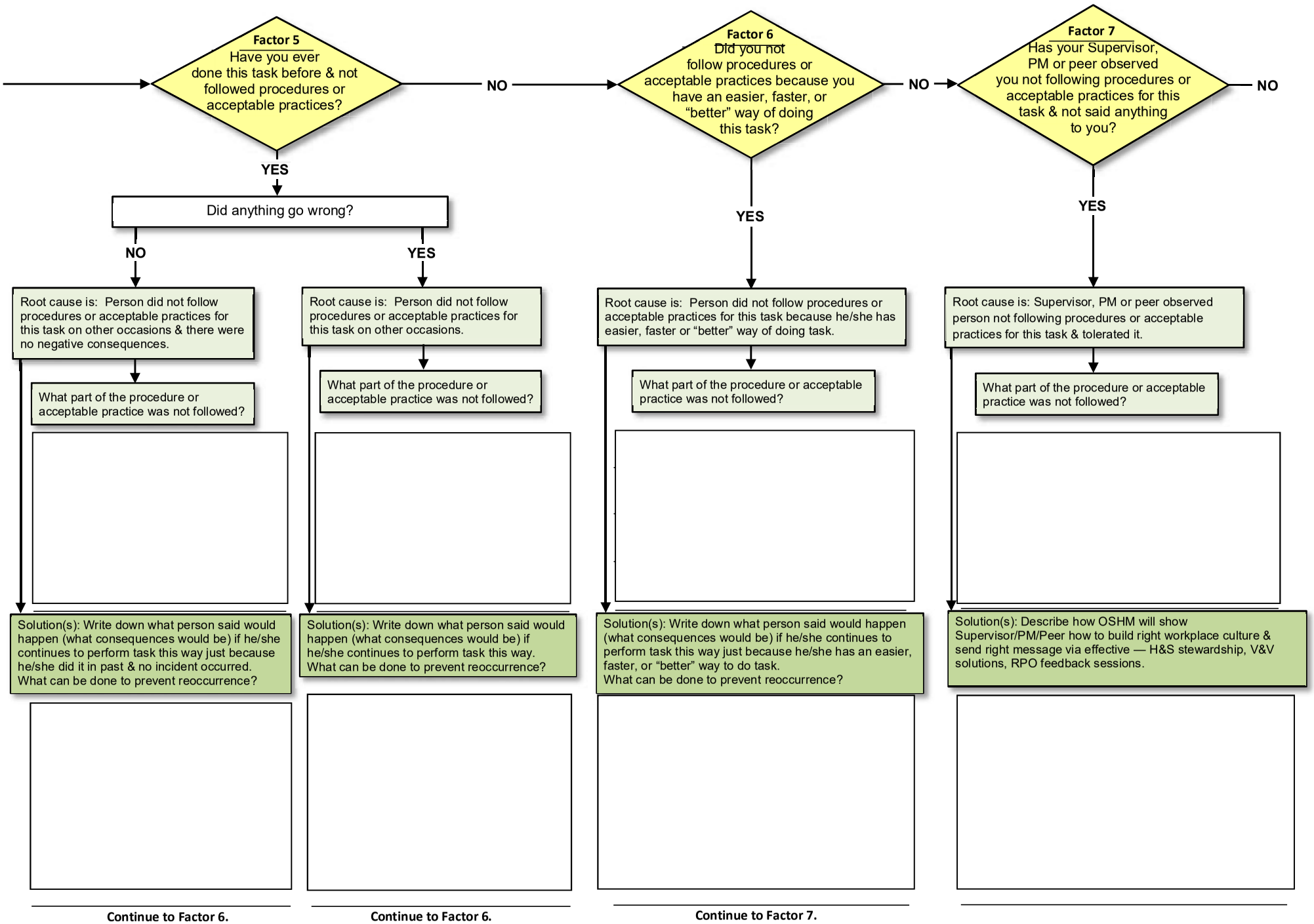
Continue to Factor 2.

Continue to Factor 3.

Continue to Factor 4.

Continue to Factor 5 on next page.

Factors, Root Causes, Solutions (FRCS)™



APPENDIX C

Soil Boring Permit

CITY OF LONG BEACH

DEPARTMENT OF HEALTH AND HUMAN SERVICES | BUREAU OF ENVIRONMENTAL HEALTH

WATER QUALITY PROGRAM

2525 Grand Avenue Room 220 | Long Beach, CA 90815 | Hotline (562) 570-4132 Fax: (562) 570-4038

www.longbeach.gov/health/eh

WELL PERMIT

PERMIT#: ***2668***

DATE ISSUED: ***August 6, 2019***

PROPOSED DATE: ***August 12, 2019***

All work must be completed in accordance with Water Well Bulletin 74-81 and 74-90.

PLEASE NOTIFY INSPECTOR 48 HOURS BEFORE DRILLING AND SUBMIT LOG(S) TO vanna.kho@longbeach.gov , OR MAIL/FAX AT ADDRESS ABOVE.

Site Address:	***3701 North Pacific Place*** ***Long Beach, CA 90806***
Owner:	***InSite Property Group***
Owner Address:	*811 N. Catalina Avenue, Suite 1306* *Redondo Beach, CA 90277*
Consulting Firm:	***Roux Associates, Inc.***
Consulting Firm Address	*5150 E. Pacific Coast Hwy, Suite 450* *Long Beach, CA 90804* *(562) 446-8623*
Drilling Company:	***Strongarm Environmental Field Services, Inc.***
Drilling Co. Address:	*740 Williamson Avenue* *Fullerton, CA 92832* *(562) 404-6656*
Type Of Permit:	***Soil Boring***
Type Of Well:	
Total Number Of Well/Soil Boring:	***35 Borings***

This permit valid for one year from date above

Craig Wong

Cross-Connection/Water Quality

APPENDIX D

Boring Logs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-1	NORTHING 17060313.9657	EASTING 6500038.2885		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/16/19-8/16/19
LAND SURFACE ELEVATION 57.05(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT with SAND (ML): dark yellowish brown (10YR 4/4), 85% Silt, 15% fine Sand, moist, hard, no odor				Hand augered to 2 ft below ground surface (bgs)
					6.6	
						Concrete debris
					7.2	
5						5
10						10
		SANDY SILT (MLS): dark brown (10YR 3/3), 60% Silt, 40% fine Sand, moist, soft, no odor			7.4	
15						15
		SILT (ML): black (10YR 2/1), 100% Silt, soft, strong petroleum odor			318	Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-2**	NORTHING **1760203.0243**	EASTING **6499991.3595**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/16/19-8/16/19**
LAND SURFACE ELEVATION **44.93(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

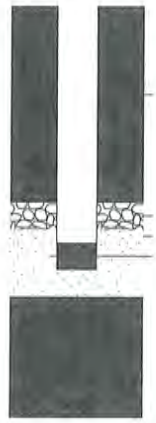
Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT with SAND (ML): dark yellowish brown (10YR 3/6), 60% Silt, 40% fine Sand, dry to moist, hard, no odor			1.3	Hand augered to 2 ft below ground surface (bgs)
5					9.6	5
					3.2	
		SANDY SILT (MLS): very dark brown (10YR 2/2), soft, moist, petroleum odor			175	Total depth at 8 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-3**	NORTHING **1760196.3405**	EASTING **6500125.1603**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/16/19-8/16/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. **1/4"**	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **57.90**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES



Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): pale brown (10YR 6/3), 90% Silt, 10% fine Sand, dry to moist, hard, no odor				Hand augered to 2 ft below ground surface (bgs)
					2.0	
5						5
					38	
					22.7	
10						10
		SILT (ML): black (10YR 2/1), 100% Silt, soft, wet, strong petroleum odor			679	Total depth at 12 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-4	NORTHING 1760066.42	EASTING 6499954.73		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/16/19-8/16/19
LAND SURFACE ELEVATION 46.00(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): dark brown (10YR 3/3), 90% Silt, 10% fine Sand, dry to moist, hard, no odor			Hand augered to 2 ft below ground surface (bgs)
				3.1	
				3.4	
5					5
				4.3	
10					10
		SANDY SILT (MLS): grayish brown (10YR 5/2), 60% Silt, 40% fine to medium grained Sand, moist, soft, no odor		0.9	
				9.3	
15					15
		POORLY-GRADED SAND (SP): gray (10YR 6/1), 100% fine Sand, moist, loose, no odor			Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-5	NORTHING 1760054.2288	EASTING 6500117.7359		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/12/19-8/12/19
LAND SURFACE ELEVATION 72.10(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

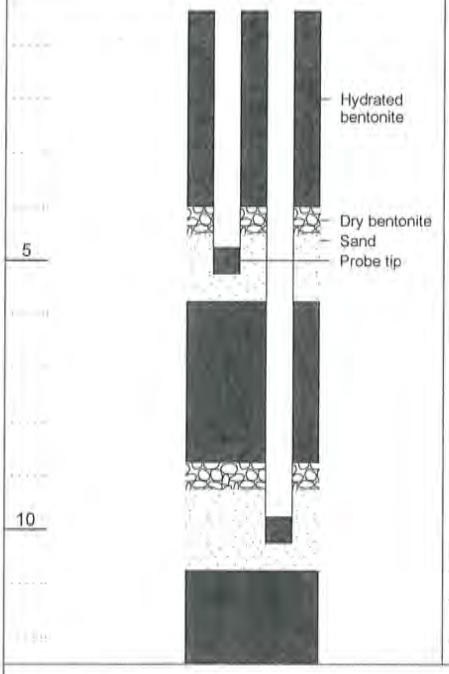
Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with SAND (ML): dark yellowish brown (10YR 3/6), 85% Silt, 15% fine Sand, dry to moist, no odor		1.2	Hand augered to 2 ft below ground surface (bgs)
				1.3	
				1.7	
5				4.8	5
		POORLY-GRADED SAND WITH SILT (SP-SM): brown (10YR 5/3), 80% fine Sand, 10% medium grained Sand, 10% Silt, moist, no odor			
				3.2	
10					10
		LEAN CLAY (CL): 6" lens			
		POORLY-GRADED SAND WITH SILT (SP-SM): brown (10YR 5/3), 80% fine Sand, 10% medium grained Sand, 10% Silt, moist, no odor			Fine Sand
15				6.1	15
					Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-6**	NORTHING **1759956.3471**	EASTING **6500150.9911**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/12/19-8/12/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. **1/4"**	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **64.58**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES



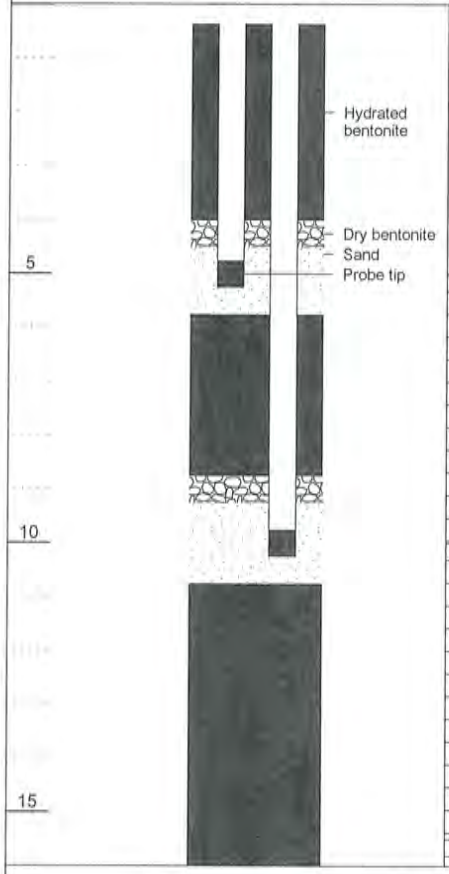
Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SANDY SILT (MLS): dark yellowish brown (10YR 3/6), 60% Silt, 40% fine Sand, moist, hard, no odor		3.1	Hand augered to 2 ft below ground surface (bgs)
5				6.7	5
10		50% Silt, 50% fine Sand			10 Refusal at 12.5 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-7**	NORTHING **1759923.4439**	EASTING **6499956.9032**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/12/19-8/12/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. **1/4"**	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **58.92**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES



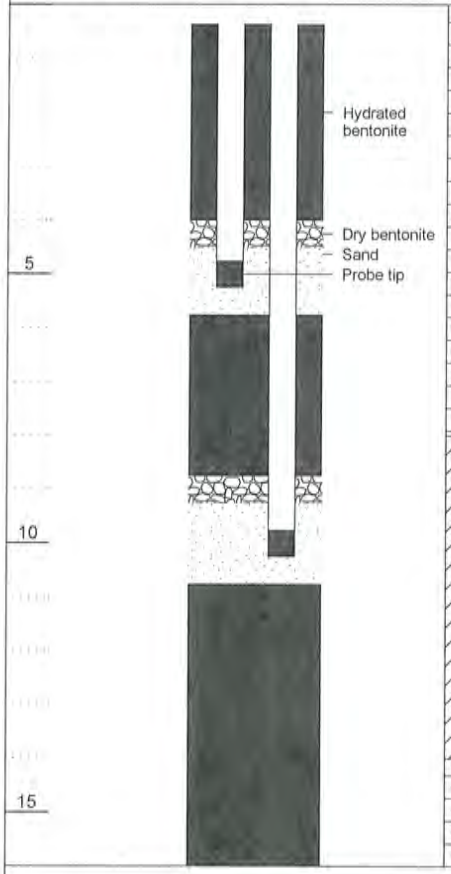
Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SANDY SILT (MLS): pale brown (10YR 6/3), 60% Silt, 40% fine Sand, dry, no cohesion, no odor		1.7	Hand augered to 2 ft below ground surface (bgs)
5		SILT with SAND (ML): light yellowish brown (10YR 6/4), 80% Silt, 20% fine Sand, moist, no odor		2.6	5
					2" hard black clast (shale) xenolith
10		SILT (ML): dark brown (10YR 3/3), 90% silt, 10% medium to coarse grained Sand, hard, no odor, some pieces of brick		5.7	10
15				13.1	15
		SILT (ML): black (10YR 2/1), 95% silt, trace medium grained Sand, soft, wet, strong odor		143	Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO.: SB-8	NORTHING: 1759929.2019	EASTING: 6500041.2533		
PROJECT NO./NAME: 3370.001L000 /		LOCATION: 3701 N Pacific Place		
APPROVED BY:	LOGGED BY: PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER: Strongarm / Strongarm		GEOGRAPHIC AREA:		
DRILL BIT DIAMETER/TYPE: 2.25 / DPT	BOREHOLE DIAMETER: 2.25	DRILLING EQUIPMENT/METHOD: HA/Truck-Mounted DPT /	SAMPLING METHOD: Acetate Sleeve	START-FINISH DATE: 8/12/19-8/12/19
CASING MAT./DIA.: Nylaflow / 1/4"	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. 1/4"	SLOT SIZE
ELEVATION OF: (Feet) GROUND SURFACE 59.78	TOP OF WELL CASING	TOP & BOTTOM SCREEN /		SAND PACK SIZES



Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): dark yellowish brown (10YR 3/6), dry to moist, 90% Silt, 10% fine Sand, no odor		0.0	Hand augered to 2 ft below ground surface (bgs)
				0.1	
				3.1	
		LEAN CLAY (CL): dark grayish brown (10YR 4/2), low plasticity, moist		5.0	
					Piece of glass
				32	
		SILT (ML): very dark gray (10YR 3/1), 90 % Silt, 10% fine sand, moist, strong hydrocarbon odor		165	
					Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-9	NORTHING 1759837.7113	EASTING 6500214.0153		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/13/19-8/13/19
LAND SURFACE ELEVATION 61.09(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with Sand (ML): brown (10YR 5/3), 80% Silt, 20% fine to coarse grained Sand, moist, no odor, pieces of brick		1.3	Hand augered to 2 ft below ground surface (bgs)
5		SANDY SILT (MLS): dark grayish brown (10YR 4/2), 60% Silt, 40% fine Sand, moist, no odor		9.1	5
				15.6	
10				9.3	10 Refusal at 14.5 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-10**	NORTHING **1759993.3558**	EASTING **6500267.4176**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/15/19-8/15/19**
LAND SURFACE ELEVATION **52.46(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): dark brown (10YR 3/3), 85% Silt, 15% fine Sand, moist, soft, no odor		1.6	Hand augered to 2 ft below ground surface (bgs)
				3.2	
5					5
				7.8	
				12.1	
		SILT (ML): black (10YR 2/1), 100% Silt, wet, soft, strong odor			
10				2700	10
15					15
					Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-11**	NORTHING **1759787.7106**	EASTING **6499897.002**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/12/19-8/12/19**
LAND SURFACE ELEVATION **57.21(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

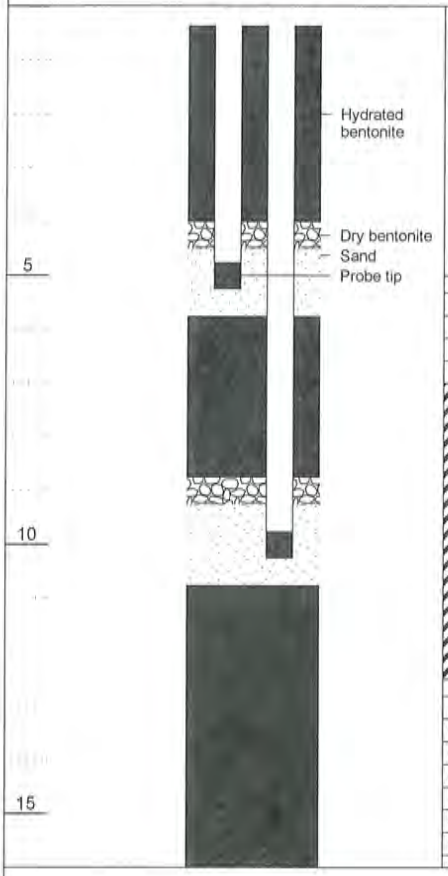
Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with SAND (ML): pale brown (10YR 6/3), 80% Silt, 20% fine Sand, moist, no odor		1.9	Hand augered to 2 ft below ground surface (bgs)
5				2.8	5
		SILT (ML): very dark grayish brown (10YR 3/2), 100% Silt, hard			
		SILTY SAND (SM): dark grayish brown (10YR 4/2), 60% fine Sand, 40% Silt			
10				3.5	10
		LEAN CLAY with SAND (CL): very dark grayish brown (10YR 3/2), 80% Lean Clay, 20% fine to coarse grained Sand			
15				12.1	15
		very dark brown (10YR 2/2), organic, strong petroleum odor		96	Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-12**	NORTHING **1759790.8512**	EASTING **6500030.9667**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/12/19-8/12/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. **1/4"**	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **55.45**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES



Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
0		POORLY-GRADED SAND with SILT (SP-SM): pale brown (10YR 6/3), 90% fine Sand, 10% Silt, dry, no odor			3.1	Hand augered to 2 ft below ground surface (bgs)
5		SILT with SAND (ML): dark brown (10YR 3/3), moist, light petroleum odor			1.2	5
		FAT CLAY (CH): dark yellowish brown (10YR 3/6), 100% Fat Clay, moist, hard			10.3 1.9 1.3	
10						10
		SILT with SAND (ML): very dark brown (10YR 2/2), 90% Silt, 10% fine Sand, organic, strong petroleum odor			2.9 75.3	
15						15
						Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-13**	NORTHING **1759804.2274**	EASTING **6500128.0401**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/12/19-8/12/19**
LAND SURFACE ELEVATION **59.74(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with SAND (ML): pale brown (10YR 6/3), 75% Silt, 25% well-graded Sand		0.1	Hand augered to 2 ft below ground surface (bgs)
				3	
		10% gravel observed		1	
5					5
				1.1	
10					10
				4.2	
		FAT CLAY (CH): dark brown (10YR 2/2), 95% fat expanding Clay, <5% fine Sand, light petroleum odor			
				6.1	
15					15
		greenish gray (Gley 1 5/10GY)			
		light petroleum odor			
		SILT (ML): very dark grayish brown (10YR 3/2), 90% Silt, 10% fine Sand, moist, stiff, highly organic, strong petroleum		103	Total depth at 18 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-14**	NORTHING **1759785.678**	EASTING **6500295.0601**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/13/19-8/13/19**
LAND SURFACE ELEVATION **57.29(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

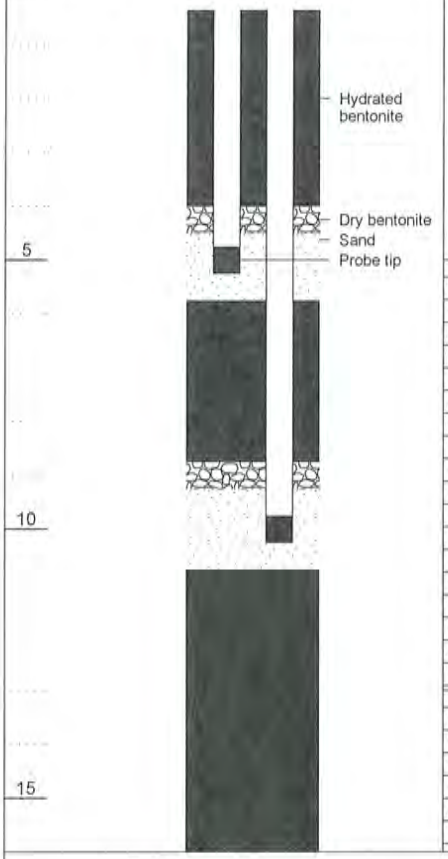
Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): yellowish brown (10YR 5/6), 90% Silt, 10% fine to medium grained Sand, dry to moist, no odor			Hand augered to 2 ft below ground surface (bgs)
				0.8	
				1.1	
5					5
				1.4	
10					10
				12.5	
		SILT (ML): black (10YR 2/1), 100% Silt, organic, strong odor, high plasticity			
				10547	Total depth at 12 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-15**	NORTHING **1759659.6453**	EASTING **6499854.63**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/13/19-8/13/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. **1/4"**	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **53.61**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES



Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SANDY SILT (MLS): pale brown (10YR 6/3), 60% silt, 40% fine sand, dry, loose, no odor				Hand augered to 2 ft below ground surface (bgs)
					2.6	
5						5
		SILT with Sand (ML): brown (10YR 4/3), 80% silt, 20% fine sand, moist, hard, no odor			2.7	
					3.4	
10						10
						brick fragment
					10.1	
		SILT (ML): black (10YR 2/1), 100% silt, organic, TPH odor				
					1235	
15						15
						Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-16	NORTHING 1759662.07	EASTING 6499989.3		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/13/19-8/13/19
LAND SURFACE ELEVATION 52.39(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): brown (10YR 4/3), 95% Silt, 5% fine Sand, very stiff, moist, no odor			1.8	Hand augered to 2 ft below ground surface (bgs)
					4.3	
5					13.1	5
					10.1	
		SILT (ML): black (10YR 2/1), 100% Silt, soft, moist, strong petroleum odor			1894	
10						10
						Total depth at 12 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-17	NORTHING 1759662.0808	EASTING 6500123.8978		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/13/19-8/13/19
LAND SURFACE ELEVATION 56.39(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

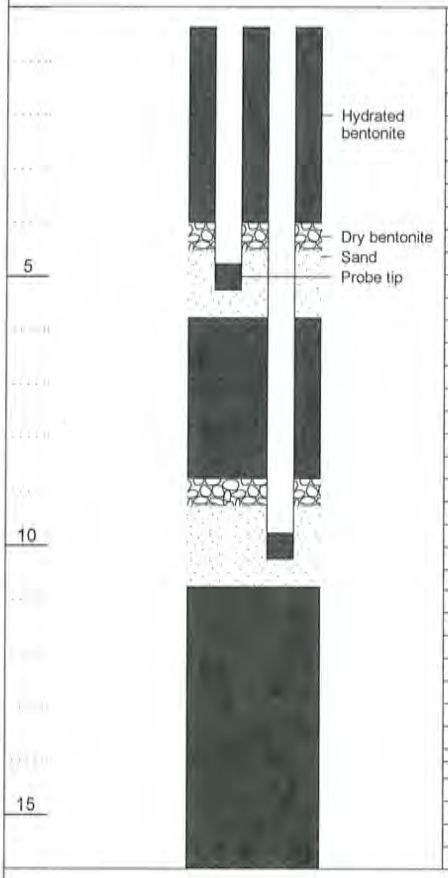
Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): dark yellowish brown (10YR 4/4), 95% Silt, 5% coarse Sand, moist, extremely stiff			Hand augered to 2 ft below ground surface (bgs)
				1.8	
5				6.1	5
		dark yellowish brown (10YR 3/6)		9.4	
10				13.1	10
		SILT (ML): very dark brown, 90% Silt, 10% fine grained Sand, moist, soft, strong petroleum odor, sludge		1593	
15					15
					Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-18**	NORTHING **1759659.6334**	EASTING **6500259.0822**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/13/19-8/13/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE	MAT.	TOTAL LENGTH ft	DIA. **1/4"** SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **57.64**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES



Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): pale brown (10YR 6/3) 90% Silt, 10% fine Sand, dry, no odor			2.3	
					2.1	
5						5
					1.1	
10		brown (10YR 4/3), moist, no odor				10
					3.7	
15		SILT (ML): very dark brown (10YR 2/2), 100% Silt, strong petroleum odor				15
					239	Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-19**	NORTHING **1759615.0746**	EASTING **6500424.37**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/13/19-8/13/19**
LAND SURFACE ELEVATION **51.97(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): pale brown (10YR 6/3), 90% Silt, 10% fine Sand, dry loose, no odor			7.1	Hand augered to 2 ft below ground surface (bgs)
		SILT (ML): black (10YR 2/1), Silt and Clay, organic, moist			75.1	Total depth at 4 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-20	1759514.2613	6499850.7215		
PROJECT NO./NAME		LOCATION		
3370.001L000 /		3701 N Pacific Place		
APPROVED BY	LOGGED BY	Long Beach, California		
	PAS			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Strongarm / Strongarm				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2.25 / DPT	2.25	HA/Truck-Mounted DPT /	Acetate Sleeve	8/13/19-8/13/19
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
50.53(FT.)	Not Measured	Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT with Sand (ML): pale brown (10YR 6/3), 85% Silt, 15% fine to medium grained Sand, dry, loose, no odor			12.9	Hand augered to 2 ft below ground surface (bgs)
5					10.1	5
		dark brown (10YR 3/3), no medium grained sand, <5% small gravel, moist, hard, no odor			13.5	
10		SILT (ML): black (10YR 2/1), 100% Silt, organic, strong petroleum odor			7250	10 Total depth at 12 ft bgs

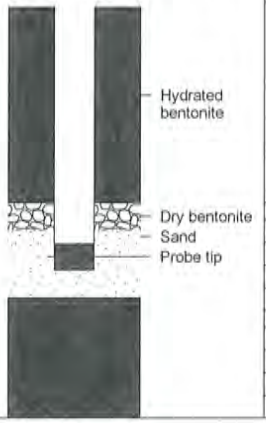
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-21**	NORTHING **1759527.922**	EASTING **6499989.5995**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/13/19-8/13/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. **1/4"**	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **49.52**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SANDY SILT (MLS): yellowish brown (10YR 5/4), 70% Silt, 30% fine Sand, moist, loose, no odor			10.7	Hand augered to 2 ft below ground surface (bgs)
					15.1	
5		SILT with SAND (ML): very dark grayish brown (10YR 3/2), 80% Silt, 20% coarse grained Sand, loose			14.3	5
		SILT (ML): black (10YR 2/2), wet, soft, strong odor			2345	Total depth at 8 ft bgs



ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-22	NORTHING 1759544.8958	EASTING 6500099.942		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/13/19-8/13/19
LAND SURFACE ELEVATION 54.73(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): yellowish brown (10YR 5/4), 90% Silt, 10% fine Sand, dry to moist, hard, no odor			1.3	Hand augered to 2 ft below ground surface (bgs)
					2.7	
5						5
					3.4	
					2.4	
10						10
		black (10YR 2/1), moist, soft, very strong odor			215	Total depth at 12 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-23**	NORTHING **1759529.2604**	EASTING **6500260.467**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/14/19-8/14/19**
LAND SURFACE ELEVATION **50.65(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

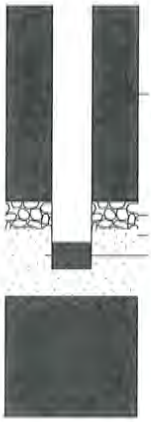
Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with Sand (ML): yellowish brown (10YR 5/4), 75% Silt, 25%, medium to coarse grained Sand, trace gravel, dry, loose			Hand augered to 2 ft below ground surface (bgs)
				2.1	
5					5
		black (10YR 2/1), moist, soft, strong petroleum odor			Total depth at 8 ft bgs
				175	

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO.: SB-24	NORTHING: 1759488.2061	EASTING: 6500403.1051		
PROJECT NO./NAME: 3370.001L000 /		LOCATION: 3701 N Pacific Place		
APPROVED BY:	LOGGED BY: PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER: Strongarm / Strongarm		GEOGRAPHIC AREA:		
DRILL BIT DIAMETER/TYPE: 2.25 / DPT	BOREHOLE DIAMETER: 2.25	DRILLING EQUIPMENT/METHOD: HA/Truck-Mounted DPT /	SAMPLING METHOD: Acetate Sleeve	START-FINISH DATE: 8/14/19-8/14/19
CASING MAT./DIA.: Nylaflow / 1/4"	SCREEN: TYPE	MAT.	TOTAL LENGTH ft	DIA. 1/4" SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE: 53.70	TOP OF WELL CASING	TOP & BOTTOM SCREEN: /	SAND PACK SIZES

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with Sand (ML): yellowish brown (10YR 5/6), 80% Silt, 15% fine to medium grained Sand, 5% large gravel (approximately 1" diameter), loose, moist		2.1	Hand augered to 2 ft below ground surface (bgs)
				3.5	
5				1.7	5
				6.5	
10		SILT (ML): very dark brown (10YR 2/2), 90% Silt, 10% fine Sand, organic, strong petroleum odor		150	10
				1290	Total depth at 12 ft bgs

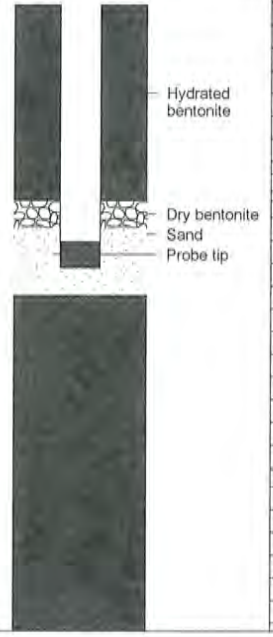
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-25**	NORTHING **1759376.4232**	EASTING **6499768.5244**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/14/19-8/14/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. **1/4"**	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **48.00**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with SAND (ML): yellowish brown (10YR 5/4), 80% Silt, 20% Sand, moist, hard, no odor		8.5	Hand augered to 2 ft below ground surface (bgs)
				13.1	
		CLAY (CLAY): dark grayish brown (10YR 4/2), 90% Clay, 10% fine Sand, slight odor			
5		SILT with SAND (ML): yellowish brown (10YR 5/4), 80% Silt, 20% Sand, moist, hard, no odor		3.2	5
				7.1	
10		SILT (ML): black (10YR 2/1), 100% Silt, wet, soft, very strong odor		540	10
					Total depth at 12 ft bgs



ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-26	1759388.7091	6499935.6098		
PROJECT NO./NAME		LOCATION		
3370.001L000 /		3701 N Pacific Place		
APPROVED BY	LOGGED BY	Long Beach, California		
	PAS			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Strongarm / Strongarm				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2.25 / DPT	2.25	HA/Truck-Mounted DPT /	Acetate Sleeve	8/14/19-8/14/19
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
46.04(FT.)	Not Measured	Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): dark grayish brown (10YR 4/2), 85% Silt, 15% fine to medium grained Sand, moist, soft			7.3	Hand augered to 2 ft below ground surface (bgs)
		SILT (ML): black (10YR 2/1), 95% Silt, 5% medium grained Sand, moist, soft, strong petroleum odor			525	Total depth at 4 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-27**	NORTHING **1759395.41**	EASTING **650116.12**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/14/19-8/14/19**
LAND SURFACE ELEVATION **50.90(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): light yellowish brown (10YR 6/4), 90% Silt, 10% fine Sand, <1% small granitic clasts (approx 1 cm diameter), dry to moist, loose, no odor			7.2	Hand augered to 2 ft below ground surface (bgs)
5		SILT (ML): very dark brown (10YR 2/2), 95% Silt, 5 % fine to medium grained Sand, mild odor			8.5 67.8	5
		SILT (ML): black (10YR 2/1), 100% Silt, moist, soft, strong petroleum odor			873.5	Total depth at 8 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-28	1759389.24	6500275.12		
PROJECT NO./NAME		LOCATION		
3370.001L000 /		3701 N Pacific Place		
APPROVED BY	LOGGED BY	Long Beach, California		
	PAS			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Strongarm / Strongarm				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2.25 / DPT	2.25	HA/Truck-Mounted DPT /	Acetate Sleeve	8/14/19-8/14/19
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
46.27(FT.)	Not Measured	Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): yellowish brown (10YR 5/4), 90% Silt, 10% fine Sand, dry hard, no odor			1.1	Hand augered to 2 ft below ground surface (bgs)
		SILT (ML): black (10YR 2/1), 100% Silt, moist to wet, soft, strong odor				Total depth at 4 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-29	1759255.16	6499856.81		
PROJECT NO./NAME		LOCATION		
3370.001L000 /		3701 N Pacific Place		
APPROVED BY	LOGGED BY	Long Beach, California		
	PAS			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Strongarm / Strongarm				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2.25 / DPT	2.25	HA/Truck-Mounted DPT /	Acetate Sleeve	8/14/19-8/14/19
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
48.42(FT.)	Not Measured	Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): yellowish brown (10YR 5/6), 90% Silt, 10% fine Sand, dry, loose, no odor, some roots				Hand augered to 2 ft below ground surface (bgs)
					32.1	
5		SILT (ML): dark brown (10YR 3/3), 100% Silt, organic, moist, soft, strong petroleum odor			721	5
						Total depth at 8 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-30	1759252.9599	649980.14		
PROJECT NO./NAME		LOCATION		
3370.001L000 /		3701 N Pacific Place		
APPROVED BY	LOGGED BY	Long Beach, California		
	PAS			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Strongarm / Strongarm				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2.25 / DPT	2.25	HA/Truck-Mounted DPT /	Acetate Sleeve	8/14/19-8/14/19
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
48.15(FT.)	Not Measured	Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT with SAND (ML): yellowish brown (10YR 5/4), 80% Silt, 20% Sand, moist, hard, no odor				Hand augered to 2 ft below ground surface (bgs)
					3.1	
		SILT (ML): black (10YR 2/1), 100% silt, wet, soft, strong odor			1525	Total depth at 4 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-31**	NORTHING **1759250.98**	EASTING **6500159.29**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/15/19-8/15/19**
LAND SURFACE ELEVATION **47.81(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): pale brown (10YR 6/3), 90% Silt, 10% fine Sand, dry, loose, no odor			8.1	
		SILT (ML): black (10YR 2/1), 100% silt, moist, soft, strong odor			451	Total depth at 4 ft bgs

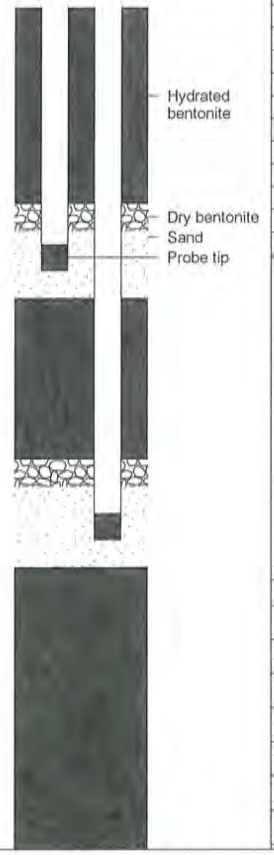
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO.: SB-32	NORTHING: 1759242.2168	EASTING: 6500255.71		
PROJECT NO./NAME: 3370.001L000 /		LOCATION: 3701 N Pacific Place		
APPROVED BY:	LOGGED BY: PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER: Strongarm / Strongarm		GEOGRAPHIC AREA:		
DRILL BIT DIAMETER/TYPE: 2.25 / DPT	BOREHOLE DIAMETER: 2.25	DRILLING EQUIPMENT/METHOD: HA/Truck-Mounted DPT /	SAMPLING METHOD: Acetate Sleeve	START-FINISH DATE: 8/15/19-8/15/19
CASING MAT./DIA.: Nylaflow / 1/4"	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. 1/4"	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE: 48.51	TOP OF WELL CASING	TOP & BOTTOM SCREEN: /	SAND PACK SIZES

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with SAND (ML): dark grayish brown (10YR 4/2), 70% Silt, 30% fine to medium grained Sand, moist, loose, no odor, some roots			Hand augered to 2 ft below ground surface (bgs)
5		POORLY-GRADED SAND WITH SILT (SP-SM): yellowish brown (10YR 5/4), 90% fine to medium grained Sand, 10% Silt, moist, soft, no odor			5
10		SILTY SAND (SM): dark brown (10YR 3/3), 80% fine to medium grained Sand, 20% silt, moist, soft, no odor			10
15					15
					Total depth at 16 ft bgs



ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-33**	NORTHING **1759137.17**	EASTING **6499964.347**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/15/19-8/15/19**
LAND SURFACE ELEVATION **49.00(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with GRAVEL (MLG): brown and dark brown (10YR 5/3 and 10YR 3/3), 70% silt, 30% gravel (1 cm), dry, loose, no odor			Hand augered to 2 ft below ground surface (bgs)
				3.1	
				4.9	
5					5
		Cold Tar: black (10YR 2/1), shiny, hard, brittle, strong odor		9.5	
		POORLY-GRADED SAND (SP): COLOR (10YR 5/6), 95% fine to medium grained Sand, 5% Silt, moist, soft, no odor			
				1.5	Refusal - Total depth at 9 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-34	1759125	6500122.84		
PROJECT NO./NAME		LOCATION		
3370.001L000 /		3701 N Pacific Place		
APPROVED BY	LOGGED BY			
	PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Strongarm / Strongarm				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2.25 / DPT	2.25	HA/Truck-Mounted DPT /	Acetate Sleeve	8/15/19-8/15/19
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
48.80(FT.)	Not Measured	Hydrated bentonite		

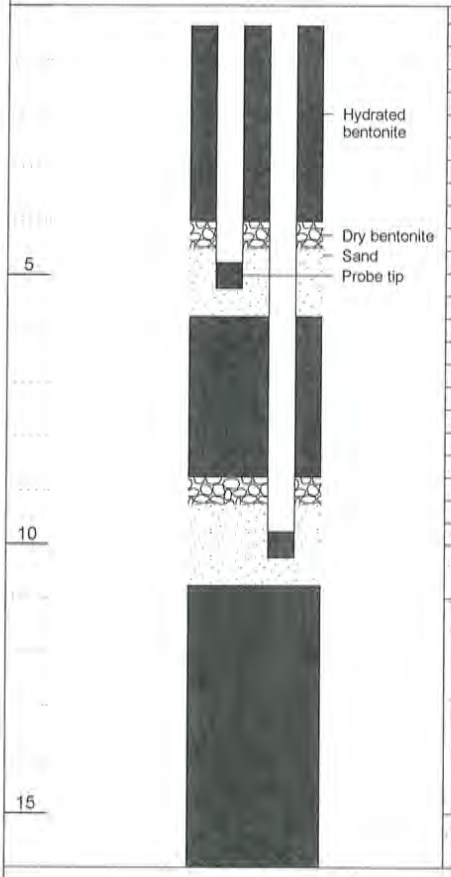
Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SANDY SILT (MLS): dark brown (10YR 3/3), 70% Silt, 30% Sand, moist, hard, no odor			3.5	Hand augered to 2 ft below ground surface (bgs)
		SILT (ML): black (10YR 2/1), 100% Silt, wet, moist, soft, strong odor			1120	Total depth at 4 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO.: SB-35	NORTHING: 1759123.296	EASTING: 6500262.225		
PROJECT NO./NAME: 3370.001L000 /		LOCATION: 3701 N Pacific Place		
APPROVED BY:	LOGGED BY: PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER: Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: 2.25 / DPT	BOREHOLE DIAMETER: 2.25	DRILLING EQUIPMENT/METHOD: HA/Truck-Mounted DPT /	SAMPLING METHOD: Acetate Sleeve	START-FINISH DATE: 8/16/19-8/16/19
CASING MAT./DIA.: Nylaflow / 1/4"	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. 1/4"	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE: 48.59	TOP OF WELL CASING	TOP & BOTTOM SCREEN: /	SAND PACK SIZES



Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT with SAND (ML): pale brown (10YR 6/3), 80% Silt, 20% fine Sand, moist, hard, no odor			2.2	Hand augered to 2 ft below ground surface (bgs)
					9.1	
5						5
					8.1	
10		POORLY-GRADED SAND (SP): light yellowish brown (10YR 6/4), 100% fine to medium grained Sand, moist, soft, no odor			7.3	10
		SANDY SILT (MLS): dark yellowish brown (10YR 4/6), 70% Silt, 30% fine to medium grained Sand, moist, soft, no odor				
15		POORLY-GRADED SAND (SP): light yellowish brown (10YR 6/4), 100% fine to medium grained Sand, moist, soft, no odor			6.0	15 Total depth at 16 ft bgs

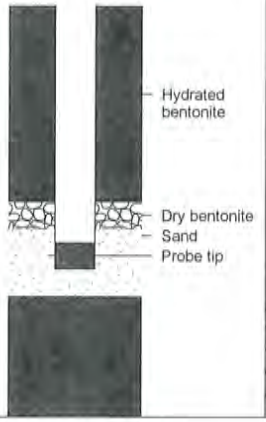
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO. **SB-36**	NORTHING **1759188.78**	EASTING **6499949.456**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/14/19-8/14/19**
CASING MAT./DIA. **Nylaflow / 1/4"**	SCREEN: TYPE MAT.	TOTAL LENGTH ft	DIA. **1/4"**	SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE **48.49**	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	SAND PACK SIZES

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SANDY SILT (MLS): dark yellowish brown (10YR 3/4), 70% silt, 30% fine Sand, moist, hard, no odor		10.1	Hand augered to 2 ft below ground surface (bgs)
5				9.6	5
		SILT (ML): black (10YR 2/1), 100% Silt, moist, soft, strong odor		89	Total depth at 8 ft bgs



ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-37	NORTHING 1759178.599	EASTING 6500076.18		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/16/19-8/16/19
LAND SURFACE ELEVATION 48.49(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SANDY SILT (MLS): pale brown (10YR 6/3), 70% Silt, 30% fine Sand, dry loose, no odor			8.1	Hand augered to 2 ft below ground surface (bgs)
		SILT (ML): black (10YR 2/1), 100% Silt, moist, to wet, soft, strong petroleum odor			261	Total depth at 4 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-38**	NORTHING **1759324.53**	EASTING **6500281.28**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/14/19-8/14/19**
LAND SURFACE ELEVATION **43.77(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		SILT (ML): black (10YR 2/1), 90% Silt, 10% medium to coarse grained Sand, moist, loose, no odor			7.8	Hand augered to 2 ft below ground surface (bgs)
		SILT (ML): 100% Silt, soft, strong odor			325	
5		SILTY SAND (SM): gray (10YR 5/1), 70% fine Sand, 30% Silt, slight petroleum odor			98.1	5
					13.9	
		SILT (ML): black (10YR 2/1), 100% Silt, organic, strong petroleum odor			126	Total depth at 8 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-39	1759443.19	6499757.02		
PROJECT NO./NAME		LOCATION		
3370.001L000 /		3701 N Pacific Place		
APPROVED BY	LOGGED BY	Long Beach, California		
	PAS			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Strongarm / Strongarm				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2.25 / DPT	2.25	HA/Truck-Mounted DPT /	Acetate Sleeve	8/15/19-8/15/19
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
48.70(FT.)	Not Measured	Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SANDY SILT (MLS): light yellowish brown (10YR 6/4), 70% Silt, 30% fine to coarse grained sand, moist, hard, no odor			Hand augered to 2 ft below ground surface (bgs)
				3.1	
5					5
10					10
		SILT (ML): black (10YR 2/1), 100% Silt, wet, soft, strong odor		723	Total depth at 12 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-40**	NORTHING **1759710.22**	EASTING **6499828.78**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/15/19-8/15/19**
LAND SURFACE ELEVATION **54.80(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): light yellowish brown (10YR 6/4), 85% Silt, 15% medium to coarse grained Sand, soft to hard, dry to moist, no odor			Hand augered to 2 ft below ground surface (bgs)
5					5
10					10
15					15
		POORLY-GRADED SAND (SP): pale brown (10YR 6/3), 95% fine to medium grained Sand, 5% Silt, moist, soft, no odor			Total depth at 16 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-41	NORTHING 1759962.37	EASTING 6499888.62		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/16/19-8/16/19
LAND SURFACE ELEVATION 45.70(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with SAND (ML): brown (10YR 3/3), 85% Silt, 15% fine to medium grained Sand, trace granitic gravel, dry to moist, hard, friable, no odor			Hand augered to 2 ft below ground surface (bgs)
5					5
		SILT (ML): black (10YR 2/1), 100% silt, wet, soft, very strong petroleum odor		1793	Total depth at 8 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. SB-42	NORTHING 1760042.79	EASTING 6500232.97		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Truck-Mounted DPT /	SAMPLING METHOD Acetate Sleeve	START-FINISH DATE 8/15/19-8/15/19
LAND SURFACE ELEVATION 53.60(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT with SAND (ML): yellowish brown (10YR 5/4), 80% Silt, 20% fine to medium grained Sand, moist, hard, no odor		1.1	Hand augered to 2 ft below ground surface (bgs)
				1.2	
5					5
10		SILT (ML): black (10YR 2/1), 100% Silt, wet, soft, strong odor		526	10
					Total depth at 12 ft bgs

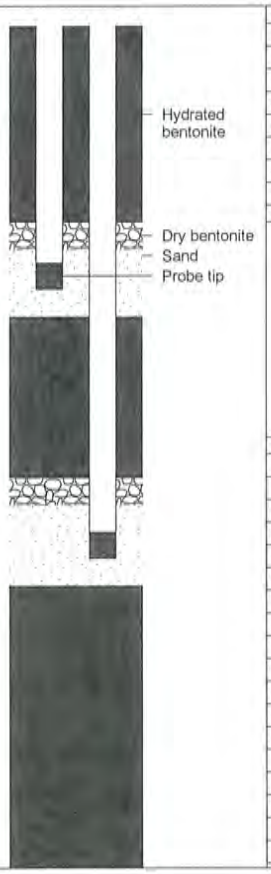
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

WELL CONSTRUCTION LOG

WELL NO.: SB-43	NORTHING: 1759884.76	EASTING: 6500333.72		
PROJECT NO./NAME: 3370.001L000 /		LOCATION: 3701 N Pacific Place		
APPROVED BY:	LOGGED BY: PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER: Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: 2.25 / DPT	BOREHOLE DIAMETER: 2.25	DRILLING EQUIPMENT/METHOD: HA/Truck-Mounted DPT /	SAMPLING METHOD: Acetate Sleeve	START-FINISH DATE: 8/15/19-8/15/19
CASING MAT./DIA.: Nylaflow / 1/4"	SCREEN: TYPE	MAT.	TOTAL LENGTH ft	DIA. 1/4" SLOT SIZE
ELEVATION OF: (Feet)	GROUND SURFACE: 50.90	TOP OF WELL CASING	TOP & BOTTOM SCREEN: /	SAND PACK SIZES

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): brown (10YR 4/3), 95% Silt, 5% fine to medium grained Sand, dry to moist, hard, friable, asphalt and glass fragments			Hand augered to 2 ft below ground surface (bgs)
5		No Recovery (rock in shoe, blocking acetate sleeve)			5
10		SILT (ML): brown (7.5YR 4/4), 95% Silt, <5% fine Sand, moist, hard, no odor			10
15					15
					Total depth at 16 ft bgs



ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. **SB-44**	NORTHING **1759762.33**	EASTING **6500400.99**		
PROJECT NO./NAME **3370.001L000 /**		LOCATION **3701 N Pacific Place**		
APPROVED BY	LOGGED BY **PAS**	**Long Beach, California**		
DRILLING CONTRACTOR/DRILLER **Strongarm / Strongarm**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2.25 / DPT**	BOREHOLE DIAMETER **2.25**	DRILLING EQUIPMENT/METHOD **HA/Truck-Mounted DPT /**	SAMPLING METHOD **Acetate Sleeve**	START-FINISH DATE **8/15/19-8/15/19**
LAND SURFACE ELEVATION **49.80(FT.)**	DEPTH TO WATER **Not Measured**	BACKFILL **Hydrated bentonite**		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): yellowish brown (10YR 5/4), 90% Silt, 10% fine Sand, dry loose, no odor			Hand augered to 2 ft below ground surface (bgs)
5		very dark brown (10YR 2/2)			5
10		SILT with SAND (ML): brown (7.5YR 4/4), 80% Silt, 20% fine Sand, moist, hard			Total depth at 10 ft bgs 10

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
GS-1	1760266.053	6500055.445		
PROJECT NO./NAME		LOCATION		
3370.001L000 /		3701 N Pacific Place		
APPROVED BY	LOGGED BY	Long Beach, California		
	PAS			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Strongarm / Strongarm				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2.25 / DPT	2.25	HA/Track-Mounted DPT /	Steel Screen	8/22/19-8/22/19
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
57.00(FT.)	Not Measured	Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): brown (10YR 5/3), 80% Silt, 20% fine Sand, moist, soft, slight odor			Hand augered to 2 ft below ground surface (bgs)
				1.7	
5					5
		dark brown (10YR 3/3)			
10		brown (10YR 5/3)			10
				2.6	
		SILT (ML): black (10 YR 2/1), 100% Silt, moist, soft, strong odor			
15				115	15
20					20
		SILT (ML): dark gray (10YR 4/1), 80% Silt, 20% fine Sand, wet, soft, strong odor		25.9	
25					25

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
GS-1	1760266.053	6500055.445
PROJECT NO./NAME		LOCATION
3370.001L000 /		3701 N Pacific Place
APPROVED BY	LOGGED BY	
	PAS	Long Beach, California

Depth, feet	Graphic Log	Visual Description (continued)	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
30		SILT (ML): dark gray (10YR 4/1), 80% Silt, 20% fine Sand, wet, soft, strong odor *(continued)*		758	30
35				847	35
40		SILT (ML): very dark grayish brown (10YR 3/2), 90% Silt, 10% fine sand			40
45		SILT (ML): greenish gray (Gley 1 5/5G_/1), 100% Silt, wet, hard		11352	45
50		SILTY SAND (SM): dark gray (10YR 4/1), 70% fine to medium grained sand, 30% silt, moist, soft			50

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
GS-1	1760266.053	6500055.445
PROJECT NO./NAME		LOCATION
3370.001L000 /		3701 N Pacific Place
APPROVED BY	LOGGED BY	Long Beach, California
	PAS	

Depth, feet	Graphic Log	Visual Description (continued)	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
55		SILTY SAND (SM): dark gray (10YR 4/1), 70% fine to medium grained sand, 30% silt, moist, soft *(continued)*			55
60					60
▽ GROUND WATER LEVEL 8/22/19					Water found at 62 ft bgs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. GS-2	NORTHING 1759241.506	EASTING 6499804.41		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Track-Mounted DPT /	SAMPLING METHOD Steel Screen	START-FINISH DATE 8/20/19-8/20/19
LAND SURFACE ELEVATION 49.80(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): pale brown (10YR 6/3), 90% Silt, 10% fine Sand, dry loose, no odor			Hand augered to 2 ft below ground surface (bgs)
5					5
		SILT (ML): black (10YR 2/1), 100% Silt, moist, soft, strong petroleum odor			
10					10
		POORLY-GRADED SAND (SP): gray (10YR 5/1), 95% fine to medium grained Sand, 5% Silt, moist, soft, slight petroleum odor			
15					15
20					20
25					25

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
GS-2	1759241.506	6499804.41
PROJECT NO./NAME		LOCATION
3370.001L000 /		3701 N Pacific Place
APPROVED BY	LOGGED BY	
	PAS	Long Beach, California

Depth, feet	Graphic Log	Visual Description (continued)	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
30		POORLY-GRADED SAND with SILT (SP-SM): dark gray (10YR 4/1), 90% fine Sand, 10% Silt, moist, hard, slight odor		12.5	30
35		SILT with SAND (MLS): brown (10YR 4/3), 70% Silt, 30% fine Sand, moist, hard, slight odor		17.9	35
40		SILTY SAND (SM): dark gray (10YR 4/1), 80% medium to coarse grained Sand, 20% Silt, moist to wet, soft, no odor		2.3	40
45		SILT (ML): dark gray (10YR 4/1), 95% Silt, 5% fine Sand, moist, hard, slight odor			45
50					50

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
GS-2	1759241.506	6499804.41
PROJECT NO./NAME		LOCATION
3370.001L000 /		3701 N Pacific Place
APPROVED BY	LOGGED BY	
	PAS	Long Beach, California

Depth, feet	Graphic Log	Visual Description (continued)	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
55		SILT (ML): dark gray (10YR 4/1), 95% Silt, 5% fine Sand, moist, hard, slight odor *(continued)*			
		No sample			Screen set at 56' to 60' bgs
60 ▽ GROUND WATER LEVEL 8/20/19					

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO. GS-3	NORTHING 1759254.825	EASTING 6500242.811		
PROJECT NO./NAME 3370.001L000 /		LOCATION 3701 N Pacific Place		
APPROVED BY	LOGGED BY PAS	Long Beach, California		
DRILLING CONTRACTOR/DRILLER Strongarm / Strongarm		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2.25 / DPT	BOREHOLE DIAMETER 2.25	DRILLING EQUIPMENT/METHOD HA/Track-Mounted DPT /	SAMPLING METHOD Steel Screen	START-FINISH DATE 8/22/19-8/22/19
LAND SURFACE ELEVATION 48.50(FT.)	DEPTH TO WATER Not Measured	BACKFILL Hydrated bentonite		

Depth, feet	Graphic Log	Visual Description	Blow-Count Values (per 6" Interval)	Sampler Type	PID Values (ppm)	REMARKS
		No recovery - rock in shoe of sampler See lithology of boring SB-32, located approximately 10 ft to the southwest				Hand augered to 2 ft below ground surface (bgs)
5						5
10						10
15						15
		SILT (ML): very dark gray (2.5Y 3/1), 95% Silt, <5% fine Sand, moist to wet, soft, strong odor			1185	
20						20
		SILT (ML): 90% Silt, 10% fine Sand, moist			16.1	
		SILT (ML): dark gray (2.5Y 4/1), 85% Silt, 15% fine Sand, moist, slight odor				
25						25

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
GS-3	1759254.825	6500242.811
PROJECT NO./NAME		LOCATION
3370.001L000 /		3701 N Pacific Place
APPROVED BY	LOGGED BY	
	PAS	Long Beach, California

Depth, feet	Graphic Log	Visual Description (continued)	Sampler Type / Blow-Count Values (per 6" Interval)	PID Values (ppm)	REMARKS
		SILT (ML): dark gray (2.5Y 4/1), 85% Silt, 15% fine Sand, moist, slight odor *(continued)*			
		very dark gray (2.5Y 3/1), thin roots		4.26	
30					30
		SILT (ML): very dark grayish brown (2.5Y 3/2), 90% Silt, 10% fine Sand		2.6	
		SILTY SAND (SM): dark olive brown (2.5Y 3/3), 75% fine Sand, 25% Silt, moist, no odor		2.3	
35					35
		POORLY-GRADED SAND (SP): light olive brown (2.5Y 5/4), 100% fine to medium grained Sand, moist, no odor		1.8	
40		gray (2.5Y 5/1)			40
		POORLY-GRADED SAND (SP): very dark gray (2.5Y 3/1), 95% fine to medium grained Sand, 5% Silt, moist, slight odor		1.4	
		CLAY (CLAY): yellowish brown (2.5Y 6/3), 90% Clay, 10% Silt, moist, no odor		0.8	
45					45
		No recovery - refusal with sampler, advanced with drop point and no acetate sleeve			Refusal with sampler
50					50

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

5150 East Pacific Coast Highway
Suite 450
Long Beach, California 90804
Telephone: (310) 879-4900
Fax: (562) 719-9431

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
GS-3	1759254.825	6500242.811
PROJECT NO./NAME		LOCATION
3370.001L000 /		3701 N Pacific Place
APPROVED BY	LOGGED BY	
	PAS	Long Beach, California

Depth, feet	Graphic Log	Visual Description (continued)	Sampler Type / Blow-Count Values (per 6" interval)	PID Values (ppm)	REMARKS
55		No recovery - refusal with sampler, advanced with drop point and no acetate sleeve *(continued)*			55
					Screen set at 56' to 60' bgs
60 ▽ GROUND WATER LEVEL 8/22/19					60

APPENDIX E

Field Records

ROUX

Project Name: InSite

Air Monitoring Data Record

Project Number: 3370.0001L000

Name of Field Personnel: Peter Shimer, Andrea Berlinghof

Site Address: 3701 N Pacific Place, Long Beach, CA

Instrument Names and Models: MiniRAE 3000 Calibrated with 100 ppm Hexane, QRAE3

Calibration Notes: QRAE Pass, PID 0.5 - 100.2 ppm Hexane

QRae bump	Piol 0	Piol span	
pass	0.5	100.2	8/12
pass	0.0	100.0	8/13
pass	0.0	100.0	8/14
pass	0.0	100.1	8/15

Date	Time	Location	PID reading (ppm)	LEL (% LEL)	O_2 (%)	CO (ppm)	H_2S (ppm)
		Initial Action Levels	> 5 ppm for 5 minutes	> 2% LEL	< 19.5% or > 21.5%	N/A	> 10 ppm
8/12/19	0930	SB-8	0.0	0	20.9	0	0.0
"	1030	SB-5	0.0	0	20.9	0	0.0
"	1105	SB-6	0.0	0	20.9	0	0.0
	1155	SB-7	0.0	0	20.9	0	0.0
	1240	SB-11	0.3	0	20.9	0	0.0
	1410	SB-12	0.0	0	20.9	0	0.0
	1455	SB-13	0.0	0	20.9	0	0.0
8/13/19	0750	SB-14	0.0	0	20.9	0	0.0
	0850	SB-9	0.0	0	20.9	0	0.0
	0940	SB-17	0.0	0	20.9	0	0.0
	0955	SB-18	0.3	0	20.9	0	0.0
	1036	SB-17	0.1	0	20.9	0	0.0
	1110	SB-16	0.0	0	20.9	0	0.0
	1150	SB-15	0.0	0	20.9	0	0.0
	1320	SB-20	0.0	0	20.9	0	0.0
	1350	SB-21	0.0	0	20.9	0	0.0
	1420	SB-22	0.0	0	20.9	0	0.0
8/14/19	0755	SB-23	0.1	0	20.9	0	0.0
	0810	SB-24	0.3	0	20.9	0	0.0
	0840	SB-28	0.0	0	20.9	0	0.0
	0855	SB-38	0.0	0	20.9	0	0.0
	0930	SB-27	0.0	0	20.9	0	0.0
	1030	SB-26	0.0	0	20.9	0	0.0
	1050	SB-25	1.2	0	20.9	0	0.0
	1220	SB-29	1.1	0	20.9	0	0.0
	1300	SB-36	0.2	0	20.9	0	0.0
	1330	SB-30	0.0	0	20.9	0	0.0
8/15/19	0715	SB-33	0.1	0	20.9	0	0.0
	0805	SB-44	0.2	0	20.9	0	0.0
	0845	SB-43	0.0	0	20.9	0	0.0
	0920	SB-10	0.3	0	20.9	0	0.0
	1005	SB-42	0.1	0	20.9	0	0.0
	1055	SB-39	0.1	0	20.9	0	0.0
	1120	SB-40	0.2	0	20.9	0	0.0

ROUX

Air Monitoring Data Record

Project Name: InSite

Project Number: 3370.0001L000

Name of Field Personnel: Peter Shimer

Site Address: 3701 N Pacific Place, Long Beach, CA

Instrument Names and Models: MiniRAE 3000 Calibrated with 100 ppm Hexane, QRAE3

Calibration Notes:

QRAE	PID ±	span	date
PASS	0	100.0	8/16/19
PASS	0	100.0	8/20/19
PASS	0	100.2	8/22/19

Date	Time	Location	PID reading (ppm)	LEL (% LEL)	O_2 (%)	CO (ppm)	H_2S (ppm)
		Initial Action Levels	> 5 ppm for 5 minutes	> 2% LEL	< 19.5% or > 21.5%	N/A	> 10 ppm
8/15/19	1300	SB-32	0.0	0	20.9	0	0.0
	1345	SB-31	0.0	0	20.9	0	0.0
	1405	SB-34	0.1	0	20.9	0	0.0
8/16/19	0735	SB-4	0.2	0	20.9	0	0.0
	0810	SB-41	0.0	0	20.9	0	0.0
	0830	SB-1	0.1	0	20.9	0	0.0
	0920	SB-33	0.2	0	20.9	0	0.0
	1010	SB-2	0.2	0	20.9	0	0.0
	1045	SB-37	0.1	0	20.9	0	0.0
	1115	SB-35	0.3	0	20.9	0	0.0
	1140	SB-45	0.0	0	20.9	0	0.0
	1155	SB-46	0.0	0	20.9	0	0.0
8/20/19	0815	GS-2	0.2	0	20.9	0	0.0
	0850	GS-2	0.2	0	20.9	0	0.0
8/22/19	930	GS-1	0.1	0	20.9	0	0.0
	1115	↓	0.0	0	20.9	0	0.0
	1250	GS-2	0.0	0	20.9	0	0.0
	1410	GS-2	0.0	0	20.9	0	0.0

APPENDIX F

Laboratory Data Reports

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client: Roux Associates, Inc.
Address: 5150 E. Pacific Coast Hwy.
Suite 450
Long Beach, CA 90804
Attn: Peter Shimer

Lab Request: 418302
Report Date: 08/22/2019
Date Received: 08/14/2019
Client ID: 15831

Comments: InSite
3370.0001L000
3701 N. Pacific Pl., Long Beach, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID	Sample #	Client Sample ID	Sample #	Client Sample ID
418302-001	SB-8-SS-0	418302-025	SB-12-SS-8	418302-049	SB-17-SS-11
418302-002	SB-8-SS-2	418302-026	SB-12-SS-12	418302-050	SB-16-SS-0
418302-003	SB-8-SS-4	418302-027	SB-13-SS-0	418302-051	SB-16-SS-2
418302-004	SB-8-SS-8	418302-028	SB-13-SS-2	418302-052	SB-16-SS-4
418302-005	SB-8-SS-13	418302-029	SB-13-SS-4	418302-053	SB-16-SS-7
418302-006	SB-5-SS-0	418302-030	SB-13-SS-7	418302-054	SB-15-SS-3
418302-007	SB-5-SS-1	418302-031	SB-13-SS-14	418302-055	SB-15-SS-6
418302-008	SB-5-SS-4	418302-032	SB-14-SS-1	418302-056	SB-15-SS-9
418302-009	SB-5-SS-8	418302-033	SB-14-SS-3	418302-057	SB-15-SS-12
418302-010	SB-5-SS-15	418302-034	SB-14-SS-8	418302-058	SB-20-SS-1
418302-011	SB-6-SS-1	418302-035	SB-14-SS-10	418302-059	SB-20-SS-5
418302-012	SB-6-SS-5	418302-036	SB-9-SS-2	418302-060	SB-20-SS-9
418302-013	SB-6-SS-9	418302-037	SB-9-SS-5	418302-061	SB-21-SS-0
418302-014	SB-6-SS-12	418302-038	SB-9-SS-8	418302-062	SB-21-SS-2
418302-015	SB-7-SS-1	418302-039	SB-9-SS-14	418302-063	SB-21-SS-4
418302-016	SB-7-SS-6	418302-040	SB-19-SS-0	418302-064	SB-22-SS-1
418302-017	SB-7-SS-10	418302-041	SB-19-SS-2	418302-065	SB-22-SS-3
418302-018	SB-7-SS-15	418302-042	SB-18-SS-1	418302-066	SB-22-SS-7
418302-019	SB-11-SS-2	418302-043	SB-18-SS-4	418302-067	SB-22-SS-9
418302-020	SB-11-SS-5	418302-044	SB-18-SS-8	418302-068	DUP-1
418302-021	SB-11-SS-10	418302-045	SB-18-SS-13	418302-069	DUP-2
418302-022	SB-11-SS-15	418302-046	SB-17-SS-2	418302-070	DUP-3
418302-023	SB-12-SS-1	418302-047	SB-17-SS-5	418302-071	DUP-4
418302-024	SB-12-SS-5	418302-048	SB-17-SS-8	418302-072	DUP-5

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:05	**Site:**			
Sample #:	**418302-001**	**Client Sample #:**	SB-8-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**11.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**286**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.31**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**38.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**16.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**42.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**30.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**26.7**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**66.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**106**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	**16**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*102*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205392		
4,4'-DDD	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
a-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Aldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
b-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/14/19	08/15/19	SS	
d-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/14/19	08/15/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/14/19	08/15/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*53*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*53*		*50-150*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:20	**Site:**			
Sample #:	**418302-002**	**Client Sample #:**	SB-8-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**3.98**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**245**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.06**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**30.5**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**46.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**72.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**20.2**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**53.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**179**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	**0.35**	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	**22**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*101*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205392		
4,4'-DDD	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
a-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Aldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
b-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/14/19	08/15/19	SS	
d-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/14/19	08/15/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/14/19	08/15/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*59*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*62*	*50-150*	

Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205393		
PCB-1016	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:20	**Site:**			
Sample #:	**418302-002**	**Client Sample #:**	SB-8-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
PCB-1242	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*60*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A QCBatchID: QC1205415

1,1,1,2-Tetrachloroethane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,1,1-Trichloroethane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,1,2,2-Tetrachloroethane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,1,2-Trichloroethane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,1,2-Trichlorotrifluoroethane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,1-Dichloroethane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,1-Dichloroethene	ND	1.4	7	ug/Kg		08/15/19	LZ
1,1-Dichloropropene	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2,3-Trichlorobenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2,3-Trichloropropane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2,4-Trichlorobenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2,4-Trimethylbenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2-Dibromo-3-chloropropane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2-Dibromoethane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2-Dichlorobenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2-Dichloroethane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,2-Dichloropropane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,3,5-Trimethylbenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
1,3-Dichlorobenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
1,3-Dichloropropane	ND	1.4	7	ug/Kg		08/15/19	LZ
1,4-Dichlorobenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
2,2-Dichloropropane	ND	1.4	7	ug/Kg		08/15/19	LZ
2-Butanone (MEK)	ND	1.4	140	ug/Kg		08/15/19	LZ
2-Chlorotoluene	ND	1.4	7	ug/Kg		08/15/19	LZ
4-Chlorotoluene	ND	1.4	7	ug/Kg		08/15/19	LZ
4-Isopropyltoluene	ND	1.4	7	ug/Kg		08/15/19	LZ
4-Methyl-2-pentanone (MIBK)	ND	1.4	7	ug/Kg		08/15/19	LZ
Acetone	ND	1.4	140	ug/Kg		08/15/19	LZ
Allyl Chloride	ND	1.4	7	ug/Kg		08/15/19	LZ
Benzene	ND	1.4	7	ug/Kg		08/15/19	LZ
Bromobenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
Bromochloromethane	ND	1.4	7	ug/Kg		08/15/19	LZ
Bromodichloromethane	ND	1.4	7	ug/Kg		08/15/19	LZ
Bromoform	ND	1.4	7	ug/Kg		08/15/19	LZ
Bromomethane	ND	1.4	7	ug/Kg		08/15/19	LZ
Carbon Tetrachloride	ND	1.4	7	ug/Kg		08/15/19	LZ
Chlorobenzene	ND	1.4	7	ug/Kg		08/15/19	LZ
Chlorodibromomethane	ND	1.4	7	ug/Kg		08/15/19	LZ
Chloroethane	ND	1.4	7	ug/Kg		08/15/19	LZ
Chloroform	ND	1.4	7	ug/Kg		08/15/19	LZ
Chloromethane	ND	1.4	7	ug/Kg		08/15/19	LZ
cis-1,2-Dichloroethene	ND	1.4	7	ug/Kg		08/15/19	LZ
cis-1,3-dichloropropene	ND	1.4	7	ug/Kg		08/15/19	LZ
cis-1,4-dichloro-2-butene	ND	1.4	7	ug/Kg		08/15/19	LZ
Dibromomethane	ND	1.4	7	ug/Kg		08/15/19	LZ

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:20	**Site:**			
Sample #:	**418302-002**	**Client Sample #:**	SB-8-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dichlorodifluoromethane	ND	1.4	7	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1.4	7	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1.4	7	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	1.4	7	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	1.4	7	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1.4	7	ug/Kg		08/15/19	LZ	
Naphthalene	ND	1.4	7	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	1.4	7	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	1.4	7	ug/Kg		08/15/19	LZ	
o-Xylene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Styrene	ND	1.4	7	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	1.4	14	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1.4	7	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Toluene	ND	1.4	7	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1.4	7	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1.4	7	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	1.4	7	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	1.4	7	ug/Kg		08/15/19	LZ	
Vinyl Chloride	ND	1.4	7	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	1.4	7	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*112*	*70-145*	
4-Bromofluorobenzene (SUR)	*107*	*70-145*	
Dibromofluoromethane (SUR)	*98*	*70-145*	
Toluene-d8 (SUR)	*103*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	10	12000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	10	4000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	10	12000	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:20	**Site:**			
Sample #:	**418302-002**	**Client Sample #:**	SB-8-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
3-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
4-Bromophenyl phenyl ether	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
4-Chloro-3-methylphenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
4-Chloroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
4-Chlorophenyl phenyl ether	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
4-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
4-Nitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Acenaphthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Acenaphthylene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Aniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Azobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Benz(a)anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Benzidine	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
Benzo(a)pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Benzo(b)fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Benzo(g,h,i)perylene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Benzo(k)fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Benzoic acid	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
Benzyl alcohol	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Bis(2-chloroethoxy)methane	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Bis(2-chloroethyl) Ether	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
Bis(2-chloroisopropyl) Ether	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Bis(2-ethylhexyl) phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Butylbenzyl Phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Carbazole	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	10	4000	ug/Kg	08/15/19	08/20/19		D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:20	**Site:**			
Sample #:	**418302-002**	**Client Sample #:**	SB-8-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Surrogate	*% Recovery*		*Limits*	*Notes*				
2,4,6-Tribromophenol (SUR)	*72*		*34-143*					
2-Fluorobiphenyl (SUR)	*66*		*41-125*					
2-Fluorophenol (SUR)	*37*		*13-153*					
Nitrobenzene-d5 (SUR)	*56*		*27-125*					
p-Terphenyl (SUR)	*70*		*33-155*					
Phenol-d5 (SUR)	*48*		*10-110*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:30	**Site:**			
Sample #:	**418302-003**	**Client Sample #:**	SB-8-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC*	Prep Method: EPA 3050B					QCBatchID:		QC1205456
Antimony	**3.00**	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**8.08**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**309**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.29**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**34.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**15.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**48.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**50.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**23.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	**3.46**	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**54.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**156**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC*	Prep Method: EPA 7471A					QCBatchID:		QC1205530
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M	Prep Method: EPA 3580A					QCBatchID:		QC1205412
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	**57**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*99*		*50-150*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:40	**Site:**			
Sample #:	**418302-004**	**Client Sample #:**	SB-8-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**17.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**340**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.78**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**35.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**15.4**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**39.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**13.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**24.4**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**56.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**66.5**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	**10**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*107*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205393		
PCB-1016	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*67*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:40	**Site:**			
Sample #:	**418302-004**	**Client Sample #:**	SB-8-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.7	70	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.7	70	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.7	7	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:40	**Site:**			
Sample #:	**418302-004**	**Client Sample #:**	SB-8-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*118*	*70-145*	
4-Bromofluorobenzene (SUR)	*102*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*101*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	20	8000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:40	**Site:**			
Sample #:	**418302-004**	**Client Sample #:**	SB-8-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	20	24000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	20	24000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	20	24000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	20	8000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*125*	*34-143*	
2-Fluorobiphenyl (SUR)	*50*	*41-125*	
2-Fluorophenol (SUR)	*32*	*13-153*	
Nitrobenzene-d5 (SUR)	*49*	*27-125*	
p-Terphenyl (SUR)	*47*	*33-155*	
Phenol-d5 (SUR)	*42*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 09:50	**Site:**			
Sample #:	**418302-005**	**Client Sample #:**	SB-8-SS-13	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**23.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**292**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.80**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**34.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**15.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**42.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**11.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**25.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**58.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**64.0**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	**11**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	**83**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*96*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 10:10	**Site:**			
Sample #:	**418302-006**	**Client Sample #:**	SB-5-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**13.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**250**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.86**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**35.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**15.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**41.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**19.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**23.7**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**62.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**86.5**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	**26**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*103*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205392		
4,4'-DDD	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
a-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Aldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
b-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/14/19	08/15/19	SS	
d-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/14/19	08/15/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/14/19	08/15/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*65*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*77*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 10:20	**Site:**			
Sample #:	**418302-007**	**Client Sample #:**	SB-5-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**11.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**194**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.60**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**28.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**31.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**15.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**19.7**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**47.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**66.7**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*105*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205392		
4,4'-DDD	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
a-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Aldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
b-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/14/19	08/15/19	SS	
d-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/14/19	08/15/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/14/19	08/15/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*73*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*81*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 10:25	**Site:**			
Sample #:	**418302-008**	**Client Sample #:**	SB-5-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**5.73**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**182**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.78**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**24.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**31.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**53.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**16.9**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**45.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**108**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	**23**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*105*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 10:30	**Site:**			
Sample #:	**418302-009**	**Client Sample #:**	SB-5-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**4.58**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**236**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.37**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**31.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**29.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**10.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**22.6**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**58.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**66.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C23 to C44)	**24**	1	10	mg/Kg	08/14/19	08/19/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/19/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*97*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205393		
PCB-1016	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*62*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 10:30	**Site:**			
Sample #:	**418302-009**	**Client Sample #:**	SB-5-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	1.2	6	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	1.2	6	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	1.2	120	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	1.2	6	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	1.2	6	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	1.2	6	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1.2	6	ug/Kg		08/15/19	LZ	
Acetone	ND	1.2	120	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	1.2	6	ug/Kg		08/15/19	LZ	
Benzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
Bromoform	ND	1.2	6	ug/Kg		08/15/19	LZ	
Bromomethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	1.2	6	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
Chloroethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
Chloroform	ND	1.2	6	ug/Kg		08/15/19	LZ	
Chloromethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	1.2	6	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	1.2	6	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	1.2	6	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1.2	6	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1.2	6	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	1.2	6	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1.2	6	ug/Kg		08/15/19	LZ	
Naphthalene	ND	1.2	6	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
o-Xylene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Styrene	ND	1.2	6	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	1.2	12	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1.2	6	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Toluene	ND	1.2	6	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1.2	6	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1.2	6	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	1.2	6	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	1.2	6	ug/Kg		08/15/19	LZ	

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/12/2019 10:30 **Site:**
Sample #: 418302-009 **Client Sample #:** SB-5-SS-8 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	1.2	6	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	1.2	6	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*115*	*70-145*	
4-Bromofluorobenzene (SUR)	*96*	*70-145*	
Dibromofluoromethane (SUR)	*101*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	20	8000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	20	24000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 10:30	**Site:**			
Sample #:	**418302-009**	**Client Sample #:**	SB-5-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	20	24000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	20	24000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	20	24000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	20	5000	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	20	8000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*120*	*34-143*	
2-Fluorobiphenyl (SUR)	*52*	*41-125*	
2-Fluorophenol (SUR)	*30*	*13-153*	
Nitrobenzene-d5 (SUR)	*43*	*27-125*	
p-Terphenyl (SUR)	*51*	*33-155*	
Phenol-d5 (SUR)	*32*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 10:40	**Site:**			
Sample #:	**418302-010**	**Client Sample #:**	SB-5-SS-15	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**3.66**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**103**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**16.5**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**8.66**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**16.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**6.75**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**11.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**32.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**42.1**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	**34**	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*97*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 10:55	**Site:**			
Sample #:	**418302-011**	**Client Sample #:**	SB-6-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**8.24**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**219**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.64**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**30.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**15.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**37.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**10.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**22.9**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**50.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**66.9**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	**28**	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*95*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 11:00	**Site:**			
Sample #:	**418302-012**	**Client Sample #:**	SB-6-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**2.70**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**114**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.76**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**27.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**23.5**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**9.81**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**16.8**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**51.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**64.8**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*103*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 11:10	**Site:**			
Sample #:	**418302-013**	**Client Sample #:**	SB-6-SS-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**12.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**206**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.60**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**28.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**31.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**10.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	**1.55**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**19.8**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**53.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**58.2**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*100*	*50-150*	

Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*54*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 11:10	**Site:**			
Sample #:	**418302-013**	**Client Sample #:**	SB-6-SS-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.9	90	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.9	90	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.9	9	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 11:10	**Site:**			
Sample #:	**418302-013**	**Client Sample #:**	SB-6-SS-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*118*	*70-145*	
4-Bromofluorobenzene (SUR)	*100*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*99*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 11:10	**Site:**			
Sample #:	**418302-013**	**Client Sample #:**	SB-6-SS-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*41*	*34-143*	
2-Fluorobiphenyl (SUR)	*48*	*41-125*	
2-Fluorophenol (SUR)	*32*	*13-153*	
Nitrobenzene-d5 (SUR)	*42*	*27-125*	
p-Terphenyl (SUR)	*54*	*33-155*	
Phenol-d5 (SUR)	*37*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 11:20	**Site:**			
Sample #:	**418302-014**	**Client Sample #:**	SB-6-SS-12	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**8.63**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**152**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.52**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**25.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**27.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**12.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**17.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**45.4**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**58.3**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*100*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 11:50	**Site:**			
Sample #:	**418302-015**	**Client Sample #:**	SB-7-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**13.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**211**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.60**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**29.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**13.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**32.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**14.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**20.4**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**51.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**59.9**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*98*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:00	**Site:**			
Sample #:	**418302-016**	**Client Sample #:**	SB-7-SS-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**9.65**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**182**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.59**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**26.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**22.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**34.5**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**17.0**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**41.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**84.3**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	**0.20**	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	**24**	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	**65**	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*100*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:10	**Site:**			
Sample #:	**418302-017**	**Client Sample #:**	SB-7-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**132**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.83**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**25.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**8.94**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**19.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**6.96**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**16.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**45.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**43.5**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205530		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	**19**	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	**67**	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*94*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:15	**Site:**			
Sample #:	**418302-018**	**Client Sample #:**	SB-7-SS-15	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205456		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**4.38**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**201**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.63**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**26.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**27.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**26.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**16.8**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**36.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**74.0**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	**35**	2	20	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	**120**	2	20	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*95*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:35	**Site:**			
Sample #:	**418302-019**	**Client Sample #:**	SB-11-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**5.24**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**131**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.53**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**23.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**23.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**9.89**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**15.2**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	**3.27**	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**38.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**51.7**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	**14**	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*98*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:40	**Site:**			
Sample #:	**418302-020**	**Client Sample #:**	SB-11-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**8.76**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**155**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.04**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**28.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**28.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**10.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**20.1**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	**3.43**	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**47.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**60.2**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205412		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C23 to C44)	**34**	1	10	mg/Kg	08/14/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/14/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*80*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:45	**Site:**			
Sample #:	**418302-021**	**Client Sample #:**	SB-11-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**4.79**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**177**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.88**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**28.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**17.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**30.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**9.30**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**22.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**49.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**60.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**13**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*101*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205393		
PCB-1016	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*39*		*50-150*	*S*				
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:45	**Site:**			
Sample #:	**418302-021**	**Client Sample #:**	SB-11-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.7	70	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.7	70	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.7	7	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:45	**Site:**			
Sample #:	**418302-021**	**Client Sample #:**	SB-11-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*121*	*70-145*	
4-Bromofluorobenzene (SUR)	*98*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*99*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:45	**Site:**			
Sample #:	**418302-021**	**Client Sample #:**	SB-11-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*40*	*34-143*	
2-Fluorobiphenyl (SUR)	*53*	*41-125*	
2-Fluorophenol (SUR)	*35*	*13-153*	
Nitrobenzene-d5 (SUR)	*47*	*27-125*	
p-Terphenyl (SUR)	*54*	*33-155*	
Phenol-d5 (SUR)	*39*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 12:50	**Site:**			
Sample #:	**418302-022**	**Client Sample #:**	SB-11-SS-15	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**8.47**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**240**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.37**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**38.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**19.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**44.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**12.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**30.4**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**75.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**94.3**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**42**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*102*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:02	**Site:**			
Sample #:	**418302-023**	**Client Sample #:**	SB-12-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**1.89**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**30.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**8.97**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**4.11**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**4.06**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**4.14**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**5.49**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**17.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**19.0**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*103*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:15	**Site:**			
Sample #:	**418302-024**	**Client Sample #:**	SB-12-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**63.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**17.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**7.92**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**11.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**7.20**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**11.3**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**27.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**36.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**65**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*102*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:20	**Site:**			
Sample #:	**418302-025**	**Client Sample #:**	SB-12-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**2.57**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**150**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.63**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**28.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.4**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**14.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**6.38**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**14.7**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**40.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**43.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**22**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*101*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:25	**Site:**			
Sample #:	**418302-026**	**Client Sample #:**	SB-12-SS-12	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**3.90**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**164**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.79**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**34.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**13.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**23.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**8.74**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**19.1**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**47.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**61.9**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**20**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*104*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:44	**Site:**			
Sample #:	**418302-027**	**Client Sample #:**	SB-13-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**3.47**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**131**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.58**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**26.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**20.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**13.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**17.3**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**40.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**56.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	**0.14**	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**99**	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*106*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205392		
4,4'-DDD	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
a-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Aldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
b-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/14/19	08/15/19	SS	
d-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/14/19	08/15/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/14/19	08/15/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*55*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*59*		*50-150*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:50	**Site:**			
Sample #:	**418302-028**	**Client Sample #:**	SB-13-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**9.88**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**254**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.77**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**32.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**15.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**37.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**11.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**23.2**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**56.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**62.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**21**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*98*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205392		
4,4'-DDD	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
a-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Aldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
b-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/14/19	08/15/19	SS	
d-BHC	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/14/19	08/15/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/14/19	08/15/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/14/19	08/15/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*63*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*66*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:55	**Site:**			
Sample #:	**418302-029**	**Client Sample #:**	SB-13-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**12.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**271**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.94**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**32.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**16.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**37.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**12.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**26.6**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**59.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**72.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**24**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*104*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*70*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:55	**Site:**			
Sample #:	**418302-029**	**Client Sample #:**	SB-13-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.9	90	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.9	90	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.9	9	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:55	**Site:**			
Sample #:	**418302-029**	**Client Sample #:**	SB-13-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*117*	*70-145*	
4-Bromofluorobenzene (SUR)	*99*	*70-145*	
Dibromofluoromethane (SUR)	*101*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:55	**Site:**			
Sample #:	**418302-029**	**Client Sample #:**	SB-13-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*40*	*34-143*	
2-Fluorobiphenyl (SUR)	*53*	*41-125*	
2-Fluorophenol (SUR)	*35*	*13-153*	
Nitrobenzene-d5 (SUR)	*48*	*27-125*	
p-Terphenyl (SUR)	*54*	*33-155*	
Phenol-d5 (SUR)	*40*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 15:05	**Site:**			
Sample #:	**418302-030**	**Client Sample #:**	SB-13-SS-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**9.26**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**190**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.72**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**34.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**36.5**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**22.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**23.6**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**53.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**61.7**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**110**	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*93*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 15:20	**Site:**			
Sample #:	**418302-031**	**Client Sample #:**	SB-13-SS-14	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**2.83**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**173**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.71**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**25.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**13.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**28.5**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**7.90**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**17.6**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**47.4**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**56.6**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**150**	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*97*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:00	**Site:**			
Sample #:	**418302-032**	**Client Sample #:**	SB-14-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**3.04**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**120**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.54**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**26.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.4**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**21.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**16.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**18.4**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**43.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**55.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**39**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*106*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:05	**Site:**			
Sample #:	**418302-033**	**Client Sample #:**	SB-14-SS-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**2.77**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**120**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.64**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**26.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**20.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**15.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**17.9**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**45.4**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**57.2**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**54**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*97*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:10	**Site:**			
Sample #:	**418302-034**	**Client Sample #:**	SB-14-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**4.88**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**100**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.61**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**32.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**24.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**8.70**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**21.4**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**52.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**56.6**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**33**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*105*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205393		
PCB-1016	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*52*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:10	**Site:**			
Sample #:	**418302-034**	**Client Sample #:**	SB-14-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.7	70	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.7	70	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromoform	**9.0**	0.7	3.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.7	7	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:10	**Site:**			
Sample #:	**418302-034**	**Client Sample #:**	SB-14-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.7	3.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.7	3.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*124*	*70-145*	
4-Bromofluorobenzene (SUR)	*96*	*70-145*	
Dibromofluoromethane (SUR)	*106*	*70-145*	
Toluene-d8 (SUR)	*99*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	100	120000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	100	40000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	100	120000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	100	120000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	100	120000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	100	120000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	100	25000	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:10	**Site:**			
Sample #:	**418302-034**	**Client Sample #:**	SB-14-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	100	120000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	100	120000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	100	120000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	100	25000	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	100	40000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*00*	*34-143*	*S2*
2-Fluorobiphenyl (SUR)	*50*	*41-125*	
2-Fluorophenol (SUR)	*15*	*13-153*	
Nitrobenzene-d5 (SUR)	*33*	*27-125*	
p-Terphenyl (SUR)	*39*	*33-155*	
Phenol-d5 (SUR)	*20*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:15	**Site:**			
Sample #:	**418302-035**	**Client Sample #:**	SB-14-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**2.09**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**111**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.55**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**24.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**16.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**6.45**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**17.1**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**41.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**50.1**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**24**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*96*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:45	**Site:**			
Sample #:	**418302-036**	**Client Sample #:**	SB-9-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**145**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.53**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**21.5**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**24.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**10.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**15.2**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**41.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**59.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	**0.27**	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**76**	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*104*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 08:55	**Site:**			
Sample #:	**418302-037**	**Client Sample #:**	SB-9-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**7.20**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**249**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.83**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**29.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**37.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**65.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**20.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**48.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**132**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205531		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**130**	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*101*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 09:00	**Site:**			
Sample #:	**418302-038**	**Client Sample #:**	SB-9-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205459		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	L
Arsenic	**4.11**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**126**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**18.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**10.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**21.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**24.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**15.0**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**36.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**60.1**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	**0.14**	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**140**	2	20	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*103*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 09:10	**Site:**			
Sample #:	**418302-039**	**Client Sample #:**	SB-9-SS-14	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**4.70**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**142**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.62**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**26.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**26.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**7.38**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**18.1**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**42.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**58.6**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*104*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 09:15	**Site:**			
Sample #:	**418302-040**	**Client Sample #:**	SB-19-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**4.56**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**241**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.31**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**29.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**28.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**23.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**21.0**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	**3.30**	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**49.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**83.1**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205417		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**76**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*109*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/20/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/20/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*68*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*69*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 09:20	**Site:**			
Sample #:	**418302-041**	**Client Sample #:**	SB-19-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**9.72**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**396**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.82**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**27.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.4**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**31.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**111**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**20.0**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**39.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**84.2**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	**0.15**	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	**130**	10	100	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	**390**	10	100	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	10	100	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*	
Triacontane (SUR)	*177*	*50-150*	*S*	*Matrix Interference, surrogate high bias fo*

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205392		
4,4'-DDD	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDE	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
4,4'-DDT	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
a-BHC	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Aldrin	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
b-BHC	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Chlordane (technical)	ND	2	100	ug/Kg	08/14/19	08/15/19	SS	
d-BHC	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Dieldrin	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan I	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan II	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Endosulfan sulfate	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Endrin	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Endrin aldehyde	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Endrin Ketone	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Heptachlor epoxide	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Lindane (Gamma-BHC)	ND	2	10	ug/Kg	08/14/19	08/15/19	SS	
Methoxychlor	ND	2	20	ug/Kg	08/14/19	08/15/19	SS	
Toxaphene	ND	2	200	ug/Kg	08/14/19	08/15/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*56*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*68*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 09:45	**Site:**			
Sample #:	**418302-042**	**Client Sample #:**	SB-18-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**10.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**212**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.79**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**31.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**37.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**19.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**21.6**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**54.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**77.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	**10**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**11**	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*111*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 09:55	**Site:**			
Sample #:	**418302-043**	**Client Sample #:**	SB-18-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**4.17**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**127**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.75**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**25.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**25.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**20.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**16.9**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**42.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**59.5**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*104*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:00	**Site:**			
Sample #:	**418302-044**	**Client Sample #:**	SB-18-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**4.14**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**142**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.60**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**24.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**24.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**16.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**16.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**39.9**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**55.9**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A NELAC Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*84*		*50-150*					
Method: EPA 8082 NELAC Prep Method: EPA 3545						QCBatchID: QC1205393		
PCB-1016	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*56*		*50-150*					
Method: EPA 8260B NELAC Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:00	**Site:**			
Sample #:	**418302-044**	**Client Sample #:**	SB-18-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	1	5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	1	5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	1	5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		08/15/19	LZ	
Acetone	ND	1	100	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	1	5	ug/Kg		08/15/19	LZ	
Benzene	ND	1	5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	1	5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	1	5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	1	5	ug/Kg		08/15/19	LZ	
Bromoform	ND	1	5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	1	5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	1	5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	1	5	ug/Kg		08/15/19	LZ	
Chloroform	ND	1	5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	1	5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	1	5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	1	5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	1	5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	1	5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	1	5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
Styrene	ND	1	5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	1	5	ug/Kg		08/15/19	LZ	
Toluene	ND	1	5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	1	5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		08/15/19	LZ	

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/13/2019 10:00 **Site:**
Sample #: 418302-044 **Client Sample #:** SB-18-SS-8 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	1	5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	1	5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*118*	*70-145*	
4-Bromofluorobenzene (SUR)	*100*	*70-145*	
Dibromofluoromethane (SUR)	*101*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:00	**Site:**			
Sample #:	**418302-044**	**Client Sample #:**	SB-18-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*40*	*34-143*	
2-Fluorobiphenyl (SUR)	*50*	*41-125*	
2-Fluorophenol (SUR)	*31*	*13-153*	
Nitrobenzene-d5 (SUR)	*41*	*27-125*	
p-Terphenyl (SUR)	*50*	*33-155*	
Phenol-d5 (SUR)	*35*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:10	**Site:**			
Sample #:	**418302-045**	**Client Sample #:**	SB-18-SS-13	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**5.34**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**160**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.89**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**30.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**28.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**19.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**18.0**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**40.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**68.1**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*119*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:28	**Site:**			
Sample #:	**418302-046**	**Client Sample #:**	SB-17-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**7.51**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**178**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.56**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**28.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**13.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**29.7**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**10.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**19.8**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**46.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**52.3**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*124*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205393		
PCB-1016	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/14/09	08/15/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*60*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:28	**Site:**			
Sample #:	**418302-046**	**Client Sample #:**	SB-17-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	1.5	150	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Acetone	ND	1.5	150	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Benzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Styrene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	1.5	15	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Toluene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	1.5	7.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:28	**Site:**			
Sample #:	**418302-046**	**Client Sample #:**	SB-17-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	1.5	7.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	1.5	7.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*119*	*70-145*	
4-Bromofluorobenzene (SUR)	*96*	*70-145*	
Dibromofluoromethane (SUR)	*105*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	10	12000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	10	4000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	10	12000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	10	12000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	10	12000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	10	12000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:28	**Site:**			
Sample #:	**418302-046**	**Client Sample #:**	SB-17-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	10	12000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	10	2500	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	10	4000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*64*	*34-143*	
2-Fluorobiphenyl (SUR)	*52*	*41-125*	
2-Fluorophenol (SUR)	*30*	*13-153*	
Nitrobenzene-d5 (SUR)	*45*	*27-125*	
p-Terphenyl (SUR)	*48*	*33-155*	
Phenol-d5 (SUR)	*38*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:30	**Site:**			
Sample #:	**418302-047**	**Client Sample #:**	SB-17-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**14.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**220**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.67**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**43.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**19.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**44.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**14.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**28.9**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**69.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**69.5**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*123*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:35	**Site:**			
Sample #:	**418302-048**	**Client Sample #:**	SB-17-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**2.02**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**145**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.62**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**25.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**23.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**8.20**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**15.9**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**45.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**52.4**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*123*	*50-150*	

Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*67*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:35	**Site:**			
Sample #:	**418302-048**	**Client Sample #:**	SB-17-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.8	80	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.8	4	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.8	4	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.8	4	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Acetone	ND	0.8	80	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.8	4	ug/Kg		08/15/19	LZ	
Benzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.8	4	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.8	4	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.8	4	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Styrene	ND	0.8	4	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.8	8	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Toluene	ND	0.8	4	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.8	4	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:35	**Site:**			
Sample #:	**418302-048**	**Client Sample #:**	SB-17-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.8	4	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.8	4	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*119*	*70-145*	
4-Bromofluorobenzene (SUR)	*99*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
3-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Acenaphthylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Aniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Azobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Benzoic acid	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:35	**Site:**			
Sample #:	**418302-048**	**Client Sample #:**	SB-17-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/15/19	08/20/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*39*	*34-143*	
2-Fluorobiphenyl (SUR)	*52*	*41-125*	
2-Fluorophenol (SUR)	*35*	*13-153*	
Nitrobenzene-d5 (SUR)	*44*	*27-125*	
p-Terphenyl (SUR)	*52*	*33-155*	
Phenol-d5 (SUR)	*40*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:40	**Site:**			
Sample #:	**418302-049**	**Client Sample #:**	SB-17-SS-11	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**1.25**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**125**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.02**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**23.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**31.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**16.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**19.3**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**44.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**63.3**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	5	50	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**130**	5	50	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	5	50	mg/Kg	08/15/19	08/20/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*120*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:00	**Site:**			
Sample #:	**418302-050**	**Client Sample #:**	SB-16-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**2.60**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**223**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.82**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**28.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**12.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**28.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**18.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**18.2**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**52.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**74.2**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*127*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/19/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/19/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*61*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*61*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:05	**Site:**			
Sample #:	**418302-051**	**Client Sample #:**	SB-16-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**5.46**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**169**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.04**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**29.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**28.4**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**8.81**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**20.3**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**53.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**65.3**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*125*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/19/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/19/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*67*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*64*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:05	**Site:**			
Sample #:	**418302-051**	**Client Sample #:**	SB-16-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*68*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A QCBatchID: QC1205415

1,1,1,2-Tetrachloroethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,1,1-Trichloroethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,1,2,2-Tetrachloroethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,1,2-Trichloroethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,1,2-Trichlorotrifluoroethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,1-Dichloroethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,1-Dichloroethene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,1-Dichloropropene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2,3-Trichlorobenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2,3-Trichloropropane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2,4-Trichlorobenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2,4-Trimethylbenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2-Dibromo-3-chloropropane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2-Dibromoethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2-Dichlorobenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2-Dichloroethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,2-Dichloropropane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,3,5-Trimethylbenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,3-Dichlorobenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,3-Dichloropropane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
1,4-Dichlorobenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
2,2-Dichloropropane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
2-Butanone (MEK)	ND	1.1	110	ug/Kg		08/15/19	LZ
2-Chlorotoluene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
4-Chlorotoluene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
4-Isopropyltoluene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
4-Methyl-2-pentanone (MIBK)	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Acetone	ND	1.1	110	ug/Kg		08/15/19	LZ
Allyl Chloride	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Benzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Bromobenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Bromochloromethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Bromodichloromethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Bromoform	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Bromomethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Carbon Tetrachloride	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Chlorobenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Chlorodibromomethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Chloroethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Chloroform	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Chloromethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ
cis-1,2-Dichloroethene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
cis-1,3-dichloropropene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
cis-1,4-dichloro-2-butene	ND	1.1	5.5	ug/Kg		08/15/19	LZ
Dibromomethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:05	**Site:**			
Sample #:	**418302-051**	**Client Sample #:**	SB-16-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dichlorodifluoromethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Styrene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	1.1	11	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Toluene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Vinyl Chloride	ND	1.1	5.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	1.1	5.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*116*	*70-145*	
4-Bromofluorobenzene (SUR)	*98*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
1,2-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
1,3-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
1,4-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
1-Methylnaphthalene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4,5-Trichlorophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4,6-Trichlorophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4-Dichlorophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4-Dimethylphenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4-Dinitrophenol	ND	1	1200	ug/Kg	08/15/19	08/20/19		
2,4-Dinitrotoluene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,6-Dinitrotoluene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Chloronaphthalene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Chlorophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Methyl-4,6-dinitrophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Methylnaphthalene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Methylphenol (o-Cresol)	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Nitrophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
3 and 4-Methylphenol (m and p-Cresol)	ND	1	400	ug/Kg	08/15/19	08/20/19		
3,3'-Dichlorobenzidine	ND	1	1200	ug/Kg	08/15/19	08/20/19		

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:05	**Site:**			
Sample #:	**418302-051**	**Client Sample #:**	SB-16-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
3-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Bromophenyl phenyl ether	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Chloro-3-methylphenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Chloroaniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Chlorophenyl phenyl ether	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Nitrophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
Acenaphthene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Acenaphthylene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Aniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
Anthracene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Azobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benz(a)anthracene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzidine	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Benzo(a)pyrene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzo(b)fluoranthene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzo(g,h,i)perylene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzo(k)fluoranthene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzoic acid	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Benzyl alcohol	ND	1	250	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroethoxy)methane	ND	1	250	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroethyl) Ether	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroisopropyl) Ether	ND	1	250	ug/Kg	08/15/19	08/20/19		
Bis(2-ethylhexyl) phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Butylbenzyl Phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Carbazole	ND	1	250	ug/Kg	08/15/19	08/20/19		
Chrysene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Dibenz(a,h)anthracene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Dibenzofuran	ND	1	250	ug/Kg	08/15/19	08/20/19		
Diethyl phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Dimethyl phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Di-n-butyl phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Di-n-octyl phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Fluoranthene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Fluorene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Hexachlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Hexachlorobutadiene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Hexachlorocyclopentadiene	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Hexachloroethane	ND	1	250	ug/Kg	08/15/19	08/20/19		
Indeno(1,2,3-cd)pyrene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Isophorone	ND	1	250	ug/Kg	08/15/19	08/20/19		
Naphthalene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Nitrobenzene	ND	1	1200	ug/Kg	08/15/19	08/20/19		
N-Nitrosodimethylamine (NDMA)	ND	1	250	ug/Kg	08/15/19	08/20/19		
N-Nitrosodi-n-propylamine (NDPA)	ND	1	250	ug/Kg	08/15/19	08/20/19		
N-Nitrosodiphenylamine	ND	1	250	ug/Kg	08/15/19	08/20/19		
Pentachlorophenol	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Phenanthrene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Phenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
Pyrene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Pyridine	ND	1	250	ug/Kg	08/15/19	08/20/19		
Total Cresol	ND	1	400	ug/Kg	08/15/19	08/20/19		

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:05	**Site:**			
Sample #:	**418302-051**	**Client Sample #:**	SB-16-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Surrogate	*% Recovery*		*Limits*	*Notes*				
2,4,6-Tribromophenol (SUR)	*20*		*34-143*	*S*				
2-Fluorobiphenyl (SUR)	*53*		*41-125*					
2-Fluorophenol (SUR)	*38*		*13-153*					
Nitrobenzene-d5 (SUR)	*53*		*27-125*					
p-Terphenyl (SUR)	*54*		*33-155*					
Phenol-d5 (SUR)	*43*		*10-110*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:10	**Site:**			
Sample #:	**418302-052**	**Client Sample #:**	SB-16-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC*	Prep Method: EPA 3050B					QCBatchID:		QC1205460
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**124**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.65**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**27.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**11.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**15.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**6.37**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**17.0**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**39.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**43.6**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC*	Prep Method: EPA 7471A					QCBatchID:		QC1205532
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M	Prep Method: EPA 3580A					QCBatchID:		QC1205422
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*121*		*50-150*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:15	**Site:**			
Sample #:	**418302-053**	**Client Sample #:**	SB-16-SS-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**4.36**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**126**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.82**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**32.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**13.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**24.9**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**7.20**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**22.8**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**53.1**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**61.3**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*129*	*50-150*	

Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*87*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:15	**Site:**			
Sample #:	**418302-053**	**Client Sample #:**	SB-16-SS-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.9	90	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.9	90	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.9	9	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix: Solid	**Client:** Roux Associates, Inc.		**Collector:** Client		
Sampled: 08/13/2019 11:15	**Site:**				
Sample #: 418302-053	**Client Sample #:** SB-16-SS-7		**Sample Type:**		

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*119*	*70-145*	
4-Bromofluorobenzene (SUR)	*99*	*70-145*	
Dibromofluoromethane (SUR)	*104*	*70-145*	
Toluene-d8 (SUR)	*101*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
1,2-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
1,3-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
1,4-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
1-Methylnaphthalene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4,5-Trichlorophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4,6-Trichlorophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4-Dichlorophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4-Dimethylphenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,4-Dinitrophenol	ND	1	1200	ug/Kg	08/15/19	08/20/19		
2,4-Dinitrotoluene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2,6-Dinitrotoluene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Chloronaphthalene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Chlorophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Methyl-4,6-dinitrophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Methylnaphthalene	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Methylphenol (o-Cresol)	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
2-Nitrophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
3 and 4-Methylphenol (m and p-Cresol)	ND	1	400	ug/Kg	08/15/19	08/20/19		
3,3'-Dichlorobenzidine	ND	1	1200	ug/Kg	08/15/19	08/20/19		
3-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Bromophenyl phenyl ether	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Chloro-3-methylphenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Chloroaniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Chlorophenyl phenyl ether	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
4-Nitrophenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
Acenaphthene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Acenaphthylene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Aniline	ND	1	250	ug/Kg	08/15/19	08/20/19		
Anthracene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Azobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benz(a)anthracene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzidine	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Benzo(a)pyrene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzo(b)fluoranthene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzo(g,h,i)perylene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzo(k)fluoranthene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Benzoic acid	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Benzyl alcohol	ND	1	250	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroethoxy)methane	ND	1	250	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroethyl) Ether	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroisopropyl) Ether	ND	1	250	ug/Kg	08/15/19	08/20/19		
Bis(2-ethylhexyl) phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Butylbenzyl Phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:15	**Site:**			
Sample #:	**418302-053**	**Client Sample #:**	SB-16-SS-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	1	250	ug/Kg	08/15/19	08/20/19		
Chrysene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Dibenz(a,h)anthracene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Dibenzofuran	ND	1	250	ug/Kg	08/15/19	08/20/19		
Diethyl phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Dimethyl phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Di-n-butyl phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Di-n-octyl phthalate	ND	1	250	ug/Kg	08/15/19	08/20/19		
Fluoranthene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Fluorene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Hexachlorobenzene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Hexachlorobutadiene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Hexachlorocyclopentadiene	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Hexachloroethane	ND	1	250	ug/Kg	08/15/19	08/20/19		
Indeno(1,2,3-cd)pyrene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Isophorone	ND	1	250	ug/Kg	08/15/19	08/20/19		
Naphthalene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Nitrobenzene	ND	1	1200	ug/Kg	08/15/19	08/20/19		
N-Nitrosodimethylamine (NDMA)	ND	1	250	ug/Kg	08/15/19	08/20/19		
N-Nitrosodi-n-propylamine (NDPA)	ND	1	250	ug/Kg	08/15/19	08/20/19		
N-Nitrosodiphenylamine	ND	1	250	ug/Kg	08/15/19	08/20/19		
Pentachlorophenol	ND	1	1200	ug/Kg	08/15/19	08/20/19		
Phenanthrene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Phenol	ND	1	250	ug/Kg	08/15/19	08/20/19		
Pyrene	ND	1	250	ug/Kg	08/15/19	08/20/19		
Pyridine	ND	1	250	ug/Kg	08/15/19	08/20/19		
Total Cresol	ND	1	400	ug/Kg	08/15/19	08/20/19		

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*23*	*34-143*	*S*
2-Fluorobiphenyl (SUR)	*54*	*41-125*	
2-Fluorophenol (SUR)	*41*	*13-153*	
Nitrobenzene-d5 (SUR)	*52*	*27-125*	
p-Terphenyl (SUR)	*57*	*33-155*	
Phenol-d5 (SUR)	*45*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:45	**Site:**			
Sample #:	**418302-054**	**Client Sample #:**	SB-15-SS-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**4.99**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**137**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.50**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**18.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**8.69**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**16.6**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**6.80**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**12.8**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	**3.31**	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**34.5**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**46.1**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*118*	*50-150*	

Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*69*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:45	**Site:**			
Sample #:	**418302-054**	**Client Sample #:**	SB-15-SS-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.8	4	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.8	80	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.8	4	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.8	4	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.8	4	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Acetone	ND	0.8	80	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.8	4	ug/Kg		08/15/19	LZ	
Benzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.8	4	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.8	4	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.8	4	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.8	4	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.8	4	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Styrene	ND	0.8	4	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.8	8	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.8	4	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Toluene	ND	0.8	4	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.8	4	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.8	4	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.8	4	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:45	**Site:**			
Sample #:	**418302-054**	**Client Sample #:**	SB-15-SS-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.8	4	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.8	4	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*119*	*70-145*	
4-Bromofluorobenzene (SUR)	*102*	*70-145*	
Dibromofluoromethane (SUR)	*101*	*70-145*	
Toluene-d8 (SUR)	*102*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
1,2-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
1,3-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
1,4-Dichlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
1-Methylnaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2,4,5-Trichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2,4,6-Trichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2,4-Dichlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2,4-Dimethylphenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2,4-Dinitrophenol	ND	10	12000	ug/Kg	08/15/19	08/20/19		
2,4-Dinitrotoluene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2,6-Dinitrotoluene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2-Chloronaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2-Chlorophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2-Methyl-4,6-dinitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2-Methylnaphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2-Methylphenol (o-Cresol)	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		
2-Nitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
3 and 4-Methylphenol (m and p-Cresol)	ND	10	4000	ug/Kg	08/15/19	08/20/19		
3,3'-Dichlorobenzidine	ND	10	12000	ug/Kg	08/15/19	08/20/19		
3-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		
4-Bromophenyl phenyl ether	ND	10	2500	ug/Kg	08/15/19	08/20/19		
4-Chloro-3-methylphenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
4-Chloroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		
4-Chlorophenyl phenyl ether	ND	10	2500	ug/Kg	08/15/19	08/20/19		
4-Nitroaniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		
4-Nitrophenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Acenaphthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Acenaphthylene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Aniline	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Azobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Benz(a)anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Benzidine	ND	10	12000	ug/Kg	08/15/19	08/20/19		
Benzo(a)pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Benzo(b)fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Benzo(g,h,i)perylene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Benzo(k)fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Benzoic acid	ND	10	12000	ug/Kg	08/15/19	08/20/19		
Benzyl alcohol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroethoxy)methane	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroethyl) Ether	ND	10	12000	ug/Kg	08/15/19	08/20/19		
Bis(2-chloroisopropyl) Ether	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Bis(2-ethylhexyl) phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Butylbenzyl Phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:45	**Site:**			
Sample #:	**418302-054**	**Client Sample #:**	SB-15-SS-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Chrysene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Dibenz(a,h)anthracene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Dibenzofuran	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Diethyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Dimethyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Di-n-butyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Di-n-octyl phthalate	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Fluoranthene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Fluorene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Hexachlorobenzene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Hexachlorobutadiene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Hexachlorocyclopentadiene	ND	10	12000	ug/Kg	08/15/19	08/20/19		
Hexachloroethane	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Indeno(1,2,3-cd)pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Isophorone	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Naphthalene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Nitrobenzene	ND	10	12000	ug/Kg	08/15/19	08/20/19		
N-Nitrosodimethylamine (NDMA)	ND	10	2500	ug/Kg	08/15/19	08/20/19		
N-Nitrosodi-n-propylamine (NDPA)	ND	10	2500	ug/Kg	08/15/19	08/20/19		
N-Nitrosodiphenylamine	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Pentachlorophenol	ND	10	12000	ug/Kg	08/15/19	08/20/19		
Phenanthrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Phenol	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Pyrene	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Pyridine	ND	10	2500	ug/Kg	08/15/19	08/20/19		
Total Cresol	ND	10	4000	ug/Kg	08/15/19	08/20/19		

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*66*	*34-143*	
2-Fluorobiphenyl (SUR)	*49*	*41-125*	
2-Fluorophenol (SUR)	*30*	*13-153*	
Nitrobenzene-d5 (SUR)	*44*	*27-125*	
p-Terphenyl (SUR)	*48*	*33-155*	
Phenol-d5 (SUR)	*35*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:55	**Site:**			
Sample #:	**418302-055**	**Client Sample #:**	SB-15-SS-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**1.61**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**115**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.12**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**31.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**15.2**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**30.3**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**9.91**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**23.1**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**51.3**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**70.2**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*129*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 12:00	**Site:**			
Sample #:	**418302-056**	**Client Sample #:**	SB-15-SS-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**4.03**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**134**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**1.18**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**34.0**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**14.8**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**36.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**9.45**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**24.2**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**64.7**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**74.0**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*121*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 12:05	**Site:**			
Sample #:	**418302-057**	**Client Sample #:**	SB-15-SS-12	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**2.74**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**97.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.60**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**24.8**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**8.99**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**20.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**6.74**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**15.3**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**37.4**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**47.6**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205532		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*125*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:20	**Site:**			
Sample #:	**418302-058**	**Client Sample #:**	SB-20-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205460		
Antimony	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Arsenic	**4.99**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Barium	**179**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Cadmium	**0.83**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Chromium	**28.2**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Cobalt	**13.0**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Copper	**29.5**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Lead	**46.1**	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg	08/15/19	08/18/19	KLN	
Nickel	**20.5**	1	1.5	mg/Kg	08/15/19	08/18/19	KLN	
Selenium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Thallium	ND	1	3	mg/Kg	08/15/19	08/18/19	KLN	
Vanadium	**47.6**	1	0.5	mg/Kg	08/15/19	08/18/19	KLN	
Zinc	**80.2**	1	5	mg/Kg	08/15/19	08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	**15**	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*127*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:25	**Site:**			
Sample #:	**418302-059**	**Client Sample #:**	SB-20-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**10.1**	1	1	mg/Kg		08/18/19	KLN	
Barium	**270**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.89**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**34.9**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**16.3**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**39.9**	1	1	mg/Kg		08/18/19	KLN	
Lead	**16.9**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**25.7**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**63.2**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**77.2**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	**59**	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	**44**	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*120*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:35	**Site:**			
Sample #:	**418302-060**	**Client Sample #:**	SB-20-SS-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**4.06**	1	1	mg/Kg		08/18/19	KLN	
Barium	**185**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.14**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**32.6**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**15.3**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**35.8**	1	1	mg/Kg		08/18/19	KLN	
Lead	**10.0**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**23.1**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**64.7**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**72.7**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205422		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*120*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:45	**Site:**			
Sample #:	**418302-061**	**Client Sample #:**	SB-21-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**12.4**	1	1	mg/Kg		08/18/19	KLN	
Barium	**558**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.97**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**42.7**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**16.3**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**44.4**	1	1	mg/Kg		08/18/19	KLN	
Lead	**21.0**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**35.0**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**92.7**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**87.4**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*120*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/19/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/19/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*71*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*68*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:50	**Site:**			
Sample #:	**418302-062**	**Client Sample #:**	SB-21-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**16.0**	1	1	mg/Kg		08/18/19	KLN	
Barium	**425**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.38**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**42.7**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**17.1**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**46.2**	1	1	mg/Kg		08/18/19	KLN	
Lead	**15.4**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**32.6**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**79.1**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**80.4**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A NELAC Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*133*		*50-150*					
Method: EPA 8081A NELAC Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/19/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/19/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/19/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*68*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*71*		*50-150*					
Method: EPA 8082 NELAC Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/13/2019 13:50 **Site:**
Sample #: 418302-062 **Client Sample #:** SB-21-SS-2 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*68*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A QCBatchID: QC1205415

1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		08/15/19	LZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg		08/15/19	LZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		08/15/19	LZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg		08/15/19	LZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		08/15/19	LZ
1,1-Dichloroethane	ND	1	5	ug/Kg		08/15/19	LZ
1,1-Dichloroethene	ND	1	5	ug/Kg		08/15/19	LZ
1,1-Dichloropropene	ND	1	5	ug/Kg		08/15/19	LZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg		08/15/19	LZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		08/15/19	LZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		08/15/19	LZ
1,2-Dibromoethane	ND	1	5	ug/Kg		08/15/19	LZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ
1,2-Dichloroethane	ND	1	5	ug/Kg		08/15/19	LZ
1,2-Dichloropropane	ND	1	5	ug/Kg		08/15/19	LZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		08/15/19	LZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ
1,3-Dichloropropane	ND	1	5	ug/Kg		08/15/19	LZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ
2,2-Dichloropropane	ND	1	5	ug/Kg		08/15/19	LZ
2-Butanone (MEK)	ND	1	100	ug/Kg		08/15/19	LZ
2-Chlorotoluene	ND	1	5	ug/Kg		08/15/19	LZ
4-Chlorotoluene	ND	1	5	ug/Kg		08/15/19	LZ
4-Isopropyltoluene	ND	1	5	ug/Kg		08/15/19	LZ
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		08/15/19	LZ
Acetone	ND	1	100	ug/Kg		08/15/19	LZ
Allyl Chloride	ND	1	5	ug/Kg		08/15/19	LZ
Benzene	ND	1	5	ug/Kg		08/15/19	LZ
Bromobenzene	ND	1	5	ug/Kg		08/15/19	LZ
Bromochloromethane	ND	1	5	ug/Kg		08/15/19	LZ
Bromodichloromethane	ND	1	5	ug/Kg		08/15/19	LZ
Bromoform	ND	1	5	ug/Kg		08/15/19	LZ
Bromomethane	ND	1	5	ug/Kg		08/15/19	LZ
Carbon Tetrachloride	ND	1	5	ug/Kg		08/15/19	LZ
Chlorobenzene	ND	1	5	ug/Kg		08/15/19	LZ
Chlorodibromomethane	ND	1	5	ug/Kg		08/15/19	LZ
Chloroethane	ND	1	5	ug/Kg		08/15/19	LZ
Chloroform	ND	1	5	ug/Kg		08/15/19	LZ
Chloromethane	ND	1	5	ug/Kg		08/15/19	LZ
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		08/15/19	LZ
cis-1,3-dichloropropene	ND	1	5	ug/Kg		08/15/19	LZ
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		08/15/19	LZ
Dibromomethane	ND	1	5	ug/Kg		08/15/19	LZ

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/13/2019 13:50 **Site:**
Sample #: 418302-062 **Client Sample #:** SB-21-SS-2 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dichlorodifluoromethane	ND	1	5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	1	5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	1	5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	1	5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	1	5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
Styrene	ND	1	5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	1	5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	1	5	ug/Kg		08/15/19	LZ	
Toluene	ND	1	5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	1	5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		08/15/19	LZ	
Vinyl Chloride	ND	1	5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	1	5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*119*	*70-145*	
4-Bromofluorobenzene (SUR)	*100*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*101*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/15/19	08/20/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:50	**Site:**			
Sample #:	**418302-062**	**Client Sample #:**	SB-21-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
3-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Acenaphthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Acenaphthylene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Aniline	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Azobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Benzidine	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Benzoic acid	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Carbazole	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Chrysene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Fluorene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Isophorone	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/15/19	08/20/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Phenol	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyrene	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Pyridine	ND	5	1250	ug/Kg	08/15/19	08/20/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/15/19	08/20/19		D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:50	**Site:**			
Sample #:	**418302-062**	**Client Sample #:**	SB-21-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Surrogate	*% Recovery*		*Limits*	*Notes*				
2,4,6-Tribromophenol (SUR)	*40*		*34-143*					
2-Fluorobiphenyl (SUR)	*52*		*41-125*					
2-Fluorophenol (SUR)	*35*		*13-153*					
Nitrobenzene-d5 (SUR)	*45*		*27-125*					
p-Terphenyl (SUR)	*54*		*33-155*					
Phenol-d5 (SUR)	*38*		*10-110*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:55	**Site:**			
Sample #:	**418302-063**	**Client Sample #:**	SB-21-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC*	Prep Method: EPA 3050B					QCBatchID:		QC1205472
Antimony	**4.76**	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**13.7**	1	1	mg/Kg		08/18/19	KLN	
Barium	**90.4**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.44**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**440**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**10.9**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**147**	1	1	mg/Kg		08/18/19	KLN	
Lead	**50.8**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	**37.7**	1	1	mg/Kg		08/18/19	KLN	
Nickel	**117**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**103**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**237**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC*	Prep Method: EPA 7471A					QCBatchID:		QC1205535
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M	Prep Method: EPA 3580A					QCBatchID:		QC1205440
TPH (C13 to C22)	ND	10	100	mg/Kg	08/15/19	08/20/19	TW	
TPH (C23 to C44)	**550**	10	100	mg/Kg	08/15/19	08/20/19	TW	
TPH (C6 to C12)	ND	10	100	mg/Kg	08/15/19	08/20/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*164*		*50-150*	*S*	*Matrix Interference*			

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 14:10	**Site:**			
Sample #:	**418302-064**	**Client Sample #:**	SB-22-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**18.9**	1	1	mg/Kg		08/18/19	KLN	
Barium	**299**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.91**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**41.8**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**18.5**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**51.3**	1	1	mg/Kg		08/18/19	KLN	
Lead	**13.2**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**28.5**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**71.2**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**76.2**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*139*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 14:15	**Site:**			
Sample #:	**418302-065**	**Client Sample #:**	SB-22-SS-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**29.9**	1	1	mg/Kg		08/18/19	KLN	
Barium	**496**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.05**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**41.1**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**25.2**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**58.4**	1	1	mg/Kg		08/18/19	KLN	
Lead	**21.1**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**34.4**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**83.2**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**80.0**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*131*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 14:20	**Site:**			
Sample #:	**418302-066**	**Client Sample #:**	SB-22-SS-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**5.08**	1	1	mg/Kg		08/18/19	KLN	
Barium	**150**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.54**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**29.0**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**11.4**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**22.2**	1	1	mg/Kg		08/18/19	KLN	
Lead	**15.0**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**17.5**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**41.9**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**57.7**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/15/19	08/16/19	TW	
TPH (C23 to C44)	**37**	2	20	mg/Kg	08/15/19	08/16/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/15/19	08/16/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*146*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 14:30	**Site:**			
Sample #:	**418302-067**	**Client Sample #:**	SB-22-SS-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**2.06**	1	1	mg/Kg		08/18/19	KLN	
Barium	**138**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.50**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**26.2**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**12.0**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**17.0**	1	1	mg/Kg		08/18/19	KLN	
Lead	**11.4**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**15.7**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**40.1**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**49.3**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C23 to C44)	**19**	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*138*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/12/2019 14:00	**Site:**			
Sample #:	**418302-068**	**Client Sample #:**	DUP-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**3.38**	1	1	mg/Kg		08/18/19	KLN	
Barium	**25.2**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**8.66**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**3.82**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**3.36**	1	1	mg/Kg		08/18/19	KLN	
Lead	**4.26**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**5.30**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**15.6**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**15.1**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/16/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*133*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:35	**Site:**			
Sample #:	**418302-069**	**Client Sample #:**	DUP-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**3.66**	1	1	mg/Kg		08/18/19	KLN	
Barium	**150**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.74**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**30.9**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**14.3**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**27.3**	1	1	mg/Kg		08/18/19	KLN	
Lead	**8.44**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**20.0**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**53.3**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**61.0**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/17/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/17/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/17/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*135*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*99*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:35	**Site:**			
Sample #:	**418302-069**	**Client Sample #:**	DUP-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.9	90	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.9	90	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.9	9	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:35	**Site:**			
Sample #:	**418302-069**	**Client Sample #:**	DUP-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*121*	*70-145*	
4-Bromofluorobenzene (SUR)	*97*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/15/19	08/21/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/15/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/15/19	08/21/19	D2
3-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Acenaphthene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Acenaphthylene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Aniline	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Anthracene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Azobenzene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Benzidine	ND	5	6000	ug/Kg	08/15/19	08/21/19	D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Benzoic acid	ND	5	6000	ug/Kg	08/15/19	08/21/19	D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/15/19	08/21/19	D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/15/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 10:35	**Site:**			
Sample #:	**418302-069**	**Client Sample #:**	DUP-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Chrysene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Fluorene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/15/19	08/21/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Isophorone	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/15/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/15/19	08/21/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Phenol	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Pyrene	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Pyridine	ND	5	1250	ug/Kg	08/15/19	08/21/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/15/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*41*	*34-143*	
2-Fluorobiphenyl (SUR)	*53*	*41-125*	
2-Fluorophenol (SUR)	*36*	*13-153*	
Nitrobenzene-d5 (SUR)	*49*	*27-125*	
p-Terphenyl (SUR)	*58*	*33-155*	
Phenol-d5 (SUR)	*42*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:15	**Site:**			
Sample #:	**418302-070**	**Client Sample #:**	DUP-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC	Prep Method: EPA 3050B					QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**2.31**	1	1	mg/Kg		08/18/19	KLN	
Barium	**138**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.98**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**35.8**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**16.0**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**28.1**	1	1	mg/Kg		08/18/19	KLN	
Lead	**8.02**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**25.3**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**62.4**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**68.5**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A NELAC	Prep Method: EPA 7471A					QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M	Prep Method: EPA 3580A					QCBatchID: QC1205440		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/15/19	08/17/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/15/19	08/17/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/17/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*122*	*50-150*	

Method: EPA 8082 NELAC	Prep Method: EPA 3545					QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/19/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*67*	*50-150*	

Method: EPA 8260B NELAC	Prep Method: EPA 5035A					QCBatchID: QC1205415		
1,1,1,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:15	**Site:**			
Sample #:	**418302-070**	**Client Sample #:**	DUP-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.9	90	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.9	90	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.9	9	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix: Solid	**Client:** Roux Associates, Inc.		**Collector:** Client		
Sampled: 08/13/2019 11:15	**Site:**				
Sample #: **418302-070**	**Client Sample #:** DUP-3		**Sample Type:**		

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*119*	*70-145*	
4-Bromofluorobenzene (SUR)	*98*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*101*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/21/19		
1,2-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/21/19		
1,3-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/21/19		
1,4-Dichlorobenzene	ND	1	250	ug/Kg	08/15/19	08/21/19		
1-Methylnaphthalene	ND	1	250	ug/Kg	08/15/19	08/21/19		
2,4,5-Trichlorophenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
2,4,6-Trichlorophenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
2,4-Dichlorophenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
2,4-Dimethylphenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
2,4-Dinitrophenol	ND	1	1200	ug/Kg	08/15/19	08/21/19		
2,4-Dinitrotoluene	ND	1	250	ug/Kg	08/15/19	08/21/19		
2,6-Dinitrotoluene	ND	1	250	ug/Kg	08/15/19	08/21/19		
2-Chloronaphthalene	ND	1	250	ug/Kg	08/15/19	08/21/19		
2-Chlorophenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
2-Methyl-4,6-dinitrophenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
2-Methylnaphthalene	ND	1	250	ug/Kg	08/15/19	08/21/19		
2-Methylphenol (o-Cresol)	ND	1	250	ug/Kg	08/15/19	08/21/19		
2-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/21/19		
2-Nitrophenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
3 and 4-Methylphenol (m and p-Cresol)	ND	1	400	ug/Kg	08/15/19	08/21/19		
3,3'-Dichlorobenzidine	ND	1	1200	ug/Kg	08/15/19	08/21/19		
3-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/21/19		
4-Bromophenyl phenyl ether	ND	1	250	ug/Kg	08/15/19	08/21/19		
4-Chloro-3-methylphenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
4-Chloroaniline	ND	1	250	ug/Kg	08/15/19	08/21/19		
4-Chlorophenyl phenyl ether	ND	1	250	ug/Kg	08/15/19	08/21/19		
4-Nitroaniline	ND	1	250	ug/Kg	08/15/19	08/21/19		
4-Nitrophenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
Acenaphthene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Acenaphthylene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Aniline	ND	1	250	ug/Kg	08/15/19	08/21/19		
Anthracene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Azobenzene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Benz(a)anthracene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Benzidine	ND	1	1200	ug/Kg	08/15/19	08/21/19		
Benzo(a)pyrene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Benzo(b)fluoranthene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Benzo(g,h,i)perylene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Benzo(k)fluoranthene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Benzoic acid	ND	1	1200	ug/Kg	08/15/19	08/21/19		
Benzyl alcohol	ND	1	250	ug/Kg	08/15/19	08/21/19		
Bis(2-chloroethoxy)methane	ND	1	250	ug/Kg	08/15/19	08/21/19		
Bis(2-chloroethyl) Ether	ND	1	1200	ug/Kg	08/15/19	08/21/19		
Bis(2-chloroisopropyl) Ether	ND	1	250	ug/Kg	08/15/19	08/21/19		
Bis(2-ethylhexyl) phthalate	ND	1	250	ug/Kg	08/15/19	08/21/19		
Butylbenzyl Phthalate	ND	1	250	ug/Kg	08/15/19	08/21/19		

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:15	**Site:**			
Sample #:	**418302-070**	**Client Sample #:**	DUP-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	1	250	ug/Kg	08/15/19	08/21/19		
Chrysene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Dibenz(a,h)anthracene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Dibenzofuran	ND	1	250	ug/Kg	08/15/19	08/21/19		
Diethyl phthalate	ND	1	250	ug/Kg	08/15/19	08/21/19		
Dimethyl phthalate	ND	1	250	ug/Kg	08/15/19	08/21/19		
Di-n-butyl phthalate	ND	1	250	ug/Kg	08/15/19	08/21/19		
Di-n-octyl phthalate	ND	1	250	ug/Kg	08/15/19	08/21/19		
Fluoranthene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Fluorene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Hexachlorobenzene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Hexachlorobutadiene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Hexachlorocyclopentadiene	ND	1	1200	ug/Kg	08/15/19	08/21/19		
Hexachloroethane	ND	1	250	ug/Kg	08/15/19	08/21/19		
Indeno(1,2,3-cd)pyrene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Isophorone	ND	1	250	ug/Kg	08/15/19	08/21/19		
Naphthalene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Nitrobenzene	ND	1	1200	ug/Kg	08/15/19	08/21/19		
N-Nitrosodimethylamine (NDMA)	ND	1	250	ug/Kg	08/15/19	08/21/19		
N-Nitrosodi-n-propylamine (NDPA)	ND	1	250	ug/Kg	08/15/19	08/21/19		
N-Nitrosodiphenylamine	ND	1	250	ug/Kg	08/15/19	08/21/19		
Pentachlorophenol	ND	1	1200	ug/Kg	08/15/19	08/21/19		
Phenanthrene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Phenol	ND	1	250	ug/Kg	08/15/19	08/21/19		
Pyrene	ND	1	250	ug/Kg	08/15/19	08/21/19		
Pyridine	ND	1	250	ug/Kg	08/15/19	08/21/19		
Total Cresol	ND	1	400	ug/Kg	08/15/19	08/21/19		

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*23*	*34-143*	*S*
2-Fluorobiphenyl (SUR)	*53*	*41-125*	
2-Fluorophenol (SUR)	*42*	*13-153*	
Nitrobenzene-d5 (SUR)	*55*	*27-125*	
p-Terphenyl (SUR)	*59*	*33-155*	
Phenol-d5 (SUR)	*46*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 11:55	**Site:**			
Sample #:	**418302-071**	**Client Sample #:**	DUP-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**3.08**	1	1	mg/Kg		08/18/19	KLN	
Barium	**102**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.83**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**29.9**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**12.8**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**27.0**	1	1	mg/Kg		08/18/19	KLN	
Lead	**8.37**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**19.7**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**54.2**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**59.3**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	**390**	1	10	mg/Kg	08/15/19	08/17/19	TW	
TPH (C23 to C44)	**470**	1	10	mg/Kg	08/15/19	08/17/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/17/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*111*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/13/2019 13:25	**Site:**			
Sample #:	**418302-072**	**Client Sample #:**	DUP-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205472		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**4.05**	1	1	mg/Kg		08/18/19	KLN	
Barium	**81.6**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**15.1**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**6.54**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**10.9**	1	1	mg/Kg		08/18/19	KLN	
Lead	**5.95**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**9.35**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**30.5**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**27.0**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205535		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205440		
TPH (C13 to C22)	**75**	1	10	mg/Kg	08/15/19	08/17/19	TW	
TPH (C23 to C44)	**49**	1	10	mg/Kg	08/15/19	08/17/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/15/19	08/17/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*131*	*50-150*	

QCBatchID: QC1205392 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/14/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205392MB1					
4,4'-DDD	ND	ug/Kg		5	
4,4'-DDE	ND	ug/Kg		5	
4,4'-DDT	ND	ug/Kg		5	
a-BHC	ND	ug/Kg		5	
Aldrin	ND	ug/Kg		5	
b-BHC	ND	ug/Kg		5	
Chlordane (technical)	ND	ug/Kg		50	
d-BHC	ND	ug/Kg		5	
Dieldrin	ND	ug/Kg		5	
Endosulfan I	ND	ug/Kg		5	
Endosulfan II	ND	ug/Kg		5	
Endosulfan sulfate	ND	ug/Kg		5	
Endrin	ND	ug/Kg		5	
Endrin aldehyde	ND	ug/Kg		5	
Endrin Ketone	ND	ug/Kg		5	
Heptachlor	ND	ug/Kg		5	
Heptachlor epoxide	ND	ug/Kg		5	
Lindane (Gamma-BHC)	ND	ug/Kg		5	
Methoxychlor	ND	ug/Kg		10	
Toxaphene	ND	ug/Kg		100	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205392LCS1											
4,4'-DDD	50		43		ug/Kg	86			43-172		
4,4'-DDE	50		39		ug/Kg	78			44-163		
4,4'-DDT	50		39		ug/Kg	78			40-158		
a-BHC	50		43		ug/Kg	86			45-150		
Aldrin	50		41		ug/Kg	82			46-142		
b-BHC	50		45		ug/Kg	90			42-156		
d-BHC	50		42		ug/Kg	84			37-161		
Dieldrin	50		44		ug/Kg	88			47-151		
Endosulfan I	50		45		ug/Kg	90			47-141		
Endosulfan II	50		45		ug/Kg	90			44-156		
Endosulfan sulfate	50		44		ug/Kg	88			43-157		
Endrin	50		41		ug/Kg	82			47-160		
Endrin aldehyde	50		26		ug/Kg	52			32-127		
Endrin Ketone	50		44		ug/Kg	88			48-159		
Heptachlor	50		43		ug/Kg	86			50-144		
Heptachlor epoxide	50		42		ug/Kg	84			48-145		
Lindane (Gamma-BHC)	50		43		ug/Kg	86			47-151		
Methoxychlor	50		44		ug/Kg	88			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205392MS1, QC1205392MSD1												**Source: 418302-002**
4,4'-DDD	ND	50	50	41	39	ug/Kg	82	78	5.0	43-172	20	
4,4'-DDE	ND	50	50	39	37	ug/Kg	78	74	5.3	44-163	20	
4,4'-DDT	ND	50	50	44	42	ug/Kg	88	84	4.7	40-158	20	
a-BHC	ND	50	50	41	40	ug/Kg	82	80	2.5	45-150	20	

QCBatchID: QC1205392 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/14/2019 **Instrument:** SVOA-GC (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205392MS1, QC1205392MSD1												**Source: 418302-002**
Aldrin	ND	50	50	42	41	ug/Kg	84	82	2.4	46-142	20	
b-BHC	ND	50	50	45	43	ug/Kg	90	86	4.5	42-156	20	
d-BHC	ND	50	50	35	34	ug/Kg	70	68	2.9	37-161	20	
Dieldrin	ND	50	50	43	41	ug/Kg	86	82	4.8	47-151	20	
Endosulfan I	ND	50	50	43	42	ug/Kg	86	84	2.4	47-141	20	
Endosulfan II	ND	50	50	42	40	ug/Kg	84	80	4.9	44-156	20	
Endosulfan sulfate	ND	50	50	41	39	ug/Kg	82	78	5.0	43-157	20	
Endrin	ND	50	50	43	41	ug/Kg	86	82	4.8	47-160	20	
Endrin aldehyde	ND	50	50	36	34	ug/Kg	72	68	5.7	32-127	20	
Endrin Ketone	ND	50	50	41	39	ug/Kg	82	78	5.0	48-159	20	
Heptachlor	ND	50	50	41	40	ug/Kg	82	80	2.5	50-144	20	
Heptachlor epoxide	ND	50	50	41	39	ug/Kg	82	78	5.0	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	41	40	ug/Kg	82	80	2.5	47-151	20	
Methoxychlor	ND	50	50	49	48	ug/Kg	98	96	2.1	36-182	20	

QCBatchID: QC1205393 **Analyst:** Jarriaga **Method:** EPA 8082

Matrix: Solid **Analyzed:** 08/14/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205393MB1					
PCB-1016	ND	ug/Kg		50	
PCB-1221	ND	ug/Kg		50	
PCB-1232	ND	ug/Kg		50	
PCB-1242	ND	ug/Kg		50	
PCB-1248	ND	ug/Kg		50	
PCB-1254	ND	ug/Kg		50	
PCB-1260	ND	ug/Kg		50	
PCB-1262	ND	ug/Kg		50	
PCB-1268	ND	ug/Kg		50	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205393LCS1											
PCB-1016	500		420		ug/Kg	84			70-130		
PCB-1260	500		350		ug/Kg	70			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205393MS1, QC1205393MSD1												**Source: 418302-002**
PCB-1016	ND	500	500	400	360	ug/Kg	80	72	10.5	70-130	20	
PCB-1260	ND	500	500	370	350	ug/Kg	74	70	5.6	70-130	20	

QCBatchID: QC1205412 **Analyst:** bmorris **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 08/19/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205412MB1						
TPH (C10 to C28)	ND	mg/Kg		10		
TPH (C13 to C22)	ND	mg/Kg		10		
TPH (C23 to C44)	ND	mg/Kg		10		
TPH (C6 to C12)	ND	mg/Kg		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205412LCS1											
TPH (C10 to C28)	250		240		mg/Kg	96			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205412MS1, QC1205412MSD1												**Source: 418302-001**
TPH (C10 to C28)	ND	250	250	250	220	mg/Kg	100	88	12.8	70-130	20	

QCBatchID: QC1205415	**Analyst:** Rlee	**Method:** EPA 8260B	
Matrix: Solid	**Analyzed:** 08/15/2019	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205415MB1						
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,1-Trichloroethane	ND	ug/Kg		5		
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,2-Trichloroethane	ND	ug/Kg		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5		
1,1-Dichloroethane	ND	ug/Kg		5		
1,1-Dichloroethene	ND	ug/Kg		5		
1,1-Dichloropropene	ND	ug/Kg		5		
1,2,3-Trichlorobenzene	ND	ug/Kg		5		
1,2,3-Trichloropropane	ND	ug/Kg		5		
1,2,4-Trichlorobenzene	ND	ug/Kg		5		
1,2,4-Trimethylbenzene	ND	ug/Kg		5		
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5		
1,2-Dibromoethane	ND	ug/Kg		5		
1,2-Dichlorobenzene	ND	ug/Kg		5		
1,2-Dichloroethane	ND	ug/Kg		5		
1,2-Dichloropropane	ND	ug/Kg		5		
1,3,5-Trimethylbenzene	ND	ug/Kg		5		
1,3-Dichlorobenzene	ND	ug/Kg		5		
1,3-Dichloropropane	ND	ug/Kg		5		
1,4-Dichlorobenzene	ND	ug/Kg		5		
2,2-Dichloropropane	ND	ug/Kg		5		
2-Butanone (MEK)	ND	ug/Kg		100		
2-Chlorotoluene	ND	ug/Kg		5		
4-Chlorotoluene	ND	ug/Kg		5		
4-Isopropyltoluene	ND	ug/Kg		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5		
Acetone	ND	ug/Kg		100		
Allyl Chloride	ND	ug/Kg		5		
Benzene	ND	ug/Kg		5		
Bromobenzene	ND	ug/Kg		5		
Bromochloromethane	ND	ug/Kg		5		
Bromodichloromethane	ND	ug/Kg		5		
Bromoform	ND	ug/Kg		5		
Bromomethane	ND	ug/Kg		5		
Carbon Tetrachloride	ND	ug/Kg		5		
Chlorobenzene	ND	ug/Kg		5		
Chlorodibromomethane	ND	ug/Kg		5		
Chloroethane	ND	ug/Kg		5		
Chloroform	ND	ug/Kg		5		
Chloromethane	ND	ug/Kg		5		
cis-1,2-Dichloroethene	ND	ug/Kg		5		
cis-1,3-dichloropropene	ND	ug/Kg		5		
cis-1,4-dichloro-2-butene	ND	ug/Kg		5		
Dibromomethane	ND	ug/Kg		5		
Dichlorodifluoromethane	ND	ug/Kg		5		
Di-isopropyl ether (DIPE)	ND	ug/Kg		5		
Ethylbenzene	ND	ug/Kg		5		
Ethyl-tertbutylether (ETBE)	ND	ug/Kg		5		
Hexachlorobutadiene	ND	ug/Kg		5		
Isopropylbenzene	ND	ug/Kg		5		
m and p-Xylene	ND	ug/Kg		5		

QCBatchID: QC1205415	**Analyst:** Rlee		**Method:** EPA 8260B		
Matrix: Solid	**Analyzed:** 08/15/2019		**Instrument:** VOA-MS (group)		

Analyte	Blank Result	Units		RDL	Notes
QC1205415MB1					
Methylene chloride	ND	ug/Kg		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5	
Naphthalene	ND	ug/Kg		5	
N-butylbenzene	ND	ug/Kg		5	
N-propylbenzene	ND	ug/Kg		5	
o-Xylene	ND	ug/Kg		5	
Sec-butylbenzene	ND	ug/Kg		5	
Styrene	ND	ug/Kg		5	
t-Butyl alcohol (TBA)	ND	ug/Kg		10	
Tert-amylmethylether (TAME)	ND	ug/Kg		5	
Tert-butylbenzene	ND	ug/Kg		5	
Tetrachloroethene	ND	ug/Kg		5	
Toluene	ND	ug/Kg		5	
trans-1,2-dichloroethene	ND	ug/Kg		5	
trans-1,3-dichloropropene	ND	ug/Kg		5	
trans-1,4-dichloro-2-butene	ND	ug/Kg		5	
Trichloroethene	ND	ug/Kg		5	
Trichlorofluoromethane	ND	ug/Kg		5	
Vinyl Chloride	ND	ug/Kg		5	
Xylenes (Total)	ND	ug/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205415LCS1, QC1205415LCSD1											
1,1-Dichloroethene	50	50	56	58	ug/Kg	112	116	4	59-172	22	
Benzene	50	50	50	54	ug/Kg	100	108	8	62-137	24	
Chlorobenzene	50	50	47	50	ug/Kg	94	100	6	60-133	24	
Methyl-t-butyl Ether (MTBE)	50	50	45	50	ug/Kg	90	100	11	62-137	21	
Toluene	50	50	50	53	ug/Kg	100	106	6	59-139	21	
Trichloroethene	50	50	48	52	ug/Kg	96	104	8	66-142	21	

QCBatchID: QC1205417	**Analyst:** Jarriaga		**Method:** EPA 8015M		
Matrix: Solid	**Analyzed:** 08/20/2019		**Instrument:** SVOA-GC (group)		

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205417MB1					
TPH (C10 to C28)	ND	mg/Kg		10	
TPH (C13 to C22)	ND	mg/Kg		10	
TPH (C23 to C44)	ND	mg/Kg		10	
TPH (C6 to C12)	ND	mg/Kg		10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205417LCS1											
TPH (C10 to C28)	250		230		mg/Kg	92			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205417MS1, QC1205417MSD1												**Source: 418302-021**
TPH (C10 to C28)	ND	250	250	240	230	mg/Kg	96	92	4.3	70-130	20	

QCBatchID:	**QC1205422**	**Analyst:**	Jarriaga	**Method:**	EPA 8015M
Matrix:	Solid	**Analyzed:**	08/19/2019	**Instrument:**	SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205422MB1						
TPH (C10 to C28)	ND	mg/Kg		10		
TPH (C13 to C22)	ND	mg/Kg		10		
TPH (C23 to C44)	ND	mg/Kg		10		
TPH (C6 to C12)	ND	mg/Kg		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205422LCS1											
TPH (C10 to C28)	250		240		mg/Kg	96			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205422MS1, QC1205422MSD1												**Source: 418302-041**
TPH (C10 to C28)	400	250	250	580	600	mg/Kg	72	80	3.4	70-130	20	

QCBatchID: QC1205431 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205431MB1					
4,4'-DDD	ND	ug/Kg		5	
4,4'-DDE	ND	ug/Kg		5	
4,4'-DDT	ND	ug/Kg		5	
a-BHC	ND	ug/Kg		5	
Aldrin	ND	ug/Kg		5	
b-BHC	ND	ug/Kg		5	
Chlordane (technical)	ND	ug/Kg		50	
d-BHC	ND	ug/Kg		5	
Dieldrin	ND	ug/Kg		5	
Endosulfan I	ND	ug/Kg		5	
Endosulfan II	ND	ug/Kg		5	
Endosulfan sulfate	ND	ug/Kg		5	
Endrin	ND	ug/Kg		5	
Endrin aldehyde	ND	ug/Kg		5	
Endrin Ketone	ND	ug/Kg		5	
Heptachlor	ND	ug/Kg		5	
Heptachlor epoxide	ND	ug/Kg		5	
Lindane (Gamma-BHC)	ND	ug/Kg		5	
Methoxychlor	ND	ug/Kg		10	
Toxaphene	ND	ug/Kg		100	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205431LCS1											
4,4'-DDD	50		45		ug/Kg	90			43-172		
4,4'-DDE	50		42		ug/Kg	84			44-163		
4,4'-DDT	50		41		ug/Kg	82			40-158		
a-BHC	50		47		ug/Kg	94			45-150		
Aldrin	50		44		ug/Kg	88			46-142		
b-BHC	50		48		ug/Kg	96			42-156		
d-BHC	50		44		ug/Kg	88			37-161		
Dieldrin	50		47		ug/Kg	94			47-151		
Endosulfan I	50		48		ug/Kg	96			47-141		
Endosulfan II	50		47		ug/Kg	94			44-156		
Endosulfan sulfate	50		47		ug/Kg	94			43-157		
Endrin	50		42		ug/Kg	84			47-160		
Endrin aldehyde	50		29		ug/Kg	58			32-127		
Endrin Ketone	50		46		ug/Kg	92			48-159		
Heptachlor	50		46		ug/Kg	92			50-144		
Heptachlor epoxide	50		45		ug/Kg	90			48-145		
Lindane (Gamma-BHC)	50		47		ug/Kg	94			47-151		
Methoxychlor	50		48		ug/Kg	96			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205431MS1, QC1205431MSD1												**Source: 418302-051**
4,4'-DDD	ND	50	50	41	38	ug/Kg	82	76	7.6	43-172	20	
4,4'-DDE	ND	50	50	37	34	ug/Kg	74	68	8.5	44-163	20	
4,4'-DDT	ND	50	50	42	40	ug/Kg	84	80	4.9	40-158	20	
a-BHC	ND	50	50	43	39	ug/Kg	86	78	9.8	45-150	20	

QCBatchID: QC1205431 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-GC (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205431MS1, QC1205431MSD1												**Source: 418302-051**
Aldrin	ND	50	50	39	36	ug/Kg	78	72	8.0	46-142	20	
b-BHC	ND	50	50	44	42	ug/Kg	88	84	4.7	42-156	20	
d-BHC	ND	50	50	40	37	ug/Kg	80	74	7.8	37-161	20	
Dieldrin	ND	50	50	41	38	ug/Kg	82	76	7.6	47-151	20	
Endosulfan I	ND	50	50	44	39	ug/Kg	88	78	12.0	47-141	20	
Endosulfan II	ND	50	50	41	39	ug/Kg	82	78	5.0	44-156	20	
Endosulfan sulfate	ND	50	50	42	39	ug/Kg	84	78	7.4	43-157	20	
Endrin	ND	50	50	38	34	ug/Kg	76	68	11.1	47-160	20	
Endrin aldehyde	ND	50	50	34	32	ug/Kg	68	64	6.1	32-127	20	
Endrin Ketone	ND	50	50	41	39	ug/Kg	82	78	5.0	48-159	20	
Heptachlor	ND	50	50	41	38	ug/Kg	82	76	7.6	50-144	20	
Heptachlor epoxide	ND	50	50	40	38	ug/Kg	80	76	5.1	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	41	38	ug/Kg	82	76	7.6	47-151	20	
Methoxychlor	ND	50	50	48	45	ug/Kg	96	90	6.5	36-182	20	

QCBatchID: QC1205432 **Analyst:** Jarriaga **Method:** EPA 8082

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205432MB1					
PCB-1016	ND	ug/Kg		50	
PCB-1221	ND	ug/Kg		50	
PCB-1232	ND	ug/Kg		50	
PCB-1242	ND	ug/Kg		50	
PCB-1248	ND	ug/Kg		50	
PCB-1254	ND	ug/Kg		50	
PCB-1260	ND	ug/Kg		50	
PCB-1262	ND	ug/Kg		50	
PCB-1268	ND	ug/Kg		50	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205432LCS1											
PCB-1016	500		430		ug/Kg	86			70-130		
PCB-1260	500		400		ug/Kg	80			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205432MS1, QC1205432MSD1												**Source: 418302-051**
PCB-1016	ND	500	500	400	350	ug/Kg	80	70	13.3	70-130	20	
PCB-1260	ND	500	500	400	350	ug/Kg	80	70	13.3	70-130	20	

QCBatchID: QC1205439	**Analyst:** bmorris		**Method:** EPA 8270C		
Matrix: Solid	**Analyzed:** 08/15/2019		**Instrument:** SVOA-MS (group)		

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205439MB1					
1,2,4-Trichlorobenzene	ND	ug/Kg		250	
1,2-Dichlorobenzene	ND	ug/Kg		250	
1,3-Dichlorobenzene	ND	ug/Kg		250	
1,4-Dichlorobenzene	ND	ug/Kg		250	
1-Methylnaphthalene	ND	ug/Kg		250	
2,4,5-Trichlorophenol	ND	ug/Kg		250	
2,4,6-Trichlorophenol	ND	ug/Kg		250	
2,4-Dichlorophenol	ND	ug/Kg		250	
2,4-Dimethylphenol	ND	ug/Kg		250	
2,4-Dinitrophenol	ND	ug/Kg		1200	
2,4-Dinitrotoluene	ND	ug/Kg		250	
2,6-Dinitrotoluene	ND	ug/Kg		250	
2-Chloronaphthalene	ND	ug/Kg		250	
2-Chlorophenol	ND	ug/Kg		250	
2-Methyl-4,6-dinitrophenol	ND	ug/Kg		250	
2-Methylnaphthalene	ND	ug/Kg		250	
2-Methylphenol (o-Cresol)	ND	ug/Kg		250	
2-Nitroaniline	ND	ug/Kg		250	
2-Nitrophenol	ND	ug/Kg		250	
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/Kg		400	
3,3'-Dichlorobenzidine	ND	ug/Kg		1200	
3-Nitroaniline	ND	ug/Kg		250	
4-Bromophenyl phenyl ether	ND	ug/Kg		250	
4-Chloro-3-methylphenol	ND	ug/Kg		250	
4-Chloroaniline	ND	ug/Kg		250	
4-Chlorophenyl phenyl ether	ND	ug/Kg		250	
4-Nitroaniline	ND	ug/Kg		250	
4-Nitrophenol	ND	ug/Kg		250	
Acenaphthene	ND	ug/Kg		250	
Acenaphthylene	ND	ug/Kg		250	
Aniline	ND	ug/Kg		250	
Anthracene	ND	ug/Kg		250	
Azobenzene	ND	ug/Kg		250	
Benz(a)anthracene	ND	ug/Kg		250	
Benzidine	ND	ug/Kg		1200	
Benzo(a)pyrene	ND	ug/Kg		250	
Benzo(b)fluoranthene	ND	ug/Kg		250	
Benzo(g,h,i)perylene	ND	ug/Kg		250	
Benzo(k)fluoranthene	ND	ug/Kg		250	
Benzoic acid	ND	ug/Kg		1200	
Benzyl alcohol	ND	ug/Kg		250	
Bis(2-chloroethoxy)methane	ND	ug/Kg		250	
Bis(2-chloroethyl) Ether	ND	ug/Kg		1200	
Bis(2-chloroisopropyl) Ether	ND	ug/Kg		250	
Bis(2-ethylhexyl) phthalate	ND	ug/Kg		250	
Butylbenzyl Phthalate	ND	ug/Kg		250	
Carbazole	ND	ug/Kg		250	
Chrysene	ND	ug/Kg		250	
Dibenz(a,h)anthracene	ND	ug/Kg		250	
Dibenzofuran	ND	ug/Kg		250	
Diethyl phthalate	ND	ug/Kg		250	
Dimethyl phthalate	ND	ug/Kg		250	

QCBatchID: QC1205439 **Analyst:** bmorris **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205439MB1					
Di-n-butyl phthalate	ND	ug/Kg		250	
Di-n-octyl phthalate	ND	ug/Kg		250	
Fluoranthene	ND	ug/Kg		250	
Fluorene	ND	ug/Kg		250	
Hexachlorobenzene	ND	ug/Kg		250	
Hexachlorobutadiene	ND	ug/Kg		250	
Hexachlorocyclopentadiene	ND	ug/Kg		1200	
Hexachloroethane	ND	ug/Kg		250	
Indeno(1,2,3-cd)pyrene	ND	ug/Kg		250	
Isophorone	ND	ug/Kg		250	
Naphthalene	ND	ug/Kg		250	
Nitrobenzene	ND	ug/Kg		1200	
N-Nitrosodimethylamine (NDMA)	ND	ug/Kg		250	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/Kg		250	
N-Nitrosodiphenylamine	ND	ug/Kg		250	
Pentachlorophenol	ND	ug/Kg		1200	
Phenanthrene	ND	ug/Kg		250	
Phenol	ND	ug/Kg		250	
Pyrene	ND	ug/Kg		250	
Pyridine	ND	ug/Kg		250	
Total Cresol	ND	ug/Kg		400	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205439LCS1											
1,2,4-Trichlorobenzene	2000		1300		ug/Kg	65			43-111		
1,4-Dichlorobenzene	2000		1300		ug/Kg	65			30-116		
2,4,5-Trichlorophenol	2000		1300		ug/Kg	65			57-125		
2,4-Dimethylphenol	2000		1200		ug/Kg	60			50-112		
2,4-Dinitrotoluene	2000		1300		ug/Kg	65			57-124		
2-Chlorophenol	2000		1200		ug/Kg	60			48-114		
3 and 4-Methylphenol (m and p-Cresol)	2000		1300		ug/Kg	65			56-124		
4-Chloro-3-methylphenol	2000		1300		ug/Kg	65			61-122		
4-Nitrophenol	2000		1200		ug/Kg	60			54-126		
Acenaphthene	2000		1400		ug/Kg	70			53-112		
Benzo(b)fluoranthene	2000		1300		ug/Kg	65			61-125		
Chrysene	2000		1600		ug/Kg	80			59-117		
N-Nitrosodi-n-propylamine (NDPA)	2000		1500		ug/Kg	75			54-110		
Pentachlorophenol	2000		1100		ug/Kg	55			41-103		
Phenol	2000		1300		ug/Kg	65			51-111		
Pyrene	2000		1500		ug/Kg	75			63-119		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205439MS1, QC1205439MSD1												**Source: 418302-002**
1,2,4-Trichlorobenzene	ND	2000	2000	1300	1200	ug/Kg	65	60	8.0	35-93	30	
1,4-Dichlorobenzene	ND	2000	2000	1100	1100	ug/Kg	55	55	0.0	39-95	30	
2,4,5-Trichlorophenol	ND	2000	2000	880	900	ug/Kg	44	45	2.2	44-108	30	
2,4-Dimethylphenol	ND	2000	2000	1100	1000	ug/Kg	55	50	9.5	37-105	30	
2,4-Dinitrotoluene	ND	2000	2000	2200	2300	ug/Kg	110	115	4.4	48-109	30	M
2-Chlorophenol	ND	2000	2000	920	910	ug/Kg	46	46	1.1	42-102	30	

QCBatchID: QC1205439 **Analyst:** bmorris **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-MS (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205439MS1, QC1205439MSD1												**Source: 418302-002**
3 and 4-Methylphenol (m and p-Cresol)	ND	2000	2000	1200	1100	ug/Kg	60	55	8.7	33-116	30	
4-Chloro-3-methylphenol	ND	2000	2000	1000	1000	ug/Kg	50	50	0.0	33-120	30	
4-Nitrophenol	ND	2000	2000	2000	2100	ug/Kg	100	105	4.9	37-107	30	
Acenaphthene	ND	2000	2000	1300	1300	ug/Kg	65	65	0.0	57-99	30	
Benzo(b)fluoranthene	ND	2000	2000	960	1100	ug/Kg	48	55	13.6	59-126	30	M
Chrysene	ND	2000	2000	1500	1500	ug/Kg	75	75	0.0	68-120	30	
N-Nitrosodi-n-propylamine (NDPA)	ND	2000	2000	1100	1000	ug/Kg	55	50	9.5	41-127	30	
Pentachlorophenol	ND	2000	2000	1800	1800	ug/Kg	90	90	0.0	43-120	30	
Phenol	ND	2000	2000	1200	1100	ug/Kg	60	55	8.7	46-116	30	
Pyrene	ND	2000	2000	1500	1600	ug/Kg	75	80	6.5	53-129	30	

QCBatchID:	**QC1205440**	**Analyst:**	Abanh	**Method:**	EPA 8015M
Matrix:	Solid	**Analyzed:**	08/16/2019	**Instrument:**	SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205440MB1					
TPH (C10 to C28)	ND	mg/Kg		10	
TPH (C13 to C22)	ND	mg/Kg		10	
TPH (C23 to C40)	ND	mg/Kg		10	
TPH (C23 to C44)	ND	mg/Kg		10	
TPH (C6 to C12)	ND	mg/Kg		10	
TPH (C8 to C10)	ND	mg/Kg		10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205440LCS1											
TPH (C10 to C28)	250		250		mg/Kg	100			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205440MS1, QC1205440MSD1												**Source: 418302-061**
TPH (C10 to C28)	ND	250	250	250	240	mg/Kg	100	96	4.1	70-130	20	

QCBatchID: QC1205456 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205456MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205456LCS1											
Antimony	100		127		mg/Kg	127			80-120		L
Arsenic	100		98.2		mg/Kg	98			80-120		
Barium	100		103		mg/Kg	103			80-120		
Beryllium	100		106		mg/Kg	106			80-120		
Cadmium	100		105		mg/Kg	105			80-120		
Chromium	100		108		mg/Kg	108			80-120		
Cobalt	100		104		mg/Kg	104			80-120		
Copper	100		105		mg/Kg	105			80-120		
Lead	100		107		mg/Kg	107			80-120		
Molybdenum	100		107		mg/Kg	107			80-120		
Nickel	100		106		mg/Kg	106			80-120		
Selenium	100		99.9		mg/Kg	100			80-120		
Silver	100		102		mg/Kg	102			80-120		
Thallium	100		100		mg/Kg	100			80-120		
Vanadium	100		107		mg/Kg	107			80-120		
Zinc	100		101		mg/Kg	101			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205456MS1, QC1205456MSD1												**Source: 418302-002**
Antimony	ND	100	100	22.6	21.8	mg/Kg	23	22	3.6	75-125	20	M
Arsenic	3.98	100	100	105	104	mg/Kg	101	100	1.0	75-125	20	
Barium	245	100	100	329	304	mg/Kg	84	59	7.9	75-125	20	M
Beryllium	ND	100	100	95.9	100	mg/Kg	96	100	4.2	75-125	20	
Cadmium	1.06	100	100	107	98.9	mg/Kg	106	98	7.9	75-125	20	
Chromium	30.5	100	100	138	130	mg/Kg	108	100	6.0	75-125	20	
Cobalt	14.0	100	100	117	108	mg/Kg	103	94	8.0	75-125	20	
Copper	46.6	100	100	160	147	mg/Kg	113	100	8.5	75-125	20	
Lead	72.9	100	100	187	201	mg/Kg	114	128	7.2	75-125	20	M
Molybdenum	ND	100	100	100	101	mg/Kg	100	101	1.0	75-125	20	

QCBatchID: QC1205456 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205456MS1, QC1205456MSD1												**Source: 418302-002**
Nickel	20.2	100	100	116	115	mg/Kg	96	95	0.9	75-125	20	
Selenium	ND	100	100	96.6	98.4	mg/Kg	97	98	1.8	75-125	20	
Silver	ND	100	100	105	99.2	mg/Kg	105	99	5.7	75-125	20	
Thallium	0.45	100	100	92.8	95.0	mg/Kg	92	95	2.3	75-125	20	
Vanadium	53.0	100	100	163	154	mg/Kg	110	101	5.7	75-125	20	
Zinc	179	100	100	297	256	mg/Kg	118	77	14.8	75-125	20	

QCBatchID: QC1205459 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205459MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205459LCS1											
Antimony	100		122		mg/Kg	122			80-120		L
Arsenic	100		96.8		mg/Kg	97			80-120		
Barium	100		98.8		mg/Kg	99			80-120		
Beryllium	100		98.2		mg/Kg	98			80-120		
Cadmium	100		104		mg/Kg	104			80-120		
Chromium	100		104		mg/Kg	104			80-120		
Cobalt	100		101		mg/Kg	101			80-120		
Copper	100		101		mg/Kg	101			80-120		
Lead	100		104		mg/Kg	104			80-120		
Molybdenum	100		103		mg/Kg	103			80-120		
Nickel	100		103		mg/Kg	103			80-120		
Selenium	100		98.4		mg/Kg	98			80-120		
Silver	100		98.1		mg/Kg	98			80-120		
Thallium	100		98.0		mg/Kg	98			80-120		
Vanadium	100		103		mg/Kg	103			80-120		
Zinc	100		95.1		mg/Kg	95			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205459MS1, QC1205459MSD1												**Source: 418302-019**
Antimony	ND	100	100	27.0	30.3	mg/Kg	27	30	11.5	75-125	20	M
Arsenic	5.24	100	100	101	103	mg/Kg	96	98	2.0	75-125	20	
Barium	131	100	100	245	239	mg/Kg	114	108	2.5	75-125	20	
Beryllium	ND	100	100	98.5	97.5	mg/Kg	99	98	1.0	75-125	20	
Cadmium	0.53	100	100	99.2	97.1	mg/Kg	99	97	2.1	75-125	20	
Chromium	23.6	100	100	129	124	mg/Kg	105	100	4.0	75-125	20	
Cobalt	11.1	100	100	107	105	mg/Kg	96	94	1.9	75-125	20	
Copper	23.6	100	100	131	127	mg/Kg	107	103	3.1	75-125	20	
Lead	9.89	100	100	105	110	mg/Kg	95	100	4.7	75-125	20	
Molybdenum	ND	100	100	95.1	98.6	mg/Kg	95	99	3.6	75-125	20	

QCBatchID: QC1205459 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205459MS1, QC1205459MSD1												**Source: 418302-019**
Nickel	15.2	100	100	109	113	mg/Kg	94	98	3.6	75-125	20	
Selenium	3.27	100	100	94.0	99.2	mg/Kg	91	96	5.4	75-125	20	
Silver	ND	100	100	96.6	94.9	mg/Kg	97	95	1.8	75-125	20	
Thallium	1.69	100	100	87.3	92.5	mg/Kg	86	91	5.8	75-125	20	
Vanadium	38.1	100	100	149	142	mg/Kg	111	104	4.8	75-125	20	
Zinc	51.7	100	100	150	154	mg/Kg	98	102	2.6	75-125	20	

QCBatchID: QC1205460 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205460MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205460LCS1											
Antimony	100		115		mg/Kg	115			80-120		
Arsenic	100		92.6		mg/Kg	93			80-120		
Barium	100		90.4		mg/Kg	90			80-120		
Beryllium	100		95.5		mg/Kg	96			80-120		
Cadmium	100		94.5		mg/Kg	95			80-120		
Chromium	100		95.8		mg/Kg	96			80-120		
Cobalt	100		91.6		mg/Kg	92			80-120		
Copper	100		92.5		mg/Kg	93			80-120		
Lead	100		98.9		mg/Kg	99			80-120		
Molybdenum	100		98.2		mg/Kg	98			80-120		
Nickel	100		98.4		mg/Kg	98			80-120		
Selenium	100		96.8		mg/Kg	97			80-120		
Silver	100		90.5		mg/Kg	91			80-120		
Thallium	100		93.2		mg/Kg	93			80-120		
Vanadium	100		94.2		mg/Kg	94			80-120		
Zinc	100		87.6		mg/Kg	88			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205460MS1, QC1205460MSD1												**Source: 418302-039**
Antimony	ND	100	100	28.8	31.3	mg/Kg	29	31	8.3	75-125	20	M
Arsenic	4.70	100	100	94.7	96.2	mg/Kg	90	92	1.6	75-125	20	
Barium	142	100	100	266	252	mg/Kg	124	110	5.4	75-125	20	
Beryllium	ND	100	100	95.4	92.8	mg/Kg	95	93	2.8	75-125	20	
Cadmium	0.62	100	100	95.3	97.5	mg/Kg	95	97	2.3	75-125	20	
Chromium	26.1	100	100	125	126	mg/Kg	99	100	0.8	75-125	20	
Cobalt	12.9	100	100	104	105	mg/Kg	91	92	1.0	75-125	20	
Copper	26.8	100	100	133	134	mg/Kg	106	107	0.7	75-125	20	
Lead	7.38	100	100	101	102	mg/Kg	94	95	1.0	75-125	20	
Molybdenum	0.40	100	100	89.8	92.0	mg/Kg	89	92	2.4	75-125	20	

QCBatchID: QC1205460 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205460MS1, QC1205460MSD1												**Source: 418302-039**
Nickel	18.1	100	100	107	108	mg/Kg	89	90	0.9	75-125	20	
Selenium	ND	100	100	88.1	91.4	mg/Kg	88	91	3.7	75-125	20	
Silver	ND	100	100	94.4	94.8	mg/Kg	94	95	0.4	75-125	20	
Thallium	1.18	100	100	83.6	87.5	mg/Kg	82	86	4.6	75-125	20	
Vanadium	42.2	100	100	144	148	mg/Kg	102	106	2.7	75-125	20	
Zinc	58.6	100	100	144	148	mg/Kg	85	89	2.7	75-125	20	

QCBatchID: QC1205472 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205472MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205472LCS1											
Antimony	100		120		mg/Kg	120			80-120		
Arsenic	100		95.0		mg/Kg	95			80-120		
Barium	100		95.8		mg/Kg	96			80-120		
Beryllium	100		99.2		mg/Kg	99			80-120		
Cadmium	100		97.8		mg/Kg	98			80-120		
Chromium	100		101		mg/Kg	101			80-120		
Cobalt	100		97.7		mg/Kg	98			80-120		
Copper	100		97.6		mg/Kg	98			80-120		
Lead	100		104		mg/Kg	104			80-120		
Molybdenum	100		103		mg/Kg	103			80-120		
Nickel	100		104		mg/Kg	104			80-120		
Selenium	100		96.1		mg/Kg	96			80-120		
Silver	100		95.3		mg/Kg	95			80-120		
Thallium	100		97.5		mg/Kg	98			80-120		
Vanadium	100		99.8		mg/Kg	100			80-120		
Zinc	100		91.1		mg/Kg	91			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205472MS1, QC1205472MSD1												**Source: 418302-059**
Antimony	ND	100	100	22.7	22.3	mg/Kg	23	22	1.8	75-125	20	M
Arsenic	10.1	100	100	103	105	mg/Kg	93	95	1.9	75-125	20	
Barium	270	100	100	369	390	mg/Kg	99	120	5.5	75-125	20	
Beryllium	ND	100	100	91.3	96.3	mg/Kg	91	96	5.3	75-125	20	
Cadmium	0.89	100	100	87.5	92.6	mg/Kg	87	92	5.7	75-125	20	
Chromium	34.9	100	100	129	135	mg/Kg	94	100	4.5	75-125	20	
Cobalt	16.3	100	100	102	106	mg/Kg	86	90	3.8	75-125	20	
Copper	39.9	100	100	139	146	mg/Kg	99	106	4.9	75-125	20	
Lead	16.9	100	100	110	112	mg/Kg	93	95	1.8	75-125	20	
Molybdenum	ND	100	100	87.6	88.8	mg/Kg	88	89	1.4	75-125	20	

QCBatchID: QC1205472 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205472MS1, QC1205472MSD1												**Source: 418302-059**
Nickel	25.7	100	100	117	117	mg/Kg	91	91	0.0	75-125	20	
Selenium	ND	100	100	90.9	90.1	mg/Kg	91	90	0.9	75-125	20	
Silver	ND	100	100	88.9	93.9	mg/Kg	89	94	5.5	75-125	20	
Thallium	1.91	100	100	84.9	86.9	mg/Kg	83	85	2.3	75-125	20	
Vanadium	63.2	100	100	160	168	mg/Kg	97	105	4.9	75-125	20	
Zinc	77.2	100	100	170	173	mg/Kg	93	96	1.7	75-125	20	

QCBatchID:	**QC1205530**	**Analyst:**	sbailey-woo	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	08/16/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205530MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205530LCS1											
Mercury	0.83		0.84		mg/Kg	101			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205530MS1, QC1205530MSD1												**Source: 418302-002**
Mercury	0.35	0.83	0.83	1.23	1.18	mg/Kg	106	100	4.1	75-125	20	

QCBatchID:	**QC1205531**	**Analyst:**	sbailey-woo	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	08/16/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205531MB1						
Mercury	ND	mg/Kg		0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205531LCS1											
Mercury	0.415		0.40		mg/Kg	96			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205531MS1, QC1205531MSD1												**Source: 418302-019**
Mercury	0.04	0.415	0.415	0.40	0.41	mg/Kg	87	89	2.5	75-125	20	

QCBatchID:	**QC1205532**	**Analyst:**	sbailey-woo	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	08/16/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205532MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205532LCS1											
Mercury	0.83		0.82		mg/Kg	99			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205532MS1, QC1205532MSD1												**Source: 418302-039**
Mercury	0.05	0.83	0.83	0.79	0.88	mg/Kg	89	100	10.8	75-125	20	

QCBatchID:	**QC1205535**	**Analyst:**	sbailey-woo	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	08/16/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205535MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205535LCS1											
Mercury	0.83		0.91		mg/Kg	110			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205535MS1, QC1205535MSD1												**Source: 418302-059**
Mercury	0.08	0.83	0.83	0.95	0.87	mg/Kg	105	95	8.8	75-125	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 418302

Page: 1 of 8

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-8-SS-0	8/12/19	0905	S	1/8oz, 3 PAS	N	X	X				X		1, 3 5, 1
2	SB-8-SS-2		0920		1/8oz, 3/40mL	Y			X	X	X	X		
3	SB-8-SS-4		0930		1/8oz	N								
4	SB-8-SS-8		0940		1/8oz, 3/40mL	Y			X	X	X			
5	SB-8-SS-13		0950		1/8oz	N								
6	SB-5-SS-0		1010									X		
7	SB-5-SS-1		1020									X		
8	SB-5-SS-4		1025											
9	SB-5-SS-8		1030		1/8oz, 3/40mL	Y			X	X	X			
10	SB-5-SS-15		1040		1/8oz	N								

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux / Project Geologist	8/13/19 1700
1 Received By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/13/19 1700
2 Relinquished By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/14/19 0934
2 Received By:		Sam K	EA	8/14/19 0934
3 Relinquished By:		Sam K	EA	8/14/19 1040
3 Received By:		Christine Castro	EA	8/14/19 1040

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 418302

Page: 2 of 8

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-6-SS-1	8/12/19	1055	S	1/8oz	N	X	X						1,3 5,3
2	SB-6-SS-5		1100		↓	↓								
3	SB-6-SS-9		1110		1/8oz, 3/40mL	Y			X	X	X			
4	SB-6-SS-12		1120		1/8oz	N								
5	SB-7-SS-1		1150											
6	SB-7-SS-6		1200											
7	SB-7-SS-10		1210											
8	SB-7-SS-15		1215											
9	SB-11-SS-2		1235											
10	SB-11-SS-5	↓	1240	↓	↓	↓	↓	↓						

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux / Project Geologist	8/13/19 1700
1 Received By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/13/19 1700
2 Relinquished By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/14/19 0934
2 Received By:		Sam R	EA	8/14/19 0934
3 Relinquished By:		Sam R	EA	8/14/19 1040
3 Received By:		Anissa Castro	EA	8/14/19 1040

ENTHALPY ANALYTICAL

Chain of Custody Record — Lab No: 418302 — Page: 3 of 8

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-11-SS-10	8/12/19	1245	S	1/8oz, 3/40mL	Y	X	X	X	X	X			1, 3 5, 7
2	SB-11-SS-15		1250		1/8oz	N								
3	SB-12-SS-1		1402											
4	SB-12-SS-5		1415											
5	SB-12-SS-8		1420											
6	SB-12-SS-12		1425											
7	SB-13-SS-0		1444									X		
8	SB-13-SS-2		1450									X		
9	SB-13-SS-4		1455		1/8oz, 3/40mL	Y			X	X	X			
10	SB-13-SS-7		1505		1/8oz	N								

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		Peter Shimer	Roux / Project Geologist	8/13/19 1700
[1] Received By:		Holly Hutcheson	Roux / staff Assistant Geologist	8/13/19 1700
[2] Relinquished By:		Holly Hutcheson	Roux / staff Assistant Geologist	8/14/19 0934
[2] Received By:		Sam R	EA	8/14/19 0934
[3] Relinquished By:		Sam R	EA	8/14/19 1040
[3] Received By:		Christine Castro	EA	8/14/19 1040

ENTHALPY ANALYTICAL

Chain of Custody Record — Lab No: 418302 — Page: 4 of 8

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-13-SS-14	8/12/19	1520	S	1/8oz	N	X	X						0.8 5.6
2	SB-14-SS-1	8/13/19	0800											
3	SB-14-SS-3		0805											
4	SB-14-SS-8		0810		1/8oz, 3/40mL	Y			X	X	X			
5	SB-14-SS-10		0815		1/8 oz	N								
6	SB-9-SS-2		0845											
7	SB-9-SS-5		0855											
8	SB-9-SS-8		0900											
9	SB-9-SS-14		0910											
10	SB-19-SS-0		0915									X		

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		Peter Shimer	Roux / Project Geologist	8/13/19 1700
[1] Received By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/13/19 1700
[2] Relinquished By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/14/19 0934
[2] Received By:		Saul R	EA	8/14/19 0934
[3] Relinquished By:		Saul R	EA	8/14/19 1040
[3] Received By:		Christine Carro	EA	8/14/19 1040

ENTHALPY ANALYTICAL

Chain of Custody Record — Lab No: 418302 — Page: 5 of 8

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A					Test Instructions / Comments
1	SB-19-SS-2	8/13/19	0920	S	1/8oz	N	X	X				X						0.8
2	SB-18-SS-1		0945															4.3
3	SB-18-SS-4		0955															
4	SB-18-SS-8		1000		1/8oz, 3/40mL	Y			X	X	X							
5	SB-18-SS-13		1010		1/8oz	N												
6	SB-17-SS-2		1020		1/8oz, 3/40mL	Y			X	X	X							
7	SB-17-SS-5		1030		1/8oz	N												
8	SB-17-SS-8		1035		1/8oz, 3/40mL	Y			X	X	X							
9	SB-17-SS-11		1040		1/8oz	N												
10	SB-16-SS-0		1100									X						

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		Peter Shimer	Roux / Project Geologist	8/13/19 1700
[1] Received By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/13/19 1700
[2] Relinquished By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/14/19 0934
[2] Received By:		Sam	EA	8/14/19 0934
[3] Relinquished By:		Sam	EA	8/14/19 1040
[3] Received By:		Christine Castro	EA	8/14/19 1040

ENTHALPY ANALYTICAL

Chain of Custody Record — Lab No: 418302 — Page: 6 of 8

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	---	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-16-SS-2	8/13/19	1105	S	1/8oz, 3/40mL	Y	X	X	X	X	X	X		0,8
2	SB-16-SS-4		1110		1/8oz	N								5,3
3	SB-16-SS-7		1115		1/8oz, 3/40mL	Y			X	X	X			
4	SB-15-SS-3		1145		↓	↓			X	X	X			
5	SB-15-SS-6		1155		1/8oz	N								
6	SB-15-SS-9		1200											
7	SB-15-SS-12		1205											
8	SB-20-SS-1		1320											
9	SB-20-SS-5		1325											
10	SB-20-SS-9		1335											

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux / Project Geologist	8/13/19 1700
1 Received By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/13/19 1700
2 Relinquished By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/14/19 0934
2 Received By:		Saul R	EA	8/14/19 0934
3 Relinquished By:		Saul R	EA	8/14/19 1040
3 Received By:		Christina Castro	EA	8/14/19 1040

ENTHALPY ANALYTICAL

Chain of Custody Record — Lab No: 418302 — Page: 7 of 8

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	---	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A				
1	SB-21-SS-0	8/13/19	1345	S	1/8oz	N	X	X				X					
2	SB-21-SS-2		1350		1/8oz, 3/40mL	Y			X	X	X	X					
3	SB-21-SS-4		1355		1/8oz	N											
4	SB-22-SS-1		1410														
5	SB-22-SS-3		1415														
6	SB-22-SS-7		1420														
7	SB-22-SS-9		1430														
8	DUP-1	8/12/19	PAS 1400 ~~1420~~														
9	DUP-2	8/13/19	1035		1/8oz, 3/40mL	Y			X	X	X						
10	DUP-3		1115						X	X	X						

Test Instructions / Comments: 0.8, 4.1

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux / Project Geologist	8/13/19 1700
1 Received By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/13/19 1700
2 Relinquished By:		Holly Hutcheson	Roux / Staff Assistant Geologist	8/14/19 0934
2 Received By:		Sai R	EA	8/14/19 0934
3 Relinquished By:		Sai R	EA	8/14/19 1040
3 Received By:		Christine Castro	EA	8/14/19 1040

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 418302

Page: 8 of 8

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	DUP-4	8/13/19	1155	S	1/8oz	N	X	X						0.8
2	DUP-5	↓	1325	↓	↓	↓	↓	↓						4.3
3														
4														
5														
6														
7				PAS										
8														
9														
10														

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux / Project Geologist	8/13/19 1700
1 Received By:		Holly Hutchison	Roux / Staff Assistant Geologist	8/13/19 1700
2 Relinquished By:		Holly Hutchison	Roux / Staff Assistant Geologist	8/14/19 0934
2 Received By:		Sam R	EA	8/14/19 0934
3 Relinquished By:		Sam R	EA	8/14/19 1040
3 Received By:		Christine Castro	EA	8/14/19 1040

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ROUX

Project: _____

Date Received: 8/14/19

Sampler's Name Present: ☐ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2)

Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 5.1 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 1.3 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		✓ cc 8/14
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Water leaked into several of the bags, possible contamination.

Section 6

For discrepancies, how was the Project Manager notified? ☑ Verbal PM Initials: _____ Date/Time _____

cc ☑ Email (email sent to/on): RC / 8/14/19

Project Manager's response:

Completed By: _____ Date: 8/14/19

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client: Roux Associates, Inc.
Address: 5150 E. Pacific Coast Hwy.
Suite 450
Long Beach, CA 90804
Attn: Peter Shimer

Lab Request: 418350
Report Date: 08/27/2019
Date Received: 08/14/2019
Client ID: 15831

Comments: InSite
3370.0001L000
3701 N. Pacific Pl., Long Beach, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
418350-001	SB-26-SS-1
418350-002	SB-27-SS-1
418350-003	SB-27-SS-3
418350-004	SB-28-SS-2
418350-005	SB-29-SS-2
418350-006	SB-29-SS-4
418350-007	SB-30-SS-0
418350-008	SB-30-SS-2
418350-009	SB-36-SS-1
418350-010	SB-36-SS-5
418350-011	SB-23-SS-0
418350-012	SB-23-SS-2
418350-013	SB-23-SS-6
418350-014	SB-24-SS-1
418350-015	SB-24-SS-5
418350-016	SB-24-SS-9
418350-017	SB-25-SS-0
418350-018	SB-25-SS-2
418350-019	SB-25-SS-5
418350-020	SB-25-SS-8
418350-021	SB-38-SS-1
418350-022	DUP-6
418350-023	DUP-7

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

ACCREDITED IN ACCORDANCE WITH nelac

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 10:25	**Site:**			
Sample #:	**418350-001**	**Client Sample #:**	SB-26-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**9.70**	1	1	mg/Kg		08/18/19	KLN	
Barium	**388**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.03**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**33.6**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**15.5**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**41.1**	1	1	mg/Kg		08/18/19	KLN	
Lead	**18.3**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**27.1**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**65.6**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**82.9**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*118*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 09:30	**Site:**			
Sample #:	**418350-002**	**Client Sample #:**	SB-27-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**16.1**	1	1	mg/Kg		08/18/19	KLN	
Barium	**252**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.88**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**36.1**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**17.6**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**44.9**	1	1	mg/Kg		08/18/19	KLN	
Lead	**16.1**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**26.4**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**65.0**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**76.6**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*128*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 09:45	**Site:**			
Sample #:	**418350-003**	**Client Sample #:**	SB-27-SS-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**12.8**	1	1	mg/Kg		08/18/19	KLN	
Barium	**205**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.71**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**29.4**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**14.0**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**35.2**	1	1	mg/Kg		08/18/19	KLN	
Lead	**13.4**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**22.3**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**51.1**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**59.1**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**57**	2	20	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*143*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:40	**Site:**			
Sample #:	**418350-004**	**Client Sample #:**	SB-28-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**6.21**	1	1	mg/Kg		08/18/19	KLN	
Barium	**182**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.65**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**27.9**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**15.2**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**26.4**	1	1	mg/Kg		08/18/19	KLN	
Lead	**41.5**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**19.5**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**40.9**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**92.5**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	**160**	10	100	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**430**	10	100	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	10	100	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*131*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 12:20	**Site:**			
Sample #:	**418350-005**	**Client Sample #:**	SB-29-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**4.43**	1	1	mg/Kg		08/18/19	KLN	
Barium	**175**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.85**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**30.0**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**12.2**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**27.2**	1	1	mg/Kg		08/18/19	KLN	
Lead	**12.5**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**20.0**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**50.1**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**61.6**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**20**	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*121*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 12:30	**Site:**			
Sample #:	**418350-006**	**Client Sample #:**	SB-29-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**5.19**	1	1	mg/Kg		08/18/19	KLN	
Barium	**145**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.55**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**22.5**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**9.32**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**23.3**	1	1	mg/Kg		08/18/19	KLN	
Lead	**59.4**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**14.4**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**37.8**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**61.4**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	10	100	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**190**	10	100	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	10	100	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*126*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 13:25	**Site:**			
Sample #:	**418350-007**	**Client Sample #:**	SB-30-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**3.48**	1	1	mg/Kg		08/18/19	KLN	
Barium	**95.1**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.56**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**15.7**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**7.09**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**17.1**	1	1	mg/Kg		08/18/19	KLN	
Lead	**16.7**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**9.47**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**28.8**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**60.6**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*115*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205872		
4,4'-DDD	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
a-BHC	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Aldrin	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
b-BHC	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/26/19	08/27/19	SS	
d-BHC	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endrin	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/26/19	08/27/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/26/19	08/27/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*51*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*59*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 13:35	**Site:**			
Sample #:	**418350-008**	**Client Sample #:**	SB-30-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**1.68**	1	1	mg/Kg		08/18/19	KLN	
Barium	**144**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**19.9**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**9.80**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**22.3**	1	1	mg/Kg		08/18/19	KLN	
Lead	**20.6**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**14.5**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**30.7**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**51.6**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	**90**	2	20	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**250**	2	20	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/16/19	08/22/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*116*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205872		
4,4'-DDD	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
a-BHC	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Aldrin	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
b-BHC	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/26/19	08/27/19	SS	
d-BHC	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endrin	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/26/19	08/27/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/26/19	08/27/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/26/19	08/27/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*65*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*78*		*50-150*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 13:55	**Site:**			
Sample #:	**418350-009**	**Client Sample #:**	SB-36-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**10.3**	1	1	mg/Kg		08/18/19	KLN	
Barium	**286**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.87**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**32.8**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**15.6**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**40.2**	1	1	mg/Kg		08/18/19	KLN	
Lead	**26.6**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**23.3**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**61.9**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**99.3**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**28**	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*120*	*50-150*	

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/14/2019 13:10 **Site:**
Sample #: 418350-010 **Client Sample #:** SB-36-SS-5 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**4.66**	1	1	mg/Kg		08/18/19	KLN	
Barium	**138**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**3.84**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**30.1**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**10.4**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**113**	1	1	mg/Kg		08/18/19	KLN	
Lead	**108**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	**1.40**	1	1	mg/Kg		08/18/19	KLN	
Nickel	**21.3**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**48.3**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**8990**	10	50	mg/Kg		08/19/19	KLN	
Method: EPA 7471A NELAC Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	**1200**	10	100	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**920**	10	100	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	**220**	10	100	mg/Kg	08/16/19	08/22/19	SS	
Surrogate	*% Recovery*	*Limits*	*Notes*					
Triacontane (SUR)	*169*	*50-150*	*S*					
Method: EPA 8082 NELAC Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
PCB-1221	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
PCB-1232	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
PCB-1242	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
PCB-1248	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
PCB-1254	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
PCB-1260	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
PCB-1262	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
PCB-1268	ND	2	100	ug/Kg	08/15/19	08/20/19	SS	D2
Surrogate	*% Recovery*	*Limits*	*Notes*					
Decachlorobiphenyl DCB (SUR)	*75*	*50-150*						
Method: EPA 8260B NELAC Prep Method: EPA 5035A						QCBatchID: QC1205416		
1,1,1,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 13:10	**Site:**			
Sample #:	**418350-010**	**Client Sample #:**	SB-36-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.9	90	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.9	90	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.9	9	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/14/2019 13:10 **Site:**
Sample #: 418350-010 **Client Sample #:** SB-36-SS-5 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*119*	*70-145*	
4-Bromofluorobenzene (SUR)	*106*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205439

1,2,4-Trichlorobenzene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
1,2-Dichlorobenzene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
1,3-Dichlorobenzene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
1,4-Dichlorobenzene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
1-Methylnaphthalene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2,4-Dichlorophenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2,4-Dimethylphenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2,4-Dinitrophenol	ND	200	240000	ug/Kg	08/15/19	08/21/19	D2
2,4-Dinitrotoluene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2,6-Dinitrotoluene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2-Chloronaphthalene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2-Chlorophenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2-Methylnaphthalene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2-Nitroaniline	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
2-Nitrophenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	200	80000	ug/Kg	08/15/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	200	240000	ug/Kg	08/15/19	08/21/19	D2
3-Nitroaniline	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
4-Bromophenyl phenyl ether	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
4-Chloro-3-methylphenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
4-Chloroaniline	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
4-Chlorophenyl phenyl ether	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
4-Nitroaniline	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
4-Nitrophenol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Acenaphthene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Acenaphthylene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Aniline	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Anthracene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Azobenzene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Benz(a)anthracene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Benzidine	ND	200	240000	ug/Kg	08/15/19	08/21/19	D2
Benzo(a)pyrene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Benzo(b)fluoranthene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Benzo(g,h,i)perylene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Benzo(k)fluoranthene	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Benzoic acid	ND	200	240000	ug/Kg	08/15/19	08/21/19	D2
Benzyl alcohol	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Bis(2-chloroethoxy)methane	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Bis(2-chloroethyl) Ether	ND	200	240000	ug/Kg	08/15/19	08/21/19	D2
Bis(2-chloroisopropyl) Ether	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Bis(2-ethylhexyl) phthalate	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2
Butylbenzyl Phthalate	ND	200	50000	ug/Kg	08/15/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 13:10	**Site:**			
Sample #:	**418350-010**	**Client Sample #:**	SB-36-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Chrysene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Dibenzofuran	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Diethyl phthalate	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Dimethyl phthalate	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Di-n-butyl phthalate	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Di-n-octyl phthalate	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Fluoranthene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Fluorene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Hexachlorobenzene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Hexachlorobutadiene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	200	240000	ug/Kg	08/15/19	08/21/19		D2
Hexachloroethane	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Isophorone	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Naphthalene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Nitrobenzene	ND	200	240000	ug/Kg	08/15/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Pentachlorophenol	ND	200	240000	ug/Kg	08/15/19	08/21/19		D2
Phenanthrene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Phenol	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Pyrene	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Pyridine	ND	200	50000	ug/Kg	08/15/19	08/21/19		D2
Total Cresol	ND	200	80000	ug/Kg	08/15/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*00*	*34-143*	*S2*
2-Fluorobiphenyl (SUR)	*59*	*41-125*	
2-Fluorophenol (SUR)	*23*	*13-153*	
Nitrobenzene-d5 (SUR)	*34*	*27-125*	
p-Terphenyl (SUR)	*50*	*33-155*	
Phenol-d5 (SUR)	*25*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 07:45	**Site:**			
Sample #:	**418350-011**	**Client Sample #:**	SB-23-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**5.30**	1	1	mg/Kg		08/18/19	KLN	
Barium	**190**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.84**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**30.0**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**13.6**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**29.9**	1	1	mg/Kg		08/18/19	KLN	
Lead	**17.5**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**20.4**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**53.7**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**109**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	**10**	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**24**	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*130*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/20/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/20/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*54*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*50*		*50-150*					

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/14/2019 07:50 **Site:**
Sample #: 418350-012 **Client Sample #:** SB-23-SS-2 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**2.64**	1	1	mg/Kg		08/18/19	KLN	
Barium	**192**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.61**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**31.4**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**13.9**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**21.1**	1	1	mg/Kg		08/18/19	KLN	
Lead	**12.4**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**19.0**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**48.1**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**65.6**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A NELAC Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**27**	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
Surrogate	*% Recovery*		*Limits*		*Notes*			
Triacontane (SUR)	*76*		*50-150*					
Method: EPA 8081A NELAC Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/20/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/20/19	SS	
Surrogate	*% Recovery*		*Limits*		*Notes*			
Decachlorobiphenyl DCB (SUR)	*91*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*176*		*50-150*		*S*			

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:00	**Site:**			
Sample #:	**418350-013**	**Client Sample #:**	SB-23-SS-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**3.37**	1	1	mg/Kg		08/18/19	KLN	
Barium	**144**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.58**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**28.6**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**11.9**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**19.9**	1	1	mg/Kg		08/18/19	KLN	
Lead	**16.4**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**17.5**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**45.4**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**62.2**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205536		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**21**	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*93*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:10	**Site:**			
Sample #:	**418350-014**	**Client Sample #:**	SB-24-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205473		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**5.93**	1	1	mg/Kg		08/18/19	KLN	
Barium	**159**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.61**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**28.9**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**12.9**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**26.5**	1	1	mg/Kg		08/18/19	KLN	
Lead	**16.1**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**19.3**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**49.3**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**69.8**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*124*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:20	**Site:**			
Sample #:	**418350-015**	**Client Sample #:**	SB-24-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**12.5**	1	1	mg/Kg		08/18/19	KLN	
Barium	**347**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.69**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**41.2**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**16.2**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**46.4**	1	1	mg/Kg		08/18/19	KLN	
Lead	**13.7**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**32.6**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**80.4**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**77.8**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*124*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205570		
PCB-1016	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*68*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205416		
1,1,1,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:20	**Site:**			
Sample #:	**418350-015**	**Client Sample #:**	SB-24-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.9	90	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Acetone	ND	0.9	90	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Benzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Styrene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.9	9	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Toluene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/14/2019 08:20 **Site:**
Sample #: 418350-015 **Client Sample #:** SB-24-SS-5 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.9	4.5	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.9	4.5	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*119*	*70-145*	
4-Bromofluorobenzene (SUR)	*101*	*70-145*	
Dibromofluoromethane (SUR)	*100*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205613

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/20/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
3-Nitroaniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Acenaphthene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Acenaphthylene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Aniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Anthracene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Azobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzidine	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzoic acid	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:20	**Site:**			
Sample #:	**418350-015**	**Client Sample #:**	SB-24-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Chrysene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Fluorene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/20/19	08/21/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Isophorone	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/20/19	08/21/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Phenol	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Pyrene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Pyridine	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/20/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*45*	*34-143*	
2-Fluorobiphenyl (SUR)	*61*	*41-125*	
2-Fluorophenol (SUR)	*40*	*13-153*	
Nitrobenzene-d5 (SUR)	*53*	*27-125*	
p-Terphenyl (SUR)	*61*	*33-155*	
Phenol-d5 (SUR)	*46*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:30	**Site:**			
Sample #:	**418350-016**	**Client Sample #:**	SB-24-SS-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**14.7**	1	1	mg/Kg		08/18/19	KLN	
Barium	**604**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.87**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**26.8**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**9.34**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**28.6**	1	1	mg/Kg		08/18/19	KLN	
Lead	**192**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**24.5**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**35.7**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**99.7**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	**0.48**	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	**2000**	50	500	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**3600**	50	500	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	50	500	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*309*	*50-150*	*S*

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 10:45	**Site:**			
Sample #:	**418350-017**	**Client Sample #:**	SB-25-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**2.62**	1	1	mg/Kg		08/18/19	KLN	
Barium	**103**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.63**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**15.5**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**7.03**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**20.0**	1	1	mg/Kg		08/18/19	KLN	
Lead	**15.7**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**10.4**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**23.4**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**70.5**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*124*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/20/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/20/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*83*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*72*	*50-150*	

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/14/2019 10:50 **Site:**
Sample #: 418350-018 **Client Sample #:** SB-25-SS-2 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**7.12**	1	1	mg/Kg		08/18/19	KLN	
Barium	**174**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.04**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**33.9**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**15.6**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**35.2**	1	1	mg/Kg		08/18/19	KLN	
Lead	**14.7**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**22.9**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**60.5**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**79.0**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A NELAC Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**26**	2	20	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/16/19	08/22/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*121*		*50-150*					
Method: EPA 8081A NELAC Prep Method: EPA 3545						QCBatchID: QC1205431		
4,4'-DDD	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
a-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Aldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
b-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
d-BHC	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/15/19	08/20/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/15/19	08/20/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/15/19	08/20/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*53*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*68*		*50-150*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 11:00	**Site:**			
Sample #:	**418350-019**	**Client Sample #:**	SB-25-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**1.80**	1	1	mg/Kg		08/18/19	KLN	
Barium	**108**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.70**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**24.5**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**13.0**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**22.2**	1	1	mg/Kg		08/18/19	KLN	
Lead	**7.98**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**16.3**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**40.9**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**61.7**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*121*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205432		
PCB-1016	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/15/19	08/20/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*62*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205416		
1,1,1,2-Tetrachloroethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,1,1-Trichloroethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,1,2-Trichloroethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,1-Dichloroethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,1-Dichloroethene	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,1-Dichloropropene	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,2,3-Trichloropropane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,2-Dibromoethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,2-Dichlorobenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 11:00	**Site:**			
Sample #:	**418350-019**	**Client Sample #:**	SB-25-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,2-Dichloropropane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,3-Dichlorobenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,3-Dichloropropane	ND	0.6	3	ug/Kg		08/15/19	LZ	
1,4-Dichlorobenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
2,2-Dichloropropane	ND	0.6	3	ug/Kg		08/15/19	LZ	
2-Butanone (MEK)	ND	0.6	60	ug/Kg		08/15/19	LZ	
2-Chlorotoluene	ND	0.6	3	ug/Kg		08/15/19	LZ	
4-Chlorotoluene	ND	0.6	3	ug/Kg		08/15/19	LZ	
4-Isopropyltoluene	ND	0.6	3	ug/Kg		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.6	3	ug/Kg		08/15/19	LZ	
Acetone	ND	0.6	60	ug/Kg		08/15/19	LZ	
Allyl Chloride	ND	0.6	3	ug/Kg		08/15/19	LZ	
Benzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Bromobenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Bromochloromethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
Bromodichloromethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
Bromoform	ND	0.6	3	ug/Kg		08/15/19	LZ	
Bromomethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
Carbon Tetrachloride	ND	0.6	3	ug/Kg		08/15/19	LZ	
Chlorobenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Chlorodibromomethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
Chloroethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
Chloroform	ND	0.6	3	ug/Kg		08/15/19	LZ	
Chloromethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	0.6	3	ug/Kg		08/15/19	LZ	
cis-1,3-dichloropropene	ND	0.6	3	ug/Kg		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Dibromomethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
Dichlorodifluoromethane	ND	0.6	3	ug/Kg		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.6	3	ug/Kg		08/15/19	LZ	
Ethylbenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.6	3	ug/Kg		08/15/19	LZ	
Hexachlorobutadiene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Isopropylbenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
m and p-Xylene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Methylene chloride	ND	0.6	3	ug/Kg		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.6	3	ug/Kg		08/15/19	LZ	
Naphthalene	ND	0.6	3	ug/Kg		08/15/19	LZ	
N-butylbenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
N-propylbenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
o-Xylene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Sec-butylbenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Styrene	ND	0.6	3	ug/Kg		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	0.6	6	ug/Kg		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	0.6	3	ug/Kg		08/15/19	LZ	
Tert-butylbenzene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Tetrachloroethene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Toluene	ND	0.6	3	ug/Kg		08/15/19	LZ	
trans-1,2-dichloroethene	ND	0.6	3	ug/Kg		08/15/19	LZ	
trans-1,3-dichloropropene	ND	0.6	3	ug/Kg		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Trichloroethene	ND	0.6	3	ug/Kg		08/15/19	LZ	
Trichlorofluoromethane	ND	0.6	3	ug/Kg		08/15/19	LZ	

Matrix: Solid	**Client:** Roux Associates, Inc.		**Collector:** Client		
Sampled: 08/14/2019 11:00	**Site:**				
Sample #: **418350-019**	**Client Sample #:** SB-25-SS-5		**Sample Type:**		

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.6	3	ug/Kg		08/15/19	LZ	
Xylenes (Total)	ND	0.6	3	ug/Kg		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*118*	*70-145*	
4-Bromofluorobenzene (SUR)	*103*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*99*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205742

1,2,4-Trichlorobenzene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
1,2-Dichlorobenzene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
1,3-Dichlorobenzene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
1,4-Dichlorobenzene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
1-Methylnaphthalene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2,4,5-Trichlorophenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2,4,6-Trichlorophenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2,4-Dichlorophenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2,4-Dimethylphenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2,4-Dinitrophenol	ND	10	12000	ug/Kg	08/22/19	08/22/19	D2
2,4-Dinitrotoluene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2,6-Dinitrotoluene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2-Chloronaphthalene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2-Chlorophenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2-Methyl-4,6-dinitrophenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2-Methylnaphthalene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2-Methylphenol (o-Cresol)	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2-Nitroaniline	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
2-Nitrophenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	10	4000	ug/Kg	08/22/19	08/22/19	D2
3,3'-Dichlorobenzidine	ND	10	12000	ug/Kg	08/22/19	08/22/19	D2
3-Nitroaniline	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
4-Bromophenyl phenyl ether	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
4-Chloro-3-methylphenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
4-Chloroaniline	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
4-Chlorophenyl phenyl ether	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
4-Nitroaniline	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
4-Nitrophenol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Acenaphthene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Acenaphthylene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Aniline	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Anthracene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Azobenzene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Benz(a)anthracene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Benzidine	ND	10	12000	ug/Kg	08/22/19	08/22/19	D2
Benzo(a)pyrene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Benzo(b)fluoranthene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Benzo(g,h,i)perylene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Benzo(k)fluoranthene	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Benzoic acid	ND	10	12000	ug/Kg	08/22/19	08/22/19	D2
Benzyl alcohol	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Bis(2-chloroethoxy)methane	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Bis(2-chloroethyl) Ether	ND	10	12000	ug/Kg	08/22/19	08/22/19	D2
Bis(2-chloroisopropyl) Ether	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Bis(2-ethylhexyl) phthalate	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2
Butylbenzyl Phthalate	ND	10	2500	ug/Kg	08/22/19	08/22/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 11:00	**Site:**			
Sample #:	**418350-019**	**Client Sample #:**	SB-25-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Chrysene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Dibenz(a,h)anthracene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Dibenzofuran	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Diethyl phthalate	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Dimethyl phthalate	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Di-n-butyl phthalate	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Di-n-octyl phthalate	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Fluoranthene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Fluorene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Hexachlorobenzene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Hexachlorobutadiene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Hexachlorocyclopentadiene	ND	10	12000	ug/Kg	08/22/19	08/22/19		D2
Hexachloroethane	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Indeno(1,2,3-cd)pyrene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Isophorone	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Naphthalene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Nitrobenzene	ND	10	12000	ug/Kg	08/22/19	08/22/19		D2
N-Nitrosodimethylamine (NDMA)	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
N-Nitrosodiphenylamine	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Pentachlorophenol	ND	10	12000	ug/Kg	08/22/19	08/22/19		D2
Phenanthrene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Phenol	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Pyrene	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Pyridine	ND	10	2500	ug/Kg	08/22/19	08/22/19		D2
Total Cresol	ND	10	4000	ug/Kg	08/22/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*76*	*34-143*	
2-Fluorobiphenyl (SUR)	*65*	*41-125*	
2-Fluorophenol (SUR)	*41*	*13-153*	
Nitrobenzene-d5 (SUR)	*50*	*27-125*	
p-Terphenyl (SUR)	*69*	*33-155*	
Phenol-d5 (SUR)	*46*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 11:05	**Site:**			
Sample #:	**418350-020**	**Client Sample #:**	SB-25-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**4.32**	1	1	mg/Kg		08/18/19	KLN	
Barium	**193**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**1.08**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**36.1**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**13.7**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**33.0**	1	1	mg/Kg		08/18/19	KLN	
Lead	**9.07**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**23.7**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**69.2**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**69.1**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205523		
TPH (C13 to C22)	**11**	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C23 to C44)	**30**	1	10	mg/Kg	08/16/19	08/22/19	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/16/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*126*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 09:00	**Site:**			
Sample #:	**418350-021**	**Client Sample #:**	SB-38-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	**15.2**	1	3	mg/Kg		08/19/19	KLN	
Arsenic	**4.82**	1	1	mg/Kg		08/18/19	KLN	
Barium	**228**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**8.65**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**88.4**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**6.29**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**120**	1	1	mg/Kg		08/18/19	KLN	
Lead	**2260**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	**10.5**	1	1	mg/Kg		08/18/19	KLN	
Nickel	**44.0**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**25.8**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**2600**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	**0.16**	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205593		
TPH (C13 to C22)	**61**	2	20	mg/Kg	08/19/19	08/21/19	TW	
TPH (C23 to C44)	**200**	2	20	mg/Kg	08/19/19	08/21/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/19/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*63*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 12:30	**Site:**			
Sample #:	**418350-022**	**Client Sample #:**	DUP-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**6.13**	1	1	mg/Kg		08/18/19	KLN	
Barium	**234**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	**0.80**	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**28.4**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**12.6**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**42.4**	1	1	mg/Kg		08/18/19	KLN	
Lead	**117**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**21.2**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**44.9**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**118**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205593		
TPH (C13 to C22)	ND	50	500	mg/Kg	08/19/19	08/21/19	TW	
TPH (C23 to C44)	**1600**	50	500	mg/Kg	08/19/19	08/21/19	TW	
TPH (C6 to C12)	ND	50	500	mg/Kg	08/19/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*168*	*50-150*	*S*

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 13:25	**Site:**			
Sample #:	**418350-023**	**Client Sample #:**	DUP-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205474		
Antimony	ND	1	3	mg/Kg		08/18/19	KLN	
Arsenic	**2.20**	1	1	mg/Kg		08/18/19	KLN	
Barium	**111**	1	1	mg/Kg		08/18/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/18/19	KLN	
Chromium	**15.8**	1	1	mg/Kg		08/18/19	KLN	
Cobalt	**7.43**	1	0.5	mg/Kg		08/18/19	KLN	
Copper	**21.9**	1	1	mg/Kg		08/18/19	KLN	
Lead	**22.3**	1	1	mg/Kg		08/18/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/18/19	KLN	
Nickel	**11.2**	1	1.5	mg/Kg		08/18/19	KLN	
Selenium	ND	1	3	mg/Kg		08/18/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/18/19	KLN	
Thallium	ND	1	3	mg/Kg		08/18/19	KLN	
Vanadium	**26.3**	1	0.5	mg/Kg		08/18/19	KLN	
Zinc	**66.7**	1	5	mg/Kg		08/18/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205537		
Mercury	ND	1	0.14	mg/Kg		08/18/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205593		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/19/19	08/21/19	TW	
TPH (C23 to C44)	**140**	2	20	mg/Kg	08/19/19	08/21/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/19/19	08/21/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*82*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205517		
4,4'-DDD	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
4,4'-DDE	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
4,4'-DDT	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
a-BHC	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Aldrin	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
b-BHC	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Chlordane (technical)	ND	2	100	ug/Kg	08/16/19	08/19/19	SS	D2
d-BHC	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Dieldrin	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Endosulfan I	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Endosulfan II	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Endosulfan sulfate	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Endrin	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Endrin aldehyde	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Endrin Ketone	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Heptachlor	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Heptachlor epoxide	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Lindane (Gamma-BHC)	ND	2	10	ug/Kg	08/16/19	08/19/19	SS	D2
Methoxychlor	ND	2	20	ug/Kg	08/16/19	08/19/19	SS	D2
Toxaphene	ND	2	200	ug/Kg	08/16/19	08/19/19	SS	D2

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*52*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*61*	*50-150*	

QCBatchID: QC1205416	**Analyst:** Rlee	**Method:** EPA 8260B	
Matrix: Solid	**Analyzed:** 08/15/2019	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205416MB1						
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,1-Trichloroethane	ND	ug/Kg		5		
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,2-Trichloroethane	ND	ug/Kg		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5		
1,1-Dichloroethane	ND	ug/Kg		5		
1,1-Dichloroethene	ND	ug/Kg		5		
1,1-Dichloropropene	ND	ug/Kg		5		
1,2,3-Trichlorobenzene	ND	ug/Kg		5		
1,2,3-Trichloropropane	ND	ug/Kg		5		
1,2,4-Trichlorobenzene	ND	ug/Kg		5		
1,2,4-Trimethylbenzene	ND	ug/Kg		5		
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5		
1,2-Dibromoethane	ND	ug/Kg		5		
1,2-Dichlorobenzene	ND	ug/Kg		5		
1,2-Dichloroethane	ND	ug/Kg		5		
1,2-Dichloropropane	ND	ug/Kg		5		
1,3,5-Trimethylbenzene	ND	ug/Kg		5		
1,3-Dichlorobenzene	ND	ug/Kg		5		
1,3-Dichloropropane	ND	ug/Kg		5		
1,4-Dichlorobenzene	ND	ug/Kg		5		
2,2-Dichloropropane	ND	ug/Kg		5		
2-Butanone (MEK)	ND	ug/Kg		100		
2-Chlorotoluene	ND	ug/Kg		5		
4-Chlorotoluene	ND	ug/Kg		5		
4-Isopropyltoluene	ND	ug/Kg		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5		
Acetone	ND	ug/Kg		100		
Allyl Chloride	ND	ug/Kg		5		
Benzene	ND	ug/Kg		5		
Bromobenzene	ND	ug/Kg		5		
Bromochloromethane	ND	ug/Kg		5		
Bromodichloromethane	ND	ug/Kg		5		
Bromoform	ND	ug/Kg		5		
Bromomethane	ND	ug/Kg		5		
Carbon Tetrachloride	ND	ug/Kg		5		
Chlorobenzene	ND	ug/Kg		5		
Chlorodibromomethane	ND	ug/Kg		5		
Chloroethane	ND	ug/Kg		5		
Chloroform	ND	ug/Kg		5		
Chloromethane	ND	ug/Kg		5		
cis-1,2-Dichloroethene	ND	ug/Kg		5		
cis-1,3-dichloropropene	ND	ug/Kg		5		
cis-1,4-dichloro-2-butene	ND	ug/Kg		5		
Dibromomethane	ND	ug/Kg		5		
Dichlorodifluoromethane	ND	ug/Kg		5		
Ethylbenzene	ND	ug/Kg		5		
Hexachlorobutadiene	ND	ug/Kg		5		
Isopropylbenzene	ND	ug/Kg		5		
m and p-Xylene	ND	ug/Kg		5		
Methylene chloride	ND	ug/Kg		5		
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5		

QCBatchID: QC1205416 **Analyst:** Rlee **Method:** EPA 8260B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205416MB1					
Naphthalene	ND	ug/Kg		5	
N-butylbenzene	ND	ug/Kg		5	
N-propylbenzene	ND	ug/Kg		5	
o-Xylene	ND	ug/Kg		5	
Sec-butylbenzene	ND	ug/Kg		5	
Styrene	ND	ug/Kg		5	
Tert-butylbenzene	ND	ug/Kg		5	
Tetrachloroethene	ND	ug/Kg		5	
Toluene	ND	ug/Kg		5	
trans-1,2-dichloroethene	ND	ug/Kg		5	
trans-1,3-dichloropropene	ND	ug/Kg		5	
trans-1,4-dichloro-2-butene	ND	ug/Kg		5	
Trichloroethene	ND	ug/Kg		5	
Trichlorofluoromethane	ND	ug/Kg		5	
Vinyl Chloride	ND	ug/Kg		5	
Xylenes (Total)	ND	ug/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205416LCS1											
1,1-Dichloroethene	50		52		ug/Kg	104			59-172		
Benzene	50		50		ug/Kg	100			62-137		
Chlorobenzene	50		46		ug/Kg	92			60-133		
Methyl-t-butyl Ether (MTBE)	50		48		ug/Kg	96			62-137		
Toluene	50		48		ug/Kg	96			59-139		
Trichloroethene	50		46		ug/Kg	92			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205416MS1, QC1205416MSD1												**Source: 418335-002**
1,1-Dichloroethene	ND	50	50	55	61	ug/Kg	110	122	10.3	59-172	22	
Benzene	ND	50	50	51	54	ug/Kg	102	108	5.7	62-137	24	
Chlorobenzene	ND	50	50	45	46	ug/Kg	90	92	2.2	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	51	54	ug/Kg	102	108	5.7	62-137	21	
Toluene	0.61	50	50	49	51	ug/Kg	97	101	4.0	59-139	21	
Trichloroethene	ND	50	50	46	50	ug/Kg	92	100	8.3	66-142	21	

QCBatchID: QC1205431 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205431MB1					
4,4'-DDD	ND	ug/Kg		5	
4,4'-DDE	ND	ug/Kg		5	
4,4'-DDT	ND	ug/Kg		5	
a-BHC	ND	ug/Kg		5	
Aldrin	ND	ug/Kg		5	
b-BHC	ND	ug/Kg		5	
Chlordane (technical)	ND	ug/Kg		50	
d-BHC	ND	ug/Kg		5	
Dieldrin	ND	ug/Kg		5	
Endosulfan I	ND	ug/Kg		5	
Endosulfan II	ND	ug/Kg		5	
Endosulfan sulfate	ND	ug/Kg		5	
Endrin	ND	ug/Kg		5	
Endrin aldehyde	ND	ug/Kg		5	
Endrin Ketone	ND	ug/Kg		5	
Heptachlor	ND	ug/Kg		5	
Heptachlor epoxide	ND	ug/Kg		5	
Lindane (Gamma-BHC)	ND	ug/Kg		5	
Methoxychlor	ND	ug/Kg		10	
Toxaphene	ND	ug/Kg		100	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205431LCS1											
4,4'-DDD	50		45		ug/Kg	90			43-172		
4,4'-DDE	50		42		ug/Kg	84			44-163		
4,4'-DDT	50		41		ug/Kg	82			40-158		
a-BHC	50		47		ug/Kg	94			45-150		
Aldrin	50		44		ug/Kg	88			46-142		
b-BHC	50		48		ug/Kg	96			42-156		
d-BHC	50		44		ug/Kg	88			37-161		
Dieldrin	50		47		ug/Kg	94			47-151		
Endosulfan I	50		48		ug/Kg	96			47-141		
Endosulfan II	50		47		ug/Kg	94			44-156		
Endosulfan sulfate	50		47		ug/Kg	94			43-157		
Endrin	50		42		ug/Kg	84			47-160		
Endrin aldehyde	50		29		ug/Kg	58			32-127		
Endrin Ketone	50		46		ug/Kg	92			48-159		
Heptachlor	50		46		ug/Kg	92			50-144		
Heptachlor epoxide	50		45		ug/Kg	90			48-145		
Lindane (Gamma-BHC)	50		47		ug/Kg	94			47-151		
Methoxychlor	50		48		ug/Kg	96			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205431MS1, QC1205431MSD1												**Source: 418302-051**
4,4'-DDD	ND	50	50	41	38	ug/Kg	82	76	7.6	43-172	20	
4,4'-DDE	ND	50	50	37	34	ug/Kg	74	68	8.5	44-163	20	
4,4'-DDT	ND	50	50	42	40	ug/Kg	84	80	4.9	40-158	20	
a-BHC	ND	50	50	43	39	ug/Kg	86	78	9.8	45-150	20	

QCBatchID: QC1205431 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-GC (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205431MS1, QC1205431MSD1												**Source: 418302-051**
Aldrin	ND	50	50	39	36	ug/Kg	78	72	8.0	46-142	20	
b-BHC	ND	50	50	44	42	ug/Kg	88	84	4.7	42-156	20	
d-BHC	ND	50	50	40	37	ug/Kg	80	74	7.8	37-161	20	
Dieldrin	ND	50	50	41	38	ug/Kg	82	76	7.6	47-151	20	
Endosulfan I	ND	50	50	44	39	ug/Kg	88	78	12.0	47-141	20	
Endosulfan II	ND	50	50	41	39	ug/Kg	82	78	5.0	44-156	20	
Endosulfan sulfate	ND	50	50	42	39	ug/Kg	84	78	7.4	43-157	20	
Endrin	ND	50	50	38	34	ug/Kg	76	68	11.1	47-160	20	
Endrin aldehyde	ND	50	50	34	32	ug/Kg	68	64	6.1	32-127	20	
Endrin Ketone	ND	50	50	41	39	ug/Kg	82	78	5.0	48-159	20	
Heptachlor	ND	50	50	41	38	ug/Kg	82	76	7.6	50-144	20	
Heptachlor epoxide	ND	50	50	40	38	ug/Kg	80	76	5.1	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	41	38	ug/Kg	82	76	7.6	47-151	20	
Methoxychlor	ND	50	50	48	45	ug/Kg	96	90	6.5	36-182	20	

QCBatchID: QC1205432 **Analyst:** Jarriaga **Method:** EPA 8082

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205432MB1					
PCB-1016	ND	ug/Kg		50	
PCB-1221	ND	ug/Kg		50	
PCB-1232	ND	ug/Kg		50	
PCB-1242	ND	ug/Kg		50	
PCB-1248	ND	ug/Kg		50	
PCB-1254	ND	ug/Kg		50	
PCB-1260	ND	ug/Kg		50	
PCB-1262	ND	ug/Kg		50	
PCB-1268	ND	ug/Kg		50	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205432LCS1											
PCB-1016	500		430		ug/Kg	86			70-130		
PCB-1260	500		400		ug/Kg	80			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205432MS1, QC1205432MSD1												**Source: 418302-051**
PCB-1016	ND	500	500	400	350	ug/Kg	80	70	13.3	70-130	20	
PCB-1260	ND	500	500	400	350	ug/Kg	80	70	13.3	70-130	20	

QCBatchID: QC1205439	Analyst: bmorris	Method: EPA 8270C
Matrix: Solid	Analyzed: 08/15/2019	Instrument: SVOA-MS (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205439MB1						
1,2,4-Trichlorobenzene	ND	ug/Kg		250		
1,2-Dichlorobenzene	ND	ug/Kg		250		
1,3-Dichlorobenzene	ND	ug/Kg		250		
1,4-Dichlorobenzene	ND	ug/Kg		250		
1-Methylnaphthalene	ND	ug/Kg		250		
2,4,5-Trichlorophenol	ND	ug/Kg		250		
2,4,6-Trichlorophenol	ND	ug/Kg		250		
2,4-Dichlorophenol	ND	ug/Kg		250		
2,4-Dimethylphenol	ND	ug/Kg		250		
2,4-Dinitrophenol	ND	ug/Kg		1200		
2,4-Dinitrotoluene	ND	ug/Kg		250		
2,6-Dinitrotoluene	ND	ug/Kg		250		
2-Chloronaphthalene	ND	ug/Kg		250		
2-Chlorophenol	ND	ug/Kg		250		
2-Methyl-4,6-dinitrophenol	ND	ug/Kg		250		
2-Methylnaphthalene	ND	ug/Kg		250		
2-Methylphenol (o-Cresol)	ND	ug/Kg		250		
2-Nitroaniline	ND	ug/Kg		250		
2-Nitrophenol	ND	ug/Kg		250		
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/Kg		400		
3,3'-Dichlorobenzidine	ND	ug/Kg		1200		
3-Nitroaniline	ND	ug/Kg		250		
4-Bromophenyl phenyl ether	ND	ug/Kg		250		
4-Chloro-3-methylphenol	ND	ug/Kg		250		
4-Chloroaniline	ND	ug/Kg		250		
4-Chlorophenyl phenyl ether	ND	ug/Kg		250		
4-Nitroaniline	ND	ug/Kg		250		
4-Nitrophenol	ND	ug/Kg		250		
Acenaphthene	ND	ug/Kg		250		
Acenaphthylene	ND	ug/Kg		250		
Aniline	ND	ug/Kg		250		
Anthracene	ND	ug/Kg		250		
Azobenzene	ND	ug/Kg		250		
Benz(a)anthracene	ND	ug/Kg		250		
Benzidine	ND	ug/Kg		1200		
Benzo(a)pyrene	ND	ug/Kg		250		
Benzo(b)fluoranthene	ND	ug/Kg		250		
Benzo(g,h,i)perylene	ND	ug/Kg		250		
Benzo(k)fluoranthene	ND	ug/Kg		250		
Benzoic acid	ND	ug/Kg		1200		
Benzyl alcohol	ND	ug/Kg		250		
Bis(2-chloroethoxy)methane	ND	ug/Kg		250		
Bis(2-chloroethyl) Ether	ND	ug/Kg		1200		
Bis(2-chloroisopropyl) Ether	ND	ug/Kg		250		
Bis(2-ethylhexyl) phthalate	ND	ug/Kg		250		
Butylbenzyl Phthalate	ND	ug/Kg		250		
Carbazole	ND	ug/Kg		250		
Chrysene	ND	ug/Kg		250		
Dibenz(a,h)anthracene	ND	ug/Kg		250		
Dibenzofuran	ND	ug/Kg		250		
Diethyl phthalate	ND	ug/Kg		250		
Dimethyl phthalate	ND	ug/Kg		250		

QCBatchID: QC1205439 **Analyst:** bmorris **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205439MB1					
Di-n-butyl phthalate	ND	ug/Kg		250	
Di-n-octyl phthalate	ND	ug/Kg		250	
Fluoranthene	ND	ug/Kg		250	
Fluorene	ND	ug/Kg		250	
Hexachlorobenzene	ND	ug/Kg		250	
Hexachlorobutadiene	ND	ug/Kg		250	
Hexachlorocyclopentadiene	ND	ug/Kg		1200	
Hexachloroethane	ND	ug/Kg		250	
Indeno(1,2,3-cd)pyrene	ND	ug/Kg		250	
Isophorone	ND	ug/Kg		250	
Naphthalene	ND	ug/Kg		250	
Nitrobenzene	ND	ug/Kg		1200	
N-Nitrosodimethylamine (NDMA)	ND	ug/Kg		250	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/Kg		250	
N-Nitrosodiphenylamine	ND	ug/Kg		250	
Pentachlorophenol	ND	ug/Kg		1200	
Phenanthrene	ND	ug/Kg		250	
Phenol	ND	ug/Kg		250	
Pyrene	ND	ug/Kg		250	
Pyridine	ND	ug/Kg		250	
Total Cresol	ND	ug/Kg		400	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205439LCS1											
1,2,4-Trichlorobenzene	2000		1300		ug/Kg	65			43-111		
1,4-Dichlorobenzene	2000		1300		ug/Kg	65			30-116		
2,4,5-Trichlorophenol	2000		1300		ug/Kg	65			57-125		
2,4-Dimethylphenol	2000		1200		ug/Kg	60			50-112		
2,4-Dinitrotoluene	2000		1300		ug/Kg	65			57-124		
2-Chlorophenol	2000		1200		ug/Kg	60			48-114		
3 and 4-Methylphenol (m and p-Cresol)	2000		1300		ug/Kg	65			56-124		
4-Chloro-3-methylphenol	2000		1300		ug/Kg	65			61-122		
4-Nitrophenol	2000		1200		ug/Kg	60			54-126		
Acenaphthene	2000		1400		ug/Kg	70			53-112		
Benzo(b)fluoranthene	2000		1300		ug/Kg	65			61-125		
Chrysene	2000		1600		ug/Kg	80			59-117		
N-Nitrosodi-n-propylamine (NDPA)	2000		1500		ug/Kg	75			54-110		
Pentachlorophenol	2000		1100		ug/Kg	55			41-103		
Phenol	2000		1300		ug/Kg	65			51-111		
Pyrene	2000		1500		ug/Kg	75			63-119		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205439MS1, QC1205439MSD1												**Source: 418302-002**
1,2,4-Trichlorobenzene	ND	2000	2000	1300	1200	ug/Kg	65	60	8.0	35-93	30	
1,4-Dichlorobenzene	ND	2000	2000	1100	1100	ug/Kg	55	55	0.0	39-95	30	
2,4,5-Trichlorophenol	ND	2000	2000	880	900	ug/Kg	44	45	2.2	44-108	30	
2,4-Dimethylphenol	ND	2000	2000	1100	1000	ug/Kg	55	50	9.5	37-105	30	
2,4-Dinitrotoluene	ND	2000	2000	2200	2300	ug/Kg	110	115	4.4	48-109	30	M
2-Chlorophenol	ND	2000	2000	920	910	ug/Kg	46	46	1.1	42-102	30	

QCBatchID: QC1205439 **Analyst:** bmorris **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** SVOA-MS (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205439MS1, QC1205439MSD1												**Source: 418302-002**
3 and 4-Methylphenol (m and p-Cresol)	ND	2000	2000	1200	1100	ug/Kg	60	55	8.7	33-116	30	
4-Chloro-3-methylphenol	ND	2000	2000	1000	1000	ug/Kg	50	50	0.0	33-120	30	
4-Nitrophenol	ND	2000	2000	2000	2100	ug/Kg	100	105	4.9	37-107	30	
Acenaphthene	ND	2000	2000	1300	1300	ug/Kg	65	65	0.0	57-99	30	
Benzo(b)fluoranthene	ND	2000	2000	960	1100	ug/Kg	48	55	13.6	59-126	30	M
Chrysene	ND	2000	2000	1500	1500	ug/Kg	75	75	0.0	68-120	30	
N-Nitrosodi-n-propylamine (NDPA)	ND	2000	2000	1100	1000	ug/Kg	55	50	9.5	41-127	30	
Pentachlorophenol	ND	2000	2000	1800	1800	ug/Kg	90	90	0.0	43-120	30	
Phenol	ND	2000	2000	1200	1100	ug/Kg	60	55	8.7	46-116	30	
Pyrene	ND	2000	2000	1500	1600	ug/Kg	75	80	6.5	53-129	30	

QCBatchID: QC1205473 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205473MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205473LCS1											
Antimony	100		118		mg/Kg	118			80-120		
Arsenic	100		89.8		mg/Kg	90			80-120		
Barium	100		97.2		mg/Kg	97			80-120		
Beryllium	100		94.5		mg/Kg	95			80-120		
Cadmium	100		97.2		mg/Kg	97			80-120		
Chromium	100		101		mg/Kg	101			80-120		
Cobalt	100		97.0		mg/Kg	97			80-120		
Copper	100		98.2		mg/Kg	98			80-120		
Lead	100		98.8		mg/Kg	99			80-120		
Molybdenum	100		98.3		mg/Kg	98			80-120		
Nickel	100		98.1		mg/Kg	98			80-120		
Selenium	100		88.8		mg/Kg	89			80-120		
Silver	100		95.7		mg/Kg	96			80-120		
Thallium	100		93.1		mg/Kg	93			80-120		
Vanadium	100		99.5		mg/Kg	100			80-120		
Zinc	100		97.0		mg/Kg	97			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205473MS1, QC1205473MSD1												**Source: 418336-019**
Antimony	ND	100	100	28.5	25.7	mg/Kg	29	26	10.3	75-125	20	M
Arsenic	1.64	100	100	95.9	95.4	mg/Kg	94	94	0.5	75-125	20	
Barium	122	100	100	218	228	mg/Kg	96	106	4.5	75-125	20	
Beryllium	ND	100	100	98.4	97.1	mg/Kg	98	97	1.3	75-125	20	
Cadmium	0.71	100	100	98.5	98.0	mg/Kg	98	97	0.5	75-125	20	
Chromium	19.6	100	100	124	126	mg/Kg	104	106	1.6	75-125	20	
Cobalt	11.8	100	100	107	108	mg/Kg	95	96	0.9	75-125	20	
Copper	18.9	100	100	128	131	mg/Kg	109	112	2.3	75-125	20	
Lead	6.80	100	100	103	101	mg/Kg	96	94	2.0	75-125	20	
Molybdenum	2.85	100	100	98.3	96.6	mg/Kg	95	94	1.7	75-125	20	

QCBatchID: QC1205473 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205473MS1, QC1205473MSD1												**Source: 418336-019**
Nickel	11.3	100	100	105	102	mg/Kg	94	91	2.9	75-125	20	
Selenium	ND	100	100	95.5	94.5	mg/Kg	96	95	1.1	75-125	20	
Silver	ND	100	100	98.7	101	mg/Kg	99	101	2.3	75-125	20	
Thallium	2.62	100	100	89.2	89.9	mg/Kg	87	87	0.8	75-125	20	
Vanadium	41.5	100	100	149	154	mg/Kg	108	113	3.3	75-125	20	
Zinc	50.2	100	100	142	140	mg/Kg	92	90	1.4	75-125	20	

QCBatchID: QC1205474 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205474MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205474LCS1											
Antimony	100		115		mg/Kg	115			80-120		
Arsenic	100		90.2		mg/Kg	90			80-120		
Barium	100		94.6		mg/Kg	95			80-120		
Beryllium	100		96.2		mg/Kg	96			80-120		
Cadmium	100		95.4		mg/Kg	95			80-120		
Chromium	100		101		mg/Kg	101			80-120		
Cobalt	100		96.9		mg/Kg	97			80-120		
Copper	100		98.3		mg/Kg	98			80-120		
Lead	100		100		mg/Kg	100			80-120		
Molybdenum	100		99.3		mg/Kg	99			80-120		
Nickel	100		98.7		mg/Kg	99			80-120		
Selenium	100		90.7		mg/Kg	91			80-120		
Silver	100		94.1		mg/Kg	94			80-120		
Thallium	100		94.1		mg/Kg	94			80-120		
Vanadium	100		99.4		mg/Kg	99			80-120		
Zinc	100		100		mg/Kg	100			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205474MS1, QC1205474MSD1												**Source: 418350-015**
Antimony	ND	100	100	22.9	22.6	mg/Kg	23	23	1.3	75-125	20	M
Arsenic	12.5	100	100	103	106	mg/Kg	91	94	2.9	75-125	20	
Barium	347	100	100	465	491	mg/Kg	118	144	5.4	75-125	20	M
Beryllium	ND	100	100	86.2	96.1	mg/Kg	86	96	10.9	75-125	20	
Cadmium	1.69	100	100	88.2	91.3	mg/Kg	87	90	3.5	75-125	20	
Chromium	41.2	100	100	136	144	mg/Kg	95	103	5.7	75-125	20	
Cobalt	16.2	100	100	103	107	mg/Kg	87	91	3.8	75-125	20	
Copper	46.4	100	100	148	156	mg/Kg	102	110	5.3	75-125	20	
Lead	13.7	100	100	107	106	mg/Kg	93	92	0.9	75-125	20	
Molybdenum	0.33	100	100	86.4	90.6	mg/Kg	86	90	4.7	75-125	20	

QCBatchID: QC1205474 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205474MS1, QC1205474MSD1												**Source: 418350-015**
Nickel	32.6	100	100	120	120	mg/Kg	87	87	0.0	75-125	20	
Selenium	2.51	100	100	86.1	85.2	mg/Kg	84	83	1.1	75-125	20	
Silver	ND	100	100	91.4	96.4	mg/Kg	91	96	5.3	75-125	20	
Thallium	2.31	100	100	81.1	84.8	mg/Kg	79	82	4.5	75-125	20	
Vanadium	80.4	100	100	180	187	mg/Kg	100	107	3.8	75-125	20	
Zinc	77.8	100	100	167	166	mg/Kg	89	88	0.6	75-125	20	

QCBatchID: QC1205517 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/16/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205517MB1					
4,4'-DDD	ND	ug/Kg		5	
4,4'-DDE	ND	ug/Kg		5	
4,4'-DDT	ND	ug/Kg		5	
a-BHC	ND	ug/Kg		5	
Aldrin	ND	ug/Kg		5	
b-BHC	ND	ug/Kg		5	
Chlordane (technical)	ND	ug/Kg		50	
d-BHC	ND	ug/Kg		5	
Dieldrin	ND	ug/Kg		5	
Endosulfan I	ND	ug/Kg		5	
Endosulfan II	ND	ug/Kg		5	
Endosulfan sulfate	ND	ug/Kg		5	
Endrin	ND	ug/Kg		5	
Endrin aldehyde	ND	ug/Kg		5	
Endrin Ketone	ND	ug/Kg		5	
Heptachlor	ND	ug/Kg		5	
Heptachlor epoxide	ND	ug/Kg		5	
Lindane (Gamma-BHC)	ND	ug/Kg		5	
Methoxychlor	ND	ug/Kg		10	
Toxaphene	ND	ug/Kg		100	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205517LCS1											
4,4'-DDD	50		44		ug/Kg	88			43-172		
4,4'-DDE	50		40		ug/Kg	80			44-163		
4,4'-DDT	50		38		ug/Kg	76			40-158		
a-BHC	50		40		ug/Kg	80			45-150		
Aldrin	50		38		ug/Kg	76			46-142		
b-BHC	50		43		ug/Kg	86			42-156		
d-BHC	50		39		ug/Kg	78			37-161		
Dieldrin	50		44		ug/Kg	88			47-151		
Endosulfan I	50		44		ug/Kg	88			47-141		
Endosulfan II	50		46		ug/Kg	92			44-156		
Endosulfan sulfate	50		46		ug/Kg	92			43-157		
Endrin	50		40		ug/Kg	80			47-160		
Endrin aldehyde	50		22		ug/Kg	44			32-127		
Endrin Ketone	50		47		ug/Kg	94			48-159		
Heptachlor	50		39		ug/Kg	78			50-144		
Heptachlor epoxide	50		40		ug/Kg	80			48-145		
Lindane (Gamma-BHC)	50		40		ug/Kg	80			47-151		
Methoxychlor	50		42		ug/Kg	84			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205517MS1, QC1205517MSD1												**Source: 418427-001**
4,4'-DDD	ND	50	50	43	46	ug/Kg	86	92	6.7	43-172	20	
4,4'-DDE	7.4	50	50	44	47	ug/Kg		79	6.6	44-163	20	
4,4'-DDT	6.6	50	50	40	45	ug/Kg		77	11.8	40-158	20	
a-BHC	ND	50	50	23	32	ug/Kg	46	64	32.7	45-150	20	D

QCBatchID: QC1205517 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/16/2019 **Instrument:** SVOA-GC (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205517MS1, QC1205517MSD1												**Source: 418427-001**
Aldrin	ND	50	50	42	45	ug/Kg		90	6.9	46-142	20	
b-BHC	ND	50	50	38	42	ug/Kg	76	84	10.0	42-156	20	
d-BHC	ND	50	50	7.2	14	ug/Kg	14	28	64.2	37-161	20	M,D
Dieldrin	ND	50	50	47	47	ug/Kg		94	0.0	47-151	20	
Endosulfan I	ND	50	50	12	18	ug/Kg		36	40.0	47-141	20	D
Endosulfan II	ND	50	50	8.5	14	ug/Kg		28	48.9	44-156	20	D
Endosulfan sulfate	ND	50	50	22	32	ug/Kg		64	37.0	43-157	20	D
Endrin	ND	50	50	44	47	ug/Kg		94	6.6	47-160	20	
Endrin aldehyde	ND	50	50	8.4	14	ug/Kg		28	50.0	32-127	20	D
Endrin Ketone	ND	50	50	29	42	ug/Kg	58	84	36.6	48-159	20	D
Heptachlor	ND	50	50	42	46	ug/Kg		92	9.1	50-144	20	
Heptachlor epoxide	ND	50	50	44	45	ug/Kg		90	2.2	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	25	34	ug/Kg	50	68	30.5	47-151	20	D
Methoxychlor	ND	50	50	46	50	ug/Kg		100	8.3	36-182	20	

QCBatchID: QC1205523 **Analyst:** Abanh **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 08/16/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205523MB1						
TPH (C10 to C28)	ND	mg/Kg		10		
TPH (C13 to C22)	ND	mg/Kg		10		
TPH (C23 to C44)	ND	mg/Kg		10		
TPH (C6 to C12)	ND	mg/Kg		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205523LCS1											
TPH (C10 to C28)	250		220		mg/Kg	88			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205523MS1, QC1205523MSD1												**Source: 418350-001**
TPH (C10 to C28)	15	250	250	240	230	mg/Kg	90	86	4.3	70-130	20	

QCBatchID: QC1205536	**Analyst:** sbailey-woo	**Method:** EPA 7471A			
Matrix: Solid	**Analyzed:** 08/16/2019	**Instrument:** AAICP-HG1			

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205536MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205536LCS1											
Mercury	0.83		0.84		mg/Kg	101			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205536MS1, QC1205536MSD1												**Source: 418336-019**
Mercury	0.04	0.83	0.83	0.85	0.88	mg/Kg	98	101	3.5	75-125	20	

QCBatchID: QC1205537	**Analyst:** sbailey-woo	**Method:** EPA 7471A			
Matrix: Solid	**Analyzed:** 08/16/2019	**Instrument:** AAICP-HG1			

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205537MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205537LCS1											
Mercury	0.83		0.93		mg/Kg	112			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205537MS1, QC1205537MSD1												**Source: 418350-015**
Mercury	0.10	0.83	0.83	0.92	0.93	mg/Kg	99	100	1.1	75-125	20	

QCBatchID: QC1205570 **Analyst:** Jarriaga **Method:** EPA 8082

Matrix: Solid **Analyzed:** 08/19/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205570MB1					
PCB-1016	ND	ug/Kg		50	
PCB-1221	ND	ug/Kg		50	
PCB-1232	ND	ug/Kg		50	
PCB-1242	ND	ug/Kg		50	
PCB-1248	ND	ug/Kg		50	
PCB-1254	ND	ug/Kg		50	
PCB-1260	ND	ug/Kg		50	
PCB-1262	ND	ug/Kg		50	
PCB-1268	ND	ug/Kg		50	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205570LCS1											
PCB-1016	500		500		ug/Kg	100			70-130		
PCB-1260	500		450		ug/Kg	90			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205570MS1, QC1205570MSD1												**Source: 418407-015**
PCB-1016	ND	500	500	370	400	ug/Kg	74	80	7.8	70-130	20	
PCB-1260	ND	500	500	290	400	ug/Kg	58	80	31.9	70-130	20	M

QCBatchID: QC1205593 **Analyst:** Abanh **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 08/19/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205593MB1					
1,1-biphenyl	ND	mg/Kg		4	
1,1-oxybisbenzene	ND	mg/Kg		4	
TPH (C10 to C28)	ND	mg/Kg		10	
TPH (C13 to C22)	ND	mg/Kg		10	
TPH (C23 to C44)	ND	mg/Kg		20	
TPH (C28 to C40)	ND	mg/Kg		20	
TPH (C6 to C12)	ND	mg/Kg		10	
TPH (C6 to C44) Total	ND	mg/Kg		20	
TPH (C8 to C10)	ND	mg/Kg		10	
TPH Diesel	ND	mg/Kg		10	
TPH Motor Oil	ND	mg/Kg		20	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205593LCS1											
TPH (C10 to C28)	250		230		mg/Kg	92			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205593MS1, QC1205593MSD1												**Source: 418458-005**
TPH (C10 to C28)	ND	250	250	230	220	mg/Kg	92	88	4.4	70-130	20	

QCBatchID: QC1205613	Analyst: Abanh	Method: EPA 8270C
Matrix: Solid	Analyzed: 08/20/2019	Instrument: SVOA-MS (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205613MB1					
1,2,4-Trichlorobenzene	ND	ug/Kg		250	
1,2-Dichlorobenzene	ND	ug/Kg		250	
1,3-Dichlorobenzene	ND	ug/Kg		250	
1,4-Dichlorobenzene	ND	ug/Kg		250	
1-Methylnaphthalene	ND	ug/Kg		250	
2,4,5-Trichlorophenol	ND	ug/Kg		250	
2,4,6-Trichlorophenol	ND	ug/Kg		250	
2,4-Dichlorophenol	ND	ug/Kg		250	
2,4-Dimethylphenol	ND	ug/Kg		250	
2,4-Dinitrophenol	ND	ug/Kg		1200	
2,4-Dinitrotoluene	ND	ug/Kg		250	
2,6-Dinitrotoluene	ND	ug/Kg		250	
2-Chloronaphthalene	ND	ug/Kg		250	
2-Chlorophenol	ND	ug/Kg		250	
2-Methyl-4,6-dinitrophenol	ND	ug/Kg		250	
2-Methylnaphthalene	ND	ug/Kg		250	
2-Methylphenol (o-Cresol)	ND	ug/Kg		250	
2-Nitroaniline	ND	ug/Kg		250	
2-Nitrophenol	ND	ug/Kg		250	
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/Kg		400	
3,3'-Dichlorobenzidine	ND	ug/Kg		1200	
3-Nitroaniline	ND	ug/Kg		250	
4-Bromophenyl phenyl ether	ND	ug/Kg		250	
4-Chloro-3-methylphenol	ND	ug/Kg		250	
4-Chloroaniline	ND	ug/Kg		250	
4-Chlorophenyl phenyl ether	ND	ug/Kg		250	
4-Nitroaniline	ND	ug/Kg		250	
4-Nitrophenol	ND	ug/Kg		250	
Acenaphthene	ND	ug/Kg		250	
Acenaphthylene	ND	ug/Kg		250	
Aniline	ND	ug/Kg		250	
Anthracene	ND	ug/Kg		250	
Azobenzene	ND	ug/Kg		250	
Benz(a)anthracene	ND	ug/Kg		250	
Benzidine	ND	ug/Kg		1200	
Benzo(a)pyrene	ND	ug/Kg		250	
Benzo(b)fluoranthene	ND	ug/Kg		250	
Benzo(g,h,i)perylene	ND	ug/Kg		250	
Benzo(k)fluoranthene	ND	ug/Kg		250	
Benzoic acid	ND	ug/Kg		1200	
Benzyl alcohol	ND	ug/Kg		250	
Bis(2-chloroethoxy)methane	ND	ug/Kg		250	
Bis(2-chloroethyl) Ether	ND	ug/Kg		1200	
Bis(2-chloroisopropyl) Ether	ND	ug/Kg		250	
Bis(2-ethylhexyl) phthalate	ND	ug/Kg		250	
Butylbenzyl Phthalate	ND	ug/Kg		250	
Carbazole	ND	ug/Kg		250	
Chrysene	ND	ug/Kg		250	
Dibenz(a,h)anthracene	ND	ug/Kg		250	
Dibenzofuran	ND	ug/Kg		250	
Diethyl phthalate	ND	ug/Kg		250	
Dimethyl phthalate	ND	ug/Kg		250	

QCBatchID: QC1205613 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205613MB1					
Di-n-butyl phthalate	ND	ug/Kg		250	
Di-n-octyl phthalate	ND	ug/Kg		250	
Fluoranthene	ND	ug/Kg		250	
Fluorene	ND	ug/Kg		250	
Hexachlorobenzene	ND	ug/Kg		250	
Hexachlorobutadiene	ND	ug/Kg		250	
Hexachlorocyclopentadiene	ND	ug/Kg		1200	
Hexachloroethane	ND	ug/Kg		250	
Indeno(1,2,3-cd)pyrene	ND	ug/Kg		250	
Isophorone	ND	ug/Kg		250	
Naphthalene	ND	ug/Kg		250	
Nitrobenzene	ND	ug/Kg		1200	
N-Nitrosodimethylamine (NDMA)	ND	ug/Kg		250	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/Kg		250	
N-Nitrosodiphenylamine	ND	ug/Kg		250	
Pentachlorophenol	ND	ug/Kg		1200	
Phenanthrene	ND	ug/Kg		250	
Phenol	ND	ug/Kg		250	
Pyrene	ND	ug/Kg		250	
Pyridine	ND	ug/Kg		250	
Total Cresol	ND	ug/Kg		400	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613LCS1											
1,2,4-Trichlorobenzene	2000		1300		ug/Kg	65			43-111		
1,4-Dichlorobenzene	2000		1100		ug/Kg	55			30-116		
2,4,5-Trichlorophenol	2000		1500		ug/Kg	75			57-125		
2,4-Dimethylphenol	2000		1100		ug/Kg	55			50-112		
2,4-Dinitrotoluene	2000		1500		ug/Kg	75			57-124		
2-Chlorophenol	2000		1300		ug/Kg	65			48-114		
3 and 4-Methylphenol (m and p-Cresol)	2000		1300		ug/Kg	65			56-124		
4-Chloro-3-methylphenol	2000		1300		ug/Kg	65			61-122		
4-Nitrophenol	2000		1300		ug/Kg	65			54-126		
Acenaphthene	2000		1400		ug/Kg	70			53-112		
Benzo(b)fluoranthene	2000		1400		ug/Kg	70			61-125		
Chrysene	2000		1600		ug/Kg	80			59-117		
N-Nitrosodi-n-propylamine (NDPA)	2000		1500		ug/Kg	75			54-110		
Pentachlorophenol	2000		1300		ug/Kg	65			41-103		
Phenol	2000		1300		ug/Kg	65			51-111		
Pyrene	2000		1500		ug/Kg	75			63-119		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613MS1, QC1205613MSD1												**Source: 418350-015**
1,2,4-Trichlorobenzene	ND	2000	2000	2000	1200	ug/Kg	100	60	50.0	35-93	30	M
1,4-Dichlorobenzene	ND	2000	2000	1700	1000	ug/Kg	85	50	51.9	39-95	30	M
2,4,5-Trichlorophenol	ND	2000	2000	1900	990	ug/Kg	95	50	63.0	44-108	30	M
2,4-Dimethylphenol	ND	2000	2000	1800	980	ug/Kg	90	49	59.0	37-105	30	M
2,4-Dinitrotoluene	ND	2000	2000	2200	1600	ug/Kg	110	80	31.6	48-109	30	M
2-Chlorophenol	ND	2000	2000	1700	990	ug/Kg	85	50	52.8	42-102	30	M

QCBatchID: QC1205613 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-MS (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613MS1, QC1205613MSD1												**Source: 418350-015**
3 and 4-Methylphenol (m and p-Cresol)	ND	2000	2000	1900	1000	ug/Kg	95	50	62.1	33-116	30	M
4-Chloro-3-methylphenol	ND	2000	2000	1800	990	ug/Kg	90	50	58.1	33-120	30	M
4-Nitrophenol	ND	2000	2000	2000	1400	ug/Kg	100	70	35.3	37-107	30	M
Acenaphthene	ND	2000	2000	2200	1200	ug/Kg	110	60	58.8	57-99	30	M
Benzo(b)fluoranthene	ND	2000	2000	1800	990	ug/Kg	90	50	58.1	59-126	30	M
Chrysene	ND	2000	2000	2300	1300	ug/Kg	115	65	55.6	68-120	30	M
N-Nitrosodi-n-propylamine (NDPA)	ND	2000	2000	1900	1100	ug/Kg	95	55	53.3	41-127	30	M
Pentachlorophenol	ND	2000	2000	1600	1200	ug/Kg	80	60	28.6	43-120	30	
Phenol	ND	2000	2000	1900	1000	ug/Kg	95	50	62.1	46-116	30	M
Pyrene	ND	2000	2000	2200	1200	ug/Kg	110	60	58.8	53-129	30	M

QCBatchID: QC1205742	Analyst: Abanh	Method: EPA 8270C
Matrix: Solid	Analyzed: 08/22/2019	Instrument: SVOA-MS (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205742MB1						
1,2,4-Trichlorobenzene	ND	ug/Kg		250		
1,2-Dichlorobenzene	ND	ug/Kg		250		
1,3-Dichlorobenzene	ND	ug/Kg		250		
1,4-Dichlorobenzene	ND	ug/Kg		250		
1-Methylnaphthalene	ND	ug/Kg		250		
2,4,5-Trichlorophenol	ND	ug/Kg		250		
2,4,6-Trichlorophenol	ND	ug/Kg		250		
2,4-Dichlorophenol	ND	ug/Kg		250		
2,4-Dimethylphenol	ND	ug/Kg		250		
2,4-Dinitrophenol	ND	ug/Kg		1200		
2,4-Dinitrotoluene	ND	ug/Kg		250		
2,6-Dinitrotoluene	ND	ug/Kg		250		
2-Chloronaphthalene	ND	ug/Kg		250		
2-Chlorophenol	ND	ug/Kg		250		
2-Methyl-4,6-dinitrophenol	ND	ug/Kg		250		
2-Methylnaphthalene	ND	ug/Kg		250		
2-Methylphenol (o-Cresol)	ND	ug/Kg		250		
2-Nitroaniline	ND	ug/Kg		250		
2-Nitrophenol	ND	ug/Kg		250		
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/Kg		400		
3,3'-Dichlorobenzidine	ND	ug/Kg		1200		
3-Nitroaniline	ND	ug/Kg		250		
4-Bromophenyl phenyl ether	ND	ug/Kg		250		
4-Chloro-3-methylphenol	ND	ug/Kg		250		
4-Chloroaniline	ND	ug/Kg		250		
4-Chlorophenyl phenyl ether	ND	ug/Kg		250		
4-Nitroaniline	ND	ug/Kg		250		
4-Nitrophenol	ND	ug/Kg		250		
Acenaphthene	ND	ug/Kg		250		
Acenaphthylene	ND	ug/Kg		250		
Aniline	ND	ug/Kg		250		
Anthracene	ND	ug/Kg		250		
Azobenzene	ND	ug/Kg		250		
Benz(a)anthracene	ND	ug/Kg		250		
Benzidine	ND	ug/Kg		1200		
Benzo(a)pyrene	ND	ug/Kg		250		
Benzo(b)fluoranthene	ND	ug/Kg		250		
Benzo(g,h,i)perylene	ND	ug/Kg		250		
Benzo(k)fluoranthene	ND	ug/Kg		250		
Benzoic acid	ND	ug/Kg		1200		
Benzyl alcohol	ND	ug/Kg		250		
Bis(2-chloroethoxy)methane	ND	ug/Kg		250		
Bis(2-chloroethyl) Ether	ND	ug/Kg		1200		
Bis(2-chloroisopropyl) Ether	ND	ug/Kg		250		
Bis(2-ethylhexyl) phthalate	ND	ug/Kg		250		
Butylbenzyl Phthalate	ND	ug/Kg		250		
Carbazole	ND	ug/Kg		250		
Chrysene	ND	ug/Kg		250		
Dibenz(a,h)anthracene	ND	ug/Kg		250		
Dibenzofuran	ND	ug/Kg		250		
Diethyl phthalate	ND	ug/Kg		250		
Dimethyl phthalate	ND	ug/Kg		250		

QCBatchID: QC1205742 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/22/2019 **Instrument:** SVOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205742MB1					
Di-n-butyl phthalate	ND	ug/Kg		250	
Di-n-octyl phthalate	ND	ug/Kg		250	
Fluoranthene	ND	ug/Kg		250	
Fluorene	ND	ug/Kg		250	
Hexachlorobenzene	ND	ug/Kg		250	
Hexachlorobutadiene	ND	ug/Kg		250	
Hexachlorocyclopentadiene	ND	ug/Kg		1200	
Hexachloroethane	ND	ug/Kg		250	
Indeno(1,2,3-cd)pyrene	ND	ug/Kg		250	
Isophorone	ND	ug/Kg		250	
Naphthalene	ND	ug/Kg		250	
Nitrobenzene	ND	ug/Kg		1200	
N-Nitrosodimethylamine (NDMA)	ND	ug/Kg		250	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/Kg		250	
N-Nitrosodiphenylamine	ND	ug/Kg		250	
Pentachlorophenol	ND	ug/Kg		1200	
Phenanthrene	ND	ug/Kg		250	
Phenol	ND	ug/Kg		250	
Pyrene	ND	ug/Kg		250	
Pyridine	ND	ug/Kg		250	
Total Cresol	ND	ug/Kg		400	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205742LCS1											
1,2,4-Trichlorobenzene	2000		1300		ug/Kg	65			43-111		
1,4-Dichlorobenzene	2000		1100		ug/Kg	55			30-116		
2,4,5-Trichlorophenol	2000		1600		ug/Kg	80			57-125		
2,4-Dimethylphenol	2000		1200		ug/Kg	60			50-112		
2,4-Dinitrotoluene	2000		1500		ug/Kg	75			57-124		
2-Chlorophenol	2000		1200		ug/Kg	60			48-114		
3 and 4-Methylphenol (m and p-Cresol)	2000		1300		ug/Kg	65			56-124		
4-Chloro-3-methylphenol	2000		1300		ug/Kg	65			61-122		
4-Nitrophenol	2000		1400		ug/Kg	70			54-126		
Acenaphthene	2000		1400		ug/Kg	70			53-112		
Benzo(b)fluoranthene	2000		1400		ug/Kg	70			61-125		
Chrysene	2000		1600		ug/Kg	80			59-117		
N-Nitrosodi-n-propylamine (NDPA)	2000		1300		ug/Kg	65			54-110		
Pentachlorophenol	2000		1300		ug/Kg	65			41-103		
Phenol	2000		1300		ug/Kg	65			51-111		
Pyrene	2000		1600		ug/Kg	80			63-119		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205742MS1, QC1205742MSD1												**Source: 418374-001**
1,2,4-Trichlorobenzene	ND	2000	2000	1200	980	ug/Kg	60	49	20.2	35-93	30	
1,4-Dichlorobenzene	ND	2000	2000	1000	860	ug/Kg	50	43	15.1	39-95	30	
2,4,5-Trichlorophenol	ND	2000	2000	1400	1100	ug/Kg	70	55	24.0	44-108	30	
2,4-Dimethylphenol	ND	2000	2000	900	700	ug/Kg	45	35	25.0	37-105	30	M
2,4-Dinitrotoluene	ND	2000	2000	1300	1100	ug/Kg	65	55	16.7	48-109	30	
2-Chlorophenol	ND	2000	2000	1100	900	ug/Kg	55	45	20.0	42-102	30	

QCBatchID: QC1205742 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/22/2019 **Instrument:** SVOA-MS (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205742MS1, QC1205742MSD1												**Source: 418374-001**
3 and 4-Methylphenol (m and p-Cresol)	ND	2000	2000	1100	910	ug/Kg	55	46	18.9	33-116	30	
4-Chloro-3-methylphenol	ND	2000	2000	1100	990	ug/Kg	55	50	10.5	33-120	30	
4-Nitrophenol	ND	2000	2000	1100	980	ug/Kg	55	49	11.5	37-107	30	
Acenaphthene	ND	2000	2000	1300	1100	ug/Kg	65	55	16.7	57-99	30	M
Benzo(b)fluoranthene	ND	2000	2000	1300	1100	ug/Kg	65	55	16.7	59-126	30	M
Chrysene	ND	2000	2000	1400	1200	ug/Kg	70	60	15.4	68-120	30	M
N-Nitrosodi-n-propylamine (NDPA)	ND	2000	2000	1200	1000	ug/Kg	60	50	18.2	41-127	30	
Pentachlorophenol	ND	2000	2000	950	900	ug/Kg	48	45	5.4	43-120	30	
Phenol	37	2000	2000	1200	990	ug/Kg	58	48	19.2	46-116	30	
Pyrene	ND	2000	2000	1400	1200	ug/Kg	70	60	15.4	53-129	30	

QCBatchID: QC1205872 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/26/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205872MB1					
4,4'-DDD	ND	ug/Kg		5	
4,4'-DDE	ND	ug/Kg		5	
4,4'-DDT	ND	ug/Kg		5	
a-BHC	ND	ug/Kg		5	
Aldrin	ND	ug/Kg		5	
b-BHC	ND	ug/Kg		5	
Chlordane (technical)	ND	ug/Kg		50	
cis-chlordane	ND	ug/Kg		5	
d-BHC	ND	ug/Kg		5	
Dieldrin	ND	ug/Kg		5	
Endosulfan I	ND	ug/Kg		5	
Endosulfan II	ND	ug/Kg		5	
Endosulfan sulfate	ND	ug/Kg		5	
Endrin	ND	ug/Kg		5	
Endrin aldehyde	ND	ug/Kg		5	
Endrin Ketone	ND	ug/Kg		5	
Heptachlor	ND	ug/Kg		5	
Heptachlor epoxide	ND	ug/Kg		5	
Hexachlorobenzene		ug/Kg			
Lindane (Gamma-BHC)	ND	ug/Kg		5	
Methoxychlor	ND	ug/Kg		10	
Mirex	ND	ug/Kg		50	
Toxaphene	ND	ug/Kg		100	
trans-chlordane	ND	ug/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205872LCS1											
4,4'-DDD	50		43		ug/Kg	86			43-172		
4,4'-DDE	50		43		ug/Kg	86			44-163		
4,4'-DDT	50		41		ug/Kg	82			40-158		
a-BHC	50		40		ug/Kg	80			45-150		
Aldrin	50		39		ug/Kg	78			46-142		
b-BHC	50		41		ug/Kg	82			42-156		
d-BHC	50		37		ug/Kg	74			37-161		
Dieldrin	50		37		ug/Kg	74			47-151		
Endosulfan I	50		42		ug/Kg	84			47-141		
Endosulfan II	50		42		ug/Kg	84			44-156		
Endosulfan sulfate	50		42		ug/Kg	84			43-157		
Endrin	50		42		ug/Kg	84			47-160		
Endrin aldehyde	50		32		ug/Kg	64			32-127		
Endrin Ketone	50		42		ug/Kg	84			48-159		
Heptachlor	50		41		ug/Kg	82			50-144		
Heptachlor epoxide	50		39		ug/Kg	78			48-145		
Lindane (Gamma-BHC)	50		39		ug/Kg	78			47-151		
Methoxychlor	50		49		ug/Kg	98			36-182		

QCBatchID: QC1205872	**Analyst:** Jarriaga		**Method:** EPA 8081A		
Matrix: Solid	**Analyzed:** 08/26/2019		**Instrument:** SVOA-GC (group)		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205872MS1, QC1205872MSD1												**Source: 418500-014**
4,4'-DDD	ND	50	50	50	56	ug/Kg	100	112	11.3	43-172	20	
4,4'-DDE	ND	50	50	49	55	ug/Kg	98	110	11.5	44-163	20	
4,4'-DDT	ND	50	50	50	57	ug/Kg	100	114	13.1	40-158	20	
a-BHC	ND	50	50	43	44	ug/Kg	86	88	2.3	45-150	20	
Aldrin	ND	50	50	43	46	ug/Kg	86	92	6.7	46-142	20	
b-BHC	ND	50	50	46	50	ug/Kg	92	100	8.3	42-156	20	
d-BHC	ND	50	50	41	46	ug/Kg	82	92	11.5	37-161	20	
Dieldrin	ND	50	50	42	48	ug/Kg	84	96	13.3	47-151	20	
Endosulfan I	ND	50	50	46	52	ug/Kg	92	104	12.2	47-141	20	
Endosulfan II	ND	50	50	49	55	ug/Kg	98	110	11.5	44-156	20	
Endosulfan sulfate	ND	50	50	49	55	ug/Kg	98	110	11.5	43-157	20	
Endrin	ND	50	50	47	53	ug/Kg	94	106	12.0	47-160	20	
Endrin aldehyde	ND	50	50	42	45	ug/Kg	84	90	6.9	32-127	20	
Endrin Ketone	ND	50	50	52	56	ug/Kg	104	112	7.4	48-159	20	
Heptachlor	ND	50	50	44	46	ug/Kg	88	92	4.4	50-144	20	
Heptachlor epoxide	ND	50	50	43	47	ug/Kg	86	94	8.9	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	43	44	ug/Kg	86	88	2.3	47-151	20	
Methoxychlor	ND	50	50	59	64	ug/Kg	118	128	8.1	36-182	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 418350

Page: 1 of 3

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Contalner No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-26-55-1	8/14/19	1025	S	1/8 oz	N	X	X						
2	SB-27-55-1		0930											
3	SB-27-55-3		0945											
4	SB-28-55-2		0840											
5	SB-29-55-2		1220											
6	SB-29-55-4		1230											
7	SB-30-55-0		1325									X		
8	SB-30-55-2		1335									X		
9	SB-36-55-1		1255											
10	SB-36-55-5		1310		1/8oz, 3/40mL	4			X	X	X			

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux	8/14/19 1503
1 Received By:		Ben Salgado	Enthalpy Analytical	8-14-19 1503
2 Relinquished By:		Ben Salgado	Enthalpy Analytical	8-14-19 1614
2 Received By:				8/14/19 1614
3 Relinquished By:				
3 Received By:				

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No:

Page: 2 of 3

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-23-55-0	8/14/19	0745	S	1/8oz	N	X	X				X		
2	SB-23-55-2		0750				X	X				X		
3	SB-23-55-6		0800											
4	SB-24-55-1		0810											
5	SB-24-55-5		0820		1/8oz, 3/40mL	Y			X	X	X			
6	SB-24-55-9		0830		1/8oz	N								
7	SB-25-55-0		1045									X		
8	SB-25-55-2		1050									X		
9	SB-25-55-5		1100		1/8oz, 3/40mL	Y			X	X	X			
10	SB-25-55-8		1105		1/8oz	N								

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		Peter Shimer	Roux	8/14/19 1503
[1] Received By:		Ben Salgado	Enthalpy Analytical	8.14.19 1503
[2] Relinquished By:		Ben Salgado	Enthalpy Analytical	8.14.19 1616
[2] Received By:				8/14/19 1616
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No:

Page: 3 of 3

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-38-55-1	8/14/19	0900	S	1/8oz	N	X	X						
2	DUP-6	↓	1230	↓	↓	↓	↓	↓						
3	DUP-7	↓	1325	↓	↓	↓	↓	↓				X		
4														
5														
6				PAS										
7														
8														
9														
10														

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux	8/14/19 1503
1 Received By:		Ben Salgado	Enthalpy Analytical	8.14.19 1503
2 Relinquished By:		Ben Salgado	Enthalpy Analytical	8.14.19 1607
2 Received By:			CAS	8/14/19 1617
3 Relinquished By:				8/14/19 2
3 Received By:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Roux Project: InSite

Date Received: 8/14/19 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 0.2 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.1 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 8/14/19

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client: Roux Associates, Inc.
Address: 5150 E. Pacific Coast Hwy.
Suite 450
Long Beach, CA 90804
Attn: Peter Shimer

Lab Request: 418457
Report Date: 08/27/2019
Date Received: 08/16/2019
Client ID: 15831

Comments: InSite
3370.0001L000
3701 N. Pacific Pl., Long Beach, CA

See attached report for EPA 8151A results.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID	Sample #	Client Sample ID
418457-001	SB-1-SS-1	418457-025	SB-46-SS-0
418457-002	SB-1-SS-4	418457-026	SB-46-SS-2
418457-003	SB-1-SS-8	418457-027	DUP-10
418457-004	SB-1-SS-13	418457-028	DUP-11
418457-005	SB-2-SS-1	418457-029	DUP-12
418457-006	SB-2-SS-4		
418457-007	SB-2-SS-6		
418457-008	SB-3-SS-0		
418457-009	SB-3-SS-2		
418457-010	SB-3-SS-5		
418457-011	SB-3-SS-7		
418457-012	SB-3-SS-10		
418457-013	SB-4-SS-0		
418457-014	SB-4-SS-2		
418457-015	SB-4-SS-5		
418457-016	SB-4-SS-10		
418457-017	SB-4-SS-14		
418457-018	SB-35-SS-2		
418457-019	SB-35-SS-7		
418457-020	SB-35-SS-10		
418457-021	SB-35-SS-15		
418457-022	SB-37-SS-1		
418457-023	SB-45-SS-0		
418457-024	SB-45-SS-2		

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 08:30	**Site:**			
Sample #:	**418457-001**	**Client Sample #:**	SB-1-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**53.4**	1	1	mg/Kg		08/22/19	KLN	
Barium	**107**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**1.21**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**21.2**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**9.10**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**24.1**	1	1	mg/Kg		08/22/19	KLN	
Lead	**49.0**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**11.8**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	**3.54**	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**30.7**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**168**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	5	50	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**110**	5	50	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	5	50	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*116*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 08:40	**Site:**			
Sample #:	**418457-002**	**Client Sample #:**	SB-1-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**15.6**	1	1	mg/Kg		08/22/19	KLN	
Barium	**78.6**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**1.41**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**21.2**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**5.78**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**29.1**	1	1	mg/Kg		08/22/19	KLN	
Lead	**171**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**12.6**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**27.6**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**104**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205771		
Mercury	ND	1	0.14	mg/Kg	08/22/19	08/22/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**50**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*121*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 08:45	**Site:**			
Sample #:	**418457-003**	**Client Sample #:**	SB-1-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**10.2**	1	1	mg/Kg		08/22/19	KLN	
Barium	**149**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.80**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**26.7**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**12.3**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**27.6**	1	1	mg/Kg		08/22/19	KLN	
Lead	**20.6**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**17.0**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**47.0**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**74.8**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	5	50	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**250**	5	50	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	5	50	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*114*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 08:50	**Site:**			
Sample #:	**418457-004**	**Client Sample #:**	SB-1-SS-13	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**6.52**	1	1	mg/Kg		08/22/19	KLN	
Barium	**152**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.66**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**26.6**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**12.2**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**24.2**	1	1	mg/Kg		08/22/19	KLN	
Lead	**21.4**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**16.3**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**44.3**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**61.0**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	**0.16**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**56**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*123*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 10:00	**Site:**			
Sample #:	**418457-005**	**Client Sample #:**	SB-2-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**7.21**	1	1	mg/Kg		08/22/19	KLN	
Barium	**182**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.71**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**27.7**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**13.8**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**27.3**	1	1	mg/Kg		08/22/19	KLN	
Lead	**33.0**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**19.8**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**46.4**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**89.0**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**26**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*108*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 10:05	**Site:**			
Sample #:	**418457-006**	**Client Sample #:**	SB-2-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**37.4**	1	1	mg/Kg		08/22/19	KLN	
Barium	**1670**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**1.38**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**38.1**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**11.2**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**51.0**	1	1	mg/Kg		08/22/19	KLN	
Lead	**304**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**33.3**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**41.4**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**147**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	**0.60**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**2200**	50	500	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**7400**	50	500	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	50	500	mg/Kg	08/23/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*190*		*50-150*	*S*				
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205671		
PCB-1016	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
PCB-1221	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
PCB-1232	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
PCB-1242	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
PCB-1248	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
PCB-1254	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
PCB-1260	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
PCB-1262	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
PCB-1268	ND	10	500	ug/Kg	08/20/19	08/23/19	SS	D2
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*83*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205561		
1,1,1,2-Tetrachloroethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,1,1-Trichloroethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,1,2-Trichloroethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,1-Dichloroethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,1-Dichloroethene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,1-Dichloropropene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,2,3-Trichlorobenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,2,3-Trichloropropane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,2,4-Trichlorobenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,2,4-Trimethylbenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,2-Dibromoethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,2-Dichlorobenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 10:05	**Site:**			
Sample #:	**418457-006**	**Client Sample #:**	SB-2-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,2-Dichloropropane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,3,5-Trimethylbenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,3-Dichlorobenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,3-Dichloropropane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
1,4-Dichlorobenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
2,2-Dichloropropane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
2-Butanone (MEK)	ND	1.1	110	ug/Kg		08/19/19	LZ	
2-Chlorotoluene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
4-Chlorotoluene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
4-Isopropyltoluene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Acetone	**160**	1.1	110	ug/Kg		08/19/19	LZ	
Allyl Chloride	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Benzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Bromobenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Bromochloromethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Bromodichloromethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Bromoform	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Bromomethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Carbon Tetrachloride	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Chlorobenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Chlorodibromomethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Chloroethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Chloroform	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Chloromethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
cis-1,2-Dichloroethene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
cis-1,3-dichloropropene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
cis-1,4-dichloro-2-butene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Dibromomethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Dichlorodifluoromethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Di-isopropyl ether (DIPE)	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Ethylbenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Hexachlorobutadiene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Isopropylbenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
m and p-Xylene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Methylene chloride	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Naphthalene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
N-butylbenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
N-propylbenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
o-Xylene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Sec-butylbenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Styrene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
t-Butyl alcohol (TBA)	ND	1.1	11	ug/Kg		08/19/19	LZ	
Tert-amylmethylether (TAME)	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Tert-butylbenzene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Tetrachloroethene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Toluene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
trans-1,2-dichloroethene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
trans-1,3-dichloropropene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
trans-1,4-dichloro-2-butene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Trichloroethene	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Trichlorofluoromethane	ND	1.1	5.5	ug/Kg		08/19/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 10:05	**Site:**			
Sample #:	**418457-006**	**Client Sample #:**	SB-2-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	1.1	5.5	ug/Kg		08/19/19	LZ	
Xylenes (Total)	ND	1.1	5.5	ug/Kg		08/19/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*107*	*70-145*	
4-Bromofluorobenzene (SUR)	*140*	*70-145*	
Dibromofluoromethane (SUR)	*96*	*70-145*	
Toluene-d8 (SUR)	*104*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205613

1,2,4-Trichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,2-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,3-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,4-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1-Methylnaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dimethylphenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrophenol	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrotoluene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,6-Dinitrotoluene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Chloronaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Chlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methylnaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Nitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	200	80000	ug/Kg	08/20/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
3-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Bromophenyl phenyl ether	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Chloro-3-methylphenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Chloroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Chlorophenyl phenyl ether	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Nitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Acenaphthene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Acenaphthylene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Aniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Azobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benz(a)anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzidine	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
Benzo(a)pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzo(b)fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzo(g,h,i)perylene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzo(k)fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzoic acid	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
Benzyl alcohol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethoxy)methane	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethyl) Ether	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroisopropyl) Ether	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-ethylhexyl) phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Butylbenzyl Phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 10:05	**Site:**			
Sample #:	**418457-006**	**Client Sample #:**	SB-2-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Chrysene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dibenzofuran	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Diethyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dimethyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Di-n-butyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Di-n-octyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Fluorene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobutadiene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Hexachloroethane	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Isophorone	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Naphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Nitrobenzene	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pentachlorophenol	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Phenanthrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Phenol	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pyridine	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Total Cresol	ND	200	80000	ug/Kg	08/20/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*00*	*34-143*	*S2*
2-Fluorobiphenyl (SUR)	*35*	*41-125*	*S2*
2-Fluorophenol (SUR)	*00*	*13-153*	*S2*
Nitrobenzene-d5 (SUR)	*00*	*27-125*	*S2*
p-Terphenyl (SUR)	*33*	*33-155*	
Phenol-d5 (SUR)	*00*	*10-110*	*S2*

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 10:18	**Site:**			
Sample #:	**418457-007**	**Client Sample #:**	SB-2-SS-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**4.40**	1	1	mg/Kg		08/22/19	KLN	
Barium	**220**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**19.6**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**4.40**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**14.0**	1	1	mg/Kg		08/22/19	KLN	
Lead	**20.8**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**10.6**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/23/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**28.1**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**40.8**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**170**	2	20	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**620**	2	20	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*122*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:10	**Site:**			
Sample #:	**418457-008**	**Client Sample #:**	SB-3-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**6.94**	1	1	mg/Kg		08/22/19	KLN	
Barium	**191**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.69**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**25.2**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**12.4**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**29.7**	1	1	mg/Kg		08/22/19	KLN	
Lead	**34.1**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**18.4**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**45.0**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**83.7**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	**0.15**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**120**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*132*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
a-BHC	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Aldrin	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
b-BHC	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
d-BHC	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endrin	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/20/19	08/23/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/20/19	08/23/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*41*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*58*	*50-150*	

Method: EPA 8151A *NELAC* Prep Method: See Attached						QCBatchID:		
See Attached		1						

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:15	**Site:**			
Sample #:	**418457-009**	**Client Sample #:**	SB-3-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**9.90**	1	1	mg/Kg		08/22/19	KLN	
Barium	**316**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.68**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**28.2**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**13.3**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**35.3**	1	1	mg/Kg		08/22/19	KLN	
Lead	**39.5**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**21.5**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**52.7**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**97.7**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**32**	2	20	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**160**	2	20	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/23/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*101*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
a-BHC	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Aldrin	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
b-BHC	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
d-BHC	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endrin	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/20/19	08/23/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/20/19	08/23/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/20/19	08/23/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*49*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*62*		*50-150*					
Method: EPA 8151A *NELAC* Prep Method: See Attached						QCBatchID:		
See Attached		1						

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:20	**Site:**			
Sample #:	**418457-010**	**Client Sample #:**	SB-3-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**8.00**	1	1	mg/Kg		08/22/19	KLN	
Barium	**220**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.98**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**35.0**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**15.7**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**33.8**	1	1	mg/Kg		08/22/19	KLN	
Lead	**16.2**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**24.3**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**57.5**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**76.8**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**86**	2	20	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/23/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*112*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205671		
PCB-1016	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/20/19	08/23/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*76*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205561		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		08/19/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:20	**Site:**			
Sample #:	**418457-010**	**Client Sample #:**	SB-3-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		08/19/19	LZ	
2-Chlorotoluene	ND	1	5	ug/Kg		08/19/19	LZ	
4-Chlorotoluene	ND	1	5	ug/Kg		08/19/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		08/19/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		08/19/19	LZ	
Acetone	ND	1	100	ug/Kg		08/19/19	LZ	
Allyl Chloride	ND	1	5	ug/Kg		08/19/19	LZ	
Benzene	**7.1**	1	5	ug/Kg		08/19/19	LZ	
Bromobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Bromochloromethane	ND	1	5	ug/Kg		08/19/19	LZ	
Bromodichloromethane	ND	1	5	ug/Kg		08/19/19	LZ	
Bromoform	ND	1	5	ug/Kg		08/19/19	LZ	
Bromomethane	ND	1	5	ug/Kg		08/19/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		08/19/19	LZ	
Chlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Chlorodibromomethane	ND	1	5	ug/Kg		08/19/19	LZ	
Chloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
Chloroform	ND	1	5	ug/Kg		08/19/19	LZ	
Chloromethane	ND	1	5	ug/Kg		08/19/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		08/19/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		08/19/19	LZ	
Dibromomethane	ND	1	5	ug/Kg		08/19/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		08/19/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		08/19/19	LZ	
Ethylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		08/19/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		08/19/19	LZ	
Isopropylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
m and p-Xylene	ND	1	5	ug/Kg		08/19/19	LZ	
Methylene chloride	ND	1	5	ug/Kg		08/19/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		08/19/19	LZ	
Naphthalene	ND	1	5	ug/Kg		08/19/19	LZ	
N-butylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
N-propylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
o-Xylene	ND	1	5	ug/Kg		08/19/19	LZ	
Sec-butylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Styrene	ND	1	5	ug/Kg		08/19/19	LZ	
t-Butyl alcohol (TBA)	**14**	1	10	ug/Kg		08/19/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		08/19/19	LZ	
Tert-butylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Tetrachloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
Toluene	**5.8**	1	5	ug/Kg		08/19/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		08/19/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		08/19/19	LZ	
Trichloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		08/19/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:20	**Site:**			
Sample #:	**418457-010**	**Client Sample #:**	SB-3-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	1	5	ug/Kg		08/19/19	LZ	
Xylenes (Total)	ND	1	5	ug/Kg		08/19/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*111*	*70-145*	
4-Bromofluorobenzene (SUR)	*88*	*70-145*	
Dibromofluoromethane (SUR)	*98*	*70-145*	
Toluene-d8 (SUR)	*97*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205613

1,2,4-Trichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,2-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,3-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,4-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1-Methylnaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dimethylphenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrophenol	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrotoluene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,6-Dinitrotoluene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Chloronaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Chlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methylnaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Nitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	200	80000	ug/Kg	08/20/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
3-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Bromophenyl phenyl ether	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Chloro-3-methylphenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Chloroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Chlorophenyl phenyl ether	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
4-Nitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Acenaphthene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Acenaphthylene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Aniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Azobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benz(a)anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzidine	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
Benzo(a)pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzo(b)fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzo(g,h,i)perylene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzo(k)fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Benzoic acid	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
Benzyl alcohol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethoxy)methane	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethyl) Ether	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroisopropyl) Ether	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-ethylhexyl) phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
Butylbenzyl Phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:20	**Site:**			
Sample #:	**418457-010**	**Client Sample #:**	SB-3-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Chrysene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dibenzofuran	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Diethyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dimethyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Di-n-butyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Di-n-octyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Fluorene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobutadiene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Hexachloroethane	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Isophorone	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Naphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Nitrobenzene	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pentachlorophenol	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Phenanthrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Phenol	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pyridine	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Total Cresol	ND	200	80000	ug/Kg	08/20/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*00*	*34-143*	*S2*
2-Fluorobiphenyl (SUR)	*38*	*41-125*	*S2*
2-Fluorophenol (SUR)	*00*	*13-153*	*S2*
Nitrobenzene-d5 (SUR)	*18*	*27-125*	*S2*
p-Terphenyl (SUR)	*42*	*33-155*	
Phenol-d5 (SUR)	*14*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:25	**Site:**			
Sample #:	**418457-011**	**Client Sample #:**	SB-3-SS-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**5.80**	1	1	mg/Kg		08/22/19	KLN	
Barium	**187**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.70**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**26.0**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**10.9**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**26.2**	1	1	mg/Kg		08/22/19	KLN	
Lead	**35.7**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**16.9**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**43.6**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**81.1**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**77**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**92**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*102*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:30	**Site:**			
Sample #:	**418457-012**	**Client Sample #:**	SB-3-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**4.98**	1	1	mg/Kg		08/22/19	KLN	
Barium	**158**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.57**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**25.6**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**13.7**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**26.5**	1	1	mg/Kg		08/22/19	KLN	
Lead	**11.2**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**17.0**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**45.5**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**58.0**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*114*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 07:30	**Site:**			
Sample #:	**418457-013**	**Client Sample #:**	SB-4-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**18.1**	1	1	mg/Kg		08/22/19	KLN	
Barium	**444**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.66**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**24.3**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**10.2**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**31.6**	1	1	mg/Kg		08/22/19	KLN	
Lead	**70.2**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**17.2**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**38.9**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**89.1**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**240**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**320**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*89*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
a-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Aldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
b-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
d-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/20/19	08/24/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/20/19	08/24/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*53*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*60*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 07:35	**Site:**			
Sample #:	**418457-014**	**Client Sample #:**	SB-4-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**5.78**	1	1	mg/Kg		08/22/19	KLN	
Barium	**172**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.51**	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**27.0**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**15.3**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**22.8**	1	1	mg/Kg		08/22/19	KLN	
Lead	**10.2**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**19.6**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**48.2**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**52.7**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**420**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**270**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*101*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
a-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Aldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
b-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
d-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/20/19	08/24/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/20/19	08/24/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*61*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*74*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 07:45	**Site:**			
Sample #:	**418457-015**	**Client Sample #:**	SB-4-SS-5	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**7.76**	1	1	mg/Kg		08/22/19	KLN	
Barium	**160**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/23/19	KLN	
Chromium	**25.3**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**20.8**	1	1	mg/Kg		08/22/19	KLN	
Lead	**8.19**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**17.0**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**41.7**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**47.7**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**88**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**92**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*104*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 07:50	**Site:**			
Sample #:	**418457-016**	**Client Sample #:**	SB-4-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**7.48**	1	1	mg/Kg		08/22/19	KLN	
Barium	**136**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**21.0**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**10.5**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**20.1**	1	1	mg/Kg		08/22/19	KLN	
Lead	**8.15**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**13.6**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**36.9**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**39.9**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**16**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**25**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*101*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 07:55	**Site:**			
Sample #:	**418457-017**	**Client Sample #:**	SB-4-SS-14	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**10.9**	1	1	mg/Kg		08/22/19	KLN	
Barium	**140**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.70**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**27.9**	1	1	mg/Kg		08/22/19	KLN	
Cobalt	**14.5**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**22.2**	1	1	mg/Kg		08/22/19	KLN	
Lead	**7.60**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**21.5**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**45.6**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**50.9**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**29**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**40**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*100*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:05	**Site:**			
Sample #:	**418457-018**	**Client Sample #:**	SB-35-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**9.38**	1	1	mg/Kg		08/22/19	KLN	
Barium	**184**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.90**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**38.0**	1	1	mg/Kg		08/22/19	KLN	
Cobalt	**13.6**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**26.6**	1	1	mg/Kg		08/22/19	KLN	
Lead	**25.5**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**20.1**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**45.1**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**113**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**32**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**83**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*89*	*50-150*	

Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205671		
PCB-1016	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*75*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205561		
1,1,1,2-Tetrachloroethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,1,1-Trichloroethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,1,2-Trichloroethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,1-Dichloroethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,1-Dichloroethene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,1-Dichloropropene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,2,3-Trichlorobenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,2,3-Trichloropropane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,2,4-Trichlorobenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,2,4-Trimethylbenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,2-Dibromoethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,2-Dichlorobenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:05	**Site:**			
Sample #:	**418457-018**	**Client Sample #:**	SB-35-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,2-Dichloropropane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,3,5-Trimethylbenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,3-Dichlorobenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,3-Dichloropropane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
1,4-Dichlorobenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
2,2-Dichloropropane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
2-Butanone (MEK)	ND	1.3	130	ug/Kg		08/19/19	LZ	
2-Chlorotoluene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
4-Chlorotoluene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
4-Isopropyltoluene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Acetone	ND	1.3	130	ug/Kg		08/19/19	LZ	
Allyl Chloride	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Benzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Bromobenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Bromochloromethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Bromodichloromethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Bromoform	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Bromomethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Carbon Tetrachloride	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Chlorobenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Chlorodibromomethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Chloroethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Chloroform	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Chloromethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
cis-1,2-Dichloroethene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
cis-1,3-dichloropropene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
cis-1,4-dichloro-2-butene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Dibromomethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Dichlorodifluoromethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Di-isopropyl ether (DIPE)	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Ethylbenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Hexachlorobutadiene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Isopropylbenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
m and p-Xylene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Methylene chloride	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Naphthalene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
N-butylbenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
N-propylbenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
o-Xylene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Sec-butylbenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Styrene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
t-Butyl alcohol (TBA)	ND	1.3	13	ug/Kg		08/19/19	LZ	
Tert-amylmethylether (TAME)	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Tert-butylbenzene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Tetrachloroethene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Toluene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
trans-1,2-dichloroethene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
trans-1,3-dichloropropene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
trans-1,4-dichloro-2-butene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Trichloroethene	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Trichlorofluoromethane	ND	1.3	6.5	ug/Kg		08/19/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:05	**Site:**			
Sample #:	**418457-018**	**Client Sample #:**	SB-35-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	1.3	6.5	ug/Kg		08/19/19	LZ	
Xylenes (Total)	ND	1.3	6.5	ug/Kg		08/19/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*108*	*70-145*	
4-Bromofluorobenzene (SUR)	*91*	*70-145*	
Dibromofluoromethane (SUR)	*97*	*70-145*	
Toluene-d8 (SUR)	*98*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205613

1,2,4-Trichlorobenzene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
1,2-Dichlorobenzene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
1,3-Dichlorobenzene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
1,4-Dichlorobenzene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
1-Methylnaphthalene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dichlorophenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dimethylphenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrophenol	ND	100	120000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrotoluene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2,6-Dinitrotoluene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2-Chloronaphthalene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2-Chlorophenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2-Methylnaphthalene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2-Nitroaniline	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
2-Nitrophenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	100	40000	ug/Kg	08/20/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	100	120000	ug/Kg	08/20/19	08/21/19	D2
3-Nitroaniline	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
4-Bromophenyl phenyl ether	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
4-Chloro-3-methylphenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
4-Chloroaniline	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
4-Chlorophenyl phenyl ether	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
4-Nitroaniline	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
4-Nitrophenol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Acenaphthene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Acenaphthylene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Aniline	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Anthracene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Azobenzene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Benz(a)anthracene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Benzidine	ND	100	120000	ug/Kg	08/20/19	08/21/19	D2
Benzo(a)pyrene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Benzo(b)fluoranthene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Benzo(g,h,i)perylene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Benzo(k)fluoranthene	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Benzoic acid	ND	100	120000	ug/Kg	08/20/19	08/21/19	D2
Benzyl alcohol	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethoxy)methane	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethyl) Ether	ND	100	120000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroisopropyl) Ether	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-ethylhexyl) phthalate	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2
Butylbenzyl Phthalate	ND	100	25000	ug/Kg	08/20/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:05	**Site:**			
Sample #:	**418457-018**	**Client Sample #:**	SB-35-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Chrysene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Dibenzofuran	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Diethyl phthalate	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Dimethyl phthalate	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Di-n-butyl phthalate	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Di-n-octyl phthalate	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Fluoranthene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Fluorene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobenzene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobutadiene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	100	120000	ug/Kg	08/20/19	08/21/19		D2
Hexachloroethane	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Isophorone	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Naphthalene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Nitrobenzene	ND	100	120000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Pentachlorophenol	ND	100	120000	ug/Kg	08/20/19	08/21/19		D2
Phenanthrene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Phenol	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Pyrene	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Pyridine	ND	100	25000	ug/Kg	08/20/19	08/21/19		D2
Total Cresol	ND	100	40000	ug/Kg	08/20/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*00*	*34-143*	*S2*
2-Fluorobiphenyl (SUR)	*58*	*41-125*	
2-Fluorophenol (SUR)	*25*	*13-153*	
Nitrobenzene-d5 (SUR)	*31*	*27-125*	
p-Terphenyl (SUR)	*51*	*33-155*	
Phenol-d5 (SUR)	*33*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:15	**Site:**			
Sample #:	**418457-019**	**Client Sample #:**	SB-35-SS-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**10.4**	1	1	mg/Kg		08/22/19	KLN	
Barium	**194**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.73**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**28.2**	1	1	mg/Kg		08/22/19	KLN	
Cobalt	**12.3**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**33.3**	1	1	mg/Kg		08/22/19	KLN	
Lead	**44.0**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**18.3**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**41.4**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**95.8**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	**21**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**62**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*88*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:20	**Site:**			
Sample #:	**418457-020**	**Client Sample #:**	SB-35-SS-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205676		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	
Arsenic	**5.15**	1	1	mg/Kg		08/22/19	KLN	
Barium	**63.7**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**9.73**	1	1	mg/Kg		08/22/19	KLN	
Cobalt	**5.27**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**9.24**	1	1	mg/Kg		08/22/19	KLN	
Lead	**3.09**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**7.30**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**19.0**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**19.9**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205655		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205805		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	**17**	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*89*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:25	**Site:**			
Sample #:	**418457-021**	**Client Sample #:**	SB-35-SS-15	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**3.18**	1	1	mg/Kg		08/22/19	KLN	
Barium	**96.2**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.52**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**19.9**	1	1	mg/Kg		08/22/19	KLN	
Cobalt	**10.1**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**14.9**	1	1	mg/Kg		08/22/19	KLN	
Lead	**5.01**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**13.4**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/23/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	**3.82**	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**37.5**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**33.3**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/23/19	08/25/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/23/19	08/25/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/25/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*76*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 10:45	**Site:**			
Sample #:	**418457-022**	**Client Sample #:**	SB-37-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**6.91**	1	1	mg/Kg		08/22/19	KLN	
Barium	**188**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**1.16**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**31.8**	1	1	mg/Kg		08/22/19	KLN	
Cobalt	**14.6**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**34.4**	1	1	mg/Kg		08/22/19	KLN	
Lead	**17.0**	1	1	mg/Kg		08/22/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**20.7**	1	1.5	mg/Kg		08/22/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**53.4**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**68.2**	1	5	mg/Kg		08/22/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	**46**	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C23 to C44)	**180**	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/23/19	08/25/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*103*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:50	**Site:**			
Sample #:	**418457-023**	**Client Sample #:**	SB-45-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**8.33**	1	1	mg/Kg		08/23/19	KLN	
Barium	**301**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.71**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**19.2**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**10.9**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**28.0**	1	1	mg/Kg		08/22/19	KLN	
Lead	**784**	1	1	mg/Kg		08/23/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**16.7**	1	1.5	mg/Kg		08/23/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**38.2**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**138**	1	5	mg/Kg		08/23/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	**0.15**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	**140**	10	100	mg/Kg	08/23/19	08/25/19	TW	
TPH (C23 to C44)	**390**	10	100	mg/Kg	08/23/19	08/25/19	TW	
TPH (C6 to C12)	ND	10	100	mg/Kg	08/23/19	08/25/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*106*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
4,4'-DDE	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
4,4'-DDT	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
a-BHC	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Aldrin	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
b-BHC	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Chlordane (technical)	ND	2	100	ug/Kg	08/20/19	08/24/19	SS	D2
d-BHC	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Dieldrin	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Endosulfan I	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Endosulfan II	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Endosulfan sulfate	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Endrin	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Endrin aldehyde	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Endrin Ketone	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Heptachlor	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Heptachlor epoxide	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Lindane (Gamma-BHC)	ND	2	10	ug/Kg	08/20/19	08/24/19	SS	D2
Methoxychlor	ND	2	20	ug/Kg	08/20/19	08/24/19	SS	D2
Toxaphene	ND	2	200	ug/Kg	08/20/19	08/24/19	SS	D2

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*91*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*91*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:55	**Site:**			
Sample #:	**418457-024**	**Client Sample #:**	SB-45-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**8.43**	1	1	mg/Kg		08/23/19	KLN	
Barium	**135**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.63**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**22.7**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**12.7**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**25.7**	1	1	mg/Kg		08/22/19	KLN	
Lead	**15.0**	1	1	mg/Kg		08/23/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**14.6**	1	1.5	mg/Kg		08/23/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**46.6**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**40.2**	1	5	mg/Kg		08/23/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	**16**	1	10	mg/Kg	08/23/19	08/25/19	TW	
TPH (C23 to C44)	**72**	1	10	mg/Kg	08/23/19	08/25/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/25/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*93*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
a-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Aldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
b-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
d-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/20/19	08/24/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/20/19	08/24/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*78*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*70*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:35	**Site:**			
Sample #:	**418457-025**	**Client Sample #:**	SB-46-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**9.77**	1	1	mg/Kg		08/23/19	KLN	
Barium	**245**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**1.06**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**38.8**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**12.4**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**38.9**	1	1	mg/Kg		08/22/19	KLN	
Lead	**71.6**	1	1	mg/Kg		08/23/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**21.5**	1	1.5	mg/Kg		08/23/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**44.3**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**137**	1	5	mg/Kg		08/23/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	**0.38**	1	0.14	mg/Kg	08/20/19	08/22/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	**32**	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C23 to C44)	**220**	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/23/19	08/25/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*100*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDT	**15**	1	5	ug/Kg	08/20/19	08/24/19	SS	
a-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Aldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
b-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
d-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/20/19	08/24/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/20/19	08/24/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*125*	*24.4-119.9*	*S*
Tetrachloro-m-xylene TCMX (SUR)	*125*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:40	**Site:**			
Sample #:	**418457-026**	**Client Sample #:**	SB-46-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**8.78**	1	1	mg/Kg		08/23/19	KLN	
Barium	**272**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**1.20**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**178**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**216**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**40.3**	1	1	mg/Kg		08/22/19	KLN	
Lead	**79.8**	1	1	mg/Kg		08/23/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**23.9**	1	1.5	mg/Kg		08/23/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**53.8**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**140**	1	5	mg/Kg		08/23/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	**0.27**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	**28**	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C23 to C44)	**140**	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/23/19	08/25/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*93*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
a-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Aldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
b-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
d-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/20/19	08/24/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/20/19	08/24/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*68*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*63*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 08:40	**Site:**			
Sample #:	**418457-027**	**Client Sample #:**	DUP-10	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**9.66**	1	1	mg/Kg		08/23/19	KLN	
Barium	**109**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.92**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**20.6**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**8.97**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**34.0**	1	1	mg/Kg		08/22/19	KLN	
Lead	**90.4**	1	1	mg/Kg		08/23/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**14.1**	1	1.5	mg/Kg		08/23/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**33.1**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**93.0**	1	5	mg/Kg		08/23/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C23 to C44)	**69**	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/23/19	08/25/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*91*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:20	**Site:**			
Sample #:	**418457-028**	**Client Sample #:**	DUP-11	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**4.81**	1	1	mg/Kg		08/23/19	KLN	
Barium	**160**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.83**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**26.2**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**25.0**	1	1	mg/Kg		08/22/19	KLN	
Lead	**11.6**	1	1	mg/Kg		08/23/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**16.0**	1	1.5	mg/Kg		08/23/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**44.8**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**54.5**	1	5	mg/Kg		08/23/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	ND	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C23 to C44)	**65**	2	20	mg/Kg	08/23/19	08/25/19	TW	
TPH (C6 to C12)	ND	2	20	mg/Kg	08/23/19	08/25/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*92*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205671		
PCB-1016	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*67*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205561		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		08/19/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:20	**Site:**			
Sample #:	**418457-028**	**Client Sample #:**	DUP-11	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		08/19/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		08/19/19	LZ	
2-Chlorotoluene	ND	1	5	ug/Kg		08/19/19	LZ	
4-Chlorotoluene	ND	1	5	ug/Kg		08/19/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		08/19/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		08/19/19	LZ	
Acetone	ND	1	100	ug/Kg		08/19/19	LZ	
Allyl Chloride	ND	1	5	ug/Kg		08/19/19	LZ	
Benzene	ND	1	5	ug/Kg		08/19/19	LZ	
Bromobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Bromochloromethane	ND	1	5	ug/Kg		08/19/19	LZ	
Bromodichloromethane	ND	1	5	ug/Kg		08/19/19	LZ	
Bromoform	ND	1	5	ug/Kg		08/19/19	LZ	
Bromomethane	ND	1	5	ug/Kg		08/19/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		08/19/19	LZ	
Chlorobenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Chlorodibromomethane	ND	1	5	ug/Kg		08/19/19	LZ	
Chloroethane	ND	1	5	ug/Kg		08/19/19	LZ	
Chloroform	ND	1	5	ug/Kg		08/19/19	LZ	
Chloromethane	ND	1	5	ug/Kg		08/19/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		08/19/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		08/19/19	LZ	
Dibromomethane	ND	1	5	ug/Kg		08/19/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		08/19/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		08/19/19	LZ	
Ethylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		08/19/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		08/19/19	LZ	
Isopropylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
m and p-Xylene	ND	1	5	ug/Kg		08/19/19	LZ	
Methylene chloride	ND	1	5	ug/Kg		08/19/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		08/19/19	LZ	
Naphthalene	ND	1	5	ug/Kg		08/19/19	LZ	
N-butylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
N-propylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
o-Xylene	ND	1	5	ug/Kg		08/19/19	LZ	
Sec-butylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Styrene	ND	1	5	ug/Kg		08/19/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/Kg		08/19/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		08/19/19	LZ	
Tert-butylbenzene	ND	1	5	ug/Kg		08/19/19	LZ	
Tetrachloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
Toluene	ND	1	5	ug/Kg		08/19/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		08/19/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		08/19/19	LZ	
Trichloroethene	ND	1	5	ug/Kg		08/19/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		08/19/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:20	**Site:**			
Sample #:	**418457-028**	**Client Sample #:**	DUP-11	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	1	5	ug/Kg		08/19/19	LZ	
Xylenes (Total)	ND	1	5	ug/Kg		08/19/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*111*	*70-145*	
4-Bromofluorobenzene (SUR)	*92*	*70-145*	
Dibromofluoromethane (SUR)	*98*	*70-145*	
Toluene-d8 (SUR)	*98*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205613

1,2,4-Trichlorobenzene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
1,2-Dichlorobenzene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
1,3-Dichlorobenzene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
1,4-Dichlorobenzene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
1-Methylnaphthalene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2,4-Dichlorophenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2,4-Dimethylphenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrophenol	ND	50	60000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrotoluene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2,6-Dinitrotoluene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2-Chloronaphthalene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2-Chlorophenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2-Methylnaphthalene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2-Nitroaniline	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
2-Nitrophenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	50	20000	ug/Kg	08/20/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	50	60000	ug/Kg	08/20/19	08/21/19	D2
3-Nitroaniline	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
4-Bromophenyl phenyl ether	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
4-Chloro-3-methylphenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
4-Chloroaniline	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
4-Chlorophenyl phenyl ether	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
4-Nitroaniline	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
4-Nitrophenol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Acenaphthene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Acenaphthylene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Aniline	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Anthracene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Azobenzene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Benz(a)anthracene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Benzidine	ND	50	60000	ug/Kg	08/20/19	08/21/19	D2
Benzo(a)pyrene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Benzo(b)fluoranthene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Benzo(g,h,i)perylene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Benzo(k)fluoranthene	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Benzoic acid	ND	50	60000	ug/Kg	08/20/19	08/21/19	D2
Benzyl alcohol	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethoxy)methane	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethyl) Ether	ND	50	60000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroisopropyl) Ether	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Bis(2-ethylhexyl) phthalate	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2
Butylbenzyl Phthalate	ND	50	12500	ug/Kg	08/20/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 09:20	**Site:**			
Sample #:	**418457-028**	**Client Sample #:**	DUP-11	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Chrysene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Dibenzofuran	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Diethyl phthalate	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Dimethyl phthalate	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Di-n-butyl phthalate	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Di-n-octyl phthalate	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Fluoranthene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Fluorene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobenzene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobutadiene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	50	60000	ug/Kg	08/20/19	08/21/19		D2
Hexachloroethane	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Isophorone	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Naphthalene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Nitrobenzene	ND	50	60000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Pentachlorophenol	ND	50	60000	ug/Kg	08/20/19	08/21/19		D2
Phenanthrene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Phenol	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Pyrene	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Pyridine	ND	50	12500	ug/Kg	08/20/19	08/21/19		D2
Total Cresol	ND	50	20000	ug/Kg	08/20/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*00*	*34-143*	*S2*
2-Fluorobiphenyl (SUR)	*58*	*41-125*	
2-Fluorophenol (SUR)	*35*	*13-153*	
Nitrobenzene-d5 (SUR)	*44*	*27-125*	
p-Terphenyl (SUR)	*54*	*33-155*	
Phenol-d5 (SUR)	*31*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/16/2019 11:55	**Site:**			
Sample #:	**418457-029**	**Client Sample #:**	DUP-12	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205677		
Antimony	ND	1	3	mg/Kg		08/22/19	KLN	L
Arsenic	**11.6**	1	1	mg/Kg		08/23/19	KLN	
Barium	**137**	1	1	mg/Kg		08/22/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/22/19	KLN	
Cadmium	**0.56**	1	0.5	mg/Kg		08/22/19	KLN	
Chromium	**28.9**	1	1	mg/Kg		08/23/19	KLN	
Cobalt	**13.0**	1	0.5	mg/Kg		08/22/19	KLN	
Copper	**25.5**	1	1	mg/Kg		08/22/19	KLN	
Lead	**7.35**	1	1	mg/Kg		08/23/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/22/19	KLN	
Nickel	**19.2**	1	1.5	mg/Kg		08/23/19	KLN	
Selenium	ND	1	3	mg/Kg		08/22/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/22/19	KLN	
Thallium	ND	1	3	mg/Kg		08/22/19	KLN	
Vanadium	**47.9**	1	0.5	mg/Kg		08/22/19	KLN	
Zinc	**49.8**	1	5	mg/Kg		08/23/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205657		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205806		
TPH (C13 to C22)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C23 to C44)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	
TPH (C6 to C12)	ND	1	10	mg/Kg	08/23/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*90*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205670		
4,4'-DDD	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
a-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Aldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
b-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/20/19	08/24/19	SS	
d-BHC	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/20/19	08/24/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/20/19	08/24/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/20/19	08/24/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*39*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*61*	*50-150*	

QCBatchID: QC1205561	Analyst: lucy	Method: EPA 8260B
Matrix: Solid	Analyzed: 08/19/2019	Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205561MB1					
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5	
1,1,1-Trichloroethane	ND	ug/Kg		5	
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5	
1,1,2-Trichloroethane	ND	ug/Kg		5	
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5	
1,1-Dichloroethane	ND	ug/Kg		5	
1,1-Dichloroethene	ND	ug/Kg		5	
1,1-Dichloropropene	ND	ug/Kg		5	
1,2,3-Trichlorobenzene	ND	ug/Kg		5	
1,2,3-Trichloropropane	ND	ug/Kg		5	
1,2,4-Trichlorobenzene	ND	ug/Kg		5	
1,2,4-Trimethylbenzene	ND	ug/Kg		5	
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5	
1,2-Dibromoethane	ND	ug/Kg		5	
1,2-Dichlorobenzene	ND	ug/Kg		5	
1,2-Dichloroethane	ND	ug/Kg		5	
1,2-Dichloropropane	ND	ug/Kg		5	
1,3,5-Trimethylbenzene	ND	ug/Kg		5	
1,3-Dichlorobenzene	ND	ug/Kg		5	
1,3-Dichloropropane	ND	ug/Kg		5	
1,4-Dichlorobenzene	ND	ug/Kg		5	
2,2-Dichloropropane	ND	ug/Kg		5	
2-Butanone (MEK)	ND	ug/Kg		100	
2-Chlorotoluene	ND	ug/Kg		5	
4-Chlorotoluene	ND	ug/Kg		5	
4-Isopropyltoluene	ND	ug/Kg		5	
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5	
Acetone	ND	ug/Kg		100	
Allyl Chloride	ND	ug/Kg		5	
Benzene	ND	ug/Kg		5	
Bromobenzene	ND	ug/Kg		5	
Bromochloromethane	ND	ug/Kg		5	
Bromodichloromethane	ND	ug/Kg		5	
Bromoform	ND	ug/Kg		5	
Bromomethane	ND	ug/Kg		5	
Carbon Tetrachloride	ND	ug/Kg		5	
Chlorobenzene	ND	ug/Kg		5	
Chlorodibromomethane	ND	ug/Kg		5	
Chloroethane	ND	ug/Kg		5	
Chloroform	ND	ug/Kg		5	
Chloromethane	ND	ug/Kg		5	
cis-1,2-Dichloroethene	ND	ug/Kg		5	
cis-1,3-dichloropropene	ND	ug/Kg		5	
cis-1,4-dichloro-2-butene	ND	ug/Kg		5	
Dibromomethane	ND	ug/Kg		5	
Dichlorodifluoromethane	ND	ug/Kg		5	
Di-isopropyl ether (DIPE)	ND	ug/Kg		5	
Ethylbenzene	ND	ug/Kg		5	
Ethyl-tertbutylether (ETBE)	ND	ug/Kg		5	
Hexachlorobutadiene	ND	ug/Kg		5	
Isopropylbenzene	ND	ug/Kg		5	
m and p-Xylene	ND	ug/Kg		5	

QCBatchID: QC1205561 **Analyst:** lucy **Method:** EPA 8260B

Matrix: Solid **Analyzed:** 08/19/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes	
QC1205561MB1						
Methylene chloride	ND	ug/Kg		5		
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5		
Naphthalene	ND	ug/Kg		5		
N-butylbenzene	ND	ug/Kg		5		
N-propylbenzene	ND	ug/Kg		5		
o-Xylene	ND	ug/Kg		5		
Sec-butylbenzene	ND	ug/Kg		5		
Styrene	ND	ug/Kg		5		
t-Butyl alcohol (TBA)	ND	ug/Kg		10		
Tert-amylmethylether (TAME)	ND	ug/Kg		5		
Tert-butylbenzene	ND	ug/Kg		5		
Tetrachloroethene	ND	ug/Kg		5		
Toluene	ND	ug/Kg		5		
trans-1,2-dichloroethene	ND	ug/Kg		5		
trans-1,3-dichloropropene	ND	ug/Kg		5		
trans-1,4-dichloro-2-butene	ND	ug/Kg		5		
Trichloroethene	ND	ug/Kg		5		
Trichlorofluoromethane	ND	ug/Kg		5		
Vinyl Chloride	ND	ug/Kg		5		
Xylenes (Total)	ND	ug/Kg		5		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205561LCS1, QC1205561LCSD1											
1,1-Dichloroethene	50	50	49	47	ug/Kg	98	94	4	59-172	22	
Benzene	50	50	53	51	ug/Kg	106	102	4	62-137	24	
Chlorobenzene	50	50	50	49	ug/Kg	100	98	2	60-133	24	
Methyl-t-butyl Ether (MTBE)	50	50	45	42	ug/Kg	90	84	7	62-137	21	
Toluene	50	50	51	50	ug/Kg	102	100	2	59-139	21	
Trichloroethene	50	50	51	50	ug/Kg	102	100	2	66-142	21	

QCBatchID: QC1205613	Analyst: Abanh	Method: EPA 8270C
Matrix: Solid	Analyzed: 08/20/2019	Instrument: SVOA-MS (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205613MB1					
1,2,4-Trichlorobenzene	ND	ug/Kg		250	
1,2-Dichlorobenzene	ND	ug/Kg		250	
1,3-Dichlorobenzene	ND	ug/Kg		250	
1,4-Dichlorobenzene	ND	ug/Kg		250	
1-Methylnaphthalene	ND	ug/Kg		250	
2,4,5-Trichlorophenol	ND	ug/Kg		250	
2,4,6-Trichlorophenol	ND	ug/Kg		250	
2,4-Dichlorophenol	ND	ug/Kg		250	
2,4-Dimethylphenol	ND	ug/Kg		250	
2,4-Dinitrophenol	ND	ug/Kg		1200	
2,4-Dinitrotoluene	ND	ug/Kg		250	
2,6-Dinitrotoluene	ND	ug/Kg		250	
2-Chloronaphthalene	ND	ug/Kg		250	
2-Chlorophenol	ND	ug/Kg		250	
2-Methyl-4,6-dinitrophenol	ND	ug/Kg		250	
2-Methylnaphthalene	ND	ug/Kg		250	
2-Methylphenol (o-Cresol)	ND	ug/Kg		250	
2-Nitroaniline	ND	ug/Kg		250	
2-Nitrophenol	ND	ug/Kg		250	
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/Kg		400	
3,3'-Dichlorobenzidine	ND	ug/Kg		1200	
3-Nitroaniline	ND	ug/Kg		250	
4-Bromophenyl phenyl ether	ND	ug/Kg		250	
4-Chloro-3-methylphenol	ND	ug/Kg		250	
4-Chloroaniline	ND	ug/Kg		250	
4-Chlorophenyl phenyl ether	ND	ug/Kg		250	
4-Nitroaniline	ND	ug/Kg		250	
4-Nitrophenol	ND	ug/Kg		250	
Acenaphthene	ND	ug/Kg		250	
Acenaphthylene	ND	ug/Kg		250	
Aniline	ND	ug/Kg		250	
Anthracene	ND	ug/Kg		250	
Azobenzene	ND	ug/Kg		250	
Benz(a)anthracene	ND	ug/Kg		250	
Benzidine	ND	ug/Kg		1200	
Benzo(a)pyrene	ND	ug/Kg		250	
Benzo(b)fluoranthene	ND	ug/Kg		250	
Benzo(g,h,i)perylene	ND	ug/Kg		250	
Benzo(k)fluoranthene	ND	ug/Kg		250	
Benzoic acid	ND	ug/Kg		1200	
Benzyl alcohol	ND	ug/Kg		250	
Bis(2-chloroethoxy)methane	ND	ug/Kg		250	
Bis(2-chloroethyl) Ether	ND	ug/Kg		1200	
Bis(2-chloroisopropyl) Ether	ND	ug/Kg		250	
Bis(2-ethylhexyl) phthalate	ND	ug/Kg		250	
Butylbenzyl Phthalate	ND	ug/Kg		250	
Carbazole	ND	ug/Kg		250	
Chrysene	ND	ug/Kg		250	
Dibenz(a,h)anthracene	ND	ug/Kg		250	
Dibenzofuran	ND	ug/Kg		250	
Diethyl phthalate	ND	ug/Kg		250	
Dimethyl phthalate	ND	ug/Kg		250	

QCBatchID: QC1205613 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205613MB1					
Di-n-butyl phthalate	ND	ug/Kg		250	
Di-n-octyl phthalate	ND	ug/Kg		250	
Fluoranthene	ND	ug/Kg		250	
Fluorene	ND	ug/Kg		250	
Hexachlorobenzene	ND	ug/Kg		250	
Hexachlorobutadiene	ND	ug/Kg		250	
Hexachlorocyclopentadiene	ND	ug/Kg		1200	
Hexachloroethane	ND	ug/Kg		250	
Indeno(1,2,3-cd)pyrene	ND	ug/Kg		250	
Isophorone	ND	ug/Kg		250	
Naphthalene	ND	ug/Kg		250	
Nitrobenzene	ND	ug/Kg		1200	
N-Nitrosodimethylamine (NDMA)	ND	ug/Kg		250	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/Kg		250	
N-Nitrosodiphenylamine	ND	ug/Kg		250	
Pentachlorophenol	ND	ug/Kg		1200	
Phenanthrene	ND	ug/Kg		250	
Phenol	ND	ug/Kg		250	
Pyrene	ND	ug/Kg		250	
Pyridine	ND	ug/Kg		250	
Total Cresol	ND	ug/Kg		400	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613LCS1											
1,2,4-Trichlorobenzene	2000		1300		ug/Kg	65			43-111		
1,4-Dichlorobenzene	2000		1100		ug/Kg	55			30-116		
2,4,5-Trichlorophenol	2000		1500		ug/Kg	75			57-125		
2,4-Dimethylphenol	2000		1100		ug/Kg	55			50-112		
2,4-Dinitrotoluene	2000		1500		ug/Kg	75			57-124		
2-Chlorophenol	2000		1300		ug/Kg	65			48-114		
3 and 4-Methylphenol (m and p-Cresol)	2000		1300		ug/Kg	65			56-124		
4-Chloro-3-methylphenol	2000		1300		ug/Kg	65			61-122		
4-Nitrophenol	2000		1300		ug/Kg	65			54-126		
Acenaphthene	2000		1400		ug/Kg	70			53-112		
Benzo(b)fluoranthene	2000		1400		ug/Kg	70			61-125		
Chrysene	2000		1600		ug/Kg	80			59-117		
N-Nitrosodi-n-propylamine (NDPA)	2000		1500		ug/Kg	75			54-110		
Pentachlorophenol	2000		1300		ug/Kg	65			41-103		
Phenol	2000		1300		ug/Kg	65			51-111		
Pyrene	2000		1500		ug/Kg	75			63-119		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613MS1, QC1205613MSD1												**Source: 418350-015**
1,2,4-Trichlorobenzene	ND	2000	2000	2000	1200	ug/Kg	100	60	50.0	35-93	30	M
1,4-Dichlorobenzene	ND	2000	2000	1700	1000	ug/Kg	85	50	51.9	39-95	30	M
2,4,5-Trichlorophenol	ND	2000	2000	1900	990	ug/Kg	95	50	63.0	44-108	30	M
2,4-Dimethylphenol	ND	2000	2000	1800	980	ug/Kg	90	49	59.0	37-105	30	M
2,4-Dinitrotoluene	ND	2000	2000	2200	1600	ug/Kg	110	80	31.6	48-109	30	M
2-Chlorophenol	ND	2000	2000	1700	990	ug/Kg	85	50	52.8	42-102	30	M

QCBatchID: QC1205613 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-MS (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613MS1, QC1205613MSD1												**Source: 418350-015**
3 and 4-Methylphenol (m and p-Cresol)	ND	2000	2000	1900	1000	ug/Kg	95	50	62.1	33-116	30	M
4-Chloro-3-methylphenol	ND	2000	2000	1800	990	ug/Kg	90	50	58.1	33-120	30	M
4-Nitrophenol	ND	2000	2000	2000	1400	ug/Kg	100	70	35.3	37-107	30	M
Acenaphthene	ND	2000	2000	2200	1200	ug/Kg	110	60	58.8	57-99	30	M
Benzo(b)fluoranthene	ND	2000	2000	1800	990	ug/Kg	90	50	58.1	59-126	30	M
Chrysene	ND	2000	2000	2300	1300	ug/Kg	115	65	55.6	68-120	30	M
N-Nitrosodi-n-propylamine (NDPA)	ND	2000	2000	1900	1100	ug/Kg	95	55	53.3	41-127	30	M
Pentachlorophenol	ND	2000	2000	1600	1200	ug/Kg	80	60	28.6	43-120	30	
Phenol	ND	2000	2000	1900	1000	ug/Kg	95	50	62.1	46-116	30	M
Pyrene	ND	2000	2000	2200	1200	ug/Kg	110	60	58.8	53-129	30	M

QCBatchID:	**QC1205655**	**Analyst:**	cmorales	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	08/20/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205655MB1						
Mercury	ND	mg/Kg		0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205655LCS1											
Mercury	0.83		0.94		mg/Kg	113			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205655MS1, QC1205655MSD1												**Source: 418457-001**
Mercury	0.04	0.83	0.83	0.87	0.88	mg/Kg	100	101	1.1	75-125	20	

QCBatchID:	**QC1205657**	**Analyst:**	cmorales	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	08/20/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205657MB1						
Mercury	ND	mg/Kg		0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205657LCS1											
Mercury	0.83		0.95		mg/Kg	114			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205657MS1, QC1205657MSD1												**Source: 418457-021**
Mercury	0.05	0.83	0.83	0.86	0.94	mg/Kg	98	107	8.9	75-125	20	

QCBatchID: QC1205670 **Analyst:** bmorris **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205670MB1					
4,4'-DDD	ND	ug/Kg		5	
4,4'-DDE	ND	ug/Kg		5	
4,4'-DDT	ND	ug/Kg		5	
a-BHC	ND	ug/Kg		5	
Aldrin	ND	ug/Kg		5	
b-BHC	ND	ug/Kg		5	
Chlordane (technical)	ND	ug/Kg		50	
d-BHC	ND	ug/Kg		5	
Dieldrin	ND	ug/Kg		5	
Endosulfan I	ND	ug/Kg		5	
Endosulfan II	ND	ug/Kg		5	
Endosulfan sulfate	ND	ug/Kg		5	
Endrin	ND	ug/Kg		5	
Endrin aldehyde	ND	ug/Kg		5	
Endrin Ketone	ND	ug/Kg		5	
Heptachlor	ND	ug/Kg		5	
Heptachlor epoxide	ND	ug/Kg		5	
Lindane (Gamma-BHC)	ND	ug/Kg		5	
Methoxychlor	ND	ug/Kg		10	
Toxaphene	ND	ug/Kg		100	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205670LCS1											
4,4'-DDD	50		42		ug/Kg	84			43-172		
4,4'-DDE	50		45		ug/Kg	90			44-163		
4,4'-DDT	50		42		ug/Kg	84			40-158		
a-BHC	50		43		ug/Kg	86			45-150		
Aldrin	50		40		ug/Kg	80			46-142		
b-BHC	50		44		ug/Kg	88			42-156		
d-BHC	50		40		ug/Kg	80			37-161		
Dieldrin	50		38		ug/Kg	76			47-151		
Endosulfan I	50		44		ug/Kg	88			47-141		
Endosulfan II	50		44		ug/Kg	88			44-156		
Endosulfan sulfate	50		44		ug/Kg	88			43-157		
Endrin	50		45		ug/Kg	90			47-160		
Endrin aldehyde	50		26		ug/Kg	52			32-127		
Endrin Ketone	50		45		ug/Kg	90			48-159		
Heptachlor	50		41		ug/Kg	82			50-144		
Heptachlor epoxide	50		42		ug/Kg	84			48-145		
Lindane (Gamma-BHC)	50		42		ug/Kg	84			47-151		
Methoxychlor	50		47		ug/Kg	94			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205670MS1, QC1205670MSD1												**Source: 418500-001**
4,4'-DDD	ND	50	50	43	38	ug/Kg	86	76	12.3	43-172	20	
4,4'-DDE	ND	50	50	44	39	ug/Kg	88	78	12.0	44-163	20	
4,4'-DDT	ND	50	50	44	39	ug/Kg	88	78	12.0	40-158	20	
a-BHC	ND	50	50	41	39	ug/Kg	82	78	5.0	45-150	20	

QCBatchID: QC1205670 **Analyst:** bmorris **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-GC (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205670MS1, QC1205670MSD1												**Source: 418500-001**
Aldrin	ND	50	50	41	37	ug/Kg	82	74	10.3	46-142	20	
b-BHC	ND	50	50	45	41	ug/Kg	90	82	9.3	42-156	20	
d-BHC	ND	50	50	40	37	ug/Kg	80	74	7.8	37-161	20	
Dieldrin	ND	50	50	38	34	ug/Kg	76	68	11.1	47-151	20	
Endosulfan I	ND	50	50	43	39	ug/Kg	86	78	9.8	47-141	20	
Endosulfan II	ND	50	50	43	38	ug/Kg	86	76	12.3	44-156	20	
Endosulfan sulfate	ND	50	50	43	39	ug/Kg	86	78	9.8	43-157	20	
Endrin	ND	50	50	43	39	ug/Kg	86	78	9.8	47-160	20	
Endrin aldehyde	ND	50	50	35	34	ug/Kg	70	68	2.9	32-127	20	
Endrin Ketone	ND	50	50	45	39	ug/Kg	90	78	14.3	48-159	20	
Heptachlor	ND	50	50	41	38	ug/Kg	82	76	7.6	50-144	20	
Heptachlor epoxide	ND	50	50	40	37	ug/Kg	80	74	7.8	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	42	39	ug/Kg	84	78	7.4	47-151	20	
Methoxychlor	ND	50	50	51	44	ug/Kg	102	88	14.7	36-182	20	

QCBatchID: QC1205671 **Analyst:** bmorris **Method:** EPA 8082

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205671MB1					
PCB-1016	ND	ug/Kg		50	
PCB-1221	ND	ug/Kg		50	
PCB-1232	ND	ug/Kg		50	
PCB-1242	ND	ug/Kg		50	
PCB-1248	ND	ug/Kg		50	
PCB-1254	ND	ug/Kg		50	
PCB-1260	ND	ug/Kg		50	
PCB-1262	ND	ug/Kg		50	
PCB-1268	ND	ug/Kg		50	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205671LCS1											
PCB-1016	500		460		ug/Kg	92			70-130		
PCB-1260	500		380		ug/Kg	76			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205671MS1, QC1205671MSD1												**Source: 418500-001**
PCB-1016	ND	500	500	410	360	ug/Kg	82	72	13.0	70-130	20	
PCB-1260	ND	500	500	400	370	ug/Kg	80	74	7.8	70-130	20	

QCBatchID: QC1205676 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/21/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205676MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205676LCS1											
Antimony	100		111		mg/Kg	111			80-120		
Arsenic	100		92.9		mg/Kg	93			80-120		
Barium	100		98.3		mg/Kg	98			80-120		
Beryllium	100		94.2		mg/Kg	94			80-120		
Cadmium	100		101		mg/Kg	101			80-120		
Chromium	100		101		mg/Kg	101			80-120		
Cobalt	100		98.0		mg/Kg	98			80-120		
Copper	100		98.8		mg/Kg	99			80-120		
Lead	100		98.8		mg/Kg	99			80-120		
Molybdenum	100		98.1		mg/Kg	98			80-120		
Nickel	100		96.1		mg/Kg	96			80-120		
Selenium	100		91.1		mg/Kg	91			80-120		
Silver	100		95.3		mg/Kg	95			80-120		
Thallium	100		91.1		mg/Kg	91			80-120		
Vanadium	100		100		mg/Kg	100			80-120		
Zinc	100		95.4		mg/Kg	95			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205676MS1, QC1205676MSD1												**Source: 418457-001**
Antimony	ND	100	100	38.9	40.8	mg/Kg	39	41	4.8	75-125	20	M
Arsenic	53.4	100	100	135	140	mg/Kg	82	87	3.6	75-125	20	
Barium	107	100	100	218	202	mg/Kg	111	95	7.6	75-125	20	
Beryllium	ND	100	100	92.3	88.9	mg/Kg	92	89	3.8	75-125	20	
Cadmium	1.21	100	100	82.1	85.5	mg/Kg	81	84	4.1	75-125	20	
Chromium	21.2	100	100	105	108	mg/Kg	84	87	2.8	75-125	20	
Cobalt	9.10	100	100	103	106	mg/Kg	94	97	2.9	75-125	20	
Copper	24.1	100	100	121	122	mg/Kg	97	98	0.8	75-125	20	
Lead	49.0	100	100	134	135	mg/Kg	85	86	0.7	75-125	20	
Molybdenum	ND	100	100	87.3	91.3	mg/Kg	87	91	4.5	75-125	20	

QCBatchID: QC1205676	**Analyst:** sbailey-woo	**Method:** EPA 6010B			
Matrix: Solid	**Analyzed:** 08/21/2019	**Instrument:** AAICP (group)			

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205676MS1, QC1205676MSD1												**Source: 418457-001**
Nickel	11.8	100	100	97.2	99.6	mg/Kg	85	88	2.4	75-125	20	
Selenium	0.83	100	100	88.5	93.4	mg/Kg	88	93	5.4	75-125	20	
Silver	ND	100	100	97.6	98.5	mg/Kg	98	99	0.9	75-125	20	
Thallium	3.54	100	100	81.9	87.5	mg/Kg	78	84	6.6	75-125	20	
Vanadium	30.7	100	100	130	132	mg/Kg	99	101	1.5	75-125	20	
Zinc	168	100	100	223	216	mg/Kg	55	48	3.2	75-125	20	M

QCBatchID: QC1205677 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/21/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205677MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205677LCS1											
Antimony	100		122		mg/Kg	122			80-120		L
Arsenic	100		96.9		mg/Kg	97			80-120		
Barium	100		98.9		mg/Kg	99			80-120		
Beryllium	100		95.0		mg/Kg	95			80-120		
Cadmium	100		97.7		mg/Kg	98			80-120		
Chromium	100		104		mg/Kg	104			80-120		
Cobalt	100		100		mg/Kg	100			80-120		
Copper	100		99.2		mg/Kg	99			80-120		
Lead	100		109		mg/Kg	109			80-120		
Molybdenum	100		104		mg/Kg	104			80-120		
Nickel	100		106		mg/Kg	106			80-120		
Selenium	100		99.8		mg/Kg	100			80-120		
Silver	100		106		mg/Kg	106			80-120		
Thallium	100		100		mg/Kg	100			80-120		
Vanadium	100		98.5		mg/Kg	99			80-120		
Zinc	100		103		mg/Kg	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205677MS1, QC1205677MSD1												**Source: 418457-021**
Antimony	ND	100	100	23.4	27.7	mg/Kg	23	28	16.8	75-125	20	M
Arsenic	3.18	100	100	90.6	93.6	mg/Kg	87	90	3.3	75-125	20	
Barium	96.2	100	100	183	183	mg/Kg	87	87	0.0	75-125	20	
Beryllium	ND	100	100	88.9	94.0	mg/Kg	89	94	5.6	75-125	20	
Cadmium	0.52	100	100	88.7	93.8	mg/Kg	88	93	5.6	75-125	20	
Chromium	19.9	100	100	115	119	mg/Kg	95	99	3.4	75-125	20	
Cobalt	10.1	100	100	99.0	103	mg/Kg	89	93	4.0	75-125	20	
Copper	14.9	100	100	109	114	mg/Kg	94	99	4.5	75-125	20	
Lead	5.01	100	100	99.7	102	mg/Kg	95	97	2.3	75-125	20	
Molybdenum	ND	100	100	89.6	92.7	mg/Kg	90	93	3.4	75-125	20	

QCBatchID: QC1205677 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/21/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205677MS1, QC1205677MSD1												**Source: 418457-021**
Nickel	13.4	100	100	106	107	mg/Kg	93	94	0.9	75-125	20	
Selenium	ND	100	100	78.6	82.0	mg/Kg	79	82	4.2	75-125	20	
Silver	ND	100	100	95.6	98.8	mg/Kg	96	99	3.3	75-125	20	
Thallium	3.82	100	100	85.3	90.6	mg/Kg	81	87	6.0	75-125	20	
Vanadium	37.5	100	100	132	134	mg/Kg	95	97	1.5	75-125	20	
Zinc	33.3	100	100	116	119	mg/Kg	83	86	2.6	75-125	20	

QCBatchID:	**QC1205771**	**Analyst:**	cmorales	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	08/22/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205771MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205771LCS1											
Mercury	0.83		0.79		mg/Kg	95			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205771MS1, QC1205771MSD1												**Source: 418178-001**
Mercury	ND	0.83	0.83	0.83	0.83	mg/Kg	100	100	0.0	75-125	20	

QCBatchID: QC1205805 **Analyst:** Jarriaga **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 08/26/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205805MB1						
TPH (C10 to C28)	ND	mg/Kg		10		
TPH (C13 to C22)	ND	mg/Kg		10		
TPH (C23 to C44)	ND	mg/Kg		10		
TPH (C6 to C12)	ND	mg/Kg		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205805LCS1											
TPH (C10 to C28)	250		230		mg/Kg	92			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205805MS1, QC1205805MSD1												**Source: 418457-001**
TPH (C10 to C28)	ND	250	250	200	230	mg/Kg	80	92	14.0	70-130	20	

QCBatchID: QC1205806 **Analyst:** Jarriaga **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 08/26/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205806MB1						
TPH (C10 to C28)	ND	mg/Kg		10		
TPH (C13 to C22)	ND	mg/Kg		10		
TPH (C23 to C44)	ND	mg/Kg		10		
TPH (C6 to C12)	ND	mg/Kg		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205806LCS1											
TPH (C10 to C28)	250		230		mg/Kg	92			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205806MS1, QC1205806MSD1												**Source: 418457-021**
TPH (C10 to C28)	ND	250	250	220	210	mg/Kg	88	84	4.7	70-130	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL

Chain of Custody Record — Lab No: 410457 — Page: 1 of 3

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A				Test Instructions / Comments
1	SB-1-SS-1	8/16/19	0830	S	1/8oz	N	X	X									
2	SB-1-SS-4		0840														
3	SB-1-SS-8		0845														
4	SB-1-SS-13		0850														
5	SB-2-SS-1		1000														
6	SB-2-SS-4		1005		1/8oz, 3/40mL	4			X	X	X						
7	SB-2-SS-6		1018		1/8oz	N											
8	SB-3-SS-0		0910									X	X				
9	SB-3-SS-2		0915									X	X				
10	SB-3-SS-5		0920		1/8oz, 3/40mL	4			X	X	X						

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux	8/16/19 1540
1 Received By:		Ben Salgado	E.A	8.16.19 1540
2 Relinquished By:		Ben Salgado	E.A.	8.16.19 1627
2 Received By:		Christine Castro	EA	8/16/19 1627
3 Relinquished By:				
3 Received By:				

8.5/0.7, 4.7/0.5

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 418457

Page: 2 of 3

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A				Test Instructions / Comments
1	SB-3-SS-7	8/16/19	0925	S	1/8oz	N	X	X									
2	SB-3-SS-10		0930														
3	SB-4-SS-0		0730									X					
4	SB-4-SS-2		0735									X					
5	SB-4-SS-5		0745														
6	SB-4-SS-10		0750														
7	SB-4-SS-14		0755														
8	SB-35-SS-2		1105		1/8oz, 3/40mL	4			X	X	X						
9	SB-35-SS-7		1115		1/8oz	N											
10	SB-35-SS-10		1120														

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux	8/16/19 1540
1 Received By:		BEN SALGADO	E.A.	8.16.19 1540
2 Relinquished By:		BEN SALGADO	E.A	8.16.19 1627
2 Received By:		Christine Castro	EA	8/16/19 1627
3 Relinquished By:				
3 Received By:				

ENTHALPY ANALYTICAL

Chain of Custody Record — Lab No: 419457 — Page: 3 of 3

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-35-SS-15	8/16/19	1125	S	1/8oz	N	X	X						
2	SB-37-SS-1		1045											
3	SB-45-SS-0		1150									X		
4	SB-45-SS-2		1155									X		
5	SB-46-SS-0		1135									X		
6	SB-46-SS-2		1140									X		
7	DUP-10		0840											
8	DUP-11		0920		1/8oz, 3/40mL	Y			X	X	X			
9	DUP-12		1155		1/8oz	N						X		
10														

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux	8/16/19 1540
1 Received By:		Ben Salgado	E.A.	8.16.19 1540
2 Relinquished By:		Ben Salgado	E.A.	8.16.19 1627
2 Received By:		Christine Castro	EA	8/16/19 1627
3 Relinquished By:				
3 Received By:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Roux Project: InSite

Date Received: 8/16/19 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 2 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 8.5 #2: 4.7 #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.7 #2: 0.5 #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____ ☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 8/16/19

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Enthalpy Analytical **931 W. Barkley Ave.** **Orange, CA 92868-**

Number of Pages 4 **Date Received 08/20/2019** **Date Reported 08/23/2019**

Telephone: (714)771-6900
Attention: Ranjit Clarke

Job Number	Order Date	Client
100139	08/20/2019	ENTANA

Project ID: 418457
Project Name: PO# 1038502

Enclosed please find results of analyses of 2 solid samples which were analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

Enthalpy Analytical
Formerly Associated Labs
1 Park Plaza, Suite 1000
Irvine, CA 92614
Tel: 714.771.6900 Fax: 714.538.1209
info-sc@enthalpy.com

100139

MONTROSE ENVIRONMENTAL

Subcontract Laboratory:

American Environmental Te
2834 North Naomi Street
Burbank, CA 91504
818-845-8200
ATTN: Jim Lin
PO# 1038502

Project: 418457 **Due:**
PM: Ranjit Clarke
Email: ranjit.clarke@enthalpy.com
CC: incomingreports@enthalpy.com
Require: ☑ EDD ☐ EDF ☐ EDT
Report To: ☐ MDL

Note:

Matrix	Sampled	Sample ID	Analysis	Comment
Solid	08/16/19 09:10	SB-3-SS-0 (418457-008)	8151_OUT	100139-01
Solid	08/16/19 09:15	SB-3-SS-2 (418457-009)	8151_OUT	100139-02

Note:
Due 08/23/19

Relinquished By:	Received By:
Date/Time 8/20/19 934	Date/Time 8/20/19 0934
Date/Time 8/20/19 1116	Date/Time 08/20/19 1116

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 NORTH NAOMI ST. BURBANK, CALIFORNIA 91504 DHS # 1541 LACSD# 10181
TEL (888) 288-AETL (818) 845-8200 FAX (818) 845-8840 www.aetlab.com

COOLER RECEIPT FORM

Client Name: Enthalpy Analy.
Project Name:
AETL Job Number: 100139
Date Received: 08/20/19 Received by:
Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS
☐ Others:

Samples were received in: ☒ Cooler (/) ☐ Other (Specify):
Inside temperature of shipping container No 1: 3.3°C, No 2: _____, No 3: _____
Type of sample containers: ☐ VOA, ☐ Glass bottles, ☒ Wide mouth jars, ☐ HDPE bottles, ☐ Metal sleeves, ☐ Others (Specify): _____
How are samples preserved: ☐ None, ☐ Ice , ☒ Blue Ice, ☐ Dry Ice
☒ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, ☐ MeOH
☐ Other (Specify):

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?		✓	
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	✓		
9. Are samples preserved properly for the intended analysis?	✓		
10. Are the VOAs free of headspace?	NA		
11. Are the jars free of headspace?	✓		

PLEASE NOTE ALL SAMPLES WILL BE DISPOSED OF 90 DAYS AFTER RECEIVING DATE. IF AETL IS INFORMED OTHERWISE, THERE WILL BE A STORAGE CHARGE PER SAMPLE PER MONTH FOR ANY SAMPLE HELD BEYOND 90 DAYS.

Explain all "No" answers for above questions:

_____
_____
_____
_____

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Enthalpy Analytical **931 W. Barkley Ave.** **Orange, CA 92868-**	**Project ID: 418457** **Date Received 08/20/2019** **Date Reported 08/23/2019**

Telephone: (714)771-6900
Attention: Ranjit Clarke

Job Number	Order Date	Client
100139	08/20/2019	ENTANA

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 2 samples with the following specification on 08/20/2019.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
100139.01	SB-3-SS-0 (418457-008)	08/16/2019	Solid	1
100139.02	SB-3-SS-2 (418457-009)	08/16/2019	Solid	1

Method ^ Submethod	Req Date	Priority	TAT	Units
(8151A)	08/23/2019	4	Rush	ug/Kg

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Unless otherwise noted, all results of soil and solid samples are based on wet weight.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868-

Telephone: (714)771-6900
Attn: Ranjit Clarke
Page: **2**

Project ID: 418457
Project Name: PO# 1038502

AETL Job Number	Submitted	Client
100139	08/20/2019	ENTANA

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 082219MB1

Our Lab I.D.			Method Blank	100139.01	100139.02		
Client Sample I.D.				SB-3-SS-0 (418457-008)	SB-3-SS-2 (418457-009)		
Date Sampled				08/16/2019	08/16/2019		
Date Prepared			08/22/2019	08/22/2019	08/22/2019		
Preparation Method			3550B	3550B	3550B		
Date Analyzed			08/23/2019	08/23/2019	08/23/2019		
Matrix			Solid	Solid	Solid		
Units			ug/Kg	ug/Kg	ug/Kg		
Dilution Factor			1	1	1		
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**		
Acifluorfen	20	20	ND	ND	ND		
Bentazon	10	10	ND	ND	ND		
Chloramben	10	10	ND	ND	ND		
2,4-D	10	10	ND	ND	ND		
Dalapon	20	20	ND	ND	ND		
2,4-DB	10	10	ND	ND	ND		
DCPA diacid	20	20	ND	ND	ND		
Dicamba	10	10	ND	ND	ND		
3,5-Dichlorobenzoic acid	10	10	ND	ND	ND		
Dichloroprop	10	10	ND	ND	ND		
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	20	20	ND	ND	ND		
MCPA	2000	2000	ND	ND	ND		
MCPP	2000	2000	ND	ND	ND		
4-Nitrophenol	10	10	ND	ND	ND		
Pentachlorophenol (PCP)	10	10	ND	ND	ND		
Picloram	10	10	ND	ND	ND		
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND	ND	ND		
2,4,5-TP	10	10	ND	ND	ND		

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Project ID: 418457
Project Name: PO# 1038502

AETL Job Number	Submitted	Client
100139	08/20/2019	ENTANA

Method: (8151A), Chlorinated Herbicides by GC/ECD

Our Lab I.D.			Method Blank	100139.01	100139.02		
Surrogates	%Rec.Limit		% Rec.	% Rec.	% Rec.		
DCAA	40-150		44.4	66.0	71.0		

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

QUALITY CONTROL RESULTS

Ordered By

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868-

Telephone: (714)771-6900
Attn: Ranjit Clarke
Page: **4**

Project ID: 418457
Project Name: PO# 1038502

AETL Job Number	Submitted	Client
100139	08/20/2019	ENTANA

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 082219MB1; Dup or Spiked Sample: 100125.02; LCS: Blank; QC Prepared: 08/22/2019; QC Analyzed: 08/22/2019; Units: ug/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
2,4-D	0.00	25.0	16.7	66.8	25.0	14.3	57.2	15.5	40-140	<40
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	0.00	25.0	18.2	72.8	25.0	17.2	68.8	5.6	40-140	<40
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	0.00	25.0	17.3	69.2	25.0	12.0	48.0	36.2	40-140	<40
Surrogates										
DCAA	0.00	50.0	27.7	55.4	50.0	29.1	58.2	4.9	40-140	<40

QC Batch No: 082219MB1; Dup or Spiked Sample: 100125.02; LCS: Blank; QC Prepared: 08/22/2019; QC Analyzed: 08/22/2019; Units: ug/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
2,4-D	25.0	26.0	104	25.0	25.5	102	1.9	50-140	<40	
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	25.0	13.6	54.4	25.0	13.5	54.0	<1	50-140	<40	
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	25.0	23.7	94.8	25.0	23.8	95.2	<1	50-140	<40	
LCS										
Dalapon	25.0	21.1	84.4	25.0	22.6	90.4	6.9	50-140	<40	
2,4-DB	25.0	16.8	67.2	25.0	22.4	89.6	28.6	50-140	<40	
Dicamba	25.0	14.1	56.4	25.0	14.3	57.2	1.4	50-140	<40	
Dichloroprop	25.0	14.3	57.2	25.0	14.8	59.2	3.4	50-140	<40	
MCPA	2,500	1,980	79.0	2,500	2,480	99.1	22.6	50-140	<40	
MCPP	2,500	2,730	109	2,500	2,430	97.2	11.4	50-140	<40	
2,4,5-TP	25.0	14.4	57.6	25.0	15.3	61.2	6.1	50-140	<40	
Surrogates										
DCAA	50.0	26.8	53.6	50.0	27.2	54.4	1.5	50-140	<40	

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

#:	Recovery is not within acceptable control limits.
*:	In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
B:	Analyte was present in the Method Blank.
D:	Result is from a diluted analysis.
E:	Result is beyond calibration limits and is estimated.
H:	Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
J:	Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
M:	Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
MCL:	Maximum Contaminant Level
NS:	No Standard Available
S6:	Surrogate recovery is outside control limits due to matrix interference.
S8:	The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
X:	Results represent LCS and LCSD data.

Definition:

%Limi:	Percent acceptable limits.
%REC:	Percent recovery.
Con.L:	Acceptable Control Limits
Conce:	Added concentration to the sample.
LCS:	Laboratory Control Sample
MDL:	Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client:	Roux Associates, Inc.
Address:	5150 E. Pacific Coast Hwy. Suite 450 Long Beach, CA 90804
Attn:	Peter Shimer

Lab Request:	418407
Report Date:	08/26/2019
Date Received:	08/15/2019
Client ID:	15831

Comments: InSite
3370.0001L000
3701 N. Pacific Pl., Long Beach, CA

See attached report for EPA 8151A results.

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
418407-001	SB-33-SS-0
418407-002	SB-33-SS-2
418407-003	SB-33-SS-4
418407-004	SB-44-SS-0
418407-005	SB-44-SS-2
418407-006	SB-10-SS-0
418407-007	SB-10-SS-2
418407-008	SB-10-SS-4
418407-009	SB-10-SS-7
418407-010	SB-32-SS-2
418407-011	SB-32-SS-6
418407-012	SB-32-SS-8
418407-013	SB-32-SS-14
418407-014	SB-31-SS-0
418407-015	SB-31-SS-2
418407-016	SB-34-SS-1
418407-017	DUP-8
418407-018	DUP-9

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 07:10	**Site:**			
Sample #:	**418407-001**	**Client Sample #:**	SB-33-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**8.04**	1	1	mg/Kg		08/21/19	KLN	
Barium	**338**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.85**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**28.7**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**11.4**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**39.6**	1	1	mg/Kg		08/21/19	KLN	
Lead	**92.0**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**20.5**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**42.9**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**123**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	**0.15**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**2700**	20	200	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**910**	20	200	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	20	200	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*120*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205569		
4,4'-DDD	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
4,4'-DDT	**11**	1	5	ug/Kg	08/19/19	08/20/19	SS	
a-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Aldrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
b-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/19/19	08/20/19	SS	
d-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/19/19	08/20/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/19/19	08/20/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*45*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*53*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 07:20	**Site:**			
Sample #:	**418407-002**	**Client Sample #:**	SB-33-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**11.7**	1	1	mg/Kg		08/21/19	KLN	
Barium	**442**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**1.52**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**32.2**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**174**	1	1	mg/Kg		08/21/19	KLN	
Lead	**265**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**23.7**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	**4.05**	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**44.9**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**401**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	**0.16**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	ND	50	500	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**590**	50	500	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	50	500	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*	
Triacontane (SUR)	*165*	*50-150*	*S*	*Surrogate diluted out*

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205569		
4,4'-DDD	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
a-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Aldrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
b-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/19/19	08/20/19	SS	
d-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/19/19	08/20/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/19/19	08/20/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*67*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*47*	*50-150*	*S*

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 07:30	**Site:**			
Sample #:	**418407-003**	**Client Sample #:**	SB-33-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**6.34**	1	1	mg/Kg		08/21/19	KLN	
Barium	**75.2**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**8.12**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**3.77**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**10.7**	1	1	mg/Kg		08/21/19	KLN	
Lead	**13.3**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**11.6**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**20.0**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**31.8**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	ND	50	500	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**1200**	50	500	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	50	500	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*138*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 08:05	**Site:**			
Sample #:	**418407-004**	**Client Sample #:**	SB-44-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**9.04**	1	1	mg/Kg		08/21/19	KLN	
Barium	**174**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.64**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**28.4**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**12.7**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**33.4**	1	1	mg/Kg		08/21/19	KLN	
Lead	**16.0**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	**1.01**	1	1	mg/Kg		08/21/19	KLN	
Nickel	**19.1**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**46.0**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**80.2**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A NELAC Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**58**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**87**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*111*		*50-150*					
Method: EPA 8081A NELAC Prep Method: EPA 3545						QCBatchID: QC1205569		
4,4'-DDD	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
a-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Aldrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
b-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/19/19	08/20/19	SS	
d-BHC	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/19/19	08/20/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/19/19	08/20/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/19/19	08/20/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*85*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*53*		*50-150*					
Method: EPA 8151A NELAC Prep Method: See Attached						QCBatchID:		
See Attached		1						

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 08:15	**Site:**			
Sample #:	**418407-005**	**Client Sample #:**	SB-44-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**17.0**	1	1	mg/Kg		08/21/19	KLN	
Barium	**247**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.83**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**38.1**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**17.3**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**47.6**	1	1	mg/Kg		08/21/19	KLN	
Lead	**14.1**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**27.1**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**66.1**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**74.3**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A NELAC Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**16**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**20**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*106*		*50-150*					
Method: EPA 8081A NELAC Prep Method: EPA 3545						QCBatchID: QC1205569		
4,4'-DDD	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
a-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Aldrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
b-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
d-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/19/19	08/21/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/19/19	08/21/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*96*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*82*		*50-150*					
Method: EPA 8151A NELAC Prep Method: See Attached						QCBatchID:		
See Attached		1						

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 09:15	**Site:**			
Sample #:	**418407-006**	**Client Sample #:**	SB-10-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**2.78**	1	1	mg/Kg		08/21/19	KLN	
Barium	**103**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**15.1**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**7.08**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**16.0**	1	1	mg/Kg		08/21/19	KLN	
Lead	**11.3**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**10.3**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**28.7**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**43.5**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**14**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*106*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205569		
4,4'-DDD	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
a-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Aldrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
b-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
d-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/19/19	08/21/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/19/19	08/21/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*86*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*60*		*50-150*					
Method: EPA 8151A *NELAC* Prep Method: See Attached						QCBatchID:		
See Attached		1						

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 09:20	**Site:**			
Sample #:	**418407-007**	**Client Sample #:**	SB-10-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**2.13**	1	1	mg/Kg		08/21/19	KLN	
Barium	**120**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**18.6**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**9.67**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**20.2**	1	1	mg/Kg		08/21/19	KLN	
Lead	**9.00**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**13.3**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**35.6**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**42.2**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**10**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**22**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*108*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205569		
4,4'-DDD	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
a-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Aldrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
b-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
d-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/19/19	08/21/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/19/19	08/21/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*56*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*63*		*50-150*					
Method: EPA 8151A *NELAC* Prep Method: See Attached						QCBatchID:		
See Attached		1						

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 09:40	**Site:**			
Sample #:	**418407-008**	**Client Sample #:**	SB-10-SS-4	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**7.37**	1	1	mg/Kg		08/21/19	KLN	
Barium	**135**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.51**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**26.2**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**12.5**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**26.2**	1	1	mg/Kg		08/21/19	KLN	
Lead	**8.27**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**17.2**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**42.3**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**50.8**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*108*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 09:45	**Site:**			
Sample #:	**418407-009**	**Client Sample #:**	SB-10-SS-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**5.96**	1	1	mg/Kg		08/21/19	KLN	
Barium	**372**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**1.00**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**31.2**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**11.3**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**29.3**	1	1	mg/Kg		08/21/19	KLN	
Lead	**11.7**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**25.4**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**65.6**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**60.1**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**19**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**19**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*109*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:00	**Site:**			
Sample #:	**418407-010**	**Client Sample #:**	SB-32-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**8.71**	1	1	mg/Kg		08/21/19	KLN	
Barium	**271**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.96**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**34.8**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**197**	1	1	mg/Kg		08/21/19	KLN	
Lead	**147**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**23.5**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**48.2**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**269**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	**0.20**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**200**	2	20	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**230**	2	20	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	2	20	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*105*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:10	**Site:**			
Sample #:	**418407-011**	**Client Sample #:**	SB-32-SS-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**4.01**	1	1	mg/Kg		08/21/19	KLN	
Barium	**149**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.65**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**22.6**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**11.0**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**274**	1	1	mg/Kg		08/21/19	KLN	
Lead	**138**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**21.0**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**41.1**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**430**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**31**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**24**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*103*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205570		
PCB-1016	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1221	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1232	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1242	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1248	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1254	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1260	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1262	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
PCB-1268	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*58*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1205481		
1,1,1,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,1,1-Trichloroethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,1,2,2-Tetrachloroethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,1,2-Trichloroethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,1-Dichloroethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,1-Dichloroethene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,1-Dichloropropene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,2,3-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,2,3-Trichloropropane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,2,4-Trichlorobenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,2,4-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,2-Dibromo-3-chloropropane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,2-Dibromoethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,2-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:10	**Site:**			
Sample #:	**418407-011**	**Client Sample #:**	SB-32-SS-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,2-Dichloroethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,3,5-Trimethylbenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,3-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,3-Dichloropropane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
1,4-Dichlorobenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
2,2-Dichloropropane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
2-Butanone (MEK)	ND	0.9	90	ug/Kg		08/16/19	LZ	
2-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
4-Chlorotoluene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
4-Isopropyltoluene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Acetone	ND	0.9	90	ug/Kg		08/16/19	LZ	
Allyl Chloride	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Benzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Bromobenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Bromochloromethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Bromodichloromethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Bromoform	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Bromomethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Carbon Tetrachloride	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Chlorobenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Chlorodibromomethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Chloroethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Chloroform	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Chloromethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
cis-1,2-Dichloroethene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
cis-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
cis-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Dibromomethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Dichlorodifluoromethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Di-isopropyl ether (DIPE)	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Ethylbenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Hexachlorobutadiene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Isopropylbenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
m and p-Xylene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Methylene chloride	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Naphthalene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
N-butylbenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
N-propylbenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
o-Xylene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Sec-butylbenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Styrene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
t-Butyl alcohol (TBA)	ND	0.9	9	ug/Kg		08/16/19	LZ	
Tert-amylmethylether (TAME)	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Tert-butylbenzene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Tetrachloroethene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Toluene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
trans-1,2-dichloroethene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
trans-1,3-dichloropropene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
trans-1,4-dichloro-2-butene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Trichloroethene	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Trichlorofluoromethane	ND	0.9	4.5	ug/Kg		08/16/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:10	**Site:**			
Sample #:	**418407-011**	**Client Sample #:**	SB-32-SS-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Vinyl Chloride	ND	0.9	4.5	ug/Kg		08/16/19	LZ	
Xylenes (Total)	ND	0.9	4.5	ug/Kg		08/16/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*114*	*70-145*	
4-Bromofluorobenzene (SUR)	*95*	*70-145*	
Dibromofluoromethane (SUR)	*101*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205613

1,2,4-Trichlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
1,2-Dichlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
1,3-Dichlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
1,4-Dichlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
1-Methylnaphthalene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4-Dichlorophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4-Dimethylphenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrophenol	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrotoluene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2,6-Dinitrotoluene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Chloronaphthalene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Chlorophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Methylnaphthalene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Nitroaniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
2-Nitrophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	5	2000	ug/Kg	08/20/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
3-Nitroaniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Bromophenyl phenyl ether	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Chloro-3-methylphenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Chloroaniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Chlorophenyl phenyl ether	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Nitroaniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
4-Nitrophenol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Acenaphthene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Acenaphthylene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Aniline	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Anthracene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Azobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benz(a)anthracene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzidine	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
Benzo(a)pyrene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzo(b)fluoranthene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzo(g,h,i)perylene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzo(k)fluoranthene	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Benzoic acid	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
Benzyl alcohol	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethoxy)methane	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroethyl) Ether	ND	5	6000	ug/Kg	08/20/19	08/21/19	D2
Bis(2-chloroisopropyl) Ether	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Bis(2-ethylhexyl) phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2
Butylbenzyl Phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:10	**Site:**			
Sample #:	**418407-011**	**Client Sample #:**	SB-32-SS-6	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Carbazole	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Chrysene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Dibenzofuran	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Diethyl phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Dimethyl phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Di-n-butyl phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Di-n-octyl phthalate	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Fluoranthene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Fluorene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobenzene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobutadiene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	5	6000	ug/Kg	08/20/19	08/21/19		D2
Hexachloroethane	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Isophorone	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Naphthalene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Nitrobenzene	ND	5	6000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Pentachlorophenol	ND	5	6000	ug/Kg	08/20/19	08/21/19		D2
Phenanthrene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Phenol	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Pyrene	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Pyridine	ND	5	1250	ug/Kg	08/20/19	08/21/19		D2
Total Cresol	ND	5	2000	ug/Kg	08/20/19	08/21/19		D2

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*50*	*34-143*	
2-Fluorobiphenyl (SUR)	*70*	*41-125*	
2-Fluorophenol (SUR)	*46*	*13-153*	
Nitrobenzene-d5 (SUR)	*62*	*27-125*	
p-Terphenyl (SUR)	*72*	*33-155*	
Phenol-d5 (SUR)	*52*	*10-110*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:20	**Site:**			
Sample #:	**418407-012**	**Client Sample #:**	SB-32-SS-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**5.81**	1	1	mg/Kg		08/21/19	KLN	
Barium	**128**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.66**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**28.7**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**32.4**	1	1	mg/Kg		08/21/19	KLN	
Lead	**9.24**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**18.4**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**43.8**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**51.0**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**12**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**11**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*97*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:30	**Site:**			
Sample #:	**418407-013**	**Client Sample #:**	SB-32-SS-14	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**5.85**	1	1	mg/Kg		08/21/19	KLN	
Barium	**90.4**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**15.5**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**7.51**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**15.1**	1	1	mg/Kg		08/21/19	KLN	
Lead	**8.86**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**10.6**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**30.5**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**34.9**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**28**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**22**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*104*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:45	**Site:**			
Sample #:	**418407-014**	**Client Sample #:**	SB-31-SS-0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**11.9**	1	1	mg/Kg		08/21/19	KLN	
Barium	**286**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.92**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**37.9**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**13.6**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**105**	1	1	mg/Kg		08/21/19	KLN	
Lead	**76.9**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**23.3**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**53.4**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**134**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	**0.18**	1	0.14	mg/Kg	08/20/19	08/22/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**92**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**140**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*104*	*50-150*	

Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205694		
4,4'-DDD	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
4,4'-DDT	**5.4**	1	5	ug/Kg	08/21/19	08/22/19	SS	
a-BHC	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Aldrin	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
b-BHC	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/21/19	08/22/19	SS	
d-BHC	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Endrin	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/21/19	08/22/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/21/19	08/22/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/21/19	08/22/19	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*79*	*24.4-119.9*	
Tetrachloro-m-xylene TCMX (SUR)	*87*	*50-150*	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:55	**Site:**			
Sample #:	**418407-015**	**Client Sample #:**	SB-31-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**19.2**	1	1	mg/Kg		08/21/19	KLN	
Barium	**382**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.87**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**30.9**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**11.4**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**48.8**	1	1	mg/Kg		08/21/19	KLN	
Lead	**154**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**20.7**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**44.2**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**128**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	**0.29**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**1200**	10	100	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**990**	10	100	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	10	100	mg/Kg	08/22/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*104*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205569		
4,4'-DDD	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
4,4'-DDE	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
4,4'-DDT	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
a-BHC	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Aldrin	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
b-BHC	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Chlordane (technical)	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2
d-BHC	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Dieldrin	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Endosulfan I	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Endosulfan II	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Endosulfan sulfate	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Endrin	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Endrin aldehyde	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Endrin Ketone	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Heptachlor	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Heptachlor epoxide	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Lindane (Gamma-BHC)	ND	2	10	ug/Kg	08/19/19	08/20/19	SS	D2
Methoxychlor	ND	2	20	ug/Kg	08/19/19	08/20/19	SS	D2
Toxaphene	ND	2	200	ug/Kg	08/19/19	08/20/19	SS	D2
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*48*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*56*		*50-150*					
Method: EPA 8082 *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205570		
PCB-1016	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2
PCB-1221	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2
PCB-1232	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:55	**Site:**			
Sample #:	**418407-015**	**Client Sample #:**	SB-31-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
PCB-1242	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2
PCB-1248	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2
PCB-1254	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2
PCB-1260	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2
PCB-1262	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2
PCB-1268	ND	2	100	ug/Kg	08/19/19	08/20/19	SS	D2

Surrogate	*% Recovery*	*Limits*	*Notes*
Decachlorobiphenyl DCB (SUR)	*35*	*50-150*	*S*

Method: EPA 8260B *NELAC* Prep Method: EPA 5035A QCBatchID: QC1205481

1,1,1,2-Tetrachloroethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,1,1-Trichloroethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,1,2,2-Tetrachloroethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,1,2-Trichloroethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,1,2-Trichlorotrifluoroethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,1-Dichloroethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,1-Dichloroethene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,1-Dichloropropene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2,3-Trichlorobenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2,3-Trichloropropane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2,4-Trichlorobenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2,4-Trimethylbenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2-Dibromo-3-chloropropane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2-Dibromoethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2-Dichlorobenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2-Dichloroethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,2-Dichloropropane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,3,5-Trimethylbenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,3-Dichlorobenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,3-Dichloropropane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
1,4-Dichlorobenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
2,2-Dichloropropane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
2-Butanone (MEK)	ND	1.1	110	ug/Kg	08/16/19	LZ
2-Chlorotoluene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
4-Chlorotoluene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
4-Isopropyltoluene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
4-Methyl-2-pentanone (MIBK)	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Acetone	ND	1.1	110	ug/Kg	08/16/19	LZ
Allyl Chloride	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Benzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Bromobenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Bromochloromethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Bromodichloromethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Bromoform	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Bromomethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Carbon Tetrachloride	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Chlorobenzene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Chlorodibromomethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Chloroethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Chloroform	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Chloromethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ
cis-1,2-Dichloroethene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
cis-1,3-dichloropropene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
cis-1,4-dichloro-2-butene	ND	1.1	5.5	ug/Kg	08/16/19	LZ
Dibromomethane	ND	1.1	5.5	ug/Kg	08/16/19	LZ

Matrix: Solid **Client:** Roux Associates, Inc. **Collector:** Client
Sampled: 08/15/2019 13:55 **Site:**
Sample #: 418407-015 **Client Sample #:** SB-31-SS-2 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dichlorodifluoromethane	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Di-isopropyl ether (DIPE)	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Ethylbenzene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Hexachlorobutadiene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Isopropylbenzene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
m and p-Xylene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Methylene chloride	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Naphthalene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
N-butylbenzene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
N-propylbenzene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
o-Xylene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Sec-butylbenzene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Styrene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
t-Butyl alcohol (TBA)	ND	1.1	11	ug/Kg		08/16/19	LZ	
Tert-amylmethylether (TAME)	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Tert-butylbenzene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Tetrachloroethene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Toluene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
trans-1,2-dichloroethene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
trans-1,3-dichloropropene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
trans-1,4-dichloro-2-butene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Trichloroethene	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Trichlorofluoromethane	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Vinyl Chloride	ND	1.1	5.5	ug/Kg		08/16/19	LZ	
Xylenes (Total)	ND	1.1	5.5	ug/Kg		08/16/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*114*	*70-145*	
4-Bromofluorobenzene (SUR)	*97*	*70-145*	
Dibromofluoromethane (SUR)	*106*	*70-145*	
Toluene-d8 (SUR)	*98*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3545 QCBatchID: QC1205613

1,2,4-Trichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,2-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,3-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1,4-Dichlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
1-Methylnaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4,5-Trichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4,6-Trichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dichlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dimethylphenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrophenol	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2
2,4-Dinitrotoluene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2,6-Dinitrotoluene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Chloronaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Chlorophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methyl-4,6-dinitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methylnaphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Methylphenol (o-Cresol)	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
2-Nitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19	D2
3 and 4-Methylphenol (m and p-Cresol)	ND	200	80000	ug/Kg	08/20/19	08/21/19	D2
3,3'-Dichlorobenzidine	ND	200	240000	ug/Kg	08/20/19	08/21/19	D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:55	**Site:**			
Sample #:	**418407-015**	**Client Sample #:**	SB-31-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
3-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
4-Bromophenyl phenyl ether	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
4-Chloro-3-methylphenol	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
4-Chloroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
4-Chlorophenyl phenyl ether	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
4-Nitroaniline	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
4-Nitrophenol	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Acenaphthene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Acenaphthylene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Aniline	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Azobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Benz(a)anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Benzidine	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Benzo(a)pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Benzo(b)fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Benzo(g,h,i)perylene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Benzo(k)fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Benzoic acid	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Benzyl alcohol	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Bis(2-chloroethoxy)methane	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Bis(2-chloroethyl) Ether	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Bis(2-chloroisopropyl) Ether	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Bis(2-ethylhexyl) phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Butylbenzyl Phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Carbazole	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Chrysene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dibenz(a,h)anthracene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dibenzofuran	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Diethyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Dimethyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Di-n-butyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Di-n-octyl phthalate	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Fluoranthene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Fluorene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobenzene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorobutadiene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Hexachlorocyclopentadiene	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Hexachloroethane	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Indeno(1,2,3-cd)pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Isophorone	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Naphthalene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Nitrobenzene	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodimethylamine (NDMA)	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodi-n-propylamine (NDPA)	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
N-Nitrosodiphenylamine	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pentachlorophenol	ND	200	240000	ug/Kg	08/20/19	08/21/19		D2
Phenanthrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Phenol	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pyrene	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Pyridine	ND	200	50000	ug/Kg	08/20/19	08/21/19		D2
Total Cresol	ND	200	80000	ug/Kg	08/20/19	08/21/19		D2

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:55	**Site:**			
Sample #:	**418407-015**	**Client Sample #:**	SB-31-SS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Surrogate	*% Recovery*		*Limits*	*Notes*				
2,4,6-Tribromophenol (SUR)	*00*		*34-143*	*S2*				
2-Fluorobiphenyl (SUR)	*40*		*41-125*	*S2*				
2-Fluorophenol (SUR)	*17*		*13-153*					
Nitrobenzene-d5 (SUR)	*37*		*27-125*					
p-Terphenyl (SUR)	*52*		*33-155*					
Phenol-d5 (SUR)	*15*		*10-110*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 14:10	**Site:**			
Sample #:	**418407-016**	**Client Sample #:**	SB-34-SS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC*	Prep Method: EPA 3050B					QCBatchID:		QC1205628
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**9.72**	1	1	mg/Kg		08/21/19	KLN	
Barium	**244**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.88**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**35.5**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**13.0**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**42.0**	1	1	mg/Kg		08/21/19	KLN	
Lead	**50.5**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**20.0**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**50.4**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**107**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC*	Prep Method: EPA 7471A					QCBatchID:		QC1205649
Mercury	**0.25**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M	Prep Method: EPA 3580A					QCBatchID:		QC1205758
TPH (C10 to C28)	**160**	10	100	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**270**	10	100	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	10	100	mg/Kg	08/22/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*120*		*50-150*					

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 08:15	**Site:**			
Sample #:	**418407-017**	**Client Sample #:**	DUP-8	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**14.5**	1	1	mg/Kg		08/21/19	KLN	
Barium	**286**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	**0.75**	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**34.6**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**16.7**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**46.0**	1	1	mg/Kg		08/21/19	KLN	
Lead	**24.6**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**25.3**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**61.9**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**72.6**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	**0.16**	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**38**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**37**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*111*		*50-150*					
Method: EPA 8081A *NELAC* Prep Method: EPA 3545						QCBatchID: QC1205569		
4,4'-DDD	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
4,4'-DDE	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
4,4'-DDT	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
a-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Aldrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
b-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Chlordane (technical)	ND	1	50	ug/Kg	08/19/19	08/21/19	SS	
d-BHC	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Dieldrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan I	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan II	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endosulfan sulfate	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin aldehyde	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Endrin Ketone	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Heptachlor	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Heptachlor epoxide	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Lindane (Gamma-BHC)	ND	1	5	ug/Kg	08/19/19	08/21/19	SS	
Methoxychlor	ND	1	10	ug/Kg	08/19/19	08/21/19	SS	
Toxaphene	ND	1	100	ug/Kg	08/19/19	08/21/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Decachlorobiphenyl DCB (SUR)	*76*		*24.4-119.9*					
Tetrachloro-m-xylene TCMX (SUR)	*79*		*50-150*					
Method: EPA 8151A *NELAC* Prep Method: See Attached						QCBatchID:		
See Attached		1						

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/15/2019 13:30	**Site:**			
Sample #:	**418407-018**	**Client Sample #:**	DUP-9	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1205628		
Antimony	ND	1	3	mg/Kg		08/21/19	KLN	L
Arsenic	**6.27**	1	1	mg/Kg		08/21/19	KLN	
Barium	**111**	1	1	mg/Kg		08/21/19	KLN	
Beryllium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Cadmium	ND	1	0.5	mg/Kg		08/21/19	KLN	
Chromium	**18.6**	1	1	mg/Kg		08/21/19	KLN	
Cobalt	**7.80**	1	0.5	mg/Kg		08/21/19	KLN	
Copper	**35.6**	1	1	mg/Kg		08/21/19	KLN	
Lead	**27.4**	1	1	mg/Kg		08/21/19	KLN	
Molybdenum	ND	1	1	mg/Kg		08/21/19	KLN	
Nickel	**11.7**	1	1.5	mg/Kg		08/21/19	KLN	
Selenium	ND	1	3	mg/Kg		08/21/19	KLN	
Silver	ND	1	0.5	mg/Kg		08/21/19	KLN	
Thallium	ND	1	3	mg/Kg		08/21/19	KLN	
Vanadium	**31.8**	1	0.5	mg/Kg		08/21/19	KLN	
Zinc	**66.5**	1	5	mg/Kg		08/21/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1205649		
Mercury	ND	1	0.14	mg/Kg	08/20/19	08/21/19	CM	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1205758		
TPH (C10 to C28)	**28**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C28 to C40)	**21**	1	10	mg/Kg	08/22/19	08/26/19	TW	
TPH (C8 to C10)	ND	1	10	mg/Kg	08/22/19	08/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*108*	*50-150*	

QCBatchID: QC1205481	**Analyst:** Rlee	**Method:** EPA 8260B	
Matrix: Solid	**Analyzed:** 08/16/2019	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205481MB1						
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,1-Trichloroethane	ND	ug/Kg		5		
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,2-Trichloroethane	ND	ug/Kg		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5		
1,1-Dichloroethane	ND	ug/Kg		5		
1,1-Dichloroethene	ND	ug/Kg		5		
1,1-Dichloropropene	ND	ug/Kg		5		
1,2,3-Trichlorobenzene	ND	ug/Kg		5		
1,2,3-Trichloropropane	ND	ug/Kg		5		
1,2,4-Trichlorobenzene	ND	ug/Kg		5		
1,2,4-Trimethylbenzene	ND	ug/Kg		5		
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5		
1,2-Dibromoethane	ND	ug/Kg		5		
1,2-Dichlorobenzene	ND	ug/Kg		5		
1,2-Dichloroethane	ND	ug/Kg		5		
1,2-Dichloropropane	ND	ug/Kg		5		
1,3,5-Trimethylbenzene	ND	ug/Kg		5		
1,3-Dichlorobenzene	ND	ug/Kg		5		
1,3-Dichloropropane	ND	ug/Kg		5		
1,4-Dichlorobenzene	ND	ug/Kg		5		
2,2-Dichloropropane	ND	ug/Kg		5		
2-Butanone (MEK)	ND	ug/Kg		100		
2-Chlorotoluene	ND	ug/Kg		5		
4-Chlorotoluene	ND	ug/Kg		5		
4-Isopropyltoluene	ND	ug/Kg		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5		
Acetone	ND	ug/Kg		100		
Allyl Chloride	ND	ug/Kg		5		
Benzene	ND	ug/Kg		5		
Bromobenzene	ND	ug/Kg		5		
Bromochloromethane	ND	ug/Kg		5		
Bromodichloromethane	ND	ug/Kg		5		
Bromoform	ND	ug/Kg		5		
Bromomethane	ND	ug/Kg		5		
Carbon Tetrachloride	ND	ug/Kg		5		
Chlorobenzene	ND	ug/Kg		5		
Chlorodibromomethane	ND	ug/Kg		5		
Chloroethane	ND	ug/Kg		5		
Chloroform	ND	ug/Kg		5		
Chloromethane	ND	ug/Kg		5		
cis-1,2-Dichloroethene	ND	ug/Kg		5		
cis-1,3-dichloropropene	ND	ug/Kg		5		
cis-1,4-dichloro-2-butene	ND	ug/Kg		5		
Dibromomethane	ND	ug/Kg		5		
Dichlorodifluoromethane	ND	ug/Kg		5		
Di-isopropyl ether (DIPE)	ND	ug/Kg		5		
Ethylbenzene	ND	ug/Kg		5		
Ethyl-tertbutylether (ETBE)	ND	ug/Kg		5		
Hexachlorobutadiene	ND	ug/Kg		5		
Isopropylbenzene	ND	ug/Kg		5		
m and p-Xylene	ND	ug/Kg		5		

QCBatchID: QC1205481 **Analyst:** Rlee **Method:** EPA 8260B

Matrix: Solid **Analyzed:** 08/16/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes	
QC1205481MB1						
Methylene chloride	ND	ug/Kg		5		
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5		
Naphthalene	ND	ug/Kg		5		
N-butylbenzene	ND	ug/Kg		5		
N-propylbenzene	ND	ug/Kg		5		
o-Xylene	ND	ug/Kg		5		
Sec-butylbenzene	ND	ug/Kg		5		
Styrene	ND	ug/Kg		5		
t-Butyl alcohol (TBA)	ND	ug/Kg		10		
Tert-amylmethylether (TAME)	ND	ug/Kg		5		
Tert-butylbenzene	ND	ug/Kg		5		
Tetrachloroethene	ND	ug/Kg		5		
Toluene	ND	ug/Kg		5		
trans-1,2-dichloroethene	ND	ug/Kg		5		
trans-1,3-dichloropropene	ND	ug/Kg		5		
trans-1,4-dichloro-2-butene	ND	ug/Kg		5		
Trichloroethene	ND	ug/Kg		5		
Trichlorofluoromethane	ND	ug/Kg		5		
Vinyl Chloride	ND	ug/Kg		5		
Xylenes (Total)	ND	ug/Kg		5		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205481LCS1, QC1205481LCSD1											
1,1-Dichloroethene	50	50	55	51	ug/Kg	110	102	8	59-172	22	
Benzene	50	50	54	50	ug/Kg	108	100	8	62-137	24	
Chlorobenzene	50	50	50	46	ug/Kg	100	92	8	60-133	24	
Methyl-t-butyl Ether (MTBE)	50	50	48	45	ug/Kg	96	90	6	62-137	21	
Toluene	50	50	53	49	ug/Kg	106	98	8	59-139	21	
Trichloroethene	50	50	51	47	ug/Kg	102	94	8	66-142	21	

QCBatchID: QC1205569 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/19/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205569MB1					
4,4'-DDD	ND	ug/Kg		5	
4,4'-DDE	ND	ug/Kg		5	
4,4'-DDT	ND	ug/Kg		5	
a-BHC	ND	ug/Kg		5	
Aldrin	ND	ug/Kg		5	
b-BHC	ND	ug/Kg		5	
Chlordane (technical)	ND	ug/Kg		50	
d-BHC	ND	ug/Kg		5	
Dieldrin	ND	ug/Kg		5	
Endosulfan I	ND	ug/Kg		5	
Endosulfan II	ND	ug/Kg		5	
Endosulfan sulfate	ND	ug/Kg		5	
Endrin	ND	ug/Kg		5	
Endrin aldehyde	ND	ug/Kg		5	
Endrin Ketone	ND	ug/Kg		5	
Heptachlor	ND	ug/Kg		5	
Heptachlor epoxide	ND	ug/Kg		5	
Lindane (Gamma-BHC)	ND	ug/Kg		5	
Methoxychlor	ND	ug/Kg		10	
Toxaphene	ND	ug/Kg		100	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205569LCS1											
4,4'-DDD	50		32		ug/Kg	64			43-172		
4,4'-DDE	50		32		ug/Kg	64			44-163		
4,4'-DDT	50		27		ug/Kg	54			40-158		
a-BHC	50		36		ug/Kg	72			45-150		
Aldrin	50		33		ug/Kg	66			46-142		
b-BHC	50		37		ug/Kg	74			42-156		
d-BHC	50		33		ug/Kg	66			37-161		
Dieldrin	50		33		ug/Kg	66			47-151		
Endosulfan I	50		36		ug/Kg	72			47-141		
Endosulfan II	50		34		ug/Kg	68			44-156		
Endosulfan sulfate	50		34		ug/Kg	68			43-157		
Endrin	50		32		ug/Kg	64			47-160		
Endrin aldehyde	50		16		ug/Kg	32			32-127		
Endrin Ketone	50		34		ug/Kg	68			48-159		
Heptachlor	50		35		ug/Kg	70			50-144		
Heptachlor epoxide	50		34		ug/Kg	68			48-145		
Lindane (Gamma-BHC)	50		36		ug/Kg	72			47-151		
Methoxychlor	50		30		ug/Kg	60			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205569MS1, QC1205569MSD1												**Source: 418407-015**
4,4'-DDD	5.9	50	50	28	14	ug/Kg	44	16	66.7	43-172	20	D,M
4,4'-DDE	5.8	50	50	35	18	ug/Kg	58	24	64.2	44-163	20	D,M
4,4'-DDT	8.3	50	50	29	15	ug/Kg	41	13	63.6	40-158	20	D,M
a-BHC	ND	50	50	29	20	ug/Kg	58	40	36.7	45-150	20	D,M

QCBatchID: QC1205569 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/19/2019 **Instrument:** SVOA-GC (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205569MS1, QC1205569MSD1												**Source: 418407-015**
Aldrin	ND	50	50	29	16	ug/Kg	58	32	57.8	46-142	20	D,M
b-BHC	ND	50	50	29	17	ug/Kg	58	34	52.2	42-156	20	D,M
d-BHC	ND	50	50	25	15	ug/Kg	50	30	50.0	37-161	20	D,M
Dieldrin	ND	50	50	33	18	ug/Kg	66	36	58.8	47-151	20	D,M
Endosulfan I	ND	50	50	29	16	ug/Kg	58	32	57.8	47-141	20	D,M
Endosulfan II	ND	50	50	27	15	ug/Kg	54	30	57.1	44-156	20	D,M
Endosulfan sulfate	ND	50	50	30	16	ug/Kg	60	32	60.9	43-157	20	D,M
Endrin	ND	50	50	30	18	ug/Kg	60	36	50.0	47-160	20	D,M
Endrin aldehyde	ND	50	50	26	11	ug/Kg	52	22	81.1	32-127	20	D,M
Endrin Ketone	ND	50	50	28	20	ug/Kg	56	40	33.3	48-159	20	D,M
Heptachlor	ND	50	50	28	17	ug/Kg	56	34	48.9	50-144	20	D,M
Heptachlor epoxide	ND	50	50	30	20	ug/Kg	60	40	40.0	48-145	20	D,M
Lindane (Gamma-BHC)	ND	50	50	31	18	ug/Kg	62	36	53.1	47-151	20	D,M
Methoxychlor	ND	50	50	29	16	ug/Kg	58	32	57.8	36-182	20	D,M

QCBatchID: QC1205570 **Analyst:** Jarriaga **Method:** EPA 8082

Matrix: Solid **Analyzed:** 08/19/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205570MB1					
PCB-1016	ND	ug/Kg		50	
PCB-1221	ND	ug/Kg		50	
PCB-1232	ND	ug/Kg		50	
PCB-1242	ND	ug/Kg		50	
PCB-1248	ND	ug/Kg		50	
PCB-1254	ND	ug/Kg		50	
PCB-1260	ND	ug/Kg		50	
PCB-1262	ND	ug/Kg		50	
PCB-1268	ND	ug/Kg		50	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205570LCS1											
PCB-1016	500		500		ug/Kg	100			70-130		
PCB-1260	500		450		ug/Kg	90			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205570MS1, QC1205570MSD1												**Source: 418407-015**
PCB-1016	ND	500	500	370	400	ug/Kg	74	80	7.8	70-130	20	
PCB-1260	ND	500	500	290	400	ug/Kg	58	80	31.9	70-130	20	M

QCBatchID: QC1205613	**Analyst:** Abanh		**Method:** EPA 8270C		
Matrix: Solid	**Analyzed:** 08/20/2019		**Instrument:** SVOA-MS (group)		

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205613MB1					
1,2,4-Trichlorobenzene	ND	ug/Kg		250	
1,2-Dichlorobenzene	ND	ug/Kg		250	
1,3-Dichlorobenzene	ND	ug/Kg		250	
1,4-Dichlorobenzene	ND	ug/Kg		250	
1-Methylnaphthalene	ND	ug/Kg		250	
2,4,5-Trichlorophenol	ND	ug/Kg		250	
2,4,6-Trichlorophenol	ND	ug/Kg		250	
2,4-Dichlorophenol	ND	ug/Kg		250	
2,4-Dimethylphenol	ND	ug/Kg		250	
2,4-Dinitrophenol	ND	ug/Kg		1200	
2,4-Dinitrotoluene	ND	ug/Kg		250	
2,6-Dinitrotoluene	ND	ug/Kg		250	
2-Chloronaphthalene	ND	ug/Kg		250	
2-Chlorophenol	ND	ug/Kg		250	
2-Methyl-4,6-dinitrophenol	ND	ug/Kg		250	
2-Methylnaphthalene	ND	ug/Kg		250	
2-Methylphenol (o-Cresol)	ND	ug/Kg		250	
2-Nitroaniline	ND	ug/Kg		250	
2-Nitrophenol	ND	ug/Kg		250	
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/Kg		400	
3,3'-Dichlorobenzidine	ND	ug/Kg		1200	
3-Nitroaniline	ND	ug/Kg		250	
4-Bromophenyl phenyl ether	ND	ug/Kg		250	
4-Chloro-3-methylphenol	ND	ug/Kg		250	
4-Chloroaniline	ND	ug/Kg		250	
4-Chlorophenyl phenyl ether	ND	ug/Kg		250	
4-Nitroaniline	ND	ug/Kg		250	
4-Nitrophenol	ND	ug/Kg		250	
Acenaphthene	ND	ug/Kg		250	
Acenaphthylene	ND	ug/Kg		250	
Aniline	ND	ug/Kg		250	
Anthracene	ND	ug/Kg		250	
Azobenzene	ND	ug/Kg		250	
Benz(a)anthracene	ND	ug/Kg		250	
Benzidine	ND	ug/Kg		1200	
Benzo(a)pyrene	ND	ug/Kg		250	
Benzo(b)fluoranthene	ND	ug/Kg		250	
Benzo(g,h,i)perylene	ND	ug/Kg		250	
Benzo(k)fluoranthene	ND	ug/Kg		250	
Benzoic acid	ND	ug/Kg		1200	
Benzyl alcohol	ND	ug/Kg		250	
Bis(2-chloroethoxy)methane	ND	ug/Kg		250	
Bis(2-chloroethyl) Ether	ND	ug/Kg		1200	
Bis(2-chloroisopropyl) Ether	ND	ug/Kg		250	
Bis(2-ethylhexyl) phthalate	ND	ug/Kg		250	
Butylbenzyl Phthalate	ND	ug/Kg		250	
Carbazole	ND	ug/Kg		250	
Chrysene	ND	ug/Kg		250	
Dibenz(a,h)anthracene	ND	ug/Kg		250	
Dibenzofuran	ND	ug/Kg		250	
Diethyl phthalate	ND	ug/Kg		250	
Dimethyl phthalate	ND	ug/Kg		250	

QCBatchID: QC1205613 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205613MB1					
Di-n-butyl phthalate	ND	ug/Kg		250	
Di-n-octyl phthalate	ND	ug/Kg		250	
Fluoranthene	ND	ug/Kg		250	
Fluorene	ND	ug/Kg		250	
Hexachlorobenzene	ND	ug/Kg		250	
Hexachlorobutadiene	ND	ug/Kg		250	
Hexachlorocyclopentadiene	ND	ug/Kg		1200	
Hexachloroethane	ND	ug/Kg		250	
Indeno(1,2,3-cd)pyrene	ND	ug/Kg		250	
Isophorone	ND	ug/Kg		250	
Naphthalene	ND	ug/Kg		250	
Nitrobenzene	ND	ug/Kg		1200	
N-Nitrosodimethylamine (NDMA)	ND	ug/Kg		250	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/Kg		250	
N-Nitrosodiphenylamine	ND	ug/Kg		250	
Pentachlorophenol	ND	ug/Kg		1200	
Phenanthrene	ND	ug/Kg		250	
Phenol	ND	ug/Kg		250	
Pyrene	ND	ug/Kg		250	
Pyridine	ND	ug/Kg		250	
Total Cresol	ND	ug/Kg		400	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613LCS1											
1,2,4-Trichlorobenzene	2000		1300		ug/Kg	65			43-111		
1,4-Dichlorobenzene	2000		1100		ug/Kg	55			30-116		
2,4,5-Trichlorophenol	2000		1500		ug/Kg	75			57-125		
2,4-Dimethylphenol	2000		1100		ug/Kg	55			50-112		
2,4-Dinitrotoluene	2000		1500		ug/Kg	75			57-124		
2-Chlorophenol	2000		1300		ug/Kg	65			48-114		
3 and 4-Methylphenol (m and p-Cresol)	2000		1300		ug/Kg	65			56-124		
4-Chloro-3-methylphenol	2000		1300		ug/Kg	65			61-122		
4-Nitrophenol	2000		1300		ug/Kg	65			54-126		
Acenaphthene	2000		1400		ug/Kg	70			53-112		
Benzo(b)fluoranthene	2000		1400		ug/Kg	70			61-125		
Chrysene	2000		1600		ug/Kg	80			59-117		
N-Nitrosodi-n-propylamine (NDPA)	2000		1500		ug/Kg	75			54-110		
Pentachlorophenol	2000		1300		ug/Kg	65			41-103		
Phenol	2000		1300		ug/Kg	65			51-111		
Pyrene	2000		1500		ug/Kg	75			63-119		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613MS1, QC1205613MSD1												**Source: 418350-015**
1,2,4-Trichlorobenzene	ND	2000	2000	2000	1200	ug/Kg	100	60	50.0	35-93	30	M
1,4-Dichlorobenzene	ND	2000	2000	1700	1000	ug/Kg	85	50	51.9	39-95	30	M
2,4,5-Trichlorophenol	ND	2000	2000	1900	990	ug/Kg	95	50	63.0	44-108	30	M
2,4-Dimethylphenol	ND	2000	2000	1800	980	ug/Kg	90	49	59.0	37-105	30	M
2,4-Dinitrotoluene	ND	2000	2000	2200	1600	ug/Kg	110	80	31.6	48-109	30	M
2-Chlorophenol	ND	2000	2000	1700	990	ug/Kg	85	50	52.8	42-102	30	M

QCBatchID: QC1205613 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** SVOA-MS (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205613MS1, QC1205613MSD1												**Source: 418350-015**
3 and 4-Methylphenol (m and p-Cresol)	ND	2000	2000	1900	1000	ug/Kg	95	50	62.1	33-116	30	M
4-Chloro-3-methylphenol	ND	2000	2000	1800	990	ug/Kg	90	50	58.1	33-120	30	M
4-Nitrophenol	ND	2000	2000	2000	1400	ug/Kg	100	70	35.3	37-107	30	M
Acenaphthene	ND	2000	2000	2200	1200	ug/Kg	110	60	58.8	57-99	30	M
Benzo(b)fluoranthene	ND	2000	2000	1800	990	ug/Kg	90	50	58.1	59-126	30	M
Chrysene	ND	2000	2000	2300	1300	ug/Kg	115	65	55.6	68-120	30	M
N-Nitrosodi-n-propylamine (NDPA)	ND	2000	2000	1900	1100	ug/Kg	95	55	53.3	41-127	30	M
Pentachlorophenol	ND	2000	2000	1600	1200	ug/Kg	80	60	28.6	43-120	30	
Phenol	ND	2000	2000	1900	1000	ug/Kg	95	50	62.1	46-116	30	M
Pyrene	ND	2000	2000	2200	1200	ug/Kg	110	60	58.8	53-129	30	M

QCBatchID: QC1205628 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205628MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205628LCS1											
Antimony	100		125		mg/Kg	125			80-120		L
Arsenic	100		99.6		mg/Kg	100			80-120		
Barium	100		103		mg/Kg	103			80-120		
Beryllium	100		94.3		mg/Kg	94			80-120		
Cadmium	100		104		mg/Kg	104			80-120		
Chromium	100		108		mg/Kg	108			80-120		
Cobalt	100		105		mg/Kg	105			80-120		
Copper	100		104		mg/Kg	104			80-120		
Lead	100		107		mg/Kg	107			80-120		
Molybdenum	100		110		mg/Kg	110			80-120		
Nickel	100		107		mg/Kg	107			80-120		
Selenium	100		94.2		mg/Kg	94			80-120		
Silver	100		106		mg/Kg	106			80-120		
Thallium	100		98.0		mg/Kg	98			80-120		
Vanadium	100		106		mg/Kg	106			80-120		
Zinc	100		103		mg/Kg	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205628MS1, QC1205628MSD1												**Source: 418407-001**
Antimony	ND	100	100	45.7	49.8	mg/Kg	46	50	8.6	75-125	20	M
Arsenic	8.04	100	100	97.1	111	mg/Kg	89	103	13.4	75-125	20	
Barium	338	100	100	390	468	mg/Kg	52	130	18.2	75-125	20	M
Beryllium	ND	100	100	91.1	100	mg/Kg	91	100	9.3	75-125	20	
Cadmium	0.85	100	100	89.3	105	mg/Kg	88	104	16.2	75-125	20	
Chromium	28.7	100	100	121	143	mg/Kg	92	114	16.7	75-125	20	
Cobalt	11.4	100	100	97.8	118	mg/Kg	86	107	18.7	75-125	20	
Copper	39.6	100	100	137	162	mg/Kg	97	122	16.7	75-125	20	
Lead	92.0	100	100	199	224	mg/Kg	107	132	11.8	75-125	20	M
Molybdenum	0.73	100	100	95.5	106	mg/Kg	95	105	10.4	75-125	20	

QCBatchID: QC1205628 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 08/20/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205628MS1, QC1205628MSD1												**Source: 418407-001**
Nickel	20.5	100	100	110	121	mg/Kg	90	101	9.5	75-125	20	
Selenium	ND	100	100	86.7	94.2	mg/Kg	87	94	8.3	75-125	20	
Silver	ND	100	100	93.6	109	mg/Kg	94	109	15.2	75-125	20	
Thallium	2.35	100	100	85.7	95.3	mg/Kg	83	93	10.6	75-125	20	
Vanadium	42.9	100	100	138	166	mg/Kg	95	123	18.4	75-125	20	
Zinc	123	100	100	212	245	mg/Kg	89	122	14.4	75-125	20	

QCBatchID:	**QC1205649**	**Analyst:**	cmorales	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	08/20/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205649MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205649LCS1											
Mercury	0.83		0.91		mg/Kg	110			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1205649MS1, QC1205649MSD1												**Source: 418407-001**
Mercury	0.15	0.83	0.83	0.96	1.05	mg/Kg	98	108	9.0	75-125	20	

QCBatchID: QC1205694 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/21/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205694MB1					
4,4'-DDD	ND	ug/Kg		5	
4,4'-DDE	ND	ug/Kg		5	
4,4'-DDT	ND	ug/Kg		5	
a-BHC	ND	ug/Kg		5	
Aldrin	ND	ug/Kg		5	
b-BHC	ND	ug/Kg		5	
Chlordane (technical)	ND	ug/Kg		50	
d-BHC	ND	ug/Kg		5	
Dieldrin	ND	ug/Kg		5	
Endosulfan I	ND	ug/Kg		5	
Endosulfan II	ND	ug/Kg		5	
Endosulfan sulfate	ND	ug/Kg		5	
Endrin	ND	ug/Kg		5	
Endrin aldehyde	ND	ug/Kg		5	
Endrin Ketone	ND	ug/Kg		5	
Heptachlor	ND	ug/Kg		5	
Heptachlor epoxide	ND	ug/Kg		5	
Lindane (Gamma-BHC)	ND	ug/Kg		5	
Methoxychlor	ND	ug/Kg		10	
Toxaphene	ND	ug/Kg		100	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205694LCS1											
4,4'-DDD	50		51		ug/Kg	102			43-172		
4,4'-DDE	50		52		ug/Kg	104			44-163		
4,4'-DDT	50		40		ug/Kg	80			40-158		
a-BHC	50		48		ug/Kg	96			45-150		
Aldrin	50		42		ug/Kg	84			46-142		
b-BHC	50		49		ug/Kg	98			42-156		
d-BHC	50		46		ug/Kg	92			37-161		
Dieldrin	50		47		ug/Kg	94			47-151		
Endosulfan I	50		51		ug/Kg	102			47-141		
Endosulfan II	50		53		ug/Kg	106			44-156		
Endosulfan sulfate	50		54		ug/Kg	108			43-157		
Endrin	50		53		ug/Kg	106			47-160		
Endrin aldehyde	50		24		ug/Kg	48			32-127		
Endrin Ketone	50		55		ug/Kg	110			48-159		
Heptachlor	50		47		ug/Kg	94			50-144		
Heptachlor epoxide	50		46		ug/Kg	92			48-145		
Lindane (Gamma-BHC)	50		47		ug/Kg	94			47-151		
Methoxychlor	50		47		ug/Kg	94			36-182		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205694MS1, QC1205694MSD1												**Source: 418500-010**
4,4'-DDD	ND	50	50	43	48	ug/Kg	86	96	11.0	43-172	20	
4,4'-DDE	ND	50	50	44	49	ug/Kg	88	98	10.8	44-163	20	
4,4'-DDT	ND	50	50	43	53	ug/Kg	86	106	20.8	40-158	20	M
a-BHC	ND	50	50	41	45	ug/Kg	82	90	9.3	45-150	20	

QCBatchID: QC1205694 **Analyst:** Jarriaga **Method:** EPA 8081A

Matrix: Solid **Analyzed:** 08/21/2019 **Instrument:** SVOA-GC (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205694MS1, QC1205694MSD1												**Source: 418500-010**
Aldrin	ND	50	50	29	41	ug/Kg	58	82	34.3	46-142	20	M
b-BHC	ND	50	50	42	46	ug/Kg	84	92	9.1	42-156	20	
d-BHC	ND	50	50	39	44	ug/Kg	78	88	12.0	37-161	20	
Dieldrin	ND	50	50	39	44	ug/Kg	78	88	12.0	47-151	20	
Endosulfan I	ND	50	50	44	48	ug/Kg	88	96	8.7	47-141	20	
Endosulfan II	ND	50	50	44	49	ug/Kg	88	98	10.8	44-156	20	
Endosulfan sulfate	ND	50	50	44	51	ug/Kg	88	102	14.7	43-157	20	
Endrin	ND	50	50	44	49	ug/Kg	88	98	10.8	47-160	20	
Endrin aldehyde	ND	50	50	30	40	ug/Kg	60	80	28.6	32-127	20	M
Endrin Ketone	ND	50	50	46	53	ug/Kg	92	106	14.1	48-159	20	
Heptachlor	ND	50	50	42	46	ug/Kg	84	92	9.1	50-144	20	
Heptachlor epoxide	ND	50	50	39	44	ug/Kg	78	88	12.0	48-145	20	
Lindane (Gamma-BHC)	ND	50	50	41	46	ug/Kg	82	92	11.5	47-151	20	
Methoxychlor	ND	50	50	51	61	ug/Kg	102	122	17.9	36-182	20	

QCBatchID: QC1205758 **Analyst:** Jarriaga **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 08/26/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205758MB1						
TPH (C10 to C28)	ND	mg/Kg		10		
TPH (C28 to C40)	ND	mg/Kg		10		
TPH (C8 to C10)	ND	mg/Kg		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205758LCS1											
TPH (C10 to C28)	250		220		mg/Kg	88			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205758MS1, QC1205758MSD1												**Source: 418407-001**
TPH (C10 to C28)	2700	250	250	3400	3100	mg/Kg	280	160	9.2	70-130	20	NC

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 418407

Page: 1 of 2

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-33-SS-0	8/15/19	0710	S	1/8oz	N	X	X				X		
2	SB-33-SS-2		0720									X		
3	SB-33-SS-4		0730											
4	SB-44-SS-0		0805									X	X	
5	SB-44-SS-2		0815									X	X	
6	SB-10-SS-0		0915									X	X	
7	SB-10-SS-2		0920									X	X	
8	SB-10-SS-4		0940											
9	SB-10-SS-7		0945											
10	SB-32-SS-2		1300											

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	ROUX	8/15/19 1644
1 Received By:		Ben Saicedo	Enthalpy Analytical	8.15.19 1644
2 Relinquished By:		Ben Saicedo	Enthalpy Analytical	8.15.19 1752
2 Received By:		G Kim		8/15/19 1752
3 Relinquished By:				
3 Received By:				

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 418407

Page: 2 of 2

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	Peter Shimer, PG

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	SVOCs - USEPA 8270C	PCBs - USEPA 8082	OCPs - USEPA 8081A	Herbicides - USEPA 8151A	Test Instructions / Comments
1	SB-32-SS-6	8/15/19	1310	S	1/8oz, 3/40mL	Y	X	X	X	X	X			
2	SB-32-SS-8		1320		1/2oz	N								
3	SB-32-SS-14		1330											
4	SB-31-SS-0		1345									X		
5	SB-31-SS-2		1355		1/8oz, 3/40mL	Y			X	X	X	X		
6	SB-34-SS-1		1410		1/2oz	N								
7	DUP-8		0815									X	X	
8	DUP-9		1330											
9														
10														

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Peter Shimer	Roux	8/15/19 1644
1 Received By:		Ben Salgado	E.A.	8.15.19 1644
2 Relinquished By:		Ben Salgado	Enthalpy Analytical	8.15.19 1753
2 Received By:				8/15/19 1753
3 Relinquished By:				
3 Received By:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Roux Associates Project: InSite

Date Received: 8/15/19 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 1.8 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 3.4 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 8/15/19

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Enthalpy Analytical **931 W. Barkley Ave.** **Orange, CA 92868-**

Telephone: (714)771-6900
Attention: Ranjit Clarke

Number of Pages 6 **Date Received 08/19/2019** **Date Reported 08/23/2019**

Job Number	Order Date	Client
100125	08/19/2019	ENTANA

Project ID: 418407
Project Name: PO# 1038501

Enclosed please find results of analyses of 5 solid samples which were analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

Enthalpy Analytical
Formerly Associated Labs
1 Park Plaza, Suite 1000
Irvine, CA 92614
Tel: 714.771.6900 Fax: 714.538.1209
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Subcontract Laboratory:

American Environmental Te
2834 North Naomi Street
Burbank, CA 91504
818-845-8200
ATTN: Cyrus Razmara
PO# 1038501

100125

Project: 418407 **Due:** 08/23/19
PM: Ranjit Clarke
Email: ranjit.clarke@enthalpy.com
CC: incomingreports@enthalpy.com
Require: ☑ EDD ☐ EDF ☐ EDT
Report To: ☑ MDL

Note:

Matrix	Sampled	Sample ID	Analysis	Comment
Solid	08/15/19 08:05	SB-44-SS-0 (418407-004)	8151_OUT	100125.01
Solid	08/15/19 08:15	SB-44-SS-2 (418407-005)	8151_OUT	100125.02
Solid	08/15/19 09:15	SB-10-SS-0 (418407-006)	8151_OUT	100125.03
Solid	08/15/19 09:20	SB-10-SS-2 (418407-007)	8151_OUT	100125.04
Solid	08/15/19 08:15	DUP-8 (418407-017)	8151_OUT	100125.05

Note:
Due 08/23/19

Relinquished By	Received By:
Date/Time 8/19/19	Date/Time 8.19.19 · 13:17
Date/Time 8-19-19 15:40	Date/Time
	08/19/19 1540

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 NORTH NAOMI ST. BURBANK, CALIFORNIA 91504 DHS # 1541 LACSD# 10181
TEL (888) 288-AETL (818) 845-8200 FAX (818) 845-8840 www.aetlab.com

COOLER RECEIPT FORM

Client Name: Enthalpy Analy.
Project Name:
AETL Job Number: 100125
Date Received: 08/17/19 Received by: AJ
Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS
☐ Others:

Samples were received in: ☒ Cooler (1) ☐ Other (Specify):
Inside temperature of shipping container No 1: 3.4°C, No 2: _____, No 3: _____
Type of sample containers: ☐ VOA, ☐ Glass bottles, ☒ Wide mouth jars, ☐ HDPE bottles, ☐ Metal sleeves, ☐ Others (Specify):
How are samples preserved: ☐ None, ☐ Ice , ☒ Blue Ice, ☐ Dry Ice
☒ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, ☐ MeOH
☐ Other (Specify):

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?		✓	
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	✓		
9. Are samples preserved properly for the intended analysis?	✓		
10. Are the VOAs free of headspace?	N/A		
11. Are the jars free of headspace?	✓		

PLEASE NOTE ALL SAMPLES WILL BE DISPOSED OF 90 DAYS AFTER RECEIVING DATE. IF AETL IS INFORMED OTHERWISE, THERE WILL BE A STORAGE CHARGE PER SAMPLE PER MONTH FOR ANY SAMPLE HELD BEYOND 90 DAYS.

Explain all "No" answers for above questions:

_____

_____

_____

_____

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Enthalpy Analytical **931 W. Barkley Ave.** **Orange, CA 92868-**	**Project ID: 418407** **Date Received 08/19/2019** **Date Reported 08/23/2019**
Telephone: (714)771-6900 **Attention: Ranjit Clarke**	

Job Number	Order Date	Client
100125	08/19/2019	ENTANA

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 5 samples with the following specification on 08/19/2019.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
100125.01	SB-44-SS-0 (418407-004)	08/15/2019	Solid	1
100125.02	SB-44-SS-2 (418407-005)	08/15/2019	Solid	1
100125.03	SB-10-SS-0 (418407-006)	08/15/2019	Solid	1
100125.04	SB-10-SS-2 (418407-007)	08/15/2019	Solid	1
100125.05	DUP-8 (418407-017)	08/15/2019	Solid	1

Method ^ Submethod	*Req Date*	*Priority*	*TAT*	*Units*
(8151A)	08/23/2019	5	Rush	ug/Kg

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Unless otherwise noted, all results of soil and solid samples are based on wet weight.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868-

Telephone: (714)771-6900
Attn: Ranjit Clarke
Page: **2**

Project ID: 418407
Project Name: PO# 1038501

AETL Job Number	Submitted	Client
100125	08/19/2019	ENTANA

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 082219MB1

Our Lab I.D.			Method Blank	100125.01	100125.02	100125.03	100125.04
Client Sample I.D.				SB-44-SS-0 (418407-004)	SB-44-SS-2 (418407-005)	SB-10-SS-0 (418407-006)	SB-10-SS-2 (418407-007)
Date Sampled				08/15/2019	08/15/2019	08/15/2019	08/15/2019
Date Prepared			08/22/2019	08/22/2019	08/22/2019	08/22/2019	08/22/2019
Preparation Method			3550B	3550B	3550B	3550B	3550B
Date Analyzed			08/23/2019	08/23/2019	08/23/2019	08/23/2019	08/23/2019
Matrix			Solid	Solid	Solid	Solid	Solid
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Acifluorfen	20	20	ND	ND	ND	ND	ND
Bentazon	10	10	ND	ND	ND	ND	ND
Chloramben	10	10	ND	ND	ND	ND	ND
2,4-D	10	10	ND	ND	ND	ND	ND
Dalapon	20	20	ND	ND	ND	ND	ND
2,4-DB	10	10	ND	ND	ND	ND	ND
DCPA diacid	20	20	ND	ND	ND	ND	ND
Dicamba	10	10	ND	ND	ND	ND	ND
3,5-Dichlorobenzoic acid	10	10	ND	ND	ND	ND	ND
Dichloroprop	10	10	ND	ND	ND	ND	ND
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	20	20	ND	ND	ND	ND	ND
MCPA	2000	2000	ND	ND	ND	ND	ND
MCPP	2000	2000	ND	ND	ND	ND	ND
4-Nitrophenol	10	10	ND	ND	ND	ND	ND
Pentachlorophenol (PCP)	10	10	ND	ND	ND	ND	ND
Picloram	10	10	ND	ND	ND	ND	ND
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND	ND	ND	ND	ND
2,4,5-TP	10	10	ND	ND	ND	ND	ND

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Project ID: 418407
Project Name: PO# 1038501

AETL Job Number	Submitted	Client
100125	08/19/2019	ENTANA

Method: (8151A), Chlorinated Herbicides by GC/ECD

Our Lab I.D.			Method Blank	100125.01	100125.02	100125.03	100125.04
Surrogates	%Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
DCAA	40-150		44.4	61.4	68.4	64.8	66.0

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868-

Telephone: (714)771-6900
Attn: Ranjit Clarke
Page: **4**

Project ID: 418407
Project Name: PO# 1038501

AETL Job Number	Submitted	Client
100125	08/19/2019	ENTANA

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 082219MB1

Our Lab I.D.			100125.05				
Client Sample I.D.			DUP-8 (418407-017)				
Date Sampled			08/15/2019				
Date Prepared			08/22/2019				
Preparation Method			3550B				
Date Analyzed			08/23/2019				
Matrix			Solid				
Units			ug/Kg				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Acifluorfen	20	20	ND				
Bentazon	10	10	ND				
Chloramben	10	10	ND				
2,4-D	10	10	ND				
Dalapon	20	20	ND				
2,4-DB	10	10	ND				
DCPA diacid	20	20	ND				
Dicamba	10	10	ND				
3,5-Dichlorobenzoic acid	10	10	ND				
Dichloroprop	10	10	ND				
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	20	20	ND				
MCPA	2000	2000	ND				
MCPP	2000	2000	ND				
4-Nitrophenol	10	10	ND				
Pentachlorophenol (PCP)	10	10	ND				
Picloram	10	10	ND				
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND				
2,4,5-TP	10	10	ND				

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Project ID: 418407
Project Name: PO# 1038501

AETL Job Number	Submitted	Client
100125	08/19/2019	ENTANA

Method: (8151A), Chlorinated Herbicides by GC/ECD

Our Lab I.D.			100125.05				
Surrogates	**%Rec.Limit**		**% Rec.**				
DCAA	**40-150**		**86.0**				

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

QUALITY CONTROL RESULTS

Ordered By

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868-

Telephone: (714)771-6900
Attn: Ranjit Clarke
Page: **6**

Project ID: 418407
Project Name: PO# 1038501

AETL Job Number	Submitted	Client
100125	08/19/2019	ENTANA

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 082219MB1; Dup or Spiked Sample: 100125.02; LCS: Blank; QC Prepared: 08/22/2019; QC Analyzed: 08/22/2019; Units: ug/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
2,4-D	0.00	25.0	16.7	66.8	25.0	14.3	57.2	15.5	40-140	<40
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	0.00	25.0	18.2	72.8	25.0	17.2	68.8	5.6	40-140	<40
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	0.00	25.0	17.3	69.2	25.0	12.0	48.0	36.2	40-140	<40
Surrogates										
DCAA	0.00	50.0	27.7	55.4	50.0	29.1	58.2	4.9	40-140	<40

QC Batch No: 082219MB1; Dup or Spiked Sample: 100125.02; LCS: Blank; QC Prepared: 08/22/2019; QC Analyzed: 08/22/2019; Units: ug/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
2,4-D	25.0	26.0	104	25.0	25.5	102	1.9	50-140	<40	
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	25.0	13.6	54.4	25.0	13.5	54.0	<1	50-140	<40	
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	25.0	23.7	94.8	25.0	23.8	95.2	<1	50-140	<40	
LCS										
Dalapon	25.0	21.1	84.4	25.0	22.6	90.4	6.9	50-140	<40	
2,4-DB	25.0	16.8	67.2	25.0	22.4	89.6	28.6	50-140	<40	
Dicamba	25.0	14.1	56.4	25.0	14.3	57.2	1.4	50-140	<40	
Dichloroprop	25.0	14.3	57.2	25.0	14.8	59.2	3.4	50-140	<40	
MCPA	2,500	1,980	79.0	2,500	2,480	99.1	22.6	50-140	<40	
MCPP	2,500	2,730	109	2,500	2,430	97.2	11.4	50-140	<40	
2,4,5-TP	25.0	14.4	57.6	25.0	15.3	61.2	6.1	50-140	<40	
Surrogates										
DCAA	50.0	26.8	53.6	50.0	27.2	54.4	1.5	50-140	<40	

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

#:	Recovery is not within acceptable control limits.
*:	In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
B:	Analyte was present in the Method Blank.
D:	Result is from a diluted analysis.
E:	Result is beyond calibration limits and is estimated.
H:	Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
J:	Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
M:	Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
MCL:	Maximum Contaminant Level
NS:	No Standard Available
S6:	Surrogate recovery is outside control limits due to matrix interference.
S8:	The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
X:	Results represent LCS and LCSD data.

Definition:

%Limi:	Percent acceptable limits.
%REC:	Percent recovery.
Con.L:	Acceptable Control Limits
Conce:	Added concentration to the sample.
LCS:	Laboratory Control Sample
MDL:	Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.

American Environmental Testing Laboratory Inc.
2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client:	Roux Associates, Inc.
Address:	5150 E. Pacific Coast Hwy. Suite 450 Long Beach, CA 90804
Attn:	Jaydeep Purandare

Lab Request:	418340
Report Date:	08/26/2019
Date Received:	08/14/2019
Client ID:	15831

Comments: InSite
3370.0001L000
3701 N. Pacific Pl., Long Beach, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
418340-001	MW-7
418340-002	EB-1
418340-003	TB-1

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:29	**Site:**			
Sample #:	**418340-001**	**Client Sample #:**	MW-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 300.0	Prep Method: Method					QCBatchID: QC1205464		
Chloride	**4640**	50	50	mg/L	08/14/19	08/15/19 20:15	JP	
Nitrate, as Nitrogen	ND	1	0.1	mg/L	08/14/19	08/15/19 13:51	JP	
Sulfate	**2.22**	1	1	mg/L	08/14/19	08/15/19 13:51	JP	
Method: EPA 6010B *NELAC*	Prep Method: EPA 3010A					QCBatchID: QC1205436		
Antimony	ND	1	0.04	mg/L		08/15/19	KLN	
Arsenic	**0.478**	1	0.01	mg/L		08/15/19	KLN	
Barium	**1.42**	1	0.01	mg/L		08/15/19	KLN	
Beryllium	ND	1	0.005	mg/L		08/15/19	KLN	
Cadmium	ND	1	0.005	mg/L		08/15/19	KLN	
Chromium	ND	1	0.01	mg/L		08/15/19	KLN	
Cobalt	ND	1	0.005	mg/L		08/15/19	KLN	
Copper	**0.018**	1	0.01	mg/L		08/15/19	KLN	
Lead	**0.024**	1	0.01	mg/L		08/15/19	KLN	
Molybdenum	**0.0751**	1	0.01	mg/L		08/15/19	KLN	
Nickel	ND	1	0.02	mg/L		08/15/19	KLN	
Selenium	**0.042**	1	0.03	mg/L		08/15/19	KLN	
Silver	ND	1	0.005	mg/L		08/15/19	KLN	
Thallium	**0.063**	1	0.05	mg/L		08/15/19	KLN	
Vanadium	ND	1	0.005	mg/L		08/15/19	KLN	
Zinc	ND	1	0.05	mg/L		08/15/19	KLN	
Method: EPA 6010B *NELAC*	Prep Method: EPA 3010A/Filtered					QCBatchID: QC1205833		
Antimony	ND	1	0.04	mg/L		08/23/19	KLN	
Arsenic	**0.102**	1	0.01	mg/L		08/23/19	KLN	
Barium	**0.695**	1	0.01	mg/L		08/23/19	KLN	
Beryllium	ND	1	0.005	mg/L		08/23/19	KLN	
Cadmium	ND	1	0.005	mg/L		08/23/19	KLN	
Chromium	ND	1	0.01	mg/L		08/23/19	KLN	
Cobalt	ND	1	0.005	mg/L		08/23/19	KLN	
Copper	ND	1	0.01	mg/L		08/23/19	KLN	
Lead	ND	1	0.01	mg/L		08/23/19	KLN	
Molybdenum	**0.0572**	1	0.01	mg/L		08/23/19	KLN	
Nickel	ND	1	0.02	mg/L		08/23/19	KLN	
Selenium	ND	1	0.03	mg/L		08/23/19	KLN	
Silver	ND	1	0.005	mg/L		08/23/19	KLN	
Thallium	ND	1	0.05	mg/L		08/23/19	KLN	
Vanadium	ND	1	0.005	mg/L		08/23/19	KLN	
Zinc	ND	1	0.05	mg/L		08/23/19	KLN	
Method: EPA 7470A *NELAC*	Prep Method: Filtered					QCBatchID: QC1205804		
Mercury	ND	1	0.4	ug/L		08/23/19	CM	
Method: EPA 7470A *NELAC*	Prep Method: Method					QCBatchID: QC1205438		
Mercury	ND	1	0.4	ug/L	08/15/19	08/15/19	CM	
Method: EPA 8015B *NELAC*	Prep Method: EPA 3510C					QCBatchID: QC1205423		
TPH (C13 to C22)	**1.9**	5	1	mg/L	08/15/19	08/16/19	TW	
TPH (C23 to C44)	ND	5	1.5	mg/L	08/15/19	08/16/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*95*	*50-150*	

Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205138		
TPH (C6 to C12)	ND	1	50	ug/L		08/19/19	EW	

Surrogate	*% Recovery*	*Limits*	*Notes*
4-Bromofluorobenzene (SUR)	*102*	*60-140*	

Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B	QCBatchID: QC1205469

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:29	**Site:**			
Sample #:	**418340-001**	**Client Sample #:**	MW-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/15/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/15/19	LZ	
Acetone	ND	1	100	ug/L		08/15/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/15/19	LZ	
Benzene	ND	1	1	ug/L		08/15/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/15/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/15/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/15/19	LZ	
Bromoform	ND	1	5	ug/L		08/15/19	LZ	
Bromomethane	ND	1	5	ug/L		08/15/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/15/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/15/19	LZ	
Chloroethane	ND	1	5	ug/L		08/15/19	LZ	
Chloroform	ND	1	5	ug/L		08/15/19	LZ	
Chloromethane	ND	1	5	ug/L		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/15/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/15/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/15/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/15/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/15/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/15/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/15/19	LZ	
Methylene chloride	**5.8**	1	5	ug/L		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/15/19	LZ	
Naphthalene	ND	1	5	ug/L		08/15/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:29	**Site:**			
Sample #:	**418340-001**	**Client Sample #:**	MW-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
N-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/15/19	LZ	
o-Xylene	ND	1	5	ug/L		08/15/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Styrene	ND	1	5	ug/L		08/15/19	LZ	
t-Butyl alcohol (TBA)	**32**	1	10	ug/L		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/15/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/15/19	LZ	
Toluene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/15/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/15/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/15/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/15/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*89*	*70-145*	
4-Bromofluorobenzene (SUR)	*109*	*70-145*	
Dibromofluoromethane (SUR)	*100*	*70-145*	
Toluene-d8 (SUR)	*108*	*70-145*	

Method: EPA 8270C *NELAC* Prep Method: EPA 3510C QCBatchID: QC1205566

1,2,4-Trichlorobenzene	ND	1	10	ug/L	08/19/19	08/21/19		
1,2-Dichlorobenzene	ND	1	10	ug/L	08/19/19	08/21/19		
1,3-Dichlorobenzene	ND	1	10	ug/L	08/19/19	08/21/19		
1,4-Dichlorobenzene	ND	1	10	ug/L	08/19/19	08/21/19		
2,4,5-Trichlorophenol	ND	1	10	ug/L	08/19/19	08/21/19		
2,4,6-Trichlorophenol	ND	1	10	ug/L	08/19/19	08/21/19		
2,4-Dichlorophenol	ND	1	10	ug/L	08/19/19	08/21/19		
2,4-Dimethylphenol	ND	1	10	ug/L	08/19/19	08/21/19		
2,4-Dinitrophenol	ND	1	50	ug/L	08/19/19	08/21/19		
2,4-Dinitrotoluene	ND	1	10	ug/L	08/19/19	08/21/19		
2,6-Dinitrotoluene	ND	1	10	ug/L	08/19/19	08/21/19		
2-Chloronaphthalene	ND	1	10	ug/L	08/19/19	08/21/19		
2-Chlorophenol	ND	1	10	ug/L	08/19/19	08/21/19		
2-Methyl-4,6-dinitrophenol	ND	1	50	ug/L	08/19/19	08/21/19		
2-Methylnaphthalene	ND	1	10	ug/L	08/19/19	08/21/19		
2-Methylphenol (o-Cresol)	ND	1	10	ug/L	08/19/19	08/21/19		
2-Nitroaniline	ND	1	50	ug/L	08/19/19	08/21/19		
2-Nitrophenol	ND	1	10	ug/L	08/19/19	08/21/19		
3 and 4-Methylphenol (m and p-Cresol)	ND	1	10	ug/L	08/19/19	08/21/19		
3,3'-Dichlorobenzidine	ND	1	25	ug/L	08/19/19	08/21/19		
3-Nitroaniline	ND	1	10	ug/L	08/19/19	08/21/19		
4-Bromophenyl phenyl ether	ND	1	10	ug/L	08/19/19	08/21/19		
4-Chloro-3-methylphenol	ND	1	10	ug/L	08/19/19	08/21/19		
4-Chloroaniline	ND	1	10	ug/L	08/19/19	08/21/19		
4-Chlorophenyl phenyl ether	ND	1	10	ug/L	08/19/19	08/21/19		
4-Nitroaniline	ND	1	10	ug/L	08/19/19	08/21/19		
4-Nitrophenol	ND	1	10	ug/L	08/19/19	08/21/19		
Acenaphthene	ND	1	10	ug/L	08/19/19	08/21/19		
Acenaphthylene	ND	1	10	ug/L	08/19/19	08/21/19		
Aniline	ND	1	10	ug/L	08/19/19	08/21/19		
Anthracene	ND	1	10	ug/L	08/19/19	08/21/19		

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:29	**Site:**			
Sample #:	**418340-001**	**Client Sample #:**	MW-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Azobenzene	ND	1	10	ug/L	08/19/19	08/21/19		
Benz(a)anthracene	ND	1	10	ug/L	08/19/19	08/21/19		
Benzidine	ND	1	50	ug/L	08/19/19	08/21/19		
Benzo(a)pyrene	ND	1	10	ug/L	08/19/19	08/21/19		
Benzo(b)fluoranthene	ND	1	10	ug/L	08/19/19	08/21/19		
Benzo(g,h,i)perylene	ND	1	10	ug/L	08/19/19	08/21/19		
Benzo(k)fluoranthene	ND	1	10	ug/L	08/19/19	08/21/19		
Benzoic acid	ND	1	50	ug/L	08/19/19	08/21/19		
Benzyl alcohol	ND	1	10	ug/L	08/19/19	08/21/19		
Bis(2-chloroethoxy)methane	ND	1	10	ug/L	08/19/19	08/21/19		
Bis(2-chloroethyl) Ether	ND	1	25	ug/L	08/19/19	08/21/19		
Bis(2-chloroisopropyl) Ether	ND	1	10	ug/L	08/19/19	08/21/19		
Bis(2-ethylhexyl) phthalate	ND	1	10	ug/L	08/19/19	08/21/19		
Butylbenzyl Phthalate	ND	1	10	ug/L	08/19/19	08/21/19		
Carbazole	ND	1	10	ug/L	08/19/19	08/21/19		
Chrysene	ND	1	10	ug/L	08/19/19	08/21/19		
Dibenz(a,h)anthracene	ND	1	10	ug/L	08/19/19	08/21/19		
Dibenzofuran	ND	1	10	ug/L	08/19/19	08/21/19		
Diethyl phthalate	ND	1	10	ug/L	08/19/19	08/21/19		
Dimethyl phthalate	ND	1	10	ug/L	08/19/19	08/21/19		
Di-n-butyl phthalate	ND	1	10	ug/L	08/19/19	08/21/19		
Di-n-octyl phthalate	ND	1	10	ug/L	08/19/19	08/21/19		
Fluoranthene	ND	1	10	ug/L	08/19/19	08/21/19		
Fluorene	ND	1	10	ug/L	08/19/19	08/21/19		
Hexachlorobenzene	ND	1	10	ug/L	08/19/19	08/21/19		
Hexachlorobutadiene	ND	1	10	ug/L	08/19/19	08/21/19		
Hexachlorocyclopentadiene	ND	1	25	ug/L	08/19/19	08/21/19		
Hexachloroethane	ND	1	10	ug/L	08/19/19	08/21/19		
Indeno(1,2,3-cd)pyrene	ND	1	10	ug/L	08/19/19	08/21/19		
Isophorone	ND	1	10	ug/L	08/19/19	08/21/19		
Naphthalene	ND	1	10	ug/L	08/19/19	08/21/19		
Nitrobenzene	ND	1	25	ug/L	08/19/19	08/21/19		
N-Nitrosodimethylamine (NDMA)	ND	1	10	ug/L	08/19/19	08/21/19		
N-Nitrosodi-n-propylamine (NDPA)	ND	1	10	ug/L	08/19/19	08/21/19		
N-Nitrosodiphenylamine	ND	1	10	ug/L	08/19/19	08/21/19		
Pentachlorophenol	ND	1	25	ug/L	08/19/19	08/21/19		
Phenanthrene	ND	1	10	ug/L	08/19/19	08/21/19		
Phenol	ND	1	10	ug/L	08/19/19	08/21/19		
Pyrene	ND	1	10	ug/L	08/19/19	08/21/19		
Pyridine	ND	1	10	ug/L	08/19/19	08/21/19		

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*51*	*39-137*	
2-Fluorobiphenyl (SUR)	*65*	*37-102*	
2-Fluorophenol (SUR)	*29*	*23-76*	
Nitrobenzene-d5 (SUR)	*63*	*30-115*	
p-Terphenyl (SUR)	*72*	*61-121*	
Phenol-d5 (SUR)	*18*	*17-56*	

Method: SM 2320-B Prep Method: Method QCBatchID: QC1205767

Bicarbonate (HCO3)	**1400**	10	50	mg/L		08/23/19	WW
Carbonate (CO3)	ND	10	50	mg/L		08/23/19	WW
Hydroxide (OH)	ND	10	50	mg/L		08/23/19	WW
Total Alkalinity (as CaCO3)	**1200**	10	50	mg/L		08/23/19	WW

Method: SM 2510-B Prep Method: Method QCBatchID: QC1205788

Specific Conductance	**14400**	1	1	umhos/cm		08/22/19	WW

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 08:29	**Site:**			
Sample #:	**418340-001**	**Client Sample #:**	MW-7	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: SM 2540-C	Prep Method: Method					QCBatchID: QC1205608		
Total Dissolved Solids	**8970**	5	50	mg/L	08/19/19	08/20/19	TP	
Method: SM 4500-H+B	Prep Method: Method					QCBatchID: QC1205503		
pH	**6.65**	1		pH Units		08/16/19 14:00	WW	T2
Temp. at Time of pH Measurement	**15.7**	1		°C		08/16/19 14:00	WW	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 09:05	**Site:**			
Sample #:	**418340-002**	**Client Sample #:**	EB-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1205469		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/15/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/15/19	LZ	
Acetone	ND	1	100	ug/L		08/15/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/15/19	LZ	
Benzene	ND	1	1	ug/L		08/15/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/15/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/15/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/15/19	LZ	
Bromoform	ND	1	5	ug/L		08/15/19	LZ	
Bromomethane	ND	1	5	ug/L		08/15/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/15/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/15/19	LZ	
Chloroethane	ND	1	5	ug/L		08/15/19	LZ	
Chloroform	ND	1	5	ug/L		08/15/19	LZ	
Chloromethane	ND	1	5	ug/L		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/15/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/15/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/15/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/15/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/15/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/15/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/15/19	LZ	
Methylene chloride	**5.9**	1	5	ug/L		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/15/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 09:05	**Site:**			
Sample #:	**418340-002**	**Client Sample #:**	EB-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Naphthalene	ND	1	5	ug/L		08/15/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/15/19	LZ	
o-Xylene	ND	1	5	ug/L		08/15/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Styrene	ND	1	5	ug/L		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/15/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/15/19	LZ	
Toluene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/15/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/15/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/15/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/15/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*91*	*70-145*	
4-Bromofluorobenzene (SUR)	*106*	*70-145*	
Dibromofluoromethane (SUR)	*101*	*70-145*	
Toluene-d8 (SUR)	*105*	*70-145*	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 07:30	**Site:**			
Sample #:	**418340-003**	**Client Sample #:**	TB-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1205469		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/15/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/15/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/15/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/15/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/15/19	LZ	
Acetone	ND	1	100	ug/L		08/15/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/15/19	LZ	
Benzene	ND	1	1	ug/L		08/15/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/15/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/15/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/15/19	LZ	
Bromoform	ND	1	5	ug/L		08/15/19	LZ	
Bromomethane	ND	1	5	ug/L		08/15/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/15/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/15/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/15/19	LZ	
Chloroethane	ND	1	5	ug/L		08/15/19	LZ	
Chloroform	ND	1	5	ug/L		08/15/19	LZ	
Chloromethane	ND	1	5	ug/L		08/15/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/15/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/15/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/15/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/15/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/15/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/15/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/15/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/15/19	LZ	
Methylene chloride	**6.3**	1	5	ug/L		08/15/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/15/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/14/2019 07:30	**Site:**			
Sample #:	**418340-003**	**Client Sample #:**	TB-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Naphthalene	ND	1	5	ug/L		08/15/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/15/19	LZ	
o-Xylene	ND	1	5	ug/L		08/15/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Styrene	ND	1	5	ug/L		08/15/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/15/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/15/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/15/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/15/19	LZ	
Toluene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/15/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/15/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/15/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/15/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/15/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/15/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*93*	*70-145*	
4-Bromofluorobenzene (SUR)	*105*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*106*	*70-145*	

QCBatchID: QC1205138 **Analyst:** sandyw **Method:** EPA 8015B

Matrix: Water **Analyzed:** 08/19/2019 **Instrument:** VOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205138MB1						
TPH (C6 to C10)	ND	ug/L		50		
TPH (C6 to C12)	ND	ug/L		50		
TPH Gasoline	ND	ug/L		50		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205138LCS1											
TPH Gasoline	500		530		ug/L	106			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205138MS1, QC1205138MSD1												**Source: 418475-023**
TPH Gasoline	ND	500	500	550	550	ug/L	110	110	0.0	70-130	30	
QC1205138MS2, QC1205138MSD2												**Source: 418366-001**
TPH Gasoline	ND	500	500	550	550	ug/L	110	110	0.0	70-130	30	

QCBatchID: QC1205423	**Analyst:** Abanh		**Method:** EPA 8015B		
Matrix: Water	**Analyzed:** 08/16/2019		**Instrument:** SVOA-GC (group)		

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205423MB1					
TPH (C22 to C36)	ND	mg/L		0.3	
TPH Diesel	ND	mg/L		0.1	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205423LCS1, QC1205423LCSD1											
TPH Diesel	1	1	0.76	0.82	mg/L	76	82	8	70-130	20	

QCBatchID: QC1205436 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Water **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205436MB1					
Antimony	ND	mg/L		0.04	
Arsenic	ND	mg/L		0.01	
Barium	ND	mg/L		0.01	
Beryllium	ND	mg/L		0.005	
Cadmium	ND	mg/L		0.005	
Chromium	ND	mg/L		0.01	
Cobalt	ND	mg/L		0.005	
Copper	ND	mg/L		0.01	
Lead	ND	mg/L		0.01	
Molybdenum	ND	mg/L		0.01	
Nickel	ND	mg/L		0.02	
Selenium	ND	mg/L		0.03	
Silver	ND	mg/L		0.005	
Thallium	ND	mg/L		0.05	
Vanadium	ND	mg/L		0.005	
Zinc	ND	mg/L		0.05	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205436LCS1											
Antimony	2		2.02		mg/L	101			80-120		
Arsenic	2		2.02		mg/L	101			80-120		
Barium	2		2.08		mg/L	104			80-120		
Beryllium	2		2.02		mg/L	101			80-120		
Cadmium	2		2.06		mg/L	103			80-120		
Chromium	2		2.12		mg/L	106			80-120		
Cobalt	2		2.03		mg/L	102			80-120		
Copper	2		2.18		mg/L	109			80-120		
Lead	2		2.04		mg/L	102			80-120		
Molybdenum	2		2.04		mg/L	102			80-120		
Nickel	2		1.95		mg/L	98			80-120		
Selenium	2		1.90		mg/L	95			80-120		
Silver	2		2.05		mg/L	103			80-120		
Thallium	2		1.89		mg/L	95			80-120		
Vanadium	2		2.18		mg/L	109			80-120		
Zinc	2		1.94		mg/L	97			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205436MS1, QC1205436MSD1												**Source: 418358-001**
Antimony	ND	1	1	1.28	1.20	mg/L	128	120	6.5	75-125	20	M
Arsenic	ND	1	1	1.08	1.05	mg/L	108	105	2.8	75-125	20	
Barium	0.123	1	1	1.20	1.18	mg/L	108	106	1.7	75-125	20	
Beryllium	ND	1	1	1.08	1.02	mg/L	108	102	5.7	75-125	20	
Cadmium	0.004	1	1	1.06	1.01	mg/L	106	101	4.8	75-125	20	
Chromium	0.028	1	1	1.14	1.09	mg/L	111	106	4.5	75-125	20	
Cobalt	0.008	1	1	1.05	1.01	mg/L	104	100	3.9	75-125	20	
Copper	0.246	1	1	1.46	1.50	mg/L	121	125	2.7	75-125	20	M
Lead	0.557	1	1	1.53	1.50	mg/L	97	94	2.0	75-125	20	
Molybdenum	0.0107	1	1	1.04	1.00	mg/L	103	99	3.9	75-125	20	

QCBatchID: QC1205436 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Water **Analyzed:** 08/15/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205436MS1, QC1205436MSD1												**Source: 418358-001**
Nickel	0.074	1	1	1.08	1.04	mg/L	101	97	3.8	75-125	20	
Selenium	ND	1	1	0.998	0.978	mg/L	100	98	2.0	75-125	20	
Silver	ND	1	1	1.06	1.02	mg/L	106	102	3.8	75-125	20	
Thallium	0.021	1	1	0.898	0.868	mg/L	88	85	3.4	75-125	20	
Vanadium	0.009	1	1	1.16	1.11	mg/L	115	110	4.4	75-125	20	
Zinc	0.516	1	1	1.55	1.54	mg/L	103	102	0.6	75-125	20	

QCBatchID: QC1205438 **Analyst:** cmorales **Method:** EPA 7470A

Matrix: Water **Analyzed:** 08/15/2019 **Instrument:** AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205438MB1					
Mercury	ND	ug/L		0.4	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205438LCS1											
Mercury	5		5.06		ug/L	101			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205438MS1, QC1205438MSD1												**Source: 418277-001**
Mercury	ND	5	5	5.21	5.22	ug/L	104	104	0.2	75-125	20	
QC1205438MS2, QC1205438MSD2												**Source: 418278-001**
Mercury	ND	5	5	5.14	5.11	ug/L	103	102	0.6	75-125	20	

QCBatchID: QC1205464 **Analyst:** JParedes **Method:** EPA 300.0

Matrix: Water **Analyzed:** 08/14/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205464MB1					
Chloride	ND	mg/L		1	
Nitrate + Nitrite, as Nitrogen	ND	mg/L		0.44	
Nitrate, as Nitrogen	ND	mg/L		0.1	
Nitrate, as NO3	ND	mg/L		0.44	
Nitrite, as Nitrogen	ND	mg/L		0.1	
Nitrite, as NO2	ND	mg/L		0.33	
Sulfate	ND	mg/L		0.5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205464LCS1											
Chloride	100		103		mg/L	103			90-110		
Nitrate, as Nitrogen	9.03		9.06		mg/L	100			90-110		
Nitrate, as NO3	40		40.2		mg/L	101			90-110		
Nitrite, as Nitrogen	9.15		9.98		mg/L	109			90-110		
Nitrite, as NO2	30		32.7		mg/L	109			90-110		
Sulfate	50		47.1		mg/L	94			90-110		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205464MS1, QC1205464MSD1												**Source: 418322-002**
Chloride	126	100	100	218	218	mg/L	92	92	0.0	80-120	20	
Nitrate, as Nitrogen	2.50	9.03	9.03	11.6	11.7	mg/L	101	102	0.9	80-120	20	
Nitrate, as NO3	11.1	40	40	51.5	51.8	mg/L	101	102	0.6	80-120	20	
Nitrite, as Nitrogen	ND	9.15	9.15	9.70	9.74	mg/L	106	106	0.4	80-120	20	
Nitrite, as NO2	ND	30	30	31.8	32.0	mg/L	106	107	0.6	80-120	20	
Sulfate	3.27	50	50	52.2	52.2	mg/L	98	98	0.0	80-120	20	
QC1205464MS2, QC1205464MSD2												**Source: 418322-004**
Chloride	133	100	100	223	223	mg/L	90	90	0.0	80-120	20	
Nitrate, as Nitrogen	2.77	9.03	9.03	11.9	11.9	mg/L	101	101	0.0	80-120	20	
Nitrate, as NO3	12.3	40	40	52.6	52.5	mg/L	101	101	0.2	80-120	20	
Nitrite, as Nitrogen	ND	9.15	9.15	9.67	9.90	mg/L	106	108	2.4	80-120	20	
Nitrite, as NO2	ND	30	30	31.7	32.5	mg/L	106	108	2.5	80-120	20	
Sulfate	4.35	50	50	53.5	53.8	mg/L	98	99	0.6	80-120	20	

QCBatchID: QC1205469	**Analyst:** lucy	**Method:** EPA 8260B	
Matrix: Water	**Analyzed:** 08/15/2019	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205469MB1						
1,1,1,2-Tetrachloroethane	ND	ug/L		5		
1,1,1-Trichloroethane	ND	ug/L		5		
1,1,2,2-Tetrachloroethane	ND	ug/L		5		
1,1,2-Trichloroethane	ND	ug/L		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/L		5		
1,1-Dichloroethane	ND	ug/L		5		
1,1-Dichloroethene	ND	ug/L		5		
1,1-Dichloropropene	ND	ug/L		5		
1,2,3-Trichlorobenzene	ND	ug/L		5		
1,2,3-Trichloropropane	ND	ug/L		5		
1,2,4-Trichlorobenzene	ND	ug/L		5		
1,2,4-Trimethylbenzene	ND	ug/L		5		
1,2-Dibromo-3-chloropropane	ND	ug/L		5		
1,2-Dibromoethane	ND	ug/L		5		
1,2-Dichlorobenzene	ND	ug/L		5		
1,2-Dichloroethane	ND	ug/L		5		
1,2-Dichloropropane	ND	ug/L		5		
1,3,5-Trimethylbenzene	ND	ug/L		5		
1,3-Dichlorobenzene	ND	ug/L		5		
1,3-Dichloropropane	ND	ug/L		5		
1,4-Dichlorobenzene	ND	ug/L		5		
2,2-Dichloropropane	ND	ug/L		5		
2-Butanone (MEK)	ND	ug/L		100		
2-Chloroethyl Vinyl Ether	ND	ug/L		10		
2-Chlorotoluene	ND	ug/L		5		
4-Chlorotoluene	ND	ug/L		5		
4-Isopropyltoluene	ND	ug/L		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/L		5		
Acetone	ND	ug/L		100		
Allyl Chloride	ND	ug/L		5		
Benzene	ND	ug/L		1		
Bromobenzene	ND	ug/L		5		
Bromochloromethane	ND	ug/L		5		
Bromodichloromethane	ND	ug/L		5		
Bromoform	ND	ug/L		5		
Bromomethane	ND	ug/L		5		
Carbon Tetrachloride	ND	ug/L		5		
Chlorobenzene	ND	ug/L		5		
Chlorodibromomethane	ND	ug/L		5		
Chloroethane	ND	ug/L		5		
Chloroform	ND	ug/L		5		
Chloromethane	ND	ug/L		5		
cis-1,2-Dichloroethene	ND	ug/L		5		
cis-1,3-dichloropropene	ND	ug/L		5		
cis-1,4-dichloro-2-butene	ND	ug/L		5		
Dibromomethane	ND	ug/L		5		
Dichlorodifluoromethane	ND	ug/L		5		
Di-isopropyl ether (DIPE)	ND	ug/L		1		
Ethylbenzene	ND	ug/L		5		
Ethyl-tertbutylether (ETBE)	ND	ug/L		1		
Hexachlorobutadiene	ND	ug/L		5		
Isopropylbenzene	ND	ug/L		5		

QCBatchID: QC1205469 **Analyst:** lucy **Method:** EPA 8260B

Matrix: Water **Analyzed:** 08/15/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205469MB1					
m and p-Xylene	ND	ug/L		5	
Methylene chloride	ND	ug/L		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L		1	
Naphthalene	ND	ug/L		5	
N-butylbenzene	ND	ug/L		5	
N-propylbenzene	ND	ug/L		5	
o-Xylene	ND	ug/L		5	
Sec-butylbenzene	ND	ug/L		5	
Styrene	ND	ug/L		5	
t-Butyl alcohol (TBA)	ND	ug/L		10	
Tert-amylmethylether (TAME)	ND	ug/L		5	
Tert-butylbenzene	ND	ug/L		5	
Tetrachloroethene	ND	ug/L		5	
Toluene	ND	ug/L		5	
trans-1,2-dichloroethene	ND	ug/L		5	
trans-1,3-dichloropropene	ND	ug/L		5	
trans-1,4-dichloro-2-butene	ND	ug/L		5	
Trichloroethene	ND	ug/L		5	
Trichlorofluoromethane	ND	ug/L		5	
Vinyl Chloride	ND	ug/L		5	
Xylenes (Total)	ND	ug/L		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205469LCS1											
1,1-Dichloroethene	50		55		ug/L	110			59-172		
Benzene	50		52		ug/L	104			62-137		
Chlorobenzene	50		56		ug/L	112			60-133		
Methyl-t-butyl Ether (MTBE)	50		46		ug/L	92			62-137		
Toluene	50		56		ug/L	112			59-139		
Trichloroethene	50		56		ug/L	112			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205469MS1, QC1205469MSD1												**Source: 418340-001**
1,1-Dichloroethene	ND	50	50	61	60	ug/L	122	120	1.7	59-172	22	
Benzene	ND	50	50	56	55	ug/L	112	110	1.8	62-137	24	
Chlorobenzene	ND	50	50	60	59	ug/L	120	118	1.7	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	48	48	ug/L	96	96	0.0	62-137	21	
Toluene	ND	50	50	64	61	ug/L	128	122	4.8	59-139	21	
Trichloroethene	ND	50	50	64	62	ug/L	128	124	3.2	66-142	21	

QCBatchID:	QC1205503	**Analyst:**	wei	**Method:**	SM 4500-H+B
Matrix:	Water	**Analyzed:**	08/16/2019	**Instrument:**	CHEM (group)

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205503DUP1						**Source: 418369-001**
pH	7.82	7.85	pH Units	0.4	20	
Temp. at Time of pH Measurement	10.2	10.3	°C	1.0	20	

QCBatchID: QC1205566	**Analyst:** Abanh	**Method:** EPA 8270C	
Matrix: Water	**Analyzed:** 08/19/2019	**Instrument:** SVOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205566MB1						
1,2,4-Trichlorobenzene	ND	ug/L		10		
1,2-Dichlorobenzene	ND	ug/L		10		
1,3-Dichlorobenzene	ND	ug/L		10		
1,4-Dichlorobenzene	ND	ug/L		10		
2,4,5-Trichlorophenol	ND	ug/L		10		
2,4,6-Trichlorophenol	ND	ug/L		10		
2,4-Dichlorophenol	ND	ug/L		10		
2,4-Dimethylphenol	ND	ug/L		10		
2,4-Dinitrophenol	ND	ug/L		50		
2,4-Dinitrotoluene	ND	ug/L		10		
2,6-Dinitrotoluene	ND	ug/L		10		
2-Chloronaphthalene	ND	ug/L		10		
2-Chlorophenol	ND	ug/L		10		
2-Methyl-4,6-dinitrophenol	ND	ug/L		50		
2-Methylnaphthalene	ND	ug/L		10		
2-Methylphenol (o-Cresol)	ND	ug/L		10		
2-Nitroaniline	ND	ug/L		50		
2-Nitrophenol	ND	ug/L		10		
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/L		10		
3,3'-Dichlorobenzidine	ND	ug/L		25		
3-Nitroaniline	ND	ug/L		10		
4-Bromophenyl phenyl ether	ND	ug/L		10		
4-Chloro-3-methylphenol	ND	ug/L		10		
4-Chloroaniline	ND	ug/L		10		
4-Chlorophenyl phenyl ether	ND	ug/L		10		
4-Nitroaniline	ND	ug/L		10		
4-Nitrophenol	ND	ug/L		10		
Acenaphthene	ND	ug/L		10		
Acenaphthylene	ND	ug/L		10		
Aniline	ND	ug/L		10		
Anthracene	ND	ug/L		10		
Azobenzene	ND	ug/L		10		
Benz(a)anthracene	ND	ug/L		10		
Benzidine	ND	ug/L		50		
Benzo(a)pyrene	ND	ug/L		10		
Benzo(b)fluoranthene	ND	ug/L		10		
Benzo(g,h,i)perylene	ND	ug/L		10		
Benzo(k)fluoranthene	ND	ug/L		10		
Benzoic acid	ND	ug/L		50		
Benzyl alcohol	ND	ug/L		10		
Bis(2-chloroethoxy)methane	ND	ug/L		10		
Bis(2-chloroethyl) Ether	ND	ug/L		25		
Bis(2-chloroisopropyl) Ether	ND	ug/L		10		
Bis(2-ethylhexyl) phthalate	ND	ug/L		10		
Butylbenzyl Phthalate	ND	ug/L		10		
Carbazole	ND	ug/L		10		
Chrysene	ND	ug/L		10		
Dibenz(a,h)anthracene	ND	ug/L		10		
Dibenzofuran	ND	ug/L		10		
Diethyl phthalate	ND	ug/L		10		
Dimethyl phthalate	ND	ug/L		10		
Di-n-butyl phthalate	ND	ug/L		10		

QCBatchID: QC1205566 **Analyst:** Abanh **Method:** EPA 8270C

Matrix: Water **Analyzed:** 08/19/2019 **Instrument:** SVOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205566MB1					
Di-n-octyl phthalate	ND	ug/L		10	
Fluoranthene	ND	ug/L		10	
Fluorene	ND	ug/L		10	
Hexachlorobenzene	ND	ug/L		10	
Hexachlorobutadiene	ND	ug/L		10	
Hexachlorocyclopentadiene	ND	ug/L		25	
Hexachloroethane	ND	ug/L		10	
Indeno(1,2,3-cd)pyrene	ND	ug/L		10	
Isophorone	ND	ug/L		10	
Naphthalene	ND	ug/L		10	
Nitrobenzene	ND	ug/L		25	
N-Nitrosodimethylamine (NDMA)	ND	ug/L		10	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/L		10	
N-Nitrosodiphenylamine	ND	ug/L		10	
Pentachlorophenol	ND	ug/L		25	
Phenanthrene	ND	ug/L		10	
Phenol	ND	ug/L		10	
Pyrene	ND	ug/L		10	
Pyridine	ND	ug/L		10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205566LCS1, QC1205566LCSD1											
1,2,4-Trichlorobenzene	40	40	23	24	ug/L	58	60	4	26-96	25	
1,4-Dichlorobenzene	40	40	20	20	ug/L	50	50	0	24-86	25	
2,4,5-Trichlorophenol	40	40	26	29	ug/L	65	73	11	42-122	25	
2,4-Dimethylphenol	40	40	25	25	ug/L	63	63	0	21-117	25	
2,4-Dinitrotoluene	40	40	26	30	ug/L	65	75	14	44-121	25	
2-Chlorophenol	40	40	24	24	ug/L	60	60	0	31-116	25	
3 and 4-Methylphenol (m and p-Cresol)	40	40	21	22	ug/L	53	55	5	26-112	25	
4-Chloro-3-methylphenol	40	40	25	27	ug/L	63	68	8	42-122	25	
4-Nitrophenol	40	40	13	13	ug/L	33	33	0	20-103	25	
Acenaphthene	40	40	27	29	ug/L	68	73	7	41-100	25	
Benzo(b)fluoranthene	40	40	27	29	ug/L	68	73	7	43-119	25	
Chrysene	40	40	30	33	ug/L	75	83	10	47-108	25	
N-Nitrosodi-n-propylamine (NDPA)	40	40	28	30	ug/L	70	75	7	35-119	25	
Pentachlorophenol	40	40	22	25	ug/L	55	63	13	22-133	25	
Phenol	40	40	12	13	ug/L	30	33	8	20-72	25	
Pyrene	40	40	29	32	ug/L	73	80	10	41-117	33	

QCBatchID:	**QC1205608**	**Analyst:**	wei	**Method:**	SM 2540-C
Matrix:	Water	**Analyzed:**	08/20/2019	**Instrument:**	CHEM (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205608MB1						
Total Dissolved Solids	ND	mg/L		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205608LCS1											
Total Dissolved Solids	95		93.0		mg/L	98			90-110		

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205608DUP1						**Source: 418277-001**
Total Dissolved Solids	1550	1520	mg/L	2.0	5	

QCBatchID: QC1205767 **Analyst:** wei **Method:** SM 2320-B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** CHEM (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205767MB1						
Bicarbonate (HCO3)	ND	mg/L		5		
Carbonate (CO3)	ND	mg/L		5		
Hydroxide (OH)	ND	mg/L		5		
Total Alkalinity (as CaCO3)	ND	mg/L		5		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205767LCS1											
Total Alkalinity (as CaCO3)	100		95		mg/L	95			90-110		

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205767DUP1						**Source: 418340-001**
Bicarbonate (HCO3)	1400	1400	mg/L	0.0	20	
Carbonate (CO3)	ND	ND	mg/L	0.0	20	
Hydroxide (OH)	ND	ND	mg/L	0.0	20	
Total Alkalinity (as CaCO3)	1200	1200	mg/L	0.0	20	

QCBatchID:	**QC1205788**	**Analyst:**	wei	**Method:**	SM 2510-B
Matrix:	Water	**Analyzed:**	08/22/2019	**Instrument:**	CHEM (group)

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205788DUP1						**Source: 418609-006**
Conductivity	7.39	7.41	umhos/cm	0.3	20	

QCBatchID: QC1205804 **Analyst:** sbailey-woo **Method:** EPA 7470A

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205804MB1						
Mercury	ND	ug/L		0.4		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205804LCS1											
Mercury	5		5.09		ug/L	102			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205804MS1, QC1205804MSD1												**Source: 418340-001**
Mercury	ND	5	5	4.90	4.91	ug/L	98	98	0.2	75-125	20	

QCBatchID: QC1205833 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205833MB1					
Aluminum	ND	mg/L		0.05	
Antimony	ND	mg/L		0.04	
Arsenic	ND	mg/L		0.01	
Barium	ND	mg/L		0.01	
Beryllium	ND	mg/L		0.005	
Cadmium	ND	mg/L		0.005	
Chromium	ND	mg/L		0.01	
Cobalt	ND	mg/L		0.005	
Copper	ND	mg/L		0.01	
Lead	ND	mg/L		0.01	
Molybdenum	ND	mg/L		0.01	
Nickel	ND	mg/L		0.02	
Selenium	ND	mg/L		0.03	
Silver	ND	mg/L		0.005	
Thallium	ND	mg/L		0.05	
Vanadium	ND	mg/L		0.005	
Zinc	ND	mg/L		0.05	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205833LCS1											
Aluminum	2		2.000		mg/L	100			80-120		
Antimony	2		1.960		mg/L	98			80-120		
Arsenic	2		1.960		mg/L	98			80-120		
Barium	2		1.850		mg/L	93			80-120		
Beryllium	2		2.060		mg/L	103			80-120		
Cadmium	2		1.99		mg/L	100			80-120		
Chromium	2		2.13		mg/L	107			80-120		
Cobalt	2		1.91		mg/L	96			80-120		
Copper	2		2.11		mg/L	106			80-120		
Lead	2		1.97		mg/L	99			80-120		
Molybdenum	2		1.98		mg/L	99			80-120		
Nickel	2		1.83		mg/L	92			80-120		
Selenium	2		2.01		mg/L	101			80-120		
Silver	2		1.96		mg/L	98			80-120		
Thallium	2		2.03		mg/L	102			80-120		
Vanadium	2		2.02		mg/L	101			80-120		
Zinc	2		2.04		mg/L	102			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205833MS1, QC1205833MSD1												**Source: 418552-001**
Antimony	ND	1	1	0.846	0.956	mg/L	85	96	12.2	75-125	20	
Arsenic	0.031	1	1	0.943	1.070	mg/L	91	104	12.6	75-125	20	
Barium	0.537	1	1	1.320	1.360	mg/L	78	82	3.0	75-125	20	
Beryllium	ND	1	1	0.829	0.972	mg/L	83	97	15.9	75-125	20	
Cadmium	ND	1	1	0.806	0.932	mg/L	81	93	14.5	75-125	20	
Chromium	ND	1	1	0.867	0.998	mg/L	87	100	14.0	75-125	20	
Cobalt	ND	1	1	0.753	0.858	mg/L	75	86	13.0	75-125	20	
Copper	ND	1	1	0.852	0.994	mg/L	85	99	15.4	75-125	20	

QCBatchID: QC1205833 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205833MS1, QC1205833MSD1												**Source: 418552-001**
Lead	ND	1	1	0.788	0.905	mg/L	79	91	13.8	75-125	20	
Molybdenum	0.0567	1	1	0.912	1.04	mg/L	86	98	13.1	75-125	20	
Nickel	0.011	1	1	0.734	0.835	mg/L	72	82	12.9	75-125	20	M
Selenium	ND	1	1	0.961	1.08	mg/L	96	108	11.7	75-125	20	
Silver	ND	1	1	0.826	0.853	mg/L	83	85	3.2	75-125	20	
Thallium	ND	1	1	0.756	0.874	mg/L	76	87	14.5	75-125	20	
Vanadium	ND	1	1	0.826	0.968	mg/L	83	97	15.8	75-125	20	
Zinc	ND	1	1	0.845	0.969	mg/L	85	97	13.7	75-125	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 418340

Page: 1 of 1

Turn Around Time (Rush must be pre-arranged)					
Standard:	X	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates	Name:	In Situ
Report To:	Jaydeep Parandare	Number:	3370
Email:	jparandare@rouxinc.com	P.O. #:	
Address:	5750 E. PCH, Suite 450, Long Beach	Address:	3701 N. Pacific Place, Long Beach
Phone:	310-877-4900	Global ID:	
Fax:		Sampled By:	M. Nishibayashi

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	8260B - VOCs	8015 - TPH-cc	6010B - TTLC Metals	8270 - SVOCs	SM2540 - TDS	300.0 - Chloride, Nitrate, Sulfate	SM2510B - Specific Conductance	SM2320B - Alkalinity	SM4500 - pH	Test Instructions / Comments
1	MW-7	8/14/19	0829	W	11 / 1L amber, 1L Poly, 4 x 40mL VOA	2,3	X	X	X	X	X	X	X	X	X	
2	EB-1	↓	0905	W	6 / 4 x 40mL VOA	HCl	X									
3	TB-1		0730	W	6 / 4 x 40mL VOA	HCl	X									
4																
5																
6																
7																
8																
9																
10																

MW

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Mark Nishibayashi	Roux	8/14/19 1020
1 Received By:		Peter Shimer	ROUX	8/14/19 1020
2 Relinquished By:		Peter Shimer	ROUX	8/14/19 1503
2 Received By:		Ben Salgado	Enthalpy Analytical	8.14.19 1503
3 Relinquished By:		Ben Salgado	Enthalpy Analytical	8.14.19 1617
3 Received By:				8/14/19 1617

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Roux Project: InSite

Date Received: 8/14/19 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 0.2 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.1 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?		✓	
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 8/14/19

Enthalpy Analytical, a subsidiary of Montrose Environmental Group, Inc.
931 W. Barkley Ave, Orange, CA 92868 • T: (714) 771-6900 • F: (714) 538-1209
www.enthalpy.com/socal

Ranjit Clarke

From: Peter Shimer
Sent: Tuesday, August 20, 2019 3:22 PM
To: Ranjit Clarke
Subject: RE: 3701 Pacific Place - Insite LB

Ranjit,

As discussed, can you please filter and analyze sample MW-7 collected on 8/14/19 at 0829 for 6010B/7470A T22 metals and mercury?

We'd like to rush this sample, to be reported by the end of this week.

Peter Shimer, P.G. - CA | Project Geologist
Direct: 310.879.4929 | Mobile: 925.818.6276
Email: pshimer@rouxinc.com

From: Ranjit Clarke <ranjit.clarke@enthalpy.com>
Sent: Monday, August 19, 2019 6:00 PM
To: Peter Shimer <pshimer@rouxinc.com>
Subject: RE: 3701 Pacific Place - Insite LB

This message originated outside your organization. Please use caution!

Peter,

Each sampling point should use the following:

1	500ml Plastic	None	Specific cond, Alkalinity, pH, 300.0 (Cl,NO3
1	1L Plastic	None	TDS
1	1L Amber	None	SVOCs
2	3x40ml VOA Vials	HCl	VOCs, TPH-g
1	250ml Plastic	HNO3	Metals
1	1L Amber	None	TPH-CC

I'll arrange the p/u for you.

Thanks,

Ranjit

Ranjit Clarke
Senior Project Manager
ENTHALPY ANALYTICAL
931 W. Barkley Ave., Orange, CA 92868
O: 714.771.6900 X 9906 | M: 657-274-9864 | F: 714-538-1209

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client:	Roux Associates, Inc.
Address:	5150 E. Pacific Coast Hwy. Suite 450 Long Beach, CA 90804
Attn:	Jaydeep Purandare

Lab Request:	418653
Report Date:	09/05/2019
Date Received:	08/22/2019
Client ID:	15831

Comments: InSite
#3370
3701 N. Pacific Pl., Long Beach, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
418653-001	GS-1-62
418653-002	GS-3-60
418653-003	TB-3
418653-004	EB-2

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

ACCREDITED IN ACCORDANCE WITH nelac

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 09:20	**Site:**			
Sample #:	**418653-001**	**Client Sample #:**	GS-1-62	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 300.0	Prep Method: Method					QCBatchID: QC1205823		
Chloride	**778**	20	20	mg/L	08/23/19	08/23/19 17:28	JP	
Nitrate, as Nitrogen	**0.13**	1	0.1	mg/L	08/23/19	08/23/19 08:16	JP	
Sulfate	**271**	20	20	mg/L	08/23/19	08/23/19 17:28	JP	
Method: EPA 6010B *NELAC*	Prep Method: EPA 3010A/Filtered					QCBatchID: QC1206278		
Antimony	ND	5	0.2	mg/L		09/04/19	SBW	D2
Arsenic	ND	5	0.05	mg/L		09/04/19	SBW	D2
Barium	**0.204**	5	0.05	mg/L		09/04/19	SBW	
Beryllium	ND	5	0.025	mg/L		09/04/19	SBW	D2
Cadmium	ND	5	0.025	mg/L		09/04/19	SBW	D2
Chromium	ND	5	0.05	mg/L		09/04/19	SBW	D2
Cobalt	ND	5	0.025	mg/L		09/04/19	SBW	D2
Copper	ND	5	0.05	mg/L		09/04/19	SBW	D2
Lead	ND	5	0.05	mg/L		09/04/19	SBW	D2
Molybdenum	**0.146**	5	0.05	mg/L		09/04/19	SBW	
Nickel	ND	5	0.1	mg/L		09/04/19	SBW	D2
Selenium	ND	5	0.15	mg/L		09/04/19	SBW	D2
Silver	ND	5	0.025	mg/L		09/04/19	SBW	D2
Thallium	ND	5	0.25	mg/L		09/04/19	SBW	D2
Vanadium	ND	5	0.025	mg/L		09/04/19	SBW	D2
Zinc	ND	5	0.25	mg/L		09/04/19	SBW	D2
Method: EPA 7470A *NELAC*	Prep Method: Filtered					QCBatchID: QC1205955		
Mercury	ND	1	0.4	ug/L	08/27/19	08/27/19	CM	
Method: EPA 8015B *NELAC*	Prep Method: EPA 3510C					QCBatchID: QC1205879		
TPH (C13 to C22)	**0.36**	1	0.2	mg/L	08/26/19	08/28/19	TW	
TPH (C23 to C44)	ND	1	0.3	mg/L	08/26/19	08/28/19	TW	
Surrogate	*% Recovery*	*Limits*	*Notes*					
Triacontane (SUR)	*65*	*50-150*						
Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205265		
TPH (C6 to C12)	**910**	1	50	ug/L		08/23/19	EW	
Surrogate	*% Recovery*	*Limits*	*Notes*					
4-Bromofluorobenzene (SUR)	*111*	*60-140*						
Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205857		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trimethylbenzene	**13**	1	5	ug/L		08/24/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 09:20	**Site:**			
Sample #:	**418653-001**	**Client Sample #:**	GS-1-62	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,4-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/24/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/24/19	LZ	
Acetone	ND	1	100	ug/L		08/24/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Benzene	**11**	1	1	ug/L		08/24/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/24/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromoform	ND	1	5	ug/L		08/24/19	LZ	
Bromomethane	ND	1	5	ug/L		08/24/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/24/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroform	ND	1	5	ug/L		08/24/19	LZ	
Chloromethane	ND	1	5	ug/L		08/24/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/24/19	LZ	
Ethylbenzene	**11**	1	5	ug/L		08/24/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/24/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/24/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/24/19	LZ	
m and p-Xylene	**6.1**	1	5	ug/L		08/24/19	LZ	
Methylene chloride	ND	1	5	ug/L		08/24/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/24/19	LZ	
Naphthalene	ND	1	5	ug/L		08/24/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/24/19	LZ	
o-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Styrene	ND	1	5	ug/L		08/24/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/24/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/24/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/24/19	LZ	
Toluene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/24/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Xylenes (Total)	**6.1**	1	5	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 09:20	**Site:**			
Sample #:	**418653-001**	**Client Sample #:**	GS-1-62	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Surrogate	*% Recovery*		*Limits*	*Notes*				
1,2-Dichloroethane-d4 (SUR)	*89*		*70-145*					
4-Bromofluorobenzene (SUR)	*106*		*70-145*					
Dibromofluoromethane (SUR)	*99*		*70-145*					
Toluene-d8 (SUR)	*104*		*70-145*					
Method: EPA 8270C *NELAC* Prep Method: EPA 3510C						QCBatchID: QC1205909		
1,2,4-Trichlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
1,2-Dichlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
1,3-Dichlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
1,4-Dichlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4,5-Trichlorophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4,6-Trichlorophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4-Dichlorophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4-Dimethylphenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4-Dinitrophenol	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
2,4-Dinitrotoluene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,6-Dinitrotoluene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Chloronaphthalene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Chlorophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Methyl-4,6-dinitrophenol	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
2-Methylnaphthalene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Methylphenol (o-Cresol)	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Nitroaniline	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
2-Nitrophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
3 and 4-Methylphenol (m and p-Cresol)	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
3,3'-Dichlorobenzidine	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
3-Nitroaniline	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Bromophenyl phenyl ether	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Chloro-3-methylphenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Chloroaniline	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Chlorophenyl phenyl ether	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Nitroaniline	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Nitrophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Acenaphthene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Acenaphthylene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Aniline	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Anthracene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Azobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benz(a)anthracene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzidine	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
Benzo(a)pyrene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzo(b)fluoranthene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzo(g,h,i)perylene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzo(k)fluoranthene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzoic acid	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
Benzyl alcohol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroethoxy)methane	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroethyl) Ether	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroisopropyl) Ether	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Bis(2-ethylhexyl) phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Butylbenzyl Phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Carbazole	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Chrysene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Dibenz(a,h)anthracene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 09:20	**Site:**			
Sample #:	**418653-001**	**Client Sample #:**	GS-1-62	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dibenzofuran	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Diethyl phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Dimethyl phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Di-n-butyl phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Di-n-octyl phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Fluoranthene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Fluorene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Hexachlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Hexachlorobutadiene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Hexachlorocyclopentadiene	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
Hexachloroethane	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Indeno(1,2,3-cd)pyrene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Isophorone	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Naphthalene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Nitrobenzene	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
N-Nitrosodimethylamine (NDMA)	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
N-Nitrosodi-n-propylamine (NDPA)	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
N-Nitrosodiphenylamine	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Pentachlorophenol	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
Phenanthrene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Phenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Pyrene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Pyridine	ND	1.4	14	ug/L	08/26/19	08/28/19		D1

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*50*	*39-137*	
2-Fluorobiphenyl (SUR)	*65*	*37-102*	
2-Fluorophenol (SUR)	*39*	*23-76*	
Nitrobenzene-d5 (SUR)	*83*	*30-115*	
p-Terphenyl (SUR)	*79*	*61-121*	
Phenol-d5 (SUR)	*27*	*17-56*	

Method: SM 2320-B	Prep Method: Method					QCBatchID: QC1205767	
Bicarbonate (HCO3)	**680**	10	50	mg/L		08/23/19	WW
Carbonate (CO3)	ND	10	50	mg/L		08/23/19	WW
Hydroxide (OH)	ND	10	50	mg/L		08/23/19	WW
Total Alkalinity (as CaCO3)	**560**	10	50	mg/L		08/23/19	WW

Method: SM 2510-B	Prep Method: Method					QCBatchID: QC1205838	
Specific Conductance	**3950**	1	1	umhos/cm		08/23/19	WW

Method: SM 2540-C	Prep Method: Method					QCBatchID: QC1205929	
Total Dissolved Solids	**2470**	2	20	mg/L	08/26/19	08/27/19	TP

Method: SM 4500-H+B	Prep Method: Method					QCBatchID: QC1205862	
pH	**7.13**	1		pH Units		08/23/19 17:15	WW T2
Temp. at Time of pH Measurement	**21.9**	1		°C		08/23/19 17:15	WW

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 12:15	**Site:**			
Sample #:	**418653-002**	**Client Sample #:**	GS-3-60	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 300.0	Prep Method: Method					QCBatchID: QC1205823		
Chloride	**991**	20	20	mg/L	08/23/19	08/23/19 17:54	JP	
Nitrate, as Nitrogen	**0.10**	1	0.1	mg/L	08/23/19	08/23/19 08:42	JP	
Sulfate	**296**	20	20	mg/L	08/23/19	08/23/19 17:54	JP	
Method: EPA 6010B *NELAC*	Prep Method: EPA 3010A/Filtered					QCBatchID: QC1206278		
Antimony	ND	5	0.2	mg/L		09/04/19	SBW	D2
Arsenic	ND	5	0.05	mg/L		09/04/19	SBW	D2
Barium	**0.102**	5	0.05	mg/L		09/04/19	SBW	
Beryllium	ND	5	0.025	mg/L		09/04/19	SBW	D2
Cadmium	ND	5	0.025	mg/L		09/04/19	SBW	D2
Chromium	ND	5	0.05	mg/L		09/04/19	SBW	D2
Cobalt	ND	5	0.025	mg/L		09/04/19	SBW	D2
Copper	ND	5	0.05	mg/L		09/04/19	SBW	D2
Lead	ND	5	0.05	mg/L		09/04/19	SBW	D2
Molybdenum	**0.174**	5	0.05	mg/L		09/04/19	SBW	
Nickel	ND	5	0.1	mg/L		09/04/19	SBW	D2
Selenium	ND	5	0.15	mg/L		09/04/19	SBW	D2
Silver	ND	5	0.025	mg/L		09/04/19	SBW	D2
Thallium	ND	5	0.25	mg/L		09/04/19	SBW	D2
Vanadium	ND	5	0.025	mg/L		09/04/19	SBW	D2
Zinc	ND	5	0.25	mg/L		09/04/19	SBW	D2
Method: EPA 7470A *NELAC*	Prep Method: Filtered					QCBatchID: QC1205955		
Mercury	ND	1	0.4	ug/L	08/27/19	08/27/19	CM	
Method: EPA 8015B *NELAC*	Prep Method: EPA 3510C					QCBatchID: QC1205879		
TPH (C13 to C22)	**0.52**	1	0.2	mg/L	08/26/19	08/28/19	TW	
TPH (C23 to C44)	**0.31**	1	0.3	mg/L	08/26/19	08/28/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*75*		*50-150*					
Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205265		
TPH (C6 to C12)	**63**	1	50	ug/L		08/23/19	EW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
4-Bromofluorobenzene (SUR)	*105*		*60-140*					
Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205857		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 12:15	**Site:**			
Sample #:	**418653-002**	**Client Sample #:**	GS-3-60	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,4-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/24/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/24/19	LZ	
Acetone	**100**	1	100	ug/L		08/24/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Benzene	**6.9**	1	1	ug/L		08/24/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/24/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromoform	ND	1	5	ug/L		08/24/19	LZ	
Bromomethane	ND	1	5	ug/L		08/24/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/24/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroform	ND	1	5	ug/L		08/24/19	LZ	
Chloromethane	ND	1	5	ug/L		08/24/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/24/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/24/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/24/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/24/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Methylene chloride	ND	1	5	ug/L		08/24/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/24/19	LZ	
Naphthalene	ND	1	5	ug/L		08/24/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/24/19	LZ	
o-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Styrene	ND	1	5	ug/L		08/24/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/24/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/24/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/24/19	LZ	
Toluene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/24/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 12:15	**Site:**			
Sample #:	**418653-002**	**Client Sample #:**	GS-3-60	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Surrogate	*% Recovery*		*Limits*	*Notes*				
1,2-Dichloroethane-d4 (SUR)	*89*		*70-145*					
4-Bromofluorobenzene (SUR)	*106*		*70-145*					
Dibromofluoromethane (SUR)	*100*		*70-145*					
Toluene-d8 (SUR)	*105*		*70-145*					
Method: EPA 8270C *NELAC* Prep Method: EPA 3510C						QCBatchID: QC1205909		
1,2,4-Trichlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
1,2-Dichlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
1,3-Dichlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
1,4-Dichlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4,5-Trichlorophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4,6-Trichlorophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4-Dichlorophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4-Dimethylphenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4-Dinitrophenol	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
2,4-Dinitrotoluene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,6-Dinitrotoluene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Chloronaphthalene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Chlorophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Methyl-4,6-dinitrophenol	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
2-Methylnaphthalene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Methylphenol (o-Cresol)	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Nitroaniline	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
2-Nitrophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
3 and 4-Methylphenol (m and p-Cresol)	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
3,3'-Dichlorobenzidine	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
3-Nitroaniline	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Bromophenyl phenyl ether	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Chloro-3-methylphenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Chloroaniline	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Chlorophenyl phenyl ether	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Nitroaniline	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Nitrophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Acenaphthene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Acenaphthylene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Aniline	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Anthracene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Azobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benz(a)anthracene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzidine	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
Benzo(a)pyrene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzo(b)fluoranthene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzo(g,h,i)perylene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzo(k)fluoranthene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzoic acid	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
Benzyl alcohol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroethoxy)methane	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroethyl) Ether	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroisopropyl) Ether	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Bis(2-ethylhexyl) phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Butylbenzyl Phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Carbazole	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Chrysene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Dibenz(a,h)anthracene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 12:15	**Site:**			
Sample #:	**418653-002**	**Client Sample #:**	GS-3-60	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dibenzofuran	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Diethyl phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Dimethyl phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Di-n-butyl phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Di-n-octyl phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Fluoranthene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Fluorene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Hexachlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Hexachlorobutadiene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Hexachlorocyclopentadiene	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
Hexachloroethane	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Indeno(1,2,3-cd)pyrene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Isophorone	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Naphthalene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Nitrobenzene	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
N-Nitrosodimethylamine (NDMA)	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
N-Nitrosodi-n-propylamine (NDPA)	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
N-Nitrosodiphenylamine	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Pentachlorophenol	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
Phenanthrene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Phenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Pyrene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Pyridine	ND	1.5	15	ug/L	08/26/19	08/28/19		D1

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*51*	*39-137*	
2-Fluorobiphenyl (SUR)	*66*	*37-102*	
2-Fluorophenol (SUR)	*35*	*23-76*	
Nitrobenzene-d5 (SUR)	*89*	*30-115*	
p-Terphenyl (SUR)	*86*	*61-121*	
Phenol-d5 (SUR)	*24*	*17-56*	

Method: SM 2320-B	Prep Method: Method					QCBatchID: QC1205767	
Bicarbonate (HCO3)	**1300**	10	50	mg/L		08/23/19	WW
Carbonate (CO3)	ND	10	50	mg/L		08/23/19	WW
Hydroxide (OH)	ND	10	50	mg/L		08/23/19	WW
Total Alkalinity (as CaCO3)	**1000**	10	50	mg/L		08/23/19	WW

Method: SM 2510-B	Prep Method: Method					QCBatchID: QC1205838	
Specific Conductance	**5160**	1	1	umhos/cm		08/23/19	WW

Method: SM 2540-C	Prep Method: Method					QCBatchID: QC1205929	
Total Dissolved Solids	**3220**	2	20	mg/L	08/26/19	08/27/19	TP

Method: SM 4500-H+B	Prep Method: Method					QCBatchID: QC1205862	
pH	**7.07**	1		pH Units		08/23/19 17:15	WW T2
Temp. at Time of pH Measurement	**21.9**	1		°C		08/23/19 17:15	WW

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 14:00	**Site:**			
Sample #:	**418653-003**	**Client Sample #:**	TB-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1205857		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/24/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/24/19	LZ	
Acetone	ND	1	100	ug/L		08/24/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Benzene	ND	1	1	ug/L		08/24/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/24/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromoform	ND	1	5	ug/L		08/24/19	LZ	
Bromomethane	ND	1	5	ug/L		08/24/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/24/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroform	ND	1	5	ug/L		08/24/19	LZ	
Chloromethane	ND	1	5	ug/L		08/24/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/24/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/24/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/24/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/24/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Methylene chloride	ND	1	5	ug/L		08/24/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 14:00	**Site:**			
Sample #:	**418653-003**	**Client Sample #:**	TB-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Naphthalene	ND	1	5	ug/L		08/24/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/24/19	LZ	
o-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Styrene	ND	1	5	ug/L		08/24/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/24/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/24/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/24/19	LZ	
Toluene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/24/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/24/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*91*	*70-145*	
4-Bromofluorobenzene (SUR)	*104*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*105*	*70-145*	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 13:00	**Site:**			
Sample #:	**418653-004**	**Client Sample #:**	EB-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1205857		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/24/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/24/19	LZ	
Acetone	ND	1	100	ug/L		08/24/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Benzene	ND	1	1	ug/L		08/24/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/24/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromoform	ND	1	5	ug/L		08/24/19	LZ	
Bromomethane	ND	1	5	ug/L		08/24/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/24/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroform	ND	1	5	ug/L		08/24/19	LZ	
Chloromethane	ND	1	5	ug/L		08/24/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/24/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/24/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/24/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/24/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Methylene chloride	ND	1	5	ug/L		08/24/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 13:00	**Site:**			
Sample #:	**418653-004**	**Client Sample #:**	EB-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Naphthalene	ND	1	5	ug/L		08/24/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/24/19	LZ	
o-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Styrene	ND	1	5	ug/L		08/24/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/24/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/24/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/24/19	LZ	
Toluene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/24/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/24/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*91*	*70-145*	
4-Bromofluorobenzene (SUR)	*104*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*105*	*70-145*	

QCBatchID: QC1205265 **Analyst:** sandyw **Method:** EPA 8015B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** VOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205265MB1						
TPH (C6 to C10)	ND	ug/L		50		
TPH (C6 to C12)	ND	ug/L		50		
TPH Gasoline	ND	ug/L		50		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205265LCS1											
TPH Gasoline	500		540		ug/L	108			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205265MS1, QC1205265MSD1												**Source: 418577-001**
TPH Gasoline	ND	500	500	540	530	ug/L	108	106	1.9	70-130	30	

QCBatchID: QC1205767 **Analyst:** wei **Method:** SM 2320-B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** CHEM (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205767MB1						
Bicarbonate (HCO3)	ND	mg/L		5		
Carbonate (CO3)	ND	mg/L		5		
Hydroxide (OH)	ND	mg/L		5		
Total Alkalinity (as CaCO3)	ND	mg/L		5		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205767LCS1											
Total Alkalinity (as CaCO3)	100		95		mg/L	95			90-110		

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205767DUP1						**Source: 418340-001**
Bicarbonate (HCO3)	1400	1400	mg/L	0.0	20	
Carbonate (CO3)	ND	ND	mg/L	0.0	20	
Hydroxide (OH)	ND	ND	mg/L	0.0	20	
Total Alkalinity (as CaCO3)	1200	1200	mg/L	0.0	20	

QCBatchID: QC1205823 **Analyst:** JParedes **Method:** EPA 300.0

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205823MB1					
Bromide	ND	mg/L		0.3	
Chloride	ND	mg/L		1	
Nitrate + Nitrite, as Nitrogen	ND	mg/L		0.44	
Nitrate, as Nitrogen	ND	mg/L		0.1	
Nitrite, as Nitrogen	ND	mg/L		0.1	
Sulfate	ND	mg/L		0.5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205823LCS1											
Bromide	15		14.6		mg/L	97			90-110		
Chloride	100		101		mg/L	101			90-110		
Nitrate, as Nitrogen	9.03		8.83		mg/L	98			90-110		
Nitrite, as Nitrogen	9.15		9.32		mg/L	102			90-110		
Sulfate	50		48.7		mg/L	97			90-110		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205823MS1, QC1205823MSD1												**Source: 418647-001**
Bromide	0.339	15	15	14.5	14.5	mg/L	94	94	0.0	80-120	20	
Chloride	73.6	100	100	170	170	mg/L	96	96	0.0	80-120	20	
Nitrate, as Nitrogen	0.0440	9.03	9.03	8.82	8.80	mg/L	97	97	0.2	80-120	20	
Nitrite, as Nitrogen	ND	9.15	9.15	9.09	9.10	mg/L	99	99	0.1	80-120	20	
Sulfate	17.5	50	50	64.8	64.9	mg/L	95	95	0.2	80-120	20	
QC1205823MS2, QC1205823MSD2												**Source: 418648-001**
Bromide	0.299	15	15	14.5	14.8	mg/L	95	97	2.0	80-120	20	
Chloride	74.8	100	100	172	173	mg/L	97	98	0.6	80-120	20	
Nitrate, as Nitrogen	ND	9.03	9.03	8.88	9.05	mg/L	98	100	1.9	80-120	20	
Nitrite, as Nitrogen	ND	9.15	9.15	9.16	9.27	mg/L	100	101	1.2	80-120	20	
Sulfate	17.4	50	50	65.2	65.7	mg/L	96	97	0.8	80-120	20	

QCBatchID:	**QC1205838**	**Analyst:**	wei	**Method:**	SM 2510-B
Matrix:	Water	**Analyzed:**	08/23/2019	**Instrument:**	CHEM (group)

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205838DUP1						**Source: 418485-006**
Specific Conductance	7.1	7.1	umhos/cm	0.0	20	

QCBatchID: QC1205857	**Analyst:** lucy	**Method:** EPA 8260B	
Matrix: Water	**Analyzed:** 08/23/2019	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205857MB1						
1,1,1,2-Tetrachloroethane	ND	ug/L		5		
1,1,1-Trichloroethane	ND	ug/L		5		
1,1,2,2-Tetrachloroethane	ND	ug/L		5		
1,1,2-Trichloroethane	ND	ug/L		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/L		5		
1,1-Dichloroethane	ND	ug/L		5		
1,1-Dichloroethene	ND	ug/L		5		
1,1-Dichloropropene	ND	ug/L		5		
1,2,3-Trichlorobenzene	ND	ug/L		5		
1,2,3-Trichloropropane	ND	ug/L		5		
1,2,4-Trichlorobenzene	ND	ug/L		5		
1,2,4-Trimethylbenzene	ND	ug/L		5		
1,2-Dibromo-3-chloropropane	ND	ug/L		5		
1,2-Dibromoethane	ND	ug/L		5		
1,2-Dichlorobenzene	ND	ug/L		5		
1,2-Dichloroethane	ND	ug/L		5		
1,2-Dichloropropane	ND	ug/L		5		
1,3,5-Trimethylbenzene	ND	ug/L		5		
1,3-Dichlorobenzene	ND	ug/L		5		
1,3-Dichloropropane	ND	ug/L		5		
1,4-Dichlorobenzene	ND	ug/L		5		
2,2-Dichloropropane	ND	ug/L		5		
2-Butanone (MEK)	ND	ug/L		100		
2-Chloroethyl Vinyl Ether	ND	ug/L		10		
2-Chlorotoluene	ND	ug/L		5		
4-Chlorotoluene	ND	ug/L		5		
4-Isopropyltoluene	ND	ug/L		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/L		5		
Acetone	ND	ug/L		100		
Allyl Chloride	ND	ug/L		5		
Benzene	ND	ug/L		1		
Bromobenzene	ND	ug/L		5		
Bromochloromethane	ND	ug/L		5		
Bromodichloromethane	ND	ug/L		5		
Bromoform	ND	ug/L		5		
Bromomethane	ND	ug/L		5		
Carbon Tetrachloride	ND	ug/L		5		
Chlorobenzene	ND	ug/L		5		
Chlorodibromomethane	ND	ug/L		5		
Chloroethane	ND	ug/L		5		
Chloroform	ND	ug/L		5		
Chloromethane	ND	ug/L		5		
cis-1,2-Dichloroethene	ND	ug/L		5		
cis-1,3-dichloropropene	ND	ug/L		5		
cis-1,4-dichloro-2-butene	ND	ug/L		5		
Dibromomethane	ND	ug/L		5		
Dichlorodifluoromethane	ND	ug/L		5		
Di-isopropyl ether (DIPE)	ND	ug/L		1		
Ethylbenzene	ND	ug/L		5		
Ethyl-tertbutylether (ETBE)	ND	ug/L		1		
Hexachlorobutadiene	ND	ug/L		5		
Isopropylbenzene	ND	ug/L		5		

QCBatchID: QC1205857 **Analyst:** lucy **Method:** EPA 8260B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205857MB1					
m and p-Xylene	ND	ug/L		5	
Methylene chloride	ND	ug/L		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L		1	
Naphthalene	ND	ug/L		5	
N-butylbenzene	ND	ug/L		5	
N-propylbenzene	ND	ug/L		5	
o-Xylene	ND	ug/L		5	
Sec-butylbenzene	ND	ug/L		5	
Styrene	ND	ug/L		5	
t-Butyl alcohol (TBA)	ND	ug/L		10	
Tert-amylmethylether (TAME)	ND	ug/L		5	
Tert-butylbenzene	ND	ug/L		5	
Tetrachloroethene	ND	ug/L		5	
Toluene	ND	ug/L		5	
trans-1,2-dichloroethene	ND	ug/L		5	
trans-1,3-dichloropropene	ND	ug/L		5	
trans-1,4-dichloro-2-butene	ND	ug/L		5	
Trichloroethene	ND	ug/L		5	
Trichlorofluoromethane	ND	ug/L		5	
Vinyl Chloride	ND	ug/L		5	
Xylenes (Total)	ND	ug/L		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205857LCS1											
1,1-Dichloroethene	50		58		ug/L	116			59-172		
Benzene	50		57		ug/L	114			62-137		
Chlorobenzene	50		58		ug/L	116			60-133		
Methyl-t-butyl Ether (MTBE)	50		48		ug/L	96			62-137		
Toluene	50		60		ug/L	120			59-139		
Trichloroethene	50		61		ug/L	122			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205857MS1, QC1205857MSD1												**Source: 418653-001**
1,1-Dichloroethene	ND	50	50	58	58	ug/L	116	116	0.0	59-172	22	
Benzene	11	50	50	84	85	ug/L	146	148	1.2	62-137	24	M
Chlorobenzene	ND	50	50	53	52	ug/L	106	104	1.9	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	50	49	ug/L	100	98	2.0	62-137	21	
Toluene	ND	50	50	54	55	ug/L	108	110	1.8	59-139	21	
Trichloroethene	ND	50	50	54	56	ug/L	108	112	3.6	66-142	21	

QCBatchID:	**QC1205862**	**Analyst:**	wei	**Method:**	SM 4500-H+B
Matrix:	Water	**Analyzed:**	08/23/2019	**Instrument:**	CHEM (group)

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205862DUP1						**Source: 418653-002**
pH	7.07	7.10	pH Units	0.4	20	
Temp. at Time of pH Measurement	21.9	21.7	°C	0.9	20	

QCBatchID: QC1205879 **Analyst:** Abanh **Method:** EPA 8015B

Matrix: Water **Analyzed:** 08/27/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205879MB1						
TPH (C10 to C22)	ND	mg/L		0.1		
TPH (C13 to C22)	ND	mg/L		0.2		
TPH (C22 to C36)	ND	mg/L		0.3		
TPH (C23 to C44)	ND	mg/L		0.3		
TPH Diesel	ND	mg/L		0.1		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205879LCS1, QC1205879LCSD1											
TPH Diesel	1	1	0.71	0.71	mg/L	71	71	0	70-130	20	

QCBatchID: QC1205909	**Analyst:** bmorris	**Method:** EPA 8270C	
Matrix: Water	**Analyzed:** 08/26/2019	**Instrument:** SVOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205909MB1						
1,2,4-Trichlorobenzene	ND	ug/L		10		
1,2-Dichlorobenzene	ND	ug/L		10		
1,3-Dichlorobenzene	ND	ug/L		10		
1,4-Dichlorobenzene	ND	ug/L		10		
2,4,5-Trichlorophenol	ND	ug/L		10		
2,4,6-Trichlorophenol	ND	ug/L		10		
2,4-Dichlorophenol	ND	ug/L		10		
2,4-Dimethylphenol	ND	ug/L		10		
2,4-Dinitrophenol	ND	ug/L		50		
2,4-Dinitrotoluene	ND	ug/L		10		
2,6-Dinitrotoluene	ND	ug/L		10		
2-Chloronaphthalene	ND	ug/L		10		
2-Chlorophenol	ND	ug/L		10		
2-Methyl-4,6-dinitrophenol	ND	ug/L		50		
2-Methylnaphthalene	ND	ug/L		10		
2-Methylphenol (o-Cresol)	ND	ug/L		10		
2-Nitroaniline	ND	ug/L		50		
2-Nitrophenol	ND	ug/L		10		
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/L		10		
3,3'-Dichlorobenzidine	ND	ug/L		25		
3-Nitroaniline	ND	ug/L		10		
4-Bromophenyl phenyl ether	ND	ug/L		10		
4-Chloro-3-methylphenol	ND	ug/L		10		
4-Chloroaniline	ND	ug/L		10		
4-Chlorophenyl phenyl ether	ND	ug/L		10		
4-Nitroaniline	ND	ug/L		10		
4-Nitrophenol	ND	ug/L		10		
Acenaphthene	ND	ug/L		10		
Acenaphthylene	ND	ug/L		10		
Aniline	ND	ug/L		10		
Anthracene	ND	ug/L		10		
Azobenzene	ND	ug/L		10		
Benz(a)anthracene	ND	ug/L		10		
Benzidine	ND	ug/L		50		
Benzo(a)pyrene	ND	ug/L		10		
Benzo(b)fluoranthene	ND	ug/L		10		
Benzo(g,h,i)perylene	ND	ug/L		10		
Benzo(k)fluoranthene	ND	ug/L		10		
Benzoic acid	ND	ug/L		50		
Benzyl alcohol	ND	ug/L		10		
Bis(2-chloroethoxy)methane	ND	ug/L		10		
Bis(2-chloroethyl) Ether	ND	ug/L		25		
Bis(2-chloroisopropyl) Ether	ND	ug/L		10		
Bis(2-ethylhexyl) phthalate	ND	ug/L		10		
Butylbenzyl Phthalate	ND	ug/L		10		
Carbazole	ND	ug/L		10		
Chrysene	ND	ug/L		10		
Dibenz(a,h)anthracene	ND	ug/L		10		
Dibenzofuran	ND	ug/L		10		
Diethyl phthalate	ND	ug/L		10		
Dimethyl phthalate	ND	ug/L		10		
Di-n-butyl phthalate	ND	ug/L		10		

QCBatchID: QC1205909 **Analyst:** bmorris **Method:** EPA 8270C

Matrix: Water **Analyzed:** 08/26/2019 **Instrument:** SVOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes	
QC1205909MB1						
Di-n-octyl phthalate	ND	ug/L		10		
Fluoranthene	ND	ug/L		10		
Fluorene	ND	ug/L		10		
Hexachlorobenzene	ND	ug/L		10		
Hexachlorobutadiene	ND	ug/L		10		
Hexachlorocyclopentadiene	ND	ug/L		25		
Hexachloroethane	ND	ug/L		10		
Indeno(1,2,3-cd)pyrene	ND	ug/L		10		
Isophorone	ND	ug/L		10		
Naphthalene	ND	ug/L		10		
Nitrobenzene	ND	ug/L		25		
N-Nitrosodimethylamine (NDMA)	ND	ug/L		10		
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/L		10		
N-Nitrosodiphenylamine	ND	ug/L		10		
Pentachlorophenol	ND	ug/L		25		
Phenanthrene	ND	ug/L		10		
Phenol	ND	ug/L		10		
Pyrene	ND	ug/L		10		
Pyridine	ND	ug/L		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205909LCS1, QC1205909LCSD1											
1,2,4-Trichlorobenzene	40	40	22	22	ug/L	55	55	0	26-96	25	
1,4-Dichlorobenzene	40	40	19	16	ug/L	48	40	17	24-86	25	
2,4,5-Trichlorophenol	40	40	25	28	ug/L	63	70	11	42-122	25	
2,4-Dimethylphenol	40	40	21	23	ug/L	53	58	9	21-117	46	
2,4-Dinitrotoluene	40	40	25	27	ug/L	63	68	8	44-121	25	
2-Chlorophenol	40	40	19	22	ug/L	48	55	15	31-116	25	
3 and 4-Methylphenol (m and p-Cresol)	40	40	18	22	ug/L	45	55	20	26-112	25	
4-Chloro-3-methylphenol	40	40	21	25	ug/L	53	63	17	42-122	25	
4-Nitrophenol	40	40	11	15	ug/L	28	38	31	20-103	25	
Acenaphthene	40	40	24	24	ug/L	60	60	0	41-100	25	
Benzo(b)fluoranthene	40	40	23	27	ug/L	58	68	16	43-119	25	
Chrysene	40	40	28	29	ug/L	70	73	4	47-108	25	
N-Nitrosodi-n-propylamine (NDPA)	40	40	27	28	ug/L	68	70	4	35-119	25	
Pentachlorophenol	40	40	19	20	ug/L	48	50	5	22-133	25	
Phenol	40	40	10	12	ug/L	25	30	18	20-72	25	
Pyrene	40	40	26	27	ug/L	65	68	4	41-117	33	

QCBatchID:	**QC1205929**	**Analyst:**	trinh	**Method:**	SM 2540-C
Matrix:	Water	**Analyzed:**	08/27/2019	**Instrument:**	CHEM (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205929MB1						
Total Dissolved Solids	ND	mg/L		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205929LCS1											
Total Dissolved Solids	95		99.0		mg/L	104			90-110		

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205929DUP1						**Source: 418677-001**
Total Dissolved Solids	434	436	mg/L	0.5	5	

QCBatchID:	**QC1205955**	**Analyst:**	cmorales	**Method:**	EPA 7470A
Matrix:	Water	**Analyzed:**	08/27/2019	**Instrument:**	AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205955MB1						
Mercury	ND	ug/L		0.4		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205955LCS1											
Mercury	5		5.50		ug/L	110			80-120		

QCBatchID: QC1206278 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Water **Analyzed:** 09/05/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1206278MB1					
Antimony	ND	mg/L		0.04	
Arsenic	ND	mg/L		0.01	
Barium	ND	mg/L		0.01	
Beryllium	ND	mg/L		0.005	
Cadmium	ND	mg/L		0.005	
Chromium	ND	mg/L		0.01	
Cobalt	ND	mg/L		0.005	
Copper	ND	mg/L		0.01	
Lead	ND	mg/L		0.01	
Molybdenum	ND	mg/L		0.01	
Nickel	ND	mg/L		0.02	
Selenium	ND	mg/L		0.03	
Silver	ND	mg/L		0.005	
Thallium	ND	mg/L		0.05	
Vanadium	ND	mg/L		0.005	
Zinc	ND	mg/L		0.05	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206278LCS1, QC1206278LCSD1											
Antimony	2	2	1.890	1.940	mg/L	95	97	3	80-120	20	
Arsenic	2	2	1.860	1.860	mg/L	93	93	0	80-120	20	
Barium	2	2	1.970	2.040	mg/L	99	102	3	80-120	20	
Beryllium	2	2	1.980	2.100	mg/L	99	105	6	80-120	20	
Cadmium	2	2	2.02	2.11	mg/L	101	106	4	80-120	20	
Chromium	2	2	2.10	2.21	mg/L	105	111	5	80-120	20	
Cobalt	2	2	1.94	2.05	mg/L	97	103	6	80-120	20	
Copper	2	2	2.03	2.18	mg/L	102	109	7	80-120	20	
Lead	2	2	1.92	2.05	mg/L	96	103	7	80-120	20	
Molybdenum	2	2	1.97	1.98	mg/L	99	99	1	80-120	20	
Nickel	2	2	1.72	1.73	mg/L	86	87	1	80-120	20	
Selenium	2	2	1.89	1.92	mg/L	95	96	2	80-120	20	
Silver	2	2	1.95	2.02	mg/L	98	101	4	80-120	20	
Thallium	2	2	2.00	1.99	mg/L	100	100	1	80-120	20	
Vanadium	2	2	1.99	2.09	mg/L	100	105	5	80-120	20	
Zinc	2	2	2.07	2.17	mg/L	104	109	5	80-120	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL

Chain of Custody Record Lab No: 418653 Page: 1 of 1

Turn Around Time (Rush must be pre-arranged)

Standard:	X	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates	Name:	Insite
Report To:	Jaydeep Purandare	Number:	3370
Email:	Jpurandare@rouxinc.com	P.O. #:	
Address:	5150 E P.C.H #450	Address:	3701 N Pacific Pl. Long Beach
Phone:	Long Beach, CA 90804	Global ID:	
Fax: Phone	(310) 879-4900	Sampled By:	PAJ

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Analysis Request: 8260B - VOCs	8015 - TPHcc	6010B/7470A T22 + mercury	8270 - SVOCs	Sm 2540 - TDS	300.0 - chloride, nitrate, sulfate	SM2510B - Specific Conductance	Sm2320B - Alkalinity	SM4500 - pH	Test Instructions / Comments
1	GS-1-62	8/22/19	0920	W	11/40mL VOA, 1L Amber, 1L Poly	Y/N	X	X	X	X	X	X	X	X	X	* filter 6010B/7470A in lab.
2	GS-3-60	↓	1215	↓	↓	↓	X	X	X	X	X	X	X	X	X	
3	TB-3	↓	1400	↓	3/40mL	Y	X									
4	EB-2	↓	1300	↓	↓	↓	X									
5																
6																
7																
8																
9																
10																

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:	Peter Shimer	Peter Shimer	Roux	8/22/19 1515
[1] Received By:		[illegible]	Enthalpy	8/22/19 1515
[2] Relinquished By:		[illegible]	"	8/22/19 16:02
[2] Received By:		Elizabeth Ramirez	EA	8/22/19 16:00
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Roux Associates Project: Insite

Date Received: 8/22/19 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 2.5 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.2 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?	~~✓~~	✓	
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 8/22/19

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client:	Roux Associates, Inc.
Address:	5150 E. Pacific Coast Hwy. Suite 450 Long Beach, CA 90804
Attn:	Jaydeep Purandare

Lab Request:	418653
Report Date:	08/29/2019
Date Received:	08/22/2019
Client ID:	15831

Comments: InSite
#3370
3701 N. Pacific Pl., Long Beach, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
418653-001	GS-1-62
418653-002	GS-3-60
418653-003	TB-3
418653-004	EB-2

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 09:20	**Site:**			
Sample #:	**418653-001**	**Client Sample #:**	GS-1-62	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 300.0	Prep Method: Method					QCBatchID: QC1205823		
Chloride	**778**	20	20	mg/L	08/23/19	08/23/19 17:28	JP	
Nitrate, as Nitrogen	**0.13**	1	0.1	mg/L	08/23/19	08/23/19 08:16	JP	
Sulfate	**271**	20	20	mg/L	08/23/19	08/23/19 17:28	JP	
Method: EPA 6010B *NELAC*	Prep Method: EPA 3010A/Filtered					QCBatchID: QC1205938		
Antimony	ND	25	1	mg/L		08/27/19	SBW	D2
Arsenic	ND	25	0.25	mg/L		08/27/19	SBW	D2
Barium	**0.325**	25	0.25	mg/L		08/27/19	SBW	
Beryllium	ND	25	0.125	mg/L		08/27/19	SBW	D2
Cadmium	ND	25	0.125	mg/L		08/27/19	SBW	D2
Chromium	ND	25	0.25	mg/L		08/27/19	SBW	D2
Cobalt	ND	25	0.125	mg/L		08/27/19	SBW	D2
Copper	ND	25	0.25	mg/L		08/27/19	SBW	D2
Lead	ND	25	0.25	mg/L		08/27/19	SBW	D2
Molybdenum	ND	100	1	mg/L		08/28/19	SBW	D2
Nickel	ND	25	0.5	mg/L		08/27/19	SBW	D2
Selenium	ND	25	0.75	mg/L		08/27/19	SBW	D2
Silver	ND	100	0.5	mg/L		08/28/19	SBW	D2
Thallium	ND	100	5	mg/L		08/28/19	SBW	D2
Vanadium	ND	100	0.5	mg/L		08/28/19	SBW	D2
Zinc	ND	100	5	mg/L		08/28/19	SBW	D2
Method: EPA 7470A *NELAC*	Prep Method: Filtered					QCBatchID: QC1205955		
Mercury	ND	1	0.4	ug/L	08/27/19	08/27/19	CM	
Method: EPA 8015B *NELAC*	Prep Method: EPA 3510C					QCBatchID: QC1205879		
TPH (C13 to C22)	**0.36**	1	0.2	mg/L	08/26/19	08/28/19	TW	
TPH (C23 to C44)	ND	1	0.3	mg/L	08/26/19	08/28/19	TW	
Surrogate	*% Recovery*		*Limits*		*Notes*			
Triacontane (SUR)	*65*		*50-150*					
Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205265		
TPH (C6 to C12)	**910**	1	50	ug/L		08/23/19	EW	
Surrogate	*% Recovery*		*Limits*		*Notes*			
4-Bromofluorobenzene (SUR)	*111*		*60-140*					
Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205857		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trimethylbenzene	**13**	1	5	ug/L		08/24/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 09:20	**Site:**			
Sample #:	**418653-001**	**Client Sample #:**	GS-1-62	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,4-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/24/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/24/19	LZ	
Acetone	ND	1	100	ug/L		08/24/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Benzene	**11**	1	1	ug/L		08/24/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/24/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromoform	ND	1	5	ug/L		08/24/19	LZ	
Bromomethane	ND	1	5	ug/L		08/24/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/24/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroform	ND	1	5	ug/L		08/24/19	LZ	
Chloromethane	ND	1	5	ug/L		08/24/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/24/19	LZ	
Ethylbenzene	**11**	1	5	ug/L		08/24/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/24/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/24/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/24/19	LZ	
m and p-Xylene	**6.1**	1	5	ug/L		08/24/19	LZ	
Methylene chloride	ND	1	5	ug/L		08/24/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/24/19	LZ	
Naphthalene	ND	1	5	ug/L		08/24/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/24/19	LZ	
o-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Styrene	ND	1	5	ug/L		08/24/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/24/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/24/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/24/19	LZ	
Toluene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/24/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Xylenes (Total)	**6.1**	1	5	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 09:20	**Site:**			
Sample #:	**418653-001**	**Client Sample #:**	GS-1-62	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Surrogate	*% Recovery*		*Limits*	*Notes*				
1,2-Dichloroethane-d4 (SUR)	*89*		*70-145*					
4-Bromofluorobenzene (SUR)	*106*		*70-145*					
Dibromofluoromethane (SUR)	*99*		*70-145*					
Toluene-d8 (SUR)	*104*		*70-145*					
Method: EPA 8270C *NELAC* Prep Method: EPA 3510C						QCBatchID: QC1205909		
1,2,4-Trichlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
1,2-Dichlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
1,3-Dichlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
1,4-Dichlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4,5-Trichlorophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4,6-Trichlorophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4-Dichlorophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4-Dimethylphenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,4-Dinitrophenol	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
2,4-Dinitrotoluene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2,6-Dinitrotoluene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Chloronaphthalene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Chlorophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Methyl-4,6-dinitrophenol	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
2-Methylnaphthalene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Methylphenol (o-Cresol)	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
2-Nitroaniline	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
2-Nitrophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
3 and 4-Methylphenol (m and p-Cresol)	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
3,3'-Dichlorobenzidine	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
3-Nitroaniline	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Bromophenyl phenyl ether	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Chloro-3-methylphenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Chloroaniline	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Chlorophenyl phenyl ether	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Nitroaniline	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
4-Nitrophenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Acenaphthene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Acenaphthylene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Aniline	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Anthracene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Azobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benz(a)anthracene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzidine	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
Benzo(a)pyrene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzo(b)fluoranthene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzo(g,h,i)perylene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzo(k)fluoranthene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Benzoic acid	ND	1.4	70	ug/L	08/26/19	08/28/19		D1
Benzyl alcohol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroethoxy)methane	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroethyl) Ether	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroisopropyl) Ether	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Bis(2-ethylhexyl) phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Butylbenzyl Phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Carbazole	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Chrysene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Dibenz(a,h)anthracene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 09:20	**Site:**			
Sample #:	**418653-001**	**Client Sample #:**	GS-1-62	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dibenzofuran	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Diethyl phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Dimethyl phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Di-n-butyl phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Di-n-octyl phthalate	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Fluoranthene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Fluorene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Hexachlorobenzene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Hexachlorobutadiene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Hexachlorocyclopentadiene	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
Hexachloroethane	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Indeno(1,2,3-cd)pyrene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Isophorone	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Naphthalene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Nitrobenzene	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
N-Nitrosodimethylamine (NDMA)	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
N-Nitrosodi-n-propylamine (NDPA)	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
N-Nitrosodiphenylamine	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Pentachlorophenol	ND	1.4	35	ug/L	08/26/19	08/28/19		D1
Phenanthrene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Phenol	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Pyrene	ND	1.4	14	ug/L	08/26/19	08/28/19		D1
Pyridine	ND	1.4	14	ug/L	08/26/19	08/28/19		D1

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*50*	*39-137*	
2-Fluorobiphenyl (SUR)	*65*	*37-102*	
2-Fluorophenol (SUR)	*39*	*23-76*	
Nitrobenzene-d5 (SUR)	*83*	*30-115*	
p-Terphenyl (SUR)	*79*	*61-121*	
Phenol-d5 (SUR)	*27*	*17-56*	

Method: SM 2320-B	Prep Method: Method					QCBatchID: QC1205767	
Bicarbonate (HCO3)	**680**	10	50	mg/L		08/23/19	WW
Carbonate (CO3)	ND	10	50	mg/L		08/23/19	WW
Hydroxide (OH)	ND	10	50	mg/L		08/23/19	WW
Total Alkalinity (as CaCO3)	**560**	10	50	mg/L		08/23/19	WW

Method: SM 2510-B	Prep Method: Method					QCBatchID: QC1205838	
Specific Conductance	**3950**	1	1	umhos/cm		08/23/19	WW

Method: SM 2540-C	Prep Method: Method					QCBatchID: QC1205929	
Total Dissolved Solids	**2470**	2	20	mg/L	08/26/19	08/27/19	TP

Method: SM 4500-H+B	Prep Method: Method					QCBatchID: QC1205862	
pH	**7.13**	1		pH Units		08/23/19 17:15	WW T2
Temp. at Time of pH Measurement	**21.9**	1		°C		08/23/19 17:15	WW

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 12:15	**Site:**			
Sample #:	**418653-002**	**Client Sample #:**	GS-3-60	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 300.0	Prep Method: Method					QCBatchID: QC1205823		
Chloride	**991**	20	20	mg/L	08/23/19	08/23/19 17:54	JP	
Nitrate, as Nitrogen	**0.10**	1	0.1	mg/L	08/23/19	08/23/19 08:42	JP	
Sulfate	**296**	20	20	mg/L	08/23/19	08/23/19 17:54	JP	
Method: EPA 6010B *NELAC*	Prep Method: EPA 3010A/Filtered					QCBatchID: QC1205938		
Antimony	ND	25	1	mg/L		08/27/19	SBW	D2
Arsenic	ND	25	0.25	mg/L		08/27/19	SBW	D2
Barium	ND	25	0.25	mg/L		08/27/19	SBW	D2
Beryllium	ND	25	0.125	mg/L		08/27/19	SBW	D2
Cadmium	ND	25	0.125	mg/L		08/27/19	SBW	D2
Chromium	ND	25	0.25	mg/L		08/27/19	SBW	D2
Cobalt	ND	25	0.125	mg/L		08/27/19	SBW	D2
Copper	ND	25	0.25	mg/L		08/27/19	SBW	D2
Lead	ND	25	0.25	mg/L		08/27/19	SBW	D2
Molybdenum	ND	100	1	mg/L		08/28/19	SBW	D2
Nickel	ND	25	0.5	mg/L		08/27/19	SBW	D2
Selenium	ND	25	0.75	mg/L		08/27/19	SBW	D2
Silver	ND	100	0.5	mg/L		08/28/19	SBW	D2
Thallium	ND	100	5	mg/L		08/28/19	SBW	D2
Vanadium	ND	100	0.5	mg/L		08/28/19	SBW	D2
Zinc	ND	100	5	mg/L		08/28/19	SBW	D2
Method: EPA 7470A *NELAC*	Prep Method: Filtered					QCBatchID: QC1205955		
Mercury	ND	1	0.4	ug/L	08/27/19	08/27/19	CM	
Method: EPA 8015B *NELAC*	Prep Method: EPA 3510C					QCBatchID: QC1205879		
TPH (C13 to C22)	**0.52**	1	0.2	mg/L	08/26/19	08/28/19	TW	
TPH (C23 to C44)	**0.31**	1	0.3	mg/L	08/26/19	08/28/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*75*		*50-150*					
Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205265		
TPH (C6 to C12)	**63**	1	50	ug/L		08/23/19	EW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
4-Bromofluorobenzene (SUR)	*105*		*60-140*					
Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B					QCBatchID: QC1205857		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 12:15	**Site:**			
Sample #:	**418653-002**	**Client Sample #:**	GS-3-60	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
1,4-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/24/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/24/19	LZ	
Acetone	**100**	1	100	ug/L		08/24/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Benzene	**6.9**	1	1	ug/L		08/24/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/24/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromoform	ND	1	5	ug/L		08/24/19	LZ	
Bromomethane	ND	1	5	ug/L		08/24/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/24/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroform	ND	1	5	ug/L		08/24/19	LZ	
Chloromethane	ND	1	5	ug/L		08/24/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/24/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/24/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/24/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/24/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Methylene chloride	ND	1	5	ug/L		08/24/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/24/19	LZ	
Naphthalene	ND	1	5	ug/L		08/24/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/24/19	LZ	
o-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Styrene	ND	1	5	ug/L		08/24/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/24/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/24/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/24/19	LZ	
Toluene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/24/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 12:15	**Site:**			
Sample #:	**418653-002**	**Client Sample #:**	GS-3-60	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Surrogate	*% Recovery*		*Limits*	*Notes*				
1,2-Dichloroethane-d4 (SUR)	*89*		*70-145*					
4-Bromofluorobenzene (SUR)	*106*		*70-145*					
Dibromofluoromethane (SUR)	*100*		*70-145*					
Toluene-d8 (SUR)	*105*		*70-145*					
Method: EPA 8270C *NELAC* Prep Method: EPA 3510C							QCBatchID:	QC1205909
1,2,4-Trichlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
1,2-Dichlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
1,3-Dichlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
1,4-Dichlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4,5-Trichlorophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4,6-Trichlorophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4-Dichlorophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4-Dimethylphenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,4-Dinitrophenol	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
2,4-Dinitrotoluene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2,6-Dinitrotoluene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Chloronaphthalene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Chlorophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Methyl-4,6-dinitrophenol	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
2-Methylnaphthalene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Methylphenol (o-Cresol)	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
2-Nitroaniline	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
2-Nitrophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
3 and 4-Methylphenol (m and p-Cresol)	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
3,3'-Dichlorobenzidine	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
3-Nitroaniline	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Bromophenyl phenyl ether	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Chloro-3-methylphenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Chloroaniline	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Chlorophenyl phenyl ether	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Nitroaniline	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
4-Nitrophenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Acenaphthene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Acenaphthylene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Aniline	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Anthracene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Azobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benz(a)anthracene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzidine	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
Benzo(a)pyrene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzo(b)fluoranthene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzo(g,h,i)perylene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzo(k)fluoranthene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Benzoic acid	ND	1.5	75	ug/L	08/26/19	08/28/19		D1
Benzyl alcohol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroethoxy)methane	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroethyl) Ether	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
Bis(2-chloroisopropyl) Ether	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Bis(2-ethylhexyl) phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Butylbenzyl Phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Carbazole	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Chrysene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Dibenz(a,h)anthracene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 12:15	**Site:**			
Sample #:	**418653-002**	**Client Sample #:**	GS-3-60	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dibenzofuran	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Diethyl phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Dimethyl phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Di-n-butyl phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Di-n-octyl phthalate	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Fluoranthene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Fluorene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Hexachlorobenzene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Hexachlorobutadiene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Hexachlorocyclopentadiene	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
Hexachloroethane	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Indeno(1,2,3-cd)pyrene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Isophorone	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Naphthalene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Nitrobenzene	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
N-Nitrosodimethylamine (NDMA)	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
N-Nitrosodi-n-propylamine (NDPA)	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
N-Nitrosodiphenylamine	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Pentachlorophenol	ND	1.5	37.5	ug/L	08/26/19	08/28/19		D1
Phenanthrene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Phenol	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Pyrene	ND	1.5	15	ug/L	08/26/19	08/28/19		D1
Pyridine	ND	1.5	15	ug/L	08/26/19	08/28/19		D1

Surrogate	*% Recovery*	*Limits*	*Notes*
2,4,6-Tribromophenol (SUR)	*51*	*39-137*	
2-Fluorobiphenyl (SUR)	*66*	*37-102*	
2-Fluorophenol (SUR)	*35*	*23-76*	
Nitrobenzene-d5 (SUR)	*89*	*30-115*	
p-Terphenyl (SUR)	*86*	*61-121*	
Phenol-d5 (SUR)	*24*	*17-56*	

Method: SM 2320-B	Prep Method: Method					QCBatchID: QC1205767	
Bicarbonate (HCO3)	**1300**	10	50	mg/L		08/23/19	WW
Carbonate (CO3)	ND	10	50	mg/L		08/23/19	WW
Hydroxide (OH)	ND	10	50	mg/L		08/23/19	WW
Total Alkalinity (as CaCO3)	**1000**	10	50	mg/L		08/23/19	WW

Method: SM 2510-B	Prep Method: Method					QCBatchID: QC1205838	
Specific Conductance	**5160**	1	1	umhos/cm		08/23/19	WW

Method: SM 2540-C	Prep Method: Method					QCBatchID: QC1205929	
Total Dissolved Solids	**3220**	2	20	mg/L	08/26/19	08/27/19	TP

Method: SM 4500-H+B	Prep Method: Method					QCBatchID: QC1205862	
pH	**7.07**	1		pH Units		08/23/19 17:15	WW T2
Temp. at Time of pH Measurement	**21.9**	1		°C		08/23/19 17:15	WW

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 14:00	**Site:**			
Sample #:	**418653-003**	**Client Sample #:**	TB-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1205857		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/24/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/24/19	LZ	
Acetone	ND	1	100	ug/L		08/24/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Benzene	ND	1	1	ug/L		08/24/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/24/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromoform	ND	1	5	ug/L		08/24/19	LZ	
Bromomethane	ND	1	5	ug/L		08/24/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/24/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroform	ND	1	5	ug/L		08/24/19	LZ	
Chloromethane	ND	1	5	ug/L		08/24/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/24/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/24/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/24/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/24/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Methylene chloride	ND	1	5	ug/L		08/24/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 14:00	**Site:**			
Sample #:	**418653-003**	**Client Sample #:**	TB-3	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Naphthalene	ND	1	5	ug/L		08/24/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/24/19	LZ	
o-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Styrene	ND	1	5	ug/L		08/24/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/24/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/24/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/24/19	LZ	
Toluene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/24/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/24/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*91*	*70-145*	
4-Bromofluorobenzene (SUR)	*104*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*105*	*70-145*	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 13:00	**Site:**			
Sample #:	**418653-004**	**Client Sample #:**	EB-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1205857		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		08/24/19	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		08/24/19	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		08/24/19	LZ	
2-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Chlorotoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		08/24/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		08/24/19	LZ	
Acetone	ND	1	100	ug/L		08/24/19	LZ	
Allyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Benzene	ND	1	1	ug/L		08/24/19	LZ	
Bromobenzene	ND	1	5	ug/L		08/24/19	LZ	
Bromochloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromodichloromethane	ND	1	5	ug/L		08/24/19	LZ	
Bromoform	ND	1	5	ug/L		08/24/19	LZ	
Bromomethane	ND	1	5	ug/L		08/24/19	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		08/24/19	LZ	
Chlorobenzene	ND	1	5	ug/L		08/24/19	LZ	
Chlorodibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroethane	ND	1	5	ug/L		08/24/19	LZ	
Chloroform	ND	1	5	ug/L		08/24/19	LZ	
Chloromethane	ND	1	5	ug/L		08/24/19	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Dibromomethane	ND	1	5	ug/L		08/24/19	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		08/24/19	LZ	
Ethylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		08/24/19	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		08/24/19	LZ	
Isopropylbenzene	ND	1	5	ug/L		08/24/19	LZ	
m and p-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Methylene chloride	ND	1	5	ug/L		08/24/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		08/24/19	LZ	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	08/22/2019 13:00	**Site:**			
Sample #:	**418653-004**	**Client Sample #:**	EB-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Naphthalene	ND	1	5	ug/L		08/24/19	LZ	
N-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
N-propylbenzene	ND	1	5	ug/L		08/24/19	LZ	
o-Xylene	ND	1	5	ug/L		08/24/19	LZ	
Sec-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Styrene	ND	1	5	ug/L		08/24/19	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		08/24/19	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		08/24/19	LZ	
Tert-butylbenzene	ND	1	5	ug/L		08/24/19	LZ	
Tetrachloroethene	ND	1	5	ug/L		08/24/19	LZ	
Toluene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		08/24/19	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		08/24/19	LZ	
Trichloroethene	ND	1	5	ug/L		08/24/19	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		08/24/19	LZ	
Vinyl Chloride	ND	1	5	ug/L		08/24/19	LZ	
Xylenes (Total)	ND	1	5	ug/L		08/24/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*91*	*70-145*	
4-Bromofluorobenzene (SUR)	*104*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*105*	*70-145*	

QCBatchID: QC1205265 **Analyst:** sandyw **Method:** EPA 8015B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** VOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205265MB1					
TPH (C6 to C10)	ND	ug/L		50	
TPH (C6 to C12)	ND	ug/L		50	
TPH Gasoline	ND	ug/L		50	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205265LCS1											
TPH Gasoline	500		540		ug/L	108			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205265MS1, QC1205265MSD1												**Source: 418577-001**
TPH Gasoline	ND	500	500	540	530	ug/L	108	106	1.9	70-130	30	

QCBatchID: QC1205767 **Analyst:** wei **Method:** SM 2320-B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** CHEM (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205767MB1						
Bicarbonate (HCO3)	ND	mg/L		5		
Carbonate (CO3)	ND	mg/L		5		
Hydroxide (OH)	ND	mg/L		5		
Total Alkalinity (as CaCO3)	ND	mg/L		5		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205767LCS1											
Total Alkalinity (as CaCO3)	100		95		mg/L	95			90-110		

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205767DUP1						**Source: 418340-001**
Bicarbonate (HCO3)	1400	1400	mg/L	0.0	20	
Carbonate (CO3)	ND	ND	mg/L	0.0	20	
Hydroxide (OH)	ND	ND	mg/L	0.0	20	
Total Alkalinity (as CaCO3)	1200	1200	mg/L	0.0	20	

QCBatchID: QC1205823 **Analyst:** JParedes **Method:** EPA 300.0

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205823MB1					
Bromide	ND	mg/L		0.3	
Chloride	ND	mg/L		1	
Nitrate + Nitrite, as Nitrogen	ND	mg/L		0.44	
Nitrate, as Nitrogen	ND	mg/L		0.1	
Nitrite, as Nitrogen	ND	mg/L		0.1	
Sulfate	ND	mg/L		0.5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205823LCS1											
Bromide	15		14.6		mg/L	97			90-110		
Chloride	100		101		mg/L	101			90-110		
Nitrate, as Nitrogen	9.03		8.83		mg/L	98			90-110		
Nitrite, as Nitrogen	9.15		9.32		mg/L	102			90-110		
Sulfate	50		48.7		mg/L	97			90-110		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205823MS1, QC1205823MSD1												**Source: 418647-001**
Bromide	0.339	15	15	14.5	14.5	mg/L	94	94	0.0	80-120	20	
Chloride	73.6	100	100	170	170	mg/L	96	96	0.0	80-120	20	
Nitrate, as Nitrogen	0.0440	9.03	9.03	8.82	8.80	mg/L	97	97	0.2	80-120	20	
Nitrite, as Nitrogen	ND	9.15	9.15	9.09	9.10	mg/L	99	99	0.1	80-120	20	
Sulfate	17.5	50	50	64.8	64.9	mg/L	95	95	0.2	80-120	20	
QC1205823MS2, QC1205823MSD2												**Source: 418648-001**
Bromide	0.299	15	15	14.5	14.8	mg/L	95	97	2.0	80-120	20	
Chloride	74.8	100	100	172	173	mg/L	97	98	0.6	80-120	20	
Nitrate, as Nitrogen	ND	9.03	9.03	8.88	9.05	mg/L	98	100	1.9	80-120	20	
Nitrite, as Nitrogen	ND	9.15	9.15	9.16	9.27	mg/L	100	101	1.2	80-120	20	
Sulfate	17.4	50	50	65.2	65.7	mg/L	96	97	0.8	80-120	20	

QCBatchID:	**QC1205838**	**Analyst:**	wei	**Method:**	SM 2510-B
Matrix:	Water	**Analyzed:**	08/23/2019	**Instrument:**	CHEM (group)

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205838DUP1						**Source: 418485-006**
Specific Conductance	7.1	7.1	umhos/cm	0.0	20	

QCBatchID: QC1205857	**Analyst:** lucy	**Method:** EPA 8260B	
Matrix: Water	**Analyzed:** 08/23/2019	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205857MB1						
1,1,1,2-Tetrachloroethane	ND	ug/L		5		
1,1,1-Trichloroethane	ND	ug/L		5		
1,1,2,2-Tetrachloroethane	ND	ug/L		5		
1,1,2-Trichloroethane	ND	ug/L		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/L		5		
1,1-Dichloroethane	ND	ug/L		5		
1,1-Dichloroethene	ND	ug/L		5		
1,1-Dichloropropene	ND	ug/L		5		
1,2,3-Trichlorobenzene	ND	ug/L		5		
1,2,3-Trichloropropane	ND	ug/L		5		
1,2,4-Trichlorobenzene	ND	ug/L		5		
1,2,4-Trimethylbenzene	ND	ug/L		5		
1,2-Dibromo-3-chloropropane	ND	ug/L		5		
1,2-Dibromoethane	ND	ug/L		5		
1,2-Dichlorobenzene	ND	ug/L		5		
1,2-Dichloroethane	ND	ug/L		5		
1,2-Dichloropropane	ND	ug/L		5		
1,3,5-Trimethylbenzene	ND	ug/L		5		
1,3-Dichlorobenzene	ND	ug/L		5		
1,3-Dichloropropane	ND	ug/L		5		
1,4-Dichlorobenzene	ND	ug/L		5		
2,2-Dichloropropane	ND	ug/L		5		
2-Butanone (MEK)	ND	ug/L		100		
2-Chloroethyl Vinyl Ether	ND	ug/L		10		
2-Chlorotoluene	ND	ug/L		5		
4-Chlorotoluene	ND	ug/L		5		
4-Isopropyltoluene	ND	ug/L		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/L		5		
Acetone	ND	ug/L		100		
Allyl Chloride	ND	ug/L		5		
Benzene	ND	ug/L		1		
Bromobenzene	ND	ug/L		5		
Bromochloromethane	ND	ug/L		5		
Bromodichloromethane	ND	ug/L		5		
Bromoform	ND	ug/L		5		
Bromomethane	ND	ug/L		5		
Carbon Tetrachloride	ND	ug/L		5		
Chlorobenzene	ND	ug/L		5		
Chlorodibromomethane	ND	ug/L		5		
Chloroethane	ND	ug/L		5		
Chloroform	ND	ug/L		5		
Chloromethane	ND	ug/L		5		
cis-1,2-Dichloroethene	ND	ug/L		5		
cis-1,3-dichloropropene	ND	ug/L		5		
cis-1,4-dichloro-2-butene	ND	ug/L		5		
Dibromomethane	ND	ug/L		5		
Dichlorodifluoromethane	ND	ug/L		5		
Di-isopropyl ether (DIPE)	ND	ug/L		1		
Ethylbenzene	ND	ug/L		5		
Ethyl-tertbutylether (ETBE)	ND	ug/L		1		
Hexachlorobutadiene	ND	ug/L		5		
Isopropylbenzene	ND	ug/L		5		

QCBatchID: QC1205857 **Analyst:** lucy **Method:** EPA 8260B

Matrix: Water **Analyzed:** 08/23/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205857MB1					
m and p-Xylene	ND	ug/L		5	
Methylene chloride	ND	ug/L		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L		1	
Naphthalene	ND	ug/L		5	
N-butylbenzene	ND	ug/L		5	
N-propylbenzene	ND	ug/L		5	
o-Xylene	ND	ug/L		5	
Sec-butylbenzene	ND	ug/L		5	
Styrene	ND	ug/L		5	
t-Butyl alcohol (TBA)	ND	ug/L		10	
Tert-amylmethylether (TAME)	ND	ug/L		5	
Tert-butylbenzene	ND	ug/L		5	
Tetrachloroethene	ND	ug/L		5	
Toluene	ND	ug/L		5	
trans-1,2-dichloroethene	ND	ug/L		5	
trans-1,3-dichloropropene	ND	ug/L		5	
trans-1,4-dichloro-2-butene	ND	ug/L		5	
Trichloroethene	ND	ug/L		5	
Trichlorofluoromethane	ND	ug/L		5	
Vinyl Chloride	ND	ug/L		5	
Xylenes (Total)	ND	ug/L		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205857LCS1											
1,1-Dichloroethene	50		58		ug/L	116			59-172		
Benzene	50		57		ug/L	114			62-137		
Chlorobenzene	50		58		ug/L	116			60-133		
Methyl-t-butyl Ether (MTBE)	50		48		ug/L	96			62-137		
Toluene	50		60		ug/L	120			59-139		
Trichloroethene	50		61		ug/L	122			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205857MS1, QC1205857MSD1												**Source: 418653-001**
1,1-Dichloroethene	ND	50	50	58	58	ug/L	116	116	0.0	59-172	22	
Benzene	11	50	50	84	85	ug/L	146	148	1.2	62-137	24	M
Chlorobenzene	ND	50	50	53	52	ug/L	106	104	1.9	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	50	49	ug/L	100	98	2.0	62-137	21	
Toluene	ND	50	50	54	55	ug/L	108	110	1.8	59-139	21	
Trichloroethene	ND	50	50	54	56	ug/L	108	112	3.6	66-142	21	

QCBatchID:	**QC1205862**	**Analyst:**	wei	**Method:**	SM 4500-H+B
Matrix:	Water	**Analyzed:**	08/23/2019	**Instrument:**	CHEM (group)

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205862DUP1						**Source: 418653-002**
pH	7.07	7.10	pH Units	0.4	20	
Temp. at Time of pH Measurement	21.9	21.7	°C	0.9	20	

QCBatchID: QC1205879 **Analyst:** Abanh **Method:** EPA 8015B

Matrix: Water **Analyzed:** 08/27/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205879MB1						
TPH (C10 to C22)	ND	mg/L		0.1		
TPH (C13 to C22)	ND	mg/L		0.2		
TPH (C22 to C36)	ND	mg/L		0.3		
TPH (C23 to C44)	ND	mg/L		0.3		
TPH Diesel	ND	mg/L		0.1		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1205879LCS1, QC1205879LCSD1											
TPH Diesel	1	1	0.71	0.71	mg/L	71	71	0	70-130	20	

QCBatchID: QC1205909	**Analyst:** bmorris	**Method:** EPA 8270C	
Matrix: Water	**Analyzed:** 08/26/2019	**Instrument:** SVOA-GC (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205909MB1						
1,2,4-Trichlorobenzene	ND	ug/L		10		
1,2-Dichlorobenzene	ND	ug/L		10		
1,3-Dichlorobenzene	ND	ug/L		10		
1,4-Dichlorobenzene	ND	ug/L		10		
2,4,5-Trichlorophenol	ND	ug/L		10		
2,4,6-Trichlorophenol	ND	ug/L		10		
2,4-Dichlorophenol	ND	ug/L		10		
2,4-Dimethylphenol	ND	ug/L		10		
2,4-Dinitrophenol	ND	ug/L		50		
2,4-Dinitrotoluene	ND	ug/L		10		
2,6-Dinitrotoluene	ND	ug/L		10		
2-Chloronaphthalene	ND	ug/L		10		
2-Chlorophenol	ND	ug/L		10		
2-Methyl-4,6-dinitrophenol	ND	ug/L		50		
2-Methylnaphthalene	ND	ug/L		10		
2-Methylphenol (o-Cresol)	ND	ug/L		10		
2-Nitroaniline	ND	ug/L		50		
2-Nitrophenol	ND	ug/L		10		
3 and 4-Methylphenol (m and p-Cresol)	ND	ug/L		10		
3,3'-Dichlorobenzidine	ND	ug/L		25		
3-Nitroaniline	ND	ug/L		10		
4-Bromophenyl phenyl ether	ND	ug/L		10		
4-Chloro-3-methylphenol	ND	ug/L		10		
4-Chloroaniline	ND	ug/L		10		
4-Chlorophenyl phenyl ether	ND	ug/L		10		
4-Nitroaniline	ND	ug/L		10		
4-Nitrophenol	ND	ug/L		10		
Acenaphthene	ND	ug/L		10		
Acenaphthylene	ND	ug/L		10		
Aniline	ND	ug/L		10		
Anthracene	ND	ug/L		10		
Azobenzene	ND	ug/L		10		
Benz(a)anthracene	ND	ug/L		10		
Benzidine	ND	ug/L		50		
Benzo(a)pyrene	ND	ug/L		10		
Benzo(b)fluoranthene	ND	ug/L		10		
Benzo(g,h,i)perylene	ND	ug/L		10		
Benzo(k)fluoranthene	ND	ug/L		10		
Benzoic acid	ND	ug/L		50		
Benzyl alcohol	ND	ug/L		10		
Bis(2-chloroethoxy)methane	ND	ug/L		10		
Bis(2-chloroethyl) Ether	ND	ug/L		25		
Bis(2-chloroisopropyl) Ether	ND	ug/L		10		
Bis(2-ethylhexyl) phthalate	ND	ug/L		10		
Butylbenzyl Phthalate	ND	ug/L		10		
Carbazole	ND	ug/L		10		
Chrysene	ND	ug/L		10		
Dibenz(a,h)anthracene	ND	ug/L		10		
Dibenzofuran	ND	ug/L		10		
Diethyl phthalate	ND	ug/L		10		
Dimethyl phthalate	ND	ug/L		10		
Di-n-butyl phthalate	ND	ug/L		10		

QCBatchID: QC1205909	Analyst: bmorris	Method: EPA 8270C
Matrix: Water	Analyzed: 08/26/2019	Instrument: SVOA-GC (group)

Analyte	Blank Result	Units		RDL	Notes
QC1205909MB1					
Di-n-octyl phthalate	ND	ug/L		10	
Fluoranthene	ND	ug/L		10	
Fluorene	ND	ug/L		10	
Hexachlorobenzene	ND	ug/L		10	
Hexachlorobutadiene	ND	ug/L		10	
Hexachlorocyclopentadiene	ND	ug/L		25	
Hexachloroethane	ND	ug/L		10	
Indeno(1,2,3-cd)pyrene	ND	ug/L		10	
Isophorone	ND	ug/L		10	
Naphthalene	ND	ug/L		10	
Nitrobenzene	ND	ug/L		25	
N-Nitrosodimethylamine (NDMA)	ND	ug/L		10	
N-Nitrosodi-n-propylamine (NDPA)	ND	ug/L		10	
N-Nitrosodiphenylamine	ND	ug/L		10	
Pentachlorophenol	ND	ug/L		25	
Phenanthrene	ND	ug/L		10	
Phenol	ND	ug/L		10	
Pyrene	ND	ug/L		10	
Pyridine	ND	ug/L		10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205909LCS1, QC1205909LCSD1											
1,2,4-Trichlorobenzene	40	40	22	22	ug/L	55	55	0	-		
1,4-Dichlorobenzene	40	40	19	16	ug/L	48	40	17	-		
2,4,5-Trichlorophenol	40	40	25	28	ug/L	63	70	11	-		
2,4-Dimethylphenol	40	40	21	23	ug/L	53	58	9	-		
2,4-Dinitrotoluene	40	40	25	27	ug/L	63	68	8	-		
2-Chlorophenol	40	40	19	22	ug/L	48	55	15	-		
3 and 4-Methylphenol (m and p-Cresol)	40	40	18	22	ug/L	45	55	20	-		
4-Chloro-3-methylphenol	40	40	21	25	ug/L	53	63	17	-		
4-Nitrophenol	40	40	11	14	ug/L	28	35	24	-		
Acenaphthene	40	40	24	24	ug/L	60	60	0	-		
Benzo(b)fluoranthene	40	40	23	27	ug/L	58	68	16	-		
Chrysene	40	40	28	29	ug/L	70	73	4	-		
N-Nitrosodi-n-propylamine (NDPA)	40	40	27	28	ug/L	68	70	4	-		
Pentachlorophenol	40	40	19	20	ug/L	48	50	5	-		
Phenol	40	40	10	12	ug/L	25	30	18	-		
Pyrene	40	40	26	27	ug/L	65	68	4	-		

QCBatchID:	**QC1205929**	**Analyst:**	trinh	**Method:**	SM 2540-C
Matrix:	Water	**Analyzed:**	08/27/2019	**Instrument:**	CHEM (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205929MB1						
Total Dissolved Solids	ND	mg/L		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205929LCS1											
Total Dissolved Solids	95		99.0		mg/L	104			90-110		

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1205929DUP1						**Source: 418677-001**
Total Dissolved Solids	434	436	mg/L	0.5	5	

QCBatchID: QC1205938 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Water **Analyzed:** 08/27/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1205938MB1					
Antimony	ND	mg/L		0.04	
Arsenic	ND	mg/L		0.01	
Barium	ND	mg/L		0.01	
Beryllium	ND	mg/L		0.005	
Cadmium	ND	mg/L		0.005	
Chromium	ND	mg/L		0.01	
Cobalt	ND	mg/L		0.005	
Copper	ND	mg/L		0.01	
Lead	ND	mg/L		0.01	
Molybdenum	ND	mg/L		0.01	
Nickel	ND	mg/L		0.02	
Selenium	ND	mg/L		0.03	
Silver	ND	mg/L		0.005	
Thallium	ND	mg/L		0.05	
Vanadium	ND	mg/L		0.005	
Zinc	ND	mg/L		0.05	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205938LCS1											
Antimony	2		1.900		mg/L	95			80-120		
Arsenic	2		1.870		mg/L	94			80-120		
Barium	2		1.860		mg/L	93			80-120		
Beryllium	2		2.060		mg/L	103			80-120		
Cadmium	2		1.87		mg/L	94			80-120		
Chromium	2		1.87		mg/L	94			80-120		
Cobalt	2		1.82		mg/L	91			80-120		
Copper	2		1.70		mg/L	85			80-120		
Lead	2		1.80		mg/L	90			80-120		
Molybdenum	2		2.20		mg/L	110			80-120		
Nickel	2		1.82		mg/L	91			80-120		
Selenium	2		1.88		mg/L	94			80-120		
Silver	2		1.88		mg/L	94			80-120		
Thallium	2		1.91		mg/L	96			80-120		
Vanadium	2		1.97		mg/L	99			80-120		
Zinc	2		2.00		mg/L	100			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205938MS1, QC1205938MSD1												**Source: 418653-002**
Antimony	ND	1	1	0.948	1.120	mg/L	95	112	16.6	75-125	20	
Arsenic	ND	1	1	1.240	1.160	mg/L	124	116	6.7	75-125	20	
Barium	0.114	1	1	1.170	1.140	mg/L	106	103	2.6	75-125	20	
Beryllium	ND	1	1	1.100	1.120	mg/L	110	112	1.8	75-125	20	
Cadmium	ND	1	1	1.07	1.05	mg/L	107	105	1.9	75-125	20	
Chromium	ND	1	1	1.10	1.09	mg/L	110	109	0.9	75-125	20	
Cobalt	ND	1	1	1.10	1.06	mg/L	110	106	3.7	75-125	20	
Copper	0.041	1	1	1.06	1.03	mg/L	102	99	2.9	75-125	20	
Lead	ND	1	1	1.03	0.898	mg/L	103	90	13.7	75-125	20	
Molybdenum	ND	1	1	0.986	0.977	mg/L	99	98	0.9	75-125	20	

QCBatchID: QC1205938 **Analyst:** sbailey-woo **Method:** EPA 6010B

Matrix: Water **Analyzed:** 08/27/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205938MS1, QC1205938MSD1												**Source: 418653-002**
Nickel	ND	1	1	1.13	1.08	mg/L	113	108	4.5	75-125	20	
Selenium	ND	1	1	0.659	0.014	mg/L	66	1	191.7	75-125	20	M
Silver	ND	1	1	0.405	0.310	mg/L	41	31	26.6	75-125	20	M,D
Thallium	ND	1	1	-0.336	-0.320	mg/L	0	0	4.9	75-125	20	M
Vanadium	ND	1	1	1.21	1.21	mg/L	121	121	0.0	75-125	20	
Zinc	ND	1	1	0.136	0.137	mg/L	14	14	0.7	75-125	20	M

QCBatchID:	**QC1205955**	**Analyst:**	cmorales	**Method:**	EPA 7470A
Matrix:	Water	**Analyzed:**	08/27/2019	**Instrument:**	AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1205955MB1						
Mercury	ND	ug/L		0.4		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1205955LCS1											
Mercury	5		5.50		ug/L	110			80-120		

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL

Chain of Custody Record Lab No: 418653 Page: 1 of 1

Turn Around Time (Rush must be pre-arranged)

Standard:	X	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange
931 W. Barkley Avenue, Orange, CA 92868
Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates	Name:	Insite
Report To:	Jaydeep Purandare	Number:	3370
Email:	Jpurandare@rouxinc.com	P.O. #:	
Address:	5150 E P.C.H #450	Address:	3701 N Pacific Pl. Long Beach
Phone:	Long Beach, CA 90804	Global ID:	
Fax: Phone	(310) 879-4900	Sampled By:	PAJ

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Analysis Request: 8260B - VOCs	8015 - TPHcc	6010B/7470A T22 + mercury	8270 - SVOCs	Sm 2540 - TDS	300.0 - chloride, nitrate, sulfate	SM2510B - Specific Conductance	Sm2320B - Alkalinity	SM4500 - pH	Test Instructions / Comments
1	GS-1-62	8/22/19	0920	W	11/40mL VOA, 1L Amber, 1L Poly	Y/N	X	X	X	X	X	X	X	X	X	* filter 6010B/7470A in lab.
2	GS-3-60	↓	1215	↓	↓	↓	X	X	X	X	X	X	X	X	X	
3	TB-3	↓	1400	↓	3/40mL	Y	X									
4	EB-2	↓	1300	↓	↓	↓	X									
5																
6																
7																
8																
9																
10																

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:	Peter Shimer	Peter Shimer	Roux	8/22/19 1515
[1] Received By:		[illegible]	Enthalpy	8/22/19 1515
[2] Relinquished By:		[illegible]	"	8/22/19 16:02
[2] Received By:		Elizabeth Ramirez	EA	8/22/19 16:00
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Roux Associates Project: Insite

Date Received: 8/22/19 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 2.5 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.2 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?	~~✓~~	✓	
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 8/22/19

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client:	Roux Associates, Inc.	Lab Request:	419149
Address:	5150 E. Pacific Coast Hwy. Suite 450 Long Beach, CA 90804	Report Date:	10/09/2019
		Date Received:	09/06/2019
		Client ID:	15831
Attn:	Peter Shimer		

Comments: InSite
3370.0001L000
3701 N. Pacific Pl., Long Beach, CA

Supplemental Report 1 - STLC Pb result now reported for sample "Waste Soil".

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
419149-001	Waste Soil
419149-002	Waste Water

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Patricia Mata, PM

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

The reports of the Enthalpy Analytical, Inc. are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	09/06/2019 11:43	**Site:**			
Sample #:	**419149-001**	**Client Sample #:**	Waste Soil	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1206483		
Antimony	ND	1	3	mg/Kg		09/12/19	SBW	
Arsenic	**6.00**	1	1	mg/Kg		09/12/19	SBW	
Barium	**446**	1	1	mg/Kg		09/12/19	SBW	
Beryllium	ND	1	0.5	mg/Kg		09/12/19	SBW	
Cadmium	**0.91**	1	0.5	mg/Kg		09/12/19	SBW	
Chromium	**33.7**	1	1	mg/Kg		09/12/19	SBW	
Cobalt	**9.51**	1	0.5	mg/Kg		09/12/19	SBW	
Copper	**35.6**	1	1	mg/Kg		09/12/19	SBW	
Lead	**62.6**	1	1	mg/Kg		09/12/19	SBW	
Molybdenum	ND	1	1	mg/Kg		09/12/19	SBW	
Nickel	**21.4**	1	1.5	mg/Kg		09/12/19	SBW	
Selenium	ND	1	3	mg/Kg		09/12/19	SBW	
Silver	ND	1	0.5	mg/Kg		09/12/19	SBW	
Thallium	ND	1	3	mg/Kg		09/12/19	SBW	
Vanadium	**44.1**	1	0.5	mg/Kg		09/12/19	SBW	
Zinc	**107**	1	5	mg/Kg		09/12/19	SBW	
Method: EPA 6010B *NELAC* Prep Method: STLC						QCBatchID: QC1207488		
Lead	**3.83**	10	0.15	mg/L		10/09/19	SBW	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1206579		
Mercury	**0.14**	1	0.14	mg/Kg	09/12/19	09/12/19	KLN	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1206392		
TPH (C13 to C22)	**8200**	50	500	mg/Kg	09/09/19	09/13/19	TW	
TPH (C23 to C44)	**5200**	50	500	mg/Kg	09/09/19	09/13/19	TW	
TPH (C6 to C12)	**2300**	50	500	mg/Kg	09/09/19	09/13/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*260*		*50-150*	*S*				
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1206491		
1,1,1,2-Tetrachloroethane	ND	50	250	ug/Kg		09/11/19	LZ	
1,1,1-Trichloroethane	ND	50	250	ug/Kg		09/11/19	LZ	
1,1,2,2-Tetrachloroethane	ND	50	250	ug/Kg		09/11/19	LZ	
1,1,2-Trichloroethane	ND	50	250	ug/Kg		09/11/19	LZ	
1,1,2-Trichlorotrifluoroethane	ND	50	250	ug/Kg		09/11/19	LZ	
1,1-Dichloroethane	ND	50	250	ug/Kg		09/11/19	LZ	
1,1-Dichloroethene	ND	50	250	ug/Kg		09/11/19	LZ	
1,1-Dichloropropene	ND	50	250	ug/Kg		09/11/19	LZ	
1,2,3-Trichlorobenzene	ND	50	250	ug/Kg		09/11/19	LZ	
1,2,3-Trichloropropane	ND	50	250	ug/Kg		09/11/19	LZ	
1,2,4-Trichlorobenzene	ND	50	250	ug/Kg		09/11/19	LZ	
1,2,4-Trimethylbenzene	**2800**	50	250	ug/Kg		09/11/19	LZ	
1,2-Dibromo-3-chloropropane	ND	50	250	ug/Kg		09/11/19	LZ	
1,2-Dibromoethane	ND	50	250	ug/Kg		09/11/19	LZ	
1,2-Dichlorobenzene	ND	50	250	ug/Kg		09/11/19	LZ	
1,2-Dichloroethane	ND	50	250	ug/Kg		09/11/19	LZ	
1,2-Dichloropropane	ND	50	250	ug/Kg		09/11/19	LZ	
1,3,5-Trimethylbenzene	**510**	50	250	ug/Kg		09/11/19	LZ	
1,3-Dichlorobenzene	ND	50	250	ug/Kg		09/11/19	LZ	
1,3-Dichloropropane	ND	50	250	ug/Kg		09/11/19	LZ	
1,4-Dichlorobenzene	ND	50	250	ug/Kg		09/11/19	LZ	
2,2-Dichloropropane	ND	50	250	ug/Kg		09/11/19	LZ	
2-Butanone (MEK)	ND	50	5000	ug/Kg		09/11/19	LZ	
2-Chlorotoluene	ND	50	250	ug/Kg		09/11/19	LZ	
4-Chlorotoluene	ND	50	250	ug/Kg		09/11/19	LZ	

Matrix:	Solid	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	09/06/2019 11:43	**Site:**			
Sample #:	**419149-001**	**Client Sample #:**	Waste Soil	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
4-Isopropyltoluene	**1200**	50	250	ug/Kg		09/11/19	LZ	
4-Methyl-2-pentanone (MIBK)	ND	50	250	ug/Kg		09/11/19	LZ	
Acetone	ND	50	5000	ug/Kg		09/11/19	LZ	
Allyl Chloride	ND	50	250	ug/Kg		09/11/19	LZ	
Benzene	ND	50	250	ug/Kg		09/11/19	LZ	
Bromobenzene	ND	50	250	ug/Kg		09/11/19	LZ	
Bromochloromethane	ND	50	250	ug/Kg		09/11/19	LZ	
Bromodichloromethane	ND	50	250	ug/Kg		09/11/19	LZ	
Bromoform	ND	50	250	ug/Kg		09/11/19	LZ	
Bromomethane	ND	50	250	ug/Kg		09/11/19	LZ	
Carbon Tetrachloride	ND	50	250	ug/Kg		09/11/19	LZ	
Chlorobenzene	ND	50	250	ug/Kg		09/11/19	LZ	
Chlorodibromomethane	ND	50	250	ug/Kg		09/11/19	LZ	
Chloroethane	ND	50	250	ug/Kg		09/11/19	LZ	
Chloroform	ND	50	250	ug/Kg		09/11/19	LZ	
Chloromethane	ND	50	250	ug/Kg		09/11/19	LZ	
cis-1,2-Dichloroethene	ND	50	250	ug/Kg		09/11/19	LZ	
cis-1,3-dichloropropene	ND	50	250	ug/Kg		09/11/19	LZ	
cis-1,4-dichloro-2-butene	ND	50	250	ug/Kg		09/11/19	LZ	
Dibromomethane	ND	50	250	ug/Kg		09/11/19	LZ	
Dichlorodifluoromethane	ND	50	250	ug/Kg		09/11/19	LZ	
Di-isopropyl ether (DIPE)	ND	50	250	ug/Kg		09/11/19	LZ	
Ethylbenzene	**960**	50	250	ug/Kg		09/11/19	LZ	
Ethyl-tertbutylether (ETBE)	ND	50	250	ug/Kg		09/11/19	LZ	
Hexachlorobutadiene	ND	50	250	ug/Kg		09/11/19	LZ	
Isopropylbenzene	**680**	50	250	ug/Kg		09/11/19	LZ	
m and p-Xylene	**550**	50	250	ug/Kg		09/11/19	LZ	
Methylene chloride	ND	50	250	ug/Kg		09/11/19	LZ	
Methyl-t-butyl Ether (MTBE)	ND	50	250	ug/Kg		09/11/19	LZ	
Naphthalene	**5500**	50	250	ug/Kg		09/11/19	LZ	
N-butylbenzene	ND	50	250	ug/Kg		09/11/19	LZ	
N-propylbenzene	**1000**	50	250	ug/Kg		09/11/19	LZ	
o-Xylene	ND	50	250	ug/Kg		09/11/19	LZ	
Sec-butylbenzene	**990**	50	250	ug/Kg		09/11/19	LZ	
Styrene	ND	50	250	ug/Kg		09/11/19	LZ	
t-Butyl alcohol (TBA)	ND	50	500	ug/Kg		09/11/19	LZ	
Tert-amylmethylether (TAME)	ND	50	250	ug/Kg		09/11/19	LZ	
Tert-butylbenzene	ND	50	250	ug/Kg		09/11/19	LZ	
Tetrachloroethene	ND	50	250	ug/Kg		09/11/19	LZ	
Toluene	ND	50	250	ug/Kg		09/11/19	LZ	
trans-1,2-dichloroethene	ND	50	250	ug/Kg		09/11/19	LZ	
trans-1,3-dichloropropene	ND	50	250	ug/Kg		09/11/19	LZ	
trans-1,4-dichloro-2-butene	ND	50	250	ug/Kg		09/11/19	LZ	
Trichloroethene	ND	50	250	ug/Kg		09/11/19	LZ	
Trichlorofluoromethane	ND	50	250	ug/Kg		09/11/19	LZ	
Vinyl Chloride	ND	50	250	ug/Kg		09/11/19	LZ	
Xylenes (Total)	**550**	50	250	ug/Kg		09/11/19	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*87*	*70-145*	
4-Bromofluorobenzene (SUR)	*89*	*70-145*	
Dibromofluoromethane (SUR)	*93*	*70-145*	
Toluene-d8 (SUR)	*106*	*70-145*	

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	09/06/2019 11:50	**Site:**			
Sample #:	**419149-002**	**Client Sample #:**	Waste Water	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3010A						QCBatchID: QC1206381		
Antimony	ND	1	0.04	mg/L		09/09/19	SBW	
Arsenic	**0.043**	1	0.01	mg/L		09/09/19	SBW	
Barium	ND	1	0.01	mg/L		09/09/19	SBW	
Beryllium	ND	1	0.005	mg/L		09/09/19	SBW	
Cadmium	ND	1	0.005	mg/L		09/09/19	SBW	
Chromium	ND	1	0.01	mg/L		09/10/19	SBW	
Cobalt	ND	1	0.005	mg/L		09/09/19	SBW	
Copper	**0.017**	1	0.01	mg/L		09/09/19	SBW	
Lead	**0.035**	1	0.01	mg/L		09/09/19	SBW	
Molybdenum	**0.0305**	1	0.01	mg/L		09/09/19	SBW	
Nickel	**0.031**	1	0.02	mg/L		09/10/19	SBW	
Selenium	ND	1	0.03	mg/L		09/09/19	SBW	
Silver	ND	1	0.005	mg/L		09/09/19	SBW	
Thallium	ND	1	0.05	mg/L		09/09/19	SBW	
Vanadium	ND	1	0.005	mg/L		09/09/19	SBW	
Zinc	**0.253**	1	0.05	mg/L		09/10/19	SBW	
Method: EPA 7470A *NELAC* Prep Method: Method						QCBatchID: QC1206378		
Mercury	ND	1	0.4	ug/L	09/08/19	09/08/19	KLN	
Method: EPA 8015B *NELAC* Prep Method: EPA 3510C						QCBatchID: QC1206360		
TPH (C13 to C22)	**1.2**	2	0.4	mg/L	09/06/19	09/12/19	TW	B
TPH (C23 to C44)	ND	2	0.6	mg/L	09/06/19	09/12/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*70*		*50-150*					
Method: EPA 8015B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1206057		
TPH (C6 to C12)	ND	20	1000	ug/L		09/10/19	EW	D2
Surrogate	*% Recovery*		*Limits*	*Notes*				
4-Bromofluorobenzene (SUR)	*101*		*60-140*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1206370		
1,1,1,2-Tetrachloroethane	ND	20	100	ug/L		09/07/19	LZ	D2
1,1,1-Trichloroethane	ND	20	100	ug/L		09/07/19	LZ	D2
1,1,2,2-Tetrachloroethane	ND	20	100	ug/L		09/07/19	LZ	D2
1,1,2-Trichloroethane	ND	20	100	ug/L		09/07/19	LZ	D2
1,1,2-Trichlorotrifluoroethane	ND	20	100	ug/L		09/07/19	LZ	D2
1,1-Dichloroethane	ND	20	100	ug/L		09/07/19	LZ	D2
1,1-Dichloroethene	ND	20	100	ug/L		09/07/19	LZ	D2
1,1-Dichloropropene	ND	20	100	ug/L		09/07/19	LZ	D2
1,2,3-Trichlorobenzene	ND	20	100	ug/L		09/07/19	LZ	D2
1,2,3-Trichloropropane	ND	20	100	ug/L		09/07/19	LZ	D2
1,2,4-Trichlorobenzene	ND	20	100	ug/L		09/07/19	LZ	D2
1,2,4-Trimethylbenzene	ND	20	100	ug/L		09/07/19	LZ	D2
1,2-Dibromo-3-chloropropane	ND	20	100	ug/L		09/07/19	LZ	D2
1,2-Dibromoethane	ND	20	100	ug/L		09/07/19	LZ	D2
1,2-Dichlorobenzene	ND	20	100	ug/L		09/07/19	LZ	D2
1,2-Dichloroethane	ND	20	100	ug/L		09/07/19	LZ	D2
1,2-Dichloropropane	ND	20	100	ug/L		09/07/19	LZ	D2
1,3,5-Trimethylbenzene	ND	20	100	ug/L		09/07/19	LZ	D2
1,3-Dichlorobenzene	ND	20	100	ug/L		09/07/19	LZ	D2
1,3-Dichloropropane	ND	20	100	ug/L		09/07/19	LZ	D2
1,4-Dichlorobenzene	ND	20	100	ug/L		09/07/19	LZ	D2
2,2-Dichloropropane	ND	20	100	ug/L		09/07/19	LZ	D2
2-Butanone (MEK)	ND	20	2000	ug/L		09/07/19	LZ	D2
2-Chlorotoluene	ND	20	100	ug/L		09/07/19	LZ	D2

Matrix:	Water	**Client:**	Roux Associates, Inc.	**Collector:**	Client
Sampled:	09/06/2019 11:50	**Site:**			
Sample #:	**419149-002**	**Client Sample #:**	Waste Water	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
4-Chlorotoluene	ND	20	100	ug/L		09/07/19	LZ	D2
4-Isopropyltoluene	ND	20	100	ug/L		09/07/19	LZ	D2
4-Methyl-2-pentanone (MIBK)	ND	20	100	ug/L		09/07/19	LZ	D2
Acetone	ND	20	2000	ug/L		09/07/19	LZ	D2
Allyl Chloride	ND	20	100	ug/L		09/07/19	LZ	D2
Benzene	ND	20	20	ug/L		09/07/19	LZ	D2
Bromobenzene	ND	20	100	ug/L		09/07/19	LZ	D2
Bromochloromethane	ND	20	100	ug/L		09/07/19	LZ	D2
Bromodichloromethane	ND	20	100	ug/L		09/07/19	LZ	D2
Bromoform	ND	20	100	ug/L		09/07/19	LZ	D2
Bromomethane	ND	20	100	ug/L		09/07/19	LZ	D2
Carbon Tetrachloride	ND	20	100	ug/L		09/07/19	LZ	D2
Chlorobenzene	ND	20	100	ug/L		09/07/19	LZ	D2
Chlorodibromomethane	ND	20	100	ug/L		09/07/19	LZ	D2
Chloroethane	ND	20	100	ug/L		09/07/19	LZ	D2
Chloroform	ND	20	100	ug/L		09/07/19	LZ	D2
Chloromethane	ND	20	100	ug/L		09/07/19	LZ	D2
cis-1,2-Dichloroethene	ND	20	100	ug/L		09/07/19	LZ	D2
cis-1,3-dichloropropene	ND	20	100	ug/L		09/07/19	LZ	D2
cis-1,4-dichloro-2-butene	ND	20	100	ug/L		09/07/19	LZ	D2
Dibromomethane	ND	20	100	ug/L		09/07/19	LZ	D2
Dichlorodifluoromethane	ND	20	100	ug/L		09/07/19	LZ	D2
Di-isopropyl ether (DIPE)	ND	20	20	ug/L		09/07/19	LZ	D2
Ethylbenzene	ND	20	100	ug/L		09/07/19	LZ	D2
Ethyl-tertbutylether (ETBE)	ND	20	20	ug/L		09/07/19	LZ	D2
Hexachlorobutadiene	ND	20	100	ug/L		09/07/19	LZ	D2
Isopropylbenzene	ND	20	100	ug/L		09/07/19	LZ	D2
m and p-Xylene	ND	20	100	ug/L		09/07/19	LZ	D2
Methylene chloride	ND	20	100	ug/L		09/07/19	LZ	D2
Methyl-t-butyl Ether (MTBE)	ND	20	20	ug/L		09/07/19	LZ	D2
Naphthalene	ND	20	100	ug/L		09/07/19	LZ	D2
N-butylbenzene	ND	20	100	ug/L		09/07/19	LZ	D2
N-propylbenzene	ND	20	100	ug/L		09/07/19	LZ	D2
o-Xylene	ND	20	100	ug/L		09/07/19	LZ	D2
Sec-butylbenzene	ND	20	100	ug/L		09/07/19	LZ	D2
Styrene	ND	20	100	ug/L		09/07/19	LZ	D2
t-Butyl alcohol (TBA)	ND	20	200	ug/L		09/07/19	LZ	D2
Tert-amylmethylether (TAME)	ND	20	100	ug/L		09/07/19	LZ	D2
Tert-butylbenzene	ND	20	100	ug/L		09/07/19	LZ	D2
Tetrachloroethene	ND	20	100	ug/L		09/07/19	LZ	D2
Toluene	ND	20	100	ug/L		09/07/19	LZ	D2
trans-1,2-dichloroethene	ND	20	100	ug/L		09/07/19	LZ	D2
trans-1,3-dichloropropene	ND	20	100	ug/L		09/07/19	LZ	D2
trans-1,4-dichloro-2-butene	ND	20	100	ug/L		09/07/19	LZ	D2
Trichloroethene	ND	20	100	ug/L		09/07/19	LZ	D2
Trichlorofluoromethane	ND	20	100	ug/L		09/07/19	LZ	D2
Vinyl Chloride	ND	20	100	ug/L		09/07/19	LZ	D2
Xylenes (Total)	ND	20	100	ug/L		09/07/19	LZ	D2

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*95*	*70-145*	
4-Bromofluorobenzene (SUR)	*104*	*70-145*	
Dibromofluoromethane (SUR)	*107*	*70-145*	
Toluene-d8 (SUR)	*104*	*70-145*	

QCBatchID: QC1206057 **Analyst:** sandyw **Method:** EPA 8015B

Matrix: Water **Analyzed:** 09/10/2019 **Instrument:** VOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1206057MB1						
TPH (C6 to C10)	ND	ug/L		50		
TPH (C6 to C12)	ND	ug/L		50		
TPH Gasoline	ND	ug/L		50		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206057LCS1											
TPH Gasoline	500		520		ug/L	104			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206057MS1, QC1206057MSD1												**Source: 419141-001**
TPH Gasoline	ND	500	500	530	540	ug/L	106	108	1.9	70-130	30	

QCBatchID: QC1206360 **Analyst:** Abanh **Method:** EPA 8015B

Matrix: Water **Analyzed:** 09/11/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1206360MB1						
TPH (C10 to C22)	ND	mg/L		0.1		
TPH (C13 to C22)	ND	mg/L		0.2		
TPH (C22 to C36)	ND	mg/L		0.3		
TPH (C23 to C44)	ND	mg/L		0.3		
TPH Diesel	ND	mg/L		0.1		
TPH Motor Oil	ND	mg/L		0.3		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206360LCS1, QC1206360LCSD1											
TPH Diesel	1	1	0.77	0.75	mg/L	77	75	3	)4112-99.0	20	

QCBatchID: QC1206370	**Analyst:** Rlee	**Method:** EPA 8260B	
Matrix: Water	**Analyzed:** 09/06/2019	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1206370MB1						
1,1,1,2-Tetrachloroethane	ND	ug/L		5		
1,1,1-Trichloroethane	ND	ug/L		5		
1,1,2,2-Tetrachloroethane	ND	ug/L		5		
1,1,2-Trichloroethane	ND	ug/L		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/L		5		
1,1-Dichloroethane	ND	ug/L		5		
1,1-Dichloroethene	ND	ug/L		5		
1,1-Dichloropropene	ND	ug/L		5		
1,2,3-Trichlorobenzene	ND	ug/L		5		
1,2,3-Trichloropropane	ND	ug/L		5		
1,2,4-Trichlorobenzene	ND	ug/L		5		
1,2,4-Trimethylbenzene	ND	ug/L		5		
1,2-Dibromo-3-chloropropane	ND	ug/L		5		
1,2-Dibromoethane	ND	ug/L		5		
1,2-Dichlorobenzene	ND	ug/L		5		
1,2-Dichloroethane	ND	ug/L		5		
1,2-Dichloropropane	ND	ug/L		5		
1,3,5-Trimethylbenzene	ND	ug/L		5		
1,3-Dichlorobenzene	ND	ug/L		5		
1,3-Dichloropropane	ND	ug/L		5		
1,4-Dichlorobenzene	ND	ug/L		5		
2,2-Dichloropropane	ND	ug/L		5		
2-Butanone (MEK)	ND	ug/L		100		
2-Chloroethyl Vinyl Ether	ND	ug/L		10		
2-Chlorotoluene	ND	ug/L		5		
4-Chlorotoluene	ND	ug/L		5		
4-Isopropyltoluene	ND	ug/L		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/L		5		
Acetone	ND	ug/L		100		
Allyl Chloride	ND	ug/L		5		
Benzene	ND	ug/L		1		
Bromobenzene	ND	ug/L		5		
Bromochloromethane	ND	ug/L		5		
Bromodichloromethane	ND	ug/L		5		
Bromoform	ND	ug/L		5		
Bromomethane	ND	ug/L		5		
Carbon Tetrachloride	ND	ug/L		5		
Chlorobenzene	ND	ug/L		5		
Chlorodibromomethane	ND	ug/L		5		
Chloroethane	ND	ug/L		5		
Chloroform	ND	ug/L		5		
Chloromethane	ND	ug/L		5		
cis-1,2-Dichloroethene	ND	ug/L		5		
cis-1,3-dichloropropene	ND	ug/L		5		
cis-1,4-dichloro-2-butene	ND	ug/L		5		
Dibromomethane	ND	ug/L		5		
Dichlorodifluoromethane	ND	ug/L		5		
Di-isopropyl ether (DIPE)	ND	ug/L		1		
Ethylbenzene	ND	ug/L		5		
Ethyl-tertbutylether (ETBE)	ND	ug/L		1		
Hexachlorobutadiene	ND	ug/L		5		
Isopropylbenzene	ND	ug/L		5		

QCBatchID: QC1206370 **Analyst:** Rlee **Method:** EPA 8260B

Matrix: Water **Analyzed:** 09/06/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1206370MB1					
m and p-Xylene	ND	ug/L		5	
Methylene chloride	ND	ug/L		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L		1	
Naphthalene	ND	ug/L		5	
N-butylbenzene	ND	ug/L		5	
N-propylbenzene	ND	ug/L		5	
o-Xylene	ND	ug/L		5	
Sec-butylbenzene	ND	ug/L		5	
Styrene	ND	ug/L		5	
t-Butyl alcohol (TBA)	ND	ug/L		10	
Tert-amylmethylether (TAME)	ND	ug/L		5	
Tert-butylbenzene	ND	ug/L		5	
Tetrachloroethene	ND	ug/L		5	
Toluene	ND	ug/L		5	
trans-1,2-dichloroethene	ND	ug/L		5	
trans-1,3-dichloropropene	ND	ug/L		5	
trans-1,4-dichloro-2-butene	ND	ug/L		5	
Trichloroethene	ND	ug/L		5	
Trichlorofluoromethane	ND	ug/L		5	
Vinyl Chloride	ND	ug/L		5	
Xylenes (Total)	ND	ug/L		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206370LCS1											
1,1-Dichloroethene	50		60		ug/L	120			59-172		
Benzene	50		56		ug/L	112			62-137		
Chlorobenzene	50		58		ug/L	116			60-133		
Methyl-t-butyl Ether (MTBE)	50		50		ug/L	100			62-137		
Toluene	50		59		ug/L	118			59-139		
Trichloroethene	50		61		ug/L	122			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206370MS1, QC1206370MSD1												**Source: 419136-001**
1,1-Dichloroethene	ND	50	50	58	58	ug/L	116	116	0.0	59-172	22	
Benzene	ND	50	50	55	55	ug/L	110	110	0.0	62-137	24	
Chlorobenzene	ND	50	50	57	58	ug/L	114	116	1.7	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	50	51	ug/L	100	102	2.0	62-137	21	
Toluene	0.55	50	50	59	60	ug/L	117	119	1.7	59-139	21	
Trichloroethene	ND	50	50	60	61	ug/L	120	122	1.7	66-142	21	

QCBatchID: QC1206378 **Analyst:** cmorales **Method:** EPA 7470A

Matrix: Water **Analyzed:** 09/08/2019 **Instrument:** AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1206378MB1						
Mercury	ND	ug/L		0.2		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206378LCS1											
Mercury	5		5.17		ug/L	103			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206378MS1, QC1206378MSD1												**Source: 419103-001**
Mercury	ND	5	5	4.53	4.54	ug/L	91	91	0.2	75-125	20	

QCBatchID: QC1206381 **Analyst:** kedy **Method:** EPA 6010B

Matrix: Water **Analyzed:** 09/08/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1206381MB1					
Antimony	ND	mg/L		0.04	
Arsenic	ND	mg/L		0.01	
Barium	ND	mg/L		0.01	
Beryllium	ND	mg/L		0.005	
Cadmium	ND	mg/L		0.005	
Chromium	ND	mg/L		0.01	
Cobalt	ND	mg/L		0.005	
Copper	ND	mg/L		0.01	
Lead	ND	mg/L		0.01	
Molybdenum	ND	mg/L		0.01	
Nickel	ND	mg/L		0.02	
Selenium	ND	mg/L		0.03	
Silver	ND	mg/L		0.005	
Thallium	ND	mg/L		0.05	
Vanadium	ND	mg/L		0.005	
Zinc	ND	mg/L		0.05	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206381LCS1											
Antimony	4		3.85		mg/L	96			80-120		
Arsenic	4		3.81		mg/L	95			80-120		
Barium	4		3.98		mg/L	100			80-120		
Beryllium	4		3.75		mg/L	94			80-120		
Cadmium	4		3.85		mg/L	96			80-120		
Chromium	4		4.18		mg/L	105			80-120		
Cobalt	4		3.94		mg/L	99			80-120		
Copper	4		3.75		mg/L	94			80-120		
Lead	4		3.88		mg/L	97			80-120		
Molybdenum	4		4.06		mg/L	102			80-120		
Nickel	4		3.75		mg/L	94			80-120		
Selenium	4		3.74		mg/L	94			80-120		
Silver	4		3.25		mg/L	81			80-120		
Thallium	4		4.03		mg/L	101			80-120		
Vanadium	4		3.78		mg/L	95			80-120		
Zinc	4		3.72		mg/L	93			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206381MS1, QC1206381MSD1												**Source: 419163-018**
Antimony	ND	4	4	4.48	4.20	mg/L	112	105	6.5	75-125	20	
Arsenic	ND	4	4	4.48	4.20	mg/L	112	105	6.5	75-125	20	
Barium	ND	4	4	3.98	3.61	mg/L	100	90	9.7	75-125	20	
Beryllium	ND	4	4	4.48	4.05	mg/L	112	101	10.1	75-125	20	
Cadmium	ND	4	4	4.56	4.33	mg/L	114	108	5.2	75-125	20	
Chromium	0.004	4	4	4.91	4.72	mg/L	123	118	3.9	75-125	20	
Cobalt	ND	4	4	4.06	3.90	mg/L	102	98	4.0	75-125	20	
Copper	ND	4	4	4.49	4.07	mg/L	112	102	9.8	75-125	20	
Lead	ND	4	4	4.42	4.22	mg/L	111	106	4.6	75-125	20	
Molybdenum	ND	4	4	4.66	4.44	mg/L	117	111	4.8	75-125	20	

QCBatchID: QC1206381 **Analyst:** kedy **Method:** EPA 6010B

Matrix: Water **Analyzed:** 09/08/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206381MS1, QC1206381MSD1												**Source: 419163-018**
Nickel	ND	4	4	3.91	3.72	mg/L	98	93	5.0	75-125	20	
Selenium	ND	4	4	4.44	4.12	mg/L	111	103	7.5	75-125	20	
Silver	ND	4	4	3.90	3.50	mg/L	98	88	10.8	75-125	20	
Thallium	ND	4	4	4.54	4.29	mg/L	114	107	5.7	75-125	20	
Vanadium	ND	4	4	4.62	4.14	mg/L	116	104	11.0	75-125	20	
Zinc	0.120	4	4	4.20	4.08	mg/L	102	99	2.9	75-125	20	

QCBatchID: QC1206392 **Analyst:** Jarriaga **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 09/12/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1206392MB1					
TPH (C10 to C28)	ND	mg/Kg		10	
TPH (C13 to C22)	ND	mg/Kg		10	
TPH (C23 to C44)	ND	mg/Kg		10	
TPH (C6 to C12)	ND	mg/Kg		10	
TPH Diesel	ND	mg/Kg		10	
TPH Motor Oil	ND	mg/Kg		10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206392LCS1											
TPH (C10 to C28)	250		230		mg/Kg	92			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206392MS1, QC1206392MSD1												**Source: 419099-001**
TPH (C10 to C28)	370	250	250	690	520	mg/Kg	128	60	28.1	70-130	20	M,D

QCBatchID: QC1206483 **Analyst:** kedy **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 09/11/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1206483MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206483LCS1											
Antimony	100		95.4		mg/Kg	95			80-120		
Arsenic	100		90.4		mg/Kg	90			80-120		
Barium	100		98.7		mg/Kg	99			80-120		
Beryllium	100		91.3		mg/Kg	91			80-120		
Cadmium	100		95.9		mg/Kg	96			80-120		
Chromium	100		99.3		mg/Kg	99			80-120		
Cobalt	100		95.7		mg/Kg	96			80-120		
Copper	100		112		mg/Kg	112			80-120		
Lead	100		94.5		mg/Kg	95			80-120		
Molybdenum	100		98.6		mg/Kg	99			80-120		
Nickel	100		93.8		mg/Kg	94			80-120		
Selenium	100		87.5		mg/Kg	88			80-120		
Silver	100		103		mg/Kg	103			80-120		
Thallium	100		90.5		mg/Kg	91			80-120		
Vanadium	100		98.2		mg/Kg	98			80-120		
Zinc	100		101		mg/Kg	101			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206483MS1, QC1206483MSD1												**Source: 419160-034**
Antimony	ND	100	100	22.2	22.8	mg/Kg	22	23	2.7	75-125	20	M
Arsenic	16.2	100	100	62.1	89.0	mg/Kg	46	73	35.6	75-125	20	M,D
Barium	143	100	100	150	231	mg/Kg	7	88	42.5	75-125	20	M,D
Beryllium	ND	100	100	53.8	80.3	mg/Kg	54	80	39.5	75-125	20	M,D
Cadmium	0.81	100	100	57.0	88.1	mg/Kg	56	87	42.9	75-125	20	M,D
Chromium	22.4	100	100	71.2	112	mg/Kg	49	90	44.5	75-125	20	M,D
Cobalt	12.2	100	100	62.3	98.3	mg/Kg	50	86	44.8	75-125	20	M,D
Copper	30.4	100	100	87.9	110	mg/Kg	58	80	22.3	75-125	20	M,D
Lead	30.3	100	100	83.1	117	mg/Kg	53	87	33.9	75-125	20	M,D
Molybdenum	ND	100	100	57.6	85.7	mg/Kg	58	86	39.2	75-125	20	M,D

QCBatchID: QC1206483 **Analyst:** kedy **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 09/11/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206483MS1, QC1206483MSD1												**Source: 419160-034**
Nickel	14.9	100	100	61.3	94.4	mg/Kg	46	80	42.5	75-125	20	M,D
Selenium	ND	100	100	53.4	79.4	mg/Kg	53	79	39.2	75-125	20	M,D
Silver	ND	100	100	63.7	77.3	mg/Kg	64	77	19.3	75-125	20	M
Thallium	ND	100	100	49.0	81.0	mg/Kg	49	81	49.2	75-125	20	M,D
Vanadium	42.2	100	100	86.7	134	mg/Kg	45	92	42.9	75-125	20	M,D
Zinc	122	100	100	145	185	mg/Kg	23	63	24.2	75-125	20	M,D

QCBatchID: QC1206491	**Analyst:** nicollez	**Method:** EPA 8260B	
Matrix: Solid	**Analyzed:** 09/11/2019	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1206491MB1					
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5	
1,1,1-Trichloroethane	ND	ug/Kg		5	
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5	
1,1,2-Trichloroethane	ND	ug/Kg		5	
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5	
1,1-Dichloroethane	ND	ug/Kg		5	
1,1-Dichloroethene	ND	ug/Kg		5	
1,1-Dichloropropene	ND	ug/Kg		5	
1,2,3-Trichlorobenzene	ND	ug/Kg		5	
1,2,3-Trichloropropane	ND	ug/Kg		5	
1,2,4-Trichlorobenzene	ND	ug/Kg		5	
1,2,4-Trimethylbenzene	ND	ug/Kg		5	
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5	
1,2-Dibromoethane	ND	ug/Kg		5	
1,2-Dichlorobenzene	ND	ug/Kg		5	
1,2-Dichloroethane	ND	ug/Kg		5	
1,2-Dichloropropane	ND	ug/Kg		5	
1,3,5-Trimethylbenzene	ND	ug/Kg		5	
1,3-Dichlorobenzene	ND	ug/Kg		5	
1,3-Dichloropropane	ND	ug/Kg		5	
1,4-Dichlorobenzene	ND	ug/Kg		5	
2,2-Dichloropropane	ND	ug/Kg		5	
2-Butanone (MEK)	ND	ug/Kg		100	
2-Chlorotoluene	ND	ug/Kg		5	
4-Chlorotoluene	ND	ug/Kg		5	
4-Isopropyltoluene	ND	ug/Kg		5	
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5	
Acetone	ND	ug/Kg		100	
Allyl Chloride	ND	ug/Kg		5	
Benzene	ND	ug/Kg		5	
Bromobenzene	ND	ug/Kg		5	
Bromochloromethane	ND	ug/Kg		5	
Bromodichloromethane	ND	ug/Kg		5	
Bromoform	ND	ug/Kg		5	
Bromomethane	ND	ug/Kg		5	
Carbon Tetrachloride	ND	ug/Kg		5	
Chlorobenzene	ND	ug/Kg		5	
Chlorodibromomethane	ND	ug/Kg		5	
Chloroethane	ND	ug/Kg		5	
Chloroform	ND	ug/Kg		5	
Chloromethane	ND	ug/Kg		5	
cis-1,2-Dichloroethene	ND	ug/Kg		5	
cis-1,3-dichloropropene	ND	ug/Kg		5	
cis-1,4-dichloro-2-butene	ND	ug/Kg		5	
Dibromomethane	ND	ug/Kg		5	
Dichlorodifluoromethane	ND	ug/Kg		5	
Di-isopropyl ether (DIPE)	ND	ug/Kg		5	
Ethanol	ND	ug/Kg		500	
Ethylbenzene	ND	ug/Kg		5	
Ethyl-tertbutylether (ETBE)	ND	ug/Kg		5	
Hexachlorobutadiene	ND	ug/Kg		5	
Isopropylbenzene	ND	ug/Kg		5	

QCBatchID: QC1206491 **Analyst:** nicollez **Method:** EPA 8260B

Matrix: Solid **Analyzed:** 09/11/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1206491MB1					
m and p-Xylene	ND	ug/Kg		5	
Methylene chloride	ND	ug/Kg		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5	
Naphthalene	ND	ug/Kg		5	
N-butylbenzene	ND	ug/Kg		5	
N-propylbenzene	ND	ug/Kg		5	
o-Xylene	ND	ug/Kg		5	
Sec-butylbenzene	ND	ug/Kg		5	
Styrene	ND	ug/Kg		5	
t-Butyl alcohol (TBA)	ND	ug/Kg		10	
Tert-amylmethylether (TAME)	ND	ug/Kg		5	
Tert-butylbenzene	ND	ug/Kg		5	
Tetrachloroethene	ND	ug/Kg		5	
Toluene	ND	ug/Kg		5	
trans-1,2-dichloroethene	ND	ug/Kg		5	
trans-1,3-dichloropropene	ND	ug/Kg		5	
trans-1,4-dichloro-2-butene	ND	ug/Kg		5	
Trichloroethene	ND	ug/Kg		5	
Trichlorofluoromethane	ND	ug/Kg		5	
Vinyl Chloride	ND	ug/Kg		5	
Xylenes (Total)	ND	ug/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206491LCS1											
1,1-Dichloroethene	50		57		ug/Kg	114			59-172		
Benzene	50		55		ug/Kg	110			62-137		
Chlorobenzene	50		58		ug/Kg	116			60-133		
Methyl-t-butyl Ether (MTBE)	50		48		ug/Kg	96			62-137		
Toluene	50		57		ug/Kg	114			59-139		
Trichloroethene	50		60		ug/Kg	120			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1206491MS1, QC1206491MSD1												**Source: 419192-001**
1,1-Dichloroethene	ND	50	50	59	56	ug/Kg	118	112	5.2	59-172	22	
Benzene	ND	50	50	52	53	ug/Kg	104	106	1.9	62-137	24	
Chlorobenzene	ND	50	50	55	54	ug/Kg	110	108	1.8	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	47	47	ug/Kg	94	94	0.0	62-137	21	
Toluene	ND	50	50	47	55	ug/Kg	94	110	15.7	59-139	21	
Trichloroethene	ND	50	50	60	66	ug/Kg	120	132	9.5	66-142	21	

QCBatchID:	**QC1206579**	**Analyst:**	kedy	**Method:**	EPA 7471A
Matrix:	Solid	**Analyzed:**	09/12/2019	**Instrument:**	AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1206579MB1						
Mercury	ND	mg/Kg		0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1206579LCS1											
Mercury	0.83		0.83		mg/Kg	100			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
		MS	MSD	MS	MSD		MS	MSD		%Rec	RPD	
QC1206579MS1, QC1206579MSD1												**Source: 419252-001**
Mercury	ND	0.83	0.83	0.78	0.83	mg/Kg	94	100	6.2	75-125	20	

QCBatchID:	**QC1207488**	**Analyst:**	rvenegas	**Method:**	EPA 6010B
Matrix:	Solid	**Analyzed:**	10/09/2019	**Instrument:**	AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1207488MB1						
Arsenic	ND	mg/L		0.03		
Lead	ND	mg/L		0.015		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1207488LCS1, QC1207488LCSD1											
Arsenic	20	20	20.0	19.8	mg/L	100	99	1	80-120	20	
Lead	20	20	17.7	18.4	mg/L	89	92	4	80-120	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No: 419149

Page: 1 of 1

Turn Around Time (Rush must be pre-arranged)

Standard:	X (5 day)	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air DW = Drinking Water F = Food SD = Sediment T = Tissue PP = Pure Product S = Solid/Soil SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Roux Associates, Inc.	Name:	InSite
Report To:	Peter Shimer	Number:	3370.0001L000
Email:	PShimer@rouxinc.com	P.O. #:	ROU073019A
Address:	5150 E Pacific Coast Hwy Ste 450, Long Beach, CA 90804	Address:	3701 N Pacific Pl, Long Beach, CA
Phone:	310-879-4929	Global ID:	
Fax:	--	Sampled By:	~~Peter Shimer, PG~~ IC

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	Title 22 Metals - USEPA 6000/7000	TPH-cc - USEPA 8015	VOCs - USEPA 8260B	~~SVOCs - USEPA 8270C~~	~~PCBs - USEPA 8082~~	~~OCPs - USEPA 8081A~~	~~Herbicides - USEPA 8151A~~	Test Instructions / Comments
1	Waste Soil	9/6/19	1143	S	1/8oz	N	X	X	X					
2	Waste Water	↓	1150	W	5/various	Y/N	X	X	X					
3														
4														
5														
6														
7														
8														
9														
10														

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Ian Cross	Roux / Proj. Geol.	9/6/19 / ~~1400~~ 1400
1 Received By:		Peter Shimer	ROUX	9/6/19 / ~~1400~~ 1400
2 Relinquished By:		Peter Shimer	ROUX	9/6/19 1415
2 Received By:			Enthalpy	9/6/19 1415
3 Relinquished By:			Enthalpy	9/6/19 1505
3 Received By:		Elizabeth Ramirez	EA	9/6/19 1530

PM

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Roux Associates Project: InSite 3370.0001L00

Date Received: 09/06/2019 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 2.2 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 1.2 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?	✓		
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

1 vial received with headspace.

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☑ Email (email sent to/on): 9/6/19 6:05pm

Project Manager's response:

Completed By: _____ Date: 09/06/19

Ranjit Clarke

From: Peter Shimer
Sent: Friday, October 04, 2019 2:29 PM
To: Ranjit Clarke
Subject: RE: Insite (09/06/19) - Enthalpy Analytical Final Report #419149

Ranjit,

I just realized that I replied to the wrong person asking for you to run STLC Lead on this sample.

Can you still do this? And, if possible, I'd like to rush the result.

Thanks,

Peter Shimer, P.G. - CA | Project Geologist
Direct: 310.879.4929 | Mobile: 925.818.6276
Email: pshimer@rouxinc.com

From: Ranjit Clarke <ranjit.clarke@enthalpy.com>
Sent: Friday, September 13, 2019 5:57 PM
To: Peter Shimer <pshimer@rouxinc.com>
Subject: Insite (09/06/19) - Enthalpy Analytical Final Report #419149

This message originated outside your organization. Please use caution!

Hi Peter Shimer,

Attached is your final report #419149. Please let me know if you require STLC Lead on the soil sample.

Thank you.

In accordance with our paperless initiative, we are no longer mailing or faxing reports by default. If you require a hard copy, please inform your Project Manager.

Data qualifiers and additional information necessary for the interpretation of the test results are contained in the PDF file and may not be included in the EDD.

CONFIDENTIALITY NOTICE: The contents of this email message and any attachments are intended solely for the addressee(s) and may contain confidential, proprietary and/or privileged information and may be legally protected from disclosure. If you are not the intended recipient of this message or their agent, or if this message has been addressed to you in error, please immediately alert the sender by reply email and then delete this message and any attachments and the reply from your system. If you are not the intended recipient, you are hereby notified that any disclosure, use, dissemination, copying, or storage of this message or its attachments is strictly prohibited.

H&P Mobile Geochemistry Inc.

29 August 2019

Peter Shimer
Roux Associates, Inc.
5150 E. Pacific Coast Highway, Ste. 450
Long Beach, CA 90804

H&P Project: RX082019-A2
Client Project: 3370.0001L000 / N Pacific Pl

Dear Peter Shimer:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 8/20/2019 -8/22/2019 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Janis La Roux
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC). H&P is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-35-10	E908094-01	Vapor	20-Aug-19	20-Aug-19
SB-35-5	E908094-02	Vapor	20-Aug-19	20-Aug-19
SB-32-10	E908094-03	Vapor	20-Aug-19	20-Aug-19
SB-32-5	E908094-04	Vapor	20-Aug-19	20-Aug-19
SB-36-5	E908094-05	Vapor	20-Aug-19	20-Aug-19
SB-29-3	E908094-06	Vapor	20-Aug-19	20-Aug-19
SB-25-5	E908094-07	Vapor	20-Aug-19	20-Aug-19
SB-25-5REP	E908094-08	Vapor	20-Aug-19	20-Aug-19
SB-21-5	E908094-09	Vapor	20-Aug-19	20-Aug-19
SB-27-3	E908094-10	Vapor	20-Aug-19	20-Aug-19
SB-15-10	E908094-11	Vapor	20-Aug-19	20-Aug-19
SB-15-5	E908102-01	Vapor	21-Aug-19	21-Aug-19
SB-12-10	E908102-02	Vapor	21-Aug-19	21-Aug-19
SB-12-5	E908102-03	Vapor	21-Aug-19	21-Aug-19
SB-7-10	E908102-04	Vapor	21-Aug-19	21-Aug-19
SB-7-5	E908102-05	Vapor	21-Aug-19	21-Aug-19
SB-3-10	E908102-06	Vapor	21-Aug-19	21-Aug-19
SB-3-5	E908102-07	Vapor	21-Aug-19	21-Aug-19
SB-3-5REP	E908102-08	Vapor	21-Aug-19	21-Aug-19
SB-6-10	E908102-09	Vapor	21-Aug-19	21-Aug-19
SB-6-5	E908102-10	Vapor	21-Aug-19	21-Aug-19
SB-24-5	E908102-11	Vapor	21-Aug-19	21-Aug-19
SB-43-10	E908106-01	Vapor	22-Aug-19	22-Aug-19
SB-43-5	E908106-02	Vapor	22-Aug-19	22-Aug-19
SB-18-10	E908106-03	Vapor	22-Aug-19	22-Aug-19
SB-18-5	E908106-04	Vapor	22-Aug-19	22-Aug-19
SB-18-5REP	E908106-05	Vapor	22-Aug-19	22-Aug-19

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project:	RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number:	3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager:	Peter Shimer	29-Aug-19 09:52

August 20, 2019

The percent recovery for 2-Hexanone fell below the method criteria in the continuing calibration verification (CCV). Any result for this analyte may be biased low.

Following the performance of appropriate corrective action procedures, the relative percent difference (RPD) for SB-25-5 and SB-25-5 Rep exceeded H&P's internal RPD criteria of 50%.

August 21 and Augsut 22, 2019

The percent recoveries for 1,2,4-Trichlorobenzene and Hexachlorobutadiene fell below the method criteria in the CCV. Any results for these analytes may be biased low.

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

DETECTIONS SUMMARY

Sample ID: **SB-35-10** Laboratory ID: **E908094-01**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SB-35-5** Laboratory ID: **E908094-02**

Analyte	Result	Reporting Limit	Units	Method	Notes
2-Butanone (MEK)	**77**	60	ug/m3	H&P TO-15	

Sample ID: **SB-32-10** Laboratory ID: **E908094-03**

Analyte	Result	Reporting Limit	Units	Method	Notes
2-Butanone (MEK)	**130**	60	ug/m3	H&P TO-15	

Sample ID: **SB-32-5** Laboratory ID: **E908094-04**

Analyte	Result	Reporting Limit	Units	Method	Notes
2-Butanone (MEK)	**170**	60	ug/m3	H&P TO-15	
Tetrachloroethene	**49**	34	ug/m3	H&P TO-15	

Sample ID: **SB-36-5** Laboratory ID: **E908094-05**

Analyte	Result	Reporting Limit	Units	Method	Notes
Chloromethane	**43**	21	ug/m3	H&P TO-15	
2-Butanone (MEK)	**240**	60	ug/m3	H&P TO-15	

Sample ID: **SB-29-3** Laboratory ID: **E908094-06**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,1-Difluoroethane (LCC)	**97**	27	ug/m3	H&P TO-15	
2-Butanone (MEK)	**63**	60	ug/m3	H&P TO-15	

Sample ID: **SB-25-5** Laboratory ID: **E908094-07**

Analyte	Result	Reporting Limit	Units	Method	Notes
2-Butanone (MEK)	**360**	60	ug/m3	H&P TO-15	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Sample ID: **SB-25-5REP** Laboratory ID: **E908094-08**

Analyte	Result	Reporting Limit	Units	Method	Notes
Chloromethane	**45**	21	ug/m3	H&P TO-15	
2-Butanone (MEK)	**200**	60	ug/m3	H&P TO-15	

Sample ID: **SB-21-5** Laboratory ID: **E908094-09**

Analyte	Result	Reporting Limit	Units	Method	Notes
Chloromethane	**69**	21	ug/m3	H&P TO-15	
Benzene	**1000**	16	ug/m3	H&P TO-15	
Toluene	**71**	38	ug/m3	H&P TO-15	
Ethylbenzene	**59**	22	ug/m3	H&P TO-15	
m,p-Xylene	**67**	44	ug/m3	H&P TO-15	

Sample ID: **SB-27-3** Laboratory ID: **E908094-10**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SB-15-10** Laboratory ID: **E908094-11**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SB-15-5** Laboratory ID: **E908102-01**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,1-Difluoroethane (LCC)	**160**	27	ug/m3	H&P TO-15	

Sample ID: **SB-12-10** Laboratory ID: **E908102-02**

Analyte	Result	Reporting Limit	Units	Method	Notes
Benzene	**24**	16	ug/m3	H&P TO-15	

Sample ID: **SB-12-5** Laboratory ID: **E908102-03**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,1-Difluoroethane (LCC)	**50**	27	ug/m3	H&P TO-15	
Chloromethane	**22**	21	ug/m3	H&P TO-15	
2-Butanone (MEK)	**81**	60	ug/m3	H&P TO-15	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Sample ID: **SB-7-10** Laboratory ID: **E908102-04**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SB-7-5** Laboratory ID: **E908102-05**

Analyte	Result	Reporting Limit	Units	Method	Notes
2-Butanone (MEK)	**190**	60	ug/m3	H&P TO-15	

Sample ID: **SB-3-10** Laboratory ID: **E908102-06**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SB-3-5** Laboratory ID: **E908102-07**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,1-Difluoroethane (LCC)	**30**	27	ug/m3	H&P TO-15	
Chloromethane	**34**	21	ug/m3	H&P TO-15	
2-Butanone (MEK)	**110**	60	ug/m3	H&P TO-15	

Sample ID: **SB-3-5REP** Laboratory ID: **E908102-08**

Analyte	Result	Reporting Limit	Units	Method	Notes
2-Butanone (MEK)	**170**	60	ug/m3	H&P TO-15	

Sample ID: **SB-6-10** Laboratory ID: **E908102-09**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SB-6-5** Laboratory ID: **E908102-10**

Analyte	Result	Reporting Limit	Units	Method	Notes
2-Butanone (MEK)	**140**	60	ug/m3	H&P TO-15	

Sample ID: **SB-24-5** Laboratory ID: **E908102-11**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Sample ID: **SB-43-10** Laboratory ID: **E908106-01**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,1-Difluoroethane (LCC)	**45**	27	ug/m3	H&P TO-15	
Carbon disulfide	**260**	32	ug/m3	H&P TO-15	
Benzene	**21**	16	ug/m3	H&P TO-15	
o-Xylene	**29**	22	ug/m3	H&P TO-15	

Sample ID: **SB-43-5** Laboratory ID: **E908106-02**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,1-Difluoroethane (LCC)	**31**	27	ug/m3	H&P TO-15	

Sample ID: **SB-18-10** Laboratory ID: **E908106-03**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,1-Difluoroethane (LCC)	**39**	27	ug/m3	H&P TO-15	
2-Butanone (MEK)	**290**	60	ug/m3	H&P TO-15	

Sample ID: **SB-18-5** Laboratory ID: **E908106-04**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,1-Difluoroethane (LCC)	**180**	27	ug/m3	H&P TO-15	
2-Butanone (MEK)	**310**	60	ug/m3	H&P TO-15	

Sample ID: **SB-18-5REP** Laboratory ID: **E908106-05**

Analyte	Result	Reporting Limit	Units	Method	Notes
2-Butanone (MEK)	**220**	60	ug/m3	H&P TO-15	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-35-10 (E908094-01) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-35-10 (E908094-01) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98.7 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*102 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.4 %*		*56-127*	"	"	"	"	
SB-35-5 (E908094-02) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**77**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-35-5 (E908094-02) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*61.9 %*		*75-125*	"	"	"	"	*S-GC*
Surrogate: 4-Bromofluorobenzene		*90.9 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-32-10 (E908094-03) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**130**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-32-10 (E908094-03) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98.8 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*100 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90.4 %*		*56-127*	"	"	"	"	
SB-32-5 (E908094-04) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**170**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-32-5 (E908094-04) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	**49**	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*98.9 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.5 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-36-5 (E908094-05) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	**43**	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**240**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-36-5 (E908094-05) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*99.6 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89.5 %*		*56-127*	"	"	"	"	
SB-29-3 (E908094-06) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	**97**	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**63**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-29-3 (E908094-06) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98.9 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*94.3 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*85.6 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-25-5 (E908094-07) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**360**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-25-5 (E908094-07) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89.5 %*		*56-127*	"	"	"	"	
SB-25-5REP (E908094-08) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	**45**	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**200**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-25-5REP (E908094-08) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*101 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*99.2 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.5 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-21-5 (E908094-09) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	**69**	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	**1000**	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	**71**	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	**59**	22	"	"	"	"	"	"	
m,p-Xylene	**67**	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-21-5 (E908094-09) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89.1 %*		*56-127*	"	"	"	"	
SB-27-3 (E908094-10) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-27-3 (E908094-10) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*103 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*101 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.1 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-15-10 (E908094-11) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-15-10 (E908094-11) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92004	20-Aug-19	20-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*107 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.8 %*		*56-127*	"	"	"	"	
SB-15-5 (E908102-01) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	**160**	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-15-5 (E908102-01) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*103 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*101 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.8 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-12-10 (E908102-02) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	**24**	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-12-10 (E908102-02) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91.9 %*		*56-127*	"	"	"	"	
SB-12-5 (E908102-03) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	**50**	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	**22**	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**81**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-12-5 (E908102-03) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*114 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*95.5 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.3 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-7-10 (E908102-04) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-7-10 (E908102-04) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*99.8 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.1 %*		*56-127*	"	"	"	"	
SB-7-5 (E908102-05) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**190**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-7-5 (E908102-05) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*100 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.3 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-3-10 (E908102-06) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-3-10 (E908102-06) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*107 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*107 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*83.6 %*		*56-127*	"	"	"	"	
SB-3-5 (E908102-07) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	**30**	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	**34**	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**110**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-3-5 (E908102-07) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.9 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-3-5REP (E908102-08) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**170**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-3-5REP (E908102-08) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*98.8 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.6 %*		*56-127*	"	"	"	"	
SB-6-10 (E908102-09) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-6-10 (E908102-09) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*		*67-141*	*"*	*"*	*"*	*"*	
Surrogate: Toluene-d8		*95.6 %*		*75-125*	*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*83.0 %*		*56-127*	*"*	*"*	*"*	*"*	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-6-5 (E908102-10) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**140**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-6-5 (E908102-10) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*100 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82.5 %*		*56-127*	"	"	"	"	
SB-24-5 (E908102-11) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-24-5 (E908102-11) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92107	21-Aug-19	21-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*97.9 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*84.2 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-43-10 (E908106-01) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
1,1-Difluoroethane (LCC)	**45**	27	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	**260**	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	**21**	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-43-10 (E908106-01) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
o-Xylene	**29**	22	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*107 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*105 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.5 %*		*56-127*	"	"	"	"	
SB-43-5 (E908106-02) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
1,1-Difluoroethane (LCC)	**31**	27	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	ND	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-43-5 (E908106-02) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*93.3 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*86.0 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-18-10 (E908106-03) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
1,1-Difluoroethane (LCC)	**39**	27	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**290**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-18-10 (E908106-03) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*79.9 %*		*56-127*	"	"	"	"	
SB-18-5 (E908106-04) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
1,1-Difluoroethane (LCC)	**180**	27	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**310**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-18-5 (E908106-04) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
Trichloroethene	ND	27	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	
o-Xylene	ND	22	"	"	"	"	"	"	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*99.5 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82.9 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-18-5REP (E908106-05) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
1,1-Difluoroethane (LCC)	ND	27	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
Dichlorodifluoromethane (F12)	ND	50	"	"	"	"	"	"	
Chloromethane	ND	21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	71	"	"	"	"	"	"	
Vinyl chloride	ND	13	"	"	"	"	"	"	
Bromomethane	ND	39	"	"	"	"	"	"	
Chloroethane	ND	27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	35	"	"	"	"	"	"	
Carbon disulfide	ND	32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	41	"	"	"	"	"	"	
2-Butanone (MEK)	**220**	60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	40	"	"	"	"	"	"	
Chloroform	ND	25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	28	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	21	"	"	"	"	"	"	
Benzene	ND	16	"	"	"	"	"	"	
Carbon tetrachloride	ND	13	"	"	"	"	"	"	
Trichloroethene	ND	27	"	"	"	"	"	"	
1,2-Dichloropropane	ND	47	"	"	"	"	"	"	
Bromodichloromethane	ND	68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	41	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	46	"	"	"	"	"	"	
Toluene	ND	38	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	41	"	"	"	"	"	"	
Dibromochloromethane	ND	86	"	"	"	"	"	"	
Tetrachloroethene	ND	34	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
Chlorobenzene	ND	23	"	"	"	"	"	"	
Ethylbenzene	ND	22	"	"	"	"	"	"	
m,p-Xylene	ND	44	"	"	"	"	"	"	
Styrene	ND	43	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-18-5REP (E908106-05) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
o-Xylene	ND	22	ug/m3	1	EH92202	22-Aug-19	22-Aug-19	H&P TO-15	
Bromoform	ND	100	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	70	"	"	"	"	"	"	
4-Ethyltoluene	ND	50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	61	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	75	"	"	"	"	"	"	
Hexachlorobutadiene	ND	110	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*		*67-141*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*79.8 %*		*56-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92004 - TO-15										
Blank (EH92004-BLK1)				Prepared & Analyzed: 20-Aug-19						
1,1-Difluoroethane (LCC)	ND	27	ug/m3							
Dichlorodifluoromethane (F12)	ND	50	"							
Chloromethane	ND	21	"							
Dichlorotetrafluoroethane (F114)	ND	71	"							
Vinyl chloride	ND	13	"							
Bromomethane	ND	39	"							
Chloroethane	ND	27	"							
Trichlorofluoromethane (F11)	ND	56	"							
1,1-Dichloroethene	ND	20	"							
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"							
Methylene chloride (Dichloromethane)	ND	35	"							
Carbon disulfide	ND	32	"							
trans-1,2-Dichloroethene	ND	40	"							
1,1-Dichloroethane	ND	41	"							
2-Butanone (MEK)	ND	60	"							
cis-1,2-Dichloroethene	ND	40	"							
Chloroform	ND	25	"							
1,1,1-Trichloroethane	ND	28	"							
1,2-Dichloroethane (EDC)	ND	21	"							
Benzene	ND	16	"							
Carbon tetrachloride	ND	13	"							
Trichloroethene	ND	27	"							
1,2-Dichloropropane	ND	47	"							
Bromodichloromethane	ND	68	"							
cis-1,3-Dichloropropene	ND	46	"							
4-Methyl-2-pentanone (MIBK)	ND	41	"							
trans-1,3-Dichloropropene	ND	46	"							
Toluene	ND	38	"							
1,1,2-Trichloroethane	ND	55	"							
2-Hexanone (MBK)	ND	41	"							
Dibromochloromethane	ND	86	"							
Tetrachloroethene	ND	34	"							
1,2-Dibromoethane (EDB)	ND	39	"							
1,1,1,2-Tetrachloroethane	ND	70	"							

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92004 - TO-15										
Blank (EH92004-BLK1)				Prepared & Analyzed: 20-Aug-19						
Chlorobenzene	ND	23	ug/m3							
Ethylbenzene	ND	22	"							
m,p-Xylene	ND	44	"							
Styrene	ND	43	"							
o-Xylene	ND	22	"							
Bromoform	ND	100	"							
1,1,2,2-Tetrachloroethane	ND	70	"							
4-Ethyltoluene	ND	50	"							
1,3,5-Trimethylbenzene	ND	50	"							
1,2,4-Trimethylbenzene	ND	50	"							
1,3-Dichlorobenzene	ND	61	"							
1,4-Dichlorobenzene	ND	61	"							
1,2-Dichlorobenzene	ND	61	"							
1,2,4-Trichlorobenzene	ND	75	"							
Hexachlorobutadiene	ND	110	"							
Surrogate: 1,2-Dichloroethane-d4	*845*		*"*	*886*		*95.3*	*67-141*			
Surrogate: Toluene-d8	*830*		*"*	*864*		*96.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*1490*		*"*	*1540*		*97.0*	*56-127*			
LCS (EH92004-BS1)				Prepared & Analyzed: 20-Aug-19						
Dichlorodifluoromethane (F12)	270	50	ug/m3	250		109	65-135			
Vinyl chloride	130	13	"	130		101	65-135			
Chloroethane	160	27	"	134		122	65-135			
Trichlorofluoromethane (F11)	310	56	"	283		111	65-135			
1,1-Dichloroethene	190	20	"	202		94.6	65-135			
1,1,2-Trichlorotrifluoroethane (F113)	390	77	"	387		102	65-135			
Methylene chloride (Dichloromethane)	170	35	"	177		94.9	65-135			
trans-1,2-Dichloroethene	200	40	"	202		99.0	65-135			
1,1-Dichloroethane	200	41	"	206		99.1	65-135			
cis-1,2-Dichloroethene	180	40	"	202		87.4	65-135			
Chloroform	220	25	"	247		90.3	65-135			
1,1,1-Trichloroethane	270	28	"	276		98.0	65-135			
1,2-Dichloroethane (EDC)	210	21	"	206		100	65-135			

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92004 - TO-15										
LCS (EH92004-BS1)				Prepared & Analyzed: 20-Aug-19						
Benzene	130	16	ug/m3	162		80.8	65-135			
Carbon tetrachloride	330	13	"	320		103	65-135			
Trichloroethene	260	27	"	272		94.2	65-135			
Toluene	170	38	"	191		88.3	65-135			
1,1,2-Trichloroethane	290	55	"	276		105	65-135			
Tetrachloroethene	330	34	"	345		94.5	65-135			
1,1,1,2-Tetrachloroethane	330	70	"	349		93.5	65-135			
Ethylbenzene	240	22	"	220		107	65-135			
m,p-Xylene	460	44	"	440		105	65-135			
o-Xylene	250	22	"	220		114	65-135			
1,1,2,2-Tetrachloroethane	470	70	"	349		134	65-135			
Surrogate: 1,2-Dichloroethane-d4	*935*		*"*	*886*		*106*	*67-141*			
Surrogate: Toluene-d8	*718*		*"*	*864*		*83.1*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*1270*		*"*	*1540*		*82.5*	*56-127*			
Batch EH92107 - TO-15										
Blank (EH92107-BLK1)				Prepared & Analyzed: 21-Aug-19						
1,1-Difluoroethane (LCC)	ND	27	ug/m3							
Dichlorodifluoromethane (F12)	ND	50	"							
Chloromethane	ND	21	"							
Dichlorotetrafluoroethane (F114)	ND	71	"							
Vinyl chloride	ND	13	"							
Bromomethane	ND	39	"							
Chloroethane	ND	27	"							
Trichlorofluoromethane (F11)	ND	56	"							
1,1-Dichloroethene	ND	20	"							
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"							
Methylene chloride (Dichloromethane)	ND	35	"							
Carbon disulfide	ND	32	"							
trans-1,2-Dichloroethene	ND	40	"							
1,1-Dichloroethane	ND	41	"							
2-Butanone (MEK)	ND	60	"							

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92107 - TO-15										
Blank (EH92107-BLK1)				Prepared & Analyzed: 21-Aug-19						
cis-1,2-Dichloroethene	ND	40	ug/m3							
Chloroform	ND	25	"							
1,1,1-Trichloroethane	ND	28	"							
1,2-Dichloroethane (EDC)	ND	21	"							
Benzene	ND	16	"							
Carbon tetrachloride	ND	13	"							
Trichloroethene	ND	27	"							
1,2-Dichloropropane	ND	47	"							
Bromodichloromethane	ND	68	"							
cis-1,3-Dichloropropene	ND	46	"							
4-Methyl-2-pentanone (MIBK)	ND	41	"							
trans-1,3-Dichloropropene	ND	46	"							
Toluene	ND	38	"							
1,1,2-Trichloroethane	ND	55	"							
2-Hexanone (MBK)	ND	41	"							
Dibromochloromethane	ND	86	"							
Tetrachloroethene	ND	34	"							
1,2-Dibromoethane (EDB)	ND	39	"							
1,1,1,2-Tetrachloroethane	ND	70	"							
Chlorobenzene	ND	23	"							
Ethylbenzene	ND	22	"							
m,p-Xylene	ND	44	"							
Styrene	ND	43	"							
o-Xylene	ND	22	"							
Bromoform	ND	100	"							
1,1,2,2-Tetrachloroethane	ND	70	"							
4-Ethyltoluene	ND	50	"							
1,3,5-Trimethylbenzene	ND	50	"							
1,2,4-Trimethylbenzene	ND	50	"							
1,3-Dichlorobenzene	ND	61	"							
1,4-Dichlorobenzene	ND	61	"							
1,2-Dichlorobenzene	ND	61	"							
1,2,4-Trichlorobenzene	ND	75	"							
Hexachlorobutadiene	ND	110	"							

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92107 - TO-15										
Blank (EH92107-BLK1)				Prepared & Analyzed: 21-Aug-19						
Surrogate: 1,2-Dichloroethane-d4	*902*		*ug/m3*	*886*		*102*	*67-141*			
Surrogate: Toluene-d8	*821*		*"*	*864*		*95.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*1380*		*"*	*1540*		*89.8*	*56-127*			
LCS (EH92107-BS1)				Prepared & Analyzed: 21-Aug-19						
Dichlorodifluoromethane (F12)	240	50	ug/m3	250		95.5	65-135			
Vinyl chloride	100	13	"	130		80.2	65-135			
Chloroethane	130	27	"	134		98.9	65-135			
Trichlorofluoromethane (F11)	260	56	"	283		92.5	65-135			
1,1-Dichloroethene	150	20	"	202		72.5	65-135			
1,1,2-Trichlorotrifluoroethane (F113)	350	77	"	387		91.1	65-135			
Methylene chloride (Dichloromethane)	140	35	"	177		77.4	65-135			
trans-1,2-Dichloroethene	160	40	"	202		79.5	65-135			
1,1-Dichloroethane	150	41	"	206		71.6	65-135			
cis-1,2-Dichloroethene	160	40	"	202		80.8	65-135			
Chloroform	200	25	"	247		81.3	65-135			
1,1,1-Trichloroethane	230	28	"	276		83.6	65-135			
1,2-Dichloroethane (EDC)	160	21	"	206		76.8	65-135			
Benzene	110	16	"	162		68.4	65-135			
Carbon tetrachloride	220	13	"	320		70.0	65-135			
Trichloroethene	220	27	"	272		80.6	65-135			
Toluene	160	38	"	191		86.0	65-135			
1,1,2-Trichloroethane	260	55	"	276		93.7	65-135			
Tetrachloroethene	300	34	"	345		86.4	65-135			
1,1,1,2-Tetrachloroethane	330	70	"	349		95.4	65-135			
Ethylbenzene	140	22	"	220		64.4	65-135			QL-1L
m,p-Xylene	290	44	"	440		66.3	65-135			
o-Xylene	160	22	"	220		72.3	65-135			
1,1,2,2-Tetrachloroethane	310	70	"	349		87.7	65-135			
Surrogate: 1,2-Dichloroethane-d4	*917*		*"*	*886*		*104*	*67-141*			
Surrogate: Toluene-d8	*809*		*"*	*864*		*93.6*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*1260*		*"*	*1540*		*82.1*	*56-127*			

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92107 - TO-15										
Batch EH92202 - TO-15										
Blank (EH92202-BLK1)				Prepared & Analyzed: 22-Aug-19						
1,1-Difluoroethane (LCC)	ND	27	ug/m3							
Dichlorodifluoromethane (F12)	ND	50	"							
Chloromethane	ND	21	"							
Dichlorotetrafluoroethane (F114)	ND	71	"							
Vinyl chloride	ND	13	"							
Bromomethane	ND	39	"							
Chloroethane	ND	27	"							
Trichlorofluoromethane (F11)	ND	56	"							
1,1-Dichloroethene	ND	20	"							
1,1,2-Trichlorotrifluoroethane (F113)	ND	77	"							
Methylene chloride (Dichloromethane)	ND	35	"							
Carbon disulfide	ND	32	"							
trans-1,2-Dichloroethene	ND	40	"							
1,1-Dichloroethane	ND	41	"							
2-Butanone (MEK)	ND	60	"							
cis-1,2-Dichloroethene	ND	40	"							
Chloroform	ND	25	"							
1,1,1-Trichloroethane	ND	28	"							
1,2-Dichloroethane (EDC)	ND	21	"							
Benzene	ND	16	"							
Carbon tetrachloride	ND	13	"							
Trichloroethene	ND	27	"							
1,2-Dichloropropane	ND	47	"							
Bromodichloromethane	ND	68	"							
cis-1,3-Dichloropropene	ND	46	"							
4-Methyl-2-pentanone (MIBK)	ND	41	"							
trans-1,3-Dichloropropene	ND	46	"							
Toluene	ND	38	"							
1,1,2-Trichloroethane	ND	55	"							
2-Hexanone (MBK)	ND	41	"							
Dibromochloromethane	ND	86	"							
Tetrachloroethene	ND	34	"							

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92202 - TO-15										
Blank (EH92202-BLK1)				Prepared & Analyzed: 22-Aug-19						
1,2-Dibromoethane (EDB)	ND	39	ug/m3							
1,1,1,2-Tetrachloroethane	ND	70	"							
Chlorobenzene	ND	23	"							
Ethylbenzene	ND	22	"							
m,p-Xylene	ND	44	"							
Styrene	ND	43	"							
o-Xylene	ND	22	"							
Bromoform	ND	100	"							
1,1,2,2-Tetrachloroethane	ND	70	"							
4-Ethyltoluene	ND	50	"							
1,3,5-Trimethylbenzene	ND	50	"							
1,2,4-Trimethylbenzene	ND	50	"							
1,3-Dichlorobenzene	ND	61	"							
1,4-Dichlorobenzene	ND	61	"							
1,2-Dichlorobenzene	ND	61	"							
1,2,4-Trichlorobenzene	ND	75	"							
Hexachlorobutadiene	ND	110	"							
Surrogate: 1,2-Dichloroethane-d4	*898*		*"*	*886*		*101*	*67-141*			
Surrogate: Toluene-d8	*846*		*"*	*864*		*97.9*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*1410*		*"*	*1540*		*91.6*	*56-127*			
LCS (EH92202-BS1)				Prepared & Analyzed: 22-Aug-19						
Dichlorodifluoromethane (F12)	240	50	ug/m3	250		95.4	65-135			
Vinyl chloride	110	13	"	130		82.5	65-135			
Chloroethane	130	27	"	134		95.3	65-135			
Trichlorofluoromethane (F11)	290	56	"	283		102	65-135			
1,1-Dichloroethene	140	20	"	202		71.6	65-135			
1,1,2-Trichlorotrifluoroethane (F113)	360	77	"	387		92.0	65-135			
Methylene chloride (Dichloromethane)	170	35	"	177		94.5	65-135			
trans-1,2-Dichloroethene	180	40	"	202		88.8	65-135			
1,1-Dichloroethane	180	41	"	206		88.0	65-135			
cis-1,2-Dichloroethene	160	40	"	202		78.2	65-135			
Chloroform	230	25	"	247		94.8	65-135			

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Volatile Organic Compounds by H&P Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92202 - TO-15										
LCS (EH92202-BS1)				Prepared & Analyzed: 22-Aug-19						
1,1,1-Trichloroethane	250	28	ug/m3	276		88.9	65-135			
1,2-Dichloroethane (EDC)	190	21	"	206		90.7	65-135			
Benzene	130	16	"	162		79.7	65-135			
Carbon tetrachloride	310	13	"	320		96.8	65-135			
Trichloroethene	270	27	"	272		100	65-135			
Toluene	160	38	"	191		85.2	65-135			
1,1,2-Trichloroethane	280	55	"	276		102	65-135			
Tetrachloroethene	300	34	"	345		87.3	65-135			
1,1,1,2-Tetrachloroethane	320	70	"	349		92.5	65-135			
Ethylbenzene	190	22	"	220		85.0	65-135			
m,p-Xylene	370	44	"	440		83.0	65-135			
o-Xylene	190	22	"	220		86.6	65-135			
1,1,2,2-Tetrachloroethane	410	70	"	349		117	65-135			
Surrogate: 1,2-Dichloroethane-d4	*923*		*"*	*886*		*104*	*67-141*			
Surrogate: Toluene-d8	*760*		*"*	*864*		*88.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*1270*		*"*	*1540*		*82.4*	*56-127*			

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082019-A2	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 09:52

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate(s).
QL-1L	The LCS and/or LCSD recoveries fell below the established control specifications for this analyte. Any result for this compound is qualified and should be considered biased low.
LCC	Leak Check Compound
ND	Analyte NOT DETECTED at or above the reporting limit
MDL	Method Detection Limit
%REC	Percent Recovery
RPD	Relative Percent Difference

All soil results are reported in wet weight.

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs through PJLA, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743 & 2745.

H&P is approved by the State of Louisiana Department of Environmental Quality under the National Environmental Laboratory Accreditation Conference (NELAC) certification number 04138

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8/20/19
Page 1 of 2

Lab Client and Project Information

Lab Client/Consultant: Roux Associates, Inc	Project Name / #: 3370.0001L000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N. Pacific PL, Long Beach, CA
Lab Client Address: 5150 E. Pacific Coast Hwy Ste 450	Report E-Mail(s): pshimer@rouxinc.com
Lab Client City, State, Zip: Long Beach, CA	
Phone Number: 310-879-4900	

Sample Receipt (Lab Use Only)

Date Rec'd: 8/20/19	Control #: 190727.00/01
H&P Project #: RX08/2019-A2	
Lab Work Order #: E908094	
Sample Intact: ☐ Yes ☐ No ☐ See Notes Below	
Receipt Gauge ID:	Temp:
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials:	

Reporting Requirements

☒ Standard Report ☐ Level III ☐ Level IV
☒ Excel EDD ☐ Other EDD: _____
☐ CA Geotracker Global ID: _____

Turnaround Time

☒ **Standard** (7 days for preliminary report, 10 days for final report)
☐ **Rush** (specify): _____

Sampler Information

Sampler(s): Mike Hennford
Signature:
Date: 8/20/19

Additional Instructions to Laboratory:

** Preferred VOC units (please choose one):*
☐ µg/L ☒ µg/m³ ☐ ppbv ☐ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☒ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☒ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-35-10		8/20/19	0803	SV	Glass syringe			X						X						
SB-35-5		8/20/19	0833	SV				X						X						
SB-32-10		8/20/19	0859	SV				X						X						
SB-32-5		8/20/19	0923	SV				X						X						
SB-36-5		8/20/19	0956	SV				X						X						
SB-29-3		8/20/19	1105	SV				X						X						
SB-25-5		8/20/19	1138	SV				X						X						
SB-25-5 Rep		8/20/19	1240	SV				X						X						
SB-21-5		8/20/19	1310	SV				X						X						
SB-27-3		8/20/19	1343	SV																

Approved/Relinquished by:	Company: Roux	Date: 8/20/19	Time: 1514	Received by:	Company: H&P	Date: 8/20/19	Time: 1514
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

**Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back*

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8/20/19
Page 2 of 2

Lab Client and Project Information

Lab Client/Consultant: Roux Associates, INC	Project Name / #: 3370.0001L.000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N. PACIFIC PL. Long Beach, CA
Lab Client Address: 5150 E. PCH ste 450	Report E-Mail(s): pshimer@rouxinc.com
Lab Client City, State, Zip: Long Beach, CA	
Phone Number: 310-879-4900	

Sample Receipt (Lab Use Only)

Date Rec'd: 8/20/19	Control #: 190727.00/01
H&P Project # RX082019-A2	
Lab Work Order # E908094	
Sample Intact: ☐ Yes ☐ No ☐ See Notes Below	
Receipt Gauge ID:	Temp:
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials:	

Reporting Requirements

- ☒ Standard Report ☐ Level III ☐ Level IV
- ☒ Excel EDD ☐ Other EDD:_____
- ☐ CA Geotracker Global ID:_____

Turnaround Time

- ☒ **Standard** (7 days for preliminary report, 10 days for final report)
- ☐ **Rush** (specify):_____

Sampler Information

Sampler(s): Mike Herrifard
Signature:
Date: 8/20/19

Additional Instructions to Laboratory:

** Preferred VOC units (please choose one):*
☐ µg/L ☒ µg/m³ ☐ ppbv ☐ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☒ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☒ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-15-10		8/20/19	1415	SV	Glass syringe			X						X						

Approved/Relinquished by: Thomas Mendler	Company: Roux	Date: 8/20/19	Time: 1514	Received by:	Company:	Date: 8/20/19	Time: 15:14
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

**Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back*

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8/21/19
Page 1 of 2

Lab Client and Project Information

Lab Client/Consultant: Roux Associates, Inc.	Project Name / #: 3370.00011.000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N. Pacific Pl, Long Beach, CA
Lab Client Address: 5150 E. Pacific Coast Hwy. Suite 450	Report E-Mail(s): pshimer@rouxinc.com
Lab Client City, State, Zip: Long Beach, CA. 90804	
Phone Number: (310) 879-4900	

Reporting Requirements

- [x] Standard Report ☐ Level III ☐ Level IV
- [x] Excel EDD ☐ Other EDD:
- ☐ CA Geotracker Global ID:

Turnaround Time

- ☐ **Standard** (7 days for preliminary report, 10 days for final report)
- ☐ **Rush** (specify):

Sampler Information

Sampler(s): Bobby Stewart
Signature:
Date: 8/21/2019

Sample Receipt (Lab Use Only)

Date Rec'd: 8/21/19 Control #: 190727.00/01
H&P Project # RX082019-A2
Lab Work Order # E908102
Sample Intact: ☐ Yes ☐ No ☐ See Notes Below
Receipt Gauge ID: Temp:
Outside Lab:
Receipt Notes/Tracking #:
Lab PM Initials:

Additional Instructions to Laboratory:

* *Preferred VOC units (please choose one):*
☐ µg/L [x] µg/m³ ☐ ppbv ☐ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List [x] 8260SV [x] TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound [x] DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-15-5		8/21/19	0837	SV	Glass Syringe			x						x							
SB-12-10		8/21/19	0927	SV	↓			x						x							
SB-12-5		8/21/19	0953	SV				x						x							
SB-7-10		8/21/19	1042	SV				x						x							
SB-7-5		8/21/19	1107	SV				x						x							
SB-3-10		8/21/19	1157	SV				x						x							
SB-3-5		8/21/19	1213	SV				x						x							
SB-3-5 Rep		8/21/19	1243	SV				x						x							
SB-6-10		8/21/19	1345	SV				x						x							
SB-6-5		8/21/19	1406	SV	↓			x						x							

Approved/Relinquished by:	Company: Roux	Date: 8/21/19	Time: 1523	Received by:	Company: H&P	Date: 8/21/19	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

*Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back

Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8/21/19
Page 2 of 2

Lab Client and Project Information

Lab Client/Consultant: Roux Associates INC	Project Name / #: 3370.0001L000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N. Pacific PL. Long Beach, CA
Lab Client Address: 5150 E PCH Ste 450	Report E-Mail(s): pshimer@rouxinc.com
Lab Client City, State, Zip: Long Beach, CA	
Phone Number: 310-879-4900	

Sample Receipt (Lab Use Only)

Date Rec'd: 8/21/19	Control #: 190727.00/01
H&P Project # RX082019-A2	
Lab Work Order # E908102	
Sample Intact: ☐ Yes ☐ No ☐ See Notes Below	
Receipt Gauge ID:	Temp:
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials:	

Reporting Requirements

- ☒ Standard Report ☐ Level III ☐ Level IV
- ☒ Excel EDD ☐ Other EDD: _____
- ☐ CA Geotracker Global ID: _____

Turnaround Time

- ☒ **Standard** (7 days for preliminary report, 10 days for final report)
- ☐ **Rush** (specify): _____

Sampler Information

Sampler(s): Bobby Stangl
Signature:
Date: 8/21/19

Additional Instructions to Laboratory:

* *Preferred VOC units (please choose one):*
☐ µg/L ☐ µg/m³ ☐ ppbv ☐ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☒ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☒ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-24-5		8/21/19	1451	SV	Glass syringe			X						X						

Approved/Relinquished by: Thomas Young	Company: Roux	Date: 8/21/19	Time: 1523	Received by:	Company: H&P	Date: 8/21/19	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

*Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8/22/19
Page 1 of 1

Lab Client and Project Information

Lab Client/Consultant: Roux Associates, INC	Project Name / #: 3370.0001L000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N. Pacific PL. Long Beach, CA
Lab Client Address: 5150 E. PCH ste 450	Report E-Mail(s): pshimer@rouxinc.com
Lab Client City, State, Zip: Long Beach, CA 90804	
Phone Number: 310-879-4900	

Reporting Requirements

- [x] Standard Report ☐ Level III ☐ Level IV
- [x] Excel EDD ☐ Other EDD:
- ☐ CA Geotracker Global ID:

Turnaround Time

- [x] **Standard** (7 days for preliminary report, 10 days for final report)
- ☐ **Rush** (specify):

Sampler Information

Sampler(s): Bobby Stang
Signature:
Date: 8/22/19

Sample Receipt (Lab Use Only)

Date Rec'd: 8/22/19	Control #: 190727.00/01
H&P Project # RX082019-AZ	
Lab Work Order # E908106	

Sample Intact: ☐ Yes ☐ No ☐ See Notes Below

Receipt Gauge ID: | Temp:

Outside Lab:

Receipt Notes/Tracking #:

Lab PM Initials:

Additional Instructions to Laboratory:

** Preferred VOC units (please choose one):*
☐ µg/L [x] µg/m³ ☐ ppbv ☐ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV [x] TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound [x] DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-43-10		8/22/19	0747	SV	Glass syringe			x						x						
SB-43-5		8/22/19	0809	SV	↓			x						x						
SB-18-10		8/22/19	0920	SV				x						x						
SB-18-5		8/22/19	0940	SV				x						x						
SB-18-5 Rep		8/22/19	1003	SV	↓			x						x						

Approved/Relinquished by: Thomas Yelman	Company: Roux	Date: 8/22/19	Time: 1044	Received by:	Company: H&P	Date: 8/22/19	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

**Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back*

Mobile Geochemistry Inc.

FMS004
Revision: 4
Revised: 3/22/2017
Effective: 3/2[illegible]/2017
Page 1 of 1

Log Sheet: Soil Vapor Sampling with Syringe

3 - 7:55
5 - 8:04
10 - 8:25

H&P Project #: RX082019 - A2 / Tech
Date: 8/20/19
Site Address: 3701 North Pacific Place
Page: 1 of 2
Consultant: Roux Associates
H&P Rep(s): M. Herriford
Reviewed: EC
Consultant Rep(s): Thomas Warfel & Peter Shimer
Scanned: TTorres

Equipment Info
Inline Gauge ID#:
Pump ID#: 007

Purge Volume Information
PV Amount: 3 PV
PV Includes: ☑ Tubing ☑ Sand 40% ☑ Dry Bent 50%

Leak Check Compound
A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.
☑ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:

Resample Key
RS = Resample
RD = for Dilution
RL = for LCC Fail

	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☐ Hg ☒ H_2O	Probe Pressure
1	SB-35 - 10	21	50	8:03	10	11	1/4	12	2.25	6	2.25	✓	✓	1684 ✓	200	8:25	<200	0	0
2	SB-35 - 5	297	50	8:33	5	6	1/4	12	2.25	6	2.25	✓	✓	1612 ✓	200	8:04	<200	0	0
3	SB-32 - 10	266	50	8:59	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0
4	SB-32 - 5	296	50	9:23	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0
5	SB-36 - 5	238	50	9:56	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0
6	SB-29-3	297	50	10:27	3	4	1/4	12	2.25	6	2.25	✓	✓	1583	200	7:55	<200	0	0
7	SB-25-5	21	50	11:38	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0
8	SB-25-5 Rep	297	50	1206	5	6	1/4	12	2.25	6	2.25	✓	✓	1662 ✓	200	~~8:04~~	<200	0	0
9	SB-21-5	~~266~~ 256 MH	50	1310	5	6	1/4	12	2.25	6	2.25	✓	✓	1612 ✓	200	8:04	<200	0	0
10	SB-29-3 RL	296	50	1105	3	4	1/4	12	2.25	6	2.25	✓	✓	~~1712~~ 1633 MH ✓	200	~~7:55~~	<200	0	0
11	SB-25-5 Rep RS	238	50	1240	5	6	1/4	12	2.25	6	2.25	✓	✓	1712	200	~~8:04~~	<200	0	0
12	SB-27-3	297	50	1343	3	4	1/4	12	2.25	6	2.25	✓	✓	1583	200	7:55	<200	0	0

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

Mobile Geochemistry Inc.

FMS004
Revision: 4
Revised: 3/22/2017
Effective: 3/24/2017
Page 1 of 1

Log Sheet: Soil Vapor Sampling with Syringe

H&P Project #: Rx 082019 - A2 Tech
Date: 8/20/19
Site Address: 3701 North Pacific Place
Page: 2 of 2
Consultant: Roux Associates
H&P Rep(s): M Herrfeld
Reviewed: EC
Consultant Rep(s): Thomas Warfel & Peter Skinner
Scanned: TTorres

Equipment Info
Inline Gauge ID#:
Pump ID#: 007

Purge Volume Information
PV Amount:
PV Includes: ☒ Tubing ☒ Sand 40% ☒ Dry Bent 50%

Leak Check Compound
A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.
☒ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:

Resample Key
RS = Resample
RD = for Dilution
RL = for LCC Fail

	Sample Information				Probe Specs							Purge & Collection Information							
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☐ Hg ☒ H_2O	Probe pressure
1	SB-15-10	296	50	1415	5	6	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0
2	~~SB-15-5~~		~~50~~				~~1/4~~	~~12~~	~~2.25~~	~~6~~	~~2.25~~								~~0~~
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

H&P Mobile Geochemistry Inc.

Log Sheet: Soil Vapor Sampling with Syringe

H&P Project #: RX082019-AZ Date: 8/21/19

Site Address: 3701 N Pacific Pl Page: 1 of 2

Consultant: Roux Associates H&P Rep(s): B. Stengl M. Gregg

Consultant Rep(s): Thomas Warfel M. Montemayor

Reviewed: EC

Scanned: TTorres

Equipment Info	Purge Volume Information	Leak Check Compound	Resample Key:
Inline Gauge ID#: T07 Pump ID#: 036	PV Amount: 3PV PV Includes: ☑ Tubing ☑ Sand 40% ☑ Dry Bent 50%	*A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.* ☑ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:	*RS = Resample* *RD = for Dilution* *RL = lor LCC fail*

	Sample Information				Probe Specs							Purge & Collection Information							
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☐ Hg ☑ H_2O	Probe IN Press WC
1	SB-15-5	21	50	837	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	-0.11
2	SB-15-5	Tedlar	400	937	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
3	SB-12-10	296	50	927	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.09
4	SB-12-10	Tedlar	400	1004	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	0	
5	SB-12-5	238	50	953	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
6	SB-12-5	Tedlar	400	1022	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
7	SB-7-10	297	50	1042	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.00
8	SB-7-10	Tedlar	400	1112	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	0	
9	SB-7-5	21	50	1107	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
10	SB-7-5	Tedlar	400	1135	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
11	SB-3-10	296	50	1151	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.00
12	SB-3-10	Tedlar	400	1320	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	0	

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

H&P Mobile Geochemistry Inc.

Log Sheet: Soil Vapor Sampling with Syringe

H&P Project #: RX082019-A2 Date: 8/22/19

Site Address: 3701 N Pacific Pl Page: 1 of 1

Consultant: Roux Associates H&P Rep(s): B. Stengl M. Gregg

Consultant Rep(s): Thomas Warfel M. Montemayor

Reviewed: EC

Scanned: T Torres

Equipment Info
Inline Gauge ID#: T07
Pump ID#: 036

Purge Volume Information
PV Amount: 3PV PV Includes: ☑ Tubing ☑ Sand 40% ☑ Dry Bent 50%

Leak Check Compound ☐ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:
A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.

Resample Key:
RS = Resample
RD = for Dilution
RL = lor LCC fail

	Sample Information				Probe Specs							Purge & Collection Information							
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☐ Hg ☑ H_2O	PICS INW
1	SB-43-10	256	50	747	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	10	0.00
2	SB-43-10	Tedlar	400	820	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	10	
3	SB-43-5	238	50	809	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
4	SB-43-5	Tedlar	400	834	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
5	SB-18-10	296	50	853	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.00
6	SB-18-10 RL	297	50	920	10	11	1/4	12	2.25	6	2.25	✓	✓	1734 (45)	200	—	<200	0	
7	SB-18-10	Tedlar	400	955	10	11	1/4	12	2.25	6	2.25	✓		1784 (95)	—	—	<200	0	
8	SB-18-5	21	50	~~1003~~ 940	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
9	SB-18-5	Tedlar	400	1029	5	6	1/4	12	2.25	6	2.25	✓		1717	—	—	<200	0	
10	SB-18-5 REP	256	50	1003	5	6	1/4	12	2.25	6	2.25	✓	✓	1662	200	—	<200	0	
11	SB-18-5 REP	Tedlar	400	~~1003~~ 1039	5	6	1/4	12	2.25	6	2.25	✓		2112	—	—	<200	0	
12																			

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

H&P Mobile Geochemistry Inc.

Log Sheet: Soil Vapor Sampling with Syringe

H&P Project #: RX082019-AZ
Date: 8/21/19
Site Address: 3701 N Pacific Pl
Page: 2 of 2
Consultant: Roux Associates
H&P Rep(s): B. Steingl M. Gregg
Reviewed: EC
Consultant Rep(s): Thomas Warfel M. Montemayor
Scanned: TTorres

Equipment Info
Inline Gauge ID#: T07
Pump ID#: 036

Purge Volume Information
PV Amount: 3PV PV Includes: ☑ Tubing ☑ Sand 40% ☑ Dry Bent 50%

Leak Check Compound ☑ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:
A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.

Resample Key:
RS = Resample
RD = for Dilution
RL = lor LCC fail

	Sample Information				Probe Specs							Purge & Collection Information							
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☐ Hg ☑ H_2O	Probe TW RPDS WC
1	SB-3-5	238	50	1213	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
2	SB-3-5	Tedlar	400	1325	5	6	1/4	12	2.25	6	2.25	✓		1712	—	—	<200	0	
3	SB-3-5 REP	256	50	1243	5	6	1/4	12	2.25	6	2.25	✓	✓	1662	200 RS	—	<200	0	
4	SB-3-5 REP	Tedlar	400	1328	5	6	1/4	12	2.25	6	2.25	✓		2112	—	—	<200	0	
5	SB-6-10	247	50	1345	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.00
6	SB-6-10	Tedlar	400	1413	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	0	
7	SB-6-5	21	50	1406	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
8	SB-6-5	Tedlar	400	1429	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
9	SB-24-5	238	50	1451	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:25	<200	0	0.00
10	SB-24-5	Tedlar	400	1515	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
11												✓	✓						
12												✓							

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

H&P Mobile Geochemistry Inc.

29 August 2019

Peter Shimer
Roux Associates, Inc.
5150 E. Pacific Coast Highway, Ste. 450
Long Beach, CA 90804

H&P Project: RX082119-12
Client Project: 3370.0001L000 / N Pacific Pl

Dear Peter Shimer:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 8/20/2019 -8/22/2019 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Janis La Roux
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC). H&P is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082119-12	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 10:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-35-10	E908107-01	Vapor	20-Aug-19	20-Aug-19
SB-35-5	E908107-02	Vapor	20-Aug-19	20-Aug-19
SB-32-10	E908107-03	Vapor	20-Aug-19	20-Aug-19
SB-32-5	E908107-04	Vapor	20-Aug-19	20-Aug-19
SB-36-5	E908107-05	Vapor	20-Aug-19	20-Aug-19
SB-29-3	E908107-06	Vapor	20-Aug-19	20-Aug-19
SB-25-5	E908107-07	Vapor	20-Aug-19	20-Aug-19
SB-27-3	E908107-09	Vapor	20-Aug-19	20-Aug-19
SB-15-10	E908107-10	Vapor	20-Aug-19	20-Aug-19
SB-15-5	E908113-01	Vapor	21-Aug-19	21-Aug-19
SB-12-10	E908113-02	Vapor	21-Aug-19	21-Aug-19
SB-12-5	E908113-03	Vapor	21-Aug-19	21-Aug-19
SB-7-10	E908113-04	Vapor	21-Aug-19	21-Aug-19
SB-7-5	E908113-05	Vapor	21-Aug-19	21-Aug-19
SB-3-10	E908113-06	Vapor	21-Aug-19	21-Aug-19
SB-3-5	E908113-07	Vapor	21-Aug-19	21-Aug-19
SB-3-5 REP	E908113-08	Vapor	21-Aug-19	21-Aug-19
SB-6-10	E908113-09	Vapor	21-Aug-19	21-Aug-19
SB-6-5	E908113-10	Vapor	21-Aug-19	21-Aug-19
SB-24-5	E908113-11	Vapor	21-Aug-19	21-Aug-19
SB-43-10	E908114-01	Vapor	22-Aug-19	22-Aug-19
SB-43-5	E908114-02	Vapor	22-Aug-19	22-Aug-19
SB-18-10	E908114-03	Vapor	22-Aug-19	22-Aug-19
SB-18-5	E908114-04	Vapor	22-Aug-19	22-Aug-19
SB-18-5 REP	E908114-05	Vapor	22-Aug-19	22-Aug-19

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082119-12	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 10:04

Soil Vapor/Air Analysis by EPA 8015M

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-35-10 (E908107-01) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	ND	10	ppmv	1	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	
SB-35-5 (E908107-02) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	ND	10	ppmv	1	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	
SB-32-10 (E908107-03) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	ND	10	ppmv	1	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	
SB-32-5 (E908107-04) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	ND	10	ppmv	1	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	
SB-36-5 (E908107-05) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	ND	10	ppmv	1	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	
SB-29-3 (E908107-06) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	**34**	10	ppmv	1	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	
SB-25-5 (E908107-07) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	ND	10	ppmv	1	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	
SB-27-3 (E908107-09) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	**1400**	20	ppmv	2	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	
SB-15-10 (E908107-10) Vapor Sampled: 20-Aug-19 Received: 20-Aug-19									
Methane	**190**	10	ppmv	1	EH92206	22-Aug-19	22-Aug-19	EPA 8015M	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082119-12	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 10:04

Soil Vapor/Air Analysis by EPA 8015M

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-15-5 (E908113-01) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	ND	10	ppmv	1	EH92304	23-Aug-19	23-Aug-19	EPA 8015M	
SB-12-10 (E908113-02) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	**40000**	100	ppmv	10	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-12-5 (E908113-03) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	**650**	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-7-10 (E908113-04) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	**38**	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-7-5 (E908113-05) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	ND	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-3-10 (E908113-06) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	**60**	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-3-5 (E908113-07) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	ND	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-3-5 REP (E908113-08) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	ND	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-6-10 (E908113-09) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	ND	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082119-12	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 10:04

Soil Vapor/Air Analysis by EPA 8015M

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SB-6-5 (E908113-10) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	ND	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-24-5 (E908113-11) Vapor Sampled: 21-Aug-19 Received: 21-Aug-19									
Methane	**14**	10	ppmv	1	EH92305	23-Aug-19	23-Aug-19	EPA 8015M	
SB-43-10 (E908114-01) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
Methane	**12**	10	ppmv	1	EH92304	23-Aug-19	23-Aug-19	EPA 8015M	
SB-43-5 (E908114-02) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
Methane	ND	10	ppmv	1	EH92304	23-Aug-19	23-Aug-19	EPA 8015M	
SB-18-10 (E908114-03) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
Methane	ND	10	ppmv	1	EH92304	23-Aug-19	23-Aug-19	EPA 8015M	
SB-18-5 (E908114-04) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
Methane	ND	10	ppmv	1	EH92304	23-Aug-19	23-Aug-19	EPA 8015M	
SB-18-5 REP (E908114-05) Vapor Sampled: 22-Aug-19 Received: 22-Aug-19									
Methane	ND	10	ppmv	1	EH92304	23-Aug-19	23-Aug-19	EPA 8015M	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082119-12	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 10:04

Soil Vapor/Air Analysis by EPA 8015M - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH92206 - GC										
Blank (EH92206-BLK1)				Prepared & Analyzed: 22-Aug-19						
Methane	ND	10	ppmv							
Batch EH92304 - GC										
Blank (EH92304-BLK1)				Prepared & Analyzed: 23-Aug-19						
Methane	ND	10	ppmv							
Batch EH92305 - GC										
Blank (EH92305-BLK1)				Prepared & Analyzed: 23-Aug-19						
Methane	ND	10	ppmv							

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Roux Associates, Inc.	Project: RX082119-12	
5150 E. Pacific Coast Highway, Ste. 450	Project Number: 3370.0001L000 / N Pacific Pl	Reported:
Long Beach, CA 90804	Project Manager: Peter Shimer	29-Aug-19 10:04

Notes and Definitions

LCC	Leak Check Compound
ND	Analyte NOT DETECTED at or above the reporting limit
MDL	Method Detection Limit
%REC	Percent Recovery
RPD	Relative Percent Difference

All soil results are reported in wet weight.

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs through PJLA, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743 & 2745.

H&P is approved by the State of Louisiana Department of Environmental Quality under the National Environmental Laboratory Accreditation Conference (NELAC) certification number 04138.

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8/20/19
Page 1 of 1

Lab Client and Project Information

Lab Client/Consultant: Roux Associates Inc	Project Name / #: 3370.0001L000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N. Pacific Place Long Beach, CA
Lab Client Address: 5150 E. Pacific Coast Hwy #450	Report E-Mail(s): pshimer@rouxinc.com
Lab Client City, State, Zip: Long Beach, CA	
Phone Number: 310-879-4900	

Sample Receipt (Lab Use Only)

Date Rec'd: 8/20/19	Control #: 190727.~~05~~02
H&P Project #	RX082019-~~02~~12
Lab Work Order #	908107
Sample Intact: ☒ Yes ☐ No ☐ See Notes Below	
Receipt Gauge ID:	Temp: RT
Outside Lab:	
Receipt Notes/Tracking #: SB-21-5 ⇒ No sample YSE 8/23/19	
	Lab PM Initials: VA

Reporting Requirements

☒ Standard Report ☐ Level III ☐ Level IV
☒ Excel EDD ☐ Other EDD: _____
☐ CA Geotracker Global ID: _____

Turnaround Time

☒ **Standard** (7 days for preliminary report, 10 days for final report)
☐ **Rush** (specify): _____

Sampler Information

Sampler(s): Mike Hernifod
Signature:
Date: 8/20/19

Additional Instructions to Laboratory:

* *Preferred VOC units (please choose one):*
☐ µg/L ☒ ~~µg/m³~~ µg/m³ ☐ ppbv ☒ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☐ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☐ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-35-10		8/20/19	0840	SV	Tedlar Bag										X					
SB-35-5			0901												X					
SB-32-10			0928												X					
SB-32-5			1000												X					
SB-36-5			1030												X					
SB-29-3			1133												X					
SB-25-5			1317												X					
SB-21-5			1350												~~X~~	YSE 8/23/19				
SB-27-3			1420												X					
SB-15-10			1443												X					

Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
x Shimer	ROUX	8/20/19	1514		H&P	8/20/19	1514
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

*Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8-21-19
Page 1 of 2

Lab Client and Project Information

Lab Client/Consultant: Roux Associates, Inc.	Project Name / #: 3370.000/L000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N Pacific Pl
Lab Client Address: 5150 E Pacific Coast Hwy Suite 450	Report E-Mail(s): pshimer@roxinc.com
Lab Client City, State, Zip: Long Beach CA 90804	
Phone Number: (310) 879-4900	

Sample Receipt (Lab Use Only)

Date Rec'd: 8-21-19	Control #: 190727-03
H&P Project # RX082019-ADD	
Lab Work Order # RX082319-1D	
Sample Intact: ☐ Yes ☐ No ☐ See Notes Below	
Receipt Gauge ID:	Temp:
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials: NA	

E 90.8/13

Reporting Requirements	Turnaround Time	Sampler Information
☒ Standard Report ☐ Level III ☐ Level IV	☒ **Standard** (7 days for preliminary report, 10 days for final report)	Sampler(s): Bobby Frank
☐ Excel EDD ☐ Other EDD:	☐ **Rush** (specify):	Signature:
☐ CA Geotracker Global ID:		Date: 8-21-19

Additional Instructions to Laboratory:

** Preferred VOC units (please choose one):*
☐ µg/L ☐ µg/m³ ☐ ppbv ☒ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☐ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☐ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-15-5		08/21/19	937	SV	Tedlar										X					
SB-12-10		"	1004	"	"										X					
SB-12-5			1022												X					
SB-7-10			1112												X					
SB-7-5			1135												X					
SB-3-10			1320												X					
SB-3-5			1325												X					
SB-3-5REP			1328												X					
SB-6-10			1413												X					
SB-6-5			1429												X					

Approved/Relinquished by: Thomas Mann	Company: Roux	Date: 8/21/19	Time: 1038	Received by:	Company: H&P	Date: 8-21-19	Time: 15:30
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

**Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back*

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8-21-19
Page 2 of 2

RX082319-TD

Lab Client and Project Information

Lab Client/Consultant: Roux Associates, Inc	Project Name / #: 3370.000/L000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N Pacific Pl
Lab Client Address: 5150 E Pacific coast hwy suite 450	Report E-Mail(s): PShimer@RouxInc.com
Lab Client City, State, Zip: Long Beach CA 90804	
Phone Number: (310) 879-4900	

Sample Receipt (Lab Use Only)

Date Rec'd: 8-21-19	Control #: 190727-2
H&P Project # RX082019-A2	
Lab Work Order # E908113	
Sample Intact: ☐ Yes ☐ No ☐ See Notes Below	
Receipt Gauge ID:	Temp:
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials: NA	

Reporting Requirements

☒ Standard Report ☐ Level III ☐ Level IV
☐ Excel EDD ☐ Other EDD:
☐ CA Geotracker Global ID:

Turnaround Time

☒ **Standard** (7 days for preliminary report, 10 days for final report)
☐ **Rush** (specify):

Sampler Information

Sampler(s): Bobby Stangl
Signature:
Date: 8-21-19

Additional Instructions to Laboratory:

** Preferred VOC units (please choose one):*
☐ µg/L ☐ µg/m³ ☐ ppbv ☒ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☐ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☐ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-24-5		08/21/19	1515	SV	Tedlar										X					

Approved/Relinquished by: Thomas Uhlig	Company: Roux	Date: 8/21/19	Time: 1039	Received by:	Company: H&P	Date: 8-21-19	Time: 15:30
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

**Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back*

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 8-22-19
Page 1 of 1

Lab Client and Project Information

Lab Client/Consultant: Roux Associates Inc	Project Name / #: 3370-0001L000
Lab Client Project Manager: Peter Shimer	Project Location: 3701 N Pacific Pl
Lab Client Address: 5150 E Pacific Coast Hwy Suite 450	Report E-Mail(s): pshimer@rouxinc.com
Lab Client City, State, Zip: Long Beach CA 90804	
Phone Number: (310) 879-4900	

Sample Receipt (Lab Use Only)

Date Rec'd: 8-22-19	Control #: 190727-03
H&P Project #: ~~RX0820L4-A1~~	
Lab Work Order # RX082319-10	
Sample Intact: ☐ Yes ☐ No ☐ See Notes Below	
Receipt Gauge ID:	Temp:
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials: MA	

EDF 9081 ↓

Reporting Requirements

☑ Standard Report ☐ Level III ☐ Level IV
☐ Excel EDD ☐ Other EDD: _____
☐ CA Geotracker Global ID: _____

Turnaround Time

☑ **Standard** (7 days for preliminary report, 10 days for final report)
☐ **Rush** (specify): _____

Sampler Information

Sampler(s): Bobby Stumbo
Signature:
Date: 8-22-19

Additional Instructions to Laboratory:

* *Preferred VOC units (please choose one):*
☐ µg/L ☐ µg/m³ ☐ ppbv ☑ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☐ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☐ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
SB-43-10		08/22/19	820	SV	Tedlar										X					
SB-43-5			834												X					
SB-18-10			955												X					
SB-18-5			1029												X					
SB-18-5REP			1034												X					

Approved/Relinquished by:	Company: Roux	Date: 8/22/19	Time: 1040	Received by:	Company: H&P	Date: 8-22-19	Time: 10:40
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

*Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back

Mobile Geochemistry Inc.

FMS004
Revision: 4
Revised: 3/22/2017
Effective: 3/2[illegible]/2017
Page 1 of 1

Log Sheet: Soil Vapor Sampling with Tedlar Syringe

H&P Project #: Rx 082019 - AZ / Tech
Date: 8/20/19
Site Address: 3701 North Pacific Place
Page: 1 of 1
Consultant: Roux Associates
H&P Rep(s): M. Herriford
Reviewed: EC
Consultant Rep(s): Thomas Warfel & Peter Shimer
Scanned: TTorres

Equipment Info
Inline Gauge ID#: T38
Pump ID#:

Purge Volume Information
PV Amount: 3PV
PV Includes: ☒ Tubing ☒ Sand 40% ☒ Dry Bent 50%

Leak Check Compound
A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.
☒ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:

Resample Key
RS = Resample
RD = for Dilution
RL = for LCC Fail

	Sample Information				Probe Specs							Purge & Collection Information						
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☒ Hg ☐ H_2O
1	SB-35-10	–	420	8:40	10	11	1/4	12	2.25	6	2.25	✓	–	~~1734~~ 1734	~~200 mL~~ 200	–	<200	0
2	SB-35-5	–	420	9:01	5	6	1/4	12	2.25	6	2.25	✓	–	~~1662~~ 1662	~~200~~ 200	–	<200	0
3	SB-32-10	–	420	9:28	10	11	1/4	12	2.25	6	2.25	✓	–	~~1734~~ 1734	200	–	<200	0
4	SB-32-5	–	420	1000	5	6	1/4	12	2.25	6	2.25	✓	–	~~1662~~ 1662	200	–	<200	0
5	SB-36-5	–	420	1030	5	6	1/4	12	2.25	6	2.25	✓	–	~~1662~~ 1662	200	–	<200	0
6	SB-29-3	–	420	1133	3	4	1/4	12	2.25	6	2.25	✓	–	~~1683~~ 1683	200	–	<200	0
7	SB-25-5	–	420	1317	5	6	1/4	12	2.25	6	2.25	✓	–	~~1762~~ 1762	200	–	<200	0
8	SB-21-5	–	420	1350	5	6	1/4	12	2.25	6	2.25	✓	–	~~1662~~ 1662	200	–	<200	0
9	SB-27-3	–	420	1420	3	4	1/4	12	2.25	6	2.25	✓	–	~~1633~~ 1633	200	–	<200	0
10	SB-15-10	–	420	1443	10	11	1/4	12	2.25	6	2.25	✓	–	~~1734~~ 1734	200	–	<200	0
11																		
12																		

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

* PV amounts added incorrectly for tedlar collection OK'd by E. Curson

H&P Mobile Geochemistry Inc.

Log Sheet: Soil Vapor Sampling with Syringe

H&P Project #: RX082019-AZ Date: 8/21/19

Site Address: 3701 N Pacific Pl Page: 1 of 2

Consultant: Roux Associates H&P Rep(s): B. Stengl M. Gregg

Consultant Rep(s): Thomas Warfel M. Montemayor

Reviewed: EC

Scanned: TTorres

Equipment Info	Purge Volume Information	Leak Check Compound	Resample Key:
Inline Gauge ID#: T07 Pump ID#: 036	PV Amount: 3PV PV Includes: ☑ Tubing ☑ Sand 40% ☑ Dry Bent 50%	*A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.* ☑ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:	*RS = Resample* *RD = for Dilution* *RL = lor LCC fail*

	Sample Information				Probe Specs							Purge & Collection Information							
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☐ Hg ☑ H_2O	Probe IN Press WC
1	SB-15-5	21	50	837	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	-0.11
2	SB-15-5	Tedlar	400	937	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
3	SB-12-10	296	50	927	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.09
4	SB-12-10	Tedlar	400	1004	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	0	
5	SB-12-5	238	50	953	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
6	SB-12-5	Tedlar	400	1022	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
7	SB-7-10	297	50	1042	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.00
8	SB-7-10	Tedlar	400	1112	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	0	
9	SB-7-5	21	50	1107	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
10	SB-7-5	Tedlar	400	1135	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
11	SB-3-10	296	50	1151	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.00
12	SB-3-10	Tedlar	400	1320	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	0	

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

H&P Mobile Geochemistry Inc.

Log Sheet: Soil Vapor Sampling with Syringe

H&P Project #: RX082019-A2 Date: 8/22/19

Site Address: 3701 N Pacific Pl Page: 1 of 1

Consultant: Roux Associates H&P Rep(s): B. Stengl M. Gregg

Consultant Rep(s): Thomas Warfel M. Montemayor

Reviewed: EC

Scanned: T Torres

Equipment Info
Inline Gauge ID#: T07
Pump ID#: 036

Purge Volume Information
PV Amount: 3PV PV Includes: ☑ Tubing ☑ Sand 40% ☑ Dry Bent 50%

Leak Check Compound ☐ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:
A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.

Resample Key:
RS = Resample
RD = for Dilution
RL = lor LCC fail

	Sample Information				Probe Specs							Purge & Collection Information							
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☐ Hg ☑ H_2O	PICS INW
1	SB-43-10	256	50	747	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	10	0.00
2	SB-43-10	Tedlar	400	820	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	10	
3	SB-43-5	238	50	809	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
4	SB-43-5	Tedlar	400	834	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
5	SB-18-10	296	50	853	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.00
6	SB-18-10 RL	297	50	920	10	11	1/4	12	2.25	6	2.25	✓	✓	1734 (45)	200	—	<200	0	
7	SB-18-10	Tedlar	400	955	10	11	1/4	12	2.25	6	2.25	✓		1784 (95)	—	—	<200	0	
8	SB-18-5	21	50	~~1003~~ 940	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
9	SB-18-5	Tedlar	400	1029	5	6	1/4	12	2.25	6	2.25	✓		1717	—	—	<200	0	
10	SB-18-5 REP	256	50	1003	5	6	1/4	12	2.25	6	2.25	✓	✓	1662	200	—	<200	0	
11	SB-18-5 REP	Tedlar	400	~~1003~~ 1039	5	6	1/4	12	2.25	6	2.25	✓		2112	—	—	<200	0	
12																			

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

H&P Mobile Geochemistry Inc.

Log Sheet: Soil Vapor Sampling with Syringe

H&P Project #: RX082019-AZ
Date: 8/21/19
Site Address: 3701 N Pacific Pl
Page: 2 of 2
Consultant: Roux Associates
H&P Rep(s): B. Steingl M. Gregg
Reviewed: EC
Consultant Rep(s): Thomas Warfel M. Montemayor
Scanned: TTorres

Equipment Info
Inline Gauge ID#: T07
Pump ID#: 036

Purge Volume Information
PV Amount: 3PV PV Includes: ☑ Tubing ☑ Sand 40% ☑ Dry Bent 50%

Leak Check Compound ☑ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other:
A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.

Resample Key:
RS = Resample
RD = for Dilution
RL = lor LCC fail

	Sample Information				Probe Specs							Purge & Collection Information							
	Point ID	Syringe ID	Sample Volume (cc)	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac ☐ Hg ☑ H_2O	Probe TW RPDS WC
1	SB-3-5	238	50	1213	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
2	SB-3-5	Tedlar	400	1325	5	6	1/4	12	2.25	6	2.25	✓		1712	—	—	<200	0	
3	SB-3-5 REP	256	50	1243	5	6	1/4	12	2.25	6	2.25	✓	✓	1662	200 RS	—	<200	0	
4	SB-3-5 REP	Tedlar	400	1328	5	6	1/4	12	2.25	6	2.25	✓		2112	—	—	<200	0	
5	SB-6-10	247	50	1345	10	11	1/4	12	2.25	6	2.25	✓	✓	1684	200	8:25	<200	0	0.00
6	SB-6-10	Tedlar	400	1413	10	11	1/4	12	2.25	6	2.25	✓		1734	—	—	<200	0	
7	SB-6-5	21	50	1406	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:04	<200	0	0.00
8	SB-6-5	Tedlar	400	1429	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
9	SB-24-5	238	50	1451	5	6	1/4	12	2.25	6	2.25	✓	✓	1612	200	8:25	<200	0	0.00
10	SB-24-5	Tedlar	400	1515	5	6	1/4	12	2.25	6	2.25	✓		1662	—	—	<200	0	
11												✓	✓						
12												✓							

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

APPENDIX G

Technical Memo for Development of Soil Arsenic Action Level

Appendix G: Determination of Arsenic Action Level

Arsenic was identified as a chemical of concern at the Site, as concentrations detected at the Site exceeded the upper bound background concentration for naturally occurring soils in southern California per the Department of Toxic Substance Control (DTSC) (DTSC, 2008). However, there is no reason to believe that arsenic detected at the Site is related to past industrial operations. Therefore, a site-specific soil action level of 17 milligrams per kilogram (mg/kg) was derived, in accordance with DTSC methodology as described in *Arsenic Strategies Determination of Arsenic Remediation Development of Arsenic Cleanup Goals* (DTSC, 2009). Summary statistics for the arsenic data set are as follows:

DESCRIPTIVE STATISTIC	VALUE
Number of Samples	130
Number of Detects	126
Minimum Detected Concentration	1.25
Maximum Detected Concentration	53.4
Mean Concentration with NDs	7.97
Standard Deviation with NDs	6.791

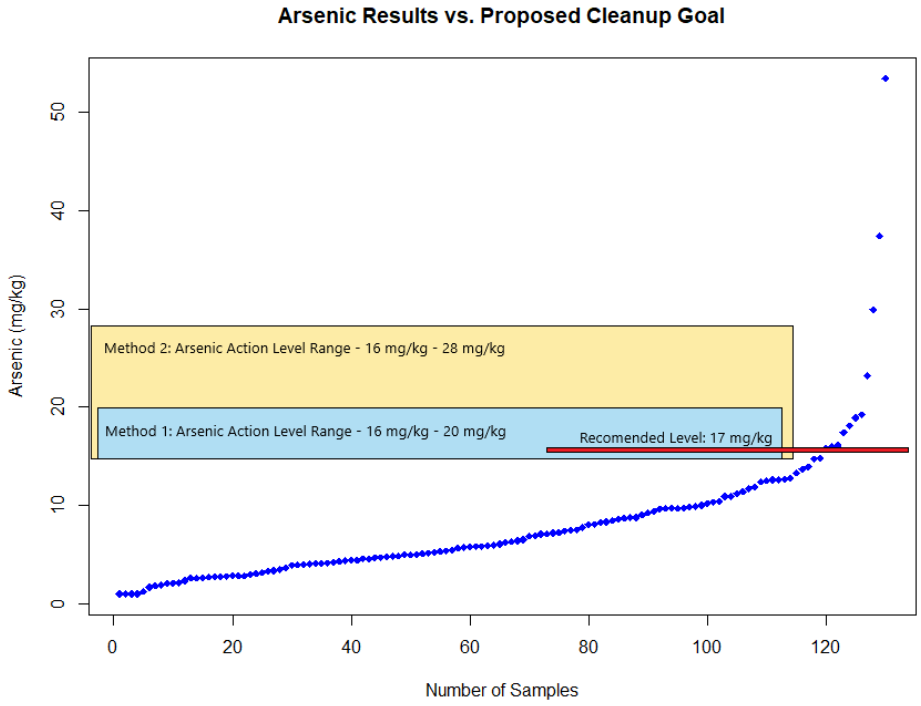
The dataset for arsenic was cleaned prior to evaluation. Non-detect values were changed from "ND" to the reporting limit (1 mg/kg). In addition, to account for duplicate samples, the duplicate values were averaged with their parent sample. The finalized dataset was evaluated using two methodologies, consistent with DTSC, 2009:

1. **Method #1: Simple Graphical Determination of the Arsenic Action Level:** Using Method #1, the arsenic action level ranged from 16 mg/kg to 20 mg/kg based on an analysis of inflection points within the dataset, dependent on assumed distribution.
2. **Method #2: Statistical Evaluation of the Arsenic Action Level:** Using Method #2, the arsenic action level ranged from 16 mg/kg to 28 mg/kg, after adjusting for potential outliers in the dataset, assuming lognormal distribution.

Based on an evaluation of the results produced from the two methods outlined above and discussions with DTSC,[1] Roux recommends a site-specific soil arsenic action level of 17 mg/kg.

[1] October 9, 2019 teleconference with CY Jeng and Catie Boston.

Appendix G: Determination of Arsenic Action Level



Supporting analysis for each of the two methods is provided below.

Method #1: Simple, Graphical Determination of the Arsenic Action Level

Figure 1 presents the normality plot of the raw arsenic data. The data do not appear to follow a normal distribution, and therefore, were log transformed. Figure 2 presents the normality plot of the log-transformed data. There are several distinct changes in slope in both normality plots. In Figure 1, after 16 mg/kg and then again at 20 mg/kg, there are distinct increases in slope. The samples below these points would be representative of ambient arsenic in the site's urban environment. The inflection point where the slope changes is indicative of a deviation from ambient levels. In Figure 2, these inflection points occur around the log-transformed values of 1.22-1.27, equating to an upper-bound of approximately 16.6 to 18.6 mg/kg for ambient arsenic in soil. Both figures demonstrate a similar ambient arsenic level ranging from 16 mg/kg to 20 mg/kg.

Figure 1. Range for upper-bound of ambient arsenic in soil assuming normal distribution.

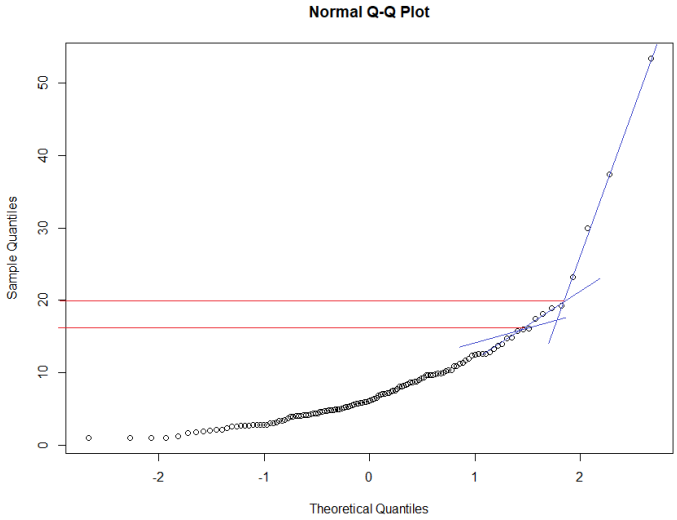
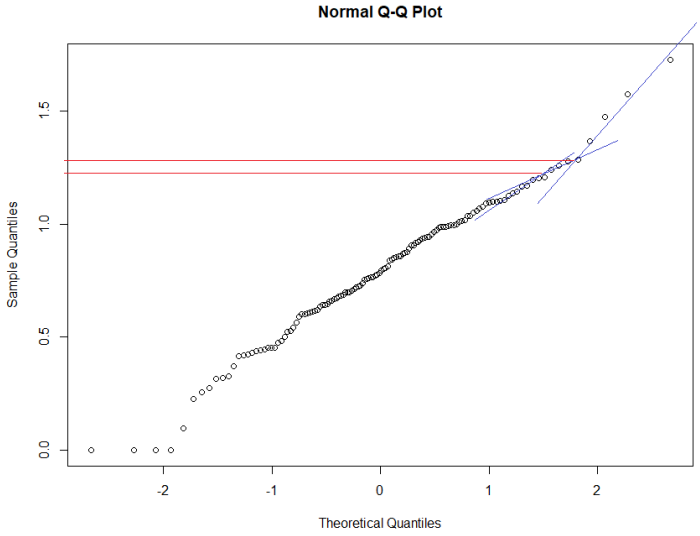


Figure 2. Range for upper-bound of ambient arsenic in soil assuming lognormal distribution.



Method #2: Statistical Evaluation of the Arsenic Action Level

Step 1. Quartile Analysis ("Fourth Spread")

Initial summary statistics can be found in **Table 1**. A box plot for the data provided below as **Figure 3** indicates there may be several outliers in the data, identified as the "fourth spread, f_s."

Table 1. Summary Statistics of arsenic data.

General Statistics for Censored Datasets (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Arsenic	130	0	126	4	3.08%	1	1	7.97	46.12	6.791	0.852

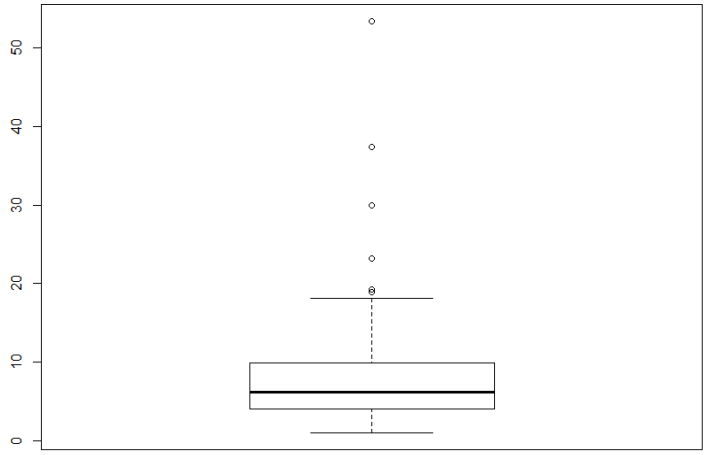
General Statistics for Raw Dataset using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Arsenic	126	0	1.25	53.4	8.191	6.373	46.36	6.809	4.377	3.413	0.831

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Arsenic	130	0	2.618	3.363	4.038	6.135	9.895	10.96	13.98	17.79	35.23

Figure 3. Boxplot of arsenic data.



Based on the presence of potential outliers, the fourth spread was calculated using the summary statistics from **Table 1** as follows:

$$f_s = Q_3 - Q_1$$
$$9.895 - 4.038 = 5.857$$

Any observation further than 1.5*f_s from the closest fourth was determined to be an outlier.

$$f_s = Q_3 - Q_1 = 9.895 - 4.038 = 5.857$$
$$< Q_1 - 1.5f_s \quad \text{and} \quad > Q_3 + 1.5f_s$$
$$< 4.038 - 8.7855 \quad \text{and} \quad > 9.895 + 8.7855$$

$$< -4.7475 \quad \text{and} \quad > 18.6805$$

Therefore, the following arsenic data points were determined to be statistical outliers: SB-22-SS1 (18.9 mg/kg), SB-31-SS-2 (19.2 mg/kg), SB-8-SS-13 (23.2 mg/kg), SB-22-SS-3 (29.9 mg/kg), SB-2-SS-4 (37.4 mg/kg), and SB-1-SS-1 (53.4 mg/kg).

Table 2 below provides summary statistics of the data after removal of the six outliers identified above. The data were log-transformed, and summary statistics were reevaluated as the variable "Log_Arsenic". **Table 3** shows general statistics using detected data only.

Table 2. Summary statistics for native data and log-transformed data after removal of outliers.

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Arsenic	124	0	120	4	3.23%	1	1	6.888	15.82	3.978	0.578
Log_Arsenic	124	0	120	4	3.23%	0	0	0.755	0.0821	0.287	0.379

Table 3. Summary statistics using only detected data after removal of outliers.

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Arsenic	120	0	1.25	18.1	7.084	6.01	15.29	3.91	3.984	0.751	0.552
Log_Arsenic	120	0	0.0969	1.258	0.78	0.779	0.0658	0.256	0.278	-0.284	0.329

Step 2. Upper Limit Identification

The upper limit of the data set (95% confidence limit of the 99th quantile of the data set) was estimated using the following equation and a K value of 2.40 (obtained from Table A3, Gilbert 1987). The mean and standard deviations were obtained from **Table 2** for both the normal data and log-transformed data; non-detect data was included in the evaluation as the reporting limit. Dependent on distribution, the estimated action levels range from 16 mg/kg to 28 mg/kg, as follows:

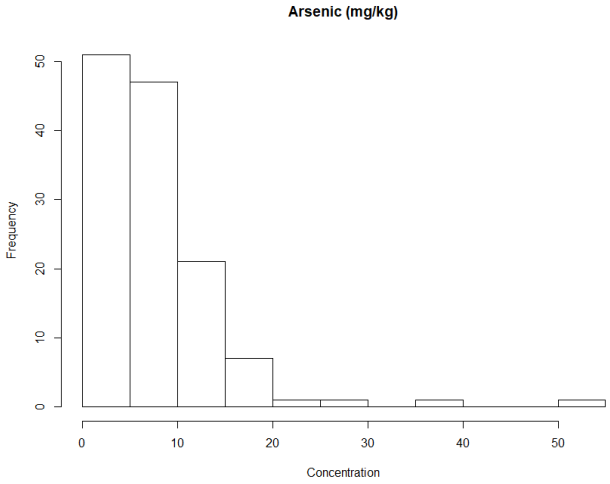
$$UL_{0.95}(X_{0.99}) = \bar{x} + s * K_{0.95,0.99}$$

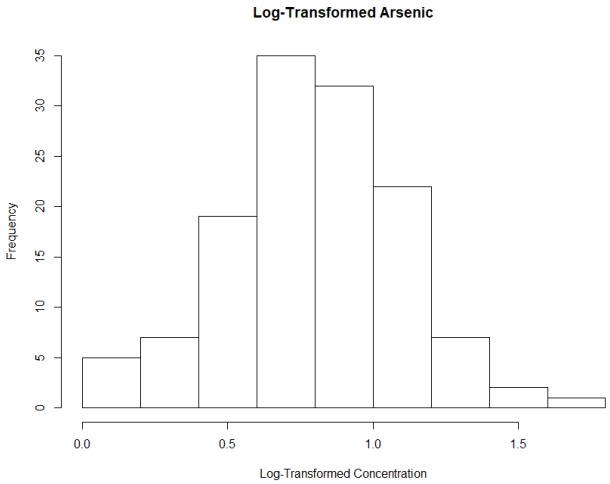
Normal data: $6.888 + (3.978)(2.40) = 16.435$ mg/kg

Log-transformed data: $0.755 + (0.287)(2.40) = 1.4438 = 10^{1.3944} = 27.78$ mg/kg

The upper limits for background threshold values were also evaluated using ProUCL. **Figure 4a** and **Figure 4b** provide histograms of the distribution of arsenic concentrations, indicating a lognormal distribution; note the left-skewedness in **Figure 4a**. For analysis in ProUCL, a lognormal distribution was assumed moving forward.

Figures 4a and 4b. Histogram of data and log-transformed data.





An upper limit analysis with NDs was run on the non-transformed arsenic data; a tolerance factor (K) of 1.892 was assigned by the ProUCL program during the evaluation. The detected data appeared approximate lognormal at 5% significance, as seen in **Output 1**. In **Output 2**, the background statistics range from 16 to 20 mg/kg, with similar values for both the regression on order statistics (ROS) method and the Kaplan Meier (KM) method. ProUCL input files and full output files can be found in **Attachment 1**. In conclusion, Method 2 ProUCL results are comparable to the conclusions from Method 1 and support an arsenic action level range of between 16 mg/kg and 20 mg/kg.

Output 1. Lognormal Goodness-of-Fit Test for Arsenic Data

Lognormal GOF Test on Detected Observations Only		
Shapiro Wilk Approximate Test Statistic	0.967	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0.0476	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.062	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0812	Detected Data appear Lognormal at 5% Significance Level
Detected Data appear Approximate Lognormal at 5% Significance Level		

Output 2. Background Statistics Assuming Lognormal Distribution.

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects			
Mean in Original Scale	6.902	Mean in Log Scale	1.75
SD in Original Scale	3.975	SD in Log Scale	0.636
95% UTL95% Coverage	19.17	95% BCA UTL95% Coverage	15.96
95% Bootstrap (%) UTL95% Coverage	16	95% UPL (t)	16.58
90% Percentile (z)	13	95% Percentile (z)	16.38
99% Percentile (z)	25.26	95% USL	46.36

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean of Logged Data	1.739	95% KM UTL (Lognormal)95% Coverage	19.84
KM SD of Logged Data	0.66	95% KM UPL (Lognormal)	17.06
95% KM Percentile Lognormal (z)	16.85	95% KM USL (Lognormal)	49.61

References:

DTSC, 2008. *Determination of a Southern California Regional Background Arsenic Concentration in Soil.*

DTSC, 2009*. Arsenic Strategies Determination of Arsenic Remediation Development of Arsenic Cleanup Goals. January 16, 2009.*

Gilbert, R.O. 1987. Statistical Methods for Environmental Pollution Monitoring. United States.

ATTACHMENT 1

	LABREQUE	CUSTSAMPID	SAMPDATE	SAMPTIME	LABSAMPI	MATRIX	METHOD	PREPMETHOD	ANALYTE	ANALYTET	CASNUMB	RESULT	FLAG	DLTYPE	DILUTION	DL	RL	UNITS	SPIKECON	RECOVERY	UPPERCL	LOWERCL	ANALYST	ANADATE	QCBATCHID
NA Arsenic	418302	NA	NA	NA	QC120545	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	-1.75			1	0.36	1	mg/Kg	NA	NA			kedy	08/18/2019	QC1205459
NA Arsenic	418350	NA	NA	NA	QC120547	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	-1.39			1	0.36	1	mg/Kg	NA	NA			kedy	08/18/2019	QC1205473
NA Arsenic	418302	NA	NA	NA	QC120545	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	-1.38			1	0.36	1	mg/Kg	NA	NA			kedy	08/18/2019	QC1205456
NA Arsenic	418302	NA	NA	NA	QC120546	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	-1.27			1	0.36	1	mg/Kg	NA	NA			kedy	08/18/2019	QC1205460
NA Arsenic	418350	NA	NA	NA	QC120547	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	-0.75			1	0.36	1	mg/Kg	NA	NA			kedy	08/18/2019	QC1205474
NA Arsenic	418407	NA	NA	NA	QC120562	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	-0.24			1	0.36	1	mg/Kg	NA	NA			kedy	08/21/2019	QC1205628
NA Arsenic	418340	NA	NA	NA	QC120543	Water	EPA 6010B	EPA 3010A	Arsenic	B	7440-38-2	0.005			1	0.008	0.01	mg/L	NA	NA			kedy	08/15/2019	QC1205436
NA Arsenic	418340	NA	NA	NA	QC120583	Water	EPA 6010B	EPA 3010A/Filtered	Arsenic	B	7440-38-2	0.006			1	0.008	0.01	mg/L	NA	NA			sbailey-wo	08/23/2019	QC1205833
NA Arsenic	418302	NA	NA	NA	QC120547	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	0.05			1	0.36	1	mg/Kg	NA	NA			kedy	08/18/2019	QC1205472
MW-7 Arsenic	418340	MW-7	08/14/2019	08:29:00	418340-00	Water	EPA 6010B	EPA 3010A/Filtered	Arsenic	T	7440-38-2	0.102		RDL	1	0.008	0.01	mg/L	NA	NA	NA	NA	Kedy	08/23/2019	QC1205833
MW-7 Arsenic	418340	MW-7	08/14/2019	08:29:00	418340-00	Water	EPA 6010B	EPA 3010A	Arsenic	T	7440-38-2	0.478		RDL	1	0.008	0.01	mg/L	NA	NA	NA	NA	kedy	08/15/2019	QC1205436
NA Arsenic	418457	NA	NA	NA	QC120567	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	0.83			1	0.36	1	mg/Kg	NA	NA			kedy	08/22/2019	QC1205677
SB-17-SS-11 Arse	418302	SB-17-SS-11	08/13/2019	10:40:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.25		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-15-SS-6 Arser	418302	SB-15-SS-6	08/13/2019	11:55:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.61		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-30-SS-2 Arser	418350	SB-30-SS-2	08/14/2019	13:35:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.68		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-25-SS-5 Arser	418350	SB-25-SS-5	08/14/2019	11:00:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.8		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
SB-12-SS-1 Arser	418302	SB-12-SS-1	08/12/2019	14:02:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.89		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-17-SS-8 Arser	418302	SB-17-SS-8	08/13/2019	10:35:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.02		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-22-SS-9 Arser	418302	SB-22-SS-9	08/13/2019	14:30:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.06		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-14-SS-10 Arse	418302	SB-14-SS-10	08/13/2019	08:15:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.09		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-10-SS-2 Arser	418407	SB-10-SS-2	08/15/2019	09:20:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.13		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
DUP-7 Arsenic	418350	DUP-7	08/14/2019	13:25:00	418350-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.2		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
DUP-3 Arsenic	418302	DUP-3	08/13/2019	11:15:00	418302-07	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.31		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-12-SS-8 Arser	418302	SB-12-SS-8	08/12/2019	14:20:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.57		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-16-SS-0 Arser	418302	SB-16-SS-0	08/13/2019	11:00:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.6		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-25-SS-0 Arser	418350	SB-25-SS-0	08/14/2019	10:45:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.62		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
SB-23-SS-2 Arser	418350	SB-23-SS-2	08/14/2019	07:50:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.64		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-6-SS-5 Arseni	418302	SB-6-SS-5	08/12/2019	11:00:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.7		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-15-SS-12 Arse	418302	SB-15-SS-12	08/13/2019	12:05:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.74		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-14-SS-3 Arser	418302	SB-14-SS-3	08/13/2019	08:05:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.77		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-13-SS-14 Arse	418302	SB-13-SS-14	08/12/2019	15:20:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.83		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-14-SS-1 Arser	418302	SB-14-SS-1	08/13/2019	08:00:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.04		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
DUP-4 Arsenic	418302	DUP-4	08/13/2019	11:55:00	418302-07	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.08		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-35-SS-15 Arse	418457	SB-35-SS-15	08/16/2019	11:25:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.18		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205677
SB-23-SS-6 Arser	418350	SB-23-SS-6	08/14/2019	08:00:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.37		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
DUP-1 Arsenic	418302	DUP-1	08/12/2019	14:00:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.38		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-13-SS-0 Arser	418302	SB-13-SS-0	08/12/2019	14:44:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.47		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-30-SS-0 Arser	418350	SB-30-SS-0	08/14/2019	13:25:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.48		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-5-SS-15 Arser	418302	SB-5-SS-15	08/12/2019	10:40:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.66		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
DUP-2 Arsenic	418302	DUP-2	08/13/2019	10:35:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.66		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-12-SS-12 Arse	418302	SB-12-SS-12	08/12/2019	14:25:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.9		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-8-SS-2 Arseni	418302	SB-8-SS-2	08/12/2019	09:20:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.98		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-32-SS-6 Arser	418407	SB-32-SS-6	08/15/2019	13:10:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.01		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-15-SS-9 Arser	418302	SB-15-SS-9	08/13/2019	12:00:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.03		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
DUP-5 Arsenic	418302	DUP-5	08/13/2019	13:25:00	418302-07	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.05		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-20-SS-9 Arser	418302	SB-20-SS-9	08/13/2019	13:35:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.06		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-9-SS-8 Arseni	418302	SB-9-SS-8	08/13/2019	09:00:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.11		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-18-SS-8 Arser	418302	SB-18-SS-8	08/13/2019	10:00:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.14		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-18-SS-4 Arser	418302	SB-18-SS-4	08/13/2019	09:55:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.17		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-25-SS-8 Arser	418350	SB-25-SS-8	08/14/2019	11:05:00	418350-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.32		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
SB-16-SS-7 Arser	418302	SB-16-SS-7	08/13/2019	11:15:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.36		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-7-SS-15 Arser	418302	SB-7-SS-15	08/12/2019	12:15:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.38		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-2-SS-6 Arseni	418457	SB-2-SS-6	08/16/2019	10:18:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.4		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-29-SS-2 Arser	418350	SB-29-SS-2	08/14/2019	12:20:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.43		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-19-SS-0 Arser	418302	SB-19-SS-0	08/13/2019	09:15:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.56		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-5-SS-8 Arseni	418302	SB-5-SS-8	08/12/2019	10:30:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.58		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-36-SS-5 Arser	418350	SB-36-SS-5	08/14/2019	13:10:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.66		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-9-SS-14 Arser	418302	SB-9-SS-14	08/13/2019	09:10:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.7		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-11-SS-10 Arse	418302	SB-11-SS-10	08/12/2019	12:45:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.79		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
DUP-11 Arsenic	418457	DUP-11	08/16/2019	09:20:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.81		RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	08/23/2019	QC1205677

SB-38-SS-1	Arser	418350	SB-38-SS-1	08/14/2019	09:00:00	418350-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.82	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
SB-14-SS-8	Arser	418302	SB-14-SS-8	08/13/2019	08:10:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.88	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-3-SS-10	Arser	418457	SB-3-SS-10	08/16/2019	09:30:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.98	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-15-SS-3	Arser	418302	SB-15-SS-3	08/13/2019	11:45:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.99	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-20-SS-1	Arser	418302	SB-20-SS-1	08/13/2019	13:20:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.99	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-22-SS-7	Arser	418302	SB-22-SS-7	08/13/2019	14:20:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.08	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-35-SS-10	Arse	418457	SB-35-SS-10	08/16/2019	11:20:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.15	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-29-SS-4	Arser	418350	SB-29-SS-4	08/14/2019	12:30:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.19	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-11-SS-2	Arser	418302	SB-11-SS-2	08/12/2019	12:35:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.24	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-23-SS-0	Arser	418350	SB-23-SS-0	08/14/2019	07:45:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.3	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-18-SS-13	Arse	418302	SB-18-SS-13	08/13/2019	10:10:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.34	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-16-SS-2	Arser	418302	SB-16-SS-2	08/13/2019	11:05:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.46	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-5-SS-4	Arseni	418302	SB-5-SS-4	08/12/2019	10:25:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.73	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-4-SS-2	Arseni	418457	SB-4-SS-2	08/16/2019	07:35:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.78	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-3-SS-7	Arseni	418457	SB-3-SS-7	08/16/2019	09:25:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.8	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-32-SS-8	Arser	418407	SB-32-SS-8	08/15/2019	13:20:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.81	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-32-SS-14	Arse	418407	SB-32-SS-14	08/15/2019	13:30:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.85	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-24-SS-1	Arser	418350	SB-24-SS-1	08/14/2019	08:10:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.93	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-10-SS-7	Arser	418407	SB-10-SS-7	08/15/2019	09:45:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.96	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
DUP-6	Arsenic	418350	DUP-6	08/14/2019	12:30:00	418350-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.13	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
SB-28-SS-2	Arser	418350	SB-28-SS-2	08/14/2019	08:40:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.21	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
DUP-9	Arsenic	418407	DUP-9	08/15/2019	13:30:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.27	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-33-SS-4	Arser	418407	SB-33-SS-4	08/15/2019	07:30:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.34	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-1-SS-13	Arser	418457	SB-1-SS-13	08/16/2019	08:50:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.52	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-37-SS-1	Arser	418457	SB-37-SS-1	08/16/2019	10:45:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.91	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205677
SB-3-SS-0	Arseni	418457	SB-3-SS-0	08/16/2019	09:10:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.94	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-25-SS-2	Arser	418350	SB-25-SS-2	08/14/2019	10:50:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.12	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
SB-9-SS-5	Arseni	418302	SB-9-SS-5	08/13/2019	08:55:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.2	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-2-SS-1	Arseni	418457	SB-2-SS-1	08/16/2019	10:00:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.21	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-10-SS-4	Arser	418407	SB-10-SS-4	08/15/2019	09:40:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.37	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-4-SS-10	Arser	418457	SB-4-SS-10	08/16/2019	07:50:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.48	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-17-SS-2	Arser	418302	SB-17-SS-2	08/13/2019	10:28:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.51	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-4-SS-5	Arseni	418457	SB-4-SS-5	08/16/2019	07:45:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.76	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-3-SS-5	Arseni	418457	SB-3-SS-5	08/16/2019	09:20:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-33-SS-0	Arser	418407	SB-33-SS-0	08/15/2019	07:10:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.04	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-8-SS-4	Arseni	418302	SB-8-SS-4	08/12/2019	09:30:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.08	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-6-SS-1	Arseni	418302	SB-6-SS-1	08/12/2019	10:55:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.24	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-45-SS-0	Arser	418457	SB-45-SS-0	08/16/2019	11:50:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.33	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/23/2019	QC1205677
SB-45-SS-2	Arser	418457	SB-45-SS-2	08/16/2019	11:55:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.43	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/23/2019	QC1205677
SB-11-SS-15	Arse	418302	SB-11-SS-15	08/12/2019	12:50:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.47	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-6-SS-12	Arser	418302	SB-6-SS-12	08/12/2019	11:20:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.63	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-32-SS-2	Arser	418407	SB-32-SS-2	08/15/2019	13:00:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.71	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-11-SS-5	Arser	418302	SB-11-SS-5	08/12/2019	12:40:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.76	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-46-SS-2	Arser	418457	SB-46-SS-2	08/16/2019	11:40:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.78	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/23/2019	QC1205677
SB-44-SS-0	Arser	418407	SB-44-SS-0	08/15/2019	08:05:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.04	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-13-SS-7	Arser	418302	SB-13-SS-7	08/12/2019	15:05:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.26	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-35-SS-2	Arser	418457	SB-35-SS-2	08/16/2019	11:05:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.38	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-7-SS-6	Arseni	418302	SB-7-SS-6	08/12/2019	12:00:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.65	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
DUP-10	Arsenic	418457	DUP-10	08/16/2019	08:40:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.66	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/23/2019	QC1205677
SB-26-SS-1	Arser	418350	SB-26-SS-1	08/14/2019	10:25:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.7	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-19-SS-2	Arser	418302	SB-19-SS-2	08/13/2019	09:20:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.72	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-34-SS-1	Arser	418407	SB-34-SS-1	08/15/2019	14:10:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.72	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-46-SS-0	Arser	418457	SB-46-SS-0	08/16/2019	11:35:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.77	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/23/2019	QC1205677
SB-13-SS-2	Arser	418302	SB-13-SS-2	08/12/2019	14:50:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.88	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-3-SS-2	Arseni	418457	SB-3-SS-2	08/16/2019	09:15:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.9	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-20-SS-5	Arser	418302	SB-20-SS-5	08/13/2019	13:25:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.1	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-1-SS-8	Arseni	418457	SB-1-SS-8	08/16/2019	08:45:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.2	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-36-SS-1	Arser	418350	SB-36-SS-1	08/14/2019	13:55:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.3	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-35-SS-7	Arser	418457	SB-35-SS-7	08/16/2019	11:15:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.4	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-18-SS-1	Arser	418302	SB-18-SS-1	08/13/2019	09:45:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.9	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-4-SS-14	Arser	418457	SB-4-SS-14	08/16/2019	07:55:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.9	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-5-SS-1	Arseni	418302	SB-5-SS-1	08/12/2019	10:20:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.2	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456

SB-8-SS-0	Arseni	418302	SB-8-SS-0	08/12/2019	09:05:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.4	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
DUP-12	Arsenic	418457	DUP-12	08/16/2019	11:55:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.6	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/23/2019	QC1205677
SB-33-SS-2	Arser	418407	SB-33-SS-2	08/15/2019	07:20:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.7	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-31-SS-0	Arser	418407	SB-31-SS-0	08/15/2019	13:45:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.9	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-21-SS-0	Arser	418302	SB-21-SS-0	08/13/2019	13:45:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.4	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-24-SS-5	Arser	418350	SB-24-SS-5	08/14/2019	08:20:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.5	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
SB-6-SS-9	Arseni	418302	SB-6-SS-9	08/12/2019	11:10:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.6	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-13-SS-4	Arser	418302	SB-13-SS-4	08/12/2019	14:55:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.6	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-27-SS-3	Arser	418350	SB-27-SS-3	08/14/2019	09:45:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.8	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-7-SS-1	Arseni	418302	SB-7-SS-1	08/12/2019	11:50:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.3	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-21-SS-4	Arser	418302	SB-21-SS-4	08/13/2019	13:55:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.7	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-5-SS-0	Arseni	418302	SB-5-SS-0	08/12/2019	10:10:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.9	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
DUP-8	Arsenic	418407	DUP-8	08/15/2019	08:15:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	14.5	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-24-SS-9	Arser	418350	SB-24-SS-9	08/14/2019	08:30:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	14.7	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205474
SB-17-SS-5	Arser	418302	SB-17-SS-5	08/13/2019	10:30:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	14.8	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
SB-1-SS-4	Arseni	418457	SB-1-SS-4	08/16/2019	08:40:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	15.6	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-21-SS-2	Arser	418302	SB-21-SS-2	08/13/2019	13:50:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	16	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-27-SS-1	Arser	418350	SB-27-SS-1	08/14/2019	09:30:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	16.1	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205473
SB-44-SS-2	Arser	418407	SB-44-SS-2	08/15/2019	08:15:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	17	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-8-SS-8	Arseni	418302	SB-8-SS-8	08/12/2019	09:40:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	17.4	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-4-SS-0	Arseni	418457	SB-4-SS-0	08/16/2019	07:30:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	18.1	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-22-SS-1	Arser	418302	SB-22-SS-1	08/13/2019	14:10:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	18.9	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-31-SS-2	Arser	418407	SB-31-SS-2	08/15/2019	13:55:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	19.2	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/21/2019	QC1205628
SB-8-SS-13	Arser	418302	SB-8-SS-13	08/12/2019	09:50:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	23.2	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-22-SS-3	Arser	418302	SB-22-SS-3	08/13/2019	14:15:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	29.9	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205472
SB-2-SS-4	Arseni	418457	SB-2-SS-4	08/16/2019	10:05:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	37.4	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-1-SS-1	Arseni	418457	SB-1-SS-1	08/16/2019	08:30:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	53.4	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/22/2019	QC1205676
SB-7-SS-10	Arser	418302	SB-7-SS-10	08/12/2019	12:10:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	ND	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205456
SB-12-SS-5	Arser	418302	SB-12-SS-5	08/12/2019	14:15:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	ND	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-9-SS-2	Arseni	418302	SB-9-SS-2	08/13/2019	08:45:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	ND	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205459
SB-16-SS-4	Arser	418302	SB-16-SS-4	08/13/2019	11:10:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	ND	RDL	1	0.36	1 mg/Kg	NA	NA	NA	NA	kedy	08/18/2019	QC1205460
NA	Arsenic	418457	NA	NA	NA	QC120567	Solid	EPA 6010B	EPA 3050B	Arsenic	B	7440-38-2	ND		1	0.36	1 mg/Kg	NA	NA			sbailey-wo	08/21/2019	QC1205676

	LABREQUE	CUSTSAMPID	SAMPDATE	SAMPTIME	LABSAMPI	MATRIX	METHOD	PREPMETHOD	ANALYTE	ANALYTET	CASNUMB	Arsenic	D_Arsenic	Log_Arsen	D_Log_Ars	DLTYPE	DILUTION	DL	RL	UNITS	SPIKECON	RECOVERY	UPPERCL	LOWERCL	ANALYST	ANADATE	QCBATCHID
SB-10-SS-0 Arsenic	418407	SB-10-SS-0	8/15/2019	9:15:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.78	1	0.444045	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-10-SS-2 Arsenic	418407	SB-10-SS-2	8/15/2019	9:20:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.13	1	0.32838	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-10-SS-4 Arsenic	418407	SB-10-SS-4	8/15/2019	9:40:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.37	1	0.867467	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-10-SS-7 Arsenic	418407	SB-10-SS-7	8/15/2019	9:45:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.96	1	0.775246	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-11-SS-10 Arsenic	418302	SB-11-SS-10	8/12/2019	12:45:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.79	1	0.680336	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-11-SS-15 Arsenic	418302	SB-11-SS-15	8/12/2019	12:50:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.47	1	0.927883	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-11-SS-2 Arsenic	418302	SB-11-SS-2	8/12/2019	12:35:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.24	1	0.719331	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-11-SS-5 Arsenic	418302	SB-11-SS-5	8/12/2019	12:40:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.76	1	0.942504	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-12-SS-1 Arsenic	418302	SB-12-SS-1	8/12/2019	14:02:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.89	1	0.276462	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-12-SS-12 Arsenic	418302	SB-12-SS-12	8/12/2019	14:25:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.9	1	0.591065	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-12-SS-8 Arsenic_average with dup	418302	SB-12-SS-8	8/12/2019	14:20:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.975	1	0.473487	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-13-SS-0 Arsenic	418302	SB-13-SS-0	8/12/2019	14:44:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.47	1	0.540329	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-13-SS-14 Arsenic	418302	SB-13-SS-14	8/12/2019	15:20:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.83	1	0.451786	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-13-SS-2 Arsenic	418302	SB-13-SS-2	8/12/2019	14:50:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.88	1	0.994757	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-13-SS-4 Arsenic	418302	SB-13-SS-4	8/12/2019	14:55:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.6	1	1.100371	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-13-SS-7 Arsenic	418302	SB-13-SS-7	8/12/2019	15:05:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.26	1	0.966611	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-14-SS-1 Arsenic	418302	SB-14-SS-1	8/13/2019	8:00:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.04	1	0.482874	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-14-SS-10 Arsenic	418302	SB-14-SS-10	8/13/2019	8:15:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.09	1	0.320146	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-14-SS-3 Arsenic	418302	SB-14-SS-3	8/13/2019	8:05:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.77	1	0.44248	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-14-SS-8 Arsenic	418302	SB-14-SS-8	8/13/2019	8:10:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.88	1	0.68842	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-15-SS-12 Arsenic	418302	SB-15-SS-12	8/13/2019	12:05:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.74	1	0.437751	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-15-SS-3 Arsenic	418302	SB-15-SS-3	8/13/2019	11:45:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.99	1	0.698101	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-15-SS-6 Arsenic_average with dup	418302	SB-15-SS-6	8/13/2019	11:55:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.345	1	0.370143	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-15-SS-9 Arsenic	418302	SB-15-SS-9	8/13/2019	12:00:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.03	1	0.605305	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-16-SS-0 Arsenic	418302	SB-16-SS-0	8/13/2019	11:00:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.6	1	0.414973	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-16-SS-2 Arsenic	418302	SB-16-SS-2	8/13/2019	11:05:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.46	1	0.737193	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-16-SS-7 Arsenic_average with dup	418302	SB-16-SS-7	8/13/2019	11:15:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.335	1	0.523096	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-17-SS-11 Arsenic	418302	SB-17-SS-11	8/13/2019	10:40:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.25	1	0.09691	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-17-SS-2 Arsenic	418302	SB-17-SS-2	8/13/2019	10:28:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.51	1	0.87564	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-17-SS-5 Arsenic	418302	SB-17-SS-5	8/13/2019	10:30:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	14.8	1	1.170262	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-17-SS-8 Arsenic_average with dup	418302	SB-17-SS-8	8/13/2019	10:35:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.84	1	0.453318	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-18-SS-1 Arsenic	418302	SB-18-SS-1	8/13/2019	9:45:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.9	1	1.037426	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-18-SS-13 Arsenic	418302	SB-18-SS-13	8/13/2019	10:10:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.34	1	0.727541	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-18-SS-4 Arsenic	418302	SB-18-SS-4	8/13/2019	9:55:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.17	1	0.620136	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-18-SS-8 Arsenic	418302	SB-18-SS-8	8/13/2019	10:00:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.14	1	0.617	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-19-SS-0 Arsenic	418302	SB-19-SS-0	8/13/2019	9:15:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.56	1	0.658965	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-19-SS-2 Arsenic	418302	SB-19-SS-2	8/13/2019	9:20:00	418302-04	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.72	1	0.987666	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-1-SS-1 Arsenic	418457	SB-1-SS-1	8/16/2019	8:30:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	53.4	1	1.727541	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-1-SS-13 Arsenic	418457	SB-1-SS-13	8/16/2019	8:50:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.52	1	0.814248	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-1-SS-4 Arsenic_average with dup	418457	SB-1-SS-4	8/16/2019	8:40:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.63	1	1.101403	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-1-SS-8 Arsenic	418457	SB-1-SS-8	8/16/2019	8:45:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.2	1	1.0086	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-20-SS-1 Arsenic	418302	SB-20-SS-1	8/13/2019	13:20:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.99	1	0.698101	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-20-SS-5 Arsenic_average with dup	418302	SB-20-SS-5	8/13/2019	13:25:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.075	1	0.849726	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-20-SS-9 Arsenic	418302	SB-20-SS-9	8/13/2019	13:35:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.06	1	0.608526	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-21-SS-0 Arsenic	418302	SB-21-SS-0	8/13/2019	13:45:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.4	1	1.093422	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-21-SS-2 Arsenic	418302	SB-21-SS-2	8/13/2019	13:50:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	16	1	1.20412	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-21-SS-4 Arsenic	418302	SB-21-SS-4	8/13/2019	13:55:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.7	1	1.136721	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-22-SS-1 Arsenic	418302	SB-22-SS-1	8/13/2019	14:10:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	18.9	1	1.276462	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-22-SS-3 Arsenic	418302	SB-22-SS-3	8/13/2019	14:15:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	29.9	1	1.475671	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-22-SS-7 Arsenic	418302	SB-22-SS-7	8/13/2019	14:20:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.08	1	0.705864	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-22-SS-9 Arsenic	418302	SB-22-SS-9	8/13/2019	14:30:00	418302-06	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.06	1	0.313867	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-23-SS-0 Arsenic	418350	SB-23-SS-0	8/14/2019	7:45:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.3	1	0.724276	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-23-SS-2 Arsenic	418350	SB-23-SS-2	8/14/2019	7:50:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.64	1	0.421604	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-23-SS-6 Arsenic	418350	SB-23-SS-6	8/14/2019	8:00:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.37	1	0.52763	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-24-SS-1 Arsenic	418350	SB-24-SS-1	8/14/2019	8:10:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.93	1	0.773055	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-24-SS-5 Arsenic	418350	SB-24-SS-5	8/14/2019	8:20:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.5	1	1.09691	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-24-SS-9 Arsenic	418350	SB-24-SS-9	8/14/2019	8:30:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	14.7	1	1.167317	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-25-SS-0 Arsenic	418350	SB-25-SS-0	8/14/2019	10:45:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.62	1	0.418301	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-25-SS-2 Arsenic	418350	SB-25-SS-2	8/14/2019	10:50:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.12	1	0.85248	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-25-SS-5 Arsenic	418350	SB-25-SS-5	8/14/2019	11:00:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.8	1	0.255273	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-25-SS-8 Arsenic	418350	SB-25-SS-8	8/14/2019	11:05:00	418350-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.32	1	0.635484	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-26-SS-1 Arsenic	418350	SB-26-SS-1	8/14/2019	10:25:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.7	1	0.986772	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-27-SS-1 Arsenic	418350	SB-27-SS-1	8/14/2019	9:30:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	16.1	1	1.206826	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-27-SS-3 Arsenic	418350	SB-27-SS-3	8/14/2019	9:45:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.8	1	1.10721	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-28-SS-2 Arsenic	418350	SB-28-SS-2	8/14/2019	8:40:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.21	1	0.793092	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-29-SS-2 Arsenic	418350	SB-29-SS-2	8/14/2019	12:20:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.43	1	0.646404	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-29-SS-4 Arsenic_average with dup	418350	SB-29-SS-4	8/14/2019	12:30:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.66	1	0.752816	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-2-SS-1 Arsenic	418457	SB-2-SS-1	8/16/2019	10:00:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.21	1	0.857935	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-2-SS-4 Arsenic	418457	SB-2-SS-4	8/16/2019	10:05:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	37.4	1	1.572872	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-2-SS-6 Arsenic	418457	SB-2-SS-6	8/16/2019	10:18:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.4	1	0.643453	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-30-SS-0 Arsenic_average with dup	418350	SB-30-SS-0	8/14/2019	13:25:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.84	1	0.453318	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-30-SS-2 Arsenic	418350	SB-30-SS-2	8/14/2019	13:35:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.68	1	0.225309	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-31-SS-0 Arsenic	418407	SB-31-SS-0	8/15/2019	13:45:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.9	1	1.075547	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-31-SS-2 Arsenic	418407	SB-31-SS-2	8/15/2019	13:55:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	19.2	1	1.283301	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-32-SS-14 Arsenic_average with dup	418407	SB-32-SS-14	8/15/2019	13:30:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.06	1	0.782473	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-32-SS-2 Arsenic	418407	SB-32-SS-2	8/15/2019	13:00:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.71	1	0.940018	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-32-SS-6 Arsenic	418407	SB-32-SS-6	8/15/2019	13:10:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.01	1	0.603144	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-32-SS-8 Arsenic	418407	SB-32-SS-8	8/15/2019	13:20:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.81	1	0.764176	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-33-SS-0 Arsenic	418407	SB-33-SS-0	8/15/2019	7:10:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.04	1	0.905256	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628

SB-33-SS-2 Arsenic	418407	SB-33-SS-2	8/15/2019	7:20:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.7	1	1.068186	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-33-SS-4 Arsenic	418407	SB-33-SS-4	8/15/2019	7:30:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.34	1	0.802089	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-34-SS-1 Arsenic	418407	SB-34-SS-1	8/15/2019	14:10:00	418407-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.72	1	0.987666	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-35-SS-10 Arsenic	418457	SB-35-SS-10	8/16/2019	11:20:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.15	1	0.711807	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-35-SS-15 Arsenic	418457	SB-35-SS-15	8/16/2019	11:25:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.18	1	0.502427	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205677
SB-35-SS-2 Arsenic	418457	SB-35-SS-2	8/16/2019	11:05:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.38	1	0.972203	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-35-SS-7 Arsenic	418457	SB-35-SS-7	8/16/2019	11:15:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.4	1	1.017033	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-36-SS-1 Arsenic	418350	SB-36-SS-1	8/14/2019	13:55:00	418350-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.3	1	1.012837	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-36-SS-5 Arsenic	418350	SB-36-SS-5	8/14/2019	13:10:00	418350-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.66	1	0.668386	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-37-SS-1 Arsenic	418457	SB-37-SS-1	8/16/2019	10:45:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.91	1	0.839478	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205677
SB-38-SS-1 Arsenic	418350	SB-38-SS-1	8/14/2019	9:00:00	418350-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.82	1	0.683047	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-3-SS-0 Arsenic	418457	SB-3-SS-0	8/16/2019	9:10:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.94	1	0.841359	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-3-SS-10 Arsenic	418457	SB-3-SS-10	8/16/2019	9:30:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.98	1	0.697229	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-3-SS-2 Arsenic	418457	SB-3-SS-2	8/16/2019	9:15:00	418457-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.9	1	0.995635	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-3-SS-5 Arsenic_average with dup	418457	SB-3-SS-5	8/16/2019	9:20:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.405	1	0.806519	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-3-SS-7 Arsenic	418457	SB-3-SS-7	8/16/2019	9:25:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.8	1	0.763428	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-44-SS-0 Arsenic	418407	SB-44-SS-0	8/15/2019	8:05:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.04	1	0.956168	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-44-SS-2 Arsenic_average with dup	418407	SB-44-SS-2	8/15/2019	8:15:00	418407-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	15.75	1	1.197281	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-45-SS-0 Arsenic	418457	SB-45-SS-0	8/16/2019	11:50:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.33	1	0.920645	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/23/2019	QC1205677
SB-45-SS-2 Arsenic_average with dup	418457	SB-45-SS-2	8/16/2019	11:55:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.015	1	1.000651	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/23/2019	QC1205677
SB-46-SS-0 Arsenic	418457	SB-46-SS-0	8/16/2019	11:35:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.77	1	0.989895	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/23/2019	QC1205677
SB-46-SS-2 Arsenic	418457	SB-46-SS-2	8/16/2019	11:40:00	418457-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.78	1	0.943495	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/23/2019	QC1205677
SB-4-SS-0 Arsenic	418457	SB-4-SS-0	8/16/2019	7:30:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	18.1	1	1.257679	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-4-SS-10 Arsenic	418457	SB-4-SS-10	8/16/2019	7:50:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.48	1	0.873902	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-4-SS-14 Arsenic	418457	SB-4-SS-14	8/16/2019	7:55:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.9	1	1.037426	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-4-SS-2 Arsenic	418457	SB-4-SS-2	8/16/2019	7:35:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.78	1	0.761928	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-4-SS-5 Arsenic	418457	SB-4-SS-5	8/16/2019	7:45:00	418457-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.76	1	0.889862	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-5-SS-0 Arsenic	418302	SB-5-SS-0	8/12/2019	10:10:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.9	1	1.143015	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-5-SS-1 Arsenic	418302	SB-5-SS-1	8/12/2019	10:20:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.2	1	1.049218	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-5-SS-15 Arsenic	418302	SB-5-SS-15	8/12/2019	10:40:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.66	1	0.563481	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-5-SS-4 Arsenic	418302	SB-5-SS-4	8/12/2019	10:25:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.73	1	0.758155	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-5-SS-8 Arsenic	418302	SB-5-SS-8	8/12/2019	10:30:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.58	1	0.660865	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-6-SS-1 Arsenic	418302	SB-6-SS-1	8/12/2019	10:55:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.24	1	0.915927	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-6-SS-12 Arsenic	418302	SB-6-SS-12	8/12/2019	11:20:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.63	1	0.936011	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-6-SS-5 Arsenic	418302	SB-6-SS-5	8/12/2019	11:00:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.7	1	0.431364	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-6-SS-9 Arsenic	418302	SB-6-SS-9	8/12/2019	11:10:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.6	1	1.100371	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-7-SS-1 Arsenic	418302	SB-7-SS-1	8/12/2019	11:50:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.3	1	1.123852	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-7-SS-15 Arsenic	418302	SB-7-SS-15	8/12/2019	12:15:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.38	1	0.641474	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-7-SS-6 Arsenic	418302	SB-7-SS-6	8/12/2019	12:00:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.65	1	0.984527	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-8-SS-0 Arsenic	418302	SB-8-SS-0	8/12/2019	9:05:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.4	1	1.056905	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-8-SS-13 Arsenic	418302	SB-8-SS-13	8/12/2019	9:50:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	23.2	1	1.365488	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-8-SS-2 Arsenic	418302	SB-8-SS-2	8/12/2019	9:20:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.98	1	0.599883	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-8-SS-4 Arsenic	418302	SB-8-SS-4	8/12/2019	9:30:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.08	1	0.907411	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-8-SS-8 Arsenic	418302	SB-8-SS-8	8/12/2019	9:40:00	418302-00	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	17.4	1	1.240549	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-9-SS-14 Arsenic	418302	SB-9-SS-14	8/13/2019	9:10:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.7	1	0.672098	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-9-SS-5 Arsenic	418302	SB-9-SS-5	8/13/2019	8:55:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.2	1	0.857332	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-9-SS-8 Arsenic	418302	SB-9-SS-8	8/13/2019	9:00:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.11	1	0.613842	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-12-SS-5 Arsenic	418302	SB-12-SS-5	8/12/2019	14:15:00	418302-02	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1	0	0	0	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-16-SS-4 Arsenic	418302	SB-16-SS-4	8/13/2019	11:10:00	418302-05	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1	0	0	0	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-7-SS-10 Arsenic	418302	SB-7-SS-10	8/12/2019	12:10:00	418302-01	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1	0	0	0	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-9-SS-2 Arsenic	418302	SB-9-SS-2	8/13/2019	8:45:00	418302-03	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1	0	0	0	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459

	LABREQUESTI	CUSTSAMPID	SAMPDATE	SAMPTIME	LABSAMPID	MATRIX	METHOD	PREPMETHOD	ANALYTE	ANALYTET	CASNUMB	Arsenic	D_Arsenic	Log_Arsenic	D_Log_Arsenic	DLTYPE	DILUTION	DL	RL	UNITS	SPIKECON	RECOVERY	UPPERCL	LOWERCL	ANALYST	ANADATE	QCBATCHID
SB-12-SS-5 Arsenic	418302	SB-12-SS-5	8/12/2019	14:15:00	418302-024	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1	0	0	0	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-16-SS-4 Arsenic	418302	SB-16-SS-4	8/13/2019	11:10:00	418302-052	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1	0	0	0	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-7-SS-10 Arsenic	418302	SB-7-SS-10	8/12/2019	12:10:00	418302-017	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1	0	0	0	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-9-SS-2 Arsenic	418302	SB-9-SS-2	8/13/2019	8:45:00	418302-036	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1	0	0	0	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-17-SS-11 Arsenic	418302	SB-17-SS-11	8/13/2019	10:40:00	418302-049	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.25	1	0.096910013	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-30-SS-2 Arsenic	418350	SB-30-SS-2	8/14/2019	13:35:00	418350-008	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.68	1	0.225309282	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-25-SS-5 Arsenic	418350	SB-25-SS-5	8/14/2019	11:00:00	418350-019	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.8	1	0.255272505	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-12-SS-1 Arsenic	418302	SB-12-SS-1	8/12/2019	14:02:00	418302-023	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	1.89	1	0.276461804	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-22-SS-9 Arsenic	418302	SB-22-SS-9	8/13/2019	14:30:00	418302-067	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.06	1	0.31386722	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-14-SS-10 Arsenic	418302	SB-14-SS-10	8/13/2019	8:15:00	418302-035	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.09	1	0.320146286	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-10-SS-2 Arsenic	418407	SB-10-SS-2	8/15/2019	9:20:00	418407-007	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.13	1	0.328379603	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-15-SS-6 Arsenic_average with dup	418302	SB-15-SS-6	8/13/2019	11:55:00	418302-055	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.345	1	0.370142847	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-16-SS-0 Arsenic	418302	SB-16-SS-0	8/13/2019	11:00:00	418302-050	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.6	1	0.414973348	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-25-SS-0 Arsenic	418350	SB-25-SS-0	8/14/2019	10:45:00	418350-017	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.62	1	0.418301291	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-23-SS-2 Arsenic	418350	SB-23-SS-2	8/14/2019	7:50:00	418350-012	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.64	1	0.421603927	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-6-SS-5 Arsenic	418302	SB-6-SS-5	8/12/2019	11:00:00	418302-012	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.7	1	0.431363764	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-15-SS-12 Arsenic	418302	SB-15-SS-12	8/13/2019	12:05:00	418302-057	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.74	1	0.437750563	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-14-SS-3 Arsenic	418302	SB-14-SS-3	8/13/2019	8:05:00	418302-033	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.77	1	0.442479769	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-10-SS-0 Arsenic	418407	SB-10-SS-0	8/15/2019	9:15:00	418407-006	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.78	1	0.444044796	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-13-SS-14 Arsenic	418302	SB-13-SS-14	8/12/2019	15:20:00	418302-031	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.83	1	0.451786436	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-17-SS-8 Arsenic_average with dup	418302	SB-17-SS-8	8/13/2019	10:35:00	418302-048	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.84	1	0.45331834	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-30-SS-0 Arsenic_average with dup	418350	SB-30-SS-0	8/14/2019	13:25:00	418350-007	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.84	1	0.45331834	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-12-SS-8 Arsenic_average with dup	418302	SB-12-SS-8	8/12/2019	14:20:00	418302-025	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	2.975	1	0.47348697	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-14-SS-1 Arsenic	418302	SB-14-SS-1	8/13/2019	8:00:00	418302-032	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.04	1	0.482873584	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-35-SS-15 Arsenic	418457	SB-35-SS-15	8/16/2019	11:25:00	418457-021	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.18	1	0.50242712	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205677
SB-16-SS-7 Arsenic_average with dup	418302	SB-16-SS-7	8/13/2019	11:15:00	418302-053	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.335	1	0.523095838	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-23-SS-6 Arsenic	418350	SB-23-SS-6	8/14/2019	8:00:00	418350-013	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.37	1	0.527629901	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-13-SS-0 Arsenic	418302	SB-13-SS-0	8/12/2019	14:44:00	418302-027	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.47	1	0.540329475	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-5-SS-15 Arsenic	418302	SB-5-SS-15	8/12/2019	10:40:00	418302-010	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.66	1	0.563481085	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-12-SS-12 Arsenic	418302	SB-12-SS-12	8/12/2019	14:25:00	418302-026	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.9	1	0.591064607	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-8-SS-2 Arsenic	418302	SB-8-SS-2	8/12/2019	9:20:00	418302-002	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	3.98	1	0.599883072	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-32-SS-6 Arsenic	418407	SB-32-SS-6	8/15/2019	13:10:00	418407-011	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.01	1	0.603144373	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-15-SS-9 Arsenic	418302	SB-15-SS-9	8/13/2019	12:00:00	418302-056	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.03	1	0.605305046	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-20-SS-9 Arsenic	418302	SB-20-SS-9	8/13/2019	13:35:00	418302-060	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.06	1	0.608526034	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-9-SS-8 Arsenic	418302	SB-9-SS-8	8/13/2019	9:00:00	418302-038	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.11	1	0.613841822	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-18-SS-8 Arsenic	418302	SB-18-SS-8	8/13/2019	10:00:00	418302-044	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.14	1	0.617000341	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-18-SS-4 Arsenic	418302	SB-18-SS-4	8/13/2019	9:55:00	418302-043	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.17	1	0.620136055	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-25-SS-8 Arsenic	418350	SB-25-SS-8	8/14/2019	11:05:00	418350-020	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.32	1	0.635483747	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-7-SS-15 Arsenic	418302	SB-7-SS-15	8/12/2019	12:15:00	418302-018	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.38	1	0.641474111	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-2-SS-6 Arsenic	418457	SB-2-SS-6	8/16/2019	10:18:00	418457-007	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.4	1	0.643452676	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-29-SS-2 Arsenic	418350	SB-29-SS-2	8/14/2019	12:20:00	418350-005	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.43	1	0.646403726	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-19-SS-0 Arsenic	418302	SB-19-SS-0	8/13/2019	9:15:00	418302-040	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.56	1	0.658964843	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-5-SS-8 Arsenic	418302	SB-5-SS-8	8/12/2019	10:30:00	418302-009	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.58	1	0.660865478	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-36-SS-5 Arsenic	418350	SB-36-SS-5	8/14/2019	13:10:00	418350-010	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.66	1	0.668385917	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-9-SS-14 Arsenic	418302	SB-9-SS-14	8/13/2019	9:10:00	418302-039	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.7	1	0.672097858	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-11-SS-10 Arsenic	418302	SB-11-SS-10	8/12/2019	12:45:00	418302-021	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.79	1	0.680335513	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-38-SS-1 Arsenic	418350	SB-38-SS-1	8/14/2019	9:00:00	418350-021	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.82	1	0.683047038	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-14-SS-8 Arsenic	418302	SB-14-SS-8	8/13/2019	8:10:00	418302-034	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.88	1	0.688419822	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-3-SS-10 Arsenic	418457	SB-3-SS-10	8/16/2019	9:30:00	418457-012	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.98	1	0.697229343	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-15-SS-3 Arsenic	418302	SB-15-SS-3	8/13/2019	11:45:00	418302-054	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.99	1	0.698100546	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-20-SS-1 Arsenic	418302	SB-20-SS-1	8/13/2019	13:20:00	418302-058	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	4.99	1	0.698100546	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-22-SS-7 Arsenic	418302	SB-22-SS-7	8/13/2019	14:20:00	418302-066	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.08	1	0.705863712	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-35-SS-10 Arsenic	418457	SB-35-SS-10	8/16/2019	11:20:00	418457-020	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.15	1	0.711807229	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-11-SS-2 Arsenic	418302	SB-11-SS-2	8/12/2019	12:35:00	418302-019	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.24	1	0.719331287	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-23-SS-0 Arsenic	418350	SB-23-SS-0	8/14/2019	7:45:00	418350-011	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.3	1	0.72427587	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-18-SS-13 Arsenic	418302	SB-18-SS-13	8/13/2019	10:10:00	418302-045	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.34	1	0.727541257	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-16-SS-2 Arsenic	418302	SB-16-SS-2	8/13/2019	11:05:00	418302-051	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.46	1	0.737192643	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-29-SS-4 Arsenic_average with dup	418350	SB-29-SS-4	8/14/2019	12:30:00	418350-006	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.66	1	0.752816431	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-5-SS-4 Arsenic	418302	SB-5-SS-4	8/12/2019	10:25:00	418302-008	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.73	1	0.758154622	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-4-SS-2 Arsenic	418457	SB-4-SS-2	8/16/2019	7:35:00	418457-014	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.78	1	0.761927838	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-3-SS-7 Arsenic	418457	SB-3-SS-7	8/16/2019	9:25:00	418457-011	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.8	1	0.763427994	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-32-SS-8 Arsenic	418407	SB-32-SS-8	8/15/2019	13:20:00	418407-012	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.81	1	0.764176132	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-24-SS-1 Arsenic	418350	SB-24-SS-1	8/14/2019	8:10:00	418350-014	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.93	1	0.773054693	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-10-SS-7 Arsenic	418407	SB-10-SS-7	8/15/2019	9:45:00	418407-009	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	5.96	1	0.77524626	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-32-SS-14 Arsenic_average with dup	418407	SB-32-SS-14	8/15/2019	13:30:00	418407-013	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.06	1	0.782472624	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-28-SS-2 Arsenic	418350	SB-28-SS-2	8/14/2019	8:40:00	418350-004	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.21	1	0.7930916	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-33-SS-4 Arsenic	418407	SB-33-SS-4	8/15/2019	7:30:00	418407-003	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.34	1	0.802089258	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-3-SS-5 Arsenic_average with dup	418457	SB-3-SS-5	8/16/2019	9:20:00	418457-010	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.405	1	0.806519134	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-1-SS-13 Arsenic	418457	SB-1-SS-13	8/16/2019	8:50:00	418457-004	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.52	1	0.814247596	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-37-SS-1 Arsenic	418457	SB-37-SS-1	8/16/2019	10:45:00	418457-022	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.91	1	0.839478047	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205677
SB-3-SS-0 Arsenic	418457	SB-3-SS-0	8/16/2019	9:10:00	418457-008	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	6.94	1	0.84135947	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-20-SS-5 Arsenic_average with dup	418302	SB-20-SS-5	8/13/2019	13:25:00	418302-059	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.075	1	0.849726444	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-25-SS-2 Arsenic	418350	SB-25-SS-2	8/14/2019	10:50:00	418350-018	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.12	1	0.852479994	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-9-SS-5 Arsenic	418302	SB-9-SS-5	8/13/2019	8:55:00	418302-037	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.2	1	0.857332496	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-2-SS-1 Arsenic	418457	SB-2-SS-1	8/16/2019	10:00:00	418457-005	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.21	1	0.857935265	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-10-SS-4 Arsenic	418407	SB-10-SS-4	8/15/2019	9:40:00	418407-008	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.37	1	0.867467488	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-4-SS-10 Arsenic	418457	SB-4-SS-10	8/16/2019	7:50:00	418457-016	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.48	1	0.873901598	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-17-SS-2 Arsenic	418302	SB-17-SS-2	8/13/2019	10:28:00	418302-046	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.51	1	0.875639937	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-4-SS-5 Arsenic	418457	SB-4-SS-5	8/16/2019	7:45:00	418457-015	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	7.76	1	0.889861721	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676

SB-33-SS-0	Arsenic	418407	SB-33-SS-0	8/15/2019	7:10:00	418407-001	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.04	1	0.905256049	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-8-SS-4	Arsenic	418302	SB-8-SS-4	8/12/2019	9:30:00	418302-003	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.08	1	0.907411361	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-6-SS-1	Arsenic	418302	SB-6-SS-1	8/12/2019	10:55:00	418302-011	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.24	1	0.915927212	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-45-SS-0	Arsenic	418457	SB-45-SS-0	8/16/2019	11:50:00	418457-023	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.33	1	0.920645001	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/23/2019	QC1205677
SB-11-SS-15	Arsenic	418302	SB-11-SS-15	8/12/2019	12:50:00	418302-022	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.47	1	0.92788341	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-6-SS-12	Arsenic	418302	SB-6-SS-12	8/12/2019	11:20:00	418302-014	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.63	1	0.936010796	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-32-SS-2	Arsenic	418407	SB-32-SS-2	8/15/2019	13:00:00	418407-010	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.71	1	0.940018155	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-11-SS-5	Arsenic	418302	SB-11-SS-5	8/12/2019	12:40:00	418302-020	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.76	1	0.942504106	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-46-SS-2	Arsenic	418457	SB-46-SS-2	8/16/2019	11:40:00	418457-026	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	8.78	1	0.943494516	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/23/2019	QC1205677
SB-44-SS-0	Arsenic	418407	SB-44-SS-0	8/15/2019	8:05:00	418407-004	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.04	1	0.95616843	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-13-SS-7	Arsenic	418302	SB-13-SS-7	8/12/2019	15:05:00	418302-030	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.26	1	0.966610987	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-35-SS-2	Arsenic	418457	SB-35-SS-2	8/16/2019	11:05:00	418457-018	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.38	1	0.972202838	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-7-SS-6	Arsenic	418302	SB-7-SS-6	8/12/2019	12:00:00	418302-016	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.65	1	0.984527313	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-26-SS-1	Arsenic	418350	SB-26-SS-1	8/14/2019	10:25:00	418350-001	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.7	1	0.986771734	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-19-SS-2	Arsenic	418302	SB-19-SS-2	8/13/2019	9:20:00	418302-041	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.72	1	0.987666265	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-34-SS-1	Arsenic	418407	SB-34-SS-1	8/15/2019	14:10:00	418407-016	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.72	1	0.987666265	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-46-SS-0	Arsenic	418457	SB-46-SS-0	8/16/2019	11:35:00	418457-025	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.77	1	0.989894564	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/23/2019	QC1205677
SB-13-SS-2	Arsenic	418302	SB-13-SS-2	8/12/2019	14:50:00	418302-028	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.88	1	0.994756945	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-3-SS-2	Arsenic	418457	SB-3-SS-2	8/16/2019	9:15:00	418457-009	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	9.9	1	0.995635195	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-45-SS-2	Arsenic_average with dup	418457	SB-45-SS-2	8/16/2019	11:55:00	418457-024	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.015	1	1.000650954	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/23/2019	QC1205677
SB-1-SS-8	Arsenic	418457	SB-1-SS-8	8/16/2019	8:45:00	418457-003	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.2	1	1.008600172	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-36-SS-1	Arsenic	418350	SB-36-SS-1	8/14/2019	13:55:00	418350-009	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.3	1	1.012837225	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-35-SS-7	Arsenic	418457	SB-35-SS-7	8/16/2019	11:15:00	418457-019	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.4	1	1.017033339	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-18-SS-1	Arsenic	418302	SB-18-SS-1	8/13/2019	9:45:00	418302-042	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.9	1	1.037426498	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-4-SS-14	Arsenic	418457	SB-4-SS-14	8/16/2019	7:55:00	418457-017	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	10.9	1	1.037426498	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-5-SS-1	Arsenic	418302	SB-5-SS-1	8/12/2019	10:20:00	418302-007	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.2	1	1.049218023	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-8-SS-0	Arsenic	418302	SB-8-SS-0	8/12/2019	9:05:00	418302-001	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.4	1	1.056904851	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-33-SS-2	Arsenic	418407	SB-33-SS-2	8/15/2019	7:20:00	418407-002	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.7	1	1.068185862	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-31-SS-0	Arsenic	418407	SB-31-SS-0	8/15/2019	13:45:00	418407-014	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	11.9	1	1.075546961	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628
SB-21-SS-0	Arsenic	418302	SB-21-SS-0	8/13/2019	13:45:00	418302-061	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.4	1	1.093421685	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-24-SS-5	Arsenic	418350	SB-24-SS-5	8/14/2019	8:20:00	418350-015	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.5	1	1.096910013	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-13-SS-4	Arsenic	418302	SB-13-SS-4	8/12/2019	14:55:00	418302-029	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.6	1	1.100370545	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205459
SB-6-SS-9	Arsenic	418302	SB-6-SS-9	8/12/2019	11:10:00	418302-013	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.6	1	1.100370545	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-1-SS-4	Arsenic_average with dup	418457	SB-1-SS-4	8/16/2019	8:40:00	418457-002	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.63	1	1.101403351	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-27-SS-3	Arsenic	418350	SB-27-SS-3	8/14/2019	9:45:00	418350-003	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	12.8	1	1.10720997	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-7-SS-1	Arsenic	418302	SB-7-SS-1	8/12/2019	11:50:00	418302-015	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.3	1	1.123851641	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-21-SS-4	Arsenic	418302	SB-21-SS-4	8/13/2019	13:55:00	418302-063	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.7	1	1.136720567	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-5-SS-0	Arsenic	418302	SB-5-SS-0	8/12/2019	10:10:00	418302-006	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	13.9	1	1.1430148	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-24-SS-9	Arsenic	418350	SB-24-SS-9	8/14/2019	8:30:00	418350-016	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	14.7	1	1.167317335	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205474
SB-17-SS-5	Arsenic	418302	SB-17-SS-5	8/13/2019	10:30:00	418302-047	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	14.8	1	1.170261715	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205460
SB-21-SS-2	Arsenic	418302	SB-21-SS-2	8/13/2019	13:50:00	418302-062	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	16	1	1.204119983	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205472
SB-27-SS-1	Arsenic	418350	SB-27-SS-1	8/14/2019	9:30:00	418350-002	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	16.1	1	1.206825876	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205473
SB-8-SS-8	Arsenic	418302	SB-8-SS-8	8/12/2019	9:40:00	418302-004	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	17.4	1	1.240549248	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/18/2019	QC1205456
SB-4-SS-0	Arsenic	418457	SB-4-SS-0	8/16/2019	7:30:00	418457-013	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	18.1	1	1.257678575	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/22/2019	QC1205676
SB-44-SS-2	Arsenic_average with dup	418407	SB-44-SS-2	8/15/2019	8:15:00	418407-005	Solid	EPA 6010B	EPA 3050B	Arsenic	T	7440-38-2	15.75	1	1.197280558	1	RDL	1	0.36	1	mg/Kg	NA	NA	NA	NA	kedy	8/21/2019	QC1205628

	General Statistics on Uncensored Data	
Date/Time of Computation	ProUCL 5.110/4/2019 11:40:02 AM	
User Selected Options		
From File	Arsenic_no_outliers.xls	
Full Precision	OFF	

From File: Arsenic_no_outliers.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Arsenic	124	0	120	4	3.23%	1	1	6.888	15.82	3.978	0.578
Log_Arsenic	124	0	120	4	3.23%	0	0	0.755	0.0821	0.287	0.379

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Arsenic	120	0	1.25	18.1	7.084	6.01	15.29	3.91	3.984	0.751	0.552
Log_Arsenic	120	0	0.0969	1.258	0.78	0.779	0.0658	0.256	0.278	-0.284	0.329

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Arsenic	124	0	2.606	3.273	4.003	5.87	9.705	10.09	12.6	14.58	17.1
Log_Arsenic	124	0	0.416	0.515	0.602	0.769	0.987	1.004	1.1	1.164	1.233

	General Statistics on Uncensored Data	
Date/Time of Computation	ProUCL 5.110/4/2019 11:59:35 AM	
User Selected Options		
From File	Arsenic_Cleaned_Data.xls	
Full Precision	OFF	

From File: Arsenic_Cleaned_Data.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Arsenic	130	0	126	4	3.08%	1	1	7.97	46.12	6.791	0.852
Log_Arsenic	130	0	126	4	3.08%	0	0	0.787	0.101	0.318	0.403

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Arsenic	126	0	1.25	53.4	8.191	6.373	46.36	6.809	4.377	3.413	0.831
Log_Arsenic	126	0	0.0969	1.728	0.812	0.804	0.0844	0.29	0.283	0.185	0.358

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Arsenic	130	0	2.618	3.363	4.038	6.135	9.895	10.96	13.98	17.79	35.23
Log_Arsenic	130	0	0.418	0.527	0.606	0.788	0.995	1.04	1.145	1.25	1.545

1				Lognormal Background Statistics for Data Sets with Non-Detects								
2			User Selected Options									
3			Date/Time of Computation	ProUCL 5.110/9/2019 3:52:08 PM								
4			From File	Arsenic_no_outliers.xls								
5			Full Precision	OFF								
6			Confidence Coefficient	95%								
7			Coverage	95%								
8			Different or Future K Observations	1								
9			Number of Bootstrap Operations	2000								
10												
11	**Arsenic**											
12												
13						**General Statistics**						
14						Total Number of Observations	124			Number of Distinct Observations	116	
15						Number of Detects	120			Number of Non-Detects	4	
16						Number of Distinct Detects	115			Number of Distinct Non-Detects	1	
17						Minimum Detect	1.25			Minimum Non-Detect	1	
18						Maximum Detect	18.1			Maximum Non-Detect	1	
19						Variance Detected	15.29			Percent Non-Detects	3.226%	
20						Mean Detected	7.084			SD Detected	3.91	
21						Mean of Detected Logged Data	1.797			SD of Detected Logged Data	0.59	
22												
23						**Critical Values for Background Threshold Values (BTVs)**						
24						Tolerance Factor K (For UTL)	1.892			d2max (for USL)	3.281	
25												
26						**Lognormal GOF Test on Detected Observations Only**						
27						Shapiro Wilk Approximate Test Statistic	0.967			**Shapiro Wilk GOF Test**		
28						5% Shapiro Wilk P Value	0.0476			Data Not Lognormal at 5% Significance Level		
29						Lilliefors Test Statistic	0.062			**Lilliefors GOF Test**		
30						5% Lilliefors Critical Value	0.0812			Detected Data appear Lognormal at 5% Significance Level		
31						**Detected Data appear Approximate Lognormal at 5% Significance Level**						
32												
33						**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**						
34						Mean	6.888			SD	3.978	
35						95% UTL95% Coverage	14.42			95% KM UPL (t)	13.51	
36						95% KM Chebyshev UPL	24.3			90% KM Percentile (z)	11.99	
37						95% KM Percentile (z)	13.43			99% KM Percentile (z)	16.14	
38						95% KM USL	19.94					
39												
40						**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**						
41						Mean in Original Scale	6.902			Mean in Log Scale	1.75	
42						SD in Original Scale	3.975			SD in Log Scale	0.636	
43						95% UTL95% Coverage	19.17			95% BCA UTL95% Coverage	15.96	
44						95% Bootstrap (%) UTL95% Coverage	16			95% UPL (t)	16.58	
45						90% Percentile (z)	13			95% Percentile (z)	16.38	
46						99% Percentile (z)	25.26			95% USL	46.36	
47												
48						**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**						
49						KM Mean of Logged Data	1.739			95% KM UTL (Lognormal)95% Coverage	19.84	
50						KM SD of Logged Data	0.66			95% KM UPL (Lognormal)	17.06	

	A	B	C	D	E	F	G	H	I	J	K	L
51	95% KM Percentile Lognormal (z)					16.85	95% KM USL (Lognormal)					49.61
52												
53	**Background DL/2 Statistics Assuming Lognormal Distribution**											
54	Mean in Original Scale					6.872	Mean in Log Scale					1.717
55	SD in Original Scale					4.019	SD in Log Scale					0.73
56	95% UTL95% Coverage					22.14	95% UPL (t)					18.74
57	90% Percentile (z)					14.18	95% Percentile (z)					18.48
58	99% Percentile (z)					30.39	95% USL					61.01
59	**DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.**											
60												
61	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
62	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
63	and consists of observations collected from clean unimpacted locations.											
64	The use of USL tends to provide a balance between false positives and false negatives provided the data											
65	represents a background data set and when many onsite observations need to be compared with the BTV.											
66												

APPENDIX H

Screening Level Human Health Risk Evaluation

MEMORANDUM

Date: December 3, 2019

To: Mauricio Escobar, Principal Hydrogeologist, Roux Associates, Inc.
Jaydeep Purandare, Senior Engineer, Roux Associates, Inc.
From: Catherine Boston, Senior Risk Assessor, Roux Associates, Inc.

Subject: **Revised Screening Level Human Health Risk Evaluation**
Artesia Acquisition Company, LLC
3701 North Pacific Place, Long Beach, California

On behalf of Artesia Acquisition Company, LLC, Roux Associates, Inc. (Roux) has prepared this revised screening level human health risk evaluation ("risk evaluation") for the property located at 3701 North Pacific Place, Long Beach, California (Site). The Site has been vacant and dilapidated since 2009.

This risk evaluation has been prepared to determine if contamination present at the Site poses an unacceptable level of risk to current/future construction workers or future industrial workers. This document has been prepared to facilitate discussions with the Department of Toxic Substance Control (DTSC) regarding future redevelopment of the Site. The risk evaluation has been prepared with input from DTSC's Human and Ecological Risk Office (HERO). Pursuant to the DTSC's *Preliminary Endangerment Assessment Guidance Manual*,[1] this evaluation consists of an abbreviated evaluation of four components:

- **Evaluation of Exposure Pathways:** Exposure to chemicals may occur via dermal contact, ingestion, or inhalation of contaminants of potential concern (COPCs) present in soil or air at the Site.

- **Evaluation of Exposure to COPCs and Exposure Point Concentrations:** Identifies contaminants found in media at the Site and determines appropriate exposure point concentrations (EPCs) for COPCs.

- **Evaluation of Chemical Toxicity:** Assesses the potential adverse effects of the COPCs and compiles non-carcinogenic and carcinogenic toxicity values for use in numerical risk estimates.

- **Risk Characterization:** Integrates the results of the hazard assessment to provide a quantitative estimation of non-carcinogenic and carcinogenic risks.

This revised risk evaluation incorporates comments received from the DTSC on November 20, 2019.

Default exposure parameters from the DTSC and United States Environmental Protection Agency (USEPA) were utilized to represent a Reasonable Maximum Exposure (RME) scenario. An RME scenario is the highest exposure that is reasonably expected to occur at a Site. The risk evaluation assesses future exposure to soil and indoor air (as applicable) in the absence of any remedial action. However, as has been discussed with DTSC and HERO, mitigating measures are planned as part of future redevelopment of the Site. The risk evaluation provides a conservative estimate of the potential non-carcinogenic and carcinogenic risks associated with exposure to contaminants of potential concerns (COPCs) detected at the Site.

[1] DTSC. 2015. Preliminary Endangerment Assessment Guidance Manual: A guidance manual for evaluating hazardous substance release sites: dated October 2015.

12 Gill Street, Suite 4700 ■ Woburn, Massachusetts 01801 ■ +1.781.569.4000 ■ www.rouxinc.com
California ■ Illinois ■ Massachusetts ■ New Jersey ■ New York ■ Texas

A description of the Site background and Site setting is provided in the Report of Findings, to which this risk evaluation is appended. The Site was previously owned by Oil Operators, Inc., a non-profit co-op that functioned as a central oil brine treatment facility for member oil companies beginning in 1926. Generally, the Site is located in a mixed industrial and residential area, with residences and an elementary school parking lot located to the northeast of the Site. The planned future use of the property is for self-storage commercial/industrial activities, and redevelopment plans call for regrading and paving of the property.

Exposure Pathways and Media of Concern

As discussed below, points of potential human contact are limited to soil and indoor air:

- **Soil pathway**: The Site is generally unpaved and flat with the exception of a slope in the northern portion of the Site. Prior to the 2000s, the site was capped with up to 10 feet of fill. Future redevelopment plans at the Site entail regrading of the fill soils above the impacted sump materials. Post-grading will flatten the Site and maintain a minimum of two feet of soil cover in addition to paving over majority of the soil and construction of a building or buildings on southern portion of the Site, which will entail disruption of subsurface soil. Therefore, the soil pathway is considered a complete exposure pathway.

- **Groundwater/surface water pathway**: The groundwater pathway is not considered a complete exposure pathway because it assumed the groundwater will not be used for drinking water purposes. In July of 2008, a petition for no groundwater remediation was submitted to DTSC. In general, regional water quality is poor due to salt water intrusion and industrial waste disposal in area of site. The historic oil and gas production in the area and on Site contributed to poor water quality such that no active drinking water production wells exists within one mile of the Site. Therefore, exposure to impacted surface water is not a complete exposure pathway at the Site.

- **Indoor Air pathway**: Volatile Organic Compounds (VOCs) have been detected in soil vapor samples collected at the Site. Therefore, the indoor air pathway is considered a complete exposure pathway and inhalation of indoor air was quantitatively evaluated in the risk evaluation.

As previously discussed, the future intended use of the property is for commercial/industrial purposes. Although residences are located offsite to the north, offsite residential receptors were not quantitatively evaluated herein, and will be evaluated post-development and included in the Response Plan implementation report. Following the implementation of the Response Plan, additional data will be collected (confirmation sampling, and soil vapor sampling). This additional data will be used to quantitively evaluate offsite receptors, and ensure that no further response action or mitigating measures are necessary. Therefore, as summarized below and as discussed with DTSC, offsite residents were not evaluated at this time, but construction workers and future commercial/industrial workers were quantitatively evaluated in the risk evaluation:

Primary Source	Secondary Source	Exposure Media	Exposure Route	Receptor
Historical on-site Releases	Impacted soil	Soil	Ingestion, dermal contact, inhalation of particles and volatile chemicals in ambient air	●Construction Worker; ●Future Commercial/Industrial Worker
		Indoor Air	Inhalation	●Future Commercial/Industrial Worker

Contaminants of Potential Concern and Exposure Point Concentrations

Contaminants detected in each evaluated media were considered COPCs in the risk evaluation. Soil analytical data and soil vapor data collected by Roux in 2019 were utilized in the risk evaluation to evaluate the soil and air indoor air pathways, as these data are most representative of existing Site

conditions. Because sampling investigations conducted in 2009 focused on the characterization of the underlying waste, this previous data was not evaluated in this risk evaluation. All analytical results from samples collected at the Site are provided in the Report of Findings as Tables 2 through 13. Duplicate samples were averaged with their parent sample; half of the reporting limit was used if a non-detect was averaged with a detected value. EPCs were calculate for soil and soil vapor, as follows:

- **Soil**: Soil data collected from 0-15' was used as the exposure point for both construction worker and future commercial/industrial workers (assuming soil disturbing activities). The 95% Upper Confidence Limit (UCL) of the mean concentration was utilized.

- **Soil Vapor**: Soil vapor data collected from 5' and 10' were used to evaluate the indoor air exposure point for the future commercial/industrial worker receptor. The maximum detected concentrations were utilized, consistent with DTSC guidance (DTSC, 2015). Indoor air concentrations were calculated from soil vapor concentrations using methodology described in DTSC's PEA Guidance[2] and DTSC's Vapor Intrusion Guidance:[3]

  $$C_{indoor} = \alpha \times C_{soil\ vapor}$$

  where:

  C_{indoor}= Indoor air concentration in µg/m^3
  α= Attenuation factor (assumed to be equal to 0.0005 consistent with assumptions for future commercial scenarios at the contaminant source per DTSC, or 0.03 per USEPA default attenuation factor in accordance with HERO HHRA Note 4).[4]
  $C_{soil\ vapor}$=Soil vapor air concentration in µg/m^3

As discussed in more detail below, arsenic and lead were evaluated separately and therefore were not included in the screening level evaluation. Methane was not evaluated in the risk evaluation as discussed with HERO staff. The 95% UCL of the mean statistics were calculated in USEPA's ProUCL Software.[5] ProUCL backup is provided as **Attachment 1**.

Summary of Soil Data (0'-15' bgs)

Soil Exposure Point Concentrations (EPCs)				
COPC	**Cas No.**	**Frequency of Detection**	**EPC (mg/kg)**	**Statistic Selected[8]**
Petroleum - Gasoline	NA	1/130	2.20E+02	Maximum Concentration
Petroleum - Diesel	NA	36/130	4.10E+01	95% H-UCL (KM-Log)
Petroleum - Motor Oil	NA	96/130	5.00E+02	95% KM (Chebyshev) UCL
Antimony	7440-36-0	3/130	3.30E+00	95% KM (t) UCL
Barium	7440-39-3	130/130	2.23E+02	95% H-UCL
Cadmium[2]	7440-43-9	116/130	1.01E+00	95% KM (BCA) UCL
Chromium, Total[3]	7440-47-3	130/130	3.91E+01	95% Modified-t (UCL)
Cobalt[4]	7440-48-4	130/130	1.70E+01	95% Modified-t (UCL)
Copper	7440-50-8	130/130	4.95E+01	95% Chebyshev (Mean, Sd) UCL

[2] DTSC. 2015. Preliminary Endangerment Assessment Guidance Manual: A guidance manual for evaluating hazardous substance release sites: dated October 2015.
[3] DTSC. 2011. DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October 2011. Accessed at: https://www.dtsc.ca.gov/assessingRisk/upload/Final_VIG_Oct_2011.pdf
[4] DTSC. 2011. DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October 2011. Accessed at: https://www.dtsc.ca.gov/assessingRisk/upload/Final_VIG_Oct_2011.pdf
[5] USEPA ProUCL Version 5.1.00 (May 2016).

Soil Exposure Point Concentrations (EPCs)				
COPC	Cas No.	Frequency of Detection	EPC (mg/kg)	Statistic Selected[8]
Molybdenum	7439-98-7	5/130	1.90E+00	95% KM (t) UCL
Nickel[5]	7440-02-0	130/130	2.21E+01	95% Modified-t (UCL)
Selenium	7782-49-2	2/130	3.31E+00	Maximum Concentration
Thallium (Carbonate)	6533-73-9	6/130	3.05E+00	95% KM (t) UCL
Vanadium[6]	7440-62-2	130/130	4.97E+01	95% Modified-t (UCL)
Zinc	7440-66-6	130/130	4.80E+02	95% Chebyshev (Mean, Sd) UCL
Mercury	7469-97-6	21/130	1.25E-01	95% H-UCL (KM-Log)
Acetone	67-64-1	1/22	1.60E+02	Maximum Concentration
Benzene	71-43-2	1/22	4.80E+00	Maximum Concentration
Bromoform	75-25-2	1/22	9.00E+00	Maximum Concentration
t-Butyl alcohol (TBA)	75-65-0	1/22	9.50E+00	Maximum Concentration
Toluene	108-88-3	1/22	4.15E+00	Maximum Concentration
4,4'-DDT	50-29-3	3/34	1.50E+01	Maximum Concentration

(1) - ProUCL recommends two different UCLs for Arsenic, the 95% KM Approximate Gamma UCL (9.065 mg/kg) and the 95% GROS Approximate Gamma UCL (9.025 mg/kg), the slightly more conservative value was selected as the EPC.

(2) - ProUCL recommends three different UCLs for Cadmium, the 95% KM (t) UCL (0.985 mg/kg), the 95% KM (BCA) UCL (1.008 mg/kg), and the 95% H-UCL (KM-Log), the most conservative value was selected as the EPC.

(3) - ProUCL recommends two different UCLs for Chromium, the 95% Student's-t UCL (38.65 mg/kg) and the 95% Modified-t UCL (39.11 mg/kg) that adjusts for skewness, the more conservative value was selected as the EPC.

(4) - ProUCL recommends two different UCLs for Cobalt, the 95% Student's-t UCL (16.72 mg/kg) and the 95% Modified-t UCL (16.98 mg/kg) that adjusts for skewness, the more conservative value was selected as the EPC.

(5) - ProUCL recommends two different UCLs for Nickel, the 95% Student's-t UCL (21.99 mg/kg) and the 95% Modified-t UCL (22.08 mg/kg) that adjusts for skewness, the more conservative value was selected as the EPC.

(6) - ProUCL recommends two different UCLs for Vanadium, the 95% Student's-t UCL (49.69 mg/kg) and the 95% Modified-t UCL (49.71 mg/kg) that adjusts for skewness, the more conservative value was selected as the EPC.

(7) - ProUCL recommends two different UCLs for Mercury, the KM Student's t (0.123 mg/kg) and the 95% H-UCL (KM-Log) (0.125 mg/kg), the more conservative value was selected as the EPC.

(8) - When insufficient sample size to compute a reliable statistic in ProUCL, the maximum concentration selected as the EPC.

Summary of Soil Vapor Data (5' to 10' bgs)

Soil Vapor Exposure Point Concentrations EPCs				
COPC	Cas No.	Frequency of Detection	EPC ($\mu g/m^3$)	Statistic Selected[1]
Methyl Ethyl Ketone (2-butanone)	78-93-3	12/24	3.6E+02	Maximum Concentration
Difluoroethane, 1,1-	75-37-6	8/24	1.8E+02	Maximum Concentration
Benzene	71-43-2	3/24	1.0E+03	Maximum Concentration
Carbon Disulfide	75-15-0	1/24	2.6E+02	Maximum Concentration
Chloromethane	74-87-3	5/24	6.9E+01	Maximum Concentration
Ethylbenzene	100-41-4	1/24	5.9E+01	Maximum Concentration

Soil Vapor Exposure Point Concentrations EPCs				
COPC	Cas No.	Frequency of Detection	EPC ($\mu g/m^3$)	Statistic Selected[1]
Xylene, (m,p)-[2]	179601-23-1	1/24	6.7E+01	Maximum Concentration
Xylene, o-	95-47-6	1/24	2.9E+01	Maximum Concentration
Tetrachloroethene	127-18-4	1/24	4.9E+01	Maximum Concentration
Toluene	108-88-3	1/24	7.1E+01	Maximum Concentration

(1) m-Xylene and p-Xylene are reported together as m,p-Xylene.
(2) $\mu g/m^3$ = micrograms per cubic meter

Human Health Screening Levels

To evaluate the construction worker and future commercial/industrial worker receptors, screening values for non-carcinogenic and carcinogenic effects were utilized in the risk evaluation as follows:

- **Soil**: Screening values were obtained from DTSC HHRA Note 3. Consistent with DTSC's PEA Guidance,[6] San Francisco Bay Regional Water Quality Control Board (SFBRQWCB) health-risk-based Environmental Screening Levels (ESLs)[7] were utilized for TPH. Consistent with DTSC's PEA Guidance (DTSC, 2015), USEPA 2019 Regional Screening Levels (RSLs) were utilized if screening levels were not provided in DTSC Note 3. Screening levels for construction workers were evaluated using SFBRWQCB ESLs for all contaminants for consistency; the use of ESLs for construction worker scenarios is more protective than the commercial/industrial worker exposure scenario.

- **Indoor Air**: If available, the DTSC HHR Note 3 recommended screening levels were utilized for the indoor air evaluation. If screening levels for a COPC were not listed in Note 3, the USEPA 2019 RSLs for indoor workers were used as screening levels.

Soil Human Health Screening Levels (mg/kg) Utilized in the Risk Evaluation

COPC	Construction Worker - Cancer	Construction Worker - Non-Cancer	Source	Industrial Worker – Cancer	Industrial Worker – Non-cancer	Source
Petroleum - Gasoline	--	1.82E+03	2019 SFRWQCB ESLs	--	2.00E+03	2019 SFRWQCB ESLs
Petroleum - Diesel	--	1.08E+03	2019 SFRWQCB ESLs	--	1.22E+03	2019 SFRWQCB ESLs
Petroleum - Motor Oil	--	5.45E+04	2019 SFRWQCB ESLs	--	1.80E+05	2019 SFRWQCB ESLs
Antimony (metallic)	--	4.96E+01	2019 SFRWQCB ESLs	--	4.70E+02	USEPA 2019 RSLs

[6] DTSC. 2015. Preliminary Endangerment Assessment Guidance Manual: A guidance manual for evaluating hazardous substance release sites: dated October 2015.
[7] San Francisco Bay Regional Water Quality Control Board, 2019. Environmental Screening Levels, dated January 2019.

COPC	Construction Worker - Cancer	Construction Worker - Non-Cancer	Source	Industrial Worker – Cancer	Industrial Worker – Non-cancer	Source
Barium	--	3.02E+03	2019 SFRWQCB ESLs	--	2.20E+05	USEPA 2019 RSLs
Cadmium (diet)	--	5.09E+01	2019 SFRWQCB ESLs	4.00E+03	7.80E+02	DTSC HHRA Note 3
Chromium, Total	--	--	2019 SFRWQCB ESLs	--	--	NA
Cobalt	4.91E+01	2.79E+01	2019 SFRWQCB ESLs	1.90E+03	3.50E+02	USEPA 2019 RSLs
Copper	--	1.42E+04	2019 SFRWQCB ESLs	--	4.70E+04	USEPA 2019 RSLs
Molybdenum	--	1.77E+03	2019 SFRWQCB ESLs	--	5.80E+03	USEPA 2019 RSLs
Nickel	1.70E+03	8.63E+01	2019 SFRWQCB ESLs	6.40E+04	1.10E+04	DTSC HHRA Note 3
Selenium	--	1.75E+03	2019 SFRWQCB ESLs	--	5.80E+03	USEPA 2019 RSLs
Thallium Carbonate	--	3.54E+00	2019 SFRWQCB ESLs	--	2.30E+01	DTSC HHRA Note 3
Vanadium and Compounds	--	4.66E+02	2019 SFRWQCB ESLs	--	5.80E+03	USEPA 2019 RSLs
Zinc and Compounds	--	1.06E+05	2019 SFRWQCB ESLs	--	3.50E+05	USEPA 2019 RSLs
Mercury	--	4.36E+01	2019 SFRWQCB ESLs	--	4.40E+00	DTSC HHRA Note 3
Acetone	--	2.72E+05	2019 SFRWQCB ESLs	--	6.70E+05	USEPA 2019 RSLs
Benzene	3.28E+01	4.54E+01	2019 SFRWQCB ESLs	1.40E+00	4.60E+01	DTSC HHRA Note 3
Bromoform	--	7.08E+03	2019 SFRWQCB ESLs	8.60E+01	3.00E+03	DTSC HHRA Note 3
t-Butyl alcohol (TBA)	--	--	2019 SFRWQCB ESLs	--	--	NA

COPC	Construction Worker - Cancer	Construction Worker - Non-Cancer	Source	Industrial Worker – Cancer	Industrial Worker – Non-cancer	Source
Toluene	--	4.70E+03	2019 SFRWQCB ESLs	--	5.30E+03	DTSC HHRA Note 3
4,4'-DDT	--	1.41E+02	2019 SFRWQCB ESLs	7.10E+00	4.30E+02	DTSC HHRA Note 3

Industrial Indoor Air Human Health Screening Levels (µg/m^3) Utilized in the Risk Evaluation

COPC	Cas No.	Cancer	Non-cancer	Source of Screening Values
Methyl Ethyl Ketone (2-butanone)	78-93-3	--	2.2E+04	USEPA 2019 RSLs
Difluoroethane, 1,1-	75-37-6	--	1.8E+05	USEPA 2019 RSLs
Benzene	71-43-2	4.2E-01	1.3E+01	DTSC HHRA Note 3
Carbon Disulfide	75-15-0	--	3.1E+03	USEPA 2019 RSLs
Chloromethane	74-87-3	--	3.9E+02	USEPA 2019 RSLs
Ethylbenzene	100-41-4	4.9E+00	4.4E+03	USEPA 2019 RSLs
Xylene, m-	108-38-3	--	4.4E+02	USEPA 2019 RSLs
Xylene, p-	106-42-3	--	4.4E+02	USEPA 2019 RSLs
Xylene, o-	95-47-6	--	4.4E+02	USEPA 2019 RSLs
Xylenes	1330-20-7	--	4.4E+02	USEPA 2019 RSLs
Tetrachloroethene	127-18-4	2.0E+00	1.8E+02	DTSC HHRA Note 3
Toluene	108-88-3	--	1.3E+03	DTSC HHRA Note 3

Toxicity Values

The toxicity assessment describes the quantitative relationship between the extent of exposure to a contaminant and the increased likelihood and/or severity of adverse effects. This quantitative relationship generally takes the form of toxicity values that are identified for use in risk evaluations. Toxicity values are used to quantify the chance of observing cancer or non-cancer effects in exposed receptors. Toxicity values may be based on epidemiological studies or animal studies. Toxicological thresholds are represented by reference doses (RfDs) for oral exposures and reference concentrations (RfCs) for inhalation exposures. The RfDs and RfCs are estimates (with uncertainty spanning, in some cases, an order of magnitude) of daily exposures to the human population (including sensitive subgroups) that are likely to be without an appreciable risk of deleterious effects during a lifetime. For chemicals that are classified as possible, probable, or known human carcinogens, USEPA calculates a cancer slope factor (CSF) for oral exposures and an inhalation unit risk (IUR) for inhalation exposures when sufficient information is available to support the calculation. Toxicity values are incorporated in the screening levels utilized in the risk evaluations.

Risk Characterization

The risk characterization process integrates the results of the data evaluation, exposure assessment, and toxicity assessment to provide a quantitative estimation of non-carcinogenic and carcinogenic risks. As summarized below, cumulative cancer risk estimates for a future industrial worker and current

construction worker are within the cancer target range. The cumulative non-cancer risk estimate for a future industrial worker also does not exceed the non-cancer target risk threshold of 1; however, a construction worker's cumulative non-cancer risk estimate does exceed the non-cancer target risk threshold.

Cancer and Non-Cancer Risks

Receptor	Incremental Lifetime Cancer Risk	Hazard Index
Target Threshold	*1E-04 to 1E-06*	*1.0*
Commercial/Industrial Worker (AF= 0.0005)	6.9E-06	5.6E-01
Construction Worker	5.1E-07	2.4E+00

Risk estimates are provided as **Attachment 2**. The range of indoor air risk estimates based on the DTSC attenuation factor of 0.0005 and USEPA attenuation factor of 0.03 are also included in Attachment 2. Although the non-cancer target risk estimates exceeded the target threshold of 1 for the construction worker scenario, none of the soil EPCs exceeded applicable 2019 SFRWQCB ESLs. The non-cancer risk estimate was not driven by a single compound, but multiple (thallium, cobalt, and others). Moreover, none of the COPCs associated with historical Site operations (e.g.TPH) contributed significantly to the non-cancer risk estimate.

For carcinogens, risk is expressed as the probability that an individual will develop cancer over a lifetime as a result of exposure to the carcinogen, and is expressed as incremental lifetime cancer risk (ILCR). Carcinogenic risk is calculated by dividing the EPC for each compound by its respective screening level for construction or industrial receptor:

$$ILCR = \frac{EPC}{RSL} \times 10^{-6}$$

The combined risk from exposure to multiple constituents is evaluated by adding the risks from individual constituents, and multiple exposure pathways known as cumulative risk. The National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) (NCP) indicates that the ILCR posed by a site should not exceed a range of 1E-06 to 1E-04.

Non-carcinogenic risk is calculated by dividing the EPC for each compound by its respective screening level for industrial or construction worker receptors to arrive at a Hazard Quotient (HQ) for each chemical:

$$HQ = \frac{EPC}{RSL}$$

To assess the potential for non-carcinogenic health effects posed by exposure to multiple constituents, a Hazard Index (HI) approach is used. This approach assumes that non-carcinogenic hazards associated with exposure to more than one constituent are additive (HI = sum of the HQs). Synergistic or antagonistic interactions between constituents are not considered. The HI is then compared to the DTSC threshold of 1.0.[8]

COPCs Requiring Special Handling

As previously mentioned, lead and arsenic were not included in the screening level evaluation discussed above.

[8] DTSC. 2015. Preliminary Endangerment Assessment Guidance Manual: A guidance manual for evaluating hazardous substance release sites: dated October 2015.

A Site-specific action level for arsenic was developed, as provided in Appendix G, equal to 17 mg/kg.

For lead, DTSC's modified USEPA Adult Lead Model (ALM)[9] was used to evaluate construction worker and future commercial/industrial worker exposure to lead. The ALM model is used to model long-term continuous non-residential exposure to lead (for an exposure frequency of 250 days/year). ProUCL was used to determine the 95% UCL of the mean concentration of lead at the Site (as provided in **Attachment 1**). One sample, SB-31-SS1 was excluded from ProUCL calculations because it was identified as a potential hot spot (lead equal to 2,260 mg/kg).The PRG90 for industrial/construction workers used in the ALM is equal to 318 µg/dL. After running the modified ALM model, the probability that fetal PbB is greater than the target PbB is 0.0049%. In conclusion, the ALM model did not exceed a 5% probability that fetal blood lead levels would exceed the 1 µg/dL target. The exposure factors utilized are presented in **Attachment 3**.

Uncertainty

Risk and hazard estimates resulting from application of this screening evaluation do not represent absolute estimates reflective of a Site-specific evaluation. As previously discussed, risk estimates presume no mitigative measures eliminating exposure pathways are implemented at the Site. In addition, EPCs for soil were calculated assuming exposure to soil from 0-15' below ground surface to account for future soil disturbing activities—and all detected compounds (regardless of if they are related to past Site operations) were included in the evaluation. Although this assumption is overly conservative as Site related impacts are located below a layer of fill material up to 10' thick, calculated EPCs may be lower or higher depending on the depths of soil disturbance activities and concentration distributions in the 10-15' interval. The indoor air risk evaluation was performed by modeling soil vapor analytical data through application of a DTSC default attenuation factor—and therefore this evaluation comes with inherent uncertainty. Finally, as previously discussed, application of multiple RME exposure assumptions (embedded within the screening levels, and reflected in exposure point concentration calculations) over multiple pathways results in risk estimates that are very likely biased high. To minimize the changes of underestimating risk due to uncertainties in this evaluation, each step is biased toward health-protective estimations that tend to overestimate the potential exposure and the potential toxicity of the substances and therefore overestimate the potential risks. The evaluation is not intended to represent currently existing exposures or actual current health risks, but rather generates risk estimates that may occur only if all the conservative assumptions are actually realized.

Conclusion

Cumulative cancer risk to a future industrial worker and current construction worker are within the cancer target range. The cumulative non-cancer risk to a future industrial worker also does not exceed the non-cancer target risk threshold of 1 based on the screening level risk evaluation; however, the construction worker's cumulative non-cancer risk does exceed the non-cancer threshold. Although the non-cancer target risk estimates exceeded the target threshold of 1 for the construction worker scenario, none of the soil EPCs exceeded applicable 2019 SFRWQCB ESLs. The non-cancer risk estimate was not driven by a single compound, but multiple (thallium, cobalt, and others). Moreover, none of the COPCs associated with historical Site operations (e.g.TPH) contributed significantly to the non-cancer risk estimate.

[9] DTSC, 2011. User's Guide to Leadspread 8 and Recommendations for Evaluation of Lead Exposures in Adults. Human and Ecological Risk Office. September 2011. https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/01/LeadSpread8_UserGuide.pdf

Cancer and Non-Cancer Risks

Receptor	Incremental Lifetime Cancer Risk	Hazard Index
Target Threshold	*1E-04 to 1E-06*	*1.0*
Commercial/Industrial Worker	6.9E-06	5.6E-01
Construction Worker	5.1E-07	2.4E+00

As discussed in Appendix G, a site-specific arsenic action level has been established at the Site. In addition, adult exposure to lead at the Site associated with anticipated commercial/industrial use is not anticipated to result in blood lead levels exceeding target thresholds established in DTSC guidance,[10] based on estimates generated using DTSC's modified version of USEPA's ALM.

Attachments:

Attachment 1: ProUCL Outputs
Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk
Attachment 3: Modified Version of USEPA Adult Lead Model

[10] DTSC, 2011. User's Guide to Leadspread 8 and Recommendations for Evaluation of Lead Exposures in Adults. Human and Ecological Risk Office. September 2011. https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/01/LeadSpread8_UserGuide.pdf

ProUCL Outputs

3701 N. Pacific Place, Long Beach, California

ATTACHMENT 1

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.19/24/2019 1:03:29 PM
From File	Soil_INPUT.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

TPH (C6 to C12)

General Statistics

Total Number of Observations	130	Number of Distinct Observations	9
Number of Detects	1	Number of Non-Detects	129
Number of Distinct Detects	1	Number of Distinct Non-Detects	8

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable TPH (C6 to C12) was not processed!

TPH (C13 to C22)

General Statistics

Total Number of Observations	130	Number of Distinct Observations	38
Number of Detects	36	Number of Non-Detects	94
Number of Distinct Detects	32	Number of Distinct Non-Detects	7
Minimum Detect	8.5	Minimum Non-Detect	10
Maximum Detect	2200	Maximum Non-Detect	500
Variance Detects	258493	Percent Non-Detects	72.31%
Mean Detects	238.8	SD Detects	508.4
Median Detects	52.5	CV Detects	2.129
Skewness Detects	3.155	Kurtosis Detects	9.578
Mean of Logged Detects	4.183	SD of Logged Detects	1.517

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.489	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.338	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	72.86	KM Standard Error of Mean	25.21
KM SD	283.2	95% KM (BCA) UCL	117.6
95% KM (t) UCL	114.6	95% KM (Percentile Bootstrap) UCL	117.7
95% KM (z) UCL	114.3	95% KM Bootstrap t UCL	164
90% KM Chebyshev UCL	148.5	95% KM Chebyshev UCL	182.7
97.5% KM Chebyshev UCL	230.3	99% KM Chebyshev UCL	323.7

51												
52	**Gamma GOF Tests on Detected Observations Only**											
53					A-D Test Statistic	2.465	**Anderson-Darling GOF Test**					
54					5% A-D Critical Value	0.814	Detected Data Not Gamma Distributed at 5% Significance Level					
55					K-S Test Statistic	0.203	**Kolmogorov-Smirnov GOF**					
56					5% K-S Critical Value	0.155	Detected Data Not Gamma Distributed at 5% Significance Level					
57	**Detected Data Not Gamma Distributed at 5% Significance Level**											
58												
59	**Gamma Statistics on Detected Data Only**											
60					k hat (MLE)	0.492			k star (bias corrected MLE)	0.47		
61					Theta hat (MLE)	485			Theta star (bias corrected MLE)	508.2		
62					nu hat (MLE)	35.45			nu star (bias corrected)	33.83		
63					Mean (detects)	238.8						
64												
65	**Gamma ROS Statistics using Imputed Non-Detects**											
66	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
67	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
68	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
69	This is especially true when the sample size is small.											
70	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
71					Minimum	0.01			Mean	66.14		
72					Maximum	2200			Median	0.01		
73					SD	285.7			CV	4.32		
74					k hat (MLE)	0.124			k star (bias corrected MLE)	0.126		
75					Theta hat (MLE)	533.1			Theta star (bias corrected MLE)	523.6		
76					nu hat (MLE)	32.26			nu star (bias corrected)	32.84		
77					Adjusted Level of Significance (β)	0.0482						
78					Approximate Chi Square Value (32.84, α)	20.74			Adjusted Chi Square Value (32.84, β)	20.64		
79					95% Gamma Approximate UCL (use when n>=50)	104.7			95% Gamma Adjusted UCL (use when n<50)	105.3		
80												
81	**Estimates of Gamma Parameters using KM Estimates**											
82					Mean (KM)	72.86			SD (KM)	283.2		
83					Variance (KM)	80225			SE of Mean (KM)	25.21		
84					k hat (KM)	0.0662			k star (KM)	0.0698		
85					nu hat (KM)	17.2			nu star (KM)	18.14		
86					theta hat (KM)	1101			theta star (KM)	1044		
87					80% gamma percentile (KM)	25.9			90% gamma percentile (KM)	156.8		
88					95% gamma percentile (KM)	418.9			99% gamma percentile (KM)	1375		
89												
90	**Gamma Kaplan-Meier (KM) Statistics**											
91					Approximate Chi Square Value (18.14, α)	9.493			Adjusted Chi Square Value (18.14, β)	9.423		
92					95% Gamma Approximate KM-UCL (use when n>=50)	139.2			95% Gamma Adjusted KM-UCL (use when n<50)	140.3		
93												
94	**Lognormal GOF Test on Detected Observations Only**											
95					Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk GOF Test**					
96					5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level					
97					Lilliefors Test Statistic	0.133	**Lilliefors GOF Test**					
98					5% Lilliefors Critical Value	0.145	Detected Data appear Lognormal at 5% Significance Level					
99	**Detected Data appear Approximate Lognormal at 5% Significance Level**											
100												

101	**Lognormal ROS Statistics Using Imputed Non-Detects**											
102					Mean in Original Scale	68.12				Mean in Log Scale		1.173
103					SD in Original Scale	285.3				SD in Log Scale		2.505
104				95% t UCL (assumes normality of ROS data)		109.6				95% Percentile Bootstrap UCL		113.1
105					95% BCA Bootstrap UCL	127.1				95% Bootstrap t UCL		162.7
106					95% H-UCL (Log ROS)	175.4						
107												
108	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
109					KM Mean (logged)	2.725				KM Geo Mean		15.26
110					KM SD (logged)	1.211				95% Critical H Value (KM-Log)		2.39
111					KM Standard Error of Mean (logged)	0.109				95% H-UCL (KM -Log)		40.99
112					KM SD (logged)	1.211				95% Critical H Value (KM-Log)		2.39
113					KM Standard Error of Mean (logged)	0.109						
114												
115	**DL/2 Statistics**											
116	**DL/2 Normal**									**DL/2 Log-Transformed**		
117					Mean in Original Scale	76.21				Mean in Log Scale		2.541
118					SD in Original Scale	285.3				SD in Log Scale		1.452
119					95% t UCL (Assumes normality)	117.7				95% H-Stat UCL		50.99
120	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
121												
122	**Nonparametric Distribution Free UCL Statistics**											
123	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
124												
125	**Suggested UCL to Use**											
126					KM H-UCL	40.99						
127												
128	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
129	Recommendations are based upon data size, data distribution, and skewness.											
130	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
131	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
132												
133	**TPH (C23 to C44)**											
134												
135	**General Statistics**											
136					Total Number of Observations	130				Number of Distinct Observations		71
137					Number of Detects	96				Number of Non-Detects		34
138					Number of Distinct Detects	71				Number of Distinct Non-Detects		1
139					Minimum Detect	10				Minimum Non-Detect		10
140					Maximum Detect	7400				Maximum Non-Detect		10
141					Variance Detects	750632				Percent Non-Detects		26.15%
142					Mean Detects	283				SD Detects		866.4
143					Median Detects	60.75				CV Detects		3.061
144					Skewness Detects	6.647				Kurtosis Detects		50.51
145					Mean of Logged Detects	4.359				SD of Logged Detects		1.371
146												
147	**Normal GOF Test on Detects Only**											
148					Shapiro Wilk Test Statistic	0.332				**Normal GOF Test on Detected Observations Only**		
149					5% Shapiro Wilk P Value	0				Detected Data Not Normal at 5% Significance Level		
150					Lilliefors Test Statistic	0.376				**Lilliefors GOF Test**		

151	5% Lilliefors Critical Value					0.0907	Detected Data Not Normal at 5% Significance Level					
152	**Detected Data Not Normal at 5% Significance Level**											
153												
154	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
155	KM Mean					211.6	KM Standard Error of Mean					66.15
156	KM SD					750.3	95% KM (BCA) UCL					362.1
157	95% KM (t) UCL					321.2	95% KM (Percentile Bootstrap) UCL					330.4
158	95% KM (z) UCL					320.4	95% KM Bootstrap t UCL					463.6
159	90% KM Chebyshev UCL					410.1	95% KM Chebyshev UCL					499.9
160	97.5% KM Chebyshev UCL					624.7	99% KM Chebyshev UCL					869.8
161												
162	**Gamma GOF Tests on Detected Observations Only**											
163	A-D Test Statistic					7.73	**Anderson-Darling GOF Test**					
164	5% A-D Critical Value					0.82	Detected Data Not Gamma Distributed at 5% Significance Level					
165	K-S Test Statistic					0.209	**Kolmogorov-Smirnov GOF**					
166	5% K-S Critical Value					0.0967	Detected Data Not Gamma Distributed at 5% Significance Level					
167	**Detected Data Not Gamma Distributed at 5% Significance Level**											
168												
169	**Gamma Statistics on Detected Data Only**											
170	k hat (MLE)					0.495	k star (bias corrected MLE)					0.486
171	Theta hat (MLE)					572.3	Theta star (bias corrected MLE)					582.3
172	nu hat (MLE)					94.95	nu star (bias corrected)					93.32
173	Mean (detects)					283						
174												
175	**Gamma ROS Statistics using Imputed Non-Detects**											
176	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
177	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
178	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
179	This is especially true when the sample size is small.											
180	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
181	Minimum					0.01	Mean					209
182	Maximum					7400	Median					31.5
183	SD					753.9	CV					3.607
184	k hat (MLE)					0.218	k star (bias corrected MLE)					0.218
185	Theta hat (MLE)					958.1	Theta star (bias corrected MLE)					957.6
186	nu hat (MLE)					56.72	nu star (bias corrected)					56.74
187	Adjusted Level of Significance (β)					0.0482						
188	Approximate Chi Square Value (56.74, α)					40.43	Adjusted Chi Square Value (56.74, β)					40.27
189	95% Gamma Approximate UCL (use when n>=50)					293.3	95% Gamma Adjusted UCL (use when n<50)					294.5
190												
191	**Estimates of Gamma Parameters using KM Estimates**											
192	Mean (KM)					211.6	SD (KM)					750.3
193	Variance (KM)					562934	SE of Mean (KM)					66.15
194	k hat (KM)					0.0795	k star (KM)					0.0828
195	nu hat (KM)					20.68	nu star (KM)					21.54
196	theta hat (KM)					2660	theta star (KM)					2555
197	80% gamma percentile (KM)					107.6	90% gamma percentile (KM)					512.5
198	95% gamma percentile (KM)					1232	99% gamma percentile (KM)					3686
199												
200	**Gamma Kaplan-Meier (KM) Statistics**											

201	Approximate Chi Square Value (21.54, α)					11.99	Adjusted Chi Square Value (21.54, β)					11.91
202	95% Gamma Approximate KM-UCL (use when n>=50)					380	95% Gamma Adjusted KM-UCL (use when n<50)					382.6
203												
204	**Lognormal GOF Test on Detected Observations Only**											
205	Shapiro Wilk Approximate Test Statistic					0.925	**Shapiro Wilk GOF Test**					
206	5% Shapiro Wilk P Value					9.5860E-6	Detected Data Not Lognormal at 5% Significance Level					
207	Lilliefors Test Statistic					0.106	**Lilliefors GOF Test**					
208	5% Lilliefors Critical Value					0.0907	Detected Data Not Lognormal at 5% Significance Level					
209	**Detected Data Not Lognormal at 5% Significance Level**											
210												
211	**Lognormal ROS Statistics Using Imputed Non-Detects**											
212	Mean in Original Scale					210.1	Mean in Log Scale					3.517
213	SD in Original Scale					753.6	SD in Log Scale					1.898
214	95% t UCL (assumes normality of ROS data)					319.6	95% Percentile Bootstrap UCL					334.8
215	95% BCA Bootstrap UCL					376.1	95% Bootstrap t UCL					484.6
216	95% H-UCL (Log ROS)					344.9						
217												
218	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
219	KM Mean (logged)					3.821	KM Geo Mean					45.66
220	KM SD (logged)					1.48	95% Critical H Value (KM-Log)					2.669
221	KM Standard Error of Mean (logged)					0.131	95% H-UCL (KM -Log)					193.4
222	KM SD (logged)					1.48	95% Critical H Value (KM-Log)					2.669
223	KM Standard Error of Mean (logged)					0.131						
224												
225	**DL/2 Statistics**											
226	**DL/2 Normal**						**DL/2 Log-Transformed**					
227	Mean in Original Scale					210.3	Mean in Log Scale					3.64
228	SD in Original Scale					753.5	SD in Log Scale					1.69
229	95% t UCL (Assumes normality)					319.8	95% H-Stat UCL					244.7
230	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
231												
232	**Nonparametric Distribution Free UCL Statistics**											
233	**Data do not follow a Discernible Distribution at 5% Significance Level**											
234												
235	**Suggested UCL to Use**											
236	95% KM (Chebyshev) UCL					499.9						
237												
238	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
239	Recommendations are based upon data size, data distribution, and skewness.											
240	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
241	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
242												
243	**Antimony**											
244												
245	**General Statistics**											
246	Total Number of Observations					130	Number of Distinct Observations					3
247	Number of Detects					3	Number of Non-Detects					127
248	Number of Distinct Detects					3	Number of Distinct Non-Detects					1
249	Minimum Detect					3	Minimum Non-Detect					3
250	Maximum Detect					15.2	Maximum Non-Detect					3

251	Variance Detects					43.49	Percent Non-Detects					97.69%
252	Mean Detects					7.653	SD Detects					6.595
253	Median Detects					4.76	CV Detects					0.862
254	Skewness Detects					1.594	Kurtosis Detects					N/A
255	Mean of Logged Detects					1.793	SD of Logged Detects					0.836
256												
257	**Warning: Data set has only 3 Detected Values.**											
258	**This is not enough to compute meaningful or reliable statistics and estimates.**											
259												
260												
261	**Normal GOF Test on Detects Only**											
262	Shapiro Wilk Test Statistic					0.856	**Shapiro Wilk GOF Test**					
263	5% Shapiro Wilk Critical Value					0.767	Detected Data appear Normal at 5% Significance Level					
264	Lilliefors Test Statistic					0.336	**Lilliefors GOF Test**					
265	5% Lilliefors Critical Value					0.425	Detected Data appear Normal at 5% Significance Level					
266	**Detected Data appear Normal at 5% Significance Level**											
267												
268	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
269	KM Mean					3.107	KM Standard Error of Mean					0.116
270	KM SD					1.076	95% KM (BCA) UCL					N/A
271	95% KM (t) UCL					3.299	95% KM (Percentile Bootstrap) UCL					N/A
272	95% KM (z) UCL					3.297	95% KM Bootstrap t UCL					N/A
273	90% KM Chebyshev UCL					3.454	95% KM Chebyshev UCL					3.611
274	97.5% KM Chebyshev UCL					3.829	99% KM Chebyshev UCL					4.257
275												
276	**Gamma GOF Tests on Detected Observations Only**											
277	**Not Enough Data to Perform GOF Test**											
278												
279	**Gamma Statistics on Detected Data Only**											
280	k hat (MLE)					2.221	k star (bias corrected MLE)					N/A
281	Theta hat (MLE)					3.447	Theta star (bias corrected MLE)					N/A
282	nu hat (MLE)					13.32	nu star (bias corrected)					N/A
283	Mean (detects)					7.653						
284												
285	**Gamma ROS Statistics using Imputed Non-Detects**											
286	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
287	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
288	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
289	This is especially true when the sample size is small.											
290	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
291	Minimum					0.01	Mean					0.186
292	Maximum					15.2	Median					0.01
293	SD					1.415	CV					7.59
294	k hat (MLE)					0.255	k star (bias corrected MLE)					0.254
295	Theta hat (MLE)					0.731	Theta star (bias corrected MLE)					0.733
296	nu hat (MLE)					66.28	nu star (bias corrected)					66.08
297	Adjusted Level of Significance (β)					0.0482						
298	Approximate Chi Square Value (66.08, α)					48.38	Adjusted Chi Square Value (66.08, β)					48.21
299	95% Gamma Approximate UCL (use when n>=50)					0.255	95% Gamma Adjusted UCL (use when n<50)					N/A
300												

	A	B	C	D	E	F	G	H	I	J	K	L
301	**Estimates of Gamma Parameters using KM Estimates**											
302					Mean (KM)	3.107				SD (KM)		1.076
303					Variance (KM)	1.157				SE of Mean (KM)		0.116
304					k hat (KM)	8.344				k star (KM)		8.157
305					nu hat (KM)	2169				nu star (KM)		2121
306					theta hat (KM)	0.372				theta star (KM)		0.381
307					80% gamma percentile (KM)	3.967				90% gamma percentile (KM)		4.558
308					95% gamma percentile (KM)	5.086				99% gamma percentile (KM)		6.18
309												
310	**Gamma Kaplan-Meier (KM) Statistics**											
311					Approximate Chi Square Value (N/A, α)	2015				Adjusted Chi Square Value (N/A, β)		2014
312					95% Gamma Approximate KM-UCL (use when n>=50)	3.271				95% Gamma Adjusted KM-UCL (use when n<50)		3.273
313												
314	**Lognormal GOF Test on Detected Observations Only**											
315					Shapiro Wilk Test Statistic	0.942				**Shapiro Wilk GOF Test**		
316					5% Shapiro Wilk Critical Value	0.767				Detected Data appear Lognormal at 5% Significance Level		
317					Lilliefors Test Statistic	0.276				**Lilliefors GOF Test**		
318					5% Lilliefors Critical Value	0.425				Detected Data appear Lognormal at 5% Significance Level		
319	**Detected Data appear Lognormal at 5% Significance Level**											
320												
321	**Lognormal ROS Statistics Using Imputed Non-Detects**											
322					Mean in Original Scale	0.211				Mean in Log Scale		-7.384
323					SD in Original Scale	1.418				SD in Log Scale		3.897
324					95% t UCL (assumes normality of ROS data)	0.417				95% Percentile Bootstrap UCL		0.431
325					95% BCA Bootstrap UCL	0.586				95% Bootstrap t UCL		1.035
326					95% H-UCL (Log ROS)	8.704						
327												
328	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
329					KM Mean (logged)	1.115				KM Geo Mean		3.048
330					KM SD (logged)	0.147				95% Critical H Value (KM-Log)		1.68
331					KM Standard Error of Mean (logged)	0.0158				95% H-UCL (KM -Log)		3.149
332					KM SD (logged)	0.147				95% Critical H Value (KM-Log)		1.68
333					KM Standard Error of Mean (logged)	0.0158						
334												
335	**DL/2 Statistics**											
336					**DL/2 Normal**					**DL/2 Log-Transformed**		
337					Mean in Original Scale	1.642				Mean in Log Scale		0.437
338					SD in Original Scale	1.239				SD in Log Scale		0.234
339					95% t UCL (Assumes normality)	1.822				95% H-Stat UCL		1.649
340	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
341												
342	**Nonparametric Distribution Free UCL Statistics**											
343	**Detected Data appear Normal Distributed at 5% Significance Level**											
344												
345	**Suggested UCL to Use**											
346					95% KM (t) UCL	3.299						
347												
348	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
349	Recommendations are based upon data size, data distribution, and skewness.											
350	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											

351	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
352												
353	**Arsenic**											
354												
355	**General Statistics**											
356						Total Number of Observations	130				Number of Distinct Observations	122	
357						Number of Detects	126				Number of Non-Detects	4
358						Number of Distinct Detects	121				Number of Distinct Non-Detects	1
359						Minimum Detect	1.25				Minimum Non-Detect	1
360						Maximum Detect	53.4				Maximum Non-Detect	1
361						Variance Detects	46.36				Percent Non-Detects	3.077%
362						Mean Detects	8.191				SD Detects	6.809
363						Median Detects	6.373				CV Detects	0.831
364						Skewness Detects	3.413				Kurtosis Detects	17.52
365						Mean of Logged Detects	1.87				SD of Logged Detects	0.669
366												
367	**Normal GOF Test on Detects Only**											
368						Shapiro Wilk Test Statistic	0.728			**Normal GOF Test on Detected Observations Only**		
369						5% Shapiro Wilk P Value	0			Detected Data Not Normal at 5% Significance Level		
370						Lilliefors Test Statistic	0.162			**Lilliefors GOF Test**		
371						5% Lilliefors Critical Value	0.0793			Detected Data Not Normal at 5% Significance Level		
372	**Detected Data Not Normal at 5% Significance Level**											
373												
374	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
375						KM Mean	7.97				KM Standard Error of Mean	0.598
376						KM SD	6.791				95% KM (BCA) UCL	9.007
377						95% KM (t) UCL	8.961				95% KM (Percentile Bootstrap) UCL	8.963
378						95% KM (z) UCL	8.954				95% KM Bootstrap t UCL	9.281
379						90% KM Chebyshev UCL	9.764				95% KM Chebyshev UCL	10.58
380						97.5% KM Chebyshev UCL	11.7				99% KM Chebyshev UCL	13.92
381												
382	**Gamma GOF Tests on Detected Observations Only**											
383						A-D Test Statistic	0.958			**Anderson-Darling GOF Test**		
384						5% A-D Critical Value	0.763			Detected Data Not Gamma Distributed at 5% Significance Level		
385						K-S Test Statistic	0.0678			**Kolmogorov-Smirnov GOF**		
386						5% K-S Critical Value	0.0837			Detected data appear Gamma Distributed at 5% Significance Level		
387	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
388												
389	**Gamma Statistics on Detected Data Only**											
390						k hat (MLE)	2.302				k star (bias corrected MLE)	2.252
391						Theta hat (MLE)	3.558				Theta star (bias corrected MLE)	3.637
392						nu hat (MLE)	580.1				nu star (bias corrected)	567.6
393						Mean (detects)	8.191					
394												
395	**Gamma ROS Statistics using Imputed Non-Detects**											
396	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
397	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
398	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
399	This is especially true when the sample size is small.											
400	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											

401					Minimum	0.01					Mean	7.94
402					Maximum	53.4					Median	6.135
403					SD	6.851					CV	0.863
404					k hat (MLE)	1.391					k star (bias corrected MLE)	1.364
405					Theta hat (MLE)	5.708					Theta star (bias corrected MLE)	5.821
406					nu hat (MLE)	361.6					nu star (bias corrected)	354.6
407					Adjusted Level of Significance (β)	0.0482						
408					Approximate Chi Square Value (354.63, α)	312					Adjusted Chi Square Value (354.63, β)	311.5
409					95% Gamma Approximate UCL (use when n>=50)	9.025					95% Gamma Adjusted UCL (use when n<50)	9.038
410												
411	**Estimates of Gamma Parameters using KM Estimates**											
412					Mean (KM)	7.97					SD (KM)	6.791
413					Variance (KM)	46.12					SE of Mean (KM)	0.598
414					k hat (KM)	1.377					k star (KM)	1.351
415					nu hat (KM)	358.1					nu star (KM)	351.2
416					theta hat (KM)	5.787					theta star (KM)	5.901
417					80% gamma percentile (KM)	12.47					90% gamma percentile (KM)	17.04
418					95% gamma percentile (KM)	21.51					99% gamma percentile (KM)	31.67
419												
420	**Gamma Kaplan-Meier (KM) Statistics**											
421					Approximate Chi Square Value (351.16, α)	308.7					Adjusted Chi Square Value (351.16, β)	308.3
422					95% Gamma Approximate KM-UCL (use when n>=50)	9.065					95% Gamma Adjusted KM-UCL (use when n<50)	9.078
423												
424	**Lognormal GOF Test on Detected Observations Only**											
425					Shapiro Wilk Approximate Test Statistic	0.988					**Shapiro Wilk GOF Test**	
426					5% Shapiro Wilk P Value	0.88					Detected Data appear Lognormal at 5% Significance Level	
427					Lilliefors Test Statistic	0.0346					**Lilliefors GOF Test**	
428					5% Lilliefors Critical Value	0.0793					Detected Data appear Lognormal at 5% Significance Level	
429	**Detected Data appear Lognormal at 5% Significance Level**											
430												
431	**Lognormal ROS Statistics Using Imputed Non-Detects**											
432					Mean in Original Scale	7.978					Mean in Log Scale	1.819
433					SD in Original Scale	6.81					SD in Log Scale	0.719
434					95% t UCL (assumes normality of ROS data)	8.967					95% Percentile Bootstrap UCL	9.033
435					95% BCA Bootstrap UCL	9.144					95% Bootstrap t UCL	9.217
436					95% H-UCL (Log ROS)	9.045						
437												
438	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
439					KM Mean (logged)	1.813					KM Geo Mean	6.128
440					KM SD (logged)	0.731					95% Critical H Value (KM-Log)	1.973
441					KM Standard Error of Mean (logged)	0.0644					95% H-UCL (KM -Log)	9.089
442					KM SD (logged)	0.731					95% Critical H Value (KM-Log)	1.973
443					KM Standard Error of Mean (logged)	0.0644						
444												
445	**DL/2 Statistics**											
446	**DL/2 Normal**										**DL/2 Log-Transformed**	
447					Mean in Original Scale	7.955					Mean in Log Scale	1.792
448					SD in Original Scale	6.834					SD in Log Scale	0.794
449					95% t UCL (Assumes normality)	8.948					95% H-Stat UCL	9.472
450	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											

451												
452	**Nonparametric Distribution Free UCL Statistics**											
453	**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**											
454												
455	**Suggested UCL to Use**											
456	95% KM Approximate Gamma UCL				9.065		95% GROS Approximate Gamma UCL					9.025
457												
458	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
459	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
460												
461	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
462	Recommendations are based upon data size, data distribution, and skewness.											
463	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
464	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
465												
466												
467	**Barium**											
468												
469	**General Statistics**											
470	Total Number of Observations				130		Number of Distinct Observations					105
471							Number of Missing Observations					0
472	Minimum				30.2		Mean					209.6
473	Maximum				1670		Median					177.5
474	SD				162.3		Std. Error of Mean					14.23
475	Coefficient of Variation				0.774		Skewness					6.012
476												
477	**Normal GOF Test**											
478	Shapiro Wilk Test Statistic				0.588		**Shapiro Wilk GOF Test**					
479	5% Shapiro Wilk P Value				0		Data Not Normal at 5% Significance Level					
480	Lilliefors Test Statistic				0.195		**Lilliefors GOF Test**					
481	5% Lilliefors Critical Value				0.0781		Data Not Normal at 5% Significance Level					
482	**Data Not Normal at 5% Significance Level**											
483												
484	**Assuming Normal Distribution**											
485	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
486	95% Student's-t UCL				233.1		95% Adjusted-CLT UCL (Chen-1995)					241
487							95% Modified-t UCL (Johnson-1978)					234.4
488												
489	**Gamma GOF Test**											
490	A-D Test Statistic				2.658		**Anderson-Darling Gamma GOF Test**					
491	5% A-D Critical Value				0.758		Data Not Gamma Distributed at 5% Significance Level					
492	K-S Test Statistic				0.133		**Kolmogorov-Smirnov Gamma GOF Test**					
493	5% K-S Critical Value				0.0821		Data Not Gamma Distributed at 5% Significance Level					
494	**Data Not Gamma Distributed at 5% Significance Level**											
495												
496	**Gamma Statistics**											
497	k hat (MLE)				3.579		k star (bias corrected MLE)					3.502
498	Theta hat (MLE)				58.55		Theta star (bias corrected MLE)					59.85
499	nu hat (MLE)				930.6		nu star (bias corrected)					910.4
500	MLE Mean (bias corrected)				209.6		MLE Sd (bias corrected)					112

501											Approximate Chi Square Value (0.05)	841.4
502						Adjusted Level of Significance	0.0482				Adjusted Chi Square Value	840.7
503												
504						**Assuming Gamma Distribution**						
505						95% Approximate Gamma UCL (use when n>=50))	226.8				95% Adjusted Gamma UCL (use when n<50)	226.9
506												
507						**Lognormal GOF Test**						
508						Shapiro Wilk Test Statistic	0.979				**Shapiro Wilk Lognormal GOF Test**	
509						5% Shapiro Wilk P Value	0.402				Data appear Lognormal at 5% Significance Level	
510						Lilliefors Test Statistic	0.0917				**Lilliefors Lognormal GOF Test**	
511						5% Lilliefors Critical Value	0.0781				Data Not Lognormal at 5% Significance Level	
512						**Data appear Approximate Lognormal at 5% Significance Level**						
513												
514						**Lognormal Statistics**						
515						Minimum of Logged Data	3.408				Mean of logged Data	5.199
516						Maximum of Logged Data	7.421				SD of logged Data	0.504
517												
518						**Assuming Lognormal Distribution**						
519						95% H-UCL	222.9				90% Chebyshev (MVUE) UCL	234.2
520						95% Chebyshev (MVUE) UCL	247.2				97.5% Chebyshev (MVUE) UCL	265.3
521						99% Chebyshev (MVUE) UCL	300.9					
522												
523						**Nonparametric Distribution Free UCL Statistics**						
524						**Data appear to follow a Discernible Distribution at 5% Significance Level**						
525												
526						**Nonparametric Distribution Free UCLs**						
527						95% CLT UCL	233				95% Jackknife UCL	233.1
528						95% Standard Bootstrap UCL	234.4				95% Bootstrap-t UCL	246.6
529						95% Hall's Bootstrap UCL	341.3				95% Percentile Bootstrap UCL	233.8
530						95% BCA Bootstrap UCL	244.6					
531						90% Chebyshev(Mean, Sd) UCL	252.3				95% Chebyshev(Mean, Sd) UCL	271.6
532						97.5% Chebyshev(Mean, Sd) UCL	298.5				99% Chebyshev(Mean, Sd) UCL	351.2
533												
534						**Suggested UCL to Use**						
535						95% H-UCL	222.9					
536												
537						Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.						
538						Recommendations are based upon data size, data distribution, and skewness.						
539						These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).						
540						However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.						
541												
542						**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**						
543						**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**						
544						**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**						
545						**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**						
546												
547	**Cadmium**											
548												
549						**General Statistics**						
550						Total Number of Observations	130				Number of Distinct Observations	74

551					Number of Detects	116					Number of Non-Detects	14
552					Number of Distinct Detects	73					Number of Distinct Non-Detects	2
553					Minimum Detect	0.405					Minimum Non-Detect	0.44
554					Maximum Detect	8.65					Maximum Non-Detect	0.5
555					Variance Detects	0.678					Percent Non-Detects	10.77%
556					Mean Detects	0.926					SD Detects	0.823
557					Median Detects	0.785					CV Detects	0.889
558					Skewness Detects	7.712					Kurtosis Detects	69.42
559					Mean of Logged Detects	-0.197					SD of Logged Detects	0.402
560												
561					**Normal GOF Test on Detects Only**							
562					Shapiro Wilk Test Statistic	0.39					**Normal GOF Test on Detected Observations Only**	
563					5% Shapiro Wilk P Value	0					Detected Data Not Normal at 5% Significance Level	
564					Lilliefors Test Statistic	0.294					**Lilliefors GOF Test**	
565					5% Lilliefors Critical Value	0.0826					Detected Data Not Normal at 5% Significance Level	
566					**Detected Data Not Normal at 5% Significance Level**							
567												
568					**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**							
569					KM Mean	0.87					KM Standard Error of Mean	0.0697
570					KM SD	0.791					95% KM (BCA) UCL	1.008
571					95% KM (t) UCL	0.985					95% KM (Percentile Bootstrap) UCL	0.999
572					95% KM (z) UCL	0.985					95% KM Bootstrap t UCL	1.129
573					90% KM Chebyshev UCL	1.079					95% KM Chebyshev UCL	1.174
574					97.5% KM Chebyshev UCL	1.305					99% KM Chebyshev UCL	1.563
575												
576					**Gamma GOF Tests on Detected Observations Only**							
577					A-D Test Statistic	6.634					**Anderson-Darling GOF Test**	
578					5% A-D Critical Value	0.756					Detected Data Not Gamma Distributed at 5% Significance Level	
579					K-S Test Statistic	0.166					**Kolmogorov-Smirnov GOF**	
580					5% K-S Critical Value	0.0856					Detected Data Not Gamma Distributed at 5% Significance Level	
581					**Detected Data Not Gamma Distributed at 5% Significance Level**							
582												
583					**Gamma Statistics on Detected Data Only**							
584					k hat (MLE)	4.304					k star (bias corrected MLE)	4.199
585					Theta hat (MLE)	0.215					Theta star (bias corrected MLE)	0.221
586					nu hat (MLE)	998.6					nu star (bias corrected)	974.1
587					Mean (detects)	0.926						
588												
589					**Gamma ROS Statistics using Imputed Non-Detects**							
590					GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
591					GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)							
592					For such situations, GROS method may yield incorrect values of UCLs and BTVs							
593					This is especially true when the sample size is small.							
594					For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
595					Minimum	0.01					Mean	0.833
596					Maximum	8.65					Median	0.715
597					SD	0.823					CV	0.989
598					k hat (MLE)	1.551					k star (bias corrected MLE)	1.521
599					Theta hat (MLE)	0.537					Theta star (bias corrected MLE)	0.547
600					nu hat (MLE)	403.3					nu star (bias corrected)	395.4

	A	B	C	D	E	F	G	H	I	J	K	L
601					Adjusted Level of Significance (β)	0.0482						
602					Approximate Chi Square Value (395.36, α)	350.3					Adjusted Chi Square Value (395.36, β)	349.8
603					95% Gamma Approximate UCL (use when n>=50)	0.94					95% Gamma Adjusted UCL (use when n<50)	0.941
604												
605					**Estimates of Gamma Parameters using KM Estimates**							
606					Mean (KM)	0.87					SD (KM)	0.791
607					Variance (KM)	0.626					SE of Mean (KM)	0.0697
608					k hat (KM)	1.21					k star (KM)	1.187
609					nu hat (KM)	314.6					nu star (KM)	308.7
610					theta hat (KM)	0.719					theta star (KM)	0.733
611					80% gamma percentile (KM)	1.379					90% gamma percentile (KM)	1.92
612					95% gamma percentile (KM)	2.454					99% gamma percentile (KM)	3.679
613												
614					**Gamma Kaplan-Meier (KM) Statistics**							
615					Approximate Chi Square Value (308.68, α)	269					Adjusted Chi Square Value (308.68, β)	268.6
616					95% Gamma Approximate KM-UCL (use when n>=50)	0.998					95% Gamma Adjusted KM-UCL (use when n<50)	1
617												
618					**Lognormal GOF Test on Detected Observations Only**							
619					Shapiro Wilk Approximate Test Statistic	0.854					**Shapiro Wilk GOF Test**	
620					5% Shapiro Wilk P Value	0					Detected Data Not Lognormal at 5% Significance Level	
621					Lilliefors Test Statistic	0.114					**Lilliefors GOF Test**	
622					5% Lilliefors Critical Value	0.0826					Detected Data Not Lognormal at 5% Significance Level	
623					**Detected Data Not Lognormal at 5% Significance Level**							
624												
625					**Lognormal ROS Statistics Using Imputed Non-Detects**							
626					Mean in Original Scale	0.865					Mean in Log Scale	-0.287
627					SD in Original Scale	0.797					SD in Log Scale	0.463
628					95% t UCL (assumes normality of ROS data)	0.981					95% Percentile Bootstrap UCL	0.994
629					95% BCA Bootstrap UCL	1.068					95% Bootstrap t UCL	1.127
630					95% H-UCL (Log ROS)	0.899						
631												
632					**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
633					KM Mean (logged)	-0.273					KM Geo Mean	0.761
634					KM SD (logged)	0.437					95% Critical H Value (KM-Log)	1.791
635					KM Standard Error of Mean (logged)	0.0385					95% H-UCL (KM -Log)	0.897
636					KM SD (logged)	0.437					95% Critical H Value (KM-Log)	1.791
637					KM Standard Error of Mean (logged)	0.0385						
638												
639					**DL/2 Statistics**							
640					**DL/2 Normal**						**DL/2 Log-Transformed**	
641					Mean in Original Scale	0.853					Mean in Log Scale	-0.326
642					SD in Original Scale	0.805					SD in Log Scale	0.532
643					95% t UCL (Assumes normality)	0.97					95% H-Stat UCL	0.906
644					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
645												
646					**Nonparametric Distribution Free UCL Statistics**							
647					**Data do not follow a Discernible Distribution at 5% Significance Level**							
648												
649					**Suggested UCL to Use**							
650					95% KM (t) UCL	0.985					KM H-UCL	0.897

95% KM (BCA) UCL	1.008		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chromium

General Statistics

Total Number of Observations	130	Number of Distinct Observations	102
		Number of Missing Observations	0
Minimum	8.12	Mean	32.95
Maximum	440	Median	28.25
SD	39.23	Std. Error of Mean	3.44
Coefficient of Variation	1.19	Skewness	9.204

Normal GOF Test

Shapiro Wilk Test Statistic	0.266	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.376	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0781	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	38.65	95% Adjusted-CLT UCL (Chen-1995)	41.58
		95% Modified-t UCL (Johnson-1978)	39.11

Gamma GOF Test

A-D Test Statistic	7.692E+28	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.758	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.242	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.0821	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.567	k star (bias corrected MLE)	3.49
Theta hat (MLE)	9.238	Theta star (bias corrected MLE)	9.443
nu hat (MLE)	927.4	nu star (bias corrected)	907.3
MLE Mean (bias corrected)	32.95	MLE Sd (bias corrected)	17.64
		Approximate Chi Square Value (0.05)	838.4
Adjusted Level of Significance	0.0482	Adjusted Chi Square Value	837.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	35.66	95% Adjusted Gamma UCL (use when n<50)	35.69

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.774	**Shapiro Wilk Lognormal GOF Test**

701	5% Shapiro Wilk P Value					0	Data Not Lognormal at 5% Significance Level					
702	Lilliefors Test Statistic					0.168	**Lilliefors Lognormal GOF Test**					
703	5% Lilliefors Critical Value					0.0781	Data Not Lognormal at 5% Significance Level					
704	**Data Not Lognormal at 5% Significance Level**											
705												
706	**Lognormal Statistics**											
707	Minimum of Logged Data					2.094	Mean of logged Data					3.348
708	Maximum of Logged Data					6.087	SD of logged Data					0.417
709												
710	**Assuming Lognormal Distribution**											
711	95% H-UCL					33.15	90% Chebyshev (MVUE) UCL					34.57
712	95% Chebyshev (MVUE) UCL					36.17	97.5% Chebyshev (MVUE) UCL					38.4
713	99% Chebyshev (MVUE) UCL					42.77						
714												
715	**Nonparametric Distribution Free UCL Statistics**											
716	**Data do not follow a Discernible Distribution (0.05)**											
717												
718	**Nonparametric Distribution Free UCLs**											
719	95% CLT UCL					38.61	95% Jackknife UCL					38.65
720	95% Standard Bootstrap UCL					38.45	95% Bootstrap-t UCL					55.59
721	95% Hall's Bootstrap UCL					66.52	95% Percentile Bootstrap UCL					39.69
722	95% BCA Bootstrap UCL					44.87						
723	90% Chebyshev(Mean, Sd) UCL					43.27	95% Chebyshev(Mean, Sd) UCL					47.95
724	97.5% Chebyshev(Mean, Sd) UCL					54.44	99% Chebyshev(Mean, Sd) UCL					67.18
725												
726	**Suggested UCL to Use**											
727	95% Student's-t UCL					38.65	or 95% Modified-t UCL					39.11
728												
729	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
730	Recommendations are based upon data size, data distribution, and skewness.											
731	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
732	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
733												
734												
735	**Cobalt**											
736												
737	**General Statistics**											
738	Total Number of Observations					130	Number of Distinct Observations					82
739							Number of Missing Observations					0
740	Minimum					3.77	Mean					14.09
741	Maximum					216	Median					12.55
742	SD					18.11	Std. Error of Mean					1.589
743	Coefficient of Variation					1.285	Skewness					10.89
744												
745	**Normal GOF Test**											
746	Shapiro Wilk Test Statistic					0.204	**Shapiro Wilk GOF Test**					
747	5% Shapiro Wilk P Value					0	Data Not Normal at 5% Significance Level					
748	Lilliefors Test Statistic					0.385	**Lilliefors GOF Test**					
749	5% Lilliefors Critical Value					0.0781	Data Not Normal at 5% Significance Level					
750	**Data Not Normal at 5% Significance Level**											

751												
752	**Assuming Normal Distribution**											
753	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
754	95% Student's-t UCL				16.72		95% Adjusted-CLT UCL (Chen-1995)					18.33
755							95% Modified-t UCL (Johnson-1978)					16.98
756												
757	**Gamma GOF Test**											
758	A-D Test Statistic				7.692E+28		**Anderson-Darling Gamma GOF Test**					
759	5% A-D Critical Value				0.757		Data Not Gamma Distributed at 5% Significance Level					
760	K-S Test Statistic				0.245		**Kolmogorov-Smirnov Gamma GOF Test**					
761	5% K-S Critical Value				0.082		Data Not Gamma Distributed at 5% Significance Level					
762	**Data Not Gamma Distributed at 5% Significance Level**											
763												
764	**Gamma Statistics**											
765	k hat (MLE)				3.956		k star (bias corrected MLE)					3.87
766	Theta hat (MLE)				3.562		Theta star (bias corrected MLE)					3.641
767	nu hat (MLE)				1029		nu star (bias corrected)					1006
768	MLE Mean (bias corrected)				14.09		MLE Sd (bias corrected)					7.163
769							Approximate Chi Square Value (0.05)					933.6
770	Adjusted Level of Significance				0.0482		Adjusted Chi Square Value					932.8
771												
772	**Assuming Gamma Distribution**											
773	95% Approximate Gamma UCL (use when n>=50))				15.19		95% Adjusted Gamma UCL (use when n<50)					15.2
774												
775	**Lognormal GOF Test**											
776	Shapiro Wilk Test Statistic				0.766		**Shapiro Wilk Lognormal GOF Test**					
777	5% Shapiro Wilk P Value				0		Data Not Lognormal at 5% Significance Level					
778	Lilliefors Test Statistic				0.179		**Lilliefors Lognormal GOF Test**					
779	5% Lilliefors Critical Value				0.0781		Data Not Lognormal at 5% Significance Level					
780	**Data Not Lognormal at 5% Significance Level**											
781												
782	**Lognormal Statistics**											
783	Minimum of Logged Data				1.327		Mean of logged Data					2.514
784	Maximum of Logged Data				5.375		SD of logged Data					0.382
785												
786	**Assuming Lognormal Distribution**											
787	95% H-UCL				14.1		90% Chebyshev (MVUE) UCL					14.66
788	95% Chebyshev (MVUE) UCL				15.28		97.5% Chebyshev (MVUE) UCL					16.15
789	99% Chebyshev (MVUE) UCL				17.85							
790												
791	**Nonparametric Distribution Free UCL Statistics**											
792	**Data do not follow a Discernible Distribution (0.05)**											
793												
794	**Nonparametric Distribution Free UCLs**											
795	95% CLT UCL				16.71		95% Jackknife UCL					16.72
796	95% Standard Bootstrap UCL				16.74		95% Bootstrap-t UCL					25.42
797	95% Hall's Bootstrap UCL				28.38		95% Percentile Bootstrap UCL					17.12
798	95% BCA Bootstrap UCL				19.25							
799	90% Chebyshev(Mean, Sd) UCL				18.86		95% Chebyshev(Mean, Sd) UCL					21.02
800	97.5% Chebyshev(Mean, Sd) UCL				24.01		99% Chebyshev(Mean, Sd) UCL					29.9

801												
802	**Suggested UCL to Use**											
803					95% Student's-t UCL	16.72			or 95% Modified-t UCL			16.98
804												
805	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
806	Recommendations are based upon data size, data distribution, and skewness.											
807	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
808	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
809												
810												
811	**Copper**											
812												
813	**General Statistics**											
814					Total Number of Observations	130			Number of Distinct Observations			107
815									Number of Missing Observations			0
816					Minimum	4.06			Mean			36.49
817					Maximum	274			Median			28.63
818					SD	34			Std. Error of Mean			2.982
819					Coefficient of Variation	0.932			Skewness			4.522
820												
821	**Normal GOF Test**											
822					Shapiro Wilk Test Statistic	0.519			**Shapiro Wilk GOF Test**			
823					5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level			
824					Lilliefors Test Statistic	0.289			**Lilliefors GOF Test**			
825					5% Lilliefors Critical Value	0.0781			Data Not Normal at 5% Significance Level			
826	**Data Not Normal at 5% Significance Level**											
827												
828	**Assuming Normal Distribution**											
829					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
830					95% Student's-t UCL	41.43			95% Adjusted-CLT UCL (Chen-1995)			42.66
831									95% Modified-t UCL (Johnson-1978)			41.63
832												
833	**Gamma GOF Test**											
834					A-D Test Statistic	8.086			**Anderson-Darling Gamma GOF Test**			
835					5% A-D Critical Value	0.761			Data Not Gamma Distributed at 5% Significance Level			
836					K-S Test Statistic	0.172			**Kolmogorov-Smirnov Gamma GOF Test**			
837					5% K-S Critical Value	0.0824			Data Not Gamma Distributed at 5% Significance Level			
838	**Data Not Gamma Distributed at 5% Significance Level**											
839												
840	**Gamma Statistics**											
841					k hat (MLE)	2.777			k star (bias corrected MLE)			2.718
842					Theta hat (MLE)	13.14			Theta star (bias corrected MLE)			13.42
843					nu hat (MLE)	722.1			nu star (bias corrected)			706.8
844					MLE Mean (bias corrected)	36.49			MLE Sd (bias corrected)			22.13
845									Approximate Chi Square Value (0.05)			646.1
846					Adjusted Level of Significance	0.0482			Adjusted Chi Square Value			645.5
847												
848	**Assuming Gamma Distribution**											
849					95% Approximate Gamma UCL (use when n>=50))	39.92			95% Adjusted Gamma UCL (use when n<50)			39.96
850												

	A	B	C	D	E	F	G	H	I	J	K	L
851	**Lognormal GOF Test**											
852	Shapiro Wilk Test Statistic					0.903	**Shapiro Wilk Lognormal GOF Test**					
853	5% Shapiro Wilk P Value					8.091E-12	Data Not Lognormal at 5% Significance Level					
854	Lilliefors Test Statistic					0.12	**Lilliefors Lognormal GOF Test**					
855	5% Lilliefors Critical Value					0.0781	Data Not Lognormal at 5% Significance Level					
856	**Data Not Lognormal at 5% Significance Level**											
857												
858	**Lognormal Statistics**											
859	Minimum of Logged Data					1.401	Mean of logged Data					3.406
860	Maximum of Logged Data					5.613	SD of logged Data					0.55
861												
862	**Assuming Lognormal Distribution**											
863	95% H-UCL					38.39	90% Chebyshev (MVUE) UCL					40.46
864	95% Chebyshev (MVUE) UCL					42.92	97.5% Chebyshev (MVUE) UCL					46.33
865	99% Chebyshev (MVUE) UCL					53.02						
866												
867	**Nonparametric Distribution Free UCL Statistics**											
868	**Data do not follow a Discernible Distribution (0.05)**											
869												
870	**Nonparametric Distribution Free UCLs**											
871	95% CLT UCL					41.4	95% Jackknife UCL					41.43
872	95% Standard Bootstrap UCL					41.31	95% Bootstrap-t UCL					43.74
873	95% Hall's Bootstrap UCL					43.47	95% Percentile Bootstrap UCL					41.34
874	95% BCA Bootstrap UCL					43						
875	90% Chebyshev(Mean, Sd) UCL					45.44	95% Chebyshev(Mean, Sd) UCL					49.49
876	97.5% Chebyshev(Mean, Sd) UCL					55.11	99% Chebyshev(Mean, Sd) UCL					66.16
877												
878	**Suggested UCL to Use**											
879	95% Chebyshev (Mean, Sd) UCL					49.49						
880												
881	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
882	Recommendations are based upon data size, data distribution, and skewness.											
883	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
884	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
885												
886												
887	**Lead**											
888												
889	**General Statistics**											
890	Total Number of Observations					129	Number of Distinct Observations					119
891							Number of Missing Observations					1
892	Minimum					3.09	Mean					37.42
893	Maximum					784	Median					15.2
894	SD					80.66	Std. Error of Mean					7.102
895	Coefficient of Variation					2.156	Skewness					6.88
896												
897	**Normal GOF Test**											
898	Shapiro Wilk Test Statistic					0.395	**Shapiro Wilk GOF Test**					
899	5% Shapiro Wilk P Value					0	Data Not Normal at 5% Significance Level					
900	Lilliefors Test Statistic					0.335	**Lilliefors GOF Test**					

901	5% Lilliefors Critical Value					0.0784	Data Not Normal at 5% Significance Level					
902	**Data Not Normal at 5% Significance Level**											
903												
904	**Assuming Normal Distribution**											
905	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
906	95% Student's-t UCL					49.19	95% Adjusted-CLT UCL (Chen-1995)					53.7
907							95% Modified-t UCL (Johnson-1978)					49.91
908												
909	**Gamma GOF Test**											
910	A-D Test Statistic					10.46	**Anderson-Darling Gamma GOF Test**					
911	5% A-D Critical Value					0.789	Data Not Gamma Distributed at 5% Significance Level					
912	K-S Test Statistic					0.249	**Kolmogorov-Smirnov Gamma GOF Test**					
913	5% K-S Critical Value					0.0848	Data Not Gamma Distributed at 5% Significance Level					
914	**Data Not Gamma Distributed at 5% Significance Level**											
915												
916	**Gamma Statistics**											
917	k hat (MLE)					0.882	k star (bias corrected MLE)					0.866
918	Theta hat (MLE)					42.44	Theta star (bias corrected MLE)					43.19
919	nu hat (MLE)					227.5	nu star (bias corrected)					223.5
920	MLE Mean (bias corrected)					37.42	MLE Sd (bias corrected)					40.2
921							Approximate Chi Square Value (0.05)					189.9
922	Adjusted Level of Significance					0.0481	Adjusted Chi Square Value					189.6
923												
924	**Assuming Gamma Distribution**											
925	95% Approximate Gamma UCL (use when n>=50))					44.04	95% Adjusted Gamma UCL (use when n<50)					44.12
926												
927	**Lognormal GOF Test**											
928	Shapiro Wilk Test Statistic					0.905	**Shapiro Wilk Lognormal GOF Test**					
929	5% Shapiro Wilk P Value					2.392E-11	Data Not Lognormal at 5% Significance Level					
930	Lilliefors Test Statistic					0.162	**Lilliefors Lognormal GOF Test**					
931	5% Lilliefors Critical Value					0.0784	Data Not Lognormal at 5% Significance Level					
932	**Data Not Lognormal at 5% Significance Level**											
933												
934	**Lognormal Statistics**											
935	Minimum of Logged Data					1.128	Mean of logged Data					2.958
936	Maximum of Logged Data					6.664	SD of logged Data					0.961
937												
938	**Assuming Lognormal Distribution**											
939	95% H-UCL					36.67	90% Chebyshev (MVUE) UCL					39.56
940	95% Chebyshev (MVUE) UCL					43.71	97.5% Chebyshev (MVUE) UCL					49.48
941	99% Chebyshev (MVUE) UCL					60.82						
942												
943	**Nonparametric Distribution Free UCL Statistics**											
944	**Data do not follow a Discernible Distribution (0.05)**											
945												
946	**Nonparametric Distribution Free UCLs**											
947	95% CLT UCL					49.1	95% Jackknife UCL					49.19
948	95% Standard Bootstrap UCL					49.13	95% Bootstrap-t UCL					61.52
949	95% Hall's Bootstrap UCL					96.83	95% Percentile Bootstrap UCL					51.16
950	95% BCA Bootstrap UCL					55.58						

951	90% Chebyshev(Mean, Sd) UCL					58.73	95% Chebyshev(Mean, Sd) UCL					68.38
952	97.5% Chebyshev(Mean, Sd) UCL					81.77	99% Chebyshev(Mean, Sd) UCL					108.1
953												
954	**Suggested UCL to Use**											
955	95% Chebyshev (Mean, Sd) UCL					68.38						
956												
957	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
958	Recommendations are based upon data size, data distribution, and skewness.											
959	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
960	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
961												
962	**Molybdenum**											
963												
964	**General Statistics**											
965	Total Number of Observations					130	Number of Distinct Observations					6
966	Number of Detects					5	Number of Non-Detects					125
967	Number of Distinct Detects					5	Number of Distinct Non-Detects					1
968	Minimum Detect					1.01	Minimum Non-Detect					1
969	Maximum Detect					37.7	Maximum Non-Detect					1
970	Variance Detects					248.2	Percent Non-Detects					96.15%
971	Mean Detects					10.43	SD Detects					15.75
972	Median Detects					1.55	CV Detects					1.51
973	Skewness Detects					1.918	Kurtosis Detects					3.64
974	Mean of Logged Detects					1.353	SD of Logged Detects					1.57
975												
976	**Normal GOF Test on Detects Only**											
977	Shapiro Wilk Test Statistic					0.712	**Shapiro Wilk GOF Test**					
978	5% Shapiro Wilk Critical Value					0.762	Detected Data Not Normal at 5% Significance Level					
979	Lilliefors Test Statistic					0.314	**Lilliefors GOF Test**					
980	5% Lilliefors Critical Value					0.343	Detected Data appear Normal at 5% Significance Level					
981	**Detected Data appear Approximate Normal at 5% Significance Level**											
982												
983	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
984	KM Mean					1.363	KM Standard Error of Mean					0.324
985	KM SD					3.306	95% KM (BCA) UCL					1.927
986	95% KM (t) UCL					1.9	95% KM (Percentile Bootstrap) UCL					1.923
987	95% KM (z) UCL					1.896	95% KM Bootstrap t UCL					14.22
988	90% KM Chebyshev UCL					2.335	95% KM Chebyshev UCL					2.776
989	97.5% KM Chebyshev UCL					3.387	99% KM Chebyshev UCL					4.588
990												
991	**Gamma GOF Tests on Detected Observations Only**											
992	A-D Test Statistic					0.567	**Anderson-Darling GOF Test**					
993	5% A-D Critical Value					0.705	Detected data appear Gamma Distributed at 5% Significance Level					
994	K-S Test Statistic					0.354	**Kolmogorov-Smirnov GOF**					
995	5% K-S Critical Value					0.369	Detected data appear Gamma Distributed at 5% Significance Level					
996	**Detected data appear Gamma Distributed at 5% Significance Level**											
997												
998	**Gamma Statistics on Detected Data Only**											
999	k hat (MLE)					0.62	k star (bias corrected MLE)					0.381
1000	Theta hat (MLE)					16.82	Theta star (bias corrected MLE)					27.36

1001					nu hat (MLE)	6.2				nu star (bias corrected)		3.813
1002					Mean (detects)	10.43						
1003												
1004	**Gamma ROS Statistics using Imputed Non-Detects**											
1005	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
1006	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
1007	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
1008	This is especially true when the sample size is small.											
1009	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
1010					Minimum	0.01				Mean		0.411
1011					Maximum	37.7				Median		0.01
1012					SD	3.427				CV		8.341
1013					k hat (MLE)	0.21				k star (bias corrected MLE)		0.21
1014					Theta hat (MLE)	1.961				Theta star (bias corrected MLE)		1.958
1015					nu hat (MLE)	54.48				nu star (bias corrected)		54.56
1016					Adjusted Level of Significance (β)	0.0482						
1017					Approximate Chi Square Value (54.56, α)	38.59				Adjusted Chi Square Value (54.56, β)		38.44
1018					95% Gamma Approximate UCL (use when n>=50)	0.581				95% Gamma Adjusted UCL (use when n<50)		0.583
1019												
1020	**Estimates of Gamma Parameters using KM Estimates**											
1021					Mean (KM)	1.363				SD (KM)		3.306
1022					Variance (KM)	10.93				SE of Mean (KM)		0.324
1023					k hat (KM)	0.17				k star (KM)		0.171
1024					nu hat (KM)	44.19				nu star (KM)		44.5
1025					theta hat (KM)	8.018				theta star (KM)		7.962
1026					80% gamma percentile (KM)	1.637				90% gamma percentile (KM)		4.097
1027					95% gamma percentile (KM)	7.294				99% gamma percentile (KM)		16.34
1028												
1029	**Gamma Kaplan-Meier (KM) Statistics**											
1030					Approximate Chi Square Value (44.50, α)	30.2				Adjusted Chi Square Value (44.50, β)		30.07
1031					95% Gamma Approximate KM-UCL (use when n>=50)	2.008				95% Gamma Adjusted KM-UCL (use when n<50)		2.017
1032												
1033	**Lognormal GOF Test on Detected Observations Only**											
1034					Shapiro Wilk Test Statistic	0.849				**Shapiro Wilk GOF Test**		
1035					5% Shapiro Wilk Critical Value	0.762				Detected Data appear Lognormal at 5% Significance Level		
1036					Lilliefors Test Statistic	0.32				**Lilliefors GOF Test**		
1037					5% Lilliefors Critical Value	0.343				Detected Data appear Lognormal at 5% Significance Level		
1038	**Detected Data appear Lognormal at 5% Significance Level**											
1039												
1040	**Lognormal ROS Statistics Using Imputed Non-Detects**											
1041					Mean in Original Scale	0.408				Mean in Log Scale		-11.49
1042					SD in Original Scale	3.427				SD in Log Scale		5.933
1043					95% t UCL (assumes normality of ROS data)	0.906				95% Percentile Bootstrap UCL		0.987
1044					95% BCA Bootstrap UCL	1.343				95% Bootstrap t UCL		7.667
1045					95% H-UCL (Log ROS)	37360						
1046												
1047	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
1048					KM Mean (logged)	0.052				KM Geo Mean		1.053
1049					KM SD (logged)	0.379				95% Critical H Value (KM-Log)		1.762
1050					KM Standard Error of Mean (logged)	0.0371				95% H-UCL (KM -Log)		1.2

1051					KM SD (logged)	0.379				95% Critical H Value (KM-Log)		1.762
1052					KM Standard Error of Mean (logged)	0.0371						
1053												
1054					**DL/2 Statistics**							
1055					**DL/2 Normal**					**DL/2 Log-Transformed**		
1056					Mean in Original Scale	0.882				Mean in Log Scale		-0.614
1057					SD in Original Scale	3.372				SD in Log Scale		0.482
1058					95% t UCL (Assumes normality)	1.372				95% H-Stat UCL		0.656
1059					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
1060												
1061					**Nonparametric Distribution Free UCL Statistics**							
1062					**Detected Data appear Approximate Normal Distributed at 5% Significance Level**							
1063												
1064					**Suggested UCL to Use**							
1065					95% KM (t) UCL	1.9						
1066												
1067					When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test							
1068					When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL							
1069												
1070					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
1071					Recommendations are based upon data size, data distribution, and skewness.							
1072					These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
1073					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
1074												
1075												
1076	**Nickel**											
1077												
1078					**General Statistics**							
1079					Total Number of Observations	130				Number of Distinct Observations		93
1080										Number of Missing Observations		0
1081					Minimum	5.49				Mean		20.51
1082					Maximum	117				Median		19.65
1083					SD	10.24				Std. Error of Mean		0.898
1084					Coefficient of Variation	0.499				Skewness		6.665
1085												
1086					**Normal GOF Test**							
1087					Shapiro Wilk Test Statistic	0.571				**Shapiro Wilk GOF Test**		
1088					5% Shapiro Wilk P Value	0				Data Not Normal at 5% Significance Level		
1089					Lilliefors Test Statistic	0.217				**Lilliefors GOF Test**		
1090					5% Lilliefors Critical Value	0.0781				Data Not Normal at 5% Significance Level		
1091					**Data Not Normal at 5% Significance Level**							
1092												
1093					**Assuming Normal Distribution**							
1094					**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**		
1095					95% Student's-t UCL	21.99				95% Adjusted-CLT UCL (Chen-1995)		22.54
1096										95% Modified-t UCL (Johnson-1978)		22.08
1097												
1098					**Gamma GOF Test**							
1099					A-D Test Statistic	3.774				**Anderson-Darling Gamma GOF Test**		
1100					5% A-D Critical Value	0.753				Data Not Gamma Distributed at 5% Significance Level		

1101					K-S Test Statistic	0.134	**Kolmogorov-Smirnov Gamma GOF Test**					
1102					5% K-S Critical Value	0.0817	Data Not Gamma Distributed at 5% Significance Level					
1103	**Data Not Gamma Distributed at 5% Significance Level**											
1104												
1105	**Gamma Statistics**											
1106					k hat (MLE)	7.792				k star (bias corrected MLE)		7.617
1107					Theta hat (MLE)	2.632				Theta star (bias corrected MLE)		2.692
1108					nu hat (MLE)	2026				nu star (bias corrected)		1981
1109					MLE Mean (bias corrected)	20.51				MLE Sd (bias corrected)		7.43
1110										Approximate Chi Square Value (0.05)		1878
1111					Adjusted Level of Significance	0.0482				Adjusted Chi Square Value		1877
1112												
1113	**Assuming Gamma Distribution**											
1114				95% Approximate Gamma UCL (use when n>=50))		21.62			95% Adjusted Gamma UCL (use when n<50)			21.64
1115												
1116	**Lognormal GOF Test**											
1117					Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk Lognormal GOF Test**					
1118					5% Shapiro Wilk P Value	5.2869E-7	Data Not Lognormal at 5% Significance Level					
1119					Lilliefors Test Statistic	0.138	**Lilliefors Lognormal GOF Test**					
1120					5% Lilliefors Critical Value	0.0781	Data Not Lognormal at 5% Significance Level					
1121	**Data Not Lognormal at 5% Significance Level**											
1122												
1123	**Lognormal Statistics**											
1124					Minimum of Logged Data	1.703				Mean of logged Data		2.955
1125					Maximum of Logged Data	4.762				SD of logged Data		0.34
1126												
1127	**Assuming Lognormal Distribution**											
1128					95% H-UCL	21.44				90% Chebyshev (MVUE) UCL		22.2
1129					95% Chebyshev (MVUE) UCL	23.05				97.5% Chebyshev (MVUE) UCL		24.22
1130					99% Chebyshev (MVUE) UCL	26.53						
1131												
1132	**Nonparametric Distribution Free UCL Statistics**											
1133	**Data do not follow a Discernible Distribution (0.05)**											
1134												
1135	**Nonparametric Distribution Free UCLs**											
1136					95% CLT UCL	21.98				95% Jackknife UCL		21.99
1137					95% Standard Bootstrap UCL	22				95% Bootstrap-t UCL		22.91
1138					95% Hall's Bootstrap UCL	28.98				95% Percentile Bootstrap UCL		22.06
1139					95% BCA Bootstrap UCL	22.85						
1140					90% Chebyshev(Mean, Sd) UCL	23.2				95% Chebyshev(Mean, Sd) UCL		24.42
1141					97.5% Chebyshev(Mean, Sd) UCL	26.11				99% Chebyshev(Mean, Sd) UCL		29.44
1142												
1143	**Suggested UCL to Use**											
1144					95% Student's-t UCL	21.99				or 95% Modified-t UCL		22.08
1145												
1146	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1147	Recommendations are based upon data size, data distribution, and skewness.											
1148	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1149	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
1150												

	A	B	C	D	E	F	G	H	I	J	K	L
1151	**Selenium**											
1152												
1153	**General Statistics**											
1154	Total Number of Observations					130	Number of Distinct Observations					3
1155	Number of Detects					2	Number of Non-Detects					128
1156	Number of Distinct Detects					2	Number of Distinct Non-Detects					1
1157	Minimum Detect					3.27	Minimum Non-Detect					3
1158	Maximum Detect					3.31	Maximum Non-Detect					3
1159	Variance Detects					8.0000E-4	Percent Non-Detects					98.46%
1160	Mean Detects					3.29	SD Detects					0.0283
1161	Median Detects					3.29	CV Detects					0.0086
1162	Skewness Detects					N/A	Kurtosis Detects					N/A
1163	Mean of Logged Detects					1.191	SD of Logged Detects					0.0086
1164												
1165	**Warning: Data set has only 2 Detected Values.**											
1166	**This is not enough to compute meaningful or reliable statistics and estimates.**											
1167												
1168												
1169	**Normal GOF Test on Detects Only**											
1170	**Not Enough Data to Perform GOF Test**											
1171												
1172	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
1173	KM Mean					3.004	KM Standard Error of Mean					0.00444
1174	KM SD					0.0358	95% KM (BCA) UCL					N/A
1175	95% KM (t) UCL					3.012	95% KM (Percentile Bootstrap) UCL					N/A
1176	95% KM (z) UCL					3.012	95% KM Bootstrap t UCL					N/A
1177	90% KM Chebyshev UCL					3.018	95% KM Chebyshev UCL					3.024
1178	97.5% KM Chebyshev UCL					3.032	99% KM Chebyshev UCL					3.049
1179												
1180	**Gamma GOF Tests on Detected Observations Only**											
1181	**Not Enough Data to Perform GOF Test**											
1182												
1183	**Gamma Statistics on Detected Data Only**											
1184	k hat (MLE)					27060	k star (bias corrected MLE)					N/A
1185	Theta hat (MLE)					1.2158E-4	Theta star (bias corrected MLE)					N/A
1186	nu hat (MLE)					108240	nu star (bias corrected)					N/A
1187	Mean (detects)					3.29						
1188												
1189	**Estimates of Gamma Parameters using KM Estimates**											
1190	Mean (KM)					3.004	SD (KM)					0.0358
1191	Variance (KM)					0.00128	SE of Mean (KM)					0.00444
1192	k hat (KM)					7052	k star (KM)					6889
1193	nu hat (KM)					1833431	nu star (KM)					1791122
1194	theta hat (KM)					4.2606E-4	theta star (KM)					4.3613E-4
1195	80% gamma percentile (KM)					3.035	90% gamma percentile (KM)					3.051
1196	95% gamma percentile (KM)					3.064	99% gamma percentile (KM)					3.089
1197												
1198	**Gamma Kaplan-Meier (KM) Statistics**											
1199							Adjusted Level of Significance (β)					0.0482
1200	Approximate Chi Square Value (N/A, α)					1788010	Adjusted Chi Square Value (N/A, β)					1787976

1201	95% Gamma Approximate KM-UCL (use when n>=50)					3.01	95% Gamma Adjusted KM-UCL (use when n<50)					3.01
1202												
1203	**Lognormal GOF Test on Detected Observations Only**											
1204	**Not Enough Data to Perform GOF Test**											
1205												
1206	**Lognormal ROS Statistics Using Imputed Non-Detects**											
1207	Mean in Original Scale					2.925	Mean in Log Scale					1.072
1208	SD in Original Scale					0.139	SD in Log Scale					0.0475
1209	95% t UCL (assumes normality of ROS data)					2.946	95% Percentile Bootstrap UCL					2.945
1210	95% BCA Bootstrap UCL					2.945	95% Bootstrap t UCL					2.946
1211	95% H-UCL (Log ROS)					N/A						
1212												
1213	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
1214	KM Mean (logged)					1.1	KM Geo Mean					3.004
1215	KM SD (logged)					0.0114	95% Critical H Value (KM-Log)					N/A
1216	KM Standard Error of Mean (logged)					0.00141	95% H-UCL (KM -Log)					N/A
1217	KM SD (logged)					0.0114	95% Critical H Value (KM-Log)					N/A
1218	KM Standard Error of Mean (logged)					0.00141						
1219												
1220	**DL/2 Statistics**											
1221	**DL/2 Normal**						**DL/2 Log-Transformed**					
1222	Mean in Original Scale					1.528	Mean in Log Scale					0.418
1223	SD in Original Scale					0.221	SD in Log Scale					0.097
1224	95% t UCL (Assumes normality)					1.56	95% H-Stat UCL					N/A
1225	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
1226												
1227	**Nonparametric Distribution Free UCL Statistics**											
1228	**Data do not follow a Discernible Distribution at 5% Significance Level**											
1229												
1230	**Suggested UCL to Use**											
1231	95% KM (t) UCL					3.012	KM H-UCL					N/A
1232	95% KM (BCA) UCL					N/A						
1233	**Warning: One or more Recommended UCL(s) not available!**											
1234												
1235	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1236	Recommendations are based upon data size, data distribution, and skewness.											
1237	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1238	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
1239												
1240	**Thallium**											
1241												
1242	**General Statistics**											
1243	Total Number of Observations					130	Number of Distinct Observations					7
1244	Number of Detects					6	Number of Non-Detects					124
1245	Number of Distinct Detects					6	Number of Distinct Non-Detects					1
1246	Minimum Detect					3.3	Minimum Non-Detect					3
1247	Maximum Detect					4.05	Maximum Non-Detect					3
1248	Variance Detects					0.0786	Percent Non-Detects					95.38%
1249	Mean Detects					3.6	SD Detects					0.28
1250	Median Detects					3.5	CV Detects					0.0779

1251					Skewness Detects	0.911					Kurtosis Detects	-0.281
1252					Mean of Logged Detects	1.278					SD of Logged Detects	0.0763
1253												
1254	**Normal GOF Test on Detects Only**											
1255					Shapiro Wilk Test Statistic	0.912	**Shapiro Wilk GOF Test**					
1256					5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level					
1257					Lilliefors Test Statistic	0.251	**Lilliefors GOF Test**					
1258					5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level					
1259	**Detected Data appear Normal at 5% Significance Level**											
1260												
1261	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
1262					KM Mean	3.028	KM Standard Error of Mean					0.0132
1263					KM SD	0.137	95% KM (BCA) UCL					3.049
1264					95% KM (t) UCL	3.05	95% KM (Percentile Bootstrap) UCL					3.051
1265					95% KM (z) UCL	3.049	95% KM Bootstrap t UCL					3.045
1266					90% KM Chebyshev UCL	3.067	95% KM Chebyshev UCL					3.085
1267					97.5% KM Chebyshev UCL	3.11	99% KM Chebyshev UCL					3.159
1268												
1269	**Gamma GOF Tests on Detected Observations Only**											
1270					A-D Test Statistic	0.363	**Anderson-Darling GOF Test**					
1271					5% A-D Critical Value	0.696	Detected data appear Gamma Distributed at 5% Significance Level					
1272					K-S Test Statistic	0.252	**Kolmogorov-Smirnov GOF**					
1273					5% K-S Critical Value	0.332	Detected data appear Gamma Distributed at 5% Significance Level					
1274	**Detected data appear Gamma Distributed at 5% Significance Level**											
1275												
1276	**Gamma Statistics on Detected Data Only**											
1277					k hat (MLE)	203.4	k star (bias corrected MLE)					101.8
1278					Theta hat (MLE)	0.0177	Theta star (bias corrected MLE)					0.0354
1279					nu hat (MLE)	2441	nu star (bias corrected)					1222
1280					Mean (detects)	3.6						
1281												
1282	**Gamma ROS Statistics using Imputed Non-Detects**											
1283	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
1284	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
1285	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
1286	This is especially true when the sample size is small.											
1287	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
1288					Minimum	0.01	Mean					1.609
1289					Maximum	4.05	Median					1.575
1290					SD	0.901	CV					0.56
1291					k hat (MLE)	1.628	k star (bias corrected MLE)					1.596
1292					Theta hat (MLE)	0.988	Theta star (bias corrected MLE)					1.009
1293					nu hat (MLE)	423.3	nu star (bias corrected)					414.9
1294					Adjusted Level of Significance (β)	0.0482						
1295					Approximate Chi Square Value (414.87, α)	368.7	Adjusted Chi Square Value (414.87, β)					368.2
1296					95% Gamma Approximate UCL (use when n>=50)	1.811	95% Gamma Adjusted UCL (use when n<50)					1.813
1297												
1298	**Estimates of Gamma Parameters using KM Estimates**											
1299					Mean (KM)	3.028	SD (KM)					0.137
1300					Variance (KM)	0.0189	SE of Mean (KM)					0.0132

1301					k hat (KM)	485.8					k star (KM)	474.5
1302					nu hat (KM)	126296					nu star (KM)	123382
1303					theta hat (KM)	0.00623					theta star (KM)	0.00638
1304					80% gamma percentile (KM)	3.144					90% gamma percentile (KM)	3.207
1305					95% gamma percentile (KM)	3.26					99% gamma percentile (KM)	3.36
1306												
1307					**Gamma Kaplan-Meier (KM) Statistics**							
1308					Approximate Chi Square Value (N/A, α)	122566					Adjusted Chi Square Value (N/A, β)	122557
1309					95% Gamma Approximate KM-UCL (use when n>=50)	3.048					95% Gamma Adjusted KM-UCL (use when n<50)	3.048
1310												
1311					**Lognormal GOF Test on Detected Observations Only**							
1312					Shapiro Wilk Test Statistic	0.923					**Shapiro Wilk GOF Test**	
1313					5% Shapiro Wilk Critical Value	0.788					Detected Data appear Lognormal at 5% Significance Level	
1314					Lilliefors Test Statistic	0.241					**Lilliefors GOF Test**	
1315					5% Lilliefors Critical Value	0.325					Detected Data appear Lognormal at 5% Significance Level	
1316					**Detected Data appear Lognormal at 5% Significance Level**							
1317												
1318					**Lognormal ROS Statistics Using Imputed Non-Detects**							
1319					Mean in Original Scale	2.093					Mean in Log Scale	0.701
1320					SD in Original Scale	0.587					SD in Log Scale	0.276
1321					95% t UCL (assumes normality of ROS data)	2.178					95% Percentile Bootstrap UCL	2.178
1322					95% BCA Bootstrap UCL	2.177					95% Bootstrap t UCL	2.18
1323					95% H-UCL (Log ROS)	2.183						
1324												
1325					**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
1326					KM Mean (logged)	1.107					KM Geo Mean	3.025
1327					KM SD (logged)	0.0406					95% Critical H Value (KM-Log)	N/A
1328					KM Standard Error of Mean (logged)	0.0039					95% H-UCL (KM -Log)	N/A
1329					KM SD (logged)	0.0406					95% Critical H Value (KM-Log)	N/A
1330					KM Standard Error of Mean (logged)	0.0039						
1331												
1332					**DL/2 Statistics**							
1333					**DL/2 Normal**						**DL/2 Log-Transformed**	
1334					Mean in Original Scale	1.597					Mean in Log Scale	0.446
1335					SD in Original Scale	0.446					SD in Log Scale	0.184
1336					95% t UCL (Assumes normality)	1.662					95% H-Stat UCL	1.633
1337					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
1338												
1339					**Nonparametric Distribution Free UCL Statistics**							
1340					**Detected Data appear Normal Distributed at 5% Significance Level**							
1341												
1342					**Suggested UCL to Use**							
1343					95% KM (t) UCL	3.05						
1344												
1345					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
1346					Recommendations are based upon data size, data distribution, and skewness.							
1347					These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
1348					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
1349												
1350												

	A	B	C	D	E	F	G	H	I	J	K	L
1351	**Vanadium**											
1352												
1353	**General Statistics**											
1354	Total Number of Observations					130	Number of Distinct Observations					111
1355							Number of Missing Observations					0
1356	Minimum					17.3	Mean					47.72
1357	Maximum					103	Median					46.2
1358	SD					13.59	Std. Error of Mean					1.192
1359	Coefficient of Variation					0.285	Skewness					0.936
1360												
1361	**Normal GOF Test**											
1362	Shapiro Wilk Test Statistic					0.947	**Shapiro Wilk GOF Test**					
1363	5% Shapiro Wilk P Value					1.1363E-4	Data Not Normal at 5% Significance Level					
1364	Lilliefors Test Statistic					0.12	**Lilliefors GOF Test**					
1365	5% Lilliefors Critical Value					0.0781	Data Not Normal at 5% Significance Level					
1366	**Data Not Normal at 5% Significance Level**											
1367												
1368	**Assuming Normal Distribution**											
1369	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
1370	95% Student's-t UCL					49.69	95% Adjusted-CLT UCL (Chen-1995)					49.78
1371							95% Modified-t UCL (Johnson-1978)					49.71
1372												
1373	**Gamma GOF Test**											
1374	A-D Test Statistic					1.334	**Anderson-Darling Gamma GOF Test**					
1375	5% A-D Critical Value					0.751	Data Not Gamma Distributed at 5% Significance Level					
1376	K-S Test Statistic					0.0909	**Kolmogorov-Smirnov Gamma GOF Test**					
1377	5% K-S Critical Value					0.0816	Data Not Gamma Distributed at 5% Significance Level					
1378	**Data Not Gamma Distributed at 5% Significance Level**											
1379												
1380	**Gamma Statistics**											
1381	k hat (MLE)					12.64	k star (bias corrected MLE)					12.36
1382	Theta hat (MLE)					3.774	Theta star (bias corrected MLE)					3.861
1383	nu hat (MLE)					3288	nu star (bias corrected)					3213
1384	MLE Mean (bias corrected)					47.72	MLE Sd (bias corrected)					13.57
1385							Approximate Chi Square Value (0.05)					3082
1386	Adjusted Level of Significance					0.0482	Adjusted Chi Square Value					3081
1387												
1388	**Assuming Gamma Distribution**											
1389	95% Approximate Gamma UCL (use when n>=50))					49.74	95% Adjusted Gamma UCL (use when n<50)					49.76
1390												
1391	**Lognormal GOF Test**											
1392	Shapiro Wilk Test Statistic					0.965	**Shapiro Wilk Lognormal GOF Test**					
1393	5% Shapiro Wilk P Value					0.022	Data Not Lognormal at 5% Significance Level					
1394	Lilliefors Test Statistic					0.1	**Lilliefors Lognormal GOF Test**					
1395	5% Lilliefors Critical Value					0.0781	Data Not Lognormal at 5% Significance Level					
1396	**Data Not Lognormal at 5% Significance Level**											
1397												
1398	**Lognormal Statistics**											
1399	Minimum of Logged Data					2.851	Mean of logged Data					3.825
1400	Maximum of Logged Data					4.635	SD of logged Data					0.289

1401												
1402	**Assuming Lognormal Distribution**											
1403					95% H-UCL	49.94			90% Chebyshev (MVUE) UCL	51.49		
1404					95% Chebyshev (MVUE) UCL	53.17			97.5% Chebyshev (MVUE) UCL	55.5		
1405					99% Chebyshev (MVUE) UCL	60.07						
1406												
1407	**Nonparametric Distribution Free UCL Statistics**											
1408	**Data do not follow a Discernible Distribution (0.05)**											
1409												
1410	**Nonparametric Distribution Free UCLs**											
1411					95% CLT UCL	49.68			95% Jackknife UCL	49.69		
1412					95% Standard Bootstrap UCL	49.65			95% Bootstrap-t UCL	49.88		
1413					95% Hall's Bootstrap UCL	49.89			95% Percentile Bootstrap UCL	49.7		
1414					95% BCA Bootstrap UCL	49.82						
1415					90% Chebyshev(Mean, Sd) UCL	51.29			95% Chebyshev(Mean, Sd) UCL	52.91		
1416					97.5% Chebyshev(Mean, Sd) UCL	55.16			99% Chebyshev(Mean, Sd) UCL	59.58		
1417												
1418	**Suggested UCL to Use**											
1419					95% Student's-t UCL	49.69			or 95% Modified-t UCL	49.71		
1420												
1421	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1422	Recommendations are based upon data size, data distribution, and skewness.											
1423	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1424	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
1425												
1426												
1427	**Zinc**											
1428												
1429	**General Statistics**											
1430					Total Number of Observations	130			Number of Distinct Observations	124		
1431									Number of Missing Observations	0		
1432					Minimum	19			Mean	169		
1433					Maximum	8990			Median	66.45		
1434					SD	812.2			Std. Error of Mean	71.24		
1435					Coefficient of Variation	4.806			Skewness	10.29		
1436												
1437	**Normal GOF Test**											
1438					Shapiro Wilk Test Statistic	0.148			**Shapiro Wilk GOF Test**			
1439					5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level			
1440					Lilliefors Test Statistic	0.449			**Lilliefors GOF Test**			
1441					5% Lilliefors Critical Value	0.0781			Data Not Normal at 5% Significance Level			
1442	**Data Not Normal at 5% Significance Level**											
1443												
1444	**Assuming Normal Distribution**											
1445	**95% Normal UCL**								**95% UCLs (Adjusted for Skewness)**			
1446					95% Student's-t UCL	287			95% Adjusted-CLT UCL (Chen-1995)	354.9		
1447									95% Modified-t UCL (Johnson-1978)	297.7		
1448												
1449	**Gamma GOF Test**											
1450					A-D Test Statistic	7.692E+28			**Anderson-Darling Gamma GOF Test**			

1451					5% A-D Critical Value	0.795	Data Not Gamma Distributed at 5% Significance Level					
1452					K-S Test Statistic	0.343	**Kolmogorov-Smirnov Gamma GOF Test**					
1453					5% K-S Critical Value	0.0849	Data Not Gamma Distributed at 5% Significance Level					
1454	**Data Not Gamma Distributed at 5% Significance Level**											
1455												
1456	**Gamma Statistics**											
1457					k hat (MLE)	0.749				k star (bias corrected MLE)		0.737
1458					Theta hat (MLE)	225.5				Theta star (bias corrected MLE)		229.2
1459					nu hat (MLE)	194.9				nu star (bias corrected)		191.7
1460					MLE Mean (bias corrected)	169				MLE Sd (bias corrected)		196.8
1461										Approximate Chi Square Value (0.05)		160.7
1462					Adjusted Level of Significance	0.0482				Adjusted Chi Square Value		160.4
1463												
1464	**Assuming Gamma Distribution**											
1465				95% Approximate Gamma UCL (use when n>=50))		201.6			95% Adjusted Gamma UCL (use when n<50)			202
1466												
1467	**Lognormal GOF Test**											
1468					Shapiro Wilk Test Statistic	0.724	**Shapiro Wilk Lognormal GOF Test**					
1469					5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level					
1470					Lilliefors Test Statistic	0.184	**Lilliefors Lognormal GOF Test**					
1471					5% Lilliefors Critical Value	0.0781	Data Not Lognormal at 5% Significance Level					
1472	**Data Not Lognormal at 5% Significance Level**											
1473												
1474	**Lognormal Statistics**											
1475					Minimum of Logged Data	2.944				Mean of logged Data		4.331
1476					Maximum of Logged Data	9.104				SD of logged Data		0.702
1477												
1478	**Assuming Lognormal Distribution**											
1479					95% H-UCL	109.7				90% Chebyshev (MVUE) UCL		116.8
1480					95% Chebyshev (MVUE) UCL	125.8				97.5% Chebyshev (MVUE) UCL		138.3
1481					99% Chebyshev (MVUE) UCL	162.8						
1482												
1483	**Nonparametric Distribution Free UCL Statistics**											
1484	**Data do not follow a Discernible Distribution (0.05)**											
1485												
1486	**Nonparametric Distribution Free UCLs**											
1487					95% CLT UCL	286.2				95% Jackknife UCL		287
1488					95% Standard Bootstrap UCL	286.4				95% Bootstrap-t UCL		1627
1489					95% Hall's Bootstrap UCL	852.5				95% Percentile Bootstrap UCL		298.3
1490					95% BCA Bootstrap UCL	393.6						
1491					90% Chebyshev(Mean, Sd) UCL	382.7				95% Chebyshev(Mean, Sd) UCL		479.5
1492					97.5% Chebyshev(Mean, Sd) UCL	613.9				99% Chebyshev(Mean, Sd) UCL		877.8
1493												
1494	**Suggested UCL to Use**											
1495					95% Chebyshev (Mean, Sd) UCL	479.5						
1496												
1497	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1498	Recommendations are based upon data size, data distribution, and skewness.											
1499	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1500	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											

	A	B	C	D	E	F	G	H	I	J	K	L
1501												
1502	**Mercury**											
1503												
1504	**General Statistics**											
1505					Total Number of Observations	130			Number of Distinct Observations	14		
1506					Number of Detects	21			Number of Non-Detects	109		
1507					Number of Distinct Detects	13			Number of Distinct Non-Detects	1		
1508					Minimum Detect	0.105			Minimum Non-Detect	0.1		
1509					Maximum Detect	0.6			Maximum Non-Detect	0.1		
1510					Variance Detects	0.016			Percent Non-Detects	83.85%		
1511					Mean Detects	0.235			SD Detects	0.126		
1512					Median Detects	0.18			CV Detects	0.538		
1513					Skewness Detects	1.65			Kurtosis Detects	2.515		
1514					Mean of Logged Detects	-1.558			SD of Logged Detects	0.457		
1515												
1516	**Normal GOF Test on Detects Only**											
1517					Shapiro Wilk Test Statistic	0.805			**Shapiro Wilk GOF Test**			
1518					5% Shapiro Wilk Critical Value	0.908			Detected Data Not Normal at 5% Significance Level			
1519					Lilliefors Test Statistic	0.228			**Lilliefors GOF Test**			
1520					5% Lilliefors Critical Value	0.188			Detected Data Not Normal at 5% Significance Level			
1521	**Detected Data Not Normal at 5% Significance Level**											
1522												
1523	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
1524					KM Mean	0.122			KM Standard Error of Mean	0.00631		
1525					KM SD	0.0702			95% KM (BCA) UCL	0.134		
1526					95% KM (t) UCL	0.132			95% KM (Percentile Bootstrap) UCL	0.133		
1527					95% KM (z) UCL	0.132			95% KM Bootstrap t UCL	0.137		
1528					90% KM Chebyshev UCL	0.141			95% KM Chebyshev UCL	0.149		
1529					97.5% KM Chebyshev UCL	0.161			99% KM Chebyshev UCL	0.185		
1530												
1531	**Gamma GOF Tests on Detected Observations Only**											
1532					A-D Test Statistic	1.018			**Anderson-Darling GOF Test**			
1533					5% A-D Critical Value	0.746			Detected Data Not Gamma Distributed at 5% Significance Level			
1534					K-S Test Statistic	0.211			**Kolmogorov-Smirnov GOF**			
1535					5% K-S Critical Value	0.19			Detected Data Not Gamma Distributed at 5% Significance Level			
1536	**Detected Data Not Gamma Distributed at 5% Significance Level**											
1537												
1538	**Gamma Statistics on Detected Data Only**											
1539					k hat (MLE)	4.727			k star (bias corrected MLE)	4.083		
1540					Theta hat (MLE)	0.0497			Theta star (bias corrected MLE)	0.0576		
1541					nu hat (MLE)	198.5			nu star (bias corrected)	171.5		
1542					Mean (detects)	0.235						
1543												
1544	**Gamma ROS Statistics using Imputed Non-Detects**											
1545	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
1546	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
1547	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
1548	This is especially true when the sample size is small.											
1549	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
1550					Minimum	0.01			Mean	0.0491		

1551					Maximum	0.6					Median	0.01
1552					SD	0.0965					CV	1.966
1553					k hat (MLE)	0.621					k star (bias corrected MLE)	0.611
1554					Theta hat (MLE)	0.0791					Theta star (bias corrected MLE)	0.0803
1555					nu hat (MLE)	161.3					nu star (bias corrected)	158.9
1556					Adjusted Level of Significance (β)	0.0482						
1557					Approximate Chi Square Value (158.95, α)	130.8					Adjusted Chi Square Value (158.95, β)	130.5
1558					95% Gamma Approximate UCL (use when n>=50)	0.0596					95% Gamma Adjusted UCL (use when n<50)	0.0598
1559												
1560					**Estimates of Gamma Parameters using KM Estimates**							
1561					Mean (KM)	0.122					SD (KM)	0.0702
1562					Variance (KM)	0.00493					SE of Mean (KM)	0.00631
1563					k hat (KM)	3.012					k star (KM)	2.948
1564					nu hat (KM)	783.2					nu star (KM)	766.5
1565					theta hat (KM)	0.0404					theta star (KM)	0.0413
1566					80% gamma percentile (KM)	0.174					90% gamma percentile (KM)	0.217
1567					95% gamma percentile (KM)	0.257					99% gamma percentile (KM)	0.344
1568												
1569					**Gamma Kaplan-Meier (KM) Statistics**							
1570					Approximate Chi Square Value (766.48, α)	703.2					Adjusted Chi Square Value (766.48, β)	702.6
1571					95% Gamma Approximate KM-UCL (use when n>=50)	0.133					95% Gamma Adjusted KM-UCL (use when n<50)	0.133
1572												
1573					**Lognormal GOF Test on Detected Observations Only**							
1574					Shapiro Wilk Test Statistic	0.914					**Shapiro Wilk GOF Test**	
1575					5% Shapiro Wilk Critical Value	0.908					Detected Data appear Lognormal at 5% Significance Level	
1576					Lilliefors Test Statistic	0.203					**Lilliefors GOF Test**	
1577					5% Lilliefors Critical Value	0.188					Detected Data Not Lognormal at 5% Significance Level	
1578					**Detected Data appear Approximate Lognormal at 5% Significance Level**							
1579												
1580					**Lognormal ROS Statistics Using Imputed Non-Detects**							
1581					Mean in Original Scale	0.0698					Mean in Log Scale	-3.271
1582					SD in Original Scale	0.0919					SD in Log Scale	1.123
1583					95% t UCL (assumes normality of ROS data)	0.0831					95% Percentile Bootstrap UCL	0.0834
1584					95% BCA Bootstrap UCL	0.086					95% Bootstrap t UCL	0.0863
1585					95% H-UCL (Log ROS)	0.0896						
1586												
1587					**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
1588					KM Mean (logged)	-2.182					KM Geo Mean	0.113
1589					KM SD (logged)	0.327					95% Critical H Value (KM-Log)	1.74
1590					KM Standard Error of Mean (logged)	0.0294					95% H-UCL (KM -Log)	0.125
1591					KM SD (logged)	0.327					95% Critical H Value (KM-Log)	1.74
1592					KM Standard Error of Mean (logged)	0.0294						
1593												
1594					**DL/2 Statistics**							
1595					**DL/2 Normal**						**DL/2 Log-Transformed**	
1596					Mean in Original Scale	0.0799					Mean in Log Scale	-2.763
1597					SD in Original Scale	0.0845					SD in Log Scale	0.561
1598					95% t UCL (Assumes normality)	0.0922					95% H-Stat UCL	0.0809
1599					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
1600												

	A	B	C	D	E	F	G	H	I	J	K	L
1601	**Nonparametric Distribution Free UCL Statistics**											
1602	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
1603												
1604	**Suggested UCL to Use**											
1605	KM Student's t					0.123				KM H-UCL		0.125
1606												
1607	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1608	Recommendations are based upon data size, data distribution, and skewness.											
1609	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1610	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
1611												
1612	**Acetone**											
1613												
1614	**General Statistics**											
1615	Total Number of Observations					22				Number of Distinct Observations		12
1616	Number of Detects					1				Number of Non-Detects		21
1617	Number of Distinct Detects					1				Number of Distinct Non-Detects		11
1618												
1619	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
1620	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
1621												
1622	**The data set for variable Acetone was not processed!**											
1623												
1624												
1625	**Benzene**											
1626												
1627	**General Statistics**											
1628	Total Number of Observations					22				Number of Distinct Observations		8
1629	Number of Detects					1				Number of Non-Detects		21
1630	Number of Distinct Detects					1				Number of Distinct Non-Detects		7
1631												
1632	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
1633	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
1634												
1635	**The data set for variable Benzene was not processed!**											
1636												
1637												
1638	**Bromoform**											
1639												
1640	**General Statistics**											
1641	Total Number of Observations					22				Number of Distinct Observations		8
1642	Number of Detects					1				Number of Non-Detects		21
1643	Number of Distinct Detects					1				Number of Distinct Non-Detects		7
1644												
1645	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
1646	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
1647												
1648	**The data set for variable Bromoform was not processed!**											
1649												
1650												

	A	B	C	D	E	F	G	H	I	J	K	L
1651	**t-Butyl alcohol (TBA)**											
1652												
1653						**General Statistics**						
1654					Total Number of Observations	22			Number of Distinct Observations			12
1655					Number of Detects	1			Number of Non-Detects			21
1656					Number of Distinct Detects	1			Number of Distinct Non-Detects			11
1657												
1658					**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**							
1659					**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**							
1660												
1661					**The data set for variable t-Butyl alcohol (TBA) was not processed!**							
1662												
1663												
1664	**Toluene**											
1665												
1666						**General Statistics**						
1667					Total Number of Observations	22			Number of Distinct Observations			8
1668					Number of Detects	1			Number of Non-Detects			21
1669					Number of Distinct Detects	1			Number of Distinct Non-Detects			7
1670												
1671					**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**							
1672					**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**							
1673												
1674					**The data set for variable Toluene was not processed!**							
1675												
1676												
1677	**4,4'-DDT**											
1678												
1679						**General Statistics**						
1680					Total Number of Observations	34			Number of Distinct Observations			6
1681					Number of Detects	3			Number of Non-Detects			31
1682					Number of Distinct Detects	3			Number of Distinct Non-Detects			3
1683					Minimum Detect	5.4			Minimum Non-Detect			5
1684					Maximum Detect	15			Maximum Non-Detect			10
1685					Variance Detects	23.25			Percent Non-Detects			91.18%
1686					Mean Detects	10.47			SD Detects			4.822
1687					Median Detects	11			CV Detects			0.461
1688					Skewness Detects	-0.492			Kurtosis Detects			N/A
1689					Mean of Logged Detects	2.264			SD of Logged Detects			0.524
1690												
1691					**Warning: Data set has only 3 Detected Values.**							
1692					**This is not enough to compute meaningful or reliable statistics and estimates.**							
1693												
1694												
1695						**Normal GOF Test on Detects Only**						
1696					Shapiro Wilk Test Statistic	0.991			**Shapiro Wilk GOF Test**			
1697					5% Shapiro Wilk Critical Value	0.767			Detected Data appear Normal at 5% Significance Level			
1698					Lilliefors Test Statistic	0.211			**Lilliefors GOF Test**			
1699					5% Lilliefors Critical Value	0.425			Detected Data appear Normal at 5% Significance Level			
1700					**Detected Data appear Normal at 5% Significance Level**							

	A	B	C	D	E	F	G	H	I	J	K	L
1701												
1702	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
1703	KM Mean					5.484	KM Standard Error of Mean					0.408
1704	KM SD					1.942	95% KM (BCA) UCL					N/A
1705	95% KM (t) UCL					6.174	95% KM (Percentile Bootstrap) UCL					N/A
1706	95% KM (z) UCL					6.155	95% KM Bootstrap t UCL					N/A
1707	90% KM Chebyshev UCL					6.708	95% KM Chebyshev UCL					7.262
1708	97.5% KM Chebyshev UCL					8.032	99% KM Chebyshev UCL					9.543
1709												
1710	**Gamma GOF Tests on Detected Observations Only**											
1711	**Not Enough Data to Perform GOF Test**											
1712												
1713	**Gamma Statistics on Detected Data Only**											
1714	k hat (MLE)					6.108	k star (bias corrected MLE)					N/A
1715	Theta hat (MLE)					1.713	Theta star (bias corrected MLE)					N/A
1716	nu hat (MLE)					36.65	nu star (bias corrected)					N/A
1717	Mean (detects)					10.47						
1718												
1719	**Gamma ROS Statistics using Imputed Non-Detects**											
1720	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
1721	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
1722	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
1723	This is especially true when the sample size is small.											
1724	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
1725	Minimum					0.01	Mean					0.983
1726	Maximum					15	Median					0.01
1727	SD					3.235	CV					3.291
1728	k hat (MLE)					0.193	k star (bias corrected MLE)					0.196
1729	Theta hat (MLE)					5.089	Theta star (bias corrected MLE)					5.022
1730	nu hat (MLE)					13.14	nu star (bias corrected)					13.31
1731	Adjusted Level of Significance (β)					0.0422						
1732	Approximate Chi Square Value (13.31, α)					6.101	Adjusted Chi Square Value (13.31, β)					5.86
1733	95% Gamma Approximate UCL (use when n>=50)					2.144	95% Gamma Adjusted UCL (use when n<50)					N/A
1734												
1735	**Estimates of Gamma Parameters using KM Estimates**											
1736	Mean (KM)					5.484	SD (KM)					1.942
1737	Variance (KM)					3.771	SE of Mean (KM)					0.408
1738	k hat (KM)					7.975	k star (KM)					7.291
1739	nu hat (KM)					542.3	nu star (KM)					495.8
1740	theta hat (KM)					0.688	theta star (KM)					0.752
1741	80% gamma percentile (KM)					7.08	90% gamma percentile (KM)					8.194
1742	95% gamma percentile (KM)					9.195	99% gamma percentile (KM)					11.27
1743												
1744	**Gamma Kaplan-Meier (KM) Statistics**											
1745	Approximate Chi Square Value (495.79, α)					445.2	Adjusted Chi Square Value (495.79, β)					442.8
1746	95% Gamma Approximate KM-UCL (use when n>=50)					6.108	95% Gamma Adjusted KM-UCL (use when n<50)					6.14
1747												
1748	**Lognormal GOF Test on Detected Observations Only**											
1749	Shapiro Wilk Test Statistic					0.951	**Shapiro Wilk GOF Test**					
1750	5% Shapiro Wilk Critical Value					0.767	Detected Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
1751					Lilliefors Test Statistic	0.267	**Lilliefors GOF Test**					
1752					5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level					
1753	**Detected Data appear Lognormal at 5% Significance Level**											
1754												
1755	**Lognormal ROS Statistics Using Imputed Non-Detects**											
1756					Mean in Original Scale	1.645				Mean in Log Scale		-0.583
1757					SD in Original Scale	3.141				SD in Log Scale		1.49
1758				95% t UCL (assumes normality of ROS data)		2.556				95% Percentile Bootstrap UCL		2.587
1759					95% BCA Bootstrap UCL	2.944				95% Bootstrap t UCL		4.078
1760					95% H-UCL (Log ROS)	3.788						
1761												
1762	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
1763					KM Mean (logged)	1.668				KM Geo Mean		5.299
1764					KM SD (logged)	0.225				95% Critical H Value (KM-Log)		1.759
1765					KM Standard Error of Mean (logged)	0.0473				95% H-UCL (KM -Log)		5.822
1766					KM SD (logged)	0.225				95% Critical H Value (KM-Log)		1.759
1767					KM Standard Error of Mean (logged)	0.0473						
1768												
1769	**DL/2 Statistics**											
1770	**DL/2 Normal**						**DL/2 Log-Transformed**					
1771					Mean in Original Scale	3.46				Mean in Log Scale		1.108
1772					SD in Original Scale	2.616				SD in Log Scale		0.439
1773					95% t UCL (Assumes normality)	4.22				95% H-Stat UCL		3.854
1774	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
1775												
1776	**Nonparametric Distribution Free UCL Statistics**											
1777	**Detected Data appear Normal Distributed at 5% Significance Level**											
1778												
1779	**Suggested UCL to Use**											
1780					95% KM (t) UCL	6.174						
1781												
1782	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1783	Recommendations are based upon data size, data distribution, and skewness.											
1784	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1785	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
1786												

Summary of Hazard Indices and Incremental Lifetime Cancer Risk

3701 N. Pacific Place, Long Beach, California

ATTACHMENT 2

Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk:
Construction Worker Soil Evaluation based on 95% UCL of Mean Concentration (0-15')
InSite Property Group 3701 Pacific Place Long Beach, CA

Compound	Cas No.	Exposure Point Concentration (mg/kg)	Construction Screening Level Cancer (mg/kg)	Incremental Lifetime Cancer Risk (ILCR)
		(1)	(2)	(3)
Petroleum - Gasoline	NA	2.20E+02	--	--
Petroleum - Diesel	NA	4.10E+01	--	--
Petroleum - Motor Oil	NA	5.00E+02	--	--
Antimony (metallic)	7440-36-0	3.30E+00	--	--
Barium	7440-39-3	2.23E+02	--	--
Cadmium (diet)	7440-43-9	1.01E+00	--	--
Chromium, Total	7440-47-3	3.91E+01	--	--
Cobalt	7440-48-4	1.70E+01	4.91E+01	3.5E-07
Copper	7440-50-8	4.95E+01	--	--
Molybdenum	7439-98-7	1.90E+00	--	--
Nickel	7440-02-0	2.21E+01	1.70E+03	1.3E-08
Selenium	7782-49-2	3.31E+00	--	--
Thallium Carbonate	6533-73-9	3.05E+00	--	--
Vanadium and Compounds	7440-62-2	4.97E+01	--	--
Zinc and Compounds	7440-66-6	4.80E+02	--	--
Mercury	7469-97-6	1.25E-01	--	--
Acetone	67-64-1	1.60E+02	--	--
Benzene	71-43-2	4.80E+00	3.28E+01	1.5E-07
Bromoform	75-25-2	9.00E+00	--	--
t-Butyl alcohol (TBA)	75-65-0	9.50E+00	--	--
Toluene	108-88-3	4.15E+00	--	--
4,4'-DDT	50-29-3	1.50E+01	--	--
			ILCR:	**5.1E-07**

Notes:

(1) Soil Exposure Point Concentration (EPC) = 95% UCL of the mean; when insufficient sample size to compute a reliable statistic in ProUCL, the maximum concentration was selected as the EPC.

(2) Construction Worker Screening Level Cancer (SL) as provided in HHSE text. SLs based on San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, dated January 2019 (Rev. 2).

(3) Incremental Lifetime Cancer Risk (ILCR) = EPC/SL*1E-06

- Lead to be evaluated using Leadspread 8 and arsenic to be evaluated separately.

Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk:
Construction Worker Soil Evaluation based on 95% UCL of Mean Concentration (0-15')
InSite Property Group 3701 Pacific Place Long Beach, CA

Compound	Cas No.	Exposure Point Concentration (mg/kg)	Construction Screening Level Non-Cancer (SL) (mg/kg)	Hazard Quotient (HQ)
		(1)	(2)	(3)
Petroleum - Gasoline	NA	2.20E+02	1.82E+03	1.2E-01
Petroleum - Diesel	NA	4.10E+01	1.08E+03	3.8E-02
Petroleum - Motor Oil	NA	5.00E+02	5.45E+04	9.2E-03
Antimony (metallic)	7440-36-0	3.30E+00	4.96E+01	6.7E-02
Barium	7440-39-3	2.23E+02	3.02E+03	7.4E-02
Cadmium (diet)	7440-43-9	1.01E+00	5.09E+01	2.0E-02
Chromium, Total	7440-47-3	3.91E+01	--	--
Cobalt	7440-48-4	1.70E+01	2.79E+01	6.1E-01
Copper	7440-50-8	4.95E+01	1.42E+04	3.5E-03
Molybdenum	7439-98-7	1.90E+00	1.77E+03	1.1E-03
Nickel	7440-02-0	2.21E+01	8.63E+01	2.6E-01
Selenium	7782-49-2	3.31E+00	1.75E+03	1.9E-03
Thallium Carbonate	6533-73-9	3.05E+00	3.54E+00	8.6E-01
Vanadium and Compounds	7440-62-2	4.97E+01	4.66E+02	1.1E-01
Zinc and Compounds	7440-66-6	4.80E+02	1.06E+05	4.5E-03
Mercury	7469-97-6	1.25E-01	4.36E+01	2.9E-03
Acetone	67-64-1	1.60E+02	2.72E+05	5.9E-04
Benzene	71-43-2	4.80E+00	4.54E+01	1.1E-01
Bromoform	75-25-2	9.00E+00	7.08E+03	1.3E-03
t-Butyl alcohol (TBA)	75-65-0	9.50E+00	--	--
Toluene	108-88-3	4.15E+00	4.70E+03	8.8E-04
4,4'-DDT	50-29-3	1.50E+01	1.41E+02	1.1E-01
			HI:	**2.4E+00**

Notes:

(1) Soil Exposure Point Concentration (EPC) = 95% UCL of the mean; when insufficient sample size to compute a reliable statistic in ProUCL, the maximum concentration was selected as the EPC.

(2) Construction Worker Screening Level Cancer (SL) as provided in HHSE text. SLs based on San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, dated January 2019 (Rev. 2).

(3) Hazard Quotient (HQ) = EPC/ SL

- Lead to be evaluated using Leadspread 8 and arsenic to be evaluated separately.

Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk:
Industrial Worker Soil Evaluation based on 95% UCL of Mean Concentration (0-15')
InSite Property Group 3701 Pacific Place Long Beach, CA

Compound	Cas No.	Exposure Point Concentration (mg/kg)	Industrial Screening Level Cancer (mg/kg)	Incremental Lifetime Cancer Risk (ILCR)
		(1)	(2)	(3)
Petroleum - Gasoline	NA	2.20E+02	--	--
Petroleum - Diesel	NA	4.10E+01	--	--
Petroleum - Motor Oil	NA	5.00E+02	--	--
Antimony (metallic)	7440-36-0	3.30E+00	--	--
Barium	7440-39-3	2.23E+02	--	--
Cadmium (diet)	7440-43-9	1.01E+00	4.00E+03	2.5E-10
Chromium, Total	7440-47-3	3.91E+01	--	--
Cobalt	7440-48-4	1.70E+01	1.90E+03	8.9E-09
Copper	7440-50-8	4.95E+01	--	--
Molybdenum	7439-98-7	1.90E+00	--	--
Nickel	7440-02-0	2.21E+01	6.40E+04	3.5E-10
Selenium	7782-49-2	3.31E+00	--	--
Thallium Carbonate	6533-73-9	3.05E+00	--	--
Vanadium and Compounds	7440-62-2	4.97E+01	--	--
Zinc and Compounds	7440-66-6	4.80E+02	--	--
Mercury	7469-97-6	1.25E-01	--	--
Acetone	67-64-1	1.60E+02	--	--
Benzene	71-43-2	4.80E+00	1.40E+00	3.4E-06
Bromoform	75-25-2	9.00E+00	8.60E+01	1.0E-07
t-Butyl alcohol (TBA)	75-65-0	9.50E+00	--	--
Toluene	108-88-3	4.15E+00	--	--
4,4'-DDT	50-29-3	1.50E+01	7.10E+00	2.1E-06
			ILCR:	**5.7E-06**

Notes:

(1) Soil Exposure Point Concentration (EPC) = 95% UCL of the mean; when insufficient sample size to compute a reliable statistic in ProUCL, the maximum concentration was selected as the EPC.

(2) Industrial Screening Level Cancer (SL) as provided in HHSE text. SLs based on USEPA Regional Screening Levels (RSLs) at a TR of 1E-06, unless modified by DTSC, dated November 2019. Human Health Risk Assessment Note 3: DTSC-Modified Screening Levels; HHRA-Note-3-Tables-April 2019.xlsx. dated April 2019. SLs based on ESLs for TPH provided in San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, dated January 2019 (Rev. 2) and USEPA 2019 RSLs.

(3) Incremental Lifetime Cancer Risk (ILCR) = EPC/SL*1E-06

- Lead to be evaluated using Leadspread 8 and arsenic to be evaluated separately.

Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk:
Industrial Worker Soil Evaluation based on 95% UCL of Mean Concentration (0-15')
InSite Property Group 3701 Pacific Place Long Beach, CA

Compound	Cas No.	Soil Exposure Point Concentration (mg/kg)	Industrial Screening Level Non-Cancer (SL) (mg/kg)	Hazard Quotient (HQ)
		(1)	(2)	(3)
Petroleum - Gasoline	NA	2.20E+02	2.00E+03	1.1E-01
Petroleum - Diesel	NA	4.10E+01	1.22E+03	3.4E-02
Petroleum - Motor Oil	NA	5.00E+02	1.80E+05	2.8E-03
Antimony (metallic)	7440-36-0	3.30E+00	4.70E+02	7.0E-03
Barium	7440-39-3	2.23E+02	2.20E+05	1.0E-03
Cadmium (diet)	7440-43-9	1.01E+00	7.80E+02	1.3E-03
Chromium, Total	7440-47-3	3.91E+01	--	--
Cobalt	7440-48-4	1.70E+01	3.50E+02	4.9E-02
Copper	7440-50-8	4.95E+01	4.70E+04	1.1E-03
Molybdenum	7439-98-7	1.90E+00	5.80E+03	3.3E-04
Nickel	7440-02-0	2.21E+01	1.10E+04	2.0E-03
Selenium	7782-49-2	3.31E+00	5.80E+03	5.7E-04
Thallium Carbonate	6533-73-9	3.05E+00	2.30E+01	1.3E-01
Vanadium and Compounds	7440-62-2	4.97E+01	5.80E+03	8.6E-03
Zinc and Compounds	7440-66-6	4.80E+02	3.50E+05	1.4E-03
Mercury	7469-97-6	1.25E-01	4.40E+00	2.8E-02
Acetone	67-64-1	1.60E+02	6.70E+05	2.4E-04
Benzene	71-43-2	4.80E+00	4.60E+01	1.0E-01
Bromoform	75-25-2	9.00E+00	3.00E+03	3.0E-03
t-Butyl alcohol (TBA)	75-65-0	9.50E+00	--	--
Toluene	108-88-3	4.15E+00	5.30E+03	7.8E-04
4,4'-DDT	50-29-3	1.50E+01	4.30E+02	3.5E-02
			HI:	**5.2E-01**

Notes:

(1) Soil Exposure Point Concentration (EPC) = 95% UCL of the mean; when insufficient sample size to compute a reliable statistic in ProUCL, the maximum concentration was selected as the EPC.

(2) Industrial Screening Level Non-Cancer (SL) as provided in HHSE text. SLs based on USEPA Regional Screening Levels (RSLs) at a TR of 1E-06, unless modified by DTSC, dated November 2019. Human Health Risk Assessment Note 3: DTSC-Modified Screening Levels; HHRA-Note-3-Tables-April 2019.xlsx. dated April 2019. SLs based on ESLs for TPH provided in San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, dated January 2019 (Rev. 2) and USEPA 2019 RSLs.

(3) Hazard Quotient (HQ) = EPC/ SL

- Lead to be evaluated using Leadspread 8 and arsenic to be evaluated separately.

Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk:
Industrial Indoor Air based on Maximum Concentrations (0.0005 AF)
InSite Property Group 3701 Pacific Place Long Beach, CA

Compound	Cas No.	Exposure Point Concentration ($\mu g/m^3$)	Industrial Screening Level Cancer ($\mu g/m^3$)	Incremental Lifetime Cancer Risk (ILCR)
Methyl Ethyl Ketone (2-butanone)	78-93-3	1.80E-01	--	--
Difluoroethane, 1,1-	75-37-6	9.00E-02	--	--
Benzene	71-43-2	5.00E-01	4.20E-01	1.2E-06
Carbon Disulfide	75-15-0	1.30E-01	--	--
Chloromethane	74-87-3	3.45E-02	--	--
Ethylbenzene	100-41-4	2.95E-02	4.90E+00	6.0E-09
Xylene, m/p	179601-23-1	3.35E-02	--	--
Xylene, o-	95-47-6	1.45E-02	--	--
Tetrachloroethene	127-18-4	2.45E-02	2.00E+00	1.2E-08
Toluene	108-88-3	3.55E-02	--	--
			ILCR:	**1.2E-06**

Exposure Assumptions:

Attenuation Factor	AF	0.0005

Notes:

(1) Indoor Air Exposure Point Concentration (EPC) = soil gas EPC ($\mu g/m^3$)*AF where AF=steady state attenuation factor. AF assumed to be equal to 0.0005 for future commercial contaminant source based on Table 2 DTSC. 2011. DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October 2011. Accessed at: https://www.dtsc.ca.gov/assessingRisk/upload/Final_VIG_Oct_2011.pdf.

(2) Industrial Screening Level Cancer (SL) as provided in HHSE text. SLs based on USEPA Regional Screening Levels (RSLs) at a TR of 1E-06, unless modified by DTSC, dated November 2019. Human Health Risk Assessment Note 3: DTSC-Modified Screening Levels; HHRA-Note-3-Tables-April 2019.xlsx. dated April 2019.

(3) Incremental Lifetime Cancer Risk (ILCR)=EPC/SL*1E-06

- Methane is not evaluated under IRIS, HERO, or other state programs consulted; therefore it is not included in the screening evaluation.

Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk:
Industrial Indoor Air based on Maximum Concentrations (0.0005 AF)
InSite Property Group 3701 Pacific Place Long Beach, CA

Compound	Cas No.	Exposure Point Concentration ($\mu g/m^3$)	Industrial Screening Level Non-Cancer (SL) ($\mu g/m^3$)	Hazard Quotient (HQ)
Methyl Ethyl Ketone (2-butanone)	78-93-3	1.80E-01	2.20E+04	8.2E-06
Difluoroethane, 1,1-	75-37-6	9.00E-02	1.80E+05	5.0E-07
Benzene	71-43-2	5.00E-01	1.30E+01	3.8E-02
Carbon Disulfide	75-15-0	1.30E-01	3.10E+03	4.2E-05
Chloromethane	74-87-3	3.45E-02	3.90E+02	8.8E-05
Ethylbenzene	100-41-4	2.95E-02	4.40E+03	6.7E-06
Xylene, m/p	179601-23-1	3.35E-02	4.40E+02	7.6E-05
Xylene, o-	95-47-6	1.45E-02	4.40E+02	3.3E-05
Tetrachloroethene	127-18-4	2.45E-02	1.80E+02	1.4E-04
Toluene	108-88-3	3.55E-02	1.30E+03	2.7E-05
			HI:	**3.9E-02**

Exposure Assumptions:

Attenuation Factor	AF	0.0005

Notes:

(1) Indoor Air Exposure Point Concentration (EPC) = soil gas EPC ($\mu g/m^3$)*AF where AF=steady state attenuation factor. AF assumed to be equal to 0.0005 for future commercial contaminant source based on Table 2 DTSC. 2011. DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October 2011. Accessed at: https://www.dtsc.ca.gov/assessingRisk/upload/Final_VIG_Oct_2011.pdf.

Regional Screening Levels (RSLs) at a TR of 1E-06, unless modified by DTSC, dated November 2019. Human Health Risk Assessment Note 3: DTSC-Modified Screening Levels; HHRA-Note-3-Tables-April 2019.xlsx. dated April 2019.

(3) Hazard Quotient (HQ) = EPC/ SL

- Methane is not evaluated under IRIS, HERO, or other state programs consulted; therefore it is not included in the screening evaluation.

Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk:
Industrial Indoor Air based on Maximum Concentrations (0.03 AF)
InSite Property Group 3701 Pacific Place Long Beach, CA

Compound	Cas No.	Exposure Point Concentration ($\mu g/m^3$)	Industrial Screening Level Cancer ($\mu g/m^3$)	Incremental Lifetime Cancer Risk (ILCR)
Methyl Ethyl Ketone (2-butanone)	78-93-3	1.08E+01	--	--
Difluoroethane, 1,1-	75-37-6	5.40E+00	--	--
Benzene	71-43-2	3.00E+01	4.20E-01	7.1E-05
Carbon Disulfide	75-15-0	7.80E+00	--	--
Chloromethane	74-87-3	2.07E+00	--	--
Ethylbenzene	100-41-4	1.77E+00	4.90E+00	3.6E-07
Xylene, m/p	179601-23-1	2.01E+00	--	--
Xylene, o-	95-47-6	8.70E-01	--	--
Tetrachloroethene	127-18-4	1.47E+00	2.00E+00	7.4E-07
Toluene	108-88-3	2.13E+00	--	--
			ILCR:	**7.3E-05**

Exposure Assumptions:

Attenuation Factor	AF	0.03

Notes:

(1) Indoor Air Exposure Point Concentration (EPC) = soil gas EPC ($\mu g/m^3$)*AF where AF=steady state attenuation factor. AF assumed to be equal to 0.03 per USEPA default attenuation factor in accordance with HERO HHRA Note 4. DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October 2011. Accessed at: https://www.dtsc.ca.gov/assessingRisk/upload/Final_VIG_Oct_2011.pdf.

(2) Industrial Screening Level Cancer (SL) as provided in HHSE text. SLs based on USEPA Regional Screening Levels (RSLs) at a TR of 1E-06, unless modified by DTSC, dated November 2019. Human Health Risk Assessment Note 3: DTSC-Modified Screening Levels; HHRA-Note-3-Tables-April 2019.xlsx. dated April 2019.

(3) Incremental Lifetime Cancer Risk (ILCR)=EPC/SL*1E-06

- Methane is not evaluated under IRIS, HERO, or other state programs consulted; therefore it is not included in the screening evaluation.

Attachment 2: Summary of Hazard Indices and Incremental Lifetime Cancer Risk:
Industrial Indoor Air based on Maximum Concentrations (0.03 AF)
InSite Property Group 3701 Pacific Place Long Beach, CA

Compound	Cas No.	Exposure Point Concentration ($\mu g/m^3$)	Industrial Screening Level Non-Cancer (SL) ($\mu g/m^3$)	Hazard Quotient (HQ)
Methyl Ethyl Ketone (2-butanone)	78-93-3	1.08E+01	2.20E+04	4.9E-04
Difluoroethane, 1,1-	75-37-6	5.40E+00	1.80E+05	3.0E-05
Benzene	71-43-2	3.00E+01	1.30E+01	2.3E+00
Carbon Disulfide	75-15-0	7.80E+00	3.10E+03	2.5E-03
Chloromethane	74-87-3	2.07E+00	3.90E+02	5.3E-03
Ethylbenzene	100-41-4	1.77E+00	4.40E+03	4.0E-04
Xylene, m/p	179601-23-1	2.01E+00	4.40E+02	4.6E-03
Xylene, o-	95-47-6	8.70E-01	4.40E+02	2.0E-03
Tetrachloroethene	127-18-4	1.47E+00	1.80E+02	8.2E-03
Toluene	108-88-3	2.13E+00	1.30E+03	1.6E-03
			HI:	**2.3E+00**

Exposure Assumptions:

Attenuation Factor	AF	0.03

Notes:

(1) Indoor Air Exposure Point Concentration (EPC) = soil gas EPC ($\mu g/m^3$)*AF where AF=steady state attenuation factor. AF assumed to be equal to 0.03 per USEPA default attenuation factor in accordance with HERO HHRA Note 4. DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October 2011. Accessed at: https://www.dtsc.ca.gov/assessingRisk/upload/Final_VIG_Oct_2011.pdf.

Regional Screening Levels (RSLs) at a TR of 1E-06, unless modified by DTSC, dated November 2019. Human Health Risk Assessment Note 3: DTSC-Modified Screening Levels; HHRA-Note-3-Tables-April 2019.xlsx. dated April 2019.

(3) Hazard Quotient (HQ) = EPC/ SL

- Methane is not evaluated under IRIS, HERO, or other state programs consulted; therefore it is not included in the screening evaluation.

Modified Version of USEPA Adult Lead Model

3701 N. Pacific Place, Long Beach, California

ATTACHMENT 3

MODIFIED VERSION OF USEPA ADULT LEAD MODEL

CALCULATIONS OF BLOOD LEAD CONCENTRATIONS (PbBs) AND PRELMIINARY REMEDIATION GOAL (PRG)

EDIT RED CELL

Variable	Description of Variable	Units	
PbS	Soil lead concentration	ug/g or ppm	68.38
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.8
PbB_0	Baseline PbB	ug/dL	0.0
IR_S	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	250
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365
PbB_{adult}	**PbB of adult worker, geometric mean**	**ug/dL**	**0.1**
$PbB_{fetal, 0.90}$	90th percentile PbB among fetuses of adult workers	ug/dL	0.2
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)	ug/dL	**1.0**
$P(PbB_{fetal} > PbB_t)$	**Probability that fetal PbB > PbB_t, assuming lognormal distributi**	**%**	**0.0%**

PRG90 **318**

Click here for REFERENCES