Phase II Environmental Site Assessment Report

Kimberly Clark Facility
2001 Orangethorpe Avenue
Fullerton, CA 92831

Stantec PN: 185803951

August 22, 2019

Prepared for:

GNAP Development LLC
18201 Von Karman Avenue
Irvine, CA 92612

Prepared by:

Stantec Consulting Services Inc.
735 East Carnegie Drive, Suite 280
San Bernardino, CA 92408

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Prepared by _____
(signature)
Brian Viggiano, PG, Senior Geologist

Reviewed by _____
(signature)
Dion Monge, Senior Scientist

Approved by _____
(signature)
Kyle Emerson, CEG, Managing Principal Geologist

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1.0 INTRODUCTION

This report prepared by Stantec Consulting Services Inc. (Stantec) on behalf of GNAP Development LLC documents Phase II Environmental Site Assessment activities conducted at the Kimberly Clark Corporation (KCC) facility located at 2001 East Orangethorpe Avenue, Fullerton, CA (the "Site" or "Property").

The work was conducted between August 2 and August 13, 2019 in general accordance with *Work Plan for Preliminary Phase II Investigations*, dated July 23, 2019 and *Work Plan Addendum No. 1 (e-mail)*, dated August 7, 2019.

This document is organized as follows:

- Section 1.0 – Introduction: Provides a Site description and geologic and hydrogeologic information
- Section 2.0 – Background: Provides and overview of the Site Background
- Section 3.0 – Scope of Work: Provides the work elements incorporated into this assessment
- Section 4.0 – Field Investigation: Provides an overview of the field components incorporated into this investigation
- Section 5.0 – Laboratory Services: Provides a description of the laboratory services.
- Section 6.0 – Investigation Results: Provides a summary of the field and laboratory analytical results.
- Section 7.0 – Summary of Findings: Provides a summary of the investigation results and recommendations.
- Section 8.0 – Limitations: Provides a discussion of the report limitations

1.1 SITE DESCRIPTION

The Property is comprised of two (2) parcels of land totaling approximately 65 acres in the City of Fullerton, Orange County, California. The Property is developed and currently operates as the KCC Fullerton Mill (paper mill) with over 1.2-million square feet of manufacturing, warehouse, office space, and other support buildings used for equipment and chemical storage, fire-suppression and other manufacturing related uses. The Property was developed for industrial purposes by KCC in 1955 and originally included buildings 1 through 6 (Figure 2). In the years that followed, several buildings were added to the mill to support product demand. At the height of production, historical manufacturing of other KCC product lines at the Fullerton mill included colored paper, diapers, and feminine hygiene products. Current manufacturing processes are reported to include only white paper manufacturing, facial and bath tissue production, on-site

equipment/tool repair, and warehousing with support administrative activities. The Property was also formerly used for agricultural purposes and these former uses remain evident today as citrus and avocado groves currently occupy small portions of the Property (Figure 2).

Former and current manufacturing operations have been supported with numerous structures, processes and chemicals that could potentially result in environmental impact to the Property (e.g., underground fuel storage tanks, above ground tanks, piping, clarifiers, drains, process areas, drum storage areas, etc.). Chemicals of potential concern include solvents, petroleum hydrocarbons, pH, metals, polychlorinated biphenyls [PCBs], phthalates, polycyclic hydrocarbons, etc.). Bleaching of wood-pulp has also been linked to the formation of dioxins under certain processing conditions; however, KCC does not believe that wood-pulp bleaching was ever conducted at this facility. Further, KCC staff stated in an August 6, 2019 conference call that all paper product raw materials are certified to be dioxin free.

Groundwater beneath the Property is reported to be impacted with various VOCs, including chlorinated solvents, at concentrations in excess of allowable maximum contaminant levels (MCLs). The presence of VOC-contaminated groundwater beneath the Property may pose a potential vapor intrusion concern to existing and future property users. Multiple potentially responsible parties (PRPs) have been named in a proposed Superfund action (i.e. the Orange County North Basin) to address groundwater contamination. KCC has not been named as a PRP in the pending Superfund action; however, review of available EPA records indicate that KCC historically used chlorinated solvents including tetrachloroethylene (PCE) and 1,4-Dioxane, which are primary chemicals of concern in the regional groundwater plume. USEPA is in the initial study stages of the potential Superfund action. An Remedial Investigation/ Feasibility Study (RI/FS) has not been completed.

1.2 GEOLOGY

The Property is located in the northern portion of the Peninsular Ranges Geomorphic Province characterized by northwest-southeast trending mountains and faults. The regional surficial geology is described as Holocene to Late Pleistocene age young alluvial-fan deposits consisting of unconsolidated to moderately consolidates silt, sand, cobbles and boulders common to alluvial fan deposits (USGS, 2006). The nearest known active fault is the El Modeno fault which is located approximately 2.25 miles to the southeast (CGS, 2010a). The Property is not located within a designated Alquist-Priolo Special Studies Zone (CGS, 2010b).

1.3 HYDROGEOLOGY

The Property is located in the Coastal Plain of the Orange County (8-001) groundwater basin. The basin is bounded on the northwest and the north by the Los Angeles-Orange County line; the Whittier fault zone and consolidated rocks of the Puente Hills and Chino Hills to the northeast; consolidated rocks of the Santa Ana Mountains to the east; and consolidated rocks of the Laguna Hills and San Joaquin Hills to the south. The Pacific Ocean bounds the southwest extent of the basin. (Department of Water Resources [DWR], 2004).

Introduction

The Orange County Water District manages the groundwater basin and has identified three aquifers designated as Shallow, Principal, and Deep. The Shallow aquifer is located at a depth of approximately 80 to 120 feet bgs, the Principal aquifer at approximately 200 to 250 feet, and the Deep aquifer is at depths of more than 850 feet bgs. Based on groundwater sample data, the Shallow and Principal aquifers are impacted with various volatile organic compounds (VOCs), consisting primarily of 1,4-Dioxane, tetrachloroethylene (PCE), and PCE breakdown products. The VOC groundwater plume in the Principal aquifer has been confirmed to be several miles long and over a mile wide and has caused the closure of at least five municipal water supply wells.

In 2014 and 2015, state and local agencies requested that EPA assist in cleanup of groundwater contamination that underlies portions of Fullerton, Anaheim, and Placentia which has now been designated as the “North Basin”. The groundwater impacts in the North Basin are the result of spills and leaks from industrial activities over the preceding decades. The EPA is reviewing historical documents and other sources of information to identify Potentially Responsible Parties (PRPs) to assist in funding the cleanup. As part of the remedial investigation/feasibility study (RI/FS) required by the agreement between the EPA and the Orange County Water District (OCWD), OCWD has installed and sampled groundwater monitoring wells and collected other data to help determine the nature and extent of contamination and provide EPA with information needed to develop an initial cleanup plan. According to information available on Geotracker two of these wells are installed immediately north of the Property along Kimberly Avenue.

Information reviewed on Geotracker related to the Orange County North Basin Superfund Site, including data from the two adjacent monitoring wells (MW25 and MW26) along Kimberly Ave, indicates that shallow groundwater in the immediate vicinity of the Property in March of 2015 was located at depths of 68 and 63 feet bgs, respectively, and flows to the west or southwest.

2.0 BACKGROUND

Stantec previously completed a draft Phase I Environmental Site Assessment (ESA) for the Site, dated July 17, 2019. The ESA identified the following recognized environmental conditions (RECs) in connection with the Property:

- Off Site Sources (including Regional Groundwater Impacts):
    - The following nearby off-Site facilities have, or may have, contributed VOCs and other contaminants to soil, groundwater, and soil vapor that may potentially impact the Property:
        - Trent Tube Division, 2100 E. Orangethorpe Avenue
        - Orange County Metal Processing, 1711 E. Kimberly Avenue
        - PCE Metal Finishing, 1723 E. Kimberly Avenue
        - Khyber Food, Inc, 1818 E. Rosslynn Avenue
        - Alcoa Global Fasteners, Inc, 800 S. State College Boulevard
        - Winonics, Inc., 1257 S. State College Boulevard
        - Chapman Coast Roofing, Co., 2301 E. Orangethorpe Avenue
        - Vista Paint, 2020 E. Orangethorpe Ave
        - St Hart Container MPP Fullerton, 1901 E. Rosslynn Avenue
        - Golden West Towing Equipment, 1850 E. Orangethorpe Avenue
- General Exterior Areas:
    - Historical Agricultural Use (Orchards) – possible source of organochlorine pesticides and herbicides containing arsenic and lead;
    - Railroad spurs – possible source of herbicides, metals, petroleum hydrocarbons, pesticides and polychlorinated biphenyls (PCBs);
    - Industrial wastewater discharge point – potential source of VOCs, metals, petroleum hydrocarbons and other contaminants;
    - Forklift wash area and sump – potential releases related to past cleaning operations;
    - Tank farm unloading area, diesel UST, and sump – potential source of VOCs, petroleum hydrocarbons and other contaminants;
    - Stormwater discharge point – potential source of VOCs, petroleum hydrocarbons and other contaminants; and,
    - Four former USTs adjacent to a non-specific “loading dock” as indicated in OCHCA records. The USTs are reported to have contained mineral spirits, dioctyl phthalate and vinyl acetate: potential source of VOCs, petroleum hydrocarbons, phthalates and other contaminants.
- General Interior

- Sub-slab soil vapor and indoor air – potential vapor intrusion risk associated with potential on-site releases and contaminated groundwater related to regional groundwater impacts beneath most of the property.
- Building 1
  - Basement below paper processing area – potential source of VOCs, petroleum hydrocarbons, PCBs, and other contaminants;
  - Maintenance Shop PCE Parts Washer: potential source of VOCs; and,
  - Maintenance Shop Floor Drain: potential source of VOCs, petroleum hydrocarbons, and other contaminants.
- Building 3
  - Battery storage area – etching and staining to battery storage and charging processes may be a potential source of acids and metals.
- Building 3/8
  - Maintenance shop PCE part washer: potential source of VOCs.
- Building 4
  - Boiler Building Area, Two Former USTs: Potential source of VOCs and petroleum hydrocarbons;
  - Wastewater treatment area: potential source of VOCs, petroleum hydrocarbons, metals and other contaminants.
- Building 8
  - UCON area Sump pit and trench drains: Potential source of VOCs, petroleum hydrocarbons and other contaminants;
  - Former ink dye area wash-down/ cleaning area with trench drains: Potential source of VOCs, petroleum hydrocarbons, PCBs, and other contaminants; and,
  - Bath area sump pit: potential source of VOCs, petroleum hydrocarbons and other contaminants.
- Building 10
  - Tractor Shop PCE part washer location: Potential source of VOCs.
- Building 25
  - Chemical Storage Area, three sumps: Potential source of VOCs, metals, petroleum hydrocarbons and other chemicals.

The locations of the RECS identified on the Property and those within the property bounded by Kimberly Avenue, State College Boulevard, Orangethorpe Avenue, and Acacia Street are shown on Figure 2.

3.0 SCOPE OF WORK

This section describes the development of the scope of the Phase II ESA.

3.1 WORK PLAN DEVELOPMENT

To address the RECs identified in the Phase I ESA, Stantec completed a *Work Plan for Preliminary Phase II Investigations* (Work Plan), dated July 23, 2019. The Work Plan presented a scope of work that included the following Site Assessment Methodologies:

- 15 Hand auger borings (HA-1 through HA-15)
- Five Direct push technology (DPT) soil borings (SB-1 through SB-5)
- 15 DPT Soil Borings with Soil Vapor Probes (SV-1 through SV-15)
- Ten Sub Slab Vapor Pins (VP-1 through VP-10); and,
- Three Indoor and three Ambient outdoor are sampling (IA-1 through IA-3 and OA-1 through OA-1 through OA-3)

Following submittal of the Work Plan to KCC for review and approval, the scope of work was amended based on discussions with GNAP and KCC. The Work Plan modifications were discussed with KCC and GNAP on a conference all held August 6, 2019. Based on these discussions, Work Plan Addendum No. 1 was distributed to the group via email, dated August 7, 2019. The Work Plan Addendum included the following amendments to the original Scope of Work:

- Following discussions with KCC, it was agreed to reduce the number of samples for Dioxin/furan (EPA 8290) soil analysis to two samples collected from borings HA-15 and HA-16 located in the Building 1 basement near the pulper sumps. This decision was made based on KCC's representation that no paper bleaching that would have resulted in the production of dioxin/furans was ever conducted on the property.
- One additional soil boring, SV-16 was added to the scope of work to evaluate any potential off-Site impacts related to the Winonics property located at 1257 South State College Boulevard, Fullerton, 92831.
- Soil borings SV-5 and SV-10 were eliminated from the investigation. Soil boring SV-5 was removed because boring SV-4 is located in close proximity and is expected to provide similar data. Boring SV-10, cannot be drilled because it was determined that the basement extends below the entirety of Building 10.
- Indoor/ ambient air sampling has been eliminated from the investigation.

The Work Plan and Work Plan Addendum were approved by KCC in email correspondence dated August 7, 2019. The remainder of this report documents the methodologies and findings of the completed investigation.

3.2 SCOPE OF WORK

The Scope of Work conducted during this investigation was conducted in accordance with Stantec's *Work Plan for Preliminary Phase II Investigations*, dated July 23, 2019 and *Work Plan Addendum No. 1*, dated August 7, 2019. The scope of work consisted of the following general elements:

- Mark Site at least 48 hours in advance of drilling and notification to Underground Service Alert (USA) to clear public utility lines;
- Preparation of a Site-specific health and safety plan;
- Clear proposed soil borings with a private geophysical utility locating service;
- Excavate sixteen soil borings with a hand auger (HA-1 through HA-16) at the locations depicted on Figure 3 to collect soil samples for potential chemical analysis;
- Drill five soil borings (SB-1 through SB-5) with a direct push technology (DPT) drill rig at the locations depicted on Figure 3. Collect soil samples at approximate five-foot intervals, or less, for lithologic description and potential chemical analysis.
- Drill fourteen DPT soil borings (SV-1 through SV-4, SV-6 through SV-9, and SV-11 through SV-16) at the locations depicted on Figure 3 to collect soil samples for field screening, lithologic description, and potential chemical analysis. Convert soil borings to single or multi-depth soil vapor monitoring probes for subsequent soil vapor analysis.
- Install ten sub-slab vapor pins (VP-1 to VP-10) at the locations depicted on Figures 3 and 4
- Analyze selected soil samples in accordance with the Work Plan testing schedule for the presence of total petroleum hydrocarbons (TPH) following modified EPA method 8015b, volatile organic compounds (VOCs) following EPA method 8260B, Title 22 metals following EPA 6010B (7471A for arsenic), organochlorine pesticides following EPA 8081A and dioxins/ furans following EPA Method 8290.
- Collect and analyze soil vapor from all installed soil vapor probes and vapor pins for VOCs following EPA method 8260B using a mobile laboratory in accordance with DTSC guidance.
- Prepare a report that summarizes the results and methodologies of the completed investigation.

4.0 FIELD INVESTIGATION

4.1 PRE-DRILLING ACTIVITIES

Prior to the commencement of fieldwork activities, Stantec made the following preparations:

- Stantec visited the Property on August 2, 2019 to mark the proposed boring locations. Subsequent to marking, Underground Service Alert (USA) was notified at least 48-hours prior to the commencement drilling activities.
- In accordance with federal Occupational Safety and Health Administration (OSHA) regulations (29 CFR, Section 1910.120), Stantec developed a site-specific Health and Safety Plan (HASP) for the Property. All Stantec personnel and subcontractors associated with the project were required to be familiar with, and comply with, all provisions of the HASP.
- As required by KCC, all field staff completed online TAPPI SAFE Basic Orientation and Kimberly Clark-Fullerton Orientation safety courses on mill safety.
- A private geophysical locating service was retained to clear all soil borings for unknown private utilities prior to drilling on August 5, 2019.

4.2 INVESTIGATION

Stantec provided the services of a field geologist to supervise and direct all assessment activities performed during this investigation. All work was conducted under the direct supervision of a State of California registered professional geologist or engineer. Boring and vapor pin sampling locations are depicted on Figure 3. The following sections describe the field investigation methodologies and procedures.

4.2.1 Hand Auger Borings

Soil borings HA-1 through HA-15 and SV-6 through SV-9 were excavated using a hand-auger depth of 10 feet bgs or to refusal. At each of the proposed boring locations, the concrete/ asphalt surface, where present, was cored with a six-inch diameter concrete core-saw to provide access to the underlying soils. Following removal of the concrete core, the underlying soils were excavated with a hand-auger to the proposed target depth or refusal. Soil excavated from the borehole was monitored for odors or other visual signs of impact that may be present and periodically screened with a photoionization device (PID) equipped with a 10.6 electron volt (eV) lamp calibrated to 100 parts per million by volume (ppmV) isobutylene span gas. Soil samples were collected at depths proposed in the Work Plan for potential chemical analysis.

At each sampling depth, soils were collected by discharging soil directly from the hand auger bucket into pre-cleaned, laboratory provided, glass jars and sealed with a Teflon coated screw on lid. The sample containers were then labeled with the Sample ID, sample depth, time and date of collection and the samplers initials and recorded on a chain-of-custody documentation. The samples will be stored in an ice-chilled cooler pending transport to the laboratory for analysis under chain-of-custody.

Following drilling, the boreholes were abandoned by backfilling the boreholes with hydrated granular bentonite and capped with concrete, dyed black, if necessary, to match the existing surface. Borings placed in areas with soft surfaces (e.g., orchard samples), were not capped with concrete. Soil boring SV-6 through SV-9 were converted into soil vapor monitoring points following the procedures described below in Section 4.2.2.

4.2.2 DPT Soil Borings and Soil Vapor Probe Installations

Soil borings (SB-1 through SB-5 and SV-1 through SV-4, and SV-11 through SV-16) were drilled with a DPT drilling rig at the approximate locations provided on Figure 3. With the exception of soil borings SB-1 through SB-5, the soil borings were converted to single or multi-depth soil vapor probes following drilling and sampling as described in below.

Soil borings were advanced using a truck-mounted or dolly-mounted DPT drilling rig. Prior to drilling, the concrete or asphalt surface at each boring location was cored to provide access to the underlying soils. A hand auger was then used to excavate soils to a depth of five feet bgs to clear for utilities and other near surface structures. Once a depth of five feet bgs was reached, the remainder of the boring was drilled with the DPT rig. Soil sampling commenced at a depth of five feet bgs, and subsequent samples were collected at five-foot intervals for lithologic description and potential chemical analysis as described in the Work Plan.

Sampling of encountered soils will be conducted using a 24-inch long by one-inch diameter stainless steel sampler lined with a clear acetate sample liner into undisturbed soils using a hydraulic ram on the drilling rig until 24 inches of penetration is achieved. Upon advancement of the sampler to the full 24-inches, the steel sampling rods were extracted from the boring and the sampler removed. The drilling and sampling procedures was repeated at approximate five-foot intervals for the remainder of the boring.

Upon extracting the sampler at each depth interval, the acetate liner was split into two sections. The soils in the uppermost section were visually examined by Stantec field personnel who then logged the soils in accordance with the unified soil classification system (USCS). A PID equipped with a 10.6 eV lamp calibrated to 100 ppmV isobutylene span gas was then used to monitor headspace for VOC vapors in soil samples.

Soil samples collected from the lowermost portion of the sleeve were collected for potential chemical analysis. The sample was collected by cutting a section of the acetate liner, covering the ends with Teflon sheeting and placing a tight-fitting end cap. The end cap was then secured in place with a non-VOC containing tape. Samples were then labeled, annotated on chain of custody sheets, stored in an ice-filled cooler and delivered to the laboratory for chemical analysis in accordance with the Work Plan.

At the completion of sampling, soil borings SB-1 through SB-5 were backfilled with hydrated granular bentonite and capped with concrete dyed black to match the existing surface.

The remaining DPT borings were subsequently converted to soil vapor monitoring points between August 6 and August 9, 2019 to facilitate soil vapor sampling. The monitoring points were constructed by first placing approximately 4 to 6 inches of Monterey No. 3 wash sand, or equivalent, in the bottom of the borehole. A permeable vapor tip (e.g., airstone) connected to 1/4 -inch diameter Nylaflow tubing will that was then lowered to the bottom of the borehole and then backfilled with 12 inches of filter sand. A transition seal consisting of approximately 12-inches of dry bentonite was then placed above the filter pack, followed by an annular seal consisting of cement-bentonite grout until the next sampling interval is reached. The sequence was then be repeated, as necessary, to install the next monitoring point, and completely backfilling the borehole. The Nylafow tubing was capped with a valve in the closed position

and left protruding from the borehole. Each vapor probe was allowed to equilibrate for minimum of 48 hours between construction and sampling. Following soil vapor sampling (described below), the tubing was pulled from the borehole, the annulus filled with hydrated bentonite and the surface capped with concrete, dyed as necessary, to match the existing surface.

4.2.3 Sub-Slab Vapor Pin Installation

Ten sub-slab soil vapor probes (VP-1 through VP-10) were installed at the approximate locations depicted on Figure 3. Sub-slab Vapor Pins ™ manufactured by Cox-Colvin were installed to collect sub-slab soil vapor samples. The Vapor Pins were installed by first drilling an approximately 5/16-inch-diameter hole through the concrete slab utilizing a rotary hammer drill. The probe assembly was then fitted with the manufacturer-supplied silicon sleeve and driven through the concrete slab using the previously drilled small diameter hole. The installer followed the Cox-Colvin standard operating procedures. The sub-slab vapor pins were allowed to equilibrate a minimum of 2-hours between construction and sampling. Following collection of sub-slab soil vapor samples (described below in section 4.2.4), the vapor pins were pulled from the ground and the hole patched with concrete to match the existing surface.

4.2.4 Sub-Slab and Soil Vapor Sampling

Soil vapor samples were collected on July 22 and July 23, 2019 in accordance with the methods and procedures outlined by the DTSC and CalEPA Advisory – Active Soil Gas Investigations, dated July 2015.

Prior to sampling, a shut-in test was conducted on the sampling train to insure all connections and fittings were airtight. The shut-in test was performed on the sampling train by applying a vacuum of 100 inches of water to the sampling train and monitoring magnehelic gauges for a pressure drop for one minute. If loss of vacuum was observed, the fittings were adjusted as needed until no vacuum loss was observed during subsequent shut-in tests.

After the sampling equipment passed the shut-in test, the probes were purged to remove internal air from the sample train (calculated from the internal volume of the tubing, probe tip; the void space of the sand pack around the probe tip; and the void space of the dry bentonite (in the annular space). Three internal volumes were purged from each sampling location at a rate less than 200 millilters per minute (ml/min).

Immediately following purging the internal volumes, the soil vapor samples were collected by the laboratory technician by connecting a foil-wrapped glass bulb to the sampling port with Teflon® or Nylaflow® tubing and drawing the sample into the bulb at a rate of less than 200ml/min. A tracer compound Isopropanol was placed above the surface seal and along the sampling train to evaluate the integrity of the seal. No tracer compounds were detected in the soil vapor samples collected during this investigation.

4.2.5 Quality Assurance/ Quality Control (QA/QC) Procedures

QA/QC samples were collected and analyzed to assess the quality of the sampling effort and the analytical data.

Air samples:

Field duplicates/ replicates were collected to evaluate the quality of collected air samples. The type, description, preparation, and frequency of the QC samples are provided below.

Constituent	Media	Analytical Method	No. of Samples	No. of Replicate Samples
VOCs	Sub-slab (vapor pins)	8260B	10	1
VOCs	Soil Gas	8260B	25	2

Per the DTSC *Active Soil Gas Investigations Advisory*, 2015, Section 6.3.2, a duplicate sample is collected simultaneously with the primary sample, whereas a replicate sample is collected sequentially. Therefore, by this definition, duplicate samples were not collected during this investigation. For quality assurance and quality control (QA/QC) purposes, replicate samples were collected from a sub-slab and a soil vapor sample location and analyzed by the same methods as their associated primary sample.

Soil Samples:

Field equipment blanks and trip blanks were analyzed as part of the QA/QC program for soil sampling.

- Equipment Blanks: one equipment (decontamination) blank sample was collected per day at the start of work to verify that that sampling equipment has been appropriately decontaminated. The equipment blank was collected by decanting clean deionized or distilled water across a sampling device (e.g., hand auger bucket, drill rig sampler, etc.) and collecting the rinsate into laboratory provided glassware. The equipment blank was analyzed for VOCs by EPA method 8260B. Equipment Blank analytical results are included in **Table 7**.

- Trip Blanks: Laboratory provided trip blanks were included in the ice-filled coolers used to transport the samples. The trip blanks consisted of volatile organic analysis (VOA) vials that were filled with laboratory grade deionized water and sealed at the laboratory. One trip blank was placed in each cooler and analyzed for the presence of VOCs following EPA Method 8260B. Trip Blank analytical results are tabulated on **Table 7**.

4.2.6 Decontamination and Waste Disposal

To maintain quality control during drilling and sampling operations, all sampling equipment was cleaned using an Alconox or Liquinox (or equivalent) scrub solution, followed by a double rinse, first in tap water

followed by final rinse using distilled water. Sampling equipment was decontaminated and rinsed prior to each sampling interval.

4.2.7 Investigation Derived Waste

All drilling waste and decontamination fluids was placed into 55-gallon drums pending characterization based on concentrations and off-Site disposal. Labels were affixed to each drum identifying the contents, date of generation and contact information. The drums have been temporarily stored on Site pending profiling and acceptance to an approved waste handling facility.

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5.0 LABORATORY SERVICES

All chemical analysis was performed at State of California Certified Laboratories. Collected soil samples were analyzed at Advanced Technology Laboratories located in Signal Hill, California. Soil gas samples were analyzed by A & R Laboratories, Inc. (ARL) using an on-Site mobile laboratory. All samples were managed under strict chain-of-custody. The results are discussed below and presented on **Tables 1-6**. Complete laboratory reports, including QA/QC documentation is included in **Appendix A.**



6.0 INVESTIGATION RESULTS

6.1 FIELD OBSERVATIONS

Soils encountered in soil borings generally consisted of variable sand and sand-silt mixtures with occasional thin silt/clay interbeds to the total explored depth of approximately 25 feet below ground surface (bgs). Boring Logs depicting the encountered lithology are included in **Appendix B**.

No obvious signs of contamination (e.g., staining, odors, etc.) were noted in any of the logged soil samples. PID readings were 0.0 parts per million by volume (ppmV) isobutylene in all field screened samples as shown on boring logs attached in **Appendix B**.

6.2 SOIL VAPOR ANALYTICAL RESULTS

Soil vapor analytical results are summarized on **Table 1**. PCE and TCE results are presented on **Figure 4**. The following bullets summarize the results:

- Tetrachloroethene (PCE) was reported in soil vapor samples analyzed from borings SV-3 and SV-12 at concentrations ranging from 20J[1]micrograms per cubic meter (ug/m3) up to 30 ug/m3. The reported concentrations are well below the DTSC Human and Ecological Risk Office (HERO) Note 3 commercial modified indoor air screening level (MIASL) of 66.7 ug/m3 based on an attenuation factor of 0.03.
- No other VOCs were reported above laboratory MDLs in any other analyzed samples.

6.3 SOIL ANALYTICAL RESULTS

Soil sample analytical results are summarized on **Tables 2 - 6**. The following bullets summarize the results:

- Low concentrations TPH in the diesel range (DRO) were reported in two samples (SB-5-10 and SV-9) at concentrations of 14 and 13 milligrams per kilogram (mg/Kg), respectively. TPH was not reported above laboratory reporting limits in any other analyzed sample. TPH analytical results are tabulated on **Table 2**.
- A trace detection of chloroform was reported in sample SB-2-5 at a concentration of 0.0064 mg/Kg. The reported concentration of chloroform is well below commercial DTSC HERO Note 3 and EPA Region RSLs. Chloroform may be a by-product of treated water. No other VOCs were

[1] J – Indicates the reported value is an estimated concentration above the method detection limit (MDL) and below the laboratory reporting limit (RL).

reported above laboratory reporting limits. Soil VOC analytical results are summarized on **Table 2.**

- Selected soil samples were analyzed for lead and arsenic to evaluate historical agricultural practices (HA-1 through HA-7). Arsenic was reported in analyzed samples at concentrations ranging from non-detect (ND)<1 mg/Kg up to 6.6 mg/Kg, and lead was reported at concentrations ranging from 1.2 mg/Kg up to 31 mg/Kg. All reported detections of arsenic and lead are at levels consistent with expected southern California background, or at levels below DTSC HERO Note 3 and EPA Region 9 screening levels. Arsenic and Lead analytical results are summarized in **Table 3.**

- Title 22 metals concentrations were reported at various levels in all analyzed samples. All reported concentrations were reported at levels consistent with background and/or below regulatory screening levels. Title 22 Metals analytical results are summarized in **Table 3**.

- Selected soil samples analyzed for pH reported pH at levels ranging from 7.5 up 9.1. pH analytical results are summarized on **Table 3.**

- Polychlorinated Biphenyls (PCBs) were not reported above laboratory reporting limits in any analyzed sample. PCB analytical results are summarized in **Table 4**.

- Trace concentrations of the pesticides 4,4-DDE and 4,4-DDT were reported in samples HA-8-1 and HA-12-3 at concentrations up to 0.0023 mg/Kg and 0.013 mg/Kg. All reported concentrations are well below commercial DTSC HERO Note 3 screening levels and US EPA Region 9 RSLs. Organochlorine pesticide analytical results are summarized in **Table 5.**

- Dioxins/ Furans were not reported above laboratory reporting limits in the two analyzed samples. The 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (TCDD) toxicity equivalent factor (TEF) calculated using one-half the reporting limit indicating TCDD TEFs between 4.84E-07 and 6.29E-07, well below the USEPA RSLs and the DTSC HERO Note 2 soil remediation goal. Dioxin/ Furan analytical results are summarized in **Table 6.**

7.0 SUMMARY OF FINDINGS

The scope of work and field investigations reported herein, were developed to evaluate recognized environmental conditions (RECs) identified during completion of the Phase I ESA. Field investigations were conducted between August 2 and August 13, 2019 and include the following general elements:

- Excavating 16 soil borings with a hand auger (HA-1 through HA-16);
- Drilling and sampling five (5) soil borings (SB-1 through SB-5) with a direct push technology (DPT) drill rig.
- Drilling and sampling 14 hand auger/ DPT soil borings (SV-1 through SV-4, SV-6 through SV-9, and SV-11 through SV-16) and converting the soil borings to single or multi-depth soil vapor monitoring probes for soil vapor sampling.
- Installing and sampling ten sub-slab vapor pins (VP-1 through VP-10).
- Analyzing selected soil samples for the presence of TPH following modified EPA method 8015B, VOCs following EPA method 8260B, Title 22 metals following EPA 6010B, arsenic by EPA method 7471, organochlorine pesticides following EPA 8081A, pH following EPA method 9045, and dioxins/ furans following EPA Method 8290.
- Collecting and analyzing soil vapor from soil vapor probes and vapor pins for VOCs following EPA method 8260B using a mobile laboratory in accordance with DTSC guidance.

The results of the completed investigations did not report the presence of constituents of potential concern (COPCs) above regulatory screening levels at the locations tested. Based on these results, Stantec recommends no further assessment.

With respect to former underground storage tanks (USTs) that were formerly present at the Site, historical records indicate that two sets of USTs were removed from the Site in 1986 and included the following:

- Four 10,000-gallon USTs that were reported to have contained mineral spirits (2), dioctyl phthalate (1) and vinyl acetate (1). The location of these former USTs is unknown. These USTs were removed under the oversight of the Orange County Health Care Agency in 1986. Available records indicate that no odors were reported when the tanks were removed and that samples were collected at the time of removal. However, no details as to the location of these tanks or the results of sampling were available in the OCHCA records.
- Two former 10,000-gallon fuel oil USTs that were also removed in 1986 under the oversight of the OCHCA. A documented release was confirmed at the time of release, and remedial excavation activities occurred at the time of removal in 1986 and 1992. Residual impacts that could not be

removed below the Building 4 Boiler Room and a high-pressure water line were left in place. Based on the results of the remedial excavations, the City of Fullerton Fire Department issued Case Closure in correspondence dated January 22, 1992. The closure letter required that the agency be notified of any change in Site usage, and that further site characterization and mitigation may be required. Additional excavation was conducted in 2002 to remove the residual impacted soils below the high-pressure water line, leaving the only remaining impacts under Building 4.

Soil borings SB-4 and SB-5 were drilled to the north and south of Building 4 to evaluate the limits of residual impacts beneath the building. The results of the analyzed samples did not report the presence of any significant impacts, suggesting that the residual impacts are limited to areas beneath the footprint of Building 4, where additional investigations cannot be completed because of current Site operations.

In light of the above outstanding UST issues, and given the potential for unknown areas of impact associated with historical industrial Site operations, Stantec recommends that a soil management plan (SMP) be developed to provide guidance on addressing environmental issues should any be encountered during Site demolition, grading and construction.

8.0 LIMITATIONS

Stantec's investigation has been performed with the degree of skill generally exercised by practicing engineers and geologists in the environmental field. Stantec makes no other warranty, either expressed or implied, concerning the conclusions and professional advice that is contained within the body of this report.

Inherent in most projects performed in a heterogeneous subsurface environment, continuing excavation and assessments may reveal findings that are different than those presented herein. This facet of the environmental profession should be considered when formulating professional opinions on the limited data collected on these projects.

This report has been issued with the clear understanding that it is the responsibility of the owner, or their representative, to make appropriate notifications to regulatory agencies. It is specifically not the responsibility of Stantec to conduct appropriate notifications as specified by current regulations.

The information presented in this report is valid as of the date our exploration was performed. Site conditions may change with time or with further investigation; consequently, the findings presented herein are subject to change.

TABLES

TABLE 1
SUMMARY OF SOIL VAPOR VOC ANALYTICAL RESULTS
Kimberly Clark Facility
2001 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	Sample Depth	Benzene	1,1 - DCA	1,2 - DCA	1,1 - DCE	cis - 1,2 - DCE	trans - 1,2 - DCE	TCE	Toluene	PCE	Ethylbenzene	Total Xylenes	Vinyl Chloride	Other VOCs
DTSC HERO Note 3 MIASL (0.03 Attenuation Factor) [2]			*14.0*	*256.7*	*NE*	*10333*	*1166.7*	*11666.7*	*NE*	*43,333*	*66.7*	*NE*	*NE*	*5.3*	*varies*
US EPA Region 9 MIASL (0.03 Attenuation Factor) [3]			*53*	*257*	*16*	*29333*	*NE*	*NE*	*100*	*733,333*	*1,567*	*163*	*14,667*	*0.63*	*varies*
SV-1-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-1-15'	8/12/2019	15	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-1-25'	8/12/2019	25	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-2-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-2-15'	8/12/2019	15	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-2-25'	8/12/2019	25	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-3-5'	8/13/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	**20 J**	<15	<30	<2.4	<varies
SV-3-15'	8/13/2019	15	<10.5	<15	<15	<15	<15	<15	<15	<15	**20 J**	<15	<30	<2.4	<varies
SV-3-15'DUP	8/13/2019	15	<10.5	<15	<15	<15	<15	<15	<15	<15	**20 J**	<15	<30	<2.4	<varies
SV-3-25'	8/13/2019	25	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-4-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-4-15'	8/12/2019	15	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-4-25'	8/12/2019	25	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-4-25' DUP	8/12/2019	25	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-6-5'	8/13/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-7-5'	8/13/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-8-5'	8/13/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-9-5'	8/13/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-11-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-11-15'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-12-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	**30**	<15	<30	<2.4	<varies
SV-12-15'	8/12/2019	15	<10.5	<15	<15	<15	<15	<15	<15	<15	**20 J**	<15	<30	<2.4	<varies
SV-13-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-13-15'	8/12/2019	15	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-14-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-15-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-16-5'	8/12/2019	5	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
SV-16-15'	8/12/2019	15	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies

TABLE 1
SUMMARY OF SOIL VAPOR VOC ANALYTICAL RESULTS
Kimberly Clark Facility
2001 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	Sample Depth	Benzene	1,1 - DCA	1,2 - DCA	1,1 - DCE	cis - 1,2 - DCE	trans - 1,2 - DCE	TCE	Toluene	PCE	Ethylbenzene	Total Xylenes	Vinyl Chloride	Other VOCs
DTSC HERO Note 3 MIASL (0.03 Attenuation Factor) [2]			*14.0*	*256.7*	*NE*	*10333*	*1166.7*	*11666.7*	*NE*	*43,333*	*66.7*	*NE*	*NE*	*5.3*	*varies*
US EPA Region 9 MIASL (0.03 Attenuation Factor) [3]			*53*	*257*	*16*	*29333*	*NE*	*NE*	*100*	*733,333*	*1,567*	*163*	*14,667*	*0.63*	*varies*
VP-1	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-2	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-3	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-4	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-5	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-5 DUP	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-6	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-7	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-8	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-9	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies
VP-10	8/13/2019	Sub-Slab	<10.5	<15	<15	<15	<15	<15	<15	<15	<15	<15	<30	<2.4	<varies

Notes:
All results reported in microgram per cubic meter (µg/m^3)
(1) Sample collected via 250ml glass bulb
(2) Residential DTSC HERO HHRA Note #3 (April 2019)
(3) Residential Screening Level (SL) USEPA Region 9 Regional Screening Levels (RSL - April 2019)
" < " Indicates concnetration reported below Method Detection Limit
BOLD Indicates concentration reported above Method Detection Limit
" J " Indicates concnetration reported above Method Detection Limit, and below Reporting Limit

Abbreviations:
DCA - Dichloroethane
DCE - Dichloroethene
DTSC - Department of Toxic Substance Control
HERO - Human and Ecological Risk Office Human Health Risk Assessment
MIASL - Modified Indoor Air Screening Level
NE - Not Established
PCE - Tetrachloeoethene
TCE - Trichloroethene
USEPA - United States Environmental Protection Agency

TABLE 2
SUMMARY OF SOIL TPH AND VOC ANALYTICAL RESULTS
Kimberly Clark Facility
2001 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	Sample Depth	TPH			VOCs							
			GRO	DRO	ORO	PCE	TCE	Benzene	Toluene	Ethyl-benzene	m,p-Xylenes	o-xylenes	Various
DTSC HERO Note 3 - Commercial Soil [2]			*NE*	*NE*	*NE*	*2.7*	*NE*	*1.4*	*5,300*	*NE*	*NE*	*NE*	*various*
USEPA Region 9 RSL - Industrial Soil [3]			*420*	*440*	*33,000*	*100*	*6.0*	*5*	*47,000*	*25*	*4,800*	*2,800*	*various*
HA-8-1	8/7/2019	1	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-8-3	8/7/2019	3	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-9-1	8/7/2019	1	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-9-3	8/7/2019	3	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-10-1	8/7/2019	1	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-10-3	8/7/2019	3	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-11-1	8/7/2019	1	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-11-3	8/7/2019	3	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-12-1	8/7/2019	1	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-12-3	8/7/2019	3	<1.0	<10	<10	--	--	--	--	--	--	--	--
HA-14-5	8/6/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
HA-14-10	8/6/2019	10	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
HA-15-5	8/6/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
HA-15-10	8/6/2019	10	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
HA-16-5	8/6/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
HA-16-8	8/6/2019	8	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SB-1-5	8/9/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SB-2-5	8/8/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	**Chloroform: 0.0064**
SB-2-10	8/8/2019	10	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SB-3-5	8/8/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SB-3-10	8/8/2019	10	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SB-4-5	8/8/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SB-4-10	8/8/2019	10	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SB-5-5	8/9/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SB-5-10	8/9/2019	10	<1.0	**14**	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-4-10	8/9/2019	10	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-4-15	8/9/2019	15	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-6-5	8/6/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-6-10	8/6/2019	10	--	--	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-7-5	8/6/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-7-10	8/6/2019	10	--	--	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-8-5	8/6/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-9-5	8/6/2019	5	<1.0	**13**	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various

TABLE 2
SUMMARY OF SOIL TPH AND VOC ANALYTICAL RESULTS
Kimberly Clark Facility
2001 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	Sample Depth	TPH			VOCs							
			GRO	DRO	ORO	PCE	TCE	Benzene	Toluene	Ethyl-benzene	m,p-Xylenes	o-xylenes	Various
DTSC HERO Note 3 - Commercial Soil [2]			*NE*	*NE*	*NE*	*2.7*	*NE*	*1.4*	*5,300*	*NE*	*NE*	*NE*	*various*
USEPA Region 9 RSL - Industrial Soil [3]			*420*	*440*	*33,000*	*100*	*6.0*	*5*	*47,000*	*25*	*4,800*	*2,800*	*various*
SV-11-5	8/8/2019	5	--	--	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-11-10	8/8/2019	10	--	--	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-12-5	8/9/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-12-10	8/9/2019	10	--	--	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-13-5	8/8/2019	5	--	--	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-13-10	8/8/2019	10	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-14-5	8/6/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various
SV-15-5	8/6/2019	5	<1.0	<10	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<various

Notes:
All results reports in milligram per kilogram.
(1) Refere to Figure 2
(2) Residential DTSC HERO HHRA Note #3 (April 2019)
(3) Residential Screening Level (SL) USEPA Region 9 Regional Screening Levels (RSL - April 2019)
" < " Indicates concnetration reported below Method Detection Limit
BOLD Indicates concentration reported above Practical Quantitation Limit
" -- " Indiactes the sample was not analyzed for that analyte

Abbreviations:
GRO - Gasoline Range Organics
DRO - Diesel Range Organics
DTSC - Department of Toxic Substance Control
HERO - Human and Ecological Risk Office Human Health Risk Assessment
ORO - Oil Range Organics
NE - Not Established
PCE - Tetrachloeoethene
TCE - Trichloroethene
USEPA - United States Environmental Protection Agency
mg/kg - milligram per kilogram

TABLE 3
SUMMARY OF SOIL METALS ANALYTICAL RESULTS
Kimberly Clark Facility
2001 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	Sample Depth	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury	pH
DTSC HERO Note 3 - Commercial Soil [2]			*160*	*0.31*	*220,000*	*230*	*1,100*	*1,800,000*	*350*	*47,000*	*320*	*5,800*	*11,000*	*5,800*	*5,800*	*12*	*5,800*	*350,000*	*190*	*NE*
California Background Levels Range [3]			*0.15-19.5*	*0.6-11.0*	*133-1400*	*0.25-2.7*	*0.05-1.7*	*23-1,579*	*2.7-46-9*	*9.1-66.4*	*12.4-97.1*	*0.1-9.6*	*9.0-509*	*0.015-0.43*	*0.1-8.3*	*0.17-1.10*	*39-288*	*88-236*	*0.1-0.9*	*NE*
HA-1-1	8/7/2019	1	--	**2.8**	--	--	--	--	--	--	**3.2**	--	--	--	--	--	--	--	--	--
HA-1-3	8/7/2019	3	--	**2.0**	--	--	--	--	--	--	**2.2**	--	--	--	--	--	--	--	--	--
HA-2-1	8/7/2019	1	--	**3.7**	--	--	--	--	--	--	**4.5**	--	--	--	--	--	--	--	--	--
HA-2-3	8/7/2019	3	--	**1.8**	--	--	--	--	--	--	**2.2**	--	--	--	--	--	--	--	--	--
HA-3-1	8/7/2019	1	--	**4.7**	--	--	--	--	--	--	**5.9**	--	--	--	--	--	--	--	--	--
HA-3-3	8/7/2019	3	--	**1.9**	--	--	--	--	--	--	**2.3**	--	--	--	--	--	--	--	--	--
HA-4-1	8/6/2019	1	--	**6.6**	--	--	--	--	--	--	**21**	--	--	--	--	--	--	--	--	--
HA-4-3	8/6/2019	3	--	**1.4**	--	--	--	--	--	--	**2.4**	--	--	--	--	--	--	--	--	--
HA-5-1	8/6/2019	1	--	**6.6**	--	--	--	--	--	--	**16**	--	--	--	--	--	--	--	--	--
HA-5-3	8/6/2019	3	--	<1.0	--	--	--	--	--	--	**2.2**	--	--	--	--	--	--	--	--	--
HA-6-1	8/6/2019	1	--	**5.1**	--	--	--	--	--	--	**31**	--	--	--	--	--	--	--	--	--
HA-6-3	8/6/2019	3	--	**1.4**	--	--	--	--	--	--	**2.0**	--	--	--	--	--	--	--	--	--
HA-7-1	8/6/2019	1	--	**2.2**	--	--	--	--	--	--	**18**	--	--	--	--	--	--	--	--	--
HA-7-3	8/6/2019	3	--	<1.0	--	--	--	--	--	--	**1.3**	--	--	--	--	--	--	--	--	--
HA-8-1	8/7/2019	1	<2.2	**2.1**	**54**	<1.1	<1.1	**10**	**4.6**	**8.3**	**6.8**	<1.1	**10**	<1.1	<1.1	<1.1	**25**	**34**	<0.10	--
HA-8-3	8/7/2019	3	<2.2	**3.3**	**160**	<1.1	**1.6**	**23**	**7.8**	**18**	<1.1	**3.5**	**24**	<1.1	<1.1	<1.1	**49**	**52**	<0.10	--
HA-9-1	8/7/2019	1	<2.2	**3.0**	**80**	<1.1	<1.1	**15**	**5.8**	**10**	<1.1	**2.5**	**17**	<1.1	<1.1	<1.1	**32**	**37**	<0.10	--
HA-9-3	8/7/2019	3	<2.2	**1.4**	**73**	<1.1	<1.1	**11**	**4.2**	**7.3**	<1.1	**2.6**	**13**	<1.1	<1.1	<1.1	**23**	**29**	<0.10	--
HA-10-1	8/7/2019	1	<2.2	**3.0**	**42**	<1.1	<1.1	**6.5**	**3.9**	**9.4**	**7.5**	<1.1	**5.8**	<1.1	<1.1	<1.1	**16**	**28**	<0.10	--
HA-10-3	8/7/2019	3	<2.2	**2.0**	**90**	<1.1	<1.1	**14**	**4.8**	**9.0**	<1.1	**2.8**	**15**	<1.1	<1.1	<1.1	**29**	**33**	<0.10	--
HA-11-1	8/7/2019	1	<2.2	**2.1**	**35**	<1.1	<1.1	**5.3**	**3.5**	**7.4**	**1.4**	<1.1	**4.9**	<1.1	<1.1	<1.1	**14**	**18**	<0.10	--
HA-11-3	8/7/2019	3	<2.2	<1.1	**19**	<1.1	<1.1	**4.3**	**2.2**	**2.9**	<1.1	<1.1	**3.3**	<1.1	<1.1	<1.1	**9.3**	**13**	<0.10	--
HA-12-1	8/7/2019	1	<2.2	**1.7**	**51**	<1.1	<1.1	**12**	**5.3**	**8.3**	**6.5**	<1.1	**9.7**	<1.1	<1.1	<1.1	**26**	**38**	<0.10	--
HA-12-3	8/7/2019	3	<2.2	<1.1	**19**	<1.1	<1.1	**4.8**	**2.9**	**2.4**	<1.1	<1.1	**3.5**	<1.1	<1.1	<1.1	**14**	**16**	<0.10	--
HA-13-1	8/6/2019	1	<2.0	**1.7**	**49**	<1.0	<1.0	**10**	**4.8**	**7.3**	**2.7**	<1.0	**8.5**	<1.0	<1.0	<1.0	**23**	**31**	<0.10	**7.8**
HA-13-5	8/6/2019	5	<2.0	<1.0	**62**	<1.0	<1.0	**12**	**6.1**	**8.3**	<1.0	<1.0	**10**	<1.0	<1.0	<1.0	**26**	**35**	<0.10	**7.5**
HA-14-5	8/6/2019	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**8.0**
HA-14-10	8/6/2019	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**8.0**
HA-15-5	8/7/2019	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**9.4**
HA-15-10	8/7/2019	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**9.1**
HA-16-5	8/7/2019	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**8.9**
HA-16-8	8/7/2019	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**9.1**
SB-1-5	8/9/2019	5	<2.0	<1.0	**23**	<1.0	<1.0	**4.7**	**3.1**	**2.9**	**1.1**	<1.0	**3.3**	<1.0	<1.0	<1.0	**12**	**18**	<0.10	**8.5**
SB-2-5	8/8/2019	5	<2.0	<1.0	**12**	<1.0	<1.0	**2.8**	**1.7**	<2.0	<1.0	<1.0	**1.9**	<1.0	<1.0	<1.0	**7.3**	**10**	<0.10	--
SB-2-10	8/8/2019	10	<2.0	**1.6**	**46**	<1.0	<1.0	**8.4**	**4.8**	**6.7**	1.8	<1.0	**7.5**	<1.0	<1.0	<1.0	**20**	**28**	<0.10	--
SB-3-5	8/8/2019	5	<2.0	**1.0**	**24**	<1.0	<1.0	**5.2**	**3.3**	**3.5**	**1.1**	<1.0	**4.0**	<1.0	<1.0	<1.0	**13**	**19**	<0.11	--
SB-3-10	8/8/2019	10	<2.0	<1.0	**20**	<1.0	<1.0	**3.7**	**2.5**	**2.4**	<1.0	<1.0	**2.8**	<1.0	<1.0	<1.0	**9.2**	**14**	<0.10	--
SV-4-10	8/9/2019	10	<2.0	**3.6**	**87**	<1.0	<1.0	**17**	**7.7**	**14**	**2.9**	**1.9**	**15**	**1.0**	<1.0	<1.0	**34**	**45**	<0.10	**8.2**
SV-6-5	8/6/2019	5	<2.0	**1.6**	**72**	<1.0	<1.0	**18**	**6.6**	**12**	**1.0**	<1.0	**15**	<1.0	<1.0	<1.0	**34**	**41**	<0.10	--
SV-7-5	8/6/2019	5	<2.0	**1.3**	**73**	<1.0	<1.0	**14**	**6.4**	**10**	<1.0	<1.0	**13**	<1.0	<1.0	<1.0	**30**	**37**	<0.10	--
SV-8-5	8/6/2019	5	<2.0	<1.0	**64**	<1.0	<1.0	**11**	**5.3**	**8.0**	<1.0	<1.0	**11**	<1.0	<1.0	<1.0	**25**	**30**	<0.10	--
SV-9-5	8/6/2019	5	<2.0	<1.0	**45**	<1.0	<1.0	**9.8**	**5.4**	**6.4**	<1.0	<1.0	**7.4**	<1.0	<1.0	<1.0	**21**	**31**	<0.10	--

TABLE 3
SUMMARY OF SOIL METALS ANALYTICAL RESULTS
Kimberly Clark Facility
2001 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	Sample Depth	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury	pH
DTSC HERO Note 3 - Commercial Soil [2]			*160*	*0.31*	*220,000*	*230*	*1,100*	*1,800,000*	*350*	*47,000*	*320*	*5,800*	*11,000*	*5,800*	*5,800*	*12*	*5,800*	*350,000*	*190*	*NE*
California Background Levels Range [3]			*0.15-19.5*	*0.6-11.0*	*133-1400*	*0.25-2.7*	*0.05-1.7*	*23-1,579*	*2.7-46-9*	*9.1-66.4*	*12.4-97.1*	*0.1-9.6*	*9.0-509*	*0.015-0.43*	*0.1-8.3*	*0.17-1.10*	*39-288*	*88-236*	*0.1-0.9*	*NE*
SV-12-5	8/9/2019	5	<2.0	<1.0	**37**	<1.0	<1.0	**7.2**	**4.1**	**5.2**	**1.7**	<1.0	**4.9**	<1.0	<1.0	<1.0	**17**	**23**	<0.10	**7.9**
SV-13-10	8/8/2019	10	<2.0	<1.0	**15**	<1.0	<1.0	**2.4**	**1.9**	<2.0	<1.0	<1.0	**2.0**	<1.0	<1.0	<1.0	**7.0**	**11**	<0.11	--
SV-14-5	8/6/2019	5	<2.0	<1.0	**34**	<1.0	<1.0	**7.8**	**4.0**	**4.8**	<1.0	<1.0	**5.7**	<1.0	<1.0	<1.0	**17**	**24**	<0.10	--
SV-15-5	8/6/2019	5	<2.0	**1.8**	**40**	<1.0	<1.0	**21**	**9.4**	**14**	**5.6**	<1.0	**14**	<1.0	<1.0	<1.0	**43**	**26**	<0.10	--

Notes:
All metals results are reported in milligrmas per kilogram.
pH results are reported in pH units.
(1) Refere to Figure 2
(2) Residential DTSC HERO HHRA Note #3 (April 2019)
(3) Background Concentrations of Trace and Major Elements in California Soils (Kearney, March 1996).
" < " Indicates concnetration reported below Method Detection Limit
BOLD Indicates concentration reported above Practical Quantitation Limit
" -- " Indiactes the sample was not analyzed for that analyte

Abbreviations:
DTSC - Department of Toxic Substance Control
HERO - Human and Ecological Risk Office Human Health Risk Assessment
NE - Not Established
USEPA - United States Environmental Protection Agency
mg/kg - milligram per kilogram

TABLE 4
SUMMARY OF SOIL PCB ANALYTICAL RESULTS
Kimberly Clark Facility
2001 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	Sample Depth	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268
DTSC HERO Note 3 - Commercial Soil [2]			*17,000*	*530*	*490*	*580*	*580*	*590*	*600*	*NE*	*NE*
USEPA Region 9 RSL - Industrial Soil [3]			*27,000*	*830*	*720*	*950*	*950*	*970*	*990*	*NE*	*NE*
HA-8-1	8/7/2019	1	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-9-1	8/7/2019	1	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-10-1	8/7/2019	1	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-11-1	8/7/2019	1	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-12-1	8/7/2019	1	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-14-5	8/6/2019	5	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-14-10	8/6/2019	10	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-15-5	8/6/2019	5	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-15-10	8/6/2019	10	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-16-5	8/6/2019	5	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
HA-16-8	8/6/2019	8	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
SB-1-5	8/9/2019	5	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
SB-2-5	8/8/2019	5	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
SB-2-10	8/8/2019	10	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
SV-4-10	8/9/2019	10	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16
SB-5-5	8/9/2019	5	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16	ND<16

Notes:
All results reported in microgram per kilogram
(1) Refere to Figure 2
(2) Residential DTSC HERO HHRA Note #3 (April 2019)
(3) Residential Screening Level (SL) USEPA Region 9 Regional Screening Levels (RSL - April 2019)
" < " Indicates concnetration reported below Method Detection Limit
BOLD Indicates concentration reported above Practical Quantitation Limit
" -- " Indiactes the sample was not analyzed for that analyte

Abbreviations:
DTSC - Department of Toxic Substance Control
HERO - Human and Ecological Risk Office Human Health Risk Assessment
NE - Not Established
PCB - Polychlorinated Biphenyl
USEPA - United States Environmental Protection Agency
µg/Kg - microgram per kilogram

TABLE 5
SUMMARY OF SOIL OCP ANALYTICAL RESULTS
Kimberly Clark Facility and Duncan Parcel
2001 and 2301 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	Sample Depth	4,4-DDD	4,4-DDE	4,4-DDT	Total DDD Compounds	Aldrin	Dieldrin	Heptachlor	Toxaphene	Other OCP
DTSC HERO Note 3 - Commercial Soil [2]			*6.2*	*9.3*	*7.1*	*NE*	*0.18*	*0.093*	*0.63*	*1.2*	*varies*
USEPA Region 9 RSL - Industrial Soil [3]			*10*	*9.3*	*8.5*	*NE*	*0.18*	*0.14*	*0.63*	*2.1*	*varies*
HA-1-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-1-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-2-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-2-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-3-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-3-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-4-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-4-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-5-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-5-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-6-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-6-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-7-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-7-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-8-1	8/7/2019	1	<0.0020	<0.0020	**0.005**	**0.005**	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-8-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-9-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-9-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-10-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-10-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-11-1	8/7/2019	1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-11-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-12-1	8/7/2019	1	<0.0020	**0.0023**	**0.013**	**0.0153**	<0.0010	<0.0020	<0.0010	<0.050	<varies
HA-12-3	8/7/2019	3	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.050	<varies

Notes:
All results reported in milligram per kilogram (mg/kg)
(1) Sample collected via 250ml glass bulb
(2) Residential DTSC HERO HHRA Note #3 (April 2019)
(3) Residential Screening Level (SL) USEPA Region 9 Regional Screening Levels (RSL - April 2019)
" < " Indicates concnetration reported below Method Detection Limit
BOLD Indicates concentration reported above Method Detection Limit
" J " Indicates concnetration reported above Method Detection Limit, and below Reporting Limit

Abbreviations:
DDD - dichlorodiphenyldichloroethane
DDE - dichlorodiphenyldichloroethylene
DDT - dichlorodiphenyltrichloroethane
DTSC - Department of Toxic Substance Control
HERO - Human and Ecological Risk Office Human Health Risk Assessment
NE - Not Established
OCP - Organochlorine Pesticide
USEPA - United States Environmental Protection Agency

TABLE 6
SUMMARY OF SOIL DIOXIN / FURAN ANALYTICAL RESULTS
Kimberly Clark Facility and Duncan Parcel
2001 and 2301 E. Orangethorpe Avenue, Fullerton, CA

Analyte	TCDD Toxic Equivalency Factor (TEF)	HA-15-10			HA-16-8		
		Lab Result	TEF Adjusted	TEF Adjusted	Lab Result	TEF Adjusted	TEF Adjusted
	(unitless)	pg/g	pg/g	mg/kg	pg/g	pg/g	mg/kg
2,3,7,8-TCDD	1	< 0.172	8.60E-02	8.60E-08	< 0.342	1.71E-01	1.71E-07
1,2,3,7,8-PeCDD	1	< 0.327	1.64E-01	1.64E-07	< 0.441	2.21E-01	2.21E-07
1,2,3,4,7,8-HxCDD	0.1	< 0.327	1.64E-02	1.64E-08	< 0.422	2.11E-02	2.11E-08
1,2,3,6,7,8-HxCDD	0.1	< 0.655	3.28E-02	3.28E-08	< 0.506	2.53E-02	2.53E-08
1,2,3,7,8,9-HxCDD	0.1	< 0.315	1.58E-02	1.58E-08	< 0.453	2.27E-02	2.27E-08
1,2,3,4,6,7,8-HpCDD	0.01	< 0.409	2.05E-03	2.05E-09	< 0.916	4.58E-03	4.58E-09
OCDD	0.0003	< 1.01	1.52E-04	1.52E-10	< 1.54	2.31E-04	2.31E-10
2,3,7,8-TCDF	0.1	< 0.0886	4.43E-03	4.43E-09	< 0.3460	1.73E-02	1.73E-08
1,2,3,7,8-PeCDF	0.03	< 0.412	6.18E-03	6.18E-09	< 0.384	5.76E-03	5.76E-09
2,3,4,7,8-PeCDF	0.3	< 0.422	6.33E-02	6.33E-08	< 0.321	4.82E-02	4.82E-08
1,2,3,4,7,8-HxCDF	0.1	< 0.518	2.59E-02	2.59E-08	< 0.403	2.02E-02	2.02E-08
1,2,3,6,7,8-HxCDF	0.1	< 0.533	2.67E-02	2.67E-08	< 0.381	1.91E-02	1.91E-08
1,2,3,7,8,9-HxCDF	0.1	< 0.319	1.60E-02	1.60E-08	< 0.411	2.06E-02	2.06E-08
2,3,4,6,7,8-HxCDF	0.1	< 0.425	2.13E-02	2.13E-08	< 0.507	2.54E-02	2.54E-08
1,2,3,4,6,7,8-HpCDF	0.01	< 0.279	1.40E-03	1.40E-09	< 0.778	3.89E-03	3.89E-09
1,2,3,4,7,8,9-HpCDF	0.01	< 0.378	1.89E-03	1.89E-09	< 0.554	2.77E-03	2.77E-09
OCDF	0.0003	< 0.461	6.92E-05	6.92E-11	< 1.360	2.04E-04	2.04E-10
TCDD TEQ (ND = 1/2 DL)			**0.48**	**4.84E-07**		**0.63**	**6.29E-07**
USEPA Regional Screening Levels			**22**	**2.2E-05**		22	**2.2E-05**
DTSC Dioxin-TEQ Soil Remedial Goals			**220**	**2.2E-04**		220	**2.2E-04**

Notes:

Dioxin and furan congeners were analyzed by United States Environmental Protection Agency (USEPA) Method 8290A. Results were reported in units of picograms per gram (pg/g).

2,3,7,8-TDD toxic equivalent (TEQ) is calculated as the summation of the toxic equivalency factors (TEFs) multiplied by the concentrations of the TCDD-like dioxin/furan congeners in accordance with DTSC HHRA HERO Note 2. For results reported as non-detect, one-half the detection limit (DL) was used in the TCDD TEQ.

(1) United States Environmental Protection Agency (USEPA), Regional Screening Levels (RSLs), dated April 2019.

(2) Department of Toxic Substances Control (DTSC), Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 2, Soil Remedial Goals for Dioxins and Dioxin-like Compounds for Consideration at California Hazardous Waste Sites, dated April 2017.

Abbreviations:

1,2,3,4,6,7,8-HpCDD = 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
1,2,3,4,6,7,8-HpCDF = 1,2,3,4,6,7,8-Heptachlorodibenzofuran
1,2,3,4,7,8,9-HpCDF = 1,2,3,4,7,8,9-Heptachlorodibenzofuran
1,2,3,4,7,8-HxCDD = 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
1,2,3,4,7,8-HxCDF = 1,2,3,4,7,8-Hexachlorodibenzofuran
1,2,3,6,7,8-HxCDD = 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
1,2,3,6,7,8-HxCDF = 1,2,3,6,7,8-Hexachlorodibenzofuran
1,2,3,7,8,9-HxCDD = 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
1,2,3,7,8,9-HxCDF = 1,2,3,7,8,9-Hexachlorodibenzofuran
2,3,7,8-tetrachlorodibenzo-p-dioxin = 2,3,7,8-TCDD

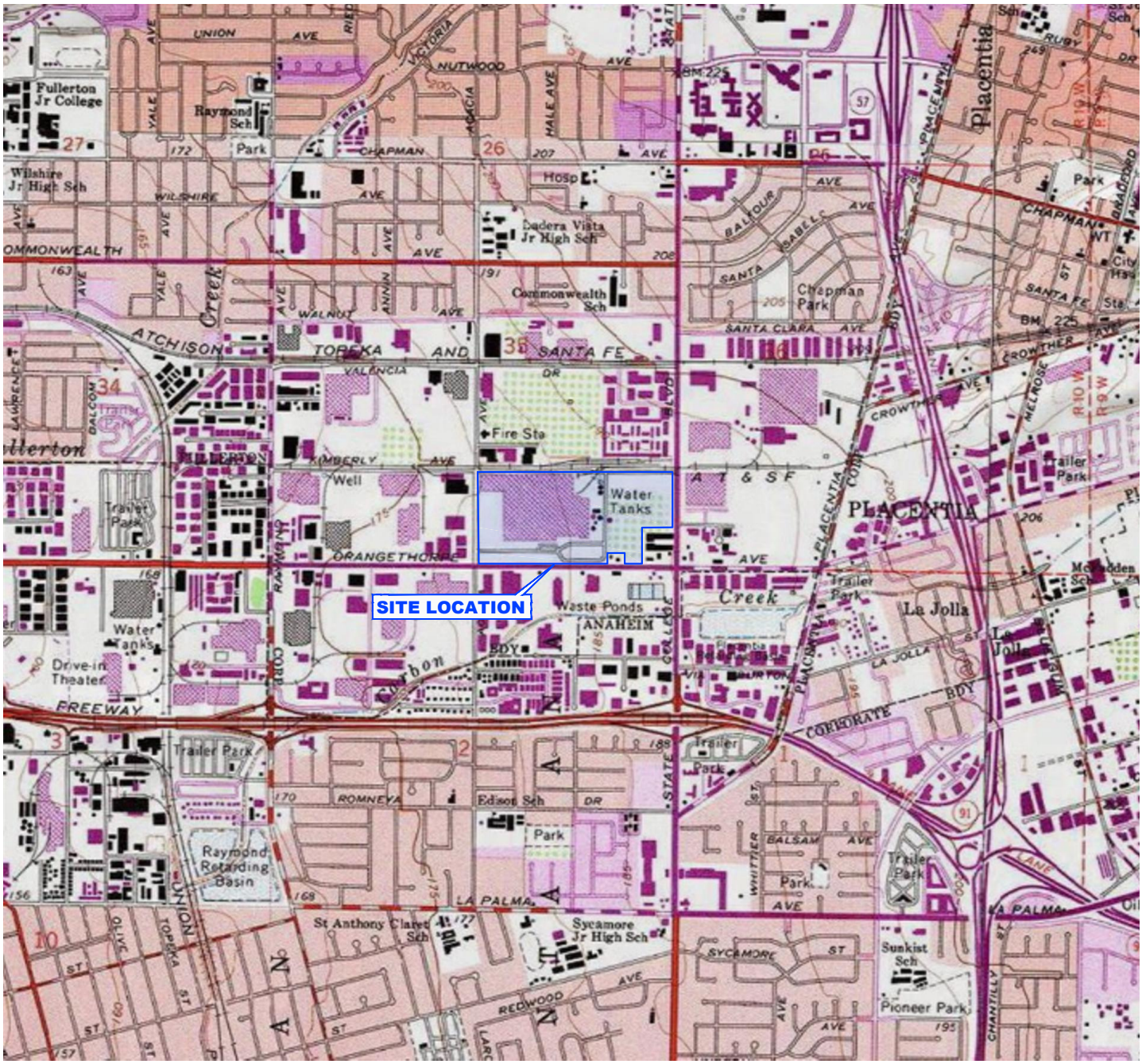
TABLE 7
SUMMARY OF QA/QC RESULTS
Kimberly Clark Facility and Duncan Parcel
2001 and 2301 E. Orangethorpe Avenue, Fullerton, CA

Sample ID [1]	Sample Date	VOCs							
		PCE	TCE	Benzene	Toluene	Ethyl-benzene	m,p-Xylenes	o-xylenes	Various
EB-20190806	8/6/2019	<5.0	<5.0	Su	<5.0	<5.0	<10	<5.0	<various
EB-20190807	8/7/2019	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<various
EB-20190808	8/8/2019	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<various
EB-20190809	8/9/2019	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<various
TB-20190806	8/6/2019	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<various
TB-20190807	8/7/2019	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<various
TB-20190808	8/8/2019	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<various
TB-20190809	8/9/2019	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<various

Notes:
All results reported in microgram per liter.
" < " Indicates concnetration reported below Method Detection Limit

Abbreviations:
EB - Equipment Blank
TB - Trip Blank
QA/QC - Quality Assurance / Quality Control
µg/L - microgram per liter

FIGURES





CALIFORNIA

1 1/2 0 1

SCALE IN MILE

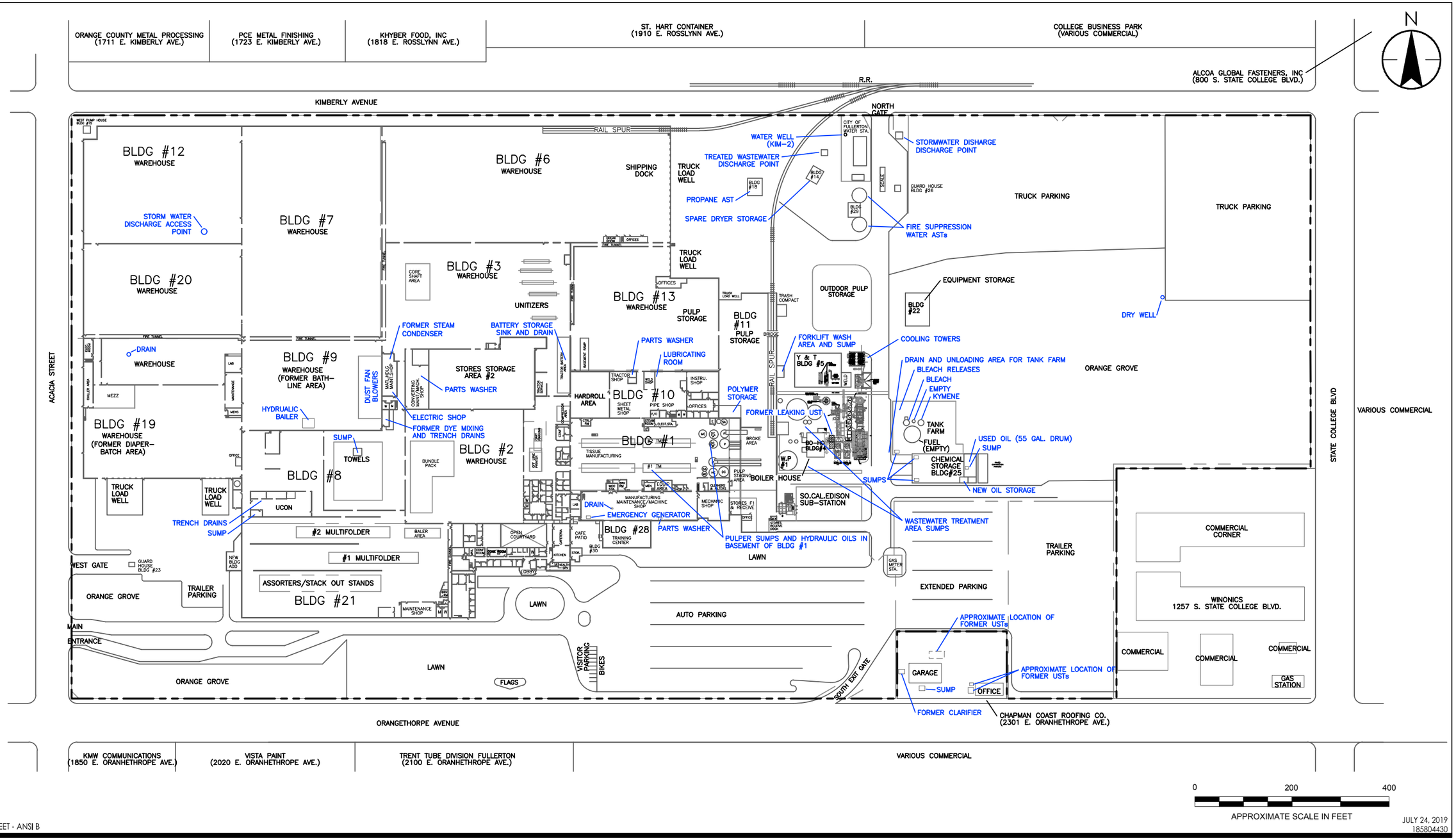
1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE IN FEET

REFERENCE: 7.5 Minute Series, Albers NAD83, Untrimmed

Stantec 735 East Carnegie Drive Suite 280 San Bernardino CA 92408-3588 www.stantec.com	FOR: GNAP DEVELOPMENT, LLC 2001 EAST ORANGETHORPE AVENUE FULLERTON, CA. 92831	SITE VICINITY MAP		FIGURE: 1
	JOB NUMBER: 185804430	DRAWN BY: JBL	CHECKED BY: BV	APPROVED BY: BV	DATE: 07/24/19

FILEPATH:M:\00_OTHER OFFICES\Former-Redlands_San Bernadino\Kimberly_Clark\Site-Map.dwg|jlieberman|Jul 25, 2019 at 13:17|Layout: Layout1



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2019/08/16 1:23 PM By: Lieberman, Justin

ORIGINAL SHEET - ANSI B

JULY 24, 2019
185804430

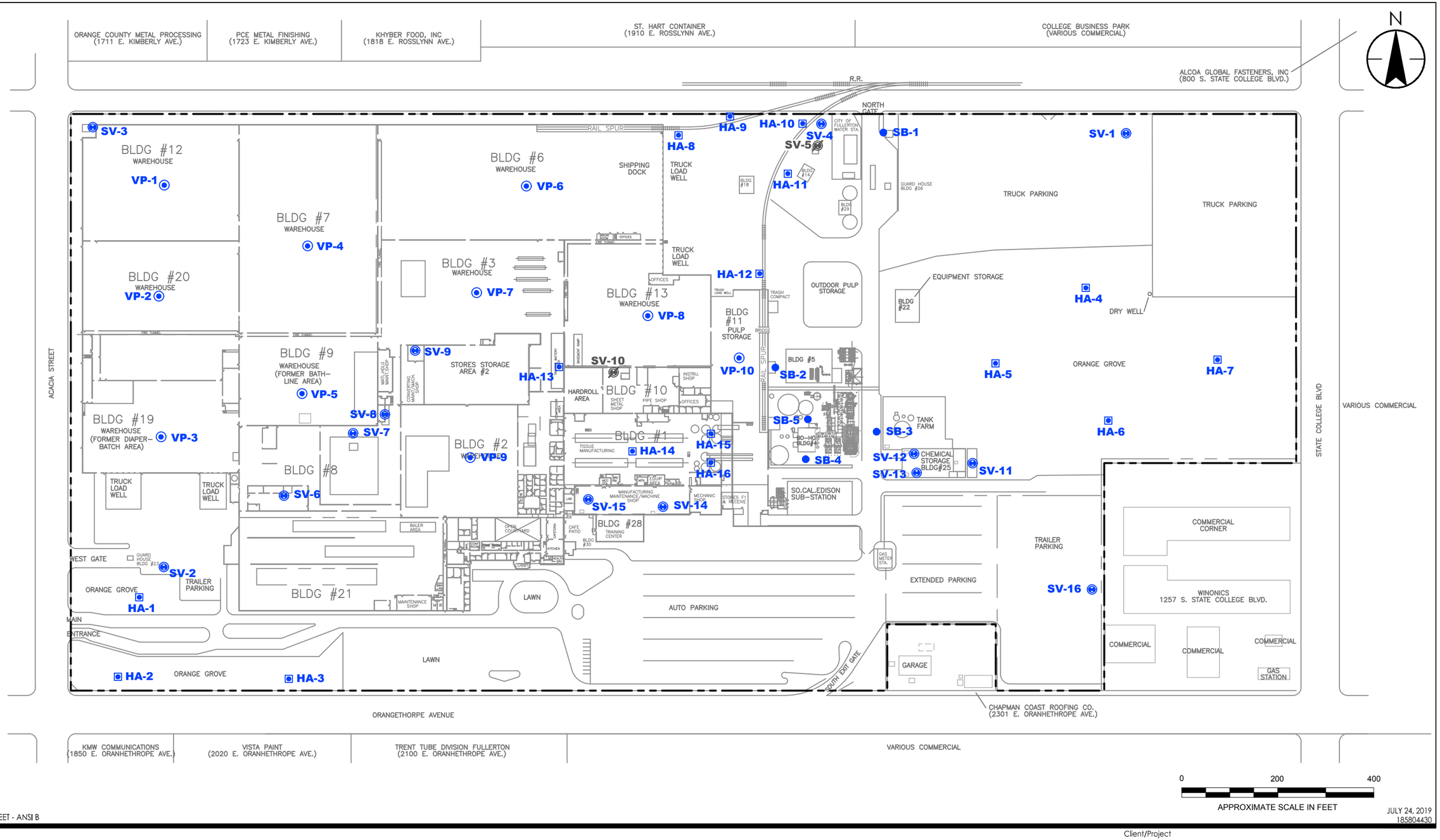
Stantec

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www.stantec.com

Client/Project
GNAP DEVELOPMENT, LLC
2001 EAST ORANGETHORPE AVENUE
FULLERTON, CA. 92831

Figure No.
2

Title
SITE MAP



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2019/08/16 2:13 PM By: Lieberman, Justin

ORIGINAL SHEET - ANSI B

JULY 24, 2019
185804430

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San Bernardino CA 92408-3588
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Legend

- DPT SOIL VAPOR BORING LOCATION (APPROXIMATE)
- ELIMINATED BORING LOCATION
- DPT SOIL BORING LOCATION (APPROXIMATE)
- SUB-SLAB SAMPLING LOCATION (APPROXIMATE)
- HAND AUGER BORING LOCATION (APPROXIMATE)

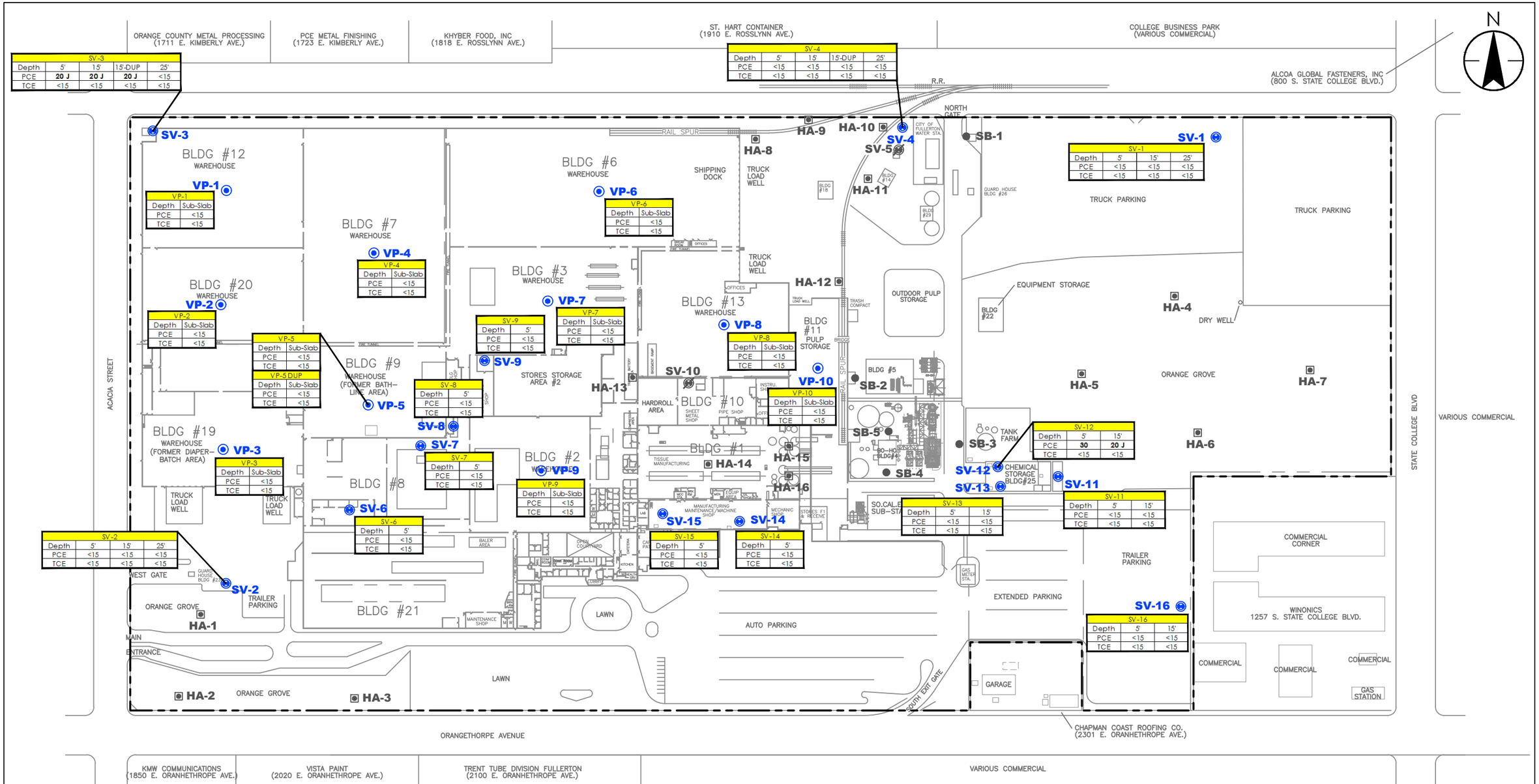
Note

FOR ADDITIONAL INTERIOR DETAIL SEE SITE MAP (FIGURE 2).

Client/Project
GNAP DEVELOPMENT, LLC
2001 EAST ORANGETHORPE AVENUE
FULLERTON, CA. 92831

Figure No.
3

Title
SITE MAP WITH ASSESSMENT SAMPLE LOCATIONS



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2019/08/16 2:13 PM By: Lieberman, Justin

ORIGINAL SHEET - ANSI B

JULY 24, 2019
185804430

Legend

◉	DPT SOIL VAPOR BORING LOCATION (APPROXIMATE)
⊘	ELIMINATED BORING LOCATION
●	DPT SOIL BORING LOCATION (APPROXIMATE)
◉	SUB-SLAB SAMPLING LOCATION (APPROXIMATE)
▣	HAND AUGER BORING LOCATION (APPROXIMATE)
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
<	INDICATES CONCENTRATION REPORTED BELOW METHOD DETECTION LIMIT
BOLD	INDICATES CONCENTRATION REPORTED ABOVE METHOD DETECTION LIMIT
J	INDICATES CONCENTRATION REPORTED ABOVE METHOD DETECTION LIMIT, AND BELOW REPORTING LIMIT

Notes

1. ALL CONCENTRATIONS REPORTED IN UNITS OF MICROGRAMS PER CUBIC METER (ug/m³).
2. FOR ADDITIONAL INTERIOR DETAIL SEE SITE MAP (FIGURE 2).

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FULLERTON, CA. 92831

Figure No.

4

Title

SITE MAP WITH VAPOR SAMPLE RESULTS

Appendix A
Laboratory Reports

A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
ELAP#'s	2789
	2790
	2122

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CASE NARRATIVE

Authorized Signature Name / Title (print)	Ken Zheng, President
Signature / Date	Ken Zheng, President 08/14/2019 13:04:49
Laboratory Job No. (Certificate of Analysis No.)	1908-00089
Project Name / No.	2001 E. Orangethorpe Ave., Fullerton, CA 92831
Dates Sampled (from/to)	08/12/19 To 08/12/19
Dates Received (from/to)	08/12/19 To 08/12/19
Dates Reported (from/to)	08/14/19 To 8/14/2019
Chains of Custody Received	Yes

Comments:

Subcontracting

Organic Analyses

No analyses sub-contracted

Sample Condition(s)

All samples intact

The data and information on this, and other accompanying documents, represent only the sample(s) analyzed and is rendered upon condition that it is not to be reproduced, wholly or in part, for advertising or other purposes without approval from the laboratory.

A & R Laboratories, Inc.

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ONTARIO, CA 91761
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FDA#	2030513
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 001 **SV-12-5'** Date & Time Sampled: 08/12/19 @ 8:17
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

The data and information on this, and other accompanying documents, represent only the sample(s) analyzed and is rendered upon condition that it is not to be reproduced, wholly or in part, for advertising or other purposes without approval from the laboratory.

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 001 **SV-12-5'** Date & Time Sampled: 08/12/19 @ 8:17
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	**0.030**	0.015	0.030	µg/L	**30**	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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ONTARIO, CA 91761
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www.arlaboratories.com office@arlaboratories.com

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 001 **SV-12-5'**									Date & Time Sampled:		08/12/19 @ 8:17		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	98		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 002 **SV-12-15'**									Date & Time Sampled:		08/12/19 @ 8:36		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 002 **SV-12-15'** Date & Time Sampled: 08/12/19 @ 8:36
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 002 **SV-12-15'** Date & Time Sampled: 08/12/19 @ 8:36
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	***0.020***	0.015	0.030	µg/L	***20***	15.0	30	µg/m3	J	0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 002 **SV-12-15'**									Date & Time Sampled:		08/12/19 @ 8:36		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	100		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	101		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	97		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 003 **SV-16-5'**									Date & Time Sampled:		08/12/19 @ 8:59		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
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www.arlaboratories.com office@arlaboratories.com

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 003 **SV-16-5'** Date & Time Sampled: 08/12/19 @ 8:59
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 003 **SV-16-5'** Date & Time Sampled: 08/12/19 @ 8:59
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	101		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	97		70-130	%REC							EPA 8260B	08/12/19	AR

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1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
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CERTIFICATE OF ANALYSIS

1908-00089

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BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 004 **SV-16-15'** Date & Time Sampled: 08/12/19 @ 9:22
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 004 **SV-16-15'** Date & Time Sampled: 08/12/19 @ 9:22
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 004 **SV-16-15'** Date & Time Sampled: 08/12/19 @ 9:22													
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	101		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	99		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 005 **SV-1-5'** Date & Time Sampled: 08/12/19 @ 10:08													
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
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SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 005 **SV-1-5'** Date & Time Sampled: 08/12/19 @ 10:08
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 005 **SV-1-5'** Date & Time Sampled: 08/12/19 @ 10:08
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR

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ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 005 **SV-1-5'**									Date & Time Sampled:		08/12/19 @ 10:08		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	100		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 006 **SV-1-15'**									Date & Time Sampled:		08/12/19 @ 10:27		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 006 **SV-1-15'** Date & Time Sampled: 08/12/19 @ 10:27
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 006 **SV-1-15'** Date & Time Sampled: 08/12/19 @ 10:27
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	102		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 007 **SV-1-25'** Date & Time Sampled: 08/12/19 @ 10:48
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 007 **SV-1-25'** Date & Time Sampled: 08/12/19 @ 10:48
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 007 **SV-1-25'**									Date & Time Sampled:		08/12/19 @ 10:48		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	103		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	105		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	99		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 008 **SV-4-5'**									Date & Time Sampled:		08/12/19 @ 11:17		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 008 **SV-4-5'** Date & Time Sampled: 08/12/19 @ 11:17
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 008 **SV-4-5'** Date & Time Sampled: 08/12/19 @ 11:17
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR

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ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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LA City#	10261
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 008 **SV-4-5'**									Date & Time Sampled:		08/12/19 @ 11:17		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	103		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	104		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 009 **SV-4-15'**									Date & Time Sampled:		08/12/19 @ 11:38		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 009 **SV-4-15'** Date & Time Sampled: 08/12/19 @ 11:38
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 009 **SV-4-15'** Date & Time Sampled: 08/12/19 @ 11:38
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	101		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	100		70-130	%REC							EPA 8260B	08/12/19	AR

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FOOD · COSMETICS · WATER · SOIL · SOIL VAPOR · WASTES

CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 010 **SV-4-25'** Date & Time Sampled: 08/12/19 @ 12:01
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 010 **SV-4-25'** Date & Time Sampled: 08/12/19 @ 12:01
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 010 **SV-4-25'** Date & Time Sampled: 08/12/19 @ 12:01
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	101		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	104		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	99		70-130	%REC							EPA 8260B	08/12/19	AR

Sample: 011 **SV-4-25' DUP** Date & Time Sampled: 08/12/19 @ 12:01
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 011 **SV-4-25' DUP** Date & Time Sampled: 08/12/19 @ 12:01
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 011 **SV-4-25' DUP** Date & Time Sampled: 08/12/19 @ 12:01
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 011 **SV-4-25' DUP**									Date & Time Sampled:		08/12/19 @ 12:01		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	106		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	105		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	101		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 012 **SV-13-5'**									Date & Time Sampled:		08/12/19 @ 12:48		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 012 **SV-13-5'** Date & Time Sampled: 08/12/19 @ 12:48
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 012 **SV-13-5'** Date & Time Sampled: 08/12/19 @ 12:48
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	105		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	104		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	97		70-130	%REC							EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 013 **SV-13-15'** Date & Time Sampled: 08/12/19 @ 13:12

Sample Matrix: **Soil Vapor**

Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 013 **SV-13-15'** Date & Time Sampled: 08/12/19 @ 13:12
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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STANTEC CONSULTING SVCS., INC.
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735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 013 **SV-13-15'**									Date & Time Sampled:		08/12/19 @ 13:12		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	102		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	105		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	99		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 014 **SV-11-5'**									Date & Time Sampled:		08/12/19 @ 13:35		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 014 **SV-11-5'** Date & Time Sampled: 08/12/19 @ 13:35
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
ELAP#'s	2789
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 014 **SV-11-5'** Date & Time Sampled: 08/12/19 @ 13:35
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR

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ONTARIO, CA 91761
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 014 **SV-11-5'**									Date & Time Sampled:		08/12/19 @ 13:35		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	104		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	104		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	99		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 015 **SV-11-15'**									Date & Time Sampled:		08/12/19 @ 13:59		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 015 **SV-11-15'** Date & Time Sampled: 08/12/19 @ 13:59
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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LA City#	10261
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 015 **SV-11-15'** Date & Time Sampled: 08/12/19 @ 13:59
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	106		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	105		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	100		70-130	%REC							EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 016 **SV-14-5'** Date & Time Sampled: 08/12/19 @ 14:34
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 016 **SV-14-5'** Date & Time Sampled: 08/12/19 @ 14:34
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 016 **SV-14-5'**									Date & Time Sampled:		08/12/19 @ 14:34		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	99		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 017 **SV-15-5'**									Date & Time Sampled:		08/12/19 @ 14:53		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 017 **SV-15-5'** Date & Time Sampled: 08/12/19 @ 14:53
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 017 **SV-15-5'** Date & Time Sampled: 08/12/19 @ 14:53
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR

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735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 017 **SV-15-5'**									Date & Time Sampled:		08/12/19 @ 14:53		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	103		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	97		70-130	%REC							EPA 8260B	08/12/19	AR
Sample: 018 **SV-2-5'**									Date & Time Sampled:		08/12/19 @ 15:26		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 018 **SV-2-5'** Date & Time Sampled: 08/12/19 @ 15:26
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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LA City#	10261
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 018 **SV-2-5'** Date & Time Sampled: 08/12/19 @ 15:26
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	102		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	98		70-130	%REC							EPA 8260B	08/12/19	AR

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ONTARIO, CA 91761
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 019 **SV-2-15'** Date & Time Sampled: 08/12/19 @ 15:43
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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STANTEC CONSULTING SVCS., INC.
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Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 019 **SV-2-15'** Date & Time Sampled: 08/12/19 @ 15:43
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
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CERTIFICATE OF ANALYSIS

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 019 **SV-2-15'** Date & Time Sampled: 08/12/19 @ 15:43
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	104		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	99		70-130	%REC							EPA 8260B	08/12/19	AR

Sample: 020 **SV-2-25'** Date & Time Sampled: 08/12/19 @ 16:06
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 020 **SV-2-25'** Date & Time Sampled: 08/12/19 @ 16:06
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR

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1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 020 **SV-2-25'** Date & Time Sampled: 08/12/19 @ 16:06
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/12/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/12/19	AR

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STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
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SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/12/19
Invoice No.	86520
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 020 **SV-2-25'** Date & Time Sampled: 08/12/19 @ 16:06
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/12/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/12/19	AR
[VOC Surrogates]													
Dibromofluoromethane	105		70-130	%REC							EPA 8260B	08/12/19	AR
Toluene-D8	104		70-130	%REC							EPA 8260B	08/12/19	AR
Bromofluorobenzene	98		70-130	%REC							EPA 8260B	08/12/19	AR

Respectfully Submitted: Ken Zheng

Ken Zheng - President

QUALIFIERS

B = Detected in the associated Method Blank at a concentration above the routine RL
B1= BOD blank is over specifications . The reported result may be biased high.
D = Surrogate recoveries are not calculated due to sample dilution
E = Estimated value
H = Analyte was prepared and/or analyzed outside of the analytical method holding time
I = Matrix Interference
J = Analyte concentration detected between RL and MDL

ABBREVIATIONS

DF = Dilution Factor
RL = Reporting Limit
MDL = Method Detection Limit
Qual = Qualifier
Tech = Technician

As regulatory limits change frequently, Microbac advises the recipient of this report to confirm such limits with the appropriate federal, state, or local authorities before acting in reliance on the regulatory limits provided.

For any feedback concerning our services, please contact Jenny Jiang, Project Manager at 951.779.0310. You may also contact Ken Zheng, President at office@arlaboratories.com.

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QUALITY CONTROL DATA REPORT

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

1908-00089

Date Reported	**08/14/2019**
Date Received	**08/12/2019**
Date Sampled	**08/12/2019**
Invoice No.	**86520**
Customer #	**1003**
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Method # EPA 8260B
QC Reference # 83778 **Date Analyzed:** 8/12/2019 **Technician:** AR
Samples 001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020

Results

	LCS %REC	LCS %DUP	LCS %RPD	BLKSRR% REC
1,1-Dichloroethene	105	102	2.9	
Benzene	107	96	10.7	
Bromofluorobenzene				97
Chlorobenzene	107	102	4.7	
Dibromofluoromethan				107
Toluene	118	106	11.4	
Toluene-D8				105
Trichloroethene	110	104	5.2	

Control Ranges

LCS %REC	LCS %RPD	BLKSRR%REC
70 - 130	0 - 25	
70 - 130	0 - 25	
		50 - 150
70 - 130	0 - 25	
		50 - 150
70 - 130	0 - 25	
		50 - 150
70 - 130	0 - 25	

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QUALITY CONTROL DATA REPORT

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO

Date Reported 08/14/2019
Date Received 08/12/2019
Date Sampled 08/12/2019

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Method blank results

Ref	Test Name	Result	Qualif	Units	MDL
83778	Acetone	<0.1500		µg/L	0.1500
	t-Amyl Methyl Ether (TAME)	<0.0150		µg/L	0.0150
	Benzene	<0.0108		µg/L	0.0108
	Bromobenzene	<0.0150		µg/L	0.0150
	Bromochloromethane	<0.0150		µg/L	0.0150
	Bromodichloromethane	<0.0150		µg/L	0.0150
	Bromoform	<0.0150		µg/L	0.0150
	Bromomethane	<0.0150		µg/L	0.0150
	t-Butanol (TBA)	<0.1500		µg/L	0.1500
	2-Butanone (MEK)	<0.1500		µg/L	0.1500
	n-Butylbenzene	<0.0150		µg/L	0.0150
	sec-Butylbenzene	<0.0150		µg/L	0.0150
	tert-Butylbenzene	<0.0150		µg/L	0.0150
	Carbon Disulfide	<0.1500		µg/L	0.1500
	Carbon Tetrachloride	<0.0075		µg/L	0.0075
	Chlorobenzene	<0.0150		µg/L	0.0150
	Chloroethane	<0.0150		µg/L	0.0150
	Chloroform	<0.0150		µg/L	0.0150
	Chloromethane	<0.0150		µg/L	0.0150
	2-Chlorotoluene	<0.0150		µg/L	0.0150
	4-Chlorotoluene	<0.0150		µg/L	0.0150
	Dibromochloromethane	<0.0150		µg/L	0.0150
	1,2-Dibromoethane (EDB)	<0.0060		µg/L	0.0060
	1,2-Dibromo-3-Chloropropane	<0.0060		µg/L	0.0060
	Dibromomethane	<0.0150		µg/L	0.0150
	1,2-Dichlorobenzene	<0.0150		µg/L	0.0150
	1,3-Dichlorobenzene	<0.0150		µg/L	0.0150
	1,4-Dichlorobenzene	<0.0150		µg/L	0.0150
	Dichlorodifluoromethane	<0.0150		µg/L	0.0150
	1,1-Dichloroethane	<0.0150		µg/L	0.0150
	1,2-Dichloroethane	<0.0150		µg/L	0.0150
	1,1-Dichloroethene	<0.0150		µg/L	0.0150
	cis-1,2-Dichloroethene	<0.0150		µg/L	0.0150
	trans-1,2-Dichloroethene	<0.0150		µg/L	0.0150
	1,2-Dichloropropane	<0.0150		µg/L	0.0150
	1,3-Dichloropropane	<0.0150		µg/L	0.0150
	2,2-Dichloropropane	<0.0150		µg/L	0.0150
	1,1-Dichloropropene	<0.0150		µg/L	0.0150
	cis-1,3-Dichloropropene	<0.0150		µg/L	0.0150
	trans-1,3-Dichloropropene	<0.0150		µg/L	0.0150
	Diisopropyl Ether (DiPE)	<0.0150		µg/L	0.0150
	Ethylbenzene	<0.0150		µg/L	0.0150
	Ethyl-t-Butyl Ether (EtBE)	<0.0150		µg/L	0.0150
	Hexachlorobutadiene	<0.0150		µg/L	0.0150
	2-Hexanone	<0.1500		µg/L	0.1500
	Isopropylbenzene	<0.0150		µg/L	0.0150
	4-Isopropyltoluene	<0.0150		µg/L	0.0150
	Methylene Chloride	<0.0150		µg/L	0.0150
	4-Methyl-2-Pentanone (MIBK)	<0.1500		µg/L	0.1500
	Methyl-t-butyl Ether (MtBE)	<0.0150		µg/L	0.0150
	Naphthalene	<0.0096		µg/L	0.0096
	n-Propylbenzene	<0.0150		µg/L	0.0150
	Styrene	<0.0150		µg/L	0.0150
	1,1,1,2-Tetrachloroethane	<0.0150		µg/L	0.0150
	1,1,2,2-Tetrachloroethane	<0.0150		µg/L	0.0150
	Tetrachloroethene	<0.0150		µg/L	0.0150
	Toluene	<0.0150		µg/L	0.0150
	1,2,3-Trichlorobenzene	<0.0150		µg/L	0.0150
	1,2,4-Trichlorobenzene	<0.0150		µg/L	0.0150
	1,1,1-Trichloroethane	<0.0150		µg/L	0.0150
	1,1,2-Trichloroethane	<0.0150		µg/L	0.0150
	Trichloroethene	<0.0150		µg/L	0.0150
	1,2,3-Trichloropropane	<0.0060		µg/L	0.0060
	Trichlorofluoromethane	<0.0150		µg/L	0.0150
	Trichlorotrifluoroethane	<0.0150		µg/L	0.0150
	1,2,4-Trimethylbenzene	<0.0150		µg/L	0.0150
	1,3,5-Trimethylbenzene	<0.0150		µg/L	0.0150
	Vinyl Chloride	<0.0024		µg/L	0.0024
	m,p-Xylenes	<0.0300		µg/L	0.0300
	o-Xylene	<0.0150		µg/L	0.0150
	Isopropanol (IPA)	<0.1500		µg/L	0.1500

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QUALITY CONTROL DATA REPORT

1908-00089

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO

Date Reported	**08/14/2019**
Date Received	**08/12/2019**
Date Sampled	**08/12/2019**

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Respectfully Submitted: Ken Zheng

Ken Zheng - President

For any feedback concerning our services, please contact Jenny Jiang, Project Manager at 951.779.0310. You may also contact Ken Zheng, President at office@arlaboratories.com.

ARL

A & R Laboratories
1650 S. Grove Ave., Ste C, Ontario, CA 91761
Tel: 951-779-0310 / 909-781-6335 Fax: 951-779-0344
E-mail: office@arlaboratories.com

CHAIN OF CUSTODY

A & R Work Order #: 1908-89

Client Name: Stantec
E-mail: BRIAN.VIGGIANO@STANTEC.COM
Address: 735 E. CARNEGIE DR., STE. 280, SN BRDNO. CA 92408
Report Attention: BRIAN V. Phone #: 909. 255.8204 Fax: #
Sampled By: Abndra
Project No./ Name:
Project Site: 2001 E. Orangethorpe Ave, Fullerton, CA 92831

☐ Chilled ☒ Intact ☐ Seal

Turn Around Time Requested: ☐ Rush 8 12 24 48 Hours ☐ Normal Mobile

Lab # (Lab use)	Client Sample ID	Sample Collection Date	Sample Collection Time	Matrix Type	Sample Preserve	No., type* & size of container	EPA8260B (VOCs & Oxygenates)	EPA8260B(BTEX & Oxygenates)	LUFT / 8015 (Gasoline)	LUFT / 8015 (Diesel)	EPA8081A (Organochlorine Pesticides)	EPA 8082 (PCBs)	EPA 8015M (Carbon Chain C4-C40)	EPA 6010B/7000 (CAM 17 Metals)	Micro: Plate Cnt., Coliform, E-Coli	Remarks
1	SV-12-5'	08/12/19	0817	Air	NA	250 mL GB	X									
2	SV-12-15'		0836													
3	SV-16-5'		0859													
4	SV-16-15'		0922													
5	SV-1-5'		1008													
6	SV-1-15'		1027													
7	SV-1-25'		1048													
8	SV-4-5'		1117													
9	SV-4-15'		1138													
10	SV-4-25'		1201													
11	SV-4-25' DUP		1201													
12	SV-13-5'		1248													
13	SV-13-15'		1312													
14	SV-11-5'		1335													
15	SV-11-15'		1359													

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	Stantec	8-12-19	1640	[signature]	A&R	08/12/19	1640
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.

Matrix Code: DW=Drinking Water; GW=Ground Water; WW=Waste Water; SD=Solid Waste; SL=Sludge; SS=Soil/Sediment; AR=Air; PP=Pure Product

Preservative Code: IC=Ice; HC=HCl; HN=HNO_3; SH=NaOH; ST=$Na_2S_2O_3$; HS=H_2SO_4

* Sample Container Types: T=Tedlar Air Bag; G=Glass Container; ST= Steel Tube; B= Brass Tube; P=Plastic Bottle; V=VOA Vial; E= EnCore

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1650 S. Grove Ave., Ste C, Ontario, CA 91761
Tel: 951-779-0310 / 909-781-6335 Fax: 951-779-0344
E-mail: office@arlaboratories.com

CHAIN OF CUSTODY

A & R Work Order #: 1908-89

Client Name: Stantec

E-mail: BRIAN.VIGGIANO@STANTEC.COM

Address: 735 E. CARNEGIE DR., STE. 280, SN BRDNO, CA 92408

Report Attention: BRIAN V. | Phone # / Fax #: 909.255.8204 | Sampled By: Alondra

Project No./ Name:

Project Site: 2001 E. Orangethorpe Ave, Fullerton, CA. 92831

☐ Chilled ☒ Intact ☐ Seal

Turn Around Time Requested: ☐ Rush 8 12 24 48 Hours ☐ Normal Mobile

Analyses Requested

Lab # (Lab use)	Client Sample ID	Sample Collection: Date	Sample Collection: Time	Matrix Type	Sample Preserve	No., type* & size of container	EPA8260B (VOCs & Oxygenates)	EPA8260B(BTEX & Oxygenates)	LUFT / 8015 (Gasoline)	LUFT / 8015 (Diesel)	EPA8081A (Organochlorine Pesticides)	EPA 8082 (PCBs)	EPA 8015M (Carbon Chain C4-C40)	EPA 6010B/7000 (CAM 17 Metals)	Micro: Plate Cnt., Coliform, E-Coli	Remarks
16	SV-14-5'	08/12/19	1434	Air	NA	250 ml GB	X									
17	SV-14-5 (AR) 5'		1453													
18	SV-2-5'		1526													
19	SV-2-15'		1543													
20	SV-2-25'		1606													

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	Stantec	8-12-19	1640	[signature]	A&R	08/12/19	1640
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.

Matrix Code: DW=Drinking Water; GW=Ground Water; WW=Waste Water; SD=Solid Waste; SL=Sludge; SS=Soil/Sediment; AR=Air; PP=Pure Product

Preservative Code: IC=Ice; HC=HCl; HN=HNO_3; SH=NaOH; ST=$Na_2S_2O_3$; HS=H_2SO_4

* Sample Container Types: T=Tedlar Air Bag; G=Glass Container; ST= Steel Tube; B= Brass Tube; P=Plastic Bottle; V=VOA Vial; E= EnCore

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CASE NARRATIVE

Authorized Signature Name / Title (print)	Ken Zheng, President
Signature / Date	Ken Zheng, President 08/14/2019 13:05:00
Laboratory Job No. (Certificate of Analysis No.)	1908-00101
Project Name / No.	2001 E. Orangethorpe Ave., Fullerton, CA 92831
Dates Sampled (from/to)	08/13/19 To 08/13/19
Dates Received (from/to)	08/13/19 To 08/13/19
Dates Reported (from/to)	08/14/19 To 8/14/2019
Chains of Custody Received	Yes

Comments:

Subcontracting

Organic Analyses

No analyses sub-contracted

Sample Condition(s)

All samples intact

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 001 **SV-3-5'** Date & Time Sampled: 08/13/19 @ 8:00
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 001 **SV-3-5'** Date & Time Sampled: 08/13/19 @ 8:00
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	***0.020***	0.015	0.030	µg/L	***20***	15.0	30	µg/m3	J	0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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1650 S. GROVE AVE., SUITE C
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951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 001 **SV-3-5'**									Date & Time Sampled:		08/13/19 @ 8:00		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	101		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/13/19	AR
Sample: 002 **SV-3-15'**									Date & Time Sampled:		08/13/19 @ 8:21		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 002 **SV-3-15'** Date & Time Sampled: 08/13/19 @ 8:21
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 002 **SV-3-15'** Date & Time Sampled: 08/13/19 @ 8:21
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	***0.020***	0.015	0.030	µg/L	***20***	15.0	30	µg/m3	J	0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 002 **SV-3-15'**									Date & Time Sampled:		08/13/19 @ 8:21		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	101		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	105		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	95		70-130	%REC							EPA 8260B	08/13/19	AR
Sample: 003 **SV-3-25'**									Date & Time Sampled:		08/13/19 @ 8:43		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
ELAP#'s	2789
	2790
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 003 **SV-3-25'** Date & Time Sampled: 08/13/19 @ 8:43
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 003 **SV-3-25'** Date & Time Sampled: 08/13/19 @ 8:43
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	103		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/13/19	AR

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1650 S. GROVE AVE., SUITE C
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SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 004 **VP-1** Date & Time Sampled: 08/13/19 @ 9:14
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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A & R Laboratories, Inc.

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ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 004 **VP-1** Date & Time Sampled: 08/13/19 @ 9:14
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 004 **VP-1** Date & Time Sampled: 08/13/19 @ 9:14
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	100		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	94		70-130	%REC							EPA 8260B	08/13/19	AR

Sample: 005 **VP-2** Date & Time Sampled: 08/13/19 @ 9:33
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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1908-00101

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735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 005 **VP-2** Date & Time Sampled: 08/13/19 @ 9:33
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 005 **VP-2** Date & Time Sampled: 08/13/19 @ 9:33
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR

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ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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LA City#	10261
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 005 **VP-2**									Date & Time Sampled:		08/13/19 @ 9:33		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	100		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	95		70-130	%REC							EPA 8260B	08/13/19	AR
Sample: 006 **VP-3**									Date & Time Sampled:		08/13/19 @ 9:54		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 006 **VP-3** Date & Time Sampled: 08/13/19 @ 9:54
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 006 **VP-3** Date & Time Sampled: 08/13/19 @ 9:54
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	102		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	104		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	95		70-130	%REC							EPA 8260B	08/13/19	AR

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STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 007 **VP-6** Date & Time Sampled: 08/13/19 @ 10:40
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 007 **VP-6** Date & Time Sampled: 08/13/19 @ 10:40
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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ONTARIO, CA 91761
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 007 **VP-6**									Date & Time Sampled:		08/13/19 @ 10:40		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	102		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	98		70-130	%REC							EPA 8260B	08/13/19	AR
Sample: 008 **VP-8**									Date & Time Sampled:		08/13/19 @ 11:00		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 008 **VP-8** Date & Time Sampled: 08/13/19 @ 11:00
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 008 **VP-8** Date & Time Sampled: 08/13/19 @ 11:00
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
ELAP#'s	2789
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 008 **VP-8**									Date & Time Sampled:		08/13/19 @ 11:00		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	101		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	104		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	99		70-130	%REC							EPA 8260B	08/13/19	AR
Sample: 009 **VP-10**									Date & Time Sampled:		08/13/19 @ 11:22		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 009 **VP-10** Date & Time Sampled: 08/13/19 @ 11:22
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 009 **VP-10** Date & Time Sampled: 08/13/19 @ 11:22
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	103		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	97		70-130	%REC							EPA 8260B	08/13/19	AR

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USDA-EPA-NIOSH Testing Food Sanitation Consulting Chemical and Microbiological Analyses and Research

A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
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	2790
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 010 **VP-4** Date & Time Sampled: 08/13/19 @ 12:02
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 010 **VP-4** Date & Time Sampled: 08/13/19 @ 12:02
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

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STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 010 **VP-4** Date & Time Sampled: 08/13/19 @ 12:02
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	99		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	94		70-130	%REC							EPA 8260B	08/13/19	AR

Sample: 011 **VP-5** Date & Time Sampled: 08/13/19 @ 12:21
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 011 **VP-5** Date & Time Sampled: 08/13/19 @ 12:21
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 011 **VP-5** Date & Time Sampled: 08/13/19 @ 12:21
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 011 **VP-5**									Date & Time Sampled:		08/13/19 @ 12:21		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	103		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	97		70-130	%REC							EPA 8260B	08/13/19	AR
Sample: 012 **VP-5 DUP**									Date & Time Sampled:		08/13/19 @ 12:21		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 012 **VP-5 DUP** Date & Time Sampled: 08/13/19 @ 12:21
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Invoice No.	86521
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Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 012 **VP-5 DUP** Date & Time Sampled: 08/13/19 @ 12:21
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	106		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	105		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	97		70-130	%REC							EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 013 **VP-7** Date & Time Sampled: 08/13/19 @ 13:10
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 013 **VP-7** Date & Time Sampled: 08/13/19 @ 13:10
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 013 **VP-7** Date & Time Sampled: 08/13/19 @ 13:10
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	102		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	102		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/13/19	AR

Sample: 014 **SV-3-15'DUP** Date & Time Sampled: 08/13/19 @ 14:00
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 014 **SV-3-15'DUP** Date & Time Sampled: 08/13/19 @ 14:00
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
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FOOD · COSMETICS · WATER · SOIL · SOIL VAPOR · WASTES

CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 014 **SV-3-15'DUP** Date & Time Sampled: 08/13/19 @ 14:00
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	***0.020***	0.015	0.030	µg/L	***20***	15.0	30	µg/m3	J	0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 014 **SV-3-15'DUP**									Date & Time Sampled:		08/13/19 @ 14:00		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	103		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	105		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	98		70-130	%REC							EPA 8260B	08/13/19	AR
Sample: 015 **SV-9-5'**									Date & Time Sampled:		08/13/19 @ 14:17		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 015 **SV-9-5'** Date & Time Sampled: 08/13/19 @ 14:17
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 015 **SV-9-5'** Date & Time Sampled: 08/13/19 @ 14:17
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	101		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	99		70-130	%REC							EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 016 **VP-9** Date & Time Sampled: 08/13/19 @ 14:40
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 016 **VP-9** Date & Time Sampled: 08/13/19 @ 14:40
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 016 **VP-9** Date & Time Sampled: 08/13/19 @ 14:40
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	105		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	104		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	97		70-130	%REC							EPA 8260B	08/13/19	AR

Sample: 017 **SV-6-5'** Date & Time Sampled: 08/13/19 @ 15:15
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 017 **SV-6-5'** Date & Time Sampled: 08/13/19 @ 15:15
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 017 **SV-6-5'** Date & Time Sampled: 08/13/19 @ 15:15
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Sample: 017 **SV-6-5'**									Date & Time Sampled:		08/13/19 @ 15:15		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
.....continued													
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	102		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	98		70-130	%REC							EPA 8260B	08/13/19	AR
Sample: 018 **SV-7-5'**									Date & Time Sampled:		08/13/19 @ 15:33		
Sample Matrix: **Soil Vapor**													
Purge Volume Sampled: **3**													
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 018 **SV-7-5'** Date & Time Sampled: 08/13/19 @ 15:33
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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A & R Laboratories, Inc.

1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

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LA City#	10261
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 018 **SV-7-5'** Date & Time Sampled: 08/13/19 @ 15:33
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	99		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	105		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	95		70-130	%REC							EPA 8260B	08/13/19	AR

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1650 S. GROVE AVE., SUITE C
ONTARIO, CA 91761
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 019 **SV-8-5'** Date & Time Sampled: 08/13/19 @ 15:58
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
[VOCs by GCMS]													
Acetone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Amyl Methyl Ether (TAME)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Benzene	<0.0108	0.0108	0.015	µg/L	<10.8	10.8	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromodichloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromoform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Bromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
t-Butanol (TBA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Butanone (MEK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
sec-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
tert-Butylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Disulfide	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Carbon Tetrachloride	<0.0075	0.0075	0.015	µg/L	<7.5	7.5	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloroform	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Chloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Chlorotoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromochloromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromoethane (EDB)	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dibromo-3-Chloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dibromomethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,4-Dichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Dichlorodifluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
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SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 019 **SV-8-5'** Date & Time Sampled: 08/13/19 @ 15:58
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,2-Dichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2,2-Dichloropropane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
cis-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
trans-1,3-Dichloropropene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Diisopropyl Ether (DiPE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Ethyl-t-Butyl Ether (EtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Hexachlorobutadiene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
2-Hexanone	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Isopropylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Isopropyltoluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methylene Chloride	<0.0150	0.015	0.03	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
4-Methyl-2-Pentanone (MIBK)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
Methyl-t-butyl Ether (MtBE)	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Naphthalene	<0.0096	0.0096	0.015	µg/L	<9.6	9.6	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
n-Propylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Styrene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,1,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2,2-Tetrachloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Tetrachloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Toluene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trichlorobenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR

The data and information on this, and other accompanying documents, represent only the sample(s) analyzed and is rendered upon condition that it is not to be reproduced, wholly or in part, for advertising or other purposes without approval from the laboratory.

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ONTARIO, CA 91761
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CERTIFICATE OF ANALYSIS

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

Date Reported	08/14/19
Date Received	08/13/19
Invoice No.	86521
Cust #	1003
Permit Number	
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Sample: 019 **SV-8-5'** Date & Time Sampled: 08/13/19 @ 15:58
Sample Matrix: **Soil Vapor**
Purge Volume Sampled: **3**
.....continued

Analysis	Result	MDL	RL	Units	Result	MDL	RL	Units	Qual	DF	Method	Date	Tech
1,1,1-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,1,2-Trichloroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichloroethene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,3-Trichloropropane	<0.0060	0.006	0.030	µg/L	<6.0	6.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorofluoromethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Trichlorotrifluoroethane	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,2,4-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
1,3,5-Trimethylbenzene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
Vinyl Chloride	<0.0024	0.0024	0.015	µg/L	<2.4	2.4	15	µg/m3		0.30	EPA 8260B	08/13/19	AR
m,p-Xylenes	<0.0300	0.03	0.060	µg/L	<30.0	30.0	60	µg/m3		0.30	EPA 8260B	08/13/19	AR
o-Xylene	<0.0150	0.015	0.030	µg/L	<15.0	15.0	30	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Vapor Sampling Tracer]													
Isopropanol (IPA)	<0.1500	0.15	0.30	µg/L	<150.0	150.0	300	µg/m3		0.30	EPA 8260B	08/13/19	AR
[VOC Surrogates]													
Dibromofluoromethane	92		70-130	%REC							EPA 8260B	08/13/19	AR
Toluene-D8	103		70-130	%REC							EPA 8260B	08/13/19	AR
Bromofluorobenzene	96		70-130	%REC							EPA 8260B	08/13/19	AR

Respectfully Submitted: Ken Zheng

Ken Zheng - President

QUALIFIERS

B = Detected in the associated Method Blank at a concentration above the routine RL
B1= BOD blank is over specifications . The reported result may be biased high.
D = Surrogate recoveries are not calculated due to sample dilution
E = Estimated value
H = Analyte was prepared and/or analyzed outside of the analytical method holding time
I = Matrix Interference
J = Analyte concentration detected between RL and MDL

ABBREVIATIONS

DF = Dilution Factor
RL = Reporting Limit
MDL = Method Detection Limit
Qual = Qualifier
Tech = Technician

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As regulatory limits change frequently, Microbac advises the recipient of this report to confirm such limits with the appropriate federal, state, or local authorities before acting in reliance on the regulatory limits provided.

For any feedback concerning our services, please contact Jenny Jiang, Project Manager at 951.779.0310. You may also contact Ken Zheng, President at office@arlaboratories.com.

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QUALITY CONTROL DATA REPORT

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO
735 E. CARNEGIE DR., STE. 280
SAN BERNARDINO, CA 92408

1908-00101

Date Reported	**08/14/2019**
Date Received	**08/13/2019**
Date Sampled	**08/13/2019**
Invoice No.	**86521**
Customer #	**1003**
Customer P.O.	

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Method # EPA 8260B
QC Reference # 83809 **Date Analyzed:** 8/13/2019 **Technician:** AR
Samples 001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019

Results

	LCS %REC	LCS %DUP	LCS %RPD	BLKSRR% REC
1,1-Dichloroethene	110	97	12.4	
Benzene	116	105	9.7	
Bromofluorobenzene				97
Chlorobenzene	116	104	11.0	
Dibromofluoromethan				103
Toluene	127	113	12.2	
Toluene-D8				103
Trichloroethene	122	108	12.0	

Control Ranges

LCS %REC	LCS %RPD	BLKSRR%REC
70 - 130	0 - 25	
70 - 130	0 - 25	
		50 - 150
70 - 130	0 - 25	
		50 - 150
70 - 130	0 - 25	
		50 - 150
70 - 130	0 - 25	

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QUALITY CONTROL DATA REPORT

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO

Date Reported 08/14/2019
Date Received 08/13/2019
Date Sampled 08/13/2019

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Method blank results

Ref	Test Name	Result	Qualif	Units	MDL	Ref	Test Name	Result	Qualif	Units	MDL
83809	Acetone	<0.1500		µg/L	0.1500		Isopropylbenzene	<0.0150		µg/L	0.0150
	t-Amyl Methyl Ether (TAME)	<0.0150		µg/L	0.0150		4-Isopropyltoluene	<0.0150		µg/L	0.0150
	Benzene	<0.0108		µg/L	0.0108		Methylene Chloride	<0.0150		µg/L	0.0150
	Bromobenzene	<0.0150		µg/L	0.0150		4-Methyl-2-Pentanone (MIBK)	<0.1500		µg/L	0.1500
	Bromochloromethane	<0.0150		µg/L	0.0150		Methyl-t-butyl Ether (MtBE)	<0.0150		µg/L	0.0150
	Bromodichloromethane	<0.0150		µg/L	0.0150		Naphthalene	<0.0096		µg/L	0.0096
	Bromoform	<0.0150		µg/L	0.0150		n-Propylbenzene	<0.0150		µg/L	0.0150
	Bromomethane	<0.0150		µg/L	0.0150		Styrene	<0.0150		µg/L	0.0150
	t-Butanol (TBA)	<0.1500		µg/L	0.1500		1,1,1,2-Tetrachloroethane	<0.0150		µg/L	0.0150
	2-Butanone (MEK)	<0.1500		µg/L	0.1500		1,1,2,2-Tetrachloroethane	<0.0150		µg/L	0.0150
	n-Butylbenzene	<0.0150		µg/L	0.0150		Tetrachloroethene	<0.0150		µg/L	0.0150
	sec-Butylbenzene	<0.0150		µg/L	0.0150		Toluene	<0.0150		µg/L	0.0150
	tert-Butylbenzene	<0.0150		µg/L	0.0150		1,2,3-Trichlorobenzene	<0.0150		µg/L	0.0150
	Carbon Disulfide	<0.1500		µg/L	0.1500		1,2,4-Trichlorobenzene	<0.0150		µg/L	0.0150
	Carbon Tetrachloride	<0.0075		µg/L	0.0075		1,1,1-Trichloroethane	<0.0150		µg/L	0.0150
	Chlorobenzene	<0.0150		µg/L	0.0150		1,1,2-Trichloroethane	<0.0150		µg/L	0.0150
	Chloroethane	<0.0150		µg/L	0.0150		Trichloroethene	<0.0150		µg/L	0.0150
	Chloroform	<0.0150		µg/L	0.0150		1,2,3-Trichloropropane	<0.0060		µg/L	0.0060
	Chloromethane	<0.0150		µg/L	0.0150		Trichlorofluoromethane	<0.0150		µg/L	0.0150
	2-Chlorotoluene	<0.0150		µg/L	0.0150		Trichlorotrifluoroethane	<0.0150		µg/L	0.0150
	4-Chlorotoluene	<0.0150		µg/L	0.0150		1,2,4-Trimethylbenzene	<0.0150		µg/L	0.0150
	Dibromochloromethane	<0.0150		µg/L	0.0150		1,3,5-Trimethylbenzene	<0.0150		µg/L	0.0150
	1,2-Dibromoethane (EDB)	<0.0060		µg/L	0.0060		Vinyl Chloride	<0.0024		µg/L	0.0024
	1,2-Dibromo-3-Chloropropane	<0.0060		µg/L	0.0060		m,p-Xylenes	<0.0300		µg/L	0.0300
	Dibromomethane	<0.0150		µg/L	0.0150		o-Xylene	<0.0150		µg/L	0.0150
	1,2-Dichlorobenzene	<0.0150		µg/L	0.0150		Isopropanol (IPA)	<0.1500		µg/L	0.1500
	1,3-Dichlorobenzene	<0.0150		µg/L	0.0150						
	1,4-Dichlorobenzene	<0.0150		µg/L	0.0150						
	Dichlorodifluoromethane	<0.0150		µg/L	0.0150						
	1,1-Dichloroethane	<0.0150		µg/L	0.0150						
	1,2-Dichloroethane	<0.0150		µg/L	0.0150						
	1,1-Dichloroethene	<0.0150		µg/L	0.0150						
	cis-1,2-Dichloroethene	<0.0150		µg/L	0.0150						
	trans-1,2-Dichloroethene	<0.0150		µg/L	0.0150						
	1,2-Dichloropropane	<0.0150		µg/L	0.0150						
	1,3-Dichloropropane	<0.0150		µg/L	0.0150						
	2,2-Dichloropropane	<0.0150		µg/L	0.0150						
	1,1-Dichloropropene	<0.0150		µg/L	0.0150						
	cis-1,3-Dichloropropene	<0.0150		µg/L	0.0150						
	trans-1,3-Dichloropropene	<0.0150		µg/L	0.0150						
	Diisopropyl Ether (DiPE)	<0.0150		µg/L	0.0150						
	Ethylbenzene	<0.0150		µg/L	0.0150						
	Ethyl-t-Butyl Ether (EtBE)	<0.0150		µg/L	0.0150						
	Hexachlorobutadiene	<0.0150		µg/L	0.0150						
	2-Hexanone	<0.1500		µg/L	0.1500						

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QUALITY CONTROL DATA REPORT

1908-00101

STANTEC CONSULTING SVCS., INC.
BRIAN VIGGIANO

Date Reported	**08/14/2019**
Date Received	**08/13/2019**
Date Sampled	**08/13/2019**

Project: 2001 E. Orangethorpe Ave., Fullerton, CA 92831

Respectfully Submitted: Ken Zheng

Ken Zheng - President

For any feedback concerning our services, please contact Jenny Jiang, Project Manager at 951.779.0310. You may also contact Ken Zheng, President at office@arlaboratories.com.

A & R Laboratories
1650 S. Grove Ave., Ste C, Ontario, CA 91761
Tel: 951-779-0310 / 909-781-6335 Fax: 951-779-0344
E-mail: office@arlaboratories.com

CHAIN OF CUSTODY

A & R Work Order #: 1908-101

Client Name: Stantec
E-mail: BRIAN.VIGGIANO@STANTEC.COM 92408
Address: 735 E. CARNEGIE DR., STE. 280, SN BRDNO, CA
Report Attention: BRIAN V. | Phone #: 909.255.8204 | Fax: #
Sampled By: Alondra
Project No./ Name:
Project Site: 2001 E. Orangethorpe, Ave Fullerton, CA. 92831

☐ Chilled ☒ Intact ☐ Seal

Turn Around Time Requested: ☐ Rush 8 12 24 48 Hours ☐ Normal
Mobile

Lab # (Lab use)	Client Sample ID	Sample Collection Date	Sample Collection Time	Matrix Type	Sample Preserve	No., type* & size of container	EPA8260B (VOCs & Oxygenates)	EPA8260B(BTEX & Oxygenates)	LUFT / 8015 (Gasoline)	LUFT / 8015 (Diesel)	EPA8081A (Organochlorine Pesticides)	EPA 8082 (PCBs)	EPA 8015M (Carbon Chain C4-C40)	EPA 6010B/7000 (CAM 17 Metals)	Micro: Plate Cnt., Coliform, E-Coli	Remarks
1	SV-3-5'	08/13/19	0800	Air	NA	250mL GB	X									
2	SV-3-15'		0821													
3	SV-3-25'		0843													
4	VP-1		0914													
5	VP-2		0933													
6	VP-3		0954													
7	VP-6		1040													
8	VP-8		1100													
9	VP-10		1122													
10	VP-4		1202													
11	VP-5		1221													
12	VP-5 DUP		1221													
13	VP-7		1310													
14	SV-3-15' DUP		1400													
15	SV-9-5'		1417													

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	Stantec	8-13-19	1635	[signature]	A&R	08/13/19	1635
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.

Matrix Code: DW=Drinking Water; GW=Ground Water; WW=Waste Water; SD=Solid Waste; SL=Sludge; SS=Soil/Sediment; AR=Air; PP=Pure Product

Preservative Code: IC=Ice; HC=HCl; HN=HNO_3; SH=NaOH; ST=$Na_2S_2O_3$; HS=H_2SO_4

* Sample Container Types: T=Tedlar Air Bag; G=Glass Container; ST= Steel Tube; B= Brass Tube; P=Plastic Bottle; V=VOA Vial; E= EnCore

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Tel: 951-779-0310 / 909-781-6335 Fax: 951-779-0344
E-mail: office@arlaboratories.com

CHAIN OF CUSTODY

A & R Work Order #: 1908-101

Client Name: Stantec
E-mail: BRIAN.VIGGIANO@STANTEC.COM 92408
Address: 730 E. CARNEGIE DR., STE. 280, SN BRDNO, CA
Report Attention: BRIAN V. | Phone # 909.255.8204 | Fax: #
Sampled By: Alondra
Project No./ Name:
Project Site: 2001 E. Orangethorpe Ave Fullerton, CA.

☐ Chilled ☒ Intact ☐ Seal

Turn Around Time Requested: ☐ Rush 8 12 24 48 Hours ☐ Normal Mobile

Lab # (Lab use)	Client Sample ID	Sample Collection Date	Sample Collection Time	Matrix Type	Sample Preserve	No., type* & size of container	EPA8260B (VOCs & Oxygenates)	EPA8260B(BTEX & Oxygenates)	LUFT / 8015 (Gasoline)	LUFT / 8015 (Diesel)	EPA8081A (Organochlorine Pesticides)	EPA 8082 (PCBs)	EPA 8015M (Carbon Chain C4-C40)	EPA 6010B/7000 (CAM 17 Metals)	Micro: Plate Cnt., Coliform, E-Coli	Remarks
16	VP-9	08/13/19	1440	Air	NA	250mL GB	X									
17	SV-6-5'	↓	1515	↓	↓	↓	↓									
18	SV-7-5'		1533													
19	SV-8-5'		1558													

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	State	8-13-19	1635	[signature]	A&R	08/13/19	1635
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.

Matrix Code: DW=Drinking Water; GW=Ground Water; WW=Waste Water; SD=Solid Waste; SL=Sludge; SS=Soil/Sediment; AR=Air; PP=Pure Product

Preservative Code: IC=Ice; HC=HCl; HN=HNO_3; SH=NaOH; ST=$Na_2S_2O_3$; HS=H_2SO_4

* Sample Container Types: T=Tedlar Air Bag; G=Glass Container; ST= Steel Tube; B= Brass Tube; P=Plastic Bottle; V=VOA Vial; E= EnCore

ADVANCED TECHNOLOGY LABORATORIES

August 08, 2019

Brian Viggiano
Stantec
735 E. Carnegie Drive, Suite 280
San Bernardino, CA 92408
Tel: (909) 255-8204
Fax:(909) 335-6120

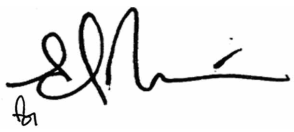
ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1902935
Client Reference : GNAP-Fullerton, 185804430

Enclosed are the results for sample(s) received on August 06, 2019 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Edgar Caballero
President & Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/08/2019

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EB-20190806	1902935-01	Water	8/06/19 7:50	8/06/19 15:30
TB-20190806	1902935-02	Water	8/06/19 0:00	8/06/19 15:30
SV-6-5	1902935-03	Soil	8/06/19 8:28	8/06/19 15:30
SV-6-10	1902935-04	Soil	8/06/19 8:35	8/06/19 15:30
SV-7-5	1902935-05	Soil	8/06/19 9:25	8/06/19 15:30
SV-7-10	1902935-06	Soil	8/06/19 9:35	8/06/19 15:30
SV-8-5	1902935-07	Soil	8/06/19 10:10	8/06/19 15:30
SV-9-5	1902935-08	Soil	8/06/19 10:45	8/06/19 15:30
HA-13-1	1902935-09	Soil	8/06/19 12:50	8/06/19 15:30
HA-13-5	1902935-10	Soil	8/06/19 12:55	8/06/19 15:30
SV-15-5	1902935-11	Soil	8/06/19 13:40	8/06/19 15:30
SV-14-5	1902935-12	Soil	8/06/19 14:05	8/06/19 15:30
HA-14-5	1902935-13	Soil	8/06/19 14:40	8/06/19 15:30
HA-14-10	1902935-14	Soil	8/06/19 15:02	8/06/19 15:30

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: EB-20190806

Lab ID: 1902935-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,1,1-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,1,2-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,1-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,1-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,1-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2,3-Trichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2-Dibromo-3-chloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2-Dibromoethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,3-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,3-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
1,4-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
2,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
2-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
4-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
4-Isopropyltoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Benzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Bromobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Bromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Bromodichloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Bromoform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Bromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Carbon disulfide	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Carbon tetrachloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Chlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Chloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Chloroform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Chloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: EB-20190806

Lab ID: 1902935-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Di-isopropyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Dibromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Dibromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Dichlorodifluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Ethyl Acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 12:23	
Ethyl Ether	ND	50	1	B9H0170	08/08/2019	08/08/19 12:23	
Ethyl tert-butyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Ethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Freon-113	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Hexachlorobutadiene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Isopropylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
m,p-Xylene	ND	10	1	B9H0170	08/08/2019	08/08/19 12:23	
Methylene chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
MTBE	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
n-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
n-Propylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Naphthalene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
o-Xylene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
sec-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Styrene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
tert-Amyl methyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
tert-Butanol	ND	100	1	B9H0170	08/08/2019	08/08/19 12:23	
tert-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Tetrachloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Toluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Trichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Trichlorofluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Vinyl acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 12:23	
Vinyl chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:23	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*59 - 158*		B9H0170	08/08/2019	*08/08/19 12:23*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*71 - 127*		B9H0170	08/08/2019	*08/08/19 12:23*	
Surrogate: Dibromofluoromethane	*105 %*	*66 - 147*		B9H0170	08/08/2019	*08/08/19 12:23*	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/08/2019

Client Sample ID: EB-20190806

Lab ID: 1902935-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Toluene-d8	*107 %*	*77 - 138*		B9H0170	08/08/2019	*08/08/19 12:23*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: TB-20190806

Lab ID: 1902935-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,1,1-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,1,2-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,1-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,1-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,1-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2,3-Trichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2-Dibromo-3-chloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2-Dibromoethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,3-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,3-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
1,4-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
2,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
2-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
4-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
4-Isopropyltoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Benzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Bromobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Bromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Bromodichloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Bromoform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Bromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Carbon disulfide	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Carbon tetrachloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Chlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Chloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Chloroform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Chloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: TB-20190806

Lab ID: 1902935-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Di-isopropyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Dibromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Dibromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Dichlorodifluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Ethyl Acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 12:47	
Ethyl Ether	ND	50	1	B9H0170	08/08/2019	08/08/19 12:47	
Ethyl tert-butyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Ethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Freon-113	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Hexachlorobutadiene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Isopropylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
m,p-Xylene	ND	10	1	B9H0170	08/08/2019	08/08/19 12:47	
Methylene chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
MTBE	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
n-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
n-Propylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Naphthalene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
o-Xylene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
sec-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Styrene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
tert-Amyl methyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
tert-Butanol	ND	100	1	B9H0170	08/08/2019	08/08/19 12:47	
tert-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Tetrachloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Toluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Trichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Trichlorofluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Vinyl acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 12:47	
Vinyl chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 12:47	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*59 - 158*		B9H0170	08/08/2019	*08/08/19 12:47*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*71 - 127*		B9H0170	08/08/2019	*08/08/19 12:47*	
Surrogate: Dibromofluoromethane	*121 %*	*66 - 147*		B9H0170	08/08/2019	*08/08/19 12:47*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: TB-20190806

Lab ID: 1902935-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Toluene-d8	*108 %*	*77 - 138*		B9H0170	08/08/2019	*08/08/19 12:47*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-6-5

Lab ID: 1902935-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Arsenic	**1.6**	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Barium	**72**	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Beryllium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Cadmium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Chromium	**18**	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Cobalt	**6.6**	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Copper	**12**	2.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Lead	**1.0**	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Molybdenum	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Nickel	**15**	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Selenium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Silver	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Thallium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Vanadium	**34**	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	
Zinc	**41**	1.0	1	B9H0145	08/07/2019	08/08/19 13:09	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0144	08/07/2019	08/07/19 15:32	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0131	08/07/2019	08/07/19 10:52	
Surrogate: 4-Bromofluorobenzene	*110 %*	*45 - 149*		B9H0131	08/07/2019	*08/07/19 10:52*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0129	08/06/2019	08/06/19 23:46	
ORO	ND	10	1	B9H0129	08/06/2019	08/06/19 23:46	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-6-5

Lab ID: 1902935-03

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*75.2 %*	*58 - 172*		B9H0129	08/06/2019	*08/06/19 23:46*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-6-5

Lab ID: 1902935-03

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 11:50	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 11:50	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 11:50	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 11:50	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-6-5

Lab ID: 1902935-03

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 11:50	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 11:50	
Surrogate: 1,2-Dichloroethane-d4	*100 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 11:50*	
Surrogate: 4-Bromofluorobenzene	*93.2 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 11:50*	
Surrogate: Dibromofluoromethane	*102 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 11:50*	
Surrogate: Toluene-d8	*94.8 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 11:50*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-6-10

Lab ID: 1902935-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-6-10

Lab ID: 1902935-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 14:59	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 14:59	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 14:59	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 14:59	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 14:59	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:59	
Surrogate: 1,2-Dichloroethane-d4	*103 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 14:59*	
Surrogate: 4-Bromofluorobenzene	*90.3 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 14:59*	
Surrogate: Dibromofluoromethane	*107 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 14:59*	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/08/2019

Client Sample ID: SV-6-10

Lab ID: 1902935-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Toluene-d8	*97.2 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 14:59*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-7-5

Lab ID: 1902935-05

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Arsenic	**1.3**	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Barium	**73**	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Beryllium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Cadmium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Chromium	**14**	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Cobalt	**6.4**	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Copper	**10**	2.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Lead	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Molybdenum	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Nickel	**13**	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Selenium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Silver	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Thallium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Vanadium	**30**	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	
Zinc	**37**	1.0	1	B9H0145	08/07/2019	08/08/19 13:10	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0144	08/07/2019	08/07/19 15:34	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0131	08/07/2019	08/07/19 11:10	
Surrogate: 4-Bromofluorobenzene	*108 %*	*45 - 149*		B9H0131	08/07/2019	*08/07/19 11:10*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0129	08/06/2019	08/07/19 00:03	
ORO	ND	10	1	B9H0129	08/06/2019	08/07/19 00:03	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-7-5

Lab ID: 1902935-05

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*72.6 %*	*58 - 172*		B9H0129	08/06/2019	*08/07/19 00:03*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-7-5

Lab ID: 1902935-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 12:27	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 12:27	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 12:27	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 12:27	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-7-5

Lab ID: 1902935-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 12:27	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 12:27	
Surrogate: 1,2-Dichloroethane-d4	*95.1 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 12:27*	
Surrogate: 4-Bromofluorobenzene	*91.4 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 12:27*	
Surrogate: Dibromofluoromethane	*102 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 12:27*	
Surrogate: Toluene-d8	*95.2 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 12:27*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-7-10

Lab ID: 1902935-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-7-10

Lab ID: 1902935-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 15:17	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 15:17	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 15:17	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 15:17	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 15:17	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:17	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 15:17*	
Surrogate: 4-Bromofluorobenzene	*89.2 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 15:17*	
Surrogate: Dibromofluoromethane	*103 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 15:17*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-7-10

Lab ID: 1902935-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Toluene-d8	*93.4 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 15:17*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-8-5

Lab ID: 1902935-07

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Arsenic	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Barium	**64**	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Beryllium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Cadmium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Chromium	**11**	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Cobalt	**5.3**	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Copper	**8.0**	2.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Lead	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Molybdenum	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Nickel	**11**	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Selenium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Silver	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Thallium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Vanadium	**25**	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	
Zinc	**30**	1.0	1	B9H0145	08/07/2019	08/08/19 13:11	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0144	08/07/2019	08/07/19 15:36	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0131	08/07/2019	08/07/19 11:29	
Surrogate: 4-Bromofluorobenzene	*111 %*	*45 - 149*		B9H0131	08/07/2019	*08/07/19 11:29*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0129	08/06/2019	08/07/19 00:20	
ORO	ND	10	1	B9H0129	08/06/2019	08/07/19 00:20	

Certificate of Analysis

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735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-8-5

Lab ID: 1902935-07

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*75.4 %*	*58 - 172*		B9H0129	08/06/2019	*08/07/19 00:20*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-8-5

Lab ID: 1902935-07

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 15:37	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 15:37	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 15:37	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 15:37	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-8-5

Lab ID: 1902935-07

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 15:37	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 15:37	
Surrogate: 1,2-Dichloroethane-d4	*91.7 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 15:37*	
Surrogate: 4-Bromofluorobenzene	*88.6 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 15:37*	
Surrogate: Dibromofluoromethane	*98.2 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 15:37*	
Surrogate: Toluene-d8	*92.4 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 15:37*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-9-5

Lab ID: 1902935-08

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Arsenic	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Barium	**45**	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Beryllium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Cadmium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Chromium	**9.8**	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Cobalt	**5.4**	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Copper	**6.4**	2.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Lead	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Molybdenum	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Nickel	**7.4**	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Selenium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Silver	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Thallium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Vanadium	**21**	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	
Zinc	**31**	1.0	1	B9H0145	08/07/2019	08/08/19 13:12	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0144	08/07/2019	08/07/19 15:38	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0131	08/07/2019	08/07/19 11:48	
Surrogate: 4-Bromofluorobenzene	*109 %*	*45 - 149*		B9H0131	08/07/2019	*08/07/19 11:48*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**13**	10	1	B9H0129	08/06/2019	08/07/19 00:37	
ORO	ND	10	1	B9H0129	08/06/2019	08/07/19 00:37	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-9-5

Lab ID: 1902935-08

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*74.2 %*	*58 - 172*		B9H0129	08/06/2019	*08/07/19 00:37*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-9-5

Lab ID: 1902935-08

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 13:24	E3
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-9-5

Lab ID: 1902935-08

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 13:24	E3
Surrogate: 1,2-Dichloroethane-d4	*121 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 13:24*	E3
Surrogate: 4-Bromofluorobenzene	*78.5 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 13:24*	E3
Surrogate: Dibromofluoromethane	*121 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 13:24*	E3
Surrogate: Toluene-d8	*85.0 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 13:24*	E3

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: HA-13-1

Lab ID: 1902935-09

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Arsenic	**1.7**	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Barium	**49**	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Beryllium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Cadmium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Chromium	**10**	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Cobalt	**4.8**	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Copper	**7.3**	2.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Lead	**2.7**	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Molybdenum	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Nickel	**8.5**	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Selenium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Silver	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Thallium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Vanadium	**23**	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	
Zinc	**31**	1.0	1	B9H0145	08/07/2019	08/08/19 13:13	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0144	08/07/2019	08/07/19 15:40	

pH by EPA 9045C

Analyst: DT

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**7.8**	0.10	1	B9H0140	08/07/2019	08/07/19 14:10	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: HA-13-5

Lab ID: 1902935-10

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Arsenic	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Barium	**62**	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Beryllium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Cadmium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Chromium	**12**	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Cobalt	**6.1**	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Copper	**8.3**	2.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Lead	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Molybdenum	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Nickel	**10**	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Selenium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Silver	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Thallium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Vanadium	**26**	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	
Zinc	**35**	1.0	1	B9H0145	08/07/2019	08/08/19 13:15	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0144	08/07/2019	08/07/19 15:42	

pH by EPA 9045C — **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**7.5**	0.10	1	B9H0140	08/07/2019	08/07/19 14:10	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID: SV-15-5

Lab ID: 1902935-11

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Arsenic	**1.8**	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Barium	**40**	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Beryllium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Cadmium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Chromium	**21**	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Cobalt	**9.4**	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Copper	**14**	2.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Lead	**5.6**	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Molybdenum	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Nickel	**14**	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Selenium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Silver	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Thallium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Vanadium	**43**	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	
Zinc	**26**	1.0	1	B9H0145	08/07/2019	08/08/19 13:16	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0144	08/07/2019	08/07/19 15:45	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0131	08/07/2019	08/07/19 12:07	
Surrogate: 4-Bromofluorobenzene	*104 %*	*45 - 149*		B9H0131	08/07/2019	*08/07/19 12:07*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0129	08/06/2019	08/07/19 00:54	
ORO	ND	10	1	B9H0129	08/06/2019	08/07/19 00:54	

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Lab ID: 1902935-11

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*76.6 %*	*58 - 172*		B9H0129	08/06/2019	*08/07/19 00:54*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	

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Client Sample ID: SV-15-5

Lab ID: 1902935-11

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 16:34	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 16:34	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 16:34	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 16:34	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-15-5

Lab ID: 1902935-11

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 16:34	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:34	
Surrogate: 1,2-Dichloroethane-d4	*97.5 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 16:34*	
Surrogate: 4-Bromofluorobenzene	*90.4 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 16:34*	
Surrogate: Dibromofluoromethane	*102 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 16:34*	
Surrogate: Toluene-d8	*92.9 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 16:34*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-14-5

Lab ID: 1902935-12

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Arsenic	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Barium	**34**	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Beryllium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Cadmium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Chromium	**7.8**	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Cobalt	**4.0**	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Copper	**4.8**	2.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Lead	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Molybdenum	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Nickel	**5.7**	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Selenium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Silver	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Thallium	ND	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Vanadium	**17**	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	
Zinc	**24**	1.0	1	B9H0145	08/07/2019	08/08/19 13:17	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0144	08/07/2019	08/07/19 15:51	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0131	08/07/2019	08/07/19 12:25	
Surrogate: 4-Bromofluorobenzene	*110 %*	*45 - 149*		B9H0131	08/07/2019	*08/07/19 12:25*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0129	08/06/2019	08/07/19 01:11	
ORO	ND	10	1	B9H0129	08/06/2019	08/07/19 01:11	

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Lab ID: 1902935-12

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*75.8 %*	*58 - 172*		B9H0129	08/06/2019	*08/07/19 01:11*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	

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Lab ID: 1902935-12

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 14:02	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 14:02	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 14:02	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 14:02	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	

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San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: SV-14-5

Lab ID: 1902935-12

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 14:02	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 14:02	
Surrogate: 1,2-Dichloroethane-d4	*100 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 14:02*	
Surrogate: 4-Bromofluorobenzene	*93.5 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 14:02*	
Surrogate: Dibromofluoromethane	*106 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 14:02*	
Surrogate: Toluene-d8	*94.7 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 14:02*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: HA-14-5

Lab ID: 1902935-13

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0131	08/07/2019	08/07/19 12:44	
Surrogate: 4-Bromofluorobenzene	*105 %*		*45 - 149*		B9H0131	08/07/2019	*08/07/19 12:44*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0129	08/06/2019	08/07/19 01:29	
ORO		ND	10	1	B9H0129	08/06/2019	08/07/19 01:29	
Surrogate: p-Terphenyl	*75.2 %*		*58 - 172*		B9H0129	08/06/2019	*08/07/19 01:29*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Aroclor 1221		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Aroclor 1232		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Aroclor 1242		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Aroclor 1248		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Aroclor 1254		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Aroclor 1260		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Aroclor 1262		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Aroclor 1268		ND	16	1	B9H0125	08/06/2019	08/07/19 09:38	
Surrogate: Decachlorobiphenyl	*115 %*		*40 - 121*		B9H0125	08/06/2019	*08/07/19 09:38*	
Surrogate: Tetrachloro-m-xylene	*91.6 %*		*55 - 105*		B9H0125	08/06/2019	*08/07/19 09:38*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	

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San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: HA-14-5

Lab ID: 1902935-13

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	

Certificate of Analysis

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Client Sample ID: HA-14-5

Lab ID: 1902935-13

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 16:53	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 16:53	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 16:53	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 16:53	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 16:53	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 16:53	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 16:53*	
Surrogate: 4-Bromofluorobenzene	*94.2 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 16:53*	
Surrogate: Dibromofluoromethane	*105 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 16:53*	
Surrogate: Toluene-d8	*96.3 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 16:53*	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
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Client Sample ID: HA-14-5

Lab ID: 1902935-13

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**8.0**	0.10	1	B9H0140	08/07/2019	08/07/19 14:10	

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San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: HA-14-10

Lab ID: 1902935-14

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0131	08/07/2019	08/07/19 13:03	
Surrogate: 4-Bromofluorobenzene	*103 %*		*45 - 149*		B9H0131	08/07/2019	*08/07/19 13:03*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0129	08/06/2019	08/07/19 01:46	
ORO		ND	10	1	B9H0129	08/06/2019	08/07/19 01:46	
Surrogate: p-Terphenyl	*76.6 %*		*58 - 172*		B9H0129	08/06/2019	*08/07/19 01:46*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Aroclor 1221		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Aroclor 1232		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Aroclor 1242		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Aroclor 1248		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Aroclor 1254		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Aroclor 1260		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Aroclor 1262		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Aroclor 1268		ND	16	1	B9H0125	08/06/2019	08/07/19 09:57	
Surrogate: Decachlorobiphenyl	*73.9 %*		*40 - 121*		B9H0125	08/06/2019	*08/07/19 09:57*	
Surrogate: Tetrachloro-m-xylene	*55.2 %*		*55 - 105*		B9H0125	08/06/2019	*08/07/19 09:57*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: HA-14-10

Lab ID: 1902935-14

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Client Sample ID: HA-14-10

Lab ID: 1902935-14

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 17:11	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 17:11	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 17:11	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 17:11	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 17:11	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 17:11	
Surrogate: 1,2-Dichloroethane-d4	*96.6 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 17:11*	
Surrogate: 4-Bromofluorobenzene	*92.5 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 17:11*	
Surrogate: Dibromofluoromethane	*101 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 17:11*	
Surrogate: Toluene-d8	*94.3 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 17:11*	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/08/2019

Client Sample ID: HA-14-10

Lab ID: 1902935-14

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**8.0**	0.10	1	B9H0140	08/07/2019	08/07/19 14:10	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0145 - EPA 3050B_S										
Blank (B9H0145-BLK1)					Prepared: 8/7/2019 Analyzed: 8/8/2019					
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B9H0145-BS1)					Prepared: 8/7/2019 Analyzed: 8/8/2019					
Antimony	45.8548	2.0	0.51	50.0000		91.7	80 - 120			
Arsenic	44.4321	1.0	0.12	50.0000		88.9	80 - 120			
Barium	46.9749	1.0	0.12	50.0000		93.9	80 - 120			
Beryllium	46.4111	1.0	0.03	50.0000		92.8	80 - 120			
Cadmium	44.7185	1.0	0.14	50.0000		89.4	80 - 120			
Chromium	47.7365	1.0	0.26	50.0000		95.5	80 - 120			
Cobalt	47.0960	1.0	0.07	50.0000		94.2	80 - 120			
Copper	48.8987	2.0	0.19	50.0000		97.8	80 - 120			
Lead	45.4736	1.0	0.18	50.0000		90.9	80 - 120			
Molybdenum	46.3694	1.0	0.12	50.0000		92.7	80 - 120			
Nickel	46.5315	1.0	0.18	50.0000		93.1	80 - 120			
Selenium	43.5394	1.0	0.40	50.0000		87.1	80 - 120			
Silver	42.5170	1.0	0.12	50.0000		85.0	80 - 120			
Thallium	46.6823	1.0	0.38	50.0000		93.4	80 - 120			
Vanadium	48.0774	1.0	0.06	50.0000		96.2	80 - 120			
Zinc	43.3446	1.0	0.15	50.0000		86.7	80 - 120			
Duplicate (B9H0145-DUP1)				**Source: 1902919-05**	Prepared: 8/7/2019 Analyzed: 8/8/2019					
Antimony	ND	2.0	0.51		ND			NR	20	
Arsenic	0.584306	1.0	0.12		0.477939			20.0	20	

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San Bernardino , CA 92408	Reported : 08/08/2019

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0145 - EPA 3050B_S (continued)										
Duplicate (B9H0145-DUP1) - Continued			**Source: 1902919-05**		Prepared: 8/7/2019 Analyzed: 8/8/2019					
Barium	77.9598	1.0	0.12		62.3302			22.3	20	R
Beryllium	ND	1.0	0.03		ND			NR	20	
Cadmium	ND	1.0	0.14		ND			NR	20	
Chromium	11.1082	1.0	0.26		7.81402			34.8	20	R
Cobalt	6.74678	1.0	0.07		5.96466			12.3	20	
Copper	11.0940	2.0	0.19		9.60062			14.4	20	
Lead	13.0728	1.0	0.18		12.0404			8.22	20	
Molybdenum	ND	1.0	0.12		ND			NR	20	
Nickel	6.44682	1.0	0.18		5.12600			22.8	20	R
Selenium	ND	1.0	0.40		ND			NR	20	
Silver	ND	1.0	0.12		ND			NR	20	
Thallium	ND	1.0	0.38		ND			NR	20	
Vanadium	33.4381	1.0	0.06		28.4060			16.3	20	
Zinc	52.1980	1.0	0.15		42.9817			19.4	20	
Duplicate (B9H0145-DUP2)			**Source: 1902920-05**		Prepared: 8/7/2019 Analyzed: 8/8/2019					
Antimony	ND	2.0	0.51		ND			NR	20	
Arsenic	3.03752	1.0	0.12		3.16152			4.00	20	
Barium	121.756	1.0	0.12		116.213			4.66	20	
Beryllium	ND	1.0	0.03		ND			NR	20	
Cadmium	0.210478	1.0	0.14		0.274541			26.4	20	R
Chromium	21.4566	1.0	0.26		21.4714			0.0689	20	
Cobalt	9.56092	1.0	0.07		9.92976			3.78	20	
Copper	16.9248	2.0	0.19		17.7187			4.58	20	
Lead	131.835	1.0	0.18		27.9397			130	20	R
Molybdenum	ND	1.0	0.12		ND			NR	20	
Nickel	12.9563	1.0	0.18		13.2119			1.95	20	
Selenium	ND	1.0	0.40		ND			NR	20	
Silver	ND	1.0	0.12		ND			NR	20	
Thallium	ND	1.0	0.38		ND			NR	20	
Vanadium	43.7104	1.0	0.06		44.7085			2.26	20	
Zinc	63.3005	1.0	0.15		68.4125			7.76	20	
Duplicate (B9H0145-DUP3)			**Source: 1902921-05**		Prepared: 8/7/2019 Analyzed: 8/8/2019					
Antimony	ND	2.0	0.51		ND			NR	20	
Arsenic	2.10100	1.0	0.12		2.49252			17.0	20	
Barium	279.800	1.0	0.12		290.314			3.69	20	
Beryllium	ND	1.0	0.03		ND			NR	20	
Cadmium	0.976638	1.0	0.14		0.988855			1.24	20	
Chromium	25.3626	1.0	0.26		25.6525			1.14	20	
Cobalt	10.2267	1.0	0.07		11.9914			15.9	20	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0145 - EPA 3050B_S (continued)										
Duplicate (B9H0145-DUP3) - Continued			**Source: 1902921-05**		Prepared: 8/7/2019 Analyzed: 8/8/2019					
Copper	17.5436	2.0	0.19		18.3450			4.47	20	
Lead	6.31370	1.0	0.18		5.52920			13.2	20	
Molybdenum	ND	1.0	0.12		ND			NR	20	
Nickel	23.1665	1.0	0.18		21.7157			6.47	20	
Selenium	ND	1.0	0.40		ND			NR	20	
Silver	ND	1.0	0.12		ND			NR	20	
Thallium	ND	1.0	0.38		ND			NR	20	
Vanadium	55.8798	1.0	0.06		57.8227			3.42	20	
Zinc	47.0336	1.0	0.15		43.6706			7.42	20	
Matrix Spike (B9H0145-MS1)			**Source: 1902919-05**		Prepared: 8/7/2019 Analyzed: 8/8/2019					
Antimony	73.4524	2.0	0.51	250.000	ND	29.4	21 - 95			
Arsenic	89.2418	1.0	0.12	125.000	0.477939	71.0	46 - 97			
Barium	167.591	1.0	0.12	125.000	62.3302	84.2	24 - 123			
Beryllium	90.2106	1.0	0.03	125.000	ND	72.2	47 - 99			
Cadmium	85.7167	1.0	0.14	125.000	ND	68.6	43 - 95			
Chromium	103.941	1.0	0.26	125.000	7.81402	76.9	39 - 109			
Cobalt	94.4710	1.0	0.07	125.000	5.96466	70.8	45 - 101			
Copper	116.498	2.0	0.19	125.000	9.60062	85.5	44 - 118			
Lead	97.5926	1.0	0.18	125.000	12.0404	68.4	33 - 121			
Molybdenum	89.3754	1.0	0.12	125.000	ND	71.5	45 - 101			
Nickel	94.4702	1.0	0.18	125.000	5.12600	71.5	37 - 104			
Selenium	85.9682	1.0	0.40	125.000	ND	68.8	43 - 96			
Silver	92.1022	1.0	0.12	125.000	ND	73.7	49 - 104			
Thallium	71.7628	1.0	0.38	125.000	ND	57.4	23 - 103			
Vanadium	131.364	1.0	0.06	125.000	28.4060	82.4	42 - 109			
Zinc	131.457	1.0	0.15	125.000	42.9817	70.8	22 - 114			
Matrix Spike (B9H0145-MS2)			**Source: 1902920-05**		Prepared: 8/7/2019 Analyzed: 8/8/2019					
Antimony	61.0140	2.0	0.51	250.000	ND	24.4	21 - 95			
Arsenic	83.7596	1.0	0.12	125.000	3.16152	64.5	46 - 97			
Barium	199.510	1.0	0.12	125.000	116.213	66.6	24 - 123			
Beryllium	83.5734	1.0	0.03	125.000	ND	66.9	47 - 99			
Cadmium	77.4866	1.0	0.14	125.000	0.274541	61.8	43 - 95			
Chromium	106.248	1.0	0.26	125.000	21.4714	67.8	39 - 109			
Cobalt	90.5436	1.0	0.07	125.000	9.92976	64.5	45 - 101			
Copper	112.619	2.0	0.19	125.000	17.7187	75.9	44 - 118			
Lead	101.451	1.0	0.18	125.000	27.9397	58.8	33 - 121			
Molybdenum	78.6546	1.0	0.12	125.000	ND	62.9	45 - 101			
Nickel	92.5596	1.0	0.18	125.000	13.2119	63.5	37 - 104			
Selenium	78.5578	1.0	0.40	125.000	ND	62.8	43 - 96			

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/08/2019

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0145 - EPA 3050B_S (continued)										
Matrix Spike (B9H0145-MS2) - Continued			**Source: 1902920-05**			Prepared: 8/7/2019 Analyzed: 8/8/2019				
Silver	82.8356	1.0	0.12	125.000	ND	66.3	49 - 104			
Thallium	62.5036	1.0	0.38	125.000	ND	50.0	23 - 103			
Vanadium	128.360	1.0	0.06	125.000	44.7085	66.9	42 - 109			
Zinc	141.227	1.0	0.15	125.000	68.4125	58.3	22 - 114			
Matrix Spike (B9H0145-MS3)			**Source: 1902921-05**			Prepared: 8/7/2019 Analyzed: 8/8/2019				
Antimony	54.4374	2.0	0.51	250.000	ND	21.8	21 - 95			
Arsenic	78.2422	1.0	0.12	125.000	2.49252	60.6	46 - 97			
Barium	360.512	1.0	0.12	125.000	290.314	56.2	24 - 123			
Beryllium	77.5660	1.0	0.03	125.000	ND	62.1	47 - 99			
Cadmium	72.3646	1.0	0.14	125.000	0.988855	57.1	43 - 95			
Chromium	106.621	1.0	0.26	125.000	25.6525	64.8	39 - 109			
Cobalt	85.4352	1.0	0.07	125.000	11.9914	58.8	45 - 101			
Copper	106.348	2.0	0.19	125.000	18.3450	70.4	44 - 118			
Lead	78.2823	1.0	0.18	125.000	5.52920	58.2	33 - 121			
Molybdenum	75.2073	1.0	0.12	125.000	ND	60.2	45 - 101			
Nickel	95.4839	1.0	0.18	125.000	21.7157	59.0	37 - 104			
Selenium	74.3770	1.0	0.40	125.000	ND	59.5	43 - 96			
Silver	77.0266	1.0	0.12	125.000	ND	61.6	49 - 104			
Thallium	58.7761	1.0	0.38	125.000	ND	47.0	23 - 103			
Vanadium	142.230	1.0	0.06	125.000	57.8227	67.5	42 - 109			
Zinc	114.616	1.0	0.15	125.000	43.6706	56.8	22 - 114			
Matrix Spike Dup (B9H0145-MSD1)			**Source: 1902919-05**			Prepared: 8/7/2019 Analyzed: 8/8/2019				
Antimony	69.4374	2.0	0.51	250.000	ND	27.8	21 - 95	5.62	20	
Arsenic	86.4114	1.0	0.12	125.000	0.477939	68.7	46 - 97	3.22	20	
Barium	164.269	1.0	0.12	125.000	62.3302	81.6	24 - 123	2.00	20	
Beryllium	86.7950	1.0	0.03	125.000	ND	69.4	47 - 99	3.86	20	
Cadmium	80.3799	1.0	0.14	125.000	ND	64.3	43 - 95	6.43	20	
Chromium	98.6525	1.0	0.26	125.000	7.81402	72.7	39 - 109	5.22	20	
Cobalt	90.9590	1.0	0.07	125.000	5.96466	68.0	45 - 101	3.79	20	
Copper	112.775	2.0	0.19	125.000	9.60062	82.5	44 - 118	3.25	20	
Lead	93.4909	1.0	0.18	125.000	12.0404	65.2	33 - 121	4.29	20	
Molybdenum	85.8614	1.0	0.12	125.000	ND	68.7	45 - 101	4.01	20	
Nickel	89.5548	1.0	0.18	125.000	5.12600	67.5	37 - 104	5.34	20	
Selenium	82.0629	1.0	0.40	125.000	ND	65.7	43 - 96	4.65	20	
Silver	87.0510	1.0	0.12	125.000	ND	69.6	49 - 104	5.64	20	
Thallium	66.3952	1.0	0.38	125.000	ND	53.1	23 - 103	7.77	20	
Vanadium	126.132	1.0	0.06	125.000	28.4060	78.2	42 - 109	4.06	20	
Zinc	128.651	1.0	0.15	125.000	42.9817	68.5	22 - 114	2.16	20	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0144 - EPA 7471_S										
Blank (B9H0144-BLK1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	ND	0.10	0.007							
LCS (B9H0144-BS1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	0.434578	0.10	0.007	0.416667		104	80 - 120			
Duplicate (B9H0144-DUP1)			**Source: 1902919-05**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	0.041367	0.10	0.007		0.040769			1.46	20	
Duplicate (B9H0144-DUP2)			**Source: 1902920-05**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	0.098560	0.10	0.007		0.102862			4.27	20	
Duplicate (B9H0144-DUP3)			**Source: 1902921-05**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	0.018757	0.10	0.007		0.014147			28.0	20	R2
Matrix Spike (B9H0144-MS1)			**Source: 1902919-05**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	0.490360	0.10	0.007	0.416667	0.040769	108	70 - 130			
Matrix Spike (B9H0144-MS2)			**Source: 1902920-05**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	0.565739	0.10	0.007	0.416667	0.102862	111	70 - 130			
Matrix Spike (B9H0144-MS3)			**Source: 1902921-05**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	0.402750	0.10	0.007	0.409836	0.014147	94.8	70 - 130			
Matrix Spike Dup (B9H0144-MSD1)			**Source: 1902919-05**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Mercury	0.481309	0.10	0.007	0.416667	0.040769	106	70 - 130	1.86	20	

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/08/2019

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0144 - EPA 7471_S									
Post Spike (B9H0144-PS1)			**Source: 1902919-05**		Prepared: 8/7/2019 Analyzed: 8/7/2019				
Mercury	0.002670		2.00000E-3	4.892E-4	109	85 - 115			

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San Bernardino , CA 92408	Reported : 08/08/2019

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0131 - GCVOA_S										
Blank (B9H0131-BLK1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Gasoline Range Organics	ND	1.0	0.20							
Surrogate: 4-Bromofluorobenzene	*0.2064*			*0.200000*		*103*	*45 - 149*			
LCS (B9H0131-BS1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Gasoline Range Organics	4.12900	1.0	0.20	5.00000		82.6	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.2235*			*0.200000*		*112*	*45 - 149*			
LCS Dup (B9H0131-BSD1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Gasoline Range Organics	4.55700	1.0	0.20	5.00000		91.1	70 - 130	9.85	20	
Surrogate: 4-Bromofluorobenzene	*0.2274*			*0.200000*		*114*	*45 - 149*			
Duplicate (B9H0131-DUP1)			**Source: 1902929-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Gasoline Range Organics	ND	1.0	0.20		ND			NR	20	
Surrogate: 4-Bromofluorobenzene	*0.2007*			*0.200000*		*100*	*45 - 149*			
Matrix Spike (B9H0131-MS1)			**Source: 1902929-02**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Gasoline Range Organics	4.12700	1.0	0.20	5.00000	ND	82.5	24 - 129			
Surrogate: 4-Bromofluorobenzene	*0.2342*			*0.200000*		*117*	*45 - 149*			
Matrix Spike Dup (B9H0131-MSD1)			**Source: 1902929-02**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Gasoline Range Organics	4.09700	1.0	0.20	5.00000	ND	81.9	24 - 129	0.730	20	
Surrogate: 4-Bromofluorobenzene	*0.2369*			*0.200000*		*118*	*45 - 149*			

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Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0129 - GCSEMI_DRO_S										
Blank (B9H0129-BLK1)						Prepared: 8/6/2019 Analyzed: 8/6/2019				
DRO	ND	10	10							
ORO	ND	10	10							
Surrogate: p-Terphenyl	*96.99*			*80.0000*		*121*	*58 - 172*			
LCS (B9H0129-BS1)						Prepared: 8/6/2019 Analyzed: 8/6/2019				
DRO	1340.64	10	10	1000.00		134	71 - 165			
Surrogate: p-Terphenyl	*95.11*			*80.0000*		*119*	*58 - 172*			
Matrix Spike (B9H0129-MS1)			**Source: 1902911-02**			Prepared: 8/6/2019 Analyzed: 8/6/2019				
DRO	1156.63	10	10	1000.00	ND	116	61 - 171			
Surrogate: p-Terphenyl	*73.26*			*80.0000*		*91.6*	*58 - 172*			
Matrix Spike Dup (B9H0129-MSD1)			**Source: 1902911-02**			Prepared: 8/6/2019 Analyzed: 8/6/2019				
DRO	1182.90	10	10	1000.00	ND	118	61 - 171	2.25	20	
Surrogate: p-Terphenyl	*84.10*			*80.0000*		*105*	*58 - 172*			

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Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0125 - GCSEMI_PCB/PEST_S										
Blank (B9H0125-BLK2)					Prepared: 8/6/2019 Analyzed: 8/6/2019					
Aroclor 1016	ND	16	4.6							
Aroclor 1221	ND	16	4.6							
Aroclor 1232	ND	16	4.6							
Aroclor 1242	ND	16	4.6							
Aroclor 1248	ND	16	4.6							
Aroclor 1254	ND	16	4.6							
Aroclor 1260	ND	16	4.6							
Aroclor 1262	ND	16	4.6							
Aroclor 1268	ND	16	4.6							
Surrogate: Decachlorobiphenyl	*15.81*			*16.6667*		*94.9*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*13.82*			*16.6667*		*82.9*	*55 - 105*			
LCS (B9H0125-BS2)					Prepared: 8/6/2019 Analyzed: 8/6/2019					
Aroclor 1016	118.484	16	4.6	166.667		71.1	51 - 100			
Aroclor 1260	139.387	16	4.6	166.667		83.6	48 - 116			
Surrogate: Decachlorobiphenyl	*16.94*			*16.6667*		*102*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*15.49*			*16.6667*		*92.9*	*55 - 105*			
Duplicate (B9H0125-DUP2)			**Source: 1902921-05**		Prepared: 8/6/2019 Analyzed: 8/6/2019					
Aroclor 1016	ND	16	4.6		ND				20	
Aroclor 1260	ND	16	4.6		ND				20	
Surrogate: Decachlorobiphenyl	*12.41*			*16.6667*		*74.5*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*11.29*			*16.6667*		*67.8*	*55 - 105*			
Matrix Spike (B9H0125-MS2)			**Source: 1902920-05**		Prepared: 8/6/2019 Analyzed: 8/6/2019					
Aroclor 1016	100.849	16	4.6	166.667	ND	60.5	36 - 109			
Aroclor 1260	117.422	16	4.6	166.667	ND	70.5	30 - 109			
Surrogate: Decachlorobiphenyl	*11.83*			*16.6667*		*71.0*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*10.89*			*16.6667*		*65.4*	*55 - 105*			
Matrix Spike Dup (B9H0125-MSD2)			**Source: 1902920-05**		Prepared: 8/6/2019 Analyzed: 8/6/2019					
Aroclor 1016	98.1477	16	4.6	166.667	ND	58.9	36 - 109	2.71	20	
Aroclor 1260	116.244	16	4.6	166.667	ND	69.7	30 - 109	1.01	20	
Surrogate: Decachlorobiphenyl	*11.76*			*16.6667*		*70.6*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*10.82*			*16.6667*		*64.9*	*55 - 105*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S										
Blank (B9H0142-BLK1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.96							
1,1,1-Trichloroethane	ND	5.0	1.1							
1,1,2,2-Tetrachloroethane	ND	5.0	0.62							
1,1,2-Trichloroethane	ND	5.0	1.6							
1,1-Dichloroethane	ND	5.0	0.81							
1,1-Dichloroethene	ND	5.0	2.6							
1,1-Dichloropropene	ND	5.0	2.3							
1,2,3-Trichloropropane	ND	5.0	0.54							
1,2,3-Trichlorobenzene	ND	5.0	1.2							
1,2,4-Trichlorobenzene	ND	5.0	1.1							
1,2,4-Trimethylbenzene	ND	5.0	1.5							
1,2-Dibromo-3-chloropropane	ND	10	1.6							
1,2-Dibromoethane	ND	5.0	3.2							
1,2-Dichlorobenzene	ND	5.0	1.1							
1,2-Dichloroethane	ND	5.0	1.2							
1,2-Dichloropropane	ND	5.0	1.8							
1,3,5-Trimethylbenzene	ND	5.0	1.7							
1,3-Dichlorobenzene	ND	5.0	1.3							
1,3-Dichloropropane	ND	5.0	1.1							
1,4-Dichlorobenzene	ND	5.0	1.2							
2,2-Dichloropropane	ND	5.0	1.2							
2-Chlorotoluene	ND	5.0	1.6							
4-Chlorotoluene	ND	5.0	1.5							
4-Isopropyltoluene	ND	5.0	2.3							
Benzene	ND	5.0	0.64							
Bromobenzene	ND	5.0	1.1							
Bromochloromethane	ND	5.0	0.64							
Bromodichloromethane	ND	5.0	1.2							
Bromoform	ND	5.0	0.80							
Bromomethane	ND	5.0	2.5							
Carbon disulfide	ND	5.0	3.5							
Carbon tetrachloride	ND	5.0	1.2							
Chlorobenzene	ND	5.0	1.0							
Chloroethane	ND	5.0	1.1							
Chloroform	ND	5.0	0.82							
Chloromethane	ND	5.0	1.4							
cis-1,2-Dichloroethene	ND	5.0	0.67							
cis-1,3-Dichloropropene	ND	5.0	1.9							
Di-isopropyl ether	ND	5.0	0.55							
Dibromochloromethane	ND	5.0	1.0							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Blank (B9H0142-BLK1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Dibromomethane	ND	5.0	1.6							
Dichlorodifluoromethane	ND	5.0	2.2							
Ethyl Acetate	ND	50	8.1							
Ethyl Ether	ND	50	6.1							
Ethyl tert-butyl ether	ND	5.0	0.67							
Ethylbenzene	ND	5.0	0.91							
Freon-113	ND	5.0	2.8							
Hexachlorobutadiene	ND	5.0	2.5							
Isopropylbenzene	ND	5.0	1.8							
m,p-Xylene	ND	10	1.5							
Methylene chloride	ND	5.0	2.3							
MTBE	ND	5.0	0.63							
n-Butylbenzene	ND	5.0	2.4							
n-Propylbenzene	ND	5.0	2.2							
Naphthalene	ND	5.0	0.97							
o-Xylene	ND	5.0	0.87							
sec-Butylbenzene	ND	5.0	2.3							
Styrene	ND	5.0	1.5							
tert-Amyl methyl ether	ND	5.0	0.59							
tert-Butanol	ND	100	19							
tert-Butylbenzene	ND	5.0	2.0							
Tetrachloroethene	ND	5.0	1.6							
Toluene	ND	5.0	0.94							
trans-1,2-Dichloroethene	ND	5.0	0.59							
trans-1,3-Dichloropropene	ND	5.0	2.1							
Trichloroethene	ND	5.0	3.1							
Trichlorofluoromethane	ND	5.0	1.4							
Vinyl acetate	ND	50	9.8							
Vinyl chloride	ND	5.0	1.7							
Surrogate: 1,2-Dichloroethane-d4	*43.73*			*50.0000*		*87.5*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*46.42*			*50.0000*		*92.8*	*68 - 121*			
Surrogate: Dibromofluoromethan	*47.75*			*50.0000*		*95.5*	*65 - 137*			
Surrogate: Toluene-d8	*47.89*			*50.0000*		*95.8*	*82 - 119*			
LCS (B9H0142-BS1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	52.5300	5.0	0.96	50.0000		105	82 - 114			
1,1,1-Trichloroethane	48.9100	5.0	1.1	50.0000		97.8	70 - 121			
1,1,2,2-Tetrachloroethane	49.1500	5.0	0.62	50.0000		98.3	65 - 116			
1,1,2-Trichloroethane	47.0300	5.0	1.6	50.0000		94.1	73 - 114			
1,1-Dichloroethane	44.0200	5.0	0.81	50.0000		88.0	69 - 117			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS (B9H0142-BS1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1-Dichloroethene	41.5500	5.0	2.6	50.0000		83.1	57 - 128			
1,1-Dichloropropene	53.5300	5.0	2.3	50.0000		107	76 - 122			
1,2,3-Trichloropropane	49.8400	5.0	0.54	50.0000		99.7	65 - 116			
1,2,3-Trichlorobenzene	61.1300	5.0	1.2	50.0000		122	72 - 130			
1,2,4-Trichlorobenzene	63.2600	5.0	1.1	50.0000		127	74 - 141			
1,2,4-Trimethylbenzene	55.9300	5.0	1.5	50.0000		112	81 - 126			
1,2-Dibromo-3-chloropropane	52.6100	10	1.6	50.0000		105	63 - 126			
1,2-Dibromoethane	47.2200	5.0	3.2	50.0000		94.4	75 - 113			
1,2-Dichlorobenzene	54.3300	5.0	1.1	50.0000		109	83 - 114			
1,2-Dichloroethane	44.4600	5.0	1.2	50.0000		88.9	73 - 115			
1,2-Dichloropropane	46.3900	5.0	1.8	50.0000		92.8	75 - 117			
1,3,5-Trimethylbenzene	56.9200	5.0	1.7	50.0000		114	80 - 126			
1,3-Dichlorobenzene	54.5000	5.0	1.3	50.0000		109	83 - 113			
1,3-Dichloropropane	48.9500	5.0	1.1	50.0000		97.9	79 - 108			
1,4-Dichlorobenzene	53.8100	5.0	1.2	50.0000		108	82 - 114			
2,2-Dichloropropane	49.3900	5.0	1.2	50.0000		98.8	66 - 135			
2-Chlorotoluene	54.6600	5.0	1.6	50.0000		109	79 - 117			
4-Chlorotoluene	53.9500	5.0	1.5	50.0000		108	77 - 118			
4-Isopropyltoluene	62.5800	5.0	2.3	50.0000		125	81 - 129			
Benzene	90.9400	5.0	0.64	100.000		90.9	78 - 112			
Bromobenzene	53.8400	5.0	1.1	50.0000		108	79 - 111			
Bromochloromethane	43.0600	5.0	0.64	50.0000		86.1	69 - 116			
Bromodichloromethane	47.3200	5.0	1.2	50.0000		94.6	79 - 111			
Bromoform	49.8300	5.0	0.80	50.0000		99.7	75 - 119			
Bromomethane	56.9200	5.0	2.5	50.0000		114	31 - 168			
Carbon disulfide	41.4600	5.0	3.5	50.0000		82.9	54 - 141			
Carbon tetrachloride	52.3800	5.0	1.2	50.0000		105	74 - 125			
Chlorobenzene	51.8500	5.0	1.0	50.0000		104	83 - 112			
Chloroethane	50.7200	5.0	1.1	50.0000		101	53 - 144			
Chloroform	45.1000	5.0	0.82	50.0000		90.2	69 - 118			
Chloromethane	44.5800	5.0	1.4	50.0000		89.2	46 - 137			
cis-1,2-Dichloroethene	45.8100	5.0	0.67	50.0000		91.6	68 - 118			
cis-1,3-Dichloropropene	56.4000	5.0	1.9	50.0000		113	77 - 121			
Di-isopropyl ether	41.5300	5.0	0.55	50.0000		83.1	60 - 129			
Dibromochloromethane	52.0500	5.0	1.0	50.0000		104	80 - 111			
Dibromomethane	45.5300	5.0	1.6	50.0000		91.1	78 - 108			
Dichlorodifluoromethane	43.7400	5.0	2.2	50.0000		87.5	41 - 146			
Ethyl Acetate	353.710	50	8.1	500.000		70.7	52 - 130			
Ethyl Ether	324.040	50	6.1	500.000		64.8	54 - 138			
Ethyl tert-butyl ether	41.1300	5.0	0.67	50.0000		82.3	52 - 141			

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS (B9H0142-BS1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Ethylbenzene	103.320	5.0	0.91	100.000		103	82 - 121			
Freon-113	46.4300	5.0	2.8	50.0000		92.9	59 - 139			
Hexachlorobutadiene	70.7300	5.0	2.5	50.0000		141	69 - 143			
Isopropylbenzene	63.4600	5.0	1.8	50.0000		127	78 - 124			L3
m,p-Xylene	107.010	10	1.5	100.000		107	85 - 118			
Methylene chloride	35.8900	5.0	2.3	50.0000		71.8	44 - 146			
MTBE	39.4400	5.0	0.63	50.0000		78.9	61 - 122			
n-Butylbenzene	63.0800	5.0	2.4	50.0000		126	78 - 135			
n-Propylbenzene	57.2400	5.0	2.2	50.0000		114	78 - 127			
Naphthalene	55.8000	5.0	0.97	50.0000		112	68 - 129			
o-Xylene	108.450	5.0	0.87	100.000		108	86 - 118			
sec-Butylbenzene	59.5500	5.0	2.3	50.0000		119	80 - 127			
Styrene	54.7800	5.0	1.5	50.0000		110	85 - 117			
tert-Amyl methyl ether	41.3900	5.0	0.59	50.0000		82.8	48 - 135			
tert-Butanol	39.4500	100	19	250.000		15.8	0 - 175			
tert-Butylbenzene	60.7100	5.0	2.0	50.0000		121	81 - 122			
Tetrachloroethene	56.2800	5.0	1.6	50.0000		113	77 - 122			
Toluene	98.3000	5.0	0.94	100.000		98.3	79 - 114			
trans-1,2-Dichloroethene	44.2000	5.0	0.59	50.0000		88.4	66 - 125			
trans-1,3-Dichloropropene	48.3800	5.0	2.1	50.0000		96.8	76 - 120			
Trichloroethene	51.7400	5.0	3.1	50.0000		103	79 - 117			
Trichlorofluoromethane	44.9900	5.0	1.4	50.0000		90.0	55 - 133			
Vinyl acetate	425.270	50	9.8	500.000		85.1	52 - 141			
Vinyl chloride	44.9700	5.0	1.7	50.0000		89.9	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*42.49*			*50.0000*		*85.0*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*48.67*			*50.0000*		*97.3*	*68 - 121*			
Surrogate: Dibromofluoromethan	*45.23*			*50.0000*		*90.5*	*65 - 137*			
Surrogate: Toluene-d8	*48.44*			*50.0000*		*96.9*	*82 - 119*			
LCS Dup (B9H0142-BSD1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	50.7100	5.0	0.96	50.0000		101	82 - 114	3.53	20	
1,1,1-Trichloroethane	46.1700	5.0	1.1	50.0000		92.3	70 - 121	5.76	20	
1,1,2,2-Tetrachloroethane	47.5800	5.0	0.62	50.0000		95.2	65 - 116	3.25	20	
1,1,2-Trichloroethane	47.2200	5.0	1.6	50.0000		94.4	73 - 114	0.403	20	
1,1-Dichloroethane	42.3700	5.0	0.81	50.0000		84.7	69 - 117	3.82	20	
1,1-Dichloroethene	40.7900	5.0	2.6	50.0000		81.6	57 - 128	1.85	20	
1,1-Dichloropropene	49.3200	5.0	2.3	50.0000		98.6	76 - 122	8.19	20	
1,2,3-Trichloropropane	48.2400	5.0	0.54	50.0000		96.5	65 - 116	3.26	20	
1,2,3-Trichlorobenzene	58.9500	5.0	1.2	50.0000		118	72 - 130	3.63	20	
1,2,4-Trichlorobenzene	61.0500	5.0	1.1	50.0000		122	74 - 141	3.56	20	

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS Dup (B9H0142-BSD1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,2,4-Trimethylbenzene	51.8400	5.0	1.5	50.0000		104	81 - 126	7.59	20	
1,2-Dibromo-3-chloropropane	51.0400	10	1.6	50.0000		102	63 - 126	3.03	20	
1,2-Dibromoethane	47.7500	5.0	3.2	50.0000		95.5	75 - 113	1.12	20	
1,2-Dichlorobenzene	51.9200	5.0	1.1	50.0000		104	83 - 114	4.54	20	
1,2-Dichloroethane	43.9500	5.0	1.2	50.0000		87.9	73 - 115	1.15	20	
1,2-Dichloropropane	45.6900	5.0	1.8	50.0000		91.4	75 - 117	1.52	20	
1,3,5-Trimethylbenzene	52.9300	5.0	1.7	50.0000		106	80 - 126	7.26	20	
1,3-Dichlorobenzene	51.0200	5.0	1.3	50.0000		102	83 - 113	6.60	20	
1,3-Dichloropropane	48.8800	5.0	1.1	50.0000		97.8	79 - 108	0.143	20	
1,4-Dichlorobenzene	51.2200	5.0	1.2	50.0000		102	82 - 114	4.93	20	
2,2-Dichloropropane	47.3200	5.0	1.2	50.0000		94.6	66 - 135	4.28	20	
2-Chlorotoluene	49.8600	5.0	1.6	50.0000		99.7	79 - 117	9.18	20	
4-Chlorotoluene	50.3100	5.0	1.5	50.0000		101	77 - 118	6.98	20	
4-Isopropyltoluene	57.1500	5.0	2.3	50.0000		114	81 - 129	9.07	20	
Benzene	87.2500	5.0	0.64	100.000		87.2	78 - 112	4.14	20	
Bromobenzene	50.3400	5.0	1.1	50.0000		101	79 - 111	6.72	20	
Bromochloromethane	41.9400	5.0	0.64	50.0000		83.9	69 - 116	2.64	20	
Bromodichloromethane	46.1600	5.0	1.2	50.0000		92.3	79 - 111	2.48	20	
Bromoform	50.9300	5.0	0.80	50.0000		102	75 - 119	2.18	20	
Bromomethane	54.6400	5.0	2.5	50.0000		109	31 - 168	4.09	20	
Carbon disulfide	39.1000	5.0	3.5	50.0000		78.2	54 - 141	5.86	20	
Carbon tetrachloride	50.2600	5.0	1.2	50.0000		101	74 - 125	4.13	20	
Chlorobenzene	50.1500	5.0	1.0	50.0000		100	83 - 112	3.33	20	
Chloroethane	46.3000	5.0	1.1	50.0000		92.6	53 - 144	9.11	20	
Chloroform	43.8700	5.0	0.82	50.0000		87.7	69 - 118	2.76	20	
Chloromethane	42.0900	5.0	1.4	50.0000		84.2	46 - 137	5.75	20	
cis-1,2-Dichloroethene	43.4100	5.0	0.67	50.0000		86.8	68 - 118	5.38	20	
cis-1,3-Dichloropropene	55.0500	5.0	1.9	50.0000		110	77 - 121	2.42	20	
Di-isopropyl ether	42.0800	5.0	0.55	50.0000		84.2	60 - 129	1.32	20	
Dibromochloromethane	50.4600	5.0	1.0	50.0000		101	80 - 111	3.10	20	
Dibromomethane	45.5100	5.0	1.6	50.0000		91.0	78 - 108	0.0439	20	
Dichlorodifluoromethane	40.4000	5.0	2.2	50.0000		80.8	41 - 146	7.94	20	
Ethyl Acetate	363.830	50	8.1	500.000		72.8	52 - 130	2.82	20	
Ethyl Ether	330.460	50	6.1	500.000		66.1	54 - 138	1.96	20	
Ethyl tert-butyl ether	40.4700	5.0	0.67	50.0000		80.9	52 - 141	1.62	20	
Ethylbenzene	98.8900	5.0	0.91	100.000		98.9	82 - 121	4.38	20	
Freon-113	43.9300	5.0	2.8	50.0000		87.9	59 - 139	5.53	20	
Hexachlorobutadiene	65.3400	5.0	2.5	50.0000		131	69 - 143	7.92	20	
Isopropylbenzene	58.0500	5.0	1.8	50.0000		116	78 - 124	8.90	20	
m,p-Xylene	102.740	10	1.5	100.000		103	85 - 118	4.07	20	

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/08/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS Dup (B9H0142-BSD1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Methylene chloride	42.8200	5.0	2.3	50.0000		85.6	44 - 146	17.6	20	
MTBE	39.2500	5.0	0.63	50.0000		78.5	61 - 122	0.483	20	
n-Butylbenzene	58.0000	5.0	2.4	50.0000		116	78 - 135	8.39	20	
n-Propylbenzene	52.6100	5.0	2.2	50.0000		105	78 - 127	8.43	20	
Naphthalene	55.9500	5.0	0.97	50.0000		112	68 - 129	0.268	20	
o-Xylene	103.890	5.0	0.87	100.000		104	86 - 118	4.29	20	
sec-Butylbenzene	55.5500	5.0	2.3	50.0000		111	80 - 127	6.95	20	
Styrene	53.5000	5.0	1.5	50.0000		107	85 - 117	2.36	20	
tert-Amyl methyl ether	41.0500	5.0	0.59	50.0000		82.1	48 - 135	0.825	20	
tert-Butanol	222.060	100	19	250.000		88.8	0 - 175	140	20	R
tert-Butylbenzene	55.9800	5.0	2.0	50.0000		112	81 - 122	8.11	20	
Tetrachloroethene	53.3100	5.0	1.6	50.0000		107	77 - 122	5.42	20	
Toluene	93.9400	5.0	0.94	100.000		93.9	79 - 114	4.54	20	
trans-1,2-Dichloroethene	42.2200	5.0	0.59	50.0000		84.4	66 - 125	4.58	20	
trans-1,3-Dichloropropene	48.3500	5.0	2.1	50.0000		96.7	76 - 120	0.0620	20	
Trichloroethene	48.9300	5.0	3.1	50.0000		97.9	79 - 117	5.58	20	
Trichlorofluoromethane	42.1300	5.0	1.4	50.0000		84.3	55 - 133	6.57	20	
Vinyl acetate	432.390	50	9.8	500.000		86.5	52 - 141	1.66	20	
Vinyl chloride	41.0400	5.0	1.7	50.0000		82.1	58 - 132	9.14	20	
Surrogate: 1,2-Dichloroethane-d4	*43.96*			*50.0000*		*87.9*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*49.03*			*50.0000*		*98.1*	*68 - 121*			
Surrogate: Dibromofluoromethan	*47.06*			*50.0000*		*94.1*	*65 - 137*			
Surrogate: Toluene-d8	*48.70*			*50.0000*		*97.4*	*82 - 119*			
Matrix Spike (B9H0142-MS1)			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	46.9300	5.0	0.96	50.0000	ND	93.9	45 - 121			
1,1,1-Trichloroethane	42.5800	5.0	1.1	50.0000	ND	85.2	43 - 127			
1,1,2,2-Tetrachloroethane	45.1500	5.0	0.62	50.0000	ND	90.3	32 - 128			
1,1,2-Trichloroethane	44.0500	5.0	1.6	50.0000	ND	88.1	45 - 121			
1,1-Dichloroethane	38.9800	5.0	0.81	50.0000	ND	78.0	46 - 119			
1,1-Dichloroethene	37.3000	5.0	2.6	50.0000	ND	74.6	40 - 130			
1,1-Dichloropropene	46.3700	5.0	2.3	50.0000	ND	92.7	45 - 130			
1,2,3-Trichloropropane	46.1000	5.0	0.54	50.0000	ND	92.2	42 - 124			
1,2,3-Trichlorobenzene	48.5300	5.0	1.2	50.0000	ND	97.1	4 - 135			
1,2,4-Trichlorobenzene	49.3100	5.0	1.1	50.0000	ND	98.6	8 - 141			
1,2,4-Trimethylbenzene	46.6900	5.0	1.5	50.0000	ND	93.4	30 - 136			
1,2-Dibromo-3-chloropropane	50.0300	10	1.6	50.0000	ND	100	38 - 132			
1,2-Dibromoethane	46.1700	5.0	3.2	50.0000	ND	92.3	45 - 121			
1,2-Dichlorobenzene	46.0000	5.0	1.1	50.0000	ND	92.0	30 - 125			
1,2-Dichloroethane	40.5900	5.0	1.2	50.0000	ND	81.2	51 - 115			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike (B9H0142-MS1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,2-Dichloropropane	41.2300	5.0	1.8	50.0000	ND	82.5	50 - 118			
1,3,5-Trimethylbenzene	47.1500	5.0	1.7	50.0000	ND	94.3	29 - 137			
1,3-Dichlorobenzene	44.5500	5.0	1.3	50.0000	ND	89.1	30 - 124			
1,3-Dichloropropane	46.1200	5.0	1.1	50.0000	ND	92.2	49 - 116			
1,4-Dichlorobenzene	44.4000	5.0	1.2	50.0000	ND	88.8	31 - 124			
2,2-Dichloropropane	42.4800	5.0	1.2	50.0000	ND	85.0	41 - 134			
2-Chlorotoluene	44.0800	5.0	1.6	50.0000	ND	88.2	32 - 127			
4-Chlorotoluene	43.9100	5.0	1.5	50.0000	ND	87.8	34 - 124			
4-Isopropyltoluene	49.8800	5.0	2.3	50.0000	ND	99.8	26 - 141			
Benzene	79.2700	5.0	0.64	100.000	ND	79.3	48 - 117			
Bromobenzene	44.8100	5.0	1.1	50.0000	ND	89.6	40 - 117			
Bromochloromethane	39.8300	5.0	0.64	50.0000	ND	79.7	48 - 117			
Bromodichloromethane	42.4700	5.0	1.2	50.0000	ND	84.9	49 - 115			
Bromoform	47.7600	5.0	0.80	50.0000	ND	95.5	42 - 127			
Bromomethane	48.7600	5.0	2.5	50.0000	ND	97.5	19 - 157			
Carbon disulfide	34.6300	5.0	3.5	50.0000	ND	69.3	34 - 138			
Carbon tetrachloride	44.6600	5.0	1.2	50.0000	ND	89.3	43 - 130			
Chlorobenzene	44.2700	5.0	1.0	50.0000	ND	88.5	41 - 122			
Chloroethane	40.2400	5.0	1.1	50.0000	ND	80.5	32 - 145			
Chloroform	39.9900	5.0	0.82	50.0000	ND	80.0	46 - 118			
Chloromethane	36.2500	5.0	1.4	50.0000	ND	72.5	34 - 132			
cis-1,2-Dichloroethene	40.3400	5.0	0.67	50.0000	ND	80.7	44 - 119			
cis-1,3-Dichloropropene	49.5400	5.0	1.9	50.0000	ND	99.1	44 - 126			
Di-isopropyl ether	39.2200	5.0	0.55	50.0000	ND	78.4	42 - 126			
Dibromochloromethane	47.4100	5.0	1.0	50.0000	ND	94.8	46 - 119			
Dibromomethane	42.3800	5.0	1.6	50.0000	ND	84.8	52 - 114			
Dichlorodifluoromethane	38.9900	5.0	2.2	50.0000	ND	78.0	22 - 147			
Ethyl Acetate	322.280	50	8.1	500.000	ND	64.5	9 - 140			
Ethyl Ether	323.070	50	6.1	500.000	ND	64.6	45 - 131			
Ethyl tert-butyl ether	39.3100	5.0	0.67	50.0000	ND	78.6	33 - 138			
Ethylbenzene	89.1500	5.0	0.91	100.000	ND	89.2	38 - 131			
Freon-113	39.7800	5.0	2.8	50.0000	ND	79.6	38 - 140			
Hexachlorobutadiene	50.5000	5.0	2.5	50.0000	ND	101	4 - 141			
Isopropylbenzene	51.2100	5.0	1.8	50.0000	ND	102	35 - 133			
m,p-Xylene	93.5500	10	1.5	100.000	ND	93.6	38 - 130			
Methylene chloride	39.6900	5.0	2.3	50.0000	ND	79.4	26 - 137			
MTBE	39.1700	5.0	0.63	50.0000	ND	78.3	45 - 121			
n-Butylbenzene	48.9100	5.0	2.4	50.0000	ND	97.8	18 - 144			
n-Propylbenzene	46.1400	5.0	2.2	50.0000	ND	92.3	30 - 137			
Naphthalene	47.9900	5.0	0.97	50.0000	ND	96.0	14 - 137			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike (B9H0142-MS1) - Continued			**Source: 1902935-03**			Prepared: 8/7/2019 Analyzed: 8/7/2019				
o-Xylene	94.9800	5.0	0.87	100.000	ND	95.0	41 - 129			
sec-Butylbenzene	48.4000	5.0	2.3	50.0000	ND	96.8	24 - 140			
Styrene	48.2000	5.0	1.5	50.0000	ND	96.4	41 - 125			
tert-Amyl methyl ether	40.2600	5.0	0.59	50.0000	ND	80.5	31 - 133			
tert-Butanol	ND	100	19	250.000	ND	NR	0 - 201			
tert-Butylbenzene	49.5700	5.0	2.0	50.0000	ND	99.1	30 - 134			
Tetrachloroethene	47.2100	5.0	1.6	50.0000	ND	94.4	37 - 130			
Toluene	84.5300	5.0	0.94	100.000	ND	84.5	45 - 122			
trans-1,2-Dichloroethene	38.2400	5.0	0.59	50.0000	ND	76.5	46 - 122			
trans-1,3-Dichloropropene	44.6700	5.0	2.1	50.0000	ND	89.3	44 - 124			
Trichloroethene	43.7400	5.0	3.1	50.0000	ND	87.5	36 - 142			
Trichlorofluoromethane	38.8200	5.0	1.4	50.0000	ND	77.6	37 - 135			
Vinyl acetate	287.060	50	9.8	500.000	ND	57.4	0 - 136			
Vinyl chloride	37.3000	5.0	1.7	50.0000	ND	74.6	42 - 131			
Surrogate: 1,2-Dichloroethane-d4	*46.11*			*50.0000*		*92.2*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*50.22*			*50.0000*		*100*	*68 - 121*			
Surrogate: Dibromofluoromethan	*47.60*			*50.0000*		*95.2*	*65 - 137*			
Surrogate: Toluene-d8	*49.00*			*50.0000*		*98.0*	*82 - 119*			
Matrix Spike Dup (B9H0142-MSD1)			**Source: 1902935-03**			Prepared: 8/7/2019 Analyzed: 8/7/2019				
1,1,1,2-Tetrachloroethane	46.2800	5.0	0.96	50.0000	ND	92.6	45 - 121	1.39	20	
1,1,1-Trichloroethane	46.8900	5.0	1.1	50.0000	ND	93.8	43 - 127	9.63	20	
1,1,2,2-Tetrachloroethane	43.6600	5.0	0.62	50.0000	ND	87.3	32 - 128	3.36	20	
1,1,2-Trichloroethane	45.4700	5.0	1.6	50.0000	ND	90.9	45 - 121	3.17	20	
1,1-Dichloroethane	43.4100	5.0	0.81	50.0000	ND	86.8	46 - 119	10.8	20	
1,1-Dichloroethene	42.2400	5.0	2.6	50.0000	ND	84.5	40 - 130	12.4	20	
1,1-Dichloropropene	48.1900	5.0	2.3	50.0000	ND	96.4	45 - 130	3.85	20	
1,2,3-Trichloropropane	44.8200	5.0	0.54	50.0000	ND	89.6	42 - 124	2.82	20	
1,2,3-Trichlorobenzene	40.8900	5.0	1.2	50.0000	ND	81.8	4 - 135	17.1	20	
1,2,4-Trichlorobenzene	42.6800	5.0	1.1	50.0000	ND	85.4	8 - 141	14.4	20	
1,2,4-Trimethylbenzene	43.5300	5.0	1.5	50.0000	ND	87.1	30 - 136	7.01	20	
1,2-Dibromo-3-chloropropane	48.4200	10	1.6	50.0000	ND	96.8	38 - 132	3.27	20	
1,2-Dibromoethane	47.3600	5.0	3.2	50.0000	ND	94.7	45 - 121	2.54	20	
1,2-Dichlorobenzene	43.4100	5.0	1.1	50.0000	ND	86.8	30 - 125	5.79	20	
1,2-Dichloroethane	45.0900	5.0	1.2	50.0000	ND	90.2	51 - 115	10.5	20	
1,2-Dichloropropane	43.5500	5.0	1.8	50.0000	ND	87.1	50 - 118	5.47	20	
1,3,5-Trimethylbenzene	44.0800	5.0	1.7	50.0000	ND	88.2	29 - 137	6.73	20	
1,3-Dichlorobenzene	42.2500	5.0	1.3	50.0000	ND	84.5	30 - 124	5.30	20	
1,3-Dichloropropane	46.5400	5.0	1.1	50.0000	ND	93.1	49 - 116	0.907	20	
1,4-Dichlorobenzene	42.4800	5.0	1.2	50.0000	ND	85.0	31 - 124	4.42	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike Dup (B9H0142-MSD1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
2,2-Dichloropropane	46.4300	5.0	1.2	50.0000	ND	92.9	41 - 134	8.89	20	
2-Chlorotoluene	42.9300	5.0	1.6	50.0000	ND	85.9	32 - 127	2.64	20	
4-Chlorotoluene	41.9100	5.0	1.5	50.0000	ND	83.8	34 - 124	4.66	20	
4-Isopropyltoluene	45.9300	5.0	2.3	50.0000	ND	91.9	26 - 141	8.25	20	
Benzene	85.4400	5.0	0.64	100.000	ND	85.4	48 - 117	7.49	20	
Bromobenzene	43.9300	5.0	1.1	50.0000	ND	87.9	40 - 117	1.98	20	
Bromochloromethane	45.6900	5.0	0.64	50.0000	ND	91.4	48 - 117	13.7	20	
Bromodichloromethane	44.9600	5.0	1.2	50.0000	ND	89.9	49 - 115	5.70	20	
Bromoform	46.2400	5.0	0.80	50.0000	ND	92.5	42 - 127	3.23	20	
Bromomethane	61.5200	5.0	2.5	50.0000	ND	123	19 - 157	23.1	20	R
Carbon disulfide	38.3600	5.0	3.5	50.0000	ND	76.7	34 - 138	10.2	20	
Carbon tetrachloride	47.9000	5.0	1.2	50.0000	ND	95.8	43 - 130	7.00	20	
Chlorobenzene	44.0700	5.0	1.0	50.0000	ND	88.1	41 - 122	0.453	20	
Chloroethane	42.7100	5.0	1.1	50.0000	ND	85.4	32 - 145	5.96	20	
Chloroform	44.4600	5.0	0.82	50.0000	ND	88.9	46 - 118	10.6	20	
Chloromethane	36.7900	5.0	1.4	50.0000	ND	73.6	34 - 132	1.48	20	
cis-1,2-Dichloroethene	44.1800	5.0	0.67	50.0000	ND	88.4	44 - 119	9.09	20	
cis-1,3-Dichloropropene	51.1800	5.0	1.9	50.0000	ND	102	44 - 126	3.26	20	
Di-isopropyl ether	43.0300	5.0	0.55	50.0000	ND	86.1	42 - 126	9.26	20	
Dibromochloromethane	46.3700	5.0	1.0	50.0000	ND	92.7	46 - 119	2.22	20	
Dibromomethane	46.2000	5.0	1.6	50.0000	ND	92.4	52 - 114	8.62	20	
Dichlorodifluoromethane	37.7200	5.0	2.2	50.0000	ND	75.4	22 - 147	3.31	20	
Ethyl Acetate	349.090	50	8.1	500.000	ND	69.8	9 - 140	7.99	20	
Ethyl Ether	384.310	50	6.1	500.000	ND	76.9	45 - 131	17.3	20	
Ethyl tert-butyl ether	39.9700	5.0	0.67	50.0000	ND	79.9	33 - 138	1.66	20	
Ethylbenzene	86.6900	5.0	0.91	100.000	ND	86.7	38 - 131	2.80	20	
Freon-113	45.1700	5.0	2.8	50.0000	ND	90.3	38 - 140	12.7	20	
Hexachlorobutadiene	45.1300	5.0	2.5	50.0000	ND	90.3	4 - 141	11.2	20	
Isopropylbenzene	48.6500	5.0	1.8	50.0000	ND	97.3	35 - 133	5.13	20	
m,p-Xylene	88.3200	10	1.5	100.000	ND	88.3	38 - 130	5.75	20	
Methylene chloride	38.7300	5.0	2.3	50.0000	ND	77.5	26 - 137	2.45	20	
MTBE	41.3200	5.0	0.63	50.0000	ND	82.6	45 - 121	5.34	20	
n-Butylbenzene	44.4700	5.0	2.4	50.0000	ND	88.9	18 - 144	9.51	20	
n-Propylbenzene	43.7500	5.0	2.2	50.0000	ND	87.5	30 - 137	5.32	20	
Naphthalene	39.5500	5.0	0.97	50.0000	ND	79.1	14 - 137	19.3	20	
o-Xylene	90.4900	5.0	0.87	100.000	ND	90.5	41 - 129	4.84	20	
sec-Butylbenzene	44.7200	5.0	2.3	50.0000	ND	89.4	24 - 140	7.90	20	
Styrene	46.2400	5.0	1.5	50.0000	ND	92.5	41 - 125	4.15	20	
tert-Amyl methyl ether	38.7400	5.0	0.59	50.0000	ND	77.5	31 - 133	3.85	20	
tert-Butanol	ND	100	19	250.000	ND	NR	0 - 201	NR	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike Dup (B9H0142-MSD1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
tert-Butylbenzene	45.9200	5.0	2.0	50.0000	ND	91.8	30 - 134	7.64	20	
Tetrachloroethene	46.1300	5.0	1.6	50.0000	ND	92.3	37 - 130	2.31	20	
Toluene	88.9800	5.0	0.94	100.000	ND	89.0	45 - 122	5.13	20	
trans-1,2-Dichloroethene	42.5200	5.0	0.59	50.0000	ND	85.0	46 - 122	10.6	20	
trans-1,3-Dichloropropene	46.6700	5.0	2.1	50.0000	ND	93.3	44 - 124	4.38	20	
Trichloroethene	46.4600	5.0	3.1	50.0000	ND	92.9	36 - 142	6.03	20	
Trichlorofluoromethane	41.2600	5.0	1.4	50.0000	ND	82.5	37 - 135	6.09	20	
Vinyl acetate	284.800	50	9.8	500.000	ND	57.0	0 - 136	0.790	20	
Vinyl chloride	39.1300	5.0	1.7	50.0000	ND	78.3	42 - 131	4.79	20	
Surrogate: 1,2-Dichloroethane-d4	*47.62*			*50.0000*		*95.2*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*49.20*			*50.0000*		*98.4*	*68 - 121*			
Surrogate: Dibromofluoromethan	*49.85*			*50.0000*		*99.7*	*65 - 137*			
Surrogate: Toluene-d8	*49.16*			*50.0000*		*98.3*	*82 - 119*			

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Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W										
Blank (B9H0170-BLK1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.11							
1,1,1-Trichloroethane	ND	5.0	0.07							
1,1,2,2-Tetrachloroethane	ND	5.0	0.36							
1,1,2-Trichloroethane	ND	5.0	0.25							
1,1-Dichloroethane	ND	5.0	0.09							
1,1-Dichloroethene	ND	5.0	0.13							
1,1-Dichloropropene	ND	5.0	0.13							
1,2,3-Trichloropropane	ND	5.0	0.39							
1,2,3-Trichlorobenzene	ND	5.0	0.18							
1,2,4-Trichlorobenzene	ND	5.0	0.16							
1,2,4-Trimethylbenzene	ND	5.0	0.14							
1,2-Dibromo-3-chloropropane	ND	5.0	0.41							
1,2-Dibromoethane	ND	5.0	0.24							
1,2-Dichlorobenzene	ND	5.0	0.20							
1,2-Dichloroethane	ND	5.0	0.20							
1,2-Dichloropropane	ND	5.0	0.15							
1,3,5-Trimethylbenzene	ND	5.0	0.13							
1,3-Dichlorobenzene	ND	5.0	0.16							
1,3-Dichloropropane	ND	5.0	0.21							
1,4-Dichlorobenzene	ND	5.0	0.17							
2,2-Dichloropropane	ND	5.0	0.38							
2-Chlorotoluene	ND	5.0	0.11							
4-Chlorotoluene	ND	5.0	0.12							
4-Isopropyltoluene	ND	5.0	0.11							
Benzene	ND	5.0	0.13							
Bromobenzene	ND	5.0	0.21							
Bromochloromethane	ND	5.0	0.16							
Bromodichloromethane	ND	5.0	0.14							
Bromoform	ND	5.0	0.20							
Bromomethane	ND	5.0	0.17							
Carbon disulfide	ND	5.0	0.07							
Carbon tetrachloride	ND	5.0	0.09							
Chlorobenzene	ND	5.0	0.13							
Chloroethane	ND	5.0	0.15							
Chloroform	ND	5.0	0.11							
Chloromethane	ND	5.0	0.12							
cis-1,2-Dichloroethene	ND	5.0	0.14							
cis-1,3-Dichloropropene	ND	5.0	0.13							
Di-isopropyl ether	ND	5.0	0.15							
Dibromochloromethane	ND	5.0	0.16							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
Blank (B9H0170-BLK1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Dibromomethane	ND	5.0	0.19							
Dichlorodifluoromethane	ND	5.0	0.05							
Ethyl Acetate	ND	50	3.1							
Ethyl Ether	ND	50	2.0							
Ethyl tert-butyl ether	ND	5.0	0.21							
Ethylbenzene	ND	5.0	0.13							
Freon-113	ND	5.0	0.13							
Hexachlorobutadiene	ND	5.0	0.15							
Isopropylbenzene	ND	5.0	0.10							
m,p-Xylene	ND	10	0.19							
Methylene chloride	ND	5.0	0.71							
MTBE	ND	5.0	0.26							
n-Butylbenzene	ND	5.0	0.11							
n-Propylbenzene	ND	5.0	0.10							
Naphthalene	ND	5.0	0.41							
o-Xylene	ND	5.0	0.13							
sec-Butylbenzene	ND	5.0	0.09							
Styrene	ND	5.0	0.13							
tert-Amyl methyl ether	ND	5.0	0.41							
tert-Butanol	ND	100	2.4							
tert-Butylbenzene	ND	5.0	0.09							
Tetrachloroethene	ND	5.0	0.10							
Toluene	ND	5.0	0.12							
trans-1,2-Dichloroethene	ND	5.0	0.09							
trans-1,3-Dichloropropene	ND	5.0	0.23							
Trichloroethene	ND	5.0	0.10							
Trichlorofluoromethane	ND	5.0	0.10							
Vinyl acetate	ND	50	1.7							
Vinyl chloride	ND	5.0	0.05							
Surrogate: 1,2-Dichloroethane-d4	*24.94*			*25.0000*		*99.8*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.16*			*25.0000*		*101*	*71 - 127*			
Surrogate: Dibromofluoromethan	*27.73*			*25.0000*		*111*	*66 - 147*			
Surrogate: Toluene-d8	*26.48*			*25.0000*		*106*	*77 - 138*			
LCS (B9H0170-BS1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1,1,2-Tetrachloroethane	17.1700	5.0	0.11	20.0000		85.8	71 - 133			
1,1,1-Trichloroethane	18.4700	5.0	0.07	20.0000		92.4	62 - 124			
1,1,2,2-Tetrachloroethane	17.4600	5.0	0.36	20.0000		87.3	50 - 131			
1,1,2-Trichloroethane	17.8300	5.0	0.25	20.0000		89.2	77 - 121			
1,1-Dichloroethane	18.8500	5.0	0.09	20.0000		94.2	52 - 130			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS (B9H0170-BS1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1-Dichloroethene	18.9200	5.0	0.13	20.0000		94.6	61 - 136			
1,1-Dichloropropene	20.1500	5.0	0.13	20.0000		101	80 - 128			
1,2,3-Trichloropropane	17.7100	5.0	0.39	20.0000		88.6	59 - 126			
1,2,3-Trichlorobenzene	17.4100	5.0	0.18	20.0000		87.0	69 - 138			
1,2,4-Trichlorobenzene	18.2300	5.0	0.16	20.0000		91.2	78 - 125			
1,2,4-Trimethylbenzene	17.9900	5.0	0.14	20.0000		90.0	70 - 126			
1,2-Dibromo-3-chloropropane	15.6200	5.0	0.41	20.0000		78.1	58 - 127			
1,2-Dibromoethane	18.1000	5.0	0.24	20.0000		90.5	76 - 120			
1,2-Dichlorobenzene	19.4000	5.0	0.20	20.0000		97.0	82 - 117			
1,2-Dichloroethane	19.4900	5.0	0.20	20.0000		97.4	66 - 126			
1,2-Dichloropropane	18.5800	5.0	0.15	20.0000		92.9	70 - 117			
1,3,5-Trimethylbenzene	18.3100	5.0	0.13	20.0000		91.6	71 - 125			
1,3-Dichlorobenzene	18.2100	5.0	0.16	20.0000		91.0	81 - 116			
1,3-Dichloropropane	18.5400	5.0	0.21	20.0000		92.7	69 - 124			
1,4-Dichlorobenzene	19.0700	5.0	0.17	20.0000		95.4	80 - 114			
2,2-Dichloropropane	19.1800	5.0	0.38	20.0000		95.9	58 - 132			
2-Chlorotoluene	18.5400	5.0	0.11	20.0000		92.7	71 - 119			
4-Chlorotoluene	18.5300	5.0	0.12	20.0000		92.6	72 - 122			
4-Isopropyltoluene	17.8600	5.0	0.11	20.0000		89.3	69 - 126			
Benzene	39.6100	5.0	0.13	40.0000		99.0	80 - 116			
Bromobenzene	18.8300	5.0	0.21	20.0000		94.2	77 - 118			
Bromochloromethane	18.2500	5.0	0.16	20.0000		91.2	68 - 121			
Bromodichloromethane	17.5000	5.0	0.14	20.0000		87.5	73 - 118			
Bromoform	15.4000	5.0	0.20	20.0000		77.0	65 - 133			
Bromomethane	21.5500	5.0	0.17	20.0000		108	7 - 205			
Carbon disulfide	18.4100	5.0	0.07	20.0000		92.0	55 - 131			
Carbon tetrachloride	17.2600	5.0	0.09	20.0000		86.3	63 - 133			
Chlorobenzene	19.0100	5.0	0.13	20.0000		95.0	86 - 113			
Chloroethane	22.5600	5.0	0.15	20.0000		113	66 - 141			
Chloroform	19.3500	5.0	0.11	20.0000		96.8	63 - 127			
Chloromethane	19.7400	5.0	0.12	20.0000		98.7	0 - 207			
cis-1,2-Dichloroethene	18.9400	5.0	0.14	20.0000		94.7	64 - 126			
cis-1,3-Dichloropropene	19.2400	5.0	0.13	20.0000		96.2	70 - 141			
Di-isopropyl ether	18.0500	5.0	0.15	20.0000		90.2	56 - 131			
Dibromochloromethane	16.6000	5.0	0.16	20.0000		83.0	67 - 135			
Dibromomethane	19.0700	5.0	0.19	20.0000		95.4	74 - 118			
Dichlorodifluoromethane	18.7000	5.0	0.05	20.0000		93.5	14 - 181			
Ethyl Acetate	190.940	50	3.1	200.000		95.5	49 - 128			
Ethyl Ether	172.440	50	2.0	200.000		86.2	53 - 143			
Ethyl tert-butyl ether	18.9100	5.0	0.21	20.0000		94.6	54 - 132			

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Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS (B9H0170-BS1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Ethylbenzene	34.2000	5.0	0.13	40.0000		85.5	77 - 118			
Freon-113	18.5500	5.0	0.13	20.0000		92.8	68 - 145			
Hexachlorobutadiene	18.1800	5.0	0.15	20.0000		90.9	66 - 125			
Isopropylbenzene	19.0500	5.0	0.10	20.0000		95.2	68 - 137			
m,p-Xylene	37.0200	10	0.19	40.0000		92.6	78 - 126			
Methylene chloride	15.4100	5.0	0.71	20.0000		77.0	51 - 149			
MTBE	18.5200	5.0	0.26	20.0000		92.6	63 - 128			
n-Butylbenzene	18.0800	5.0	0.11	20.0000		90.4	63 - 127			
n-Propylbenzene	18.2300	5.0	0.10	20.0000		91.2	69 - 124			
Naphthalene	16.6800	5.0	0.41	20.0000		83.4	60 - 126			
o-Xylene	35.1100	5.0	0.13	40.0000		87.8	79 - 126			
sec-Butylbenzene	18.2300	5.0	0.09	20.0000		91.2	69 - 124			
Styrene	18.4900	5.0	0.13	20.0000		92.4	80 - 127			
tert-Amyl methyl ether	19.5000	5.0	0.41	20.0000		97.5	49 - 130			
tert-Butanol	78.6000	100	2.4	100.000		78.6	29 - 163			
tert-Butylbenzene	18.1300	5.0	0.09	20.0000		90.6	71 - 124			
Tetrachloroethene	17.5400	5.0	0.10	20.0000		87.7	73 - 129			
Toluene	39.1700	5.0	0.12	40.0000		97.9	78 - 121			
trans-1,2-Dichloroethene	19.3300	5.0	0.09	20.0000		96.6	58 - 141			
trans-1,3-Dichloropropene	16.4500	5.0	0.23	20.0000		82.2	68 - 128			
Trichloroethene	18.1300	5.0	0.10	20.0000		90.6	73 - 126			
Trichlorofluoromethane	19.3600	5.0	0.10	20.0000		96.8	62 - 146			
Vinyl acetate	219.430	50	1.7	200.000		110	53 - 153			
Vinyl chloride	19.5600	5.0	0.05	20.0000		97.8	61 - 137			
Surrogate: 1,2-Dichloroethane-d4	*24.50*			*25.0000*		*98.0*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.60*			*25.0000*		*102*	*71 - 127*			
Surrogate: Dibromofluoromethan	*26.00*			*25.0000*		*104*	*66 - 147*			
Surrogate: Toluene-d8	*25.70*			*25.0000*		*103*	*77 - 138*			
LCS Dup (B9H0170-BSD1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1,1,2-Tetrachloroethane	19.1900	5.0	0.11	20.0000		96.0	71 - 133	11.1	20	
1,1,1-Trichloroethane	20.0600	5.0	0.07	20.0000		100	62 - 124	8.25	20	
1,1,2,2-Tetrachloroethane	19.4300	5.0	0.36	20.0000		97.2	50 - 131	10.7	20	
1,1,2-Trichloroethane	19.8200	5.0	0.25	20.0000		99.1	77 - 121	10.6	20	
1,1-Dichloroethane	20.2400	5.0	0.09	20.0000		101	52 - 130	7.11	20	
1,1-Dichloroethene	20.7300	5.0	0.13	20.0000		104	61 - 136	9.13	20	
1,1-Dichloropropene	21.7000	5.0	0.13	20.0000		108	80 - 128	7.41	20	
1,2,3-Trichloropropane	19.1700	5.0	0.39	20.0000		95.8	59 - 126	7.92	20	
1,2,3-Trichlorobenzene	18.6800	5.0	0.18	20.0000		93.4	69 - 138	7.04	20	
1,2,4-Trichlorobenzene	19.3900	5.0	0.16	20.0000		97.0	78 - 125	6.17	20	

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Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS Dup (B9H0170-BSD1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,2,4-Trimethylbenzene	19.6200	5.0	0.14	20.0000		98.1	70 - 126	8.67	20	
1,2-Dibromo-3-chloropropane	17.4800	5.0	0.41	20.0000		87.4	58 - 127	11.2	20	
1,2-Dibromoethane	19.6200	5.0	0.24	20.0000		98.1	76 - 120	8.06	20	
1,2-Dichlorobenzene	21.8000	5.0	0.20	20.0000		109	82 - 117	11.7	20	
1,2-Dichloroethane	22.2400	5.0	0.20	20.0000		111	66 - 126	13.2	20	
1,2-Dichloropropane	20.4200	5.0	0.15	20.0000		102	70 - 117	9.44	20	
1,3,5-Trimethylbenzene	19.9800	5.0	0.13	20.0000		99.9	71 - 125	8.72	20	
1,3-Dichlorobenzene	19.6700	5.0	0.16	20.0000		98.4	81 - 116	7.71	20	
1,3-Dichloropropane	19.8700	5.0	0.21	20.0000		99.4	69 - 124	6.93	20	
1,4-Dichlorobenzene	20.7400	5.0	0.17	20.0000		104	80 - 114	8.39	20	
2,2-Dichloropropane	20.7700	5.0	0.38	20.0000		104	58 - 132	7.96	20	
2-Chlorotoluene	20.3600	5.0	0.11	20.0000		102	71 - 119	9.36	20	
4-Chlorotoluene	20.3800	5.0	0.12	20.0000		102	72 - 122	9.51	20	
4-Isopropyltoluene	19.7300	5.0	0.11	20.0000		98.6	69 - 126	9.95	20	
Benzene	43.5300	5.0	0.13	40.0000		109	80 - 116	9.43	20	
Bromobenzene	21.2500	5.0	0.21	20.0000		106	77 - 118	12.1	20	
Bromochloromethane	18.4600	5.0	0.16	20.0000		92.3	68 - 121	1.14	20	
Bromodichloromethane	18.9900	5.0	0.14	20.0000		95.0	73 - 118	8.17	20	
Bromoform	16.9500	5.0	0.20	20.0000		84.8	65 - 133	9.58	20	
Bromomethane	19.4900	5.0	0.17	20.0000		97.4	7 - 205	10.0	20	
Carbon disulfide	21.1000	5.0	0.07	20.0000		106	55 - 131	13.6	20	
Carbon tetrachloride	19.8200	5.0	0.09	20.0000		99.1	63 - 133	13.8	20	
Chlorobenzene	21.4500	5.0	0.13	20.0000		107	86 - 113	12.1	20	
Chloroethane	20.1100	5.0	0.15	20.0000		101	66 - 141	11.5	20	
Chloroform	20.0400	5.0	0.11	20.0000		100	63 - 127	3.50	20	
Chloromethane	19.2900	5.0	0.12	20.0000		96.4	0 - 207	2.31	20	
cis-1,2-Dichloroethene	20.7100	5.0	0.14	20.0000		104	64 - 126	8.93	20	
cis-1,3-Dichloropropene	21.0400	5.0	0.13	20.0000		105	70 - 141	8.94	20	
Di-isopropyl ether	19.6600	5.0	0.15	20.0000		98.3	56 - 131	8.54	20	
Dibromochloromethane	18.0200	5.0	0.16	20.0000		90.1	67 - 135	8.20	20	
Dibromomethane	20.1700	5.0	0.19	20.0000		101	74 - 118	5.61	20	
Dichlorodifluoromethane	18.2200	5.0	0.05	20.0000		91.1	14 - 181	2.60	20	
Ethyl Acetate	186.160	50	3.1	200.000		93.1	49 - 128	2.54	20	
Ethyl Ether	180.950	50	2.0	200.000		90.5	53 - 143	4.82	20	
Ethyl tert-butyl ether	19.0900	5.0	0.21	20.0000		95.4	54 - 132	0.947	20	
Ethylbenzene	37.5400	5.0	0.13	40.0000		93.8	77 - 118	9.31	20	
Freon-113	20.4300	5.0	0.13	20.0000		102	68 - 145	9.65	20	
Hexachlorobutadiene	19.6600	5.0	0.15	20.0000		98.3	66 - 125	7.82	20	
Isopropylbenzene	21.2000	5.0	0.10	20.0000		106	68 - 137	10.7	20	
m,p-Xylene	40.6200	10	0.19	40.0000		102	78 - 126	9.27	20	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS Dup (B9H0170-BSD1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Methylene chloride	16.8000	5.0	0.71	20.0000		84.0	51 - 149	8.63	20	
MTBE	19.6200	5.0	0.26	20.0000		98.1	63 - 128	5.77	20	
n-Butylbenzene	19.6000	5.0	0.11	20.0000		98.0	63 - 127	8.07	20	
n-Propylbenzene	20.2200	5.0	0.10	20.0000		101	69 - 124	10.4	20	
Naphthalene	17.7300	5.0	0.41	20.0000		88.6	60 - 126	6.10	20	
o-Xylene	38.1200	5.0	0.13	40.0000		95.3	79 - 126	8.22	20	
sec-Butylbenzene	19.9300	5.0	0.09	20.0000		99.6	69 - 124	8.91	20	
Styrene	20.0600	5.0	0.13	20.0000		100	80 - 127	8.15	20	
tert-Amyl methyl ether	18.8900	5.0	0.41	20.0000		94.4	49 - 130	3.18	20	
tert-Butanol	85.7700	100	2.4	100.000		85.8	29 - 163	8.72	20	
tert-Butylbenzene	20.0500	5.0	0.09	20.0000		100	71 - 124	10.1	20	
Tetrachloroethene	19.1000	5.0	0.10	20.0000		95.5	73 - 129	8.52	20	
Toluene	43.7100	5.0	0.12	40.0000		109	78 - 121	11.0	20	
trans-1,2-Dichloroethene	20.4200	5.0	0.09	20.0000		102	58 - 141	5.48	20	
trans-1,3-Dichloropropene	19.0000	5.0	0.23	20.0000		95.0	68 - 128	14.4	20	
Trichloroethene	19.7100	5.0	0.10	20.0000		98.6	73 - 126	8.35	20	
Trichlorofluoromethane	18.9100	5.0	0.10	20.0000		94.6	62 - 146	2.35	20	
Vinyl acetate	232.170	50	1.7	200.000		116	53 - 153	5.64	20	
Vinyl chloride	19.2100	5.0	0.05	20.0000		96.0	61 - 137	1.81	20	
Surrogate: 1,2-Dichloroethane-d4	*23.95*			*25.0000*		*95.8*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.51*			*25.0000*		*102*	*71 - 127*			
Surrogate: Dibromofluoromethan	*25.72*			*25.0000*		*103*	*66 - 147*			
Surrogate: Toluene-d8	*25.76*			*25.0000*		*103*	*77 - 138*			

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/08/2019

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0140 - Prep_WC1_S										
Duplicate (B9H0140-DUP1)				**Source: 1902942-09**		Prepared: 8/7/2019 Analyzed: 8/7/2019				
pH	7.22000	0.10	0.10		7.23000			0.138	20	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/08/2019

Notes and Definitions

R2	RPD value outside acceptance criteria due to possible matrix interference.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
L3	Laboratory control sample outside in-house established limits but within method criteria.
E3	Internal standard recoveries did not meet method acceptance due to matrix interference. Result value is estimated.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Stantec

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

1902935

Page 1 of 1

Client Name/Address:	Project/PO Number:
Stantec 735 E. Carnegie Dr, Suite 280 San Bernardino, CA 92408	**GNAP-Fullerton / 185804430**
Project Manager: Brian Viggiano	Phone Number: : **(909)289-7111**
Email Address: brian.viggiano@stantec.com Sampler: Josh Sargent	Fax Number: (**909)335-6120**

	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	Title 22 metals (6010/7471)	PCB 8082A	PH 9045					Special Instructions
01	EB-20190806	W	VOA	6	8.6.19	0750	HCL		X								
02	TB-20190806	W	VOA	2			HCL		X								
03	SV-6-5	S	8oz	1	8.6.19	0820	ICE	X	X	X							
04	SV-6-10	S		1		0835			X								
05	SV-7-5	S		1		0925		X	X	X							
06	SV-7-10	S		1		0935			X								
07	SV-8-5	S		1		1010		X	X	X							
08	SV-9-5	S		1		1045		X	X	X							
09	HA-13-1	S		1		1250				X		X					
10	HA-13-5	S		1		1255				X		X					
11	SV-15-5	S		1		1340		X	X	X							
12	SV-14-5	S		1		1405		X	X	X							
13	HA-14-5	S		1		1440		X	X		X	X					
14	HA-14-10	S		1		1502		X	X		X	X					

Relinquished By:	Date/Time: 8.6.19 1530	Received By:	Date/ Time: 8-6-19 1530
Relinquished By:	Date/Time: 8-6-19 1618	Received By: Fpow	Date/Time: 8/6/19 1618
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours 5 days
48 hours normal

Sample Integrity: (Check)
intact ✓ on ice ✓

NOTE: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

2.8 °C

ADVANCED TECHNOLOGY LABORATORIES

August 15, 2019

Brian Viggiano
Stantec
735 E. Carnegie Drive, Suite 280
San Bernardino, CA 92408
Tel: (909) 255-8204
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

RE: ATL Work Order Number : 1902952
Client Reference : GNAP-Fullerton, 185804430

Enclosed are the results for sample(s) received on August, 7 2019 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Edgar Caballero
President & Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-20190807	1902952-01	Water	8/06/19 0:00	8/07/19 15:25
EB-20190807	1902952-02	Water	8/06/19 7:20	8/07/19 15:25
HA-16-5	1902952-03	Soil	8/06/19 8:30	8/07/19 15:25
HA-16-8	1902952-04	Soil	8/06/19 8:35	8/07/19 15:25
HA-15-5	1902952-05	Soil	8/06/19 8:58	8/07/19 15:25
HA-15-10	1902952-06	Soil	8/06/19 9:07	8/07/19 15:25
HA-6-1	1902952-07	Soil	8/06/19 10:25	8/07/19 15:25
HA-6-3	1902952-08	Soil	8/06/19 10:27	8/07/19 15:25
HA-7-1	1902952-09	Soil	8/06/19 10:37	8/07/19 15:25
HA-7-3	1902952-10	Soil	8/06/19 10:38	8/07/19 15:25
HA-5-1	1902952-11	Soil	8/06/19 10:50	8/07/19 15:25
HA-5-3	1902952-12	Soil	8/06/19 10:52	8/07/19 15:25
HA-4-1	1902952-13	Soil	8/06/19 11:02	8/07/19 15:25
HA-4-3	1902952-14	Soil	8/06/19 11:04	8/07/19 15:25
HA-9-1	1902952-15	Soil	8/07/19 12:35	8/07/19 15:25
HA-9-3	1902952-16	Soil	8/07/19 12:37	8/07/19 15:25
HA-8-1	1902952-17	Soil	8/07/19 12:47	8/07/19 15:25
HA-8-3	1902952-18	Soil	8/07/19 12:50	8/07/19 15:25
HA-10-1	1902952-19	Soil	8/07/19 13:07	8/07/19 15:25
HA-10-3	1902952-20	Soil	8/07/19 13:11	8/07/19 15:25
HA-11-1	1902952-21	Soil	8/07/19 13:28	8/07/19 15:25
HA-11-3	1902952-22	Soil	8/07/19 13:30	8/07/19 15:25
HA-2-1	1902952-23	Soil	8/07/19 13:56	8/07/19 15:25
HA-2-3	1902952-24	Soil	8/07/19 13:58	8/07/19 15:25
HA-3-1	1902952-25	Soil	8/07/19 14:08	8/07/19 15:25
HA-3-3	1902952-26	Soil	8/07/19 14:10	8/07/19 15:25
HA-1-1	1902952-27	Soil	8/07/19 14:27	8/07/19 15:25
HA-1-3	1902952-28	Soil	8/07/19 14:30	8/07/19 15:25
HA-12-1	1902952-29	Soil	8/07/19 14:56	8/07/19 15:25
HA-12-3	1902952-30	Soil	8/07/19 14:58	8/07/19 15:25

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/15/2019

CASE NARRATIVE

The samples for 2,3,7,8-TCDD (EPA 8290) analyses were subcontracted to Ceres Analytical Laboratory, Inc. with NELAP Cert.# 4049. Results to follow in an addendum report.

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID TB-20190807

Lab ID: 1902952-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1,1-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1,2-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2,3-Trichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dibromo-3-chloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dibromoethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,3-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,3-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,4-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
2,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
2-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
4-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
4-Isopropyltoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Benzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromodichloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromoform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Carbon disulfide	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Carbon tetrachloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Chlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Chloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Chloroform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Chloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID TB-20190807

Lab ID: 1902952-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Di-isopropyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Dibromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Dibromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Dichlorodifluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Ethyl Acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 13:11	
Ethyl Ether	ND	50	1	B9H0170	08/08/2019	08/08/19 13:11	
Ethyl tert-butyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Ethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Freon-113	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Hexachlorobutadiene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Isopropylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
m,p-Xylene	ND	10	1	B9H0170	08/08/2019	08/08/19 13:11	
Methylene chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
MTBE	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
n-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
n-Propylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Naphthalene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
o-Xylene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
sec-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Styrene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
tert-Amyl methyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
tert-Butanol	ND	100	1	B9H0170	08/08/2019	08/08/19 13:11	
tert-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Tetrachloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Toluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Trichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Trichlorofluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Vinyl acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 13:11	
Vinyl chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*59 - 158*		B9H0170	08/08/2019	*08/08/19 13:11*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*71 - 127*		B9H0170	08/08/2019	*08/08/19 13:11*	
Surrogate: Dibromofluoromethane	*112 %*	*66 - 147*		B9H0170	08/08/2019	*08/08/19 13:11*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID TB-20190807

Lab ID: 1902952-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Toluene-d8	*108 %*	*77 - 138*		B9H0170	08/08/2019	*08/08/19 13:11*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID EB-20190807

Lab ID: 1902952-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1,1-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1,2-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2,3-Trichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dibromo-3-chloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dibromoethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,3-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,3-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,4-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
2,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
2-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
4-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
4-Isopropyltoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Benzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromodichloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromoform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Carbon disulfide	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Carbon tetrachloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Chlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Chloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Chloroform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Chloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	

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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID EB-20190807

Lab ID: 1902952-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Di-isopropyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Dibromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Dibromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Dichlorodifluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Ethyl Acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 13:36	
Ethyl Ether	ND	50	1	B9H0170	08/08/2019	08/08/19 13:36	
Ethyl tert-butyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Ethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Freon-113	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Hexachlorobutadiene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Isopropylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
m,p-Xylene	ND	10	1	B9H0170	08/08/2019	08/08/19 13:36	
Methylene chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
MTBE	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
n-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
n-Propylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Naphthalene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
o-Xylene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
sec-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Styrene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
tert-Amyl methyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
tert-Butanol	ND	100	1	B9H0170	08/08/2019	08/08/19 13:36	
tert-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Tetrachloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Toluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Trichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Trichlorofluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Vinyl acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 13:36	
Vinyl chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*59 - 158*		B9H0170	08/08/2019	*08/08/19 13:36*	
Surrogate: 4-Bromofluorobenzene	*99.2 %*	*71 - 127*		B9H0170	08/08/2019	*08/08/19 13:36*	
Surrogate: Dibromofluoromethane	*116 %*	*66 - 147*		B9H0170	08/08/2019	*08/08/19 13:36*	

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID EB-20190807

Lab ID: 1902952-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Toluene-d8	*108 %*	*77 - 138*		B9H0170	08/08/2019	*08/08/19 13:36*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-5
Lab ID: 1902952-03

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0167	08/08/2019	08/08/19 09:03	
Surrogate: 4-Bromofluorobenzene	*112 %*		*45 - 149*		B9H0167	08/08/2019	*08/08/19 09:03*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0174	08/08/2019	08/08/19 15:42	
ORO		ND	10	1	B9H0174	08/08/2019	08/08/19 15:42	
Surrogate: p-Terphenyl	*71.8 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 15:42*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Surrogate: Decachlorobiphenyl	*118 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 16:01*	
Surrogate: Tetrachloro-m-xylene	*92.7 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 16:01*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-16-5

Lab ID: 1902952-03

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	

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Lab ID: 1902952-03

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:09	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 18:09	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 18:09	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 18:09	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:09	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Surrogate: 1,2-Dichloroethane-d4	*98.7 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 18:09*	
Surrogate: 4-Bromofluorobenzene	*92.7 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 18:09*	
Surrogate: Dibromofluoromethane	*105 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 18:09*	
Surrogate: Toluene-d8	*96.8 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 18:09*	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
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Client Sample ID HA-16-5

Lab ID: 1902952-03

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**8.9**	0.10	1	B9H0177	08/08/2019	08/08/19 14:49	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-16-8
Lab ID: 1902952-04

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0167	08/08/2019	08/08/19 09:22	
Surrogate: 4-Bromofluorobenzene	*109 %*		*45 - 149*		B9H0167	08/08/2019	*08/08/19 09:22*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:09	
ORO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:09	
Surrogate: p-Terphenyl	*75.9 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:09*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Surrogate: Decachlorobiphenyl	*120 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 16:20*	
Surrogate: Tetrachloro-m-xylene	*98.4 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 16:20*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-8

Lab ID: 1902952-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-8

Lab ID: 1902952-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:28	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 18:28	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 18:28	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 18:28	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:28	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Surrogate: 1,2-Dichloroethane-d4	*100 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 18:28*	
Surrogate: 4-Bromofluorobenzene	*91.5 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 18:28*	
Surrogate: Dibromofluoromethane	*105 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 18:28*	
Surrogate: Toluene-d8	*95.0 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 18:28*	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/15/2019

Client Sample ID HA-16-8

Lab ID: 1902952-04

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**9.1**	0.10	1	B9H0177	08/08/2019	08/08/19 14:49	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-15-5
Lab ID: 1902952-05

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0167	08/08/2019	08/08/19 09:40	
Surrogate: 4-Bromofluorobenzene	*109 %*		*45 - 149*		B9H0167	08/08/2019	*08/08/19 09:40*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:24	
ORO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:24	
Surrogate: p-Terphenyl	*79.3 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:24*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Surrogate: Decachlorobiphenyl	*120 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 16:38*	
Surrogate: Tetrachloro-m-xylene	*99.5 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 16:38*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-15-5

Lab ID: 1902952-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-15-5

Lab ID: 1902952-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:47	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 18:47	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 18:47	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 18:47	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:47	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Surrogate: 1,2-Dichloroethane-d4	*97.4 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 18:47*	
Surrogate: 4-Bromofluorobenzene	*90.7 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 18:47*	
Surrogate: Dibromofluoromethane	*101 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 18:47*	
Surrogate: Toluene-d8	*93.5 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 18:47*	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/15/2019

Client Sample ID HA-15-5

Lab ID: 1902952-05

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**9.4**	0.10	1	B9H0177	08/08/2019	08/08/19 14:49	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-15-10
Lab ID: 1902952-06

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0167	08/08/2019	08/08/19 09:59	
Surrogate: 4-Bromofluorobenzene	*109 %*		*45 - 149*		B9H0167	08/08/2019	*08/08/19 09:59*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:56	
ORO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:56	
Surrogate: p-Terphenyl	*77.3 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:56*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Surrogate: Decachlorobiphenyl	*124 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 16:57*	S10
Surrogate: Tetrachloro-m-xylene	*96.7 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 16:57*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	

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Lab ID: 1902952-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	

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Lab ID: 1902952-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 19:06	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 19:06	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 19:06	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 19:06	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 19:06	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Surrogate: 1,2-Dichloroethane-d4	*96.2 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 19:06*	
Surrogate: 4-Bromofluorobenzene	*93.0 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 19:06*	
Surrogate: Dibromofluoromethane	*102 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 19:06*	
Surrogate: Toluene-d8	*94.8 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 19:06*	

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Lab ID: 1902952-06

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**9.1**	0.10	1	B9H0177	08/08/2019	08/08/19 14:49	

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Client Sample ID HA-6-1

Lab ID: 1902952-07

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**5.1**	1.0	1	B9H0172	08/08/2019	08/09/19 15:29	
Lead	**31**	1.0	1	B9H0172	08/08/2019	08/09/19 15:29	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:15	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:15	
Surrogate: Decachlorobiphenyl	*50.5 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:15*	
Surrogate: Tetrachloro-m-xylene	*61.2 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:15*	

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Client Sample ID HA-6-3

Lab ID: 1902952-08

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.4**	1.0	1	B9H0172	08/08/2019	08/09/19 15:32	
Lead	**2.0**	1.0	1	B9H0172	08/08/2019	08/09/19 15:32	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:25	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:25	
Surrogate: Decachlorobiphenyl	*63.2 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:25*	
Surrogate: Tetrachloro-m-xylene	*66.4 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:25*	

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Lab ID: 1902952-09

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**2.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:34	
Lead	**18**	1.0	1	B9H0172	08/08/2019	08/09/19 15:34	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:36	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:36	
Surrogate: Decachlorobiphenyl	*60.7 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:36*	
Surrogate: Tetrachloro-m-xylene	*64.7 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:36*	

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Client Sample ID HA-7-3

Lab ID: 1902952-10

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	ND	1.0	1	B9H0172	08/08/2019	08/09/19 15:35	
Lead	**1.3**	1.0	1	B9H0172	08/08/2019	08/09/19 15:35	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:46	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:46	
Surrogate: Decachlorobiphenyl	*68.9 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:46*	
Surrogate: Tetrachloro-m-xylene	*69.7 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:46*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-5-1

Lab ID: 1902952-11

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**6.6**	1.0	1	B9H0172	08/08/2019	08/09/19 15:36	
Lead	**16**	1.0	1	B9H0172	08/08/2019	08/09/19 15:36	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:57	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:57	
Surrogate: Decachlorobiphenyl	*62.3 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:57*	
Surrogate: Tetrachloro-m-xylene	*74.1 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:57*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-5-3
Lab ID: 1902952-12

Total Metals by ICP-AES EPA 6010B

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	ND	1.0	1	B9H0172	08/08/2019	08/09/19 15:41	
Lead	**2.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:41	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:07	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 19:07	
Surrogate: Decachlorobiphenyl	*69.4 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:07*	
Surrogate: Tetrachloro-m-xylene	*71.6 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:07*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-4-1
Lab ID: 1902952-13

Total Metals by ICP-AES EPA 6010B

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**6.6**	1.0	1	B9H0172	08/08/2019	08/09/19 15:42	
Lead	**21**	1.0	1	B9H0172	08/08/2019	08/09/19 15:42	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
4,4´-DDE	**2.0**	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:18	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 19:18	
Surrogate: Decachlorobiphenyl	*53.2 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:18*	
Surrogate: Tetrachloro-m-xylene	*61.1 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:18*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-4-3

Lab ID: 1902952-14

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.4**	1.0	1	B9H0172	08/08/2019	08/09/19 15:43	
Lead	**2.4**	1.0	1	B9H0172	08/08/2019	08/09/19 15:43	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:28	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 19:28	
Surrogate: Decachlorobiphenyl	*73.0 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:28*	
Surrogate: Tetrachloro-m-xylene	*72.9 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:28*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-9-1

Lab ID: 1902952-15

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:23	
Arsenic	**3.0**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Barium	**80**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Chromium	**15**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Cobalt	**5.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Copper	**10**	2.2	1	B9H0171	08/08/2019	08/08/19 13:23	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Molybdenum	**2.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Nickel	**17**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Vanadium	**32**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Zinc	**37**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:20	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 10:18	
Surrogate: 4-Bromofluorobenzene	*109 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 10:18*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 14:40	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 14:40	

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Lab ID: 1902952-15

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*70.6 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:40*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
4,4′-DDE		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
4,4′-DDT		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Aldrin		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
alpha-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
alpha-Chlordane		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
beta-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Chlordane		ND	8.5	1	B9H0186	08/07/2019	08/14/19 14:22	
delta-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Dieldrin		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endosulfan I		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endosulfan II		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endosulfan sulfate		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endrin		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endrin aldehyde		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endrin ketone		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
gamma-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
gamma-Chlordane		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Heptachlor		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Heptachlor epoxide		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Methoxychlor		ND	5.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Toxaphene		ND	50	1	B9H0186	08/07/2019	08/14/19 14:22	
Surrogate: Decachlorobiphenyl	*83.8 %*		*32 - 91*		B9H0186	08/07/2019	*08/14/19 14:22*	
Surrogate: Tetrachloro-m-xylene	*91.8 %*		*38 - 93*		B9H0186	08/07/2019	*08/14/19 14:22*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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Lab ID: 1902952-15

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1221	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1232	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1242	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1248	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1254	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1260	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1262	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1268	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Surrogate: Decachlorobiphenyl	*102 %*	*40 - 121*		B9H0186	08/07/2019	*08/08/19 14:01*	
Surrogate: Tetrachloro-m-xylene	*96.1 %*	*55 - 105*		B9H0186	08/07/2019	*08/08/19 14:01*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-9-3

Lab ID: 1902952-16

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:27	
Arsenic	**1.4**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Barium	**73**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Chromium	**11**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Cobalt	**4.2**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Copper	**7.3**	2.2	1	B9H0171	08/08/2019	08/08/19 13:27	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Molybdenum	**2.6**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Nickel	**13**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Vanadium	**23**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Zinc	**29**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:29	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 10:37	
Surrogate: 4-Bromofluorobenzene	*107 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 10:37*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 15:11	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 15:11	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-9-3

Lab ID: 1902952-16

Diesel Range Organics by EPA 8015B **Analyst: HT**

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*91.8 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 15:11*	

Organochlorine Pesticides by EPA 8081 **Analyst: BL**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
4,4′-DDE		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
4,4′-DDT		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Aldrin		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
alpha-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
alpha-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
beta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Chlordane [2C]		ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:39	
delta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Dieldrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endosulfan I		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endosulfan II		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endosulfan sulfate		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endrin aldehyde		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endrin ketone		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
gamma-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
gamma-Chlordane [2C]		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Heptachlor		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Heptachlor epoxide		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Methoxychlor		ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Toxaphene		ND	50	1	B9H0187	08/07/2019	08/13/19 19:39	
Surrogate: Decachlorobiphenyl	*69.9 %*		*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:39*	
Surrogate: Tetrachloro-m-xylene	*77.3 %*		*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:39*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-8-1

Lab ID: 1902952-17

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:28	
Arsenic	**2.1**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Barium	**54**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Chromium	**10**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Cobalt	**4.6**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Copper	**8.3**	2.2	1	B9H0171	08/08/2019	08/08/19 13:28	
Lead	**6.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Nickel	**10**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Vanadium	**25**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Zinc	**34**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:31	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 13:22	
Surrogate: 4-Bromofluorobenzene	*108 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 13:22*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:52	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:52	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-8-1

Lab ID: 1902952-17

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*75.8 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 13:52*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
4,4′-DDE [2C]		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
4,4′-DDT		**5.0**	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Aldrin		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
alpha-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
alpha-Chlordane		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
beta-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Chlordane		ND	8.5	1	B9H0186	08/07/2019	08/14/19 14:32	
delta-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Dieldrin		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endosulfan I		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endosulfan II		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endosulfan sulfate		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endrin		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endrin aldehyde		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endrin ketone		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
gamma-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
gamma-Chlordane		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Heptachlor		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Heptachlor epoxide		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Methoxychlor		ND	5.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Toxaphene		ND	50	1	B9H0186	08/07/2019	08/14/19 14:32	
Surrogate: Decachlorobiphenyl	*91.6 %*		*32 - 91*		B9H0186	08/07/2019	*08/14/19 14:32*	S10
Surrogate: Tetrachloro-m-xylene	*96.4 %*		*38 - 93*		B9H0186	08/07/2019	*08/14/19 14:32*	S10

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-8-1

Lab ID: 1902952-17

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1221	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1232	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1242	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1248	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1254	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1260	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1262	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1268	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Surrogate: Decachlorobiphenyl	*114 %*	*40 - 121*		B9H0186	08/07/2019	*08/08/19 14:19*	
Surrogate: Tetrachloro-m-xylene	*96.2 %*	*55 - 105*		B9H0186	08/07/2019	*08/08/19 14:19*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-8-3

Lab ID: 1902952-18

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:29	
Arsenic	**3.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Barium	**160**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Cadmium	**1.6**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Chromium	**23**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Cobalt	**7.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Copper	**18**	2.2	1	B9H0171	08/08/2019	08/08/19 13:29	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Molybdenum	**3.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Nickel	**24**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Vanadium	**49**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Zinc	**52**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:33	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 11:14	
Surrogate: 4-Bromofluorobenzene	*104 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 11:14*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:43	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:43	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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Lab ID: 1902952-18

Diesel Range Organics by EPA 8015B — **Analyst: HT**

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*64.8 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 12:43*	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
4,4′-DDE		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
4,4′-DDT		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Aldrin		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
alpha-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
alpha-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
beta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Chlordane		ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:49	
delta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Dieldrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endosulfan I		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endosulfan II		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endosulfan sulfate		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endrin aldehyde		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endrin ketone		ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
gamma-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
gamma-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Heptachlor		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Heptachlor epoxide		ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Methoxychlor		ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Toxaphene		ND	50	1	B9H0187	08/07/2019	08/13/19 19:49	
Surrogate: Decachlorobiphenyl	*66.5 %*		*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:49*	
Surrogate: Tetrachloro-m-xylene	*76.0 %*		*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:49*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-1

Lab ID: 1902952-19

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:30	
Arsenic	**3.0**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Barium	**42**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Chromium	**6.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Cobalt	**3.9**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Copper	**9.4**	2.2	1	B9H0171	08/08/2019	08/08/19 13:30	
Lead	**7.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Nickel	**5.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Vanadium	**16**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Zinc	**28**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:35	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 11:33	
Surrogate: 4-Bromofluorobenzene	*108 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 11:33*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 14:10	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 14:10	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-1

Lab ID: 1902952-19

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*64.4 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:10*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
4,4′-DDE		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
4,4′-DDT		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Aldrin		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
alpha-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
alpha-Chlordane		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
beta-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Chlordane		ND	8.5	1	B9H0186	08/07/2019	08/14/19 14:43	
delta-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Dieldrin		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endosulfan I		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endosulfan II		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endosulfan sulfate		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endrin		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endrin aldehyde		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endrin ketone		ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
gamma-BHC		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
gamma-Chlordane		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Heptachlor		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Heptachlor epoxide		ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Methoxychlor		ND	5.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Toxaphene		ND	50	1	B9H0186	08/07/2019	08/14/19 14:43	
Surrogate: Decachlorobiphenyl	*96.6 %*		*32 - 91*		B9H0186	08/07/2019	*08/14/19 14:43*	S10
Surrogate: Tetrachloro-m-xylene	*91.2 %*		*38 - 93*		B9H0186	08/07/2019	*08/14/19 14:43*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-1

Lab ID: 1902952-19

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1221	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1232	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1242	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1248	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1254	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1260	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1262	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1268	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Surrogate: Decachlorobiphenyl	*140 %*	*40 - 121*		B9H0186	08/07/2019	*08/08/19 17:15*	S10
Surrogate: Tetrachloro-m-xylene	*94.7 %*	*55 - 105*		B9H0186	08/07/2019	*08/08/19 17:15*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-3

Lab ID: 1902952-20

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:31	
Arsenic	**2.0**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Barium	**90**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Chromium	**14**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Cobalt	**4.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Copper	**9.0**	2.2	1	B9H0171	08/08/2019	08/08/19 13:31	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Molybdenum	**2.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Nickel	**15**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Vanadium	**29**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Zinc	**33**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:42	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 11:51	
Surrogate: 4-Bromofluorobenzene	*109 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 11:51*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:26	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:26	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-3

Lab ID: 1902952-20

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*69.0 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 12:26*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
4,4′-DDE		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
4,4′-DDT		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Aldrin		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
alpha-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
alpha-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
beta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Chlordane		ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:00	
delta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Dieldrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endosulfan I		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endosulfan II		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endosulfan sulfate		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endrin aldehyde		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endrin ketone		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
gamma-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
gamma-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Heptachlor		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Heptachlor epoxide		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Methoxychlor		ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Toxaphene		ND	50	1	B9H0187	08/07/2019	08/13/19 20:00	
Surrogate: Decachlorobiphenyl	*60.2 %*		*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:00*	
Surrogate: Tetrachloro-m-xylene	*69.4 %*		*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:00*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-11-1

Lab ID: 1902952-21

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:35	
Arsenic	**2.1**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Barium	**35**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Chromium	**5.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Cobalt	**3.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Copper	**7.4**	2.2	1	B9H0171	08/08/2019	08/08/19 13:35	
Lead	**1.4**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Nickel	**4.9**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Vanadium	**14**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Zinc	**18**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:44	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 12:10	
Surrogate: 4-Bromofluorobenzene	*92.4 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 12:10*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:35	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:35	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-11-1

Lab ID: 1902952-21

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*78.8 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 13:35*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
4,4′-DDE	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
4,4′-DDT	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Aldrin	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
alpha-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
alpha-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
beta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Chlordane	ND	8.5	1	B9H0186	08/07/2019	08/14/19 14:53	
delta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Dieldrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endosulfan I	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endosulfan II	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endosulfan sulfate	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endrin aldehyde	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endrin ketone	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
gamma-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
gamma-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Heptachlor	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Heptachlor epoxide	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Methoxychlor	ND	5.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Toxaphene	ND	50	1	B9H0186	08/07/2019	08/14/19 14:53	
Surrogate: Decachlorobiphenyl	*89.3 %*	*32 - 91*		B9H0186	08/07/2019	*08/14/19 14:53*	
Surrogate: Tetrachloro-m-xylene	*90.2 %*	*38 - 93*		B9H0186	08/07/2019	*08/14/19 14:53*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-11-1

Lab ID: 1902952-21

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1221	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1232	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1242	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1248	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1254	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1260	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1262	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1268	ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Surrogate: Decachlorobiphenyl	*120 %*	*40 - 121*		B9H0186	08/07/2019	*08/08/19 14:48*	
Surrogate: Tetrachloro-m-xylene	*96.5 %*	*55 - 105*		B9H0186	08/07/2019	*08/08/19 14:48*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-11-3

Lab ID: 1902952-22

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:36	
Arsenic	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Barium	**19**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Chromium	**4.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Cobalt	**2.2**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Copper	**2.9**	2.2	1	B9H0171	08/08/2019	08/08/19 13:36	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Nickel	**3.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Vanadium	**9.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Zinc	**13**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:46	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 12:29	
Surrogate: 4-Bromofluorobenzene	*107 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 12:29*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:01	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:01	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-11-3

Lab ID: 1902952-22

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*110 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 13:01*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
4,4′-DDE		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
4,4′-DDT		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Aldrin		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
alpha-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
alpha-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
beta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Chlordane		ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:10	
delta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Dieldrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endosulfan I		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endosulfan II		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endosulfan sulfate		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endrin aldehyde		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endrin ketone		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
gamma-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
gamma-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Heptachlor		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Heptachlor epoxide		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Methoxychlor		ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Toxaphene		ND	50	1	B9H0187	08/07/2019	08/13/19 20:10	
Surrogate: Decachlorobiphenyl	*89.1 %*		*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:10*	
Surrogate: Tetrachloro-m-xylene	*86.8 %*		*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:10*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-2-1

Lab ID: 1902952-23

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**3.7**	1.0	1	B9H0172	08/08/2019	08/09/19 15:45	
Lead	**4.5**	1.0	1	B9H0172	08/08/2019	08/09/19 15:45	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:20	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:20	
Surrogate: Decachlorobiphenyl	*82.3 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:20*	
Surrogate: Tetrachloro-m-xylene	*83.1 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:20*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-2-3

Lab ID: 1902952-24

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.8**	1.0	1	B9H0172	08/08/2019	08/09/19 15:46	
Lead	**2.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:46	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:31	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:31	
Surrogate: Decachlorobiphenyl	*72.3 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:31*	
Surrogate: Tetrachloro-m-xylene	*69.4 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:31*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-3-1

Lab ID: 1902952-25

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**4.7**	1.0	1	B9H0172	08/08/2019	08/09/19 15:47	
Lead	**5.9**	1.0	1	B9H0172	08/08/2019	08/09/19 15:47	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:41	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:41	
Surrogate: Decachlorobiphenyl	*76.5 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:41*	
Surrogate: Tetrachloro-m-xylene	*71.6 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:41*	

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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-3-3

Lab ID: 1902952-26

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.9**	1.0	1	B9H0172	08/08/2019	08/09/19 15:48	
Lead	**2.3**	1.0	1	B9H0172	08/08/2019	08/09/19 15:48	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:52	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:52	
Surrogate: Decachlorobiphenyl	*73.0 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:52*	
Surrogate: Tetrachloro-m-xylene	*70.9 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:52*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-1-1

Lab ID: 1902952-27

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**2.8**	1.0	1	B9H0172	08/08/2019	08/09/19 15:49	
Lead	**3.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:49	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 21:02	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 21:02	
Surrogate: Decachlorobiphenyl	*35.9 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 21:02*	
Surrogate: Tetrachloro-m-xylene	*50.2 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 21:02*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-1-3
Lab ID: 1902952-28

Total Metals by ICP-AES EPA 6010B

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**2.0**	1.0	1	B9H0172	08/08/2019	08/09/19 15:50	
Lead	**2.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:50	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
4,4´-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
4,4´-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 21:13	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 21:13	
Surrogate: Decachlorobiphenyl	*65.8 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 21:13*	
Surrogate: Tetrachloro-m-xylene	*72.8 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 21:13*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-12-1

Lab ID: 1902952-29

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:37	
Arsenic	**1.7**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Barium	**51**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Chromium	**12**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Cobalt	**5.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Copper	**8.3**	2.2	1	B9H0171	08/08/2019	08/08/19 13:37	
Lead	**6.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Nickel	**9.7**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Vanadium	**26**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Zinc	**38**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:48	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 13:04	
Surrogate: 4-Bromofluorobenzene	*102 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 13:04*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:18	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:18	

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Lab ID: 1902952-29

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*113 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 13:18*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
4,4´-DDE [2C]	**2.3**	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
4,4´-DDT	**13**	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Aldrin	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
alpha-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
alpha-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
beta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Chlordane	ND	8.5	1	B9H0186	08/07/2019	08/14/19 15:04	
delta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Dieldrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endosulfan I	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endosulfan II	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endosulfan sulfate	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endrin aldehyde	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endrin ketone	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
gamma-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
gamma-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Heptachlor	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Heptachlor epoxide	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Methoxychlor	ND	5.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Toxaphene	ND	50	1	B9H0186	08/07/2019	08/14/19 15:04	
Surrogate: Decachlorobiphenyl	*54.7 %*	*32 - 91*		B9H0186	08/07/2019	*08/14/19 15:04*	
Surrogate: Tetrachloro-m-xylene	*67.2 %*	*38 - 93*		B9H0186	08/07/2019	*08/14/19 15:04*	

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Client Sample ID HA-12-1

Lab ID: 1902952-29

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1221	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1232	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1242	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1248	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1254	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1260	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1262	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1268	ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Surrogate: Decachlorobiphenyl	*95.6 %*	*40 - 121*		B9H0186	08/07/2019	*08/08/19 15:06*	
Surrogate: Tetrachloro-m-xylene	*78.3 %*	*55 - 105*		B9H0186	08/07/2019	*08/08/19 15:06*	

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Client Sample ID HA-12-3

Lab ID: 1902952-30

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:38	
Arsenic	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Barium	**19**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Chromium	**4.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Cobalt	**2.9**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Copper	**2.4**	2.2	1	B9H0171	08/08/2019	08/08/19 13:38	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Nickel	**3.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Vanadium	**14**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Zinc	**16**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:50	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 13:41	
Surrogate: 4-Bromofluorobenzene	*109 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 13:41*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:09	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:09	

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Lab ID: 1902952-30

Diesel Range Organics by EPA 8015B **Analyst: HT**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*115 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 12:09*	

Organochlorine Pesticides by EPA 8081 **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 21:23	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 21:23	
Surrogate: Decachlorobiphenyl	*83.3 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 21:23*	
Surrogate: Tetrachloro-m-xylene	*82.6 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 21:23*	

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QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0172 - EPA 3050B_S										
Blank (B9H0172-BLK1)						Prepared: 8/8/2019 Analyzed: 8/9/2019				
Arsenic	ND	1.0	0.12							
Lead	ND	1.0	0.18							
LCS (B9H0172-BS1)						Prepared: 8/8/2019 Analyzed: 8/9/2019				
Arsenic	45.5832	1.0	0.12	50.0000		91.2	80 - 120			
Lead	46.2487	1.0	0.18	50.0000		92.5	80 - 120			
Matrix Spike (B9H0172-MS1)			**Source: 1902952-07**			Prepared: 8/8/2019 Analyzed: 8/9/2019				
Arsenic	97.5942	1.0	0.12	125.000	5.10405	74.0	46 - 97			
Lead	116.252	1.0	0.18	125.000	30.7390	68.4	33 - 121			
Matrix Spike Dup (B9H0172-MSD1)			**Source: 1902952-07**			Prepared: 8/8/2019 Analyzed: 8/9/2019				
Arsenic	94.5586	1.0	0.12	125.000	5.10405	71.6	46 - 97	3.16	20	
Lead	114.409	1.0	0.18	125.000	30.7390	66.9	33 - 121	1.60	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0171 - EPA 3050B_S										
Blank (B9H0171-BLK1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B9H0171-BS1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
Antimony	43.0899	2.0	0.51	50.0000		86.2	80 - 120			
Arsenic	41.5195	1.0	0.12	50.0000		83.0	80 - 120			
Barium	45.0051	1.0	0.12	50.0000		90.0	80 - 120			
Beryllium	44.5959	1.0	0.03	50.0000		89.2	80 - 120			
Cadmium	42.4008	1.0	0.14	50.0000		84.8	80 - 120			
Chromium	45.6650	1.0	0.26	50.0000		91.3	80 - 120			
Cobalt	44.5715	1.0	0.07	50.0000		89.1	80 - 120			
Copper	47.3240	2.0	0.19	50.0000		94.6	80 - 120			
Lead	43.3025	1.0	0.18	50.0000		86.6	80 - 120			
Molybdenum	44.1188	1.0	0.12	50.0000		88.2	80 - 120			
Nickel	44.5471	1.0	0.18	50.0000		89.1	80 - 120			
Selenium	40.5898	1.0	0.40	50.0000		81.2	80 - 120			
Silver	40.9626	1.0	0.12	50.0000		81.9	80 - 120			
Thallium	45.0212	1.0	0.38	50.0000		90.0	80 - 120			
Vanadium	46.3634	1.0	0.06	50.0000		92.7	80 - 120			
Zinc	41.4800	1.0	0.15	50.0000		83.0	80 - 120			
Matrix Spike (B9H0171-MS1)			**Source: 1902952-15**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
Antimony	71.2989	2.2	0.56	251.256	ND	28.4	21 - 95			
Arsenic	87.9624	1.1	0.13	125.628	2.95776	67.7	46 - 97			
Barium	163.756	1.1	0.13	125.628	79.8242	66.8	24 - 123			
Beryllium	87.0010	1.1	0.03	125.628	ND	69.3	47 - 99			
Cadmium	79.7667	1.1	0.15	125.628	0.934458	62.8	43 - 95			

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0171 - EPA 3050B_S (continued)										
Matrix Spike (B9H0171-MS1) - Continued			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
Chromium	100.902	1.1	0.28	125.628	15.2612	68.2	39 - 109			
Cobalt	88.3256	1.1	0.07	125.628	5.81627	65.7	45 - 101			
Copper	104.338	2.2	0.21	125.628	10.1715	75.0	44 - 118			
Lead	82.4434	1.1	0.20	125.628	0.750309	65.0	33 - 121			
Molybdenum	88.2145	1.1	0.14	125.628	2.51554	68.2	45 - 101			
Nickel	98.9734	1.1	0.20	125.628	17.4698	64.9	37 - 104			
Selenium	82.4432	1.1	0.44	125.628	ND	65.6	43 - 96			
Silver	83.6754	1.1	0.13	125.628	ND	66.6	49 - 104			
Thallium	71.9335	1.1	0.42	125.628	ND	57.3	23 - 103			
Vanadium	117.273	1.1	0.07	125.628	32.3580	67.6	42 - 109			
Zinc	115.031	1.1	0.17	125.628	37.2183	61.9	22 - 114			
Matrix Spike Dup (B9H0171-MSD1)			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
Antimony	70.6335	2.2	0.56	250.000	ND	28.3	21 - 95	0.938	20	
Arsenic	88.0012	1.1	0.13	125.000	2.95776	68.0	46 - 97	0.0440	20	
Barium	164.945	1.1	0.13	125.000	79.8242	68.1	24 - 123	0.724	20	
Beryllium	87.4078	1.1	0.03	125.000	ND	69.9	47 - 99	0.466	20	
Cadmium	79.8908	1.1	0.15	125.000	0.934458	63.2	43 - 95	0.155	20	
Chromium	101.597	1.1	0.28	125.000	15.2612	69.1	39 - 109	0.686	20	
Cobalt	88.9452	1.1	0.07	125.000	5.81627	66.5	45 - 101	0.699	20	
Copper	105.211	2.2	0.21	125.000	10.1715	76.0	44 - 118	0.834	20	
Lead	82.5522	1.1	0.20	125.000	0.750309	65.4	33 - 121	0.132	20	
Molybdenum	88.5988	1.1	0.14	125.000	2.51554	68.9	45 - 101	0.435	20	
Nickel	98.9968	1.1	0.20	125.000	17.4698	65.2	37 - 104	0.0236	20	
Selenium	83.2136	1.1	0.44	125.000	ND	66.6	43 - 96	0.930	20	
Silver	84.3853	1.1	0.13	125.000	ND	67.5	49 - 104	0.845	20	
Thallium	72.8163	1.1	0.42	125.000	ND	58.3	23 - 103	1.22	20	
Vanadium	118.474	1.1	0.07	125.000	32.3580	68.9	42 - 109	1.02	20	
Zinc	115.741	1.1	0.17	125.000	37.2183	62.8	22 - 114	0.616	20	

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0173 - EPA 7471_S										
Blank (B9H0173-BLK1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Mercury	ND	0.10	0.007							
LCS (B9H0173-BS1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Mercury	0.432213	0.10	0.007	0.416667		104	80 - 120			
Matrix Spike (B9H0173-MS1)			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
Mercury	0.473573	0.10	0.007	0.409836	0.022695	110	70 - 130			
Matrix Spike Dup (B9H0173-MSD1)			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
Mercury	0.492884	0.10	0.007	0.416667	0.022695	113	70 - 130	4.00	20	

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0173 - EPA 7471_S									
Post Spike (B9H0173-PS1)			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019				
Mercury	0.002473		2.00000E-3	0.000272	110	85 - 115			

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Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0167 - GCVOA_S										
Blank (B9H0167-BLK1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
Gasoline Range Organics	ND	1.0	0.20							
Surrogate: 4-Bromofluorobenzene	*0.2128*			*0.200000*		*106*	*45 - 149*			
LCS (B9H0167-BS1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
Gasoline Range Organics	4.96000	1.0	0.20	5.00000		99.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.2297*			*0.200000*		*115*	*45 - 149*			
Matrix Spike (B9H0167-MS1)			**Source: 1902952-22**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
Gasoline Range Organics	4.16400	1.0	0.20	5.00000	ND	83.3	24 - 129			
Surrogate: 4-Bromofluorobenzene	*0.2320*			*0.200000*		*116*	*45 - 149*			
Matrix Spike Dup (B9H0167-MSD1)			**Source: 1902952-22**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
Gasoline Range Organics	4.39700	1.0	0.20	5.00000	ND	87.9	24 - 129	5.44	20	
Surrogate: 4-Bromofluorobenzene	*0.2257*			*0.200000*		*113*	*45 - 149*			

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Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0174 - GCSEMI_DRO_S										
Blank (B9H0174-BLK1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
DRO	ND	10	10							
ORO	ND	10	10							
Surrogate: p-Terphenyl	*91.46*			*80.0000*		*114*	*58 - 172*			
LCS (B9H0174-BS1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
DRO	1105.92	10	10	1000.00		111	71 - 165			
Surrogate: p-Terphenyl	*81.96*			*80.0000*		*102*	*58 - 172*			
Matrix Spike (B9H0174-MS1)			**Source: 1902952-03**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
DRO	1030.58	10	10	1000.00	ND	103	61 - 171			
Surrogate: p-Terphenyl	*52.56*			*80.0000*		*65.7*	*58 - 172*			
Matrix Spike Dup (B9H0174-MSD1)			**Source: 1902952-03**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
DRO	997.540	10	10	1000.00	ND	99.8	61 - 171	3.26	20	
Surrogate: p-Terphenyl	*50.42*			*80.0000*		*63.0*	*58 - 172*			

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Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S										
Blank (B9H0186-BLK1)							Prepared: 8/7/2019 Analyzed: 8/14/2019			
4,4´-DDD	ND	2.0	0.07							
4,4´-DDD [2C]	ND	2.0	0.07							
4,4´-DDE	ND	2.0	0.11							
4,4´-DDE [2C]	ND	2.0	0.11							
4,4´-DDT	ND	2.0	0.10							
4,4´-DDT [2C]	ND	2.0	0.10							
Aldrin	ND	1.0	0.12							
Aldrin [2C]	ND	1.0	0.12							
alpha-BHC	ND	1.0	0.11							
alpha-BHC [2C]	ND	1.0	0.11							
alpha-Chlordane	ND	1.0	0.12							
alpha-Chlordane [2C]	ND	1.0	0.12							
beta-BHC	ND	1.0	0.06							
beta-BHC [2C]	ND	1.0	0.06							
Chlordane	ND	8.5	1.1							
Chlordane [2C]	ND	8.5	1.1							
delta-BHC	ND	1.0	0.12							
delta-BHC [2C]	ND	1.0	0.12							
Dieldrin	ND	2.0	0.26							
Dieldrin [2C]	ND	2.0	0.26							
Endosulfan I	ND	1.0	0.10							
Endosulfan I [2C]	ND	1.0	0.10							
Endosulfan II	ND	2.0	0.15							
Endosulfan II [2C]	ND	2.0	0.15							
Endosulfan sulfate	ND	2.0	0.16							
Endosulfan Sulfate [2C]	ND	2.0	0.16							
Endrin	ND	2.0	0.14							
Endrin [2C]	ND	2.0	0.14							
Endrin aldehyde	ND	2.0	0.31							
Endrin aldehyde [2C]	ND	2.0	0.31							
Endrin ketone	ND	2.0	0.13							
Endrin ketone [2C]	ND	2.0	0.13							
gamma-BHC	ND	1.0	0.10							
gamma-BHC [2C]	ND	1.0	0.10							
gamma-Chlordane	ND	1.0	0.89							
gamma-Chlordane [2C]	ND	1.0	0.89							
Heptachlor	ND	1.0	0.12							
Heptachlor [2C]	ND	1.0	0.12							
Heptachlor epoxide	ND	1.0	0.09							
Heptachlor epoxide [2C]	ND	1.0	0.09							

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S (continued)										
Blank (B9H0186-BLK1) - Continued					Prepared: 8/7/2019 Analyzed: 8/14/2019					
Methoxychlor	ND	5.0	0.18							
Methoxychlor [2C]	ND	5.0	0.18							
Toxaphene	ND	50	4.7							
Toxaphene [2C]	ND	50	4.7							
Surrogate: Decachlorobiphenyl	*13.09*			*16.6667*		*78.5*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*13.31*			*16.6667*		*79.8*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*12.89*			*16.6667*		*77.4*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*12.87*			*16.6667*		*77.2*	*38 - 93*			
LCS (B9H0186-BS1)					Prepared: 8/7/2019 Analyzed: 8/14/2019					
4,4′-DDD	16.4852	2.0	0.07	16.6667		98.9	66 - 112			
4,4′-DDD [2C]	15.1522	2.0	0.07	16.6667		90.9	66 - 112			
4,4′-DDE	17.7733	2.0	0.11	16.6667		107	62 - 112			
4,4′-DDE [2C]	16.2373	2.0	0.11	16.6667		97.4	62 - 112			
4,4′-DDT	19.7092	2.0	0.10	16.6667		118	48 - 90			L3
4,4′-DDT [2C]	17.4188	2.0	0.10	16.6667		105	48 - 90			L3
Aldrin	17.2962	1.0	0.12	16.6667		104	58 - 104			
Aldrin [2C]	14.9898	1.0	0.12	16.6667		89.9	58 - 104			
alpha-BHC	16.6747	1.0	0.11	16.6667		100	57 - 105			
alpha-BHC [2C]	14.3693	1.0	0.11	16.6667		86.2	57 - 105			
alpha-Chlordane	18.0437	1.0	0.12	16.6667		108	62 - 108			L3
alpha-Chlordane [2C]	15.1743	1.0	0.12	16.6667		91.0	62 - 108			
beta-BHC	17.1608	1.0	0.06	16.6667		103	59 - 106			
beta-BHC [2C]	14.9342	1.0	0.06	16.6667		89.6	59 - 106			
delta-BHC	11.5692	1.0	0.12	16.6667		69.4	63 - 115			
delta-BHC [2C]	10.5265	1.0	0.12	16.6667		63.2	63 - 115			
Dieldrin	16.9843	2.0	0.26	16.6667		102	59 - 102			
Dieldrin [2C]	15.5013	2.0	0.26	16.6667		93.0	59 - 102			
Endosulfan I	15.3778	1.0	0.10	16.6667		92.3	61 - 99			
Endosulfan I [2C]	13.9408	1.0	0.10	16.6667		83.6	61 - 99			
Endosulfan II	17.4443	2.0	0.15	16.6667		105	65 - 105			
Endosulfan II [2C]	15.9348	2.0	0.15	16.6667		95.6	65 - 105			
Endosulfan sulfate	15.7507	2.0	0.16	16.6667		94.5	59 - 107			
Endosulfan Sulfate [2C]	14.8515	2.0	0.16	16.6667		89.1	59 - 107			
Endrin	17.9012	2.0	0.14	16.6667		107	65 - 113			
Endrin [2C]	16.5408	2.0	0.14	16.6667		99.2	65 - 113			
Endrin aldehyde	16.5822	2.0	0.31	16.6667		99.5	61 - 109			
Endrin aldehyde [2C]	14.9492	2.0	0.31	16.6667		89.7	61 - 109			
Endrin ketone	18.1203	2.0	0.13	16.6667		109	56 - 97			L3
Endrin ketone [2C]	16.6793	2.0	0.13	16.6667		100	56 - 97			L3

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S (continued)										
LCS (B9H0186-BS1) - Continued					Prepared: 8/7/2019 Analyzed: 8/14/2019					
gamma-BHC	16.6692	1.0	0.10	16.6667		100	57 - 101			
gamma-BHC [2C]	15.0193	1.0	0.10	16.6667		90.1	57 - 101			
gamma-Chlordane	18.0120	1.0	0.89	16.6667		108	56 - 125			
gamma-Chlordane [2C]	15.4827	1.0	0.89	16.6667		92.9	56 - 125			
Heptachlor	17.4825	1.0	0.12	16.6667		105	61 - 105			
Heptachlor [2C]	14.7722	1.0	0.12	16.6667		88.6	61 - 105			
Heptachlor epoxide	16.6055	1.0	0.09	16.6667		99.6	59 - 97			L3
Heptachlor epoxide [2C]	14.3123	1.0	0.09	16.6667		85.9	59 - 97			
Methoxychlor	17.6023	5.0	0.18	16.6667		106	68 - 118			
Methoxychlor [2C]	19.0527	5.0	0.18	16.6667		114	68 - 118			
Surrogate: Decachlorobiphenyl	*14.84*			*16.6667*		*89.0*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.93*			*16.6667*		*89.6*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*14.71*			*16.6667*		*88.3*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*14.74*			*16.6667*		*88.4*	*38 - 93*			
Matrix Spike (B9H0186-MS1)			**Source: 1902952-15**		Prepared: 8/7/2019 Analyzed: 8/14/2019					
4,4′-DDD	15.7068	2.0	0.07	16.6667	ND	94.2	33 - 116			
4,4′-DDD [2C]	15.3867	2.0	0.07	16.6667	ND	92.3	33 - 116			
4,4′-DDE	16.1115	2.0	0.11	16.6667	ND	96.7	29 - 128			
4,4′-DDE [2C]	16.1998	2.0	0.11	16.6667	ND	97.2	29 - 128			
4,4′-DDT	20.2300	2.0	0.10	16.6667	ND	121	27 - 109			M2
4,4′-DDT [2C]	17.5658	2.0	0.10	16.6667	ND	105	27 - 109			
Aldrin	16.4507	1.0	0.12	16.6667	ND	98.7	34 - 110			
Aldrin [2C]	15.1185	1.0	0.12	16.6667	ND	90.7	34 - 110			
alpha-BHC	17.0002	1.0	0.11	16.6667	ND	102	39 - 107			
alpha-BHC [2C]	15.6443	1.0	0.11	16.6667	ND	93.9	39 - 107			
alpha-Chlordane	16.6765	1.0	0.12	16.6667	ND	100	37 - 111			
alpha-Chlordane [2C]	15.3513	1.0	0.12	16.6667	ND	92.1	37 - 111			
beta-BHC	17.0043	1.0	0.06	16.6667	ND	102	33 - 111			
beta-BHC [2C]	15.7978	1.0	0.06	16.6667	ND	94.8	33 - 111			
delta-BHC	13.8767	1.0	0.12	16.6667	ND	83.3	25 - 122			
delta-BHC [2C]	13.0572	1.0	0.12	16.6667	ND	78.3	25 - 122			
Dieldrin	16.1138	2.0	0.26	16.6667	ND	96.7	28 - 114			
Dieldrin [2C]	15.9448	2.0	0.26	16.6667	ND	95.7	28 - 114			
Endosulfan I	14.5488	1.0	0.10	16.6667	ND	87.3	35 - 107			
Endosulfan I [2C]	14.3068	1.0	0.10	16.6667	ND	85.8	35 - 107			
Endosulfan II	16.7743	2.0	0.15	16.6667	ND	101	13 - 122			
Endosulfan II [2C]	16.6003	2.0	0.15	16.6667	ND	99.6	13 - 122			
Endosulfan sulfate	15.8245	2.0	0.16	16.6667	ND	94.9	13 - 120			
Endosulfan Sulfate [2C]	15.8338	2.0	0.16	16.6667	ND	95.0	13 - 120			

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike (B9H0186-MS1) - Continued			**Source: 1902952-15**			Prepared: 8/7/2019 Analyzed: 8/14/2019				
Endrin	17.1997	2.0	0.14	16.6667	ND	103	31 - 121			
Endrin [2C]	17.0183	2.0	0.14	16.6667	ND	102	31 - 121			
Endrin aldehyde	16.2753	2.0	0.31	16.6667	ND	97.7	18 - 129			
Endrin aldehyde [2C]	16.9370	2.0	0.31	16.6667	ND	102	18 - 129			
Endrin ketone	17.3987	2.0	0.13	16.6667	ND	104	14 - 113			
Endrin ketone [2C]	17.3973	2.0	0.13	16.6667	ND	104	14 - 113			
gamma-BHC	16.8638	1.0	0.10	16.6667	ND	101	34 - 104			
gamma-BHC [2C]	16.3010	1.0	0.10	16.6667	ND	97.8	34 - 104			
gamma-Chlordane	16.6280	1.0	0.89	16.6667	ND	99.8	35 - 121			
gamma-Chlordane [2C]	15.4567	1.0	0.89	16.6667	ND	92.7	35 - 121			
Heptachlor	17.4297	1.0	0.12	16.6667	ND	105	35 - 110			
Heptachlor [2C]	15.0568	1.0	0.12	16.6667	ND	90.3	35 - 110			
Heptachlor epoxide	15.7282	1.0	0.09	16.6667	ND	94.4	31 - 106			
Heptachlor epoxide [2C]	14.6510	1.0	0.09	16.6667	ND	87.9	31 - 106			
Methoxychlor	17.5010	5.0	0.18	16.6667	ND	105	21 - 128			
Methoxychlor [2C]	18.7532	5.0	0.18	16.6667	ND	113	21 - 128			
Surrogate: Decachlorobiphenyl	*12.85*			*16.6667*		*77.1*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.40*			*16.6667*		*86.4*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*14.58*			*16.6667*		*87.5*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*15.48*			*16.6667*		*92.9*	*38 - 93*			
Matrix Spike Dup (B9H0186-MSD1)			**Source: 1902952-15**			Prepared: 8/7/2019 Analyzed: 8/14/2019				
4,4′-DDD	15.8555	2.0	0.07	16.6667	ND	95.1	33 - 116	0.942	20	
4,4′-DDD [2C]	15.5512	2.0	0.07	16.6667	ND	93.3	33 - 116	1.06	20	
4,4′-DDE	16.6253	2.0	0.11	16.6667	ND	99.8	29 - 128	3.14	20	
4,4′-DDE [2C]	16.3263	2.0	0.11	16.6667	ND	98.0	29 - 128	0.778	20	
4,4′-DDT	20.5288	2.0	0.10	16.6667	ND	123	27 - 109	1.47	20	
4,4′-DDT [2C]	17.6840	2.0	0.10	16.6667	ND	106	27 - 109	0.670	20	
Aldrin	16.7515	1.0	0.12	16.6667	ND	101	34 - 110	1.81	20	
Aldrin [2C]	15.0953	1.0	0.12	16.6667	ND	90.6	34 - 110	0.153	20	
alpha-BHC	17.1610	1.0	0.11	16.6667	ND	103	39 - 107	0.942	20	
alpha-BHC [2C]	15.5887	1.0	0.11	16.6667	ND	93.5	39 - 107	0.356	20	
alpha-Chlordane	17.1547	1.0	0.12	16.6667	ND	103	37 - 111	2.83	20	
alpha-Chlordane [2C]	15.5353	1.0	0.12	16.6667	ND	93.2	37 - 111	1.19	20	
beta-BHC	17.5587	1.0	0.06	16.6667	ND	105	33 - 111	3.21	20	
beta-BHC [2C]	15.9552	1.0	0.06	16.6667	ND	95.7	33 - 111	0.991	20	
delta-BHC	14.2667	1.0	0.12	16.6667	ND	85.6	25 - 122	2.77	20	
delta-BHC [2C]	13.2487	1.0	0.12	16.6667	ND	79.5	25 - 122	1.46	20	
Dieldrin	16.4308	2.0	0.26	16.6667	ND	98.6	28 - 114	1.95	20	
Dieldrin [2C]	15.9810	2.0	0.26	16.6667	ND	95.9	28 - 114	0.227	20	

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike Dup (B9H0186-MSD1) - Continued			**Source: 1902952-15**		Prepared: 8/7/2019 Analyzed: 8/14/2019					
Endosulfan I	14.9552	1.0	0.10	16.6667	ND	89.7	35 - 107	2.75	20	
Endosulfan I [2C]	14.3557	1.0	0.10	16.6667	ND	86.1	35 - 107	0.341	20	
Endosulfan II	17.2317	2.0	0.15	16.6667	ND	103	13 - 122	2.69	20	
Endosulfan II [2C]	16.7575	2.0	0.15	16.6667	ND	101	13 - 122	0.942	20	
Endosulfan sulfate	16.1913	2.0	0.16	16.6667	ND	97.1	13 - 120	2.29	20	
Endosulfan Sulfate [2C]	16.0150	2.0	0.16	16.6667	ND	96.1	13 - 120	1.14	20	
Endrin	17.5123	2.0	0.14	16.6667	ND	105	31 - 121	1.80	20	
Endrin [2C]	17.2105	2.0	0.14	16.6667	ND	103	31 - 121	1.12	20	
Endrin aldehyde	16.7880	2.0	0.31	16.6667	ND	101	18 - 129	3.10	20	
Endrin aldehyde [2C]	17.1137	2.0	0.31	16.6667	ND	103	18 - 129	1.04	20	
Endrin ketone	17.8327	2.0	0.13	16.6667	ND	107	14 - 113	2.46	20	
Endrin ketone [2C]	17.6607	2.0	0.13	16.6667	ND	106	14 - 113	1.50	20	
gamma-BHC	16.9830	1.0	0.10	16.6667	ND	102	34 - 104	0.704	20	
gamma-BHC [2C]	16.2492	1.0	0.10	16.6667	ND	97.5	34 - 104	0.318	20	
gamma-Chlordane	17.0485	1.0	0.89	16.6667	ND	102	35 - 121	2.50	20	
gamma-Chlordane [2C]	15.5267	1.0	0.89	16.6667	ND	93.2	35 - 121	0.452	20	
Heptachlor	17.2875	1.0	0.12	16.6667	ND	104	35 - 110	0.819	20	
Heptachlor [2C]	15.1448	1.0	0.12	16.6667	ND	90.9	35 - 110	0.583	20	
Heptachlor epoxide	16.0632	1.0	0.09	16.6667	ND	96.4	31 - 106	2.11	20	
Heptachlor epoxide [2C]	14.6975	1.0	0.09	16.6667	ND	88.2	31 - 106	0.317	20	
Methoxychlor	17.7438	5.0	0.18	16.6667	ND	106	21 - 128	1.38	20	
Methoxychlor [2C]	18.8570	5.0	0.18	16.6667	ND	113	21 - 128	0.552	20	
Surrogate: Decachlorobiphenyl	*14.00*			*16.6667*		*84.0*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.57*			*16.6667*		*87.4*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*14.78*			*16.6667*		*88.7*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*15.39*			*16.6667*		*92.3*	*38 - 93*			

Certificate of Analysis

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735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S										
Blank (B9H0187-BLK1)							Prepared: 8/7/2019 Analyzed: 8/13/2019			
4,4´-DDD	ND	2.0	0.07							
4,4´-DDD [2C]	ND	2.0	0.07							
4,4´-DDE	ND	2.0	0.11							
4,4´-DDE [2C]	ND	2.0	0.11							
4,4´-DDT	ND	2.0	0.10							
4,4´-DDT [2C]	ND	2.0	0.10							
Aldrin	ND	1.0	0.12							
Aldrin [2C]	ND	1.0	0.12							
alpha-BHC	ND	1.0	0.11							
alpha-BHC [2C]	ND	1.0	0.11							
alpha-Chlordane	ND	1.0	0.12							
alpha-Chlordane [2C]	ND	1.0	0.12							
beta-BHC	ND	1.0	0.06							
beta-BHC [2C]	ND	1.0	0.06							
Chlordane	ND	8.5	1.1							
Chlordane [2C]	ND	8.5	1.1							
delta-BHC	ND	1.0	0.12							
delta-BHC [2C]	ND	1.0	0.12							
Dieldrin	ND	2.0	0.26							
Dieldrin [2C]	ND	2.0	0.26							
Endosulfan I	ND	1.0	0.10							
Endosulfan I [2C]	ND	1.0	0.10							
Endosulfan II	ND	2.0	0.15							
Endosulfan II [2C]	ND	2.0	0.15							
Endosulfan sulfate	ND	2.0	0.16							
Endosulfan Sulfate [2C]	ND	2.0	0.16							
Endrin	ND	2.0	0.14							
Endrin [2C]	ND	2.0	0.14							
Endrin aldehyde	ND	2.0	0.31							
Endrin aldehyde [2C]	ND	2.0	0.31							
Endrin ketone	ND	2.0	0.13							
Endrin ketone [2C]	ND	2.0	0.13							
gamma-BHC	ND	1.0	0.10							
gamma-BHC [2C]	ND	1.0	0.10							
gamma-Chlordane	ND	1.0	0.89							
gamma-Chlordane [2C]	ND	1.0	0.89							
Heptachlor	ND	1.0	0.12							
Heptachlor [2C]	ND	1.0	0.12							
Heptachlor epoxide	ND	1.0	0.09							
Heptachlor epoxide [2C]	ND	1.0	0.09							

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San Bernardino , CA 92408	Reported : 08/15/2019

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S (continued)										
Blank (B9H0187-BLK1) - Continued					Prepared: 8/7/2019 Analyzed: 8/13/2019					
Methoxychlor	ND	5.0	0.18							
Methoxychlor [2C]	ND	5.0	0.18							
Toxaphene	ND	50	4.7							
Toxaphene [2C]	ND	50	4.7							
Surrogate: Decachlorobiphenyl	*13.86*			*16.6667*		*83.2*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.57*			*16.6667*		*87.4*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*12.92*			*16.6667*		*77.5*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*13.08*			*16.6667*		*78.5*	*38 - 93*			
LCS (B9H0187-BS1)					Prepared: 8/7/2019 Analyzed: 8/13/2019					
4,4′-DDD	15.4752	2.0	0.07	16.6667		92.9	66 - 112			
4,4′-DDD [2C]	14.0252	2.0	0.07	16.6667		84.2	66 - 112			
4,4′-DDE	16.0602	2.0	0.11	16.6667		96.4	62 - 112			
4,4′-DDE [2C]	14.7223	2.0	0.11	16.6667		88.3	62 - 112			
4,4′-DDT	12.9458	2.0	0.10	16.6667		77.7	48 - 90			
4,4′-DDT [2C]	14.9537	2.0	0.10	16.6667		89.7	48 - 90			
Aldrin	15.7765	1.0	0.12	16.6667		94.7	58 - 104			
Aldrin [2C]	13.3408	1.0	0.12	16.6667		80.0	58 - 104			
alpha-BHC	15.0585	1.0	0.11	16.6667		90.4	57 - 105			
alpha-BHC [2C]	13.4757	1.0	0.11	16.6667		80.9	57 - 105			
alpha-Chlordane	15.7870	1.0	0.12	16.6667		94.7	62 - 108			
alpha-Chlordane [2C]	13.4033	1.0	0.12	16.6667		80.4	62 - 108			
beta-BHC	15.7060	1.0	0.06	16.6667		94.2	59 - 106			
beta-BHC [2C]	13.8340	1.0	0.06	16.6667		83.0	59 - 106			
delta-BHC	10.7505	1.0	0.12	16.6667		64.5	63 - 115			
delta-BHC [2C]	9.56317	1.0	0.12	16.6667		57.4	63 - 115			L4
Dieldrin	15.0660	2.0	0.26	16.6667		90.4	59 - 102			
Dieldrin [2C]	13.8045	2.0	0.26	16.6667		82.8	59 - 102			
Endosulfan I	13.8420	1.0	0.10	16.6667		83.1	61 - 99			
Endosulfan I [2C]	12.5070	1.0	0.10	16.6667		75.0	61 - 99			
Endosulfan II	15.3687	2.0	0.15	16.6667		92.2	65 - 105			
Endosulfan II [2C]	14.4715	2.0	0.15	16.6667		86.8	65 - 105			
Endosulfan sulfate	13.6490	2.0	0.16	16.6667		81.9	59 - 107			
Endosulfan Sulfate [2C]	12.9718	2.0	0.16	16.6667		77.8	59 - 107			
Endrin	16.3858	2.0	0.14	16.6667		98.3	65 - 113			
Endrin [2C]	14.9457	2.0	0.14	16.6667		89.7	65 - 113			
Endrin aldehyde	14.7803	2.0	0.31	16.6667		88.7	61 - 109			
Endrin aldehyde [2C]	10.8960	2.0	0.31	16.6667		65.4	61 - 109			
Endrin ketone	15.2165	2.0	0.13	16.6667		91.3	56 - 97			
Endrin ketone [2C]	15.0263	2.0	0.13	16.6667		90.2	56 - 97			

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San Bernardino , CA 92408	Reported : 08/15/2019

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S (continued)										
LCS (B9H0187-BS1) - Continued						Prepared: 8/7/2019 Analyzed: 8/13/2019				
gamma-BHC	15.5317	1.0	0.10	16.6667		93.2	57 - 101			
gamma-BHC [2C]	13.7162	1.0	0.10	16.6667		82.3	57 - 101			
gamma-Chlordane	15.4912	1.0	0.89	16.6667		92.9	56 - 125			
gamma-Chlordane [2C]	13.5647	1.0	0.89	16.6667		81.4	56 - 125			
Heptachlor	15.6632	1.0	0.12	16.6667		94.0	61 - 105			
Heptachlor [2C]	13.5640	1.0	0.12	16.6667		81.4	61 - 105			
Heptachlor epoxide	14.7920	1.0	0.09	16.6667		88.8	59 - 97			
Heptachlor epoxide [2C]	12.9415	1.0	0.09	16.6667		77.6	59 - 97			
Methoxychlor	17.6167	5.0	0.18	16.6667		106	68 - 118			
Methoxychlor [2C]	17.7132	5.0	0.18	16.6667		106	68 - 118			
Surrogate: Decachlorobiphenyl	*13.39*			*16.6667*		*80.3*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.14*			*16.6667*		*84.9*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*13.38*			*16.6667*		*80.3*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*14.05*			*16.6667*		*84.3*	*38 - 93*			
Matrix Spike (B9H0187-MS1)			**Source: 1902952-07**			Prepared: 8/7/2019 Analyzed: 8/13/2019				
4,4′-DDD	12.9840	2.0	0.07	16.6667	ND	77.9	33 - 116			
4,4′-DDD [2C]	14.4295	2.0	0.07	16.6667	ND	86.6	33 - 116			
4,4′-DDE	16.9648	2.0	0.11	16.6667	ND	102	29 - 128			
4,4′-DDE [2C]	15.2487	2.0	0.11	16.6667	ND	91.5	29 - 128			
4,4′-DDT	16.1988	2.0	0.10	16.6667	ND	97.2	27 - 109			
4,4′-DDT [2C]	18.3013	2.0	0.10	16.6667	ND	110	27 - 109			M2
Aldrin	13.5413	1.0	0.12	16.6667	ND	81.2	34 - 110			
Aldrin [2C]	13.3915	1.0	0.12	16.6667	ND	80.3	34 - 110			
alpha-BHC	14.0512	1.0	0.11	16.6667	ND	84.3	39 - 107			
alpha-BHC [2C]	14.6215	1.0	0.11	16.6667	ND	87.7	39 - 107			
alpha-Chlordane	13.7272	1.0	0.12	16.6667	ND	82.4	37 - 111			
alpha-Chlordane [2C]	19.6883	1.0	0.12	16.6667	ND	118	37 - 111			M2
beta-BHC	13.8052	1.0	0.06	16.6667	ND	82.8	33 - 111			
beta-BHC [2C]	14.3200	1.0	0.06	16.6667	ND	85.9	33 - 111			
delta-BHC	11.4540	1.0	0.12	16.6667	ND	68.7	25 - 122			
delta-BHC [2C]	11.9368	1.0	0.12	16.6667	ND	71.6	25 - 122			
Dieldrin	13.3393	2.0	0.26	16.6667	ND	80.0	28 - 114			
Dieldrin [2C]	14.3970	2.0	0.26	16.6667	ND	86.4	28 - 114			
Endosulfan I	12.3245	1.0	0.10	16.6667	ND	73.9	35 - 107			
Endosulfan I [2C]	12.7712	1.0	0.10	16.6667	ND	76.6	35 - 107			
Endosulfan II	14.8457	2.0	0.15	16.6667	ND	89.1	13 - 122			
Endosulfan II [2C]	14.7952	2.0	0.15	16.6667	ND	88.8	13 - 122			
Endosulfan sulfate	13.4437	2.0	0.16	16.6667	ND	80.7	13 - 120			
Endosulfan Sulfate [2C]	14.0663	2.0	0.16	16.6667	ND	84.4	13 - 120			

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San Bernardino , CA 92408	Reported : 08/15/2019

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike (B9H0187-MS1) - Continued			**Source: 1902952-07**			Prepared: 8/7/2019 Analyzed: 8/13/2019				
Endrin	14.3012	2.0	0.14	16.6667	ND	85.8	31 - 121			
Endrin [2C]	13.4665	2.0	0.14	16.6667	ND	80.8	31 - 121			
Endrin aldehyde	12.5210	2.0	0.31	16.6667	ND	75.1	18 - 129			
Endrin aldehyde [2C]	14.0997	2.0	0.31	16.6667	ND	84.6	18 - 129			
Endrin ketone	13.9263	2.0	0.13	16.6667	ND	83.6	14 - 113			
Endrin ketone [2C]	16.8578	2.0	0.13	16.6667	ND	101	14 - 113			
gamma-BHC	14.2060	1.0	0.10	16.6667	ND	85.2	34 - 104			
gamma-BHC [2C]	14.6423	1.0	0.10	16.6667	ND	87.9	34 - 104			
gamma-Chlordane	13.1582	1.0	0.89	16.6667	ND	78.9	35 - 121			
gamma-Chlordane [2C]	12.9532	1.0	0.89	16.6667	ND	77.7	35 - 121			
Heptachlor	14.2097	1.0	0.12	16.6667	ND	85.3	35 - 110			
Heptachlor [2C]	14.4438	1.0	0.12	16.6667	ND	86.7	35 - 110			
Heptachlor epoxide	12.8947	1.0	0.09	16.6667	ND	77.4	31 - 106			
Heptachlor epoxide [2C]	13.2443	1.0	0.09	16.6667	ND	79.5	31 - 106			
Methoxychlor	18.6980	5.0	0.18	16.6667	ND	112	21 - 128			
Methoxychlor [2C]	19.7743	5.0	0.18	16.6667	ND	119	21 - 128			
Surrogate: Decachlorobiphenyl	*9.743*			*16.6667*		*58.5*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*12.19*			*16.6667*		*73.1*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*11.93*			*16.6667*		*71.6*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*14.14*			*16.6667*		*84.8*	*38 - 93*			
Matrix Spike Dup (B9H0187-MSD1)			**Source: 1902952-07**			Prepared: 8/7/2019 Analyzed: 8/13/2019				
4,4′-DDD	13.3978	2.0	0.07	16.6667	ND	80.4	33 - 116	3.14	20	
4,4′-DDD [2C]	14.3778	2.0	0.07	16.6667	ND	86.3	33 - 116	0.359	20	
4,4′-DDE	17.4422	2.0	0.11	16.6667	ND	105	29 - 128	2.77	20	
4,4′-DDE [2C]	14.8518	2.0	0.11	16.6667	ND	89.1	29 - 128	2.64	20	
4,4′-DDT	16.2593	2.0	0.10	16.6667	ND	97.6	27 - 109	0.373	20	
4,4′-DDT [2C]	18.7298	2.0	0.10	16.6667	ND	112	27 - 109	2.31	20	M2
Aldrin	13.5565	1.0	0.12	16.6667	ND	81.3	34 - 110	0.112	20	
Aldrin [2C]	12.9847	1.0	0.12	16.6667	ND	77.9	34 - 110	3.08	20	
alpha-BHC	14.1087	1.0	0.11	16.6667	ND	84.7	39 - 107	0.408	20	
alpha-BHC [2C]	14.1170	1.0	0.11	16.6667	ND	84.7	39 - 107	3.51	20	
alpha-Chlordane	13.7622	1.0	0.12	16.6667	ND	82.6	37 - 111	0.255	20	
alpha-Chlordane [2C]	19.1962	1.0	0.12	16.6667	ND	115	37 - 111	2.53	20	M2
beta-BHC	14.0327	1.0	0.06	16.6667	ND	84.2	33 - 111	1.63	20	
beta-BHC [2C]	13.9135	1.0	0.06	16.6667	ND	83.5	33 - 111	2.88	20	
delta-BHC	11.6253	1.0	0.12	16.6667	ND	69.8	25 - 122	1.48	20	
delta-BHC [2C]	11.6018	1.0	0.12	16.6667	ND	69.6	25 - 122	2.85	20	
Dieldrin	13.4448	2.0	0.26	16.6667	ND	80.7	28 - 114	0.788	20	
Dieldrin [2C]	14.0673	2.0	0.26	16.6667	ND	84.4	28 - 114	2.32	20	

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike Dup (B9H0187-MSD1) - Continued			**Source: 1902952-07**		Prepared: 8/7/2019 Analyzed: 8/13/2019					
Endosulfan I	12.4333	1.0	0.10	16.6667	ND	74.6	35 - 107	0.879	20	
Endosulfan I [2C]	12.4015	1.0	0.10	16.6667	ND	74.4	35 - 107	2.94	20	
Endosulfan II	15.1795	2.0	0.15	16.6667	ND	91.1	13 - 122	2.22	20	
Endosulfan II [2C]	14.6335	2.0	0.15	16.6667	ND	87.8	13 - 122	1.10	20	
Endosulfan sulfate	12.7912	2.0	0.16	16.6667	ND	76.7	13 - 120	4.97	20	
Endosulfan Sulfate [2C]	13.9362	2.0	0.16	16.6667	ND	83.6	13 - 120	0.930	20	
Endrin	14.6390	2.0	0.14	16.6667	ND	87.8	31 - 121	2.33	20	
Endrin [2C]	13.3228	2.0	0.14	16.6667	ND	79.9	31 - 121	1.07	20	
Endrin aldehyde	12.4187	2.0	0.31	16.6667	ND	74.5	18 - 129	0.821	20	
Endrin aldehyde [2C]	13.9217	2.0	0.31	16.6667	ND	83.5	18 - 129	1.27	20	
Endrin ketone	14.2180	2.0	0.13	16.6667	ND	85.3	14 - 113	2.07	20	
Endrin ketone [2C]	17.0955	2.0	0.13	16.6667	ND	103	14 - 113	1.40	20	
gamma-BHC	14.2692	1.0	0.10	16.6667	ND	85.6	34 - 104	0.444	20	
gamma-BHC [2C]	14.1602	1.0	0.10	16.6667	ND	85.0	34 - 104	3.35	20	
gamma-Chlordane	13.3048	1.0	0.89	16.6667	ND	79.8	35 - 121	1.11	20	
gamma-Chlordane [2C]	12.5747	1.0	0.89	16.6667	ND	75.4	35 - 121	2.97	20	
Heptachlor	13.8742	1.0	0.12	16.6667	ND	83.2	35 - 110	2.39	20	
Heptachlor [2C]	14.2945	1.0	0.12	16.6667	ND	85.8	35 - 110	1.04	20	
Heptachlor epoxide	12.9102	1.0	0.09	16.6667	ND	77.5	31 - 106	0.120	20	
Heptachlor epoxide [2C]	12.8720	1.0	0.09	16.6667	ND	77.2	31 - 106	2.85	20	
Methoxychlor	18.7362	5.0	0.18	16.6667	ND	112	21 - 128	0.204	20	
Methoxychlor [2C]	20.5910	5.0	0.18	16.6667	ND	124	21 - 128	4.05	20	
Surrogate: Decachlorobiphenyl	*10.38*			*16.6667*		*62.3*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*12.25*			*16.6667*		*73.5*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*11.10*			*16.6667*		*66.6*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*13.35*			*16.6667*		*80.1*	*38 - 93*			

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Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S										
Blank (B9H0186-BLK2)						Prepared: 8/7/2019 Analyzed: 8/8/2019				
Aroclor 1016	ND	16	4.6							
Aroclor 1221	ND	16	4.6							
Aroclor 1232	ND	16	4.6							
Aroclor 1242	ND	16	4.6							
Aroclor 1248	ND	16	4.6							
Aroclor 1254	ND	16	4.6							
Aroclor 1260	ND	16	4.6							
Aroclor 1262	ND	16	4.6							
Aroclor 1268	ND	16	4.6							
Surrogate: Decachlorobiphenyl	*17.77*			*16.6667*		*107*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*12.74*			*16.6667*		*76.4*	*55 - 105*			
LCS (B9H0186-BS2)						Prepared: 8/7/2019 Analyzed: 8/8/2019				
Aroclor 1016	145.224	16	4.6	166.667		87.1	51 - 100			
Aroclor 1260	187.151	16	4.6	166.667		112	48 - 116			
Surrogate: Decachlorobiphenyl	*22.01*			*33.3333*		*66.0*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*18.51*			*33.3333*		*55.5*	*55 - 105*			
Matrix Spike (B9H0186-MS2)			**Source: 1902952-29**			Prepared: 8/7/2019 Analyzed: 8/8/2019				
Aroclor 1016	171.978	16	4.6	166.667	ND	103	36 - 109			
Aroclor 1260	178.402	16	4.6	166.667	ND	107	30 - 123			
Surrogate: Decachlorobiphenyl	*18.13*			*16.6667*		*109*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*13.50*			*16.6667*		*81.0*	*55 - 105*			
Matrix Spike Dup (B9H0186-MSD2)			**Source: 1902952-29**			Prepared: 8/7/2019 Analyzed: 8/8/2019				
Aroclor 1016	161.750	16	4.6	166.667	ND	97.0	36 - 109	6.13	20	
Aroclor 1260	174.852	16	4.6	166.667	ND	105	30 - 123	2.01	20	
Surrogate: Decachlorobiphenyl	*18.89*			*16.6667*		*113*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*13.10*			*16.6667*		*78.6*	*55 - 105*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S										
Blank (B9H0142-BLK1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.96							
1,1,1-Trichloroethane	ND	5.0	1.1							
1,1,2,2-Tetrachloroethane	ND	5.0	0.62							
1,1,2-Trichloroethane	ND	5.0	1.6							
1,1-Dichloroethane	ND	5.0	0.81							
1,1-Dichloroethene	ND	5.0	2.6							
1,1-Dichloropropene	ND	5.0	2.3							
1,2,3-Trichloropropane	ND	5.0	0.54							
1,2,3-Trichlorobenzene	ND	5.0	1.2							
1,2,4-Trichlorobenzene	ND	5.0	1.1							
1,2,4-Trimethylbenzene	ND	5.0	1.5							
1,2-Dibromo-3-chloropropane	ND	10	1.6							
1,2-Dibromoethane	ND	5.0	3.2							
1,2-Dichlorobenzene	ND	5.0	1.1							
1,2-Dichloroethane	ND	5.0	1.2							
1,2-Dichloropropane	ND	5.0	1.8							
1,3,5-Trimethylbenzene	ND	5.0	1.7							
1,3-Dichlorobenzene	ND	5.0	1.3							
1,3-Dichloropropane	ND	5.0	1.1							
1,4-Dichlorobenzene	ND	5.0	1.2							
2,2-Dichloropropane	ND	5.0	1.2							
2-Chlorotoluene	ND	5.0	1.6							
4-Chlorotoluene	ND	5.0	1.5							
4-Isopropyltoluene	ND	5.0	2.3							
Benzene	ND	5.0	0.64							
Bromobenzene	ND	5.0	1.1							
Bromochloromethane	ND	5.0	0.64							
Bromodichloromethane	ND	5.0	1.2							
Bromoform	ND	5.0	0.80							
Bromomethane	ND	5.0	2.5							
Carbon disulfide	ND	5.0	3.5							
Carbon tetrachloride	ND	5.0	1.2							
Chlorobenzene	ND	5.0	1.0							
Chloroethane	ND	5.0	1.1							
Chloroform	ND	5.0	0.82							
Chloromethane	ND	5.0	1.4							
cis-1,2-Dichloroethene	ND	5.0	0.67							
cis-1,3-Dichloropropene	ND	5.0	1.9							
Di-isopropyl ether	ND	5.0	0.55							
Dibromochloromethane	ND	5.0	1.0							

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Blank (B9H0142-BLK1) - Continued						Prepared: 8/7/2019 Analyzed: 8/7/2019				
Dibromomethane	ND	5.0	1.6							
Dichlorodifluoromethane	ND	5.0	2.2							
Ethyl Acetate	ND	50	8.1							
Ethyl Ether	ND	50	6.1							
Ethyl tert-butyl ether	ND	5.0	0.67							
Ethylbenzene	ND	5.0	0.91							
Freon-113	ND	5.0	2.8							
Hexachlorobutadiene	ND	5.0	2.5							
Isopropylbenzene	ND	5.0	1.8							
m,p-Xylene	ND	10	1.5							
Methylene chloride	ND	5.0	2.3							
MTBE	ND	5.0	0.63							
n-Butylbenzene	ND	5.0	2.4							
n-Propylbenzene	ND	5.0	2.2							
Naphthalene	ND	5.0	0.97							
o-Xylene	ND	5.0	0.87							
sec-Butylbenzene	ND	5.0	2.3							
Styrene	ND	5.0	1.5							
tert-Amyl methyl ether	ND	5.0	0.59							
tert-Butanol	ND	100	19							
tert-Butylbenzene	ND	5.0	2.0							
Tetrachloroethene	ND	5.0	1.6							
Toluene	ND	5.0	0.94							
trans-1,2-Dichloroethene	ND	5.0	0.59							
trans-1,3-Dichloropropene	ND	5.0	2.1							
Trichloroethene	ND	5.0	3.1							
Trichlorofluoromethane	ND	5.0	1.4							
Vinyl acetate	ND	50	9.8							
Vinyl chloride	ND	5.0	1.7							
Surrogate: 1,2-Dichloroethane-d4	*43.73*			*50.0000*		*87.5*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*46.42*			*50.0000*		*92.8*	*68 - 121*			
Surrogate: Dibromofluoromethane	*47.75*			*50.0000*		*95.5*	*65 - 137*			
Surrogate: Toluene-d8	*47.89*			*50.0000*		*95.8*	*82 - 119*			
LCS (B9H0142-BS1)						Prepared: 8/7/2019 Analyzed: 8/7/2019				
1,1,1,2-Tetrachloroethane	52.5300	5.0	0.96	50.0000		105	82 - 114			
1,1,1-Trichloroethane	48.9100	5.0	1.1	50.0000		97.8	70 - 121			
1,1,2,2-Tetrachloroethane	49.1500	5.0	0.62	50.0000		98.3	65 - 116			
1,1,2-Trichloroethane	47.0300	5.0	1.6	50.0000		94.1	73 - 114			
1,1-Dichloroethane	44.0200	5.0	0.81	50.0000		88.0	69 - 117			

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS (B9H0142-BS1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1-Dichloroethene	41.5500	5.0	2.6	50.0000		83.1	57 - 128			
1,1-Dichloropropene	53.5300	5.0	2.3	50.0000		107	76 - 122			
1,2,3-Trichloropropane	49.8400	5.0	0.54	50.0000		99.7	65 - 116			
1,2,3-Trichlorobenzene	61.1300	5.0	1.2	50.0000		122	72 - 130			
1,2,4-Trichlorobenzene	63.2600	5.0	1.1	50.0000		127	74 - 141			
1,2,4-Trimethylbenzene	55.9300	5.0	1.5	50.0000		112	81 - 126			
1,2-Dibromo-3-chloropropane	52.6100	10	1.6	50.0000		105	63 - 126			
1,2-Dibromoethane	47.2200	5.0	3.2	50.0000		94.4	75 - 113			
1,2-Dichlorobenzene	54.3300	5.0	1.1	50.0000		109	83 - 114			
1,2-Dichloroethane	44.4600	5.0	1.2	50.0000		88.9	73 - 115			
1,2-Dichloropropane	46.3900	5.0	1.8	50.0000		92.8	75 - 117			
1,3,5-Trimethylbenzene	56.9200	5.0	1.7	50.0000		114	80 - 126			
1,3-Dichlorobenzene	54.5000	5.0	1.3	50.0000		109	83 - 113			
1,3-Dichloropropane	48.9500	5.0	1.1	50.0000		97.9	79 - 108			
1,4-Dichlorobenzene	53.8100	5.0	1.2	50.0000		108	82 - 114			
2,2-Dichloropropane	49.3900	5.0	1.2	50.0000		98.8	66 - 135			
2-Chlorotoluene	54.6600	5.0	1.6	50.0000		109	79 - 117			
4-Chlorotoluene	53.9500	5.0	1.5	50.0000		108	77 - 118			
4-Isopropyltoluene	62.5800	5.0	2.3	50.0000		125	81 - 129			
Benzene	90.9400	5.0	0.64	100.000		90.9	78 - 112			
Bromobenzene	53.8400	5.0	1.1	50.0000		108	79 - 111			
Bromochloromethane	43.0600	5.0	0.64	50.0000		86.1	69 - 116			
Bromodichloromethane	47.3200	5.0	1.2	50.0000		94.6	79 - 111			
Bromoform	49.8300	5.0	0.80	50.0000		99.7	75 - 119			
Bromomethane	56.9200	5.0	2.5	50.0000		114	31 - 168			
Carbon disulfide	41.4600	5.0	3.5	50.0000		82.9	54 - 141			
Carbon tetrachloride	52.3800	5.0	1.2	50.0000		105	74 - 125			
Chlorobenzene	51.8500	5.0	1.0	50.0000		104	83 - 112			
Chloroethane	50.7200	5.0	1.1	50.0000		101	53 - 144			
Chloroform	45.1000	5.0	0.82	50.0000		90.2	69 - 118			
Chloromethane	44.5800	5.0	1.4	50.0000		89.2	46 - 137			
cis-1,2-Dichloroethene	45.8100	5.0	0.67	50.0000		91.6	68 - 118			
cis-1,3-Dichloropropene	56.4000	5.0	1.9	50.0000		113	77 - 121			
Di-isopropyl ether	41.5300	5.0	0.55	50.0000		83.1	60 - 129			
Dibromochloromethane	52.0500	5.0	1.0	50.0000		104	80 - 111			
Dibromomethane	45.5300	5.0	1.6	50.0000		91.1	78 - 108			
Dichlorodifluoromethane	43.7400	5.0	2.2	50.0000		87.5	41 - 146			
Ethyl Acetate	353.710	50	8.1	500.000		70.7	52 - 130			
Ethyl Ether	324.040	50	6.1	500.000		64.8	54 - 138			
Ethyl tert-butyl ether	41.1300	5.0	0.67	50.0000		82.3	52 - 141			

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS (B9H0142-BS1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Ethylbenzene	103.320	5.0	0.91	100.000		103	82 - 121			
Freon-113	46.4300	5.0	2.8	50.0000		92.9	59 - 139			
Hexachlorobutadiene	70.7300	5.0	2.5	50.0000		141	69 - 143			
Isopropylbenzene	63.4600	5.0	1.8	50.0000		127	78 - 124			L3
m,p-Xylene	107.010	10	1.5	100.000		107	85 - 118			
Methylene chloride	35.8900	5.0	2.3	50.0000		71.8	44 - 146			
MTBE	39.4400	5.0	0.63	50.0000		78.9	61 - 122			
n-Butylbenzene	63.0800	5.0	2.4	50.0000		126	78 - 135			
n-Propylbenzene	57.2400	5.0	2.2	50.0000		114	78 - 127			
Naphthalene	55.8000	5.0	0.97	50.0000		112	68 - 129			
o-Xylene	108.450	5.0	0.87	100.000		108	86 - 118			
sec-Butylbenzene	59.5500	5.0	2.3	50.0000		119	80 - 127			
Styrene	54.7800	5.0	1.5	50.0000		110	85 - 117			
tert-Amyl methyl ether	41.3900	5.0	0.59	50.0000		82.8	48 - 135			
tert-Butanol	39.4500	100	19	250.000		15.8	0 - 175			
tert-Butylbenzene	60.7100	5.0	2.0	50.0000		121	81 - 122			
Tetrachloroethene	56.2800	5.0	1.6	50.0000		113	77 - 122			
Toluene	98.3000	5.0	0.94	100.000		98.3	79 - 114			
trans-1,2-Dichloroethene	44.2000	5.0	0.59	50.0000		88.4	66 - 125			
trans-1,3-Dichloropropene	48.3800	5.0	2.1	50.0000		96.8	76 - 120			
Trichloroethene	51.7400	5.0	3.1	50.0000		103	79 - 117			
Trichlorofluoromethane	44.9900	5.0	1.4	50.0000		90.0	55 - 133			
Vinyl acetate	425.270	50	9.8	500.000		85.1	52 - 141			
Vinyl chloride	44.9700	5.0	1.7	50.0000		89.9	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*42.49*			*50.0000*		*85.0*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*48.67*			*50.0000*		*97.3*	*68 - 121*			
Surrogate: Dibromofluoromethane	*45.23*			*50.0000*		*90.5*	*65 - 137*			
Surrogate: Toluene-d8	*48.44*			*50.0000*		*96.9*	*82 - 119*			
LCS Dup (B9H0142-BSD1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	50.7100	5.0	0.96	50.0000		101	82 - 114	3.53	20	
1,1,1-Trichloroethane	46.1700	5.0	1.1	50.0000		92.3	70 - 121	5.76	20	
1,1,2,2-Tetrachloroethane	47.5800	5.0	0.62	50.0000		95.2	65 - 116	3.25	20	
1,1,2-Trichloroethane	47.2200	5.0	1.6	50.0000		94.4	73 - 114	0.403	20	
1,1-Dichloroethane	42.3700	5.0	0.81	50.0000		84.7	69 - 117	3.82	20	
1,1-Dichloroethene	40.7900	5.0	2.6	50.0000		81.6	57 - 128	1.85	20	
1,1-Dichloropropene	49.3200	5.0	2.3	50.0000		98.6	76 - 122	8.19	20	
1,2,3-Trichloropropane	48.2400	5.0	0.54	50.0000		96.5	65 - 116	3.26	20	
1,2,3-Trichlorobenzene	58.9500	5.0	1.2	50.0000		118	72 - 130	3.63	20	
1,2,4-Trichlorobenzene	61.0500	5.0	1.1	50.0000		122	74 - 141	3.56	20	

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS Dup (B9H0142-BSD1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,2,4-Trimethylbenzene	51.8400	5.0	1.5	50.0000		104	81 - 126	7.59	20	
1,2-Dibromo-3-chloropropane	51.0400	10	1.6	50.0000		102	63 - 126	3.03	20	
1,2-Dibromoethane	47.7500	5.0	3.2	50.0000		95.5	75 - 113	1.12	20	
1,2-Dichlorobenzene	51.9200	5.0	1.1	50.0000		104	83 - 114	4.54	20	
1,2-Dichloroethane	43.9500	5.0	1.2	50.0000		87.9	73 - 115	1.15	20	
1,2-Dichloropropane	45.6900	5.0	1.8	50.0000		91.4	75 - 117	1.52	20	
1,3,5-Trimethylbenzene	52.9300	5.0	1.7	50.0000		106	80 - 126	7.26	20	
1,3-Dichlorobenzene	51.0200	5.0	1.3	50.0000		102	83 - 113	6.60	20	
1,3-Dichloropropane	48.8800	5.0	1.1	50.0000		97.8	79 - 108	0.143	20	
1,4-Dichlorobenzene	51.2200	5.0	1.2	50.0000		102	82 - 114	4.93	20	
2,2-Dichloropropane	47.3200	5.0	1.2	50.0000		94.6	66 - 135	4.28	20	
2-Chlorotoluene	49.8600	5.0	1.6	50.0000		99.7	79 - 117	9.18	20	
4-Chlorotoluene	50.3100	5.0	1.5	50.0000		101	77 - 118	6.98	20	
4-Isopropyltoluene	57.1500	5.0	2.3	50.0000		114	81 - 129	9.07	20	
Benzene	87.2500	5.0	0.64	100.000		87.2	78 - 112	4.14	20	
Bromobenzene	50.3400	5.0	1.1	50.0000		101	79 - 111	6.72	20	
Bromochloromethane	41.9400	5.0	0.64	50.0000		83.9	69 - 116	2.64	20	
Bromodichloromethane	46.1600	5.0	1.2	50.0000		92.3	79 - 111	2.48	20	
Bromoform	50.9300	5.0	0.80	50.0000		102	75 - 119	2.18	20	
Bromomethane	54.6400	5.0	2.5	50.0000		109	31 - 168	4.09	20	
Carbon disulfide	39.1000	5.0	3.5	50.0000		78.2	54 - 141	5.86	20	
Carbon tetrachloride	50.2600	5.0	1.2	50.0000		101	74 - 125	4.13	20	
Chlorobenzene	50.1500	5.0	1.0	50.0000		100	83 - 112	3.33	20	
Chloroethane	46.3000	5.0	1.1	50.0000		92.6	53 - 144	9.11	20	
Chloroform	43.8700	5.0	0.82	50.0000		87.7	69 - 118	2.76	20	
Chloromethane	42.0900	5.0	1.4	50.0000		84.2	46 - 137	5.75	20	
cis-1,2-Dichloroethene	43.4100	5.0	0.67	50.0000		86.8	68 - 118	5.38	20	
cis-1,3-Dichloropropene	55.0500	5.0	1.9	50.0000		110	77 - 121	2.42	20	
Di-isopropyl ether	42.0800	5.0	0.55	50.0000		84.2	60 - 129	1.32	20	
Dibromochloromethane	50.4600	5.0	1.0	50.0000		101	80 - 111	3.10	20	
Dibromomethane	45.5100	5.0	1.6	50.0000		91.0	78 - 108	0.0439	20	
Dichlorodifluoromethane	40.4000	5.0	2.2	50.0000		80.8	41 - 146	7.94	20	
Ethyl Acetate	363.830	50	8.1	500.000		72.8	52 - 130	2.82	20	
Ethyl Ether	330.460	50	6.1	500.000		66.1	54 - 138	1.96	20	
Ethyl tert-butyl ether	40.4700	5.0	0.67	50.0000		80.9	52 - 141	1.62	20	
Ethylbenzene	98.8900	5.0	0.91	100.000		98.9	82 - 121	4.38	20	
Freon-113	43.9300	5.0	2.8	50.0000		87.9	59 - 139	5.53	20	
Hexachlorobutadiene	65.3400	5.0	2.5	50.0000		131	69 - 143	7.92	20	
Isopropylbenzene	58.0500	5.0	1.8	50.0000		116	78 - 124	8.90	20	
m,p-Xylene	102.740	10	1.5	100.000		103	85 - 118	4.07	20	

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS Dup (B9H0142-BSD1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Methylene chloride	42.8200	5.0	2.3	50.0000		85.6	44 - 146	17.6	20	
MTBE	39.2500	5.0	0.63	50.0000		78.5	61 - 122	0.483	20	
n-Butylbenzene	58.0000	5.0	2.4	50.0000		116	78 - 135	8.39	20	
n-Propylbenzene	52.6100	5.0	2.2	50.0000		105	78 - 127	8.43	20	
Naphthalene	55.9500	5.0	0.97	50.0000		112	68 - 129	0.268	20	
o-Xylene	103.890	5.0	0.87	100.000		104	86 - 118	4.29	20	
sec-Butylbenzene	55.5500	5.0	2.3	50.0000		111	80 - 127	6.95	20	
Styrene	53.5000	5.0	1.5	50.0000		107	85 - 117	2.36	20	
tert-Amyl methyl ether	41.0500	5.0	0.59	50.0000		82.1	48 - 135	0.825	20	
tert-Butanol	222.060	100	19	250.000		88.8	0 - 175	140	20	R
tert-Butylbenzene	55.9800	5.0	2.0	50.0000		112	81 - 122	8.11	20	
Tetrachloroethene	53.3100	5.0	1.6	50.0000		107	77 - 122	5.42	20	
Toluene	93.9400	5.0	0.94	100.000		93.9	79 - 114	4.54	20	
trans-1,2-Dichloroethene	42.2200	5.0	0.59	50.0000		84.4	66 - 125	4.58	20	
trans-1,3-Dichloropropene	48.3500	5.0	2.1	50.0000		96.7	76 - 120	0.0620	20	
Trichloroethene	48.9300	5.0	3.1	50.0000		97.9	79 - 117	5.58	20	
Trichlorofluoromethane	42.1300	5.0	1.4	50.0000		84.3	55 - 133	6.57	20	
Vinyl acetate	432.390	50	9.8	500.000		86.5	52 - 141	1.66	20	
Vinyl chloride	41.0400	5.0	1.7	50.0000		82.1	58 - 132	9.14	20	
Surrogate: 1,2-Dichloroethane-d4	*43.96*			*50.0000*		*87.9*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*49.03*			*50.0000*		*98.1*	*68 - 121*			
Surrogate: Dibromofluoromethane	*47.06*			*50.0000*		*94.1*	*65 - 137*			
Surrogate: Toluene-d8	*48.70*			*50.0000*		*97.4*	*82 - 119*			
Matrix Spike (B9H0142-MS1)			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	46.9300	5.0	0.96	50.0000	ND	93.9	45 - 121			
1,1,1-Trichloroethane	42.5800	5.0	1.1	50.0000	ND	85.2	43 - 127			
1,1,2,2-Tetrachloroethane	45.1500	5.0	0.62	50.0000	ND	90.3	32 - 128			
1,1,2-Trichloroethane	44.0500	5.0	1.6	50.0000	ND	88.1	45 - 121			
1,1-Dichloroethane	38.9800	5.0	0.81	50.0000	ND	78.0	46 - 119			
1,1-Dichloroethene	37.3000	5.0	2.6	50.0000	ND	74.6	40 - 130			
1,1-Dichloropropene	46.3700	5.0	2.3	50.0000	ND	92.7	45 - 130			
1,2,3-Trichloropropane	46.1000	5.0	0.54	50.0000	ND	92.2	42 - 124			
1,2,3-Trichlorobenzene	48.5300	5.0	1.2	50.0000	ND	97.1	4 - 135			
1,2,4-Trichlorobenzene	49.3100	5.0	1.1	50.0000	ND	98.6	8 - 141			
1,2,4-Trimethylbenzene	46.6900	5.0	1.5	50.0000	ND	93.4	30 - 136			
1,2-Dibromo-3-chloropropane	50.0300	10	1.6	50.0000	ND	100	38 - 132			
1,2-Dibromoethane	46.1700	5.0	3.2	50.0000	ND	92.3	45 - 121			
1,2-Dichlorobenzene	46.0000	5.0	1.1	50.0000	ND	92.0	30 - 125			
1,2-Dichloroethane	40.5900	5.0	1.2	50.0000	ND	81.2	51 - 115			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike (B9H0142-MS1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,2-Dichloropropane	41.2300	5.0	1.8	50.0000	ND	82.5	50 - 118			
1,3,5-Trimethylbenzene	47.1500	5.0	1.7	50.0000	ND	94.3	29 - 137			
1,3-Dichlorobenzene	44.5500	5.0	1.3	50.0000	ND	89.1	30 - 124			
1,3-Dichloropropane	46.1200	5.0	1.1	50.0000	ND	92.2	49 - 116			
1,4-Dichlorobenzene	44.4000	5.0	1.2	50.0000	ND	88.8	31 - 124			
2,2-Dichloropropane	42.4800	5.0	1.2	50.0000	ND	85.0	41 - 134			
2-Chlorotoluene	44.0800	5.0	1.6	50.0000	ND	88.2	32 - 127			
4-Chlorotoluene	43.9100	5.0	1.5	50.0000	ND	87.8	34 - 124			
4-Isopropyltoluene	49.8800	5.0	2.3	50.0000	ND	99.8	26 - 141			
Benzene	79.2700	5.0	0.64	100.000	ND	79.3	48 - 117			
Bromobenzene	44.8100	5.0	1.1	50.0000	ND	89.6	40 - 117			
Bromochloromethane	39.8300	5.0	0.64	50.0000	ND	79.7	48 - 117			
Bromodichloromethane	42.4700	5.0	1.2	50.0000	ND	84.9	49 - 115			
Bromoform	47.7600	5.0	0.80	50.0000	ND	95.5	42 - 127			
Bromomethane	48.7600	5.0	2.5	50.0000	ND	97.5	19 - 157			
Carbon disulfide	34.6300	5.0	3.5	50.0000	ND	69.3	34 - 138			
Carbon tetrachloride	44.6600	5.0	1.2	50.0000	ND	89.3	43 - 130			
Chlorobenzene	44.2700	5.0	1.0	50.0000	ND	88.5	41 - 122			
Chloroethane	40.2400	5.0	1.1	50.0000	ND	80.5	32 - 145			
Chloroform	39.9900	5.0	0.82	50.0000	ND	80.0	46 - 118			
Chloromethane	36.2500	5.0	1.4	50.0000	ND	72.5	34 - 132			
cis-1,2-Dichloroethene	40.3400	5.0	0.67	50.0000	ND	80.7	44 - 119			
cis-1,3-Dichloropropene	49.5400	5.0	1.9	50.0000	ND	99.1	44 - 126			
Di-isopropyl ether	39.2200	5.0	0.55	50.0000	ND	78.4	42 - 126			
Dibromochloromethane	47.4100	5.0	1.0	50.0000	ND	94.8	46 - 119			
Dibromomethane	42.3800	5.0	1.6	50.0000	ND	84.8	52 - 114			
Dichlorodifluoromethane	38.9900	5.0	2.2	50.0000	ND	78.0	22 - 147			
Ethyl Acetate	322.280	50	8.1	500.000	ND	64.5	9 - 140			
Ethyl Ether	323.070	50	6.1	500.000	ND	64.6	45 - 131			
Ethyl tert-butyl ether	39.3100	5.0	0.67	50.0000	ND	78.6	33 - 138			
Ethylbenzene	89.1500	5.0	0.91	100.000	ND	89.2	38 - 131			
Freon-113	39.7800	5.0	2.8	50.0000	ND	79.6	38 - 140			
Hexachlorobutadiene	50.5000	5.0	2.5	50.0000	ND	101	4 - 141			
Isopropylbenzene	51.2100	5.0	1.8	50.0000	ND	102	35 - 133			
m,p-Xylene	93.5500	10	1.5	100.000	ND	93.6	38 - 130			
Methylene chloride	39.6900	5.0	2.3	50.0000	ND	79.4	26 - 137			
MTBE	39.1700	5.0	0.63	50.0000	ND	78.3	45 - 121			
n-Butylbenzene	48.9100	5.0	2.4	50.0000	ND	97.8	18 - 144			
n-Propylbenzene	46.1400	5.0	2.2	50.0000	ND	92.3	30 - 137			
Naphthalene	47.9900	5.0	0.97	50.0000	ND	96.0	14 - 137			

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San Bernardino , CA 92408	Reported : 08/15/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike (B9H0142-MS1) - Continued			**Source: 1902935-03**			Prepared: 8/7/2019 Analyzed: 8/7/2019				
o-Xylene	94.9800	5.0	0.87	100.000	ND	95.0	41 - 129			
sec-Butylbenzene	48.4000	5.0	2.3	50.0000	ND	96.8	24 - 140			
Styrene	48.2000	5.0	1.5	50.0000	ND	96.4	41 - 125			
tert-Amyl methyl ether	40.2600	5.0	0.59	50.0000	ND	80.5	31 - 133			
tert-Butanol	ND	100	19	250.000	ND	NR	0 - 201			
tert-Butylbenzene	49.5700	5.0	2.0	50.0000	ND	99.1	30 - 134			
Tetrachloroethene	47.2100	5.0	1.6	50.0000	ND	94.4	37 - 130			
Toluene	84.5300	5.0	0.94	100.000	ND	84.5	45 - 122			
trans-1,2-Dichloroethene	38.2400	5.0	0.59	50.0000	ND	76.5	46 - 122			
trans-1,3-Dichloropropene	44.6700	5.0	2.1	50.0000	ND	89.3	44 - 124			
Trichloroethene	43.7400	5.0	3.1	50.0000	ND	87.5	36 - 142			
Trichlorofluoromethane	38.8200	5.0	1.4	50.0000	ND	77.6	37 - 135			
Vinyl acetate	287.060	50	9.8	500.000	ND	57.4	0 - 136			
Vinyl chloride	37.3000	5.0	1.7	50.0000	ND	74.6	42 - 131			
Surrogate: 1,2-Dichloroethane-d4	*46.11*			*50.0000*		*92.2*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*50.22*			*50.0000*		*100*	*68 - 121*			
Surrogate: Dibromofluoromethane	*47.60*			*50.0000*		*95.2*	*65 - 137*			
Surrogate: Toluene-d8	*49.00*			*50.0000*		*98.0*	*82 - 119*			
Matrix Spike Dup (B9H0142-MSD1)			**Source: 1902935-03**			Prepared: 8/7/2019 Analyzed: 8/7/2019				
1,1,1,2-Tetrachloroethane	46.2800	5.0	0.96	50.0000	ND	92.6	45 - 121	1.39	20	
1,1,1-Trichloroethane	46.8900	5.0	1.1	50.0000	ND	93.8	43 - 127	9.63	20	
1,1,2,2-Tetrachloroethane	43.6600	5.0	0.62	50.0000	ND	87.3	32 - 128	3.36	20	
1,1,2-Trichloroethane	45.4700	5.0	1.6	50.0000	ND	90.9	45 - 121	3.17	20	
1,1-Dichloroethane	43.4100	5.0	0.81	50.0000	ND	86.8	46 - 119	10.8	20	
1,1-Dichloroethene	42.2400	5.0	2.6	50.0000	ND	84.5	40 - 130	12.4	20	
1,1-Dichloropropene	48.1900	5.0	2.3	50.0000	ND	96.4	45 - 130	3.85	20	
1,2,3-Trichloropropane	44.8200	5.0	0.54	50.0000	ND	89.6	42 - 124	2.82	20	
1,2,3-Trichlorobenzene	40.8900	5.0	1.2	50.0000	ND	81.8	4 - 135	17.1	20	
1,2,4-Trichlorobenzene	42.6800	5.0	1.1	50.0000	ND	85.4	8 - 141	14.4	20	
1,2,4-Trimethylbenzene	43.5300	5.0	1.5	50.0000	ND	87.1	30 - 136	7.01	20	
1,2-Dibromo-3-chloropropane	48.4200	10	1.6	50.0000	ND	96.8	38 - 132	3.27	20	
1,2-Dibromoethane	47.3600	5.0	3.2	50.0000	ND	94.7	45 - 121	2.54	20	
1,2-Dichlorobenzene	43.4100	5.0	1.1	50.0000	ND	86.8	30 - 125	5.79	20	
1,2-Dichloroethane	45.0900	5.0	1.2	50.0000	ND	90.2	51 - 115	10.5	20	
1,2-Dichloropropane	43.5500	5.0	1.8	50.0000	ND	87.1	50 - 118	5.47	20	
1,3,5-Trimethylbenzene	44.0800	5.0	1.7	50.0000	ND	88.2	29 - 137	6.73	20	
1,3-Dichlorobenzene	42.2500	5.0	1.3	50.0000	ND	84.5	30 - 124	5.30	20	
1,3-Dichloropropane	46.5400	5.0	1.1	50.0000	ND	93.1	49 - 116	0.907	20	
1,4-Dichlorobenzene	42.4800	5.0	1.2	50.0000	ND	85.0	31 - 124	4.42	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike Dup (B9H0142-MSD1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
2,2-Dichloropropane	46.4300	5.0	1.2	50.0000	ND	92.9	41 - 134	8.89	20	
2-Chlorotoluene	42.9300	5.0	1.6	50.0000	ND	85.9	32 - 127	2.64	20	
4-Chlorotoluene	41.9100	5.0	1.5	50.0000	ND	83.8	34 - 124	4.66	20	
4-Isopropyltoluene	45.9300	5.0	2.3	50.0000	ND	91.9	26 - 141	8.25	20	
Benzene	85.4400	5.0	0.64	100.000	ND	85.4	48 - 117	7.49	20	
Bromobenzene	43.9300	5.0	1.1	50.0000	ND	87.9	40 - 117	1.98	20	
Bromochloromethane	45.6900	5.0	0.64	50.0000	ND	91.4	48 - 117	13.7	20	
Bromodichloromethane	44.9600	5.0	1.2	50.0000	ND	89.9	49 - 115	5.70	20	
Bromoform	46.2400	5.0	0.80	50.0000	ND	92.5	42 - 127	3.23	20	
Bromomethane	61.5200	5.0	2.5	50.0000	ND	123	19 - 157	23.1	20	R
Carbon disulfide	38.3600	5.0	3.5	50.0000	ND	76.7	34 - 138	10.2	20	
Carbon tetrachloride	47.9000	5.0	1.2	50.0000	ND	95.8	43 - 130	7.00	20	
Chlorobenzene	44.0700	5.0	1.0	50.0000	ND	88.1	41 - 122	0.453	20	
Chloroethane	42.7100	5.0	1.1	50.0000	ND	85.4	32 - 145	5.96	20	
Chloroform	44.4600	5.0	0.82	50.0000	ND	88.9	46 - 118	10.6	20	
Chloromethane	36.7900	5.0	1.4	50.0000	ND	73.6	34 - 132	1.48	20	
cis-1,2-Dichloroethene	44.1800	5.0	0.67	50.0000	ND	88.4	44 - 119	9.09	20	
cis-1,3-Dichloropropene	51.1800	5.0	1.9	50.0000	ND	102	44 - 126	3.26	20	
Di-isopropyl ether	43.0300	5.0	0.55	50.0000	ND	86.1	42 - 126	9.26	20	
Dibromochloromethane	46.3700	5.0	1.0	50.0000	ND	92.7	46 - 119	2.22	20	
Dibromomethane	46.2000	5.0	1.6	50.0000	ND	92.4	52 - 114	8.62	20	
Dichlorodifluoromethane	37.7200	5.0	2.2	50.0000	ND	75.4	22 - 147	3.31	20	
Ethyl Acetate	349.090	50	8.1	500.000	ND	69.8	9 - 140	7.99	20	
Ethyl Ether	384.310	50	6.1	500.000	ND	76.9	45 - 131	17.3	20	
Ethyl tert-butyl ether	39.9700	5.0	0.67	50.0000	ND	79.9	33 - 138	1.66	20	
Ethylbenzene	86.6900	5.0	0.91	100.000	ND	86.7	38 - 131	2.80	20	
Freon-113	45.1700	5.0	2.8	50.0000	ND	90.3	38 - 140	12.7	20	
Hexachlorobutadiene	45.1300	5.0	2.5	50.0000	ND	90.3	4 - 141	11.2	20	
Isopropylbenzene	48.6500	5.0	1.8	50.0000	ND	97.3	35 - 133	5.13	20	
m,p-Xylene	88.3200	10	1.5	100.000	ND	88.3	38 - 130	5.75	20	
Methylene chloride	38.7300	5.0	2.3	50.0000	ND	77.5	26 - 137	2.45	20	
MTBE	41.3200	5.0	0.63	50.0000	ND	82.6	45 - 121	5.34	20	
n-Butylbenzene	44.4700	5.0	2.4	50.0000	ND	88.9	18 - 144	9.51	20	
n-Propylbenzene	43.7500	5.0	2.2	50.0000	ND	87.5	30 - 137	5.32	20	
Naphthalene	39.5500	5.0	0.97	50.0000	ND	79.1	14 - 137	19.3	20	
o-Xylene	90.4900	5.0	0.87	100.000	ND	90.5	41 - 129	4.84	20	
sec-Butylbenzene	44.7200	5.0	2.3	50.0000	ND	89.4	24 - 140	7.90	20	
Styrene	46.2400	5.0	1.5	50.0000	ND	92.5	41 - 125	4.15	20	
tert-Amyl methyl ether	38.7400	5.0	0.59	50.0000	ND	77.5	31 - 133	3.85	20	
tert-Butanol	ND	100	19	250.000	ND	NR	0 - 201	NR	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike Dup (B9H0142-MSD1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
tert-Butylbenzene	45.9200	5.0	2.0	50.0000	ND	91.8	30 - 134	7.64	20	
Tetrachloroethene	46.1300	5.0	1.6	50.0000	ND	92.3	37 - 130	2.31	20	
Toluene	88.9800	5.0	0.94	100.000	ND	89.0	45 - 122	5.13	20	
trans-1,2-Dichloroethene	42.5200	5.0	0.59	50.0000	ND	85.0	46 - 122	10.6	20	
trans-1,3-Dichloropropene	46.6700	5.0	2.1	50.0000	ND	93.3	44 - 124	4.38	20	
Trichloroethene	46.4600	5.0	3.1	50.0000	ND	92.9	36 - 142	6.03	20	
Trichlorofluoromethane	41.2600	5.0	1.4	50.0000	ND	82.5	37 - 135	6.09	20	
Vinyl acetate	284.800	50	9.8	500.000	ND	57.0	0 - 136	0.790	20	
Vinyl chloride	39.1300	5.0	1.7	50.0000	ND	78.3	42 - 131	4.79	20	
Surrogate: 1,2-Dichloroethane-d4	*47.62*			*50.0000*		*95.2*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*49.20*			*50.0000*		*98.4*	*68 - 121*			
Surrogate: Dibromofluoromethane	*49.85*			*50.0000*		*99.7*	*65 - 137*			
Surrogate: Toluene-d8	*49.16*			*50.0000*		*98.3*	*82 - 119*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W										
Blank (B9H0170-BLK1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.11							
1,1,1-Trichloroethane	ND	5.0	0.07							
1,1,2,2-Tetrachloroethane	ND	5.0	0.36							
1,1,2-Trichloroethane	ND	5.0	0.25							
1,1-Dichloroethane	ND	5.0	0.09							
1,1-Dichloroethene	ND	5.0	0.13							
1,1-Dichloropropene	ND	5.0	0.13							
1,2,3-Trichloropropane	ND	5.0	0.39							
1,2,3-Trichlorobenzene	ND	5.0	0.18							
1,2,4-Trichlorobenzene	ND	5.0	0.16							
1,2,4-Trimethylbenzene	ND	5.0	0.14							
1,2-Dibromo-3-chloropropane	ND	5.0	0.41							
1,2-Dibromoethane	ND	5.0	0.24							
1,2-Dichlorobenzene	ND	5.0	0.20							
1,2-Dichloroethane	ND	5.0	0.20							
1,2-Dichloropropane	ND	5.0	0.15							
1,3,5-Trimethylbenzene	ND	5.0	0.13							
1,3-Dichlorobenzene	ND	5.0	0.16							
1,3-Dichloropropane	ND	5.0	0.21							
1,4-Dichlorobenzene	ND	5.0	0.17							
2,2-Dichloropropane	ND	5.0	0.38							
2-Chlorotoluene	ND	5.0	0.11							
4-Chlorotoluene	ND	5.0	0.12							
4-Isopropyltoluene	ND	5.0	0.11							
Benzene	ND	5.0	0.13							
Bromobenzene	ND	5.0	0.21							
Bromochloromethane	ND	5.0	0.16							
Bromodichloromethane	ND	5.0	0.14							
Bromoform	ND	5.0	0.20							
Bromomethane	ND	5.0	0.17							
Carbon disulfide	ND	5.0	0.07							
Carbon tetrachloride	ND	5.0	0.09							
Chlorobenzene	ND	5.0	0.13							
Chloroethane	ND	5.0	0.15							
Chloroform	ND	5.0	0.11							
Chloromethane	ND	5.0	0.12							
cis-1,2-Dichloroethene	ND	5.0	0.14							
cis-1,3-Dichloropropene	ND	5.0	0.13							
Di-isopropyl ether	ND	5.0	0.15							
Dibromochloromethane	ND	5.0	0.16							

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San Bernardino , CA 92408	Reported : 08/15/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
Blank (B9H0170-BLK1) - Continued						Prepared: 8/8/2019 Analyzed: 8/8/2019				
Dibromomethane	ND	5.0	0.19							
Dichlorodifluoromethane	ND	5.0	0.05							
Ethyl Acetate	ND	50	3.1							
Ethyl Ether	ND	50	2.0							
Ethyl tert-butyl ether	ND	5.0	0.21							
Ethylbenzene	ND	5.0	0.13							
Freon-113	ND	5.0	0.13							
Hexachlorobutadiene	ND	5.0	0.15							
Isopropylbenzene	ND	5.0	0.10							
m,p-Xylene	ND	10	0.19							
Methylene chloride	ND	5.0	0.71							
MTBE	ND	5.0	0.26							
n-Butylbenzene	ND	5.0	0.11							
n-Propylbenzene	ND	5.0	0.10							
Naphthalene	ND	5.0	0.41							
o-Xylene	ND	5.0	0.13							
sec-Butylbenzene	ND	5.0	0.09							
Styrene	ND	5.0	0.13							
tert-Amyl methyl ether	ND	5.0	0.41							
tert-Butanol	ND	100	2.4							
tert-Butylbenzene	ND	5.0	0.09							
Tetrachloroethene	ND	5.0	0.10							
Toluene	ND	5.0	0.12							
trans-1,2-Dichloroethene	ND	5.0	0.09							
trans-1,3-Dichloropropene	ND	5.0	0.23							
Trichloroethene	ND	5.0	0.10							
Trichlorofluoromethane	ND	5.0	0.10							
Vinyl acetate	ND	50	1.7							
Vinyl chloride	ND	5.0	0.05							
Surrogate: 1,2-Dichloroethane-d4	*24.94*			*25.0000*		*99.8*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.16*			*25.0000*		*101*	*71 - 127*			
Surrogate: Dibromofluoromethane	*27.73*			*25.0000*		*111*	*66 - 147*			
Surrogate: Toluene-d8	*26.48*			*25.0000*		*106*	*77 - 138*			
LCS (B9H0170-BS1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
1,1,1,2-Tetrachloroethane	17.1700	5.0	0.11	20.0000		85.8	71 - 133			
1,1,1-Trichloroethane	18.4700	5.0	0.07	20.0000		92.4	62 - 124			
1,1,2,2-Tetrachloroethane	17.4600	5.0	0.36	20.0000		87.3	50 - 131			
1,1,2-Trichloroethane	17.8300	5.0	0.25	20.0000		89.2	77 - 121			
1,1-Dichloroethane	18.8500	5.0	0.09	20.0000		94.2	52 - 130			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS (B9H0170-BS1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1-Dichloroethene	18.9200	5.0	0.13	20.0000		94.6	61 - 136			
1,1-Dichloropropene	20.1500	5.0	0.13	20.0000		101	80 - 128			
1,2,3-Trichloropropane	17.7100	5.0	0.39	20.0000		88.6	59 - 126			
1,2,3-Trichlorobenzene	17.4100	5.0	0.18	20.0000		87.0	69 - 138			
1,2,4-Trichlorobenzene	18.2300	5.0	0.16	20.0000		91.2	78 - 125			
1,2,4-Trimethylbenzene	17.9900	5.0	0.14	20.0000		90.0	70 - 126			
1,2-Dibromo-3-chloropropane	15.6200	5.0	0.41	20.0000		78.1	58 - 127			
1,2-Dibromoethane	18.1000	5.0	0.24	20.0000		90.5	76 - 120			
1,2-Dichlorobenzene	19.4000	5.0	0.20	20.0000		97.0	82 - 117			
1,2-Dichloroethane	19.4900	5.0	0.20	20.0000		97.4	66 - 126			
1,2-Dichloropropane	18.5800	5.0	0.15	20.0000		92.9	70 - 117			
1,3,5-Trimethylbenzene	18.3100	5.0	0.13	20.0000		91.6	71 - 125			
1,3-Dichlorobenzene	18.2100	5.0	0.16	20.0000		91.0	81 - 116			
1,3-Dichloropropane	18.5400	5.0	0.21	20.0000		92.7	69 - 124			
1,4-Dichlorobenzene	19.0700	5.0	0.17	20.0000		95.4	80 - 114			
2,2-Dichloropropane	19.1800	5.0	0.38	20.0000		95.9	58 - 132			
2-Chlorotoluene	18.5400	5.0	0.11	20.0000		92.7	71 - 119			
4-Chlorotoluene	18.5300	5.0	0.12	20.0000		92.6	72 - 122			
4-Isopropyltoluene	17.8600	5.0	0.11	20.0000		89.3	69 - 126			
Benzene	39.6100	5.0	0.13	40.0000		99.0	80 - 116			
Bromobenzene	18.8300	5.0	0.21	20.0000		94.2	77 - 118			
Bromochloromethane	18.2500	5.0	0.16	20.0000		91.2	68 - 121			
Bromodichloromethane	17.5000	5.0	0.14	20.0000		87.5	73 - 118			
Bromoform	15.4000	5.0	0.20	20.0000		77.0	65 - 133			
Bromomethane	21.5500	5.0	0.17	20.0000		108	7 - 205			
Carbon disulfide	18.4100	5.0	0.07	20.0000		92.0	55 - 131			
Carbon tetrachloride	17.2600	5.0	0.09	20.0000		86.3	63 - 133			
Chlorobenzene	19.0100	5.0	0.13	20.0000		95.0	86 - 113			
Chloroethane	22.5600	5.0	0.15	20.0000		113	66 - 141			
Chloroform	19.3500	5.0	0.11	20.0000		96.8	63 - 127			
Chloromethane	19.7400	5.0	0.12	20.0000		98.7	0 - 207			
cis-1,2-Dichloroethene	18.9400	5.0	0.14	20.0000		94.7	64 - 126			
cis-1,3-Dichloropropene	19.2400	5.0	0.13	20.0000		96.2	70 - 141			
Di-isopropyl ether	18.0500	5.0	0.15	20.0000		90.2	56 - 131			
Dibromochloromethane	16.6000	5.0	0.16	20.0000		83.0	67 - 135			
Dibromomethane	19.0700	5.0	0.19	20.0000		95.4	74 - 118			
Dichlorodifluoromethane	18.7000	5.0	0.05	20.0000		93.5	14 - 181			
Ethyl Acetate	190.940	50	3.1	200.000		95.5	49 - 128			
Ethyl Ether	172.440	50	2.0	200.000		86.2	53 - 143			
Ethyl tert-butyl ether	18.9100	5.0	0.21	20.0000		94.6	54 - 132			

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San Bernardino , CA 92408	Reported : 08/15/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS (B9H0170-BS1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Ethylbenzene	34.2000	5.0	0.13	40.0000		85.5	77 - 118			
Freon-113	18.5500	5.0	0.13	20.0000		92.8	68 - 145			
Hexachlorobutadiene	18.1800	5.0	0.15	20.0000		90.9	66 - 125			
Isopropylbenzene	19.0500	5.0	0.10	20.0000		95.2	68 - 137			
m,p-Xylene	37.0200	10	0.19	40.0000		92.6	78 - 126			
Methylene chloride	15.4100	5.0	0.71	20.0000		77.0	51 - 149			
MTBE	18.5200	5.0	0.26	20.0000		92.6	63 - 128			
n-Butylbenzene	18.0800	5.0	0.11	20.0000		90.4	63 - 127			
n-Propylbenzene	18.2300	5.0	0.10	20.0000		91.2	69 - 124			
Naphthalene	16.6800	5.0	0.41	20.0000		83.4	60 - 126			
o-Xylene	35.1100	5.0	0.13	40.0000		87.8	79 - 126			
sec-Butylbenzene	18.2300	5.0	0.09	20.0000		91.2	69 - 124			
Styrene	18.4900	5.0	0.13	20.0000		92.4	80 - 127			
tert-Amyl methyl ether	19.5000	5.0	0.41	20.0000		97.5	49 - 130			
tert-Butanol	78.6000	100	2.4	100.000		78.6	29 - 163			
tert-Butylbenzene	18.1300	5.0	0.09	20.0000		90.6	71 - 124			
Tetrachloroethene	17.5400	5.0	0.10	20.0000		87.7	73 - 129			
Toluene	39.1700	5.0	0.12	40.0000		97.9	78 - 121			
trans-1,2-Dichloroethene	19.3300	5.0	0.09	20.0000		96.6	58 - 141			
trans-1,3-Dichloropropene	16.4500	5.0	0.23	20.0000		82.2	68 - 128			
Trichloroethene	18.1300	5.0	0.10	20.0000		90.6	73 - 126			
Trichlorofluoromethane	19.3600	5.0	0.10	20.0000		96.8	62 - 146			
Vinyl acetate	219.430	50	1.7	200.000		110	53 - 153			
Vinyl chloride	19.5600	5.0	0.05	20.0000		97.8	61 - 137			
Surrogate: 1,2-Dichloroethane-d4	*24.50*			*25.0000*		*98.0*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.60*			*25.0000*		*102*	*71 - 127*			
Surrogate: Dibromofluoromethane	*26.00*			*25.0000*		*104*	*66 - 147*			
Surrogate: Toluene-d8	*25.70*			*25.0000*		*103*	*77 - 138*			
LCS Dup (B9H0170-BSD1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1,1,2-Tetrachloroethane	19.1900	5.0	0.11	20.0000		96.0	71 - 133	11.1	20	
1,1,1-Trichloroethane	20.0600	5.0	0.07	20.0000		100	62 - 124	8.25	20	
1,1,2,2-Tetrachloroethane	19.4300	5.0	0.36	20.0000		97.2	50 - 131	10.7	20	
1,1,2-Trichloroethane	19.8200	5.0	0.25	20.0000		99.1	77 - 121	10.6	20	
1,1-Dichloroethane	20.2400	5.0	0.09	20.0000		101	52 - 130	7.11	20	
1,1-Dichloroethene	20.7300	5.0	0.13	20.0000		104	61 - 136	9.13	20	
1,1-Dichloropropene	21.7000	5.0	0.13	20.0000		108	80 - 128	7.41	20	
1,2,3-Trichloropropane	19.1700	5.0	0.39	20.0000		95.8	59 - 126	7.92	20	
1,2,3-Trichlorobenzene	18.6800	5.0	0.18	20.0000		93.4	69 - 138	7.04	20	
1,2,4-Trichlorobenzene	19.3900	5.0	0.16	20.0000		97.0	78 - 125	6.17	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS Dup (B9H0170-BSD1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,2,4-Trimethylbenzene	19.6200	5.0	0.14	20.0000		98.1	70 - 126	8.67	20	
1,2-Dibromo-3-chloropropane	17.4800	5.0	0.41	20.0000		87.4	58 - 127	11.2	20	
1,2-Dibromoethane	19.6200	5.0	0.24	20.0000		98.1	76 - 120	8.06	20	
1,2-Dichlorobenzene	21.8000	5.0	0.20	20.0000		109	82 - 117	11.7	20	
1,2-Dichloroethane	22.2400	5.0	0.20	20.0000		111	66 - 126	13.2	20	
1,2-Dichloropropane	20.4200	5.0	0.15	20.0000		102	70 - 117	9.44	20	
1,3,5-Trimethylbenzene	19.9800	5.0	0.13	20.0000		99.9	71 - 125	8.72	20	
1,3-Dichlorobenzene	19.6700	5.0	0.16	20.0000		98.4	81 - 116	7.71	20	
1,3-Dichloropropane	19.8700	5.0	0.21	20.0000		99.4	69 - 124	6.93	20	
1,4-Dichlorobenzene	20.7400	5.0	0.17	20.0000		104	80 - 114	8.39	20	
2,2-Dichloropropane	20.7700	5.0	0.38	20.0000		104	58 - 132	7.96	20	
2-Chlorotoluene	20.3600	5.0	0.11	20.0000		102	71 - 119	9.36	20	
4-Chlorotoluene	20.3800	5.0	0.12	20.0000		102	72 - 122	9.51	20	
4-Isopropyltoluene	19.7300	5.0	0.11	20.0000		98.6	69 - 126	9.95	20	
Benzene	43.5300	5.0	0.13	40.0000		109	80 - 116	9.43	20	
Bromobenzene	21.2500	5.0	0.21	20.0000		106	77 - 118	12.1	20	
Bromochloromethane	18.4600	5.0	0.16	20.0000		92.3	68 - 121	1.14	20	
Bromodichloromethane	18.9900	5.0	0.14	20.0000		95.0	73 - 118	8.17	20	
Bromoform	16.9500	5.0	0.20	20.0000		84.8	65 - 133	9.58	20	
Bromomethane	19.4900	5.0	0.17	20.0000		97.4	7 - 205	10.0	20	
Carbon disulfide	21.1000	5.0	0.07	20.0000		106	55 - 131	13.6	20	
Carbon tetrachloride	19.8200	5.0	0.09	20.0000		99.1	63 - 133	13.8	20	
Chlorobenzene	21.4500	5.0	0.13	20.0000		107	86 - 113	12.1	20	
Chloroethane	20.1100	5.0	0.15	20.0000		101	66 - 141	11.5	20	
Chloroform	20.0400	5.0	0.11	20.0000		100	63 - 127	3.50	20	
Chloromethane	19.2900	5.0	0.12	20.0000		96.4	0 - 207	2.31	20	
cis-1,2-Dichloroethene	20.7100	5.0	0.14	20.0000		104	64 - 126	8.93	20	
cis-1,3-Dichloropropene	21.0400	5.0	0.13	20.0000		105	70 - 141	8.94	20	
Di-isopropyl ether	19.6600	5.0	0.15	20.0000		98.3	56 - 131	8.54	20	
Dibromochloromethane	18.0200	5.0	0.16	20.0000		90.1	67 - 135	8.20	20	
Dibromomethane	20.1700	5.0	0.19	20.0000		101	74 - 118	5.61	20	
Dichlorodifluoromethane	18.2200	5.0	0.05	20.0000		91.1	14 - 181	2.60	20	
Ethyl Acetate	186.160	50	3.1	200.000		93.1	49 - 128	2.54	20	
Ethyl Ether	180.950	50	2.0	200.000		90.5	53 - 143	4.82	20	
Ethyl tert-butyl ether	19.0900	5.0	0.21	20.0000		95.4	54 - 132	0.947	20	
Ethylbenzene	37.5400	5.0	0.13	40.0000		93.8	77 - 118	9.31	20	
Freon-113	20.4300	5.0	0.13	20.0000		102	68 - 145	9.65	20	
Hexachlorobutadiene	19.6600	5.0	0.15	20.0000		98.3	66 - 125	7.82	20	
Isopropylbenzene	21.2000	5.0	0.10	20.0000		106	68 - 137	10.7	20	
m,p-Xylene	40.6200	10	0.19	40.0000		102	78 - 126	9.27	20	

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San Bernardino , CA 92408	Reported : 08/15/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS Dup (B9H0170-BSD1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Methylene chloride	16.8000	5.0	0.71	20.0000		84.0	51 - 149	8.63	20	
MTBE	19.6200	5.0	0.26	20.0000		98.1	63 - 128	5.77	20	
n-Butylbenzene	19.6000	5.0	0.11	20.0000		98.0	63 - 127	8.07	20	
n-Propylbenzene	20.2200	5.0	0.10	20.0000		101	69 - 124	10.4	20	
Naphthalene	17.7300	5.0	0.41	20.0000		88.6	60 - 126	6.10	20	
o-Xylene	38.1200	5.0	0.13	40.0000		95.3	79 - 126	8.22	20	
sec-Butylbenzene	19.9300	5.0	0.09	20.0000		99.6	69 - 124	8.91	20	
Styrene	20.0600	5.0	0.13	20.0000		100	80 - 127	8.15	20	
tert-Amyl methyl ether	18.8900	5.0	0.41	20.0000		94.4	49 - 130	3.18	20	
tert-Butanol	85.7700	100	2.4	100.000		85.8	29 - 163	8.72	20	
tert-Butylbenzene	20.0500	5.0	0.09	20.0000		100	71 - 124	10.1	20	
Tetrachloroethene	19.1000	5.0	0.10	20.0000		95.5	73 - 129	8.52	20	
Toluene	43.7100	5.0	0.12	40.0000		109	78 - 121	11.0	20	
trans-1,2-Dichloroethene	20.4200	5.0	0.09	20.0000		102	58 - 141	5.48	20	
trans-1,3-Dichloropropene	19.0000	5.0	0.23	20.0000		95.0	68 - 128	14.4	20	
Trichloroethene	19.7100	5.0	0.10	20.0000		98.6	73 - 126	8.35	20	
Trichlorofluoromethane	18.9100	5.0	0.10	20.0000		94.6	62 - 146	2.35	20	
Vinyl acetate	232.170	50	1.7	200.000		116	53 - 153	5.64	20	
Vinyl chloride	19.2100	5.0	0.05	20.0000		96.0	61 - 137	1.81	20	
Surrogate: 1,2-Dichloroethane-d4	*23.95*			*25.0000*		*95.8*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.51*			*25.0000*		*102*	*71 - 127*			
Surrogate: Dibromofluoromethane	*25.72*			*25.0000*		*103*	*66 - 147*			
Surrogate: Toluene-d8	*25.76*			*25.0000*		*103*	*77 - 138*			

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San Bernardino , CA 92408	Reported : 08/15/2019

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0177 - Prep_WC1_S										
Duplicate (B9H0177-DUP1)			**Source: 1902943-01**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
pH	8.22000	0.10	0.10		8.23000			0.122	20	

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San Bernardino , CA 92408		Reported :	08/15/2019

Notes and Definitions

S10	Surrogate recovery was outside of laboratory acceptance limit due to possible matrix interference.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
L3	Laboratory control sample outside in-house established limits but within method criteria.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Stantec

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

1902952

Client Name/Address:
Stantec
735 E. Carnegie Dr, Suite 280
San Bernardino, CA 92408

Project/PO Number:
GNAP-Fullerton / 185804430

Project Manager: Brian Viggiano

Phone Number: : **(909)289-7111**

Email Address:
brian.viggiano@stantec.com
Sampler: Josh Sargent

Fax Number: **(909)335-6120**

	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	PCB 8082A	pH 9045	Dioxin/Furan 8290	Pesticides 8081A	Arsenic/Lead 6010B			Special Instructions
01	TB-20190807	W	VOA	2			HCl		X								
02	EB-20190807	W	VOA	6	8.6.19	0720	HCl		X								
03	HA-16-5	S	5oz	1		0830	ICE	X	X	X	X						
04	HA-16-8					0835		X	X	X	X	X					*Dioxin/Furan 1-week TAT
05	HA-15-5					0838		X	X	X	X						
06	HA-15-10					0907		X	X	X	X	X					*Dioxin/Furan 1-week TAT
07	HA-6-1					1025							X	X			
08	HA-6-3					~~1026~~ 1028							X	X			
09	HA-7-1					1037							X	X			
10	HA-7-3					1038							X	X			
11	HA-5-1					1050							X	X			
12	HA-5-3					1052							X	X			
13	HA-4-1					1102							X	X			
14	HA-4-3					1104							X	X			

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/Time: 8/7/19 1525
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround: same day / 24 hours / 48 hours — Time: (Check) 5 days / normal

Sample Integrity: (Check) intact _____ on ice _____

Note: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Stantec

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

Client Name/Address:
Stantec
735 E. Carnegie Dr, Suite 280
San Bernardino, CA 92408

Project/PO Number:
GNAP-Fullerton / 185804430

Project Manager: Brian Viggiano

Phone Number: : **(909)289-7111**

Email Address:
brian.viggiano@stantec.com
Sampler: Josh Sargent

Fax Number: **(909)335-6120**

	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	Pesticides 8081A	Arsenic/Lead 6010	TPH + 8 metals extended	PLEC 8082A				Special Instructions
15	HA-9-1	S	802	1	8.7.19	1235	ICE	X		X	X	X	X				
16	HA-9-3					1237		X		X	X	X					
17	HA-8-1					1247		X		X	X	X	X				
18	HA-8-3					1250		X		X	X	X					
19	HA-10-1					1307		X		X	X	X	X				
20	HA-10-3					1311		X		X	X	X					
21	HA-11-1					1328		X		X	X	X	X				
22	HA-11-3					1330		X		X	X	X					
23	HA-2-1					1356				X	X						
24	HA-2-3					1358				X	X						
25	HA-3-1					1408				X	X						
26	HA-3-3					1410				X	X						
27	HA-1-1					1427				X	X						
28	HA-1-3					1430				X	X						

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/ Time: 8/7/19 1525
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours 5 days
48 hours normal

Sample Integrity: (Check)
intact on ice

Note: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

CHAIN OF CUSTODY FORM

Stantec
735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

Client Name/Address:	Project/PO Number:	Analysis Required
Stantec 735 E. Carnegie Dr, Suite 280 San Bernardino, CA 92408	**GNAP-Fullerton / 185804430**	
Project Manager: Brian Viggiano Email Address: brian.viggiano@stantec.com Sampler: Josh Sargent	Phone Number: : **(909)289-7111** Fax Number: (**909)335-6120**	

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	Pesticides 8081A	Title 22 metals 6010/7471	PCBs 8082					Special Instructions
24 HA-12-1	S	8oz	1	8.7.19	1456	ICE	X		X	X	X					
38 HA-12-3	S	8oz	1	8.7.19	1458	ICE	X		X	X						

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/ Time: 8/7/19 1525	Turnaround: same day / 24 hours / 48 hours — Time: (Check) — 5 days / normal
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615	
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;	Sample Integrity: (Check) intact _____ on ice _____

Note: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

ADVANCED TECHNOLOGY LABORATORIES

August 16, 2019

Brian Viggiano
Stantec
735 E. Carnegie Drive, Suite 280
San Bernardino, CA 92408
Tel: (909) 255-8204
Fax:(909) 335-6120

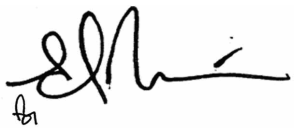
ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1902952
Client Reference : GNAP-Fullerton, 185804430

Enclosed are the results for sample(s) received on August 07, 2019 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Edgar Caballero
President & Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/16/2019

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HA-16-8	1902952-04	Soil	8/07/19 8:35	8/07/19 15:25
HA-15-10	1902952-06	Soil	8/07/19 9:07	8/07/19 15:25

CASE NARRATIVE

The samples for 2,3,7,8-TCDD (EPA 8290) analyses were subcontracted to Ceres Analytical Laboratory, Inc. with NELAP Cert.# 4049.

CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

August 14, 2019 Ceres ID: 12966

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755

The following report contains the results for the two soil samples received on August 9, 2019. These samples were analyzed for tetra through octa chlorinated dioxins and dibenzofurans by EPA method 8290A. Rush 1-week turn-around time was provided for this work.

Sample results are reported on a dry weight basis.

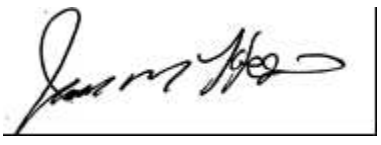
This work was authorized under Advanced Technology Laboratories' Work Order # 1902952 and P.O. # SC13973.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,



James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
12966-001	HA-16-8 1902952-04	8/9/2019	8/6/2019	8:35
12966-002	HA-15-10 1902952-06	8/9/2019	8/6/2019	9:07

Section II: Data Summary

CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Sample **Method Blank**		**Date Received:** NA
	QC Batch #: 2039	**Date Extracted:** 8/9/2019
	Matrix: Soil	**ZB-5MS Analysis:** 8/12/2019
Project ID: 1902952	**Sample Size:** 10.00 g	

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 0.463	0.172	0.500		13C-2378-TCDD	88.0	40-135	
12378-PeCDD	DL= 0.583	0.327	2.50		13C-12378-PeCDD	71.4	40-135	
123478-HxCDD	DL= 0.689	0.327	2.50		13C-123478-HxCDD	65.9	40-135	
123678-HxCDD	DL= 0.789	0.655	2.50		13C-123678-HxCDD	75.1	40-135	
123789-HxCDD	DL= 0.724	0.315	2.50		13C-1234678-HpCDD	66.1	40-135	
1234678-HpCDD	DL= 1.04	0.409	2.50		13C-OCDD	78.1	40-135	
OCDD	DL= 1.31	1.01	5.00		13C-2378-TCDF	90.7	40-135	
2,3,7,8-TCDF	DL= 0.385	0.0886	0.500		13C-12378-PeCDF	77.1	40-135	
12378-PeCDF	DL= 0.481	0.412	2.50		13C-23478-PeCDF	82.4	40-135	
23478-PeCDF	DL= 0.396	0.422	2.50		13C-123478-HxCDF	75.8	40-135	
123478-HxCDF	DL= 0.432	0.518	2.50		13C-123678-HxCDF	81.2	40-135	
123678-HxCDF	DL= 0.458	0.533	2.50		13C-234678-HxCDF	74.2	40-135	
234678-HxCDF	DL= 0.490	0.319	2.50		13C-123789-HxCDF	73.8	40-135	
123789-HxCDF	DL= 0.575	0.425	2.50		13C-1234678-HpCDF	73.0	40-135	
1234678-HpCDF	DL= 0.520	0.279	2.50		13C-1234789-HpCDF	81.5	40-135	
1234789-HpCDF	DL= 0.742	0.378	2.50					
OCDF	DL= 1.11	0.461	5.00					

Totals	Conc. (pg/g)	EMPC
Total TCDD	DL= 0.463	
Total PeCDD	DL= 0.583	
Total HxCDD	DL= 0.789	
Total HpCDD	DL= 1.04	
Total TCDF	DL= 0.385	
Total PeCDF	DL= 0.481	
Total HxCDF	DL= 0.575	
Total HpCDF	DL= 0.742	

CRS			
37Cl4-2378-TCDD	81.3	40-135	

DL - Signifies Non-Detect (ND) at sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 0.0 pg/g

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Samples Laboratory Control Samples		Date Received: NA
	QC Batch #: 2039	Date Extracted: 8/9/2019
	Matrix: Soil	ZB-5MS Analysis: 8/12/2019
Project ID: 1902952	Sample Size: 10.00 g	

Analyte	LCS1 % Rec.	LCS2 % Rec.	%RSD
2,3,7,8-TCDD	81.2	73	7.52
12378-PeCDD	114	113	0.62
123478-HxCDD	101	105	2.75
123678-HxCDD	110	104	3.97
123789-HxCDD	107	110	1.96
1234678-HpCDD	104	103	0.68
OCDD	104	106	1.35
2,3,7,8-TCDF	89.1	82.8	5.18
12378-PeCDF	105	106	0.67
23478-PeCDF	96.6	97.6	0.73
123478-HxCDF	97.8	96.8	0.73
123678-HxCDF	99.4	98.4	0.71
234678-HxCDF	97	96.6	0.29
123789-HxCDF	99	99.2	0.14
1234678-HpCDF	95.4	93.8	1.20
1234789-HpCDF	94.4	88.8	4.32
OCDF	107	107	0.00

Labeled Standards	LCS1 % Rec.	LCS2 % Rec	Limits (a)
13C-2378-TCDD	105	102	40-135
13C-12378-PeCDD	93.4	86.5	40-135
13C-123478-HxCDD	84.7	80.0	40-135
13C-123678-HxCDD	86.7	86.3	40-135
13C-1234678-HpCDD	82.6	84.4	40-135
13C-OCDD	96.5	98.0	40-135
13C-2378-TCDF	110	107	40-135
13C-12378-PeCDF	98.1	92.1	40-135
13C-23478-PeCDF	106	98.9	40-135
13C-123478-HxCDF	95.1	91.6	40-135
13C-123678-HxCDF	97.4	95.7	40-135
13C-234678-HxCDF	90.5	88.0	40-135
13C-123789-HxCDF	89.1	88.2	40-135
13C-1234678-HpCDF	89.8	89.8	40-135
13C-1234789-HpCDF	96.6	105	40-135
CRS			
37Cl4-2378-TCDD	96.5	97.0	40-135

(a) Limits based on method acceptance criteria.

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Client Sample ID: HA-16-8 1902952-04		
Project ID: 1902952	**Ceres Sample ID:** 12966-001	**Date Received:** 8/9/2019
	QC Batch #: 2039	**Date Extracted:** 8/9/2019
Date Collected: 8/6/2019	**Matrix:** Soil	**ZB-5MS Analysis:** 8/12/2019
Time Collected: 8:35	**Sample Size:** 10.46 g **% Solids:** 96.7	**Q-225 Analysis:** NA

Analyte	Conc. (pg/g)	MDL	RL	Qual.
2,3,7,8-TCDD	DL= 0.342	0.172	0.495	
12378-PeCDD	DL= 0.441	0.327	2.47	
123478-HxCDD	DL= 0.422	0.327	2.47	
123678-HxCDD	DL= 0.506	0.655	2.47	
123789-HxCDD	DL= 0.453	0.315	2.47	
1234678-HpCDD	DL= 0.916	0.409	2.47	
OCDD	DL= 1.54	1.01	4.95	
2,3,7,8-TCDF	DL= 0.346	0.0886	0.495	
12378-PeCDF	DL= 0.384	0.412	2.47	
23478-PeCDF	DL= 0.321	0.422	2.47	
123478-HxCDF	DL= 0.403	0.518	2.47	
123678-HxCDF	DL= 0.381	0.533	2.47	
234678-HxCDF	DL= 0.411	0.319	2.47	
123789-HxCDF	DL= 0.507	0.425	2.47	
1234678-HpCDF	DL= 0.778	0.279	2.47	
1234789-HpCDF	DL= 0.554	0.378	2.47	
OCDF	DL= 1.36	0.461	4.95	

Totals	Conc. (pg/g)	EMPC
Total TCDD	DL= 0.342	
Total PeCDD	DL= 0.441	
Total HxCDD	DL= 0.506	
Total HpCDD	DL= 0.916	
Total TCDF	DL= 0.346	
Total PeCDF	DL= 0.384	
Total HxCDF	DL= 0.507	
Total HpCDF	DL= 0.778	

Labeled Standards	% R	LCL-UCL (a)	Qualifiers
13C-2378-TCDD	107	40-135	
13C-12378-PeCDD	87.0	40-135	
13C-123478-HxCDD	88.4	40-135	
13C-123678-HxCDD	87.3	40-135	
13C-1234678-HpCDD	74.0	40-135	
13C-OCDD	65.1	40-135	
13C-2378-TCDF	100	40-135	
13C-12378-PeCDF	90.3	40-135	
13C-23478-PeCDF	97.0	40-135	
13C-123478-HxCDF	88.0	40-135	
13C-123678-HxCDF	88.8	40-135	
13C-234678-HxCDF	83.4	40-135	
13C-123789-HxCDF	83.5	40-135	
13C-1234678-HpCDF	39.0	40-135	H
13C-1234789-HpCDF	84.6	40-135	
CRS			
37Cl4-2378-TCDD	99.2	40-135	

DL - Signifies Non-Detect (ND) at sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 0.0 pg/g

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Client Sample ID: HA-15-10 1902952-06			
Project ID: 1902952	**Ceres Sample ID:** 12966-002		**Date Received:** 8/9/2019
	QC Batch #: 2039		**Date Extracted:** 8/9/2019
Date Collected: 8/6/2019	**Matrix:** Soil		**ZB-5MS Analysis:** 8/12/2019
Time Collected: 9:07	**Sample Size:** 10.47 g	**% Solids:** 96.1	**Q-225 Analysis:** NA

Analyte	Conc. (pg/g)	MDL	RL	Qual.
2,3,7,8-TCDD	DL= 0.353	0.172	0.497	
12378-PeCDD	DL= 0.458	0.327	2.49	
123478-HxCDD	DL= 0.468	0.327	2.49	
123678-HxCDD	DL= 0.554	0.655	2.49	
123789-HxCDD	DL= 0.500	0.315	2.49	
1234678-HpCDD	DL= 0.820	0.409	2.49	
OCDD	DL= 2.52	1.01	4.97	
2,3,7,8-TCDF	DL= 0.315	0.0886	0.497	
12378-PeCDF	DL= 0.370	0.412	2.49	
23478-PeCDF	DL= 0.302	0.422	2.49	
123478-HxCDF	DL= 0.389	0.518	2.49	
123678-HxCDF	DL= 0.364	0.533	2.49	
234678-HxCDF	DL= 0.407	0.319	2.49	
123789-HxCDF	DL= 0.467	0.425	2.49	
1234678-HpCDF	DL= 0.492	0.279	2.49	
1234789-HpCDF	DL= 0.642	0.378	2.49	
OCDF	DL= 2.37	0.461	4.97	

Totals	Conc. (pg/g)	EMPC
Total TCDD	DL= 0.353	
Total PeCDD	DL= 0.458	
Total HxCDD	DL= 0.554	
Total HpCDD	DL= 0.820	
Total TCDF	DL= 0.315	
Total PeCDF	DL= 0.370	
Total HxCDF	DL= 0.467	
Total HpCDF	DL= 0.642	

Labeled Standards	% R	LCL-UCL (a)	Qualifiers
13C-2378-TCDD	110	40-135	
13C-12378-PeCDD	90.7	40-135	
13C-123478-HxCDD	93.9	40-135	
13C-123678-HxCDD	94.6	40-135	
13C-1234678-HpCDD	79.9	40-135	
13C-OCDD	41.1	40-135	
13C-2378-TCDF	108	40-135	
13C-12378-PeCDF	95.4	40-135	
13C-23478-PeCDF	103	40-135	
13C-123478-HxCDF	92.4	40-135	
13C-123678-HxCDF	93.6	40-135	
13C-234678-HxCDF	89.2	40-135	
13C-123789-HxCDF	88.8	40-135	
13C-1234678-HpCDF	77.4	40-135	
13C-1234789-HpCDF	91.7	40-135	
CRS			
37Cl4-2378-TCDD	111	40-135	

DL - Signifies Non-Detect (ND) at sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 0.0 pg/g

Analyst: JMH **Reviewed by: BS**

Section VI: Sample Tracking

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 1902952

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachelle Arada
(Rachelle.Arada@atlglobal.com)

Sampler: Josh Sargent

RECEIVING LABORATORY:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762
Phone :(916) 932-5011
Fax: (888) 932-5011
PO#: SC13973-RUSH TAT W

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1902952-04 / HA-16-8		**Soil**	**08/06/19 08:35**	
8290_SUB	**08/16/19 14:00**	09/05/19 08:35		
[Dioxins and Dibenzofurans]				
1-Glass Jar - 4 oz				
ATL Lab#: 1902952-06 / HA-15-10		**Soil**	**08/06/19 09:07**	
8290_SUB	**08/16/19 14:00**	09/05/19 09:07		
[Dioxins and Dibenzofurans]				
1-Glass Jar - 4 oz				

Released By	Date	Received By	Date
GSO 08/08/19		GSO 545 770396	08/08/19
Released By	Date	Received By	Date
GSO 8/9/19		8/9/19 10:15	

Sample Receipt Check List Logged by: [illegible] (initials)

Ceres ID: 12966	Date/Time: 8/9/19 10:15
Client Project ID: 1902952 SC13973	Received Temp: 4.6 °C Acceptable: (Y) / N
Chain of Custody Relinquished by signed?	(Y) / N
Chain of Custody Received by signed?	(Y) / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	(NA)
Unlabeled / Illegible Samples	Y / (N)
Proper Containers:	(Y) / N
Preservation Acceptable (Chemical or Temperature)?	(Y) / N
Drinking Water, Sodium Thiosulfate present?	Y / N (NA)
Residual Cl?	Y / N
Aqueous sample pH: NA	

List COC discrepancies:

[illegible] 8/9/19

List Damaged Samples:

[illegible] 8/9/19

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*****	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

Stantec

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

1902952

Client Name/Address:	Project/PO Number:
Stantec 735 E. Carnegie Dr, Suite 280 San Bernardino, CA 92408	**GNAP-Fullerton / 185804430**
Project Manager: Brian Viggiano	Phone Number: : **(909)289-7111**
Email Address: brian.viggiano@stantec.com Sampler: Josh Sargent	Fax Number: **(909)335-6120**

	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	PCB 8082A	2,3,7,8 TCDD	Dioxin/Furan 8290	Pesticides 8081A	Arsenic/Lead 6010B			Special Instructions
01	TB-20190807	W	VOA	2	8.7.19	—	HCl		X								
02	EB-20190807	W	VOA	6			HCl		X								
03	HA-10-5	S	5oz	1		0903	ICE	X	X	X	X						
04	HA-10-8					0935		X	X	X	X	X					*Dioxin/Furan 1-week TAT
05	HA-15-5					0938		X	X	X	X						
06	HA-15-10					0907		X	X	X	X	X					*Dioxin/Furan 1-week TAT
07	HA-6-1					1045							X	X			
08	HA-6-3					~~1046~~ 1048							X	X			
09	HA-7-1					1037							X	X			
10	HA-7-3					1038							X	X			
11	HA-5-1					1050							X	X			
12	HA-5-3					1052							X	X			
13	HA-4-1					1102							X	X			
14	HA-4-3					1104							X	X			

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/ Time: 8/7/19 1525
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours
48 hours
5 days
normal

Sample Integrity: (Check)
intact _____ on ice _____

: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for ces is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Stantec

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

Client Name/Address:
Stantec
735 E. Carnegie Dr, Suite 280
San Bernardino, CA 92408

Project/PO Number:
GNAP-Fullerton / 185804430

Project Manager: Brian Viggiano

Phone Number: : **(909)289-7111**

Email Address:
brian.viggiano@stantec.com
Sampler: Josh Sargent

Fax Number: **(909)335-6120**

	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	Pesticides 8081A	Arsenic/Lead 6010	TPH w/ silica gel	PCBs 8082A				Special Instructions
15	HA-9-1	S	8oz	1	8.7.19	1235	ICE	X		X	X	X	X				
16	HA-9-3					1237		X		X	X	X					
17	HA-8-1					1247		X		X	X	X	X				
18	HA-8-3					1250		X		X	X	X					
19	HA-10-1					1307		X		X	X	X	X				
20	HA-10-3					1311		X		X	X	X					
21	HA-11-1					1328		X		X	X	X	X				
22	HA-11-3					1330		X		X	X	X					
23	HA-2-1					1356				X	X						
24	HA-2-3					1358				X	X						
25	HA-3-1					1408				X	X						
26	HA-3-3					1410				X	X						
27	HA-1-1					1427				X	X						
28	HA-1-3					1430				X	X						

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/ Time: 8/7/19 1525
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours 5 days
48 hours normal

Sample Integrity: (Check)
intact on ice

Note: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

Client Name/Address:	Project/PO Number:
Stantec 735 E. Carnegie Dr, Suite 280 San Bernardino, CA 92408	**GNAP-Fullerton / 185804430**
Project Manager: Brian Viggiano Email Address: brian.viggiano@stantec.com Sampler: Josh Sargent	Phone Number: : **(909)289-7111** Fax Number: (**909)335-6120**

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	Pesticides 8081A	Title 22 metals 6010/7471	PCBs 8082					Special Instructions
24 HA-12-1	S	8oz	1	8.7.19	1456	ICE	X		X	X	X					
38 HA-12-3	S	8oz	1	8.7.19	1458	ICE	X		X	X						

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/ Time: 8/7/19 1525
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours 5 days
48 hours normal

Sample Integrity: (Check)
intact _____ on ice _____

Note: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

August 15, 2019

Brian Viggiano
Stantec
735 E. Carnegie Drive, Suite 280
San Bernardino, CA 92408
Tel: (909) 255-8204
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

RE: ATL Work Order Number : 1902952
Client Reference : GNAP-Fullerton, 185804430

Enclosed are the results for sample(s) received on August, 7 2019 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Edgar Caballero
President & Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-20190807	1902952-01	Water	8/07/19 0:00	8/07/19 15:25
EB-20190807	1902952-02	Water	8/07/19 7:20	8/07/19 15:25
HA-16-5	1902952-03	Soil	8/07/19 8:30	8/07/19 15:25
HA-16-8	1902952-04	Soil	8/07/19 8:35	8/07/19 15:25
HA-15-5	1902952-05	Soil	8/07/19 8:58	8/07/19 15:25
HA-15-10	1902952-06	Soil	8/07/19 9:07	8/07/19 15:25
HA-6-1	1902952-07	Soil	8/07/19 10:25	8/07/19 15:25
HA-6-3	1902952-08	Soil	8/07/19 10:27	8/07/19 15:25
HA-7-1	1902952-09	Soil	8/07/19 10:37	8/07/19 15:25
HA-7-3	1902952-10	Soil	8/07/19 10:38	8/07/19 15:25
HA-5-1	1902952-11	Soil	8/07/19 10:50	8/07/19 15:25
HA-5-3	1902952-12	Soil	8/07/19 10:52	8/07/19 15:25
HA-4-1	1902952-13	Soil	8/07/19 11:02	8/07/19 15:25
HA-4-3	1902952-14	Soil	8/07/19 11:04	8/07/19 15:25
HA-9-1	1902952-15	Soil	8/07/19 12:35	8/07/19 15:25
HA-9-3	1902952-16	Soil	8/07/19 12:37	8/07/19 15:25
HA-8-1	1902952-17	Soil	8/07/19 12:47	8/07/19 15:25
HA-8-3	1902952-18	Soil	8/07/19 12:50	8/07/19 15:25
HA-10-1	1902952-19	Soil	8/07/19 13:07	8/07/19 15:25
HA-10-3	1902952-20	Soil	8/07/19 13:11	8/07/19 15:25
HA-11-1	1902952-21	Soil	8/07/19 13:28	8/07/19 15:25
HA-11-3	1902952-22	Soil	8/07/19 13:30	8/07/19 15:25
HA-2-1	1902952-23	Soil	8/07/19 13:56	8/07/19 15:25
HA-2-3	1902952-24	Soil	8/07/19 13:58	8/07/19 15:25
HA-3-1	1902952-25	Soil	8/07/19 14:08	8/07/19 15:25
HA-3-3	1902952-26	Soil	8/07/19 14:10	8/07/19 15:25
HA-1-1	1902952-27	Soil	8/07/19 14:27	8/07/19 15:25
HA-1-3	1902952-28	Soil	8/07/19 14:30	8/07/19 15:25
HA-12-1	1902952-29	Soil	8/07/19 14:56	8/07/19 15:25
HA-12-3	1902952-30	Soil	8/07/19 14:58	8/07/19 15:25

CASE NARRATIVE

The samples for 2,3,7,8-TCDD (EPA 8290) analyses were subcontracted to Ceres Analytical Laboratory, Inc. with NELAP Cert.# 4049. Results to follow in an addendum report.

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID TB-20190807

Lab ID: 1902952-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1,1-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1,2-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,1-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2,3-Trichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dibromo-3-chloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dibromoethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,3-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,3-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
1,4-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
2,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
2-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
4-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
4-Isopropyltoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Benzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromodichloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromoform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Bromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Carbon disulfide	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Carbon tetrachloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Chlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Chloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Chloroform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Chloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID TB-20190807

Lab ID: 1902952-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Di-isopropyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Dibromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Dibromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Dichlorodifluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Ethyl Acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 13:11	
Ethyl Ether	ND	50	1	B9H0170	08/08/2019	08/08/19 13:11	
Ethyl tert-butyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Ethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Freon-113	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Hexachlorobutadiene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Isopropylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
m,p-Xylene	ND	10	1	B9H0170	08/08/2019	08/08/19 13:11	
Methylene chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
MTBE	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
n-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
n-Propylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Naphthalene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
o-Xylene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
sec-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Styrene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
tert-Amyl methyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
tert-Butanol	ND	100	1	B9H0170	08/08/2019	08/08/19 13:11	
tert-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Tetrachloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Toluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Trichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Trichlorofluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Vinyl acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 13:11	
Vinyl chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:11	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*59 - 158*		B9H0170	08/08/2019	*08/08/19 13:11*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*71 - 127*		B9H0170	08/08/2019	*08/08/19 13:11*	
Surrogate: Dibromofluoromethane	*112 %*	*66 - 147*		B9H0170	08/08/2019	*08/08/19 13:11*	
Surrogate: Toluene-d8	*108 %*	*77 - 138*		B9H0170	08/08/2019	*08/08/19 13:11*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID EB-20190807

Lab ID: 1902952-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1,1-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1,2-Trichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,1-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2,3-Trichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dibromo-3-chloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dibromoethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dichloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,3-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,3-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
1,4-Dichlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
2,2-Dichloropropane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
2-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
4-Chlorotoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
4-Isopropyltoluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Benzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromodichloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromoform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Bromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Carbon disulfide	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Carbon tetrachloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Chlorobenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Chloroethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Chloroform	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Chloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID EB-20190807

Lab ID: 1902952-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Di-isopropyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Dibromochloromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Dibromomethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Dichlorodifluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Ethyl Acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 13:36	
Ethyl Ether	ND	50	1	B9H0170	08/08/2019	08/08/19 13:36	
Ethyl tert-butyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Ethylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Freon-113	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Hexachlorobutadiene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Isopropylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
m,p-Xylene	ND	10	1	B9H0170	08/08/2019	08/08/19 13:36	
Methylene chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
MTBE	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
n-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
n-Propylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Naphthalene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
o-Xylene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
sec-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Styrene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
tert-Amyl methyl ether	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
tert-Butanol	ND	100	1	B9H0170	08/08/2019	08/08/19 13:36	
tert-Butylbenzene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Tetrachloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Toluene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Trichloroethene	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Trichlorofluoromethane	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Vinyl acetate	ND	50	1	B9H0170	08/08/2019	08/08/19 13:36	
Vinyl chloride	ND	5.0	1	B9H0170	08/08/2019	08/08/19 13:36	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*59 - 158*		B9H0170	08/08/2019	*08/08/19 13:36*	
Surrogate: 4-Bromofluorobenzene	*99.2 %*	*71 - 127*		B9H0170	08/08/2019	*08/08/19 13:36*	
Surrogate: Dibromofluoromethane	*116 %*	*66 - 147*		B9H0170	08/08/2019	*08/08/19 13:36*	
Surrogate: Toluene-d8	*108 %*	*77 - 138*		B9H0170	08/08/2019	*08/08/19 13:36*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-5

Lab ID: 1902952-03

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0167	08/08/2019	08/08/19 09:03	
Surrogate: 4-Bromofluorobenzene	*112 %*		*45 - 149*		B9H0167	08/08/2019	*08/08/19 09:03*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0174	08/08/2019	08/08/19 15:42	
ORO		ND	10	1	B9H0174	08/08/2019	08/08/19 15:42	
Surrogate: p-Terphenyl	*71.8 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 15:42*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 16:01	
Surrogate: Decachlorobiphenyl	*118 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 16:01*	
Surrogate: Tetrachloro-m-xylene	*92.7 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 16:01*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-5

Lab ID: 1902952-03

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-5

Lab ID: 1902952-03

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:09	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 18:09	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 18:09	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 18:09	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:09	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:09	
Surrogate: 1,2-Dichloroethane-d4	*98.7 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 18:09*	
Surrogate: 4-Bromofluorobenzene	*92.7 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 18:09*	
Surrogate: Dibromofluoromethane	*105 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 18:09*	
Surrogate: Toluene-d8	*96.8 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 18:09*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-5

Lab ID: 1902952-03

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**8.9**	0.10	1	B9H0177	08/08/2019	08/08/19 14:49	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-8

Lab ID: 1902952-04

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0167	08/08/2019	08/08/19 09:22	
Surrogate: 4-Bromofluorobenzene	*109 %*		*45 - 149*		B9H0167	08/08/2019	*08/08/19 09:22*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:09	
ORO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:09	
Surrogate: p-Terphenyl	*75.9 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:09*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 16:20	
Surrogate: Decachlorobiphenyl	*120 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 16:20*	
Surrogate: Tetrachloro-m-xylene	*98.4 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 16:20*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-8

Lab ID: 1902952-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-16-8

Lab ID: 1902952-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:28	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 18:28	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 18:28	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 18:28	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:28	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:28	
Surrogate: 1,2-Dichloroethane-d4	*100 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 18:28*	
Surrogate: 4-Bromofluorobenzene	*91.5 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 18:28*	
Surrogate: Dibromofluoromethane	*105 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 18:28*	
Surrogate: Toluene-d8	*95.0 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 18:28*	

Certificate of Analysis

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Client Sample ID HA-16-8

Lab ID: 1902952-04

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**9.1**	0.10	1	B9H0177	08/08/2019	08/08/19 14:49	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-15-5

Lab ID: 1902952-05

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0167	08/08/2019	08/08/19 09:40	
Surrogate: 4-Bromofluorobenzene	*109 %*		*45 - 149*		B9H0167	08/08/2019	*08/08/19 09:40*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:24	
ORO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:24	
Surrogate: p-Terphenyl	*79.3 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:24*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 16:38	
Surrogate: Decachlorobiphenyl	*120 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 16:38*	
Surrogate: Tetrachloro-m-xylene	*99.5 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 16:38*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-15-5

Lab ID: 1902952-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-15-5

Lab ID: 1902952-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:47	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 18:47	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 18:47	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 18:47	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 18:47	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 18:47	
Surrogate: 1,2-Dichloroethane-d4	*97.4 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 18:47*	
Surrogate: 4-Bromofluorobenzene	*90.7 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 18:47*	
Surrogate: Dibromofluoromethane	*101 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 18:47*	
Surrogate: Toluene-d8	*93.5 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 18:47*	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
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Client Sample ID HA-15-5

Lab ID: 1902952-05

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**9.4**	0.10	1	B9H0177	08/08/2019	08/08/19 14:49	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-15-10

Lab ID: 1902952-06

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0167	08/08/2019	08/08/19 09:59	
Surrogate: 4-Bromofluorobenzene	*109 %*		*45 - 149*		B9H0167	08/08/2019	*08/08/19 09:59*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:56	
ORO		ND	10	1	B9H0174	08/08/2019	08/08/19 14:56	
Surrogate: p-Terphenyl	*77.3 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:56*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 16:57	
Surrogate: Decachlorobiphenyl	*124 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 16:57*	S10
Surrogate: Tetrachloro-m-xylene	*96.7 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 16:57*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1,1-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1,2-Trichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-15-10

Lab ID: 1902952-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,1-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2,3-Trichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dibromoethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dichloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,3-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,3-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
1,4-Dichlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
2,2-Dichloropropane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
2-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
4-Chlorotoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
4-Isopropyltoluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Benzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromodichloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromoform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Bromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Carbon disulfide	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Carbon tetrachloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Chlorobenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Chloroethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Chloroform	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Chloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Di-isopropyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Dibromochloromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Dibromomethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Dichlorodifluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	

Certificate of Analysis

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Lab ID: 1902952-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Ethyl Acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 19:06	
Ethyl Ether	ND	50	1	B9H0142	08/07/2019	08/07/19 19:06	
Ethyl tert-butyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Ethylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Freon-113	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Hexachlorobutadiene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Isopropylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
m,p-Xylene	ND	10	1	B9H0142	08/07/2019	08/07/19 19:06	
Methylene chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
MTBE	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
n-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
n-Propylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Naphthalene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
o-Xylene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
sec-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Styrene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
tert-Amyl methyl ether	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
tert-Butanol	ND	100	1	B9H0142	08/07/2019	08/07/19 19:06	
tert-Butylbenzene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Tetrachloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Toluene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Trichloroethene	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Trichlorofluoromethane	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Vinyl acetate	ND	50	1	B9H0142	08/07/2019	08/07/19 19:06	
Vinyl chloride	ND	5.0	1	B9H0142	08/07/2019	08/07/19 19:06	
Surrogate: 1,2-Dichloroethane-d4	*96.2 %*	*60 - 145*		B9H0142	08/07/2019	*08/07/19 19:06*	
Surrogate: 4-Bromofluorobenzene	*93.0 %*	*68 - 121*		B9H0142	08/07/2019	*08/07/19 19:06*	
Surrogate: Dibromofluoromethane	*102 %*	*65 - 137*		B9H0142	08/07/2019	*08/07/19 19:06*	
Surrogate: Toluene-d8	*94.8 %*	*82 - 119*		B9H0142	08/07/2019	*08/07/19 19:06*	

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Lab ID: 1902952-06

pH by EPA 9045C **Analyst: DT**

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**9.1**	0.10	1	B9H0177	08/08/2019	08/08/19 14:49	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-6-1

Lab ID: 1902952-07

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**5.1**	1.0	1	B9H0172	08/08/2019	08/09/19 15:29	
Lead	**31**	1.0	1	B9H0172	08/08/2019	08/09/19 15:29	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:15	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:15	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:15	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:15	
Surrogate: Decachlorobiphenyl	*50.5 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:15*	
Surrogate: Tetrachloro-m-xylene	*61.2 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:15*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-6-3

Lab ID: 1902952-08

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.4**	1.0	1	B9H0172	08/08/2019	08/09/19 15:32	
Lead	**2.0**	1.0	1	B9H0172	08/08/2019	08/09/19 15:32	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:25	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:25	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:25	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:25	
Surrogate: Decachlorobiphenyl	*63.2 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:25*	
Surrogate: Tetrachloro-m-xylene	*66.4 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:25*	

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Client Sample ID HA-7-1

Lab ID: 1902952-09

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**2.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:34	
Lead	**18**	1.0	1	B9H0172	08/08/2019	08/09/19 15:34	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:36	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:36	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:36	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:36	
Surrogate: Decachlorobiphenyl	*60.7 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:36*	
Surrogate: Tetrachloro-m-xylene	*64.7 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:36*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-7-3

Lab ID: 1902952-10

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	ND	1.0	1	B9H0172	08/08/2019	08/09/19 15:35	
Lead	**1.3**	1.0	1	B9H0172	08/08/2019	08/09/19 15:35	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:46	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:46	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:46	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:46	
Surrogate: Decachlorobiphenyl	*68.9 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:46*	
Surrogate: Tetrachloro-m-xylene	*69.7 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:46*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-5-1

Lab ID: 1902952-11

Total Metals by ICP-AES EPA 6010B

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**6.6**	1.0	1	B9H0172	08/08/2019	08/09/19 15:36	
Lead	**16**	1.0	1	B9H0172	08/08/2019	08/09/19 15:36	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 18:57	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 18:57	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 18:57	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 18:57	
Surrogate: Decachlorobiphenyl	*62.3 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 18:57*	
Surrogate: Tetrachloro-m-xylene	*74.1 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 18:57*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-5-3

Lab ID: 1902952-12

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	ND	1.0	1	B9H0172	08/08/2019	08/09/19 15:41	
Lead	**2.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:41	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:07	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:07	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:07	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 19:07	
Surrogate: Decachlorobiphenyl	*69.4 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:07*	
Surrogate: Tetrachloro-m-xylene	*71.6 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:07*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-4-1

Lab ID: 1902952-13

Total Metals by ICP-AES EPA 6010B

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**6.6**	1.0	1	B9H0172	08/08/2019	08/09/19 15:42	
Lead	**21**	1.0	1	B9H0172	08/08/2019	08/09/19 15:42	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
4,4′-DDE	**2.0**	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:18	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:18	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:18	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 19:18	
Surrogate: Decachlorobiphenyl	*53.2 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:18*	
Surrogate: Tetrachloro-m-xylene	*61.1 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:18*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-4-3
Lab ID: 1902952-14

Total Metals by ICP-AES EPA 6010B

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.4**	1.0	1	B9H0172	08/08/2019	08/09/19 15:43	
Lead	**2.4**	1.0	1	B9H0172	08/08/2019	08/09/19 15:43	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:28	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:28	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:28	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 19:28	
Surrogate: Decachlorobiphenyl	*73.0 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:28*	
Surrogate: Tetrachloro-m-xylene	*72.9 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:28*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-9-1

Lab ID: 1902952-15

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:23	
Arsenic	**3.0**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Barium	**80**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Chromium	**15**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Cobalt	**5.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Copper	**10**	2.2	1	B9H0171	08/08/2019	08/08/19 13:23	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Molybdenum	**2.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Nickel	**17**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Vanadium	**32**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	
Zinc	**37**	1.1	1	B9H0171	08/08/2019	08/08/19 13:23	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:20	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 10:18	
Surrogate: 4-Bromofluorobenzene	*109 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 10:18*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 14:40	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 14:40	

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Lab ID: 1902952-15

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*70.6 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:40*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
4,4′-DDE	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
4,4′-DDT	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Aldrin	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
alpha-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
alpha-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
beta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Chlordane	ND	8.5	1	B9H0186	08/07/2019	08/14/19 14:22	
delta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Dieldrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endosulfan I	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endosulfan II	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endosulfan sulfate	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endrin aldehyde	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Endrin ketone	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:22	
gamma-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
gamma-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Heptachlor	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Heptachlor epoxide	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Methoxychlor	ND	5.0	1	B9H0186	08/07/2019	08/14/19 14:22	
Toxaphene	ND	50	1	B9H0186	08/07/2019	08/14/19 14:22	
Surrogate: Decachlorobiphenyl	*83.8 %*	*32 - 91*		B9H0186	08/07/2019	*08/14/19 14:22*	
Surrogate: Tetrachloro-m-xylene	*91.8 %*	*38 - 93*		B9H0186	08/07/2019	*08/14/19 14:22*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-9-1

Lab ID: 1902952-15

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1221	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1232	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1242	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1248	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1254	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1260	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1262	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Aroclor 1268	ND	16	1	B9H0186	08/07/2019	08/08/19 14:01	
Surrogate: Decachlorobiphenyl	*102 %*	*40 - 121*		B9H0186	08/07/2019	*08/08/19 14:01*	
Surrogate: Tetrachloro-m-xylene	*96.1 %*	*55 - 105*		B9H0186	08/07/2019	*08/08/19 14:01*	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-9-3

Lab ID: 1902952-16

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:27	
Arsenic	**1.4**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Barium	**73**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Chromium	**11**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Cobalt	**4.2**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Copper	**7.3**	2.2	1	B9H0171	08/08/2019	08/08/19 13:27	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Molybdenum	**2.6**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Nickel	**13**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Vanadium	**23**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	
Zinc	**29**	1.1	1	B9H0171	08/08/2019	08/08/19 13:27	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:29	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 10:37	
Surrogate: 4-Bromofluorobenzene	*107 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 10:37*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 15:11	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 15:11	

Certificate of Analysis

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Lab ID: 1902952-16

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*91.8 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 15:11*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Chlordane [2C]	ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:39	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:39	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
gamma-Chlordane [2C]	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:39	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 19:39	
Surrogate: Decachlorobiphenyl	*69.9 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:39*	
Surrogate: Tetrachloro-m-xylene	*77.3 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:39*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-8-1

Lab ID: 1902952-17

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:28	
Arsenic	**2.1**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Barium	**54**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Chromium	**10**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Cobalt	**4.6**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Copper	**8.3**	2.2	1	B9H0171	08/08/2019	08/08/19 13:28	
Lead	**6.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Nickel	**10**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Vanadium	**25**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	
Zinc	**34**	1.1	1	B9H0171	08/08/2019	08/08/19 13:28	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:31	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 13:22	
Surrogate: 4-Bromofluorobenzene	*108 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 13:22*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:52	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:52	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Lab ID: 1902952-17

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*75.8 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 13:52*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
4,4′-DDE [2C]	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
4,4′-DDT	**5.0**	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Aldrin	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
alpha-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
alpha-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
beta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Chlordane	ND	8.5	1	B9H0186	08/07/2019	08/14/19 14:32	
delta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Dieldrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endosulfan I	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endosulfan II	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endosulfan sulfate	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endrin aldehyde	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Endrin ketone	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:32	
gamma-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
gamma-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Heptachlor	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Heptachlor epoxide	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Methoxychlor	ND	5.0	1	B9H0186	08/07/2019	08/14/19 14:32	
Toxaphene	ND	50	1	B9H0186	08/07/2019	08/14/19 14:32	
Surrogate: Decachlorobiphenyl	*91.6 %*	*32 - 91*		B9H0186	08/07/2019	*08/14/19 14:32*	S10
Surrogate: Tetrachloro-m-xylene	*96.4 %*	*38 - 93*		B9H0186	08/07/2019	*08/14/19 14:32*	S10

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-8-1

Lab ID: 1902952-17

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1221	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1232	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1242	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1248	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1254	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1260	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1262	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Aroclor 1268	ND	16	1	B9H0186	08/07/2019	08/08/19 14:19	
Surrogate: Decachlorobiphenyl	*114 %*	*40 - 121*		B9H0186	08/07/2019	*08/08/19 14:19*	
Surrogate: Tetrachloro-m-xylene	*96.2 %*	*55 - 105*		B9H0186	08/07/2019	*08/08/19 14:19*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-8-3

Lab ID: 1902952-18

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:29	
Arsenic	**3.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Barium	**160**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Cadmium	**1.6**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Chromium	**23**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Cobalt	**7.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Copper	**18**	2.2	1	B9H0171	08/08/2019	08/08/19 13:29	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Molybdenum	**3.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Nickel	**24**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Vanadium	**49**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	
Zinc	**52**	1.1	1	B9H0171	08/08/2019	08/08/19 13:29	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:33	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 11:14	
Surrogate: 4-Bromofluorobenzene	*104 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 11:14*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:43	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:43	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-8-3

Lab ID: 1902952-18

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*64.8 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 12:43*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 19:49	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 19:49	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 19:49	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 19:49	
Surrogate: Decachlorobiphenyl	*66.5 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 19:49*	
Surrogate: Tetrachloro-m-xylene	*76.0 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 19:49*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-1

Lab ID: 1902952-19

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:30	
Arsenic	**3.0**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Barium	**42**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Chromium	**6.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Cobalt	**3.9**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Copper	**9.4**	2.2	1	B9H0171	08/08/2019	08/08/19 13:30	
Lead	**7.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Nickel	**5.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Vanadium	**16**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	
Zinc	**28**	1.1	1	B9H0171	08/08/2019	08/08/19 13:30	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:35	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 11:33	
Surrogate: 4-Bromofluorobenzene	*108 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 11:33*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 14:10	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 14:10	

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Lab ID: 1902952-19

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*64.4 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 14:10*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
4,4′-DDE	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
4,4′-DDT	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Aldrin	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
alpha-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
alpha-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
beta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Chlordane	ND	8.5	1	B9H0186	08/07/2019	08/14/19 14:43	
delta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Dieldrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endosulfan I	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endosulfan II	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endosulfan sulfate	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endrin aldehyde	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Endrin ketone	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:43	
gamma-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
gamma-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Heptachlor	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Heptachlor epoxide	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Methoxychlor	ND	5.0	1	B9H0186	08/07/2019	08/14/19 14:43	
Toxaphene	ND	50	1	B9H0186	08/07/2019	08/14/19 14:43	
Surrogate: Decachlorobiphenyl	*96.6 %*	*32 - 91*		B9H0186	08/07/2019	*08/14/19 14:43*	S10
Surrogate: Tetrachloro-m-xylene	*91.2 %*	*38 - 93*		B9H0186	08/07/2019	*08/14/19 14:43*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-1

Lab ID: 1902952-19

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1221	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1232	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1242	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1248	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1254	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1260	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1262	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Aroclor 1268	ND	16	1	B9H0186	08/07/2019	08/08/19 17:15	
Surrogate: Decachlorobiphenyl	*140 %*	*40 - 121*		B9H0186	08/07/2019	*08/08/19 17:15*	S10
Surrogate: Tetrachloro-m-xylene	*94.7 %*	*55 - 105*		B9H0186	08/07/2019	*08/08/19 17:15*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-3

Lab ID: 1902952-20

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:31	
Arsenic	**2.0**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Barium	**90**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Chromium	**14**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Cobalt	**4.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Copper	**9.0**	2.2	1	B9H0171	08/08/2019	08/08/19 13:31	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Molybdenum	**2.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Nickel	**15**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Vanadium	**29**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	
Zinc	**33**	1.1	1	B9H0171	08/08/2019	08/08/19 13:31	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:42	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 11:51	
Surrogate: 4-Bromofluorobenzene	*109 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 11:51*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:26	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:26	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-10-3

Lab ID: 1902952-20

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*69.0 %*		*58 - 172*		B9H0174	08/08/2019	*08/08/19 12:26*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
4,4′-DDE		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
4,4′-DDT		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Aldrin		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
alpha-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
alpha-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
beta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Chlordane		ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:00	
delta-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Dieldrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endosulfan I		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endosulfan II		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endosulfan sulfate		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endrin		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endrin aldehyde		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Endrin ketone		ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:00	
gamma-BHC		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
gamma-Chlordane		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Heptachlor		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Heptachlor epoxide		ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Methoxychlor		ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:00	
Toxaphene		ND	50	1	B9H0187	08/07/2019	08/13/19 20:00	
Surrogate: Decachlorobiphenyl	*60.2 %*		*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:00*	
Surrogate: Tetrachloro-m-xylene	*69.4 %*		*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:00*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-11-1

Lab ID: 1902952-21

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:35	
Arsenic	**2.1**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Barium	**35**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Chromium	**5.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Cobalt	**3.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Copper	**7.4**	2.2	1	B9H0171	08/08/2019	08/08/19 13:35	
Lead	**1.4**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Nickel	**4.9**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Vanadium	**14**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	
Zinc	**18**	1.1	1	B9H0171	08/08/2019	08/08/19 13:35	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:44	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 12:10	
Surrogate: 4-Bromofluorobenzene	*92.4 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 12:10*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:35	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:35	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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Lab ID: 1902952-21

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*78.8 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 13:35*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
4,4′-DDE	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
4,4′-DDT	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Aldrin	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
alpha-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
alpha-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
beta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Chlordane	ND	8.5	1	B9H0186	08/07/2019	08/14/19 14:53	
delta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Dieldrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endosulfan I	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endosulfan II	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endosulfan sulfate	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endrin aldehyde	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Endrin ketone	ND	2.0	1	B9H0186	08/07/2019	08/14/19 14:53	
gamma-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
gamma-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Heptachlor	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Heptachlor epoxide	ND	1.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Methoxychlor	ND	5.0	1	B9H0186	08/07/2019	08/14/19 14:53	
Toxaphene	ND	50	1	B9H0186	08/07/2019	08/14/19 14:53	
Surrogate: Decachlorobiphenyl	*89.3 %*	*32 - 91*		B9H0186	08/07/2019	*08/14/19 14:53*	
Surrogate: Tetrachloro-m-xylene	*90.2 %*	*38 - 93*		B9H0186	08/07/2019	*08/14/19 14:53*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-11-1

Lab ID: 1902952-21

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 14:48	
Surrogate: Decachlorobiphenyl	*120 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 14:48*	
Surrogate: Tetrachloro-m-xylene	*96.5 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 14:48*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-11-3

Lab ID: 1902952-22

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:36	
Arsenic	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Barium	**19**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Chromium	**4.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Cobalt	**2.2**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Copper	**2.9**	2.2	1	B9H0171	08/08/2019	08/08/19 13:36	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Nickel	**3.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Vanadium	**9.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	
Zinc	**13**	1.1	1	B9H0171	08/08/2019	08/08/19 13:36	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:46	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 12:29	
Surrogate: 4-Bromofluorobenzene	*107 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 12:29*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:01	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:01	

Certificate of Analysis

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Lab ID: 1902952-22

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*110 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 13:01*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:10	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:10	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:10	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:10	
Surrogate: Decachlorobiphenyl	*89.1 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:10*	
Surrogate: Tetrachloro-m-xylene	*86.8 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:10*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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Client Sample ID HA-2-1

Lab ID: 1902952-23

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**3.7**	1.0	1	B9H0172	08/08/2019	08/09/19 15:45	
Lead	**4.5**	1.0	1	B9H0172	08/08/2019	08/09/19 15:45	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:20	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:20	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:20	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:20	
Surrogate: Decachlorobiphenyl	*82.3 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:20*	
Surrogate: Tetrachloro-m-xylene	*83.1 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:20*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-2-3

Lab ID: 1902952-24

Total Metals by ICP-AES EPA 6010B

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.8**	1.0	1	B9H0172	08/08/2019	08/09/19 15:46	
Lead	**2.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:46	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:31	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:31	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:31	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:31	
Surrogate: Decachlorobiphenyl	*72.3 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:31*	
Surrogate: Tetrachloro-m-xylene	*69.4 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:31*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-3-1

Lab ID: 1902952-25

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**4.7**	1.0	1	B9H0172	08/08/2019	08/09/19 15:47	
Lead	**5.9**	1.0	1	B9H0172	08/08/2019	08/09/19 15:47	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:41	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:41	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:41	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:41	
Surrogate: Decachlorobiphenyl	*76.5 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:41*	
Surrogate: Tetrachloro-m-xylene	*71.6 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:41*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-3-3

Lab ID: 1902952-26

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.9**	1.0	1	B9H0172	08/08/2019	08/09/19 15:48	
Lead	**2.3**	1.0	1	B9H0172	08/08/2019	08/09/19 15:48	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 20:52	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 20:52	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 20:52	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 20:52	
Surrogate: Decachlorobiphenyl	*73.0 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 20:52*	
Surrogate: Tetrachloro-m-xylene	*70.9 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 20:52*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-1-1

Lab ID: 1902952-27

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**2.8**	1.0	1	B9H0172	08/08/2019	08/09/19 15:49	
Lead	**3.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:49	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 21:02	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:02	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 21:02	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 21:02	
Surrogate: Decachlorobiphenyl	*35.9 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 21:02*	
Surrogate: Tetrachloro-m-xylene	*50.2 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 21:02*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-1-3

Lab ID: 1902952-28

Total Metals by ICP-AES EPA 6010B — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**2.0**	1.0	1	B9H0172	08/08/2019	08/09/19 15:50	
Lead	**2.2**	1.0	1	B9H0172	08/08/2019	08/09/19 15:50	

Organochlorine Pesticides by EPA 8081 — **Analyst: BL**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 21:13	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:13	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 21:13	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 21:13	
Surrogate: Decachlorobiphenyl	*65.8 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 21:13*	
Surrogate: Tetrachloro-m-xylene	*72.8 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 21:13*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-12-1

Lab ID: 1902952-29

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:37	
Arsenic	**1.7**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Barium	**51**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Chromium	**12**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Cobalt	**5.3**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Copper	**8.3**	2.2	1	B9H0171	08/08/2019	08/08/19 13:37	
Lead	**6.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Nickel	**9.7**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Vanadium	**26**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	
Zinc	**38**	1.1	1	B9H0171	08/08/2019	08/08/19 13:37	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:48	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 13:04	
Surrogate: 4-Bromofluorobenzene	*102 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 13:04*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:18	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 13:18	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-12-1

Lab ID: 1902952-29

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*113 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 13:18*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
4,4´-DDE [2C]	**2.3**	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
4,4´-DDT	**13**	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Aldrin	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
alpha-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
alpha-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
beta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Chlordane	ND	8.5	1	B9H0186	08/07/2019	08/14/19 15:04	
delta-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Dieldrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endosulfan I	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endosulfan II	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endosulfan sulfate	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endrin	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endrin aldehyde	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Endrin ketone	ND	2.0	1	B9H0186	08/07/2019	08/14/19 15:04	
gamma-BHC	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
gamma-Chlordane	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Heptachlor	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Heptachlor epoxide	ND	1.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Methoxychlor	ND	5.0	1	B9H0186	08/07/2019	08/14/19 15:04	
Toxaphene	ND	50	1	B9H0186	08/07/2019	08/14/19 15:04	
Surrogate: Decachlorobiphenyl	*54.7 %*	*32 - 91*		B9H0186	08/07/2019	*08/14/19 15:04*	
Surrogate: Tetrachloro-m-xylene	*67.2 %*	*38 - 93*		B9H0186	08/07/2019	*08/14/19 15:04*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-12-1

Lab ID: 1902952-29

Polychlorinated Biphenyls by EPA 8082 **Analyst: KD**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1221		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1232		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1242		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1248		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1254		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1260		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1262		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Aroclor 1268		ND	16	1	B9H0186	08/07/2019	08/08/19 15:06	
Surrogate: Decachlorobiphenyl	*95.6 %*		*40 - 121*		B9H0186	08/07/2019	*08/08/19 15:06*	
Surrogate: Tetrachloro-m-xylene	*78.3 %*		*55 - 105*		B9H0186	08/07/2019	*08/08/19 15:06*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Client Sample ID HA-12-3

Lab ID: 1902952-30

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B9H0171	08/08/2019	08/08/19 13:38	
Arsenic	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Barium	**19**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Beryllium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Cadmium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Chromium	**4.8**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Cobalt	**2.9**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Copper	**2.4**	2.2	1	B9H0171	08/08/2019	08/08/19 13:38	
Lead	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Molybdenum	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Nickel	**3.5**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Selenium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Silver	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Thallium	ND	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Vanadium	**14**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	
Zinc	**16**	1.1	1	B9H0171	08/08/2019	08/08/19 13:38	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0173	08/08/2019	08/08/19 15:50	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0167	08/08/2019	08/08/19 13:41	
Surrogate: 4-Bromofluorobenzene	*109 %*	*45 - 149*		B9H0167	08/08/2019	*08/08/19 13:41*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:09	
ORO	ND	10	1	B9H0174	08/08/2019	08/08/19 12:09	

Certificate of Analysis

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Lab ID: 1902952-30

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*115 %*	*58 - 172*		B9H0174	08/08/2019	*08/08/19 12:09*	

Organochlorine Pesticides by EPA 8081

Analyst: BL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
4,4′-DDE	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
4,4′-DDT	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Aldrin	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
alpha-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
alpha-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
beta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Chlordane	ND	8.5	1	B9H0187	08/07/2019	08/13/19 21:23	
delta-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Dieldrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endosulfan I	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endosulfan II	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endosulfan sulfate	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endrin	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endrin aldehyde	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Endrin ketone	ND	2.0	1	B9H0187	08/07/2019	08/13/19 21:23	
gamma-BHC	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
gamma-Chlordane	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Heptachlor	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Heptachlor epoxide	ND	1.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Methoxychlor	ND	5.0	1	B9H0187	08/07/2019	08/13/19 21:23	
Toxaphene	ND	50	1	B9H0187	08/07/2019	08/13/19 21:23	
Surrogate: Decachlorobiphenyl	*83.3 %*	*32 - 91*		B9H0187	08/07/2019	*08/13/19 21:23*	
Surrogate: Tetrachloro-m-xylene	*82.6 %*	*38 - 93*		B9H0187	08/07/2019	*08/13/19 21:23*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0172 - EPA 3050B_S										
Blank (B9H0172-BLK1)						Prepared: 8/8/2019 Analyzed: 8/9/2019				
Arsenic	ND	1.0	0.12							
Lead	ND	1.0	0.18							
LCS (B9H0172-BS1)						Prepared: 8/8/2019 Analyzed: 8/9/2019				
Arsenic	45.5832	1.0	0.12	50.0000		91.2	80 - 120			
Lead	46.2487	1.0	0.18	50.0000		92.5	80 - 120			
Matrix Spike (B9H0172-MS1)			**Source: 1902952-07**			Prepared: 8/8/2019 Analyzed: 8/9/2019				
Arsenic	97.5942	1.0	0.12	125.000	5.10405	74.0	46 - 97			
Lead	116.252	1.0	0.18	125.000	30.7390	68.4	33 - 121			
Matrix Spike Dup (B9H0172-MSD1)			**Source: 1902952-07**			Prepared: 8/8/2019 Analyzed: 8/9/2019				
Arsenic	94.5586	1.0	0.12	125.000	5.10405	71.6	46 - 97	3.16	20	
Lead	114.409	1.0	0.18	125.000	30.7390	66.9	33 - 121	1.60	20	

Certificate of Analysis

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0171 - EPA 3050B_S										
Blank (B9H0171-BLK1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B9H0171-BS1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Antimony	43.0899	2.0	0.51	50.0000		86.2	80 - 120			
Arsenic	41.5195	1.0	0.12	50.0000		83.0	80 - 120			
Barium	45.0051	1.0	0.12	50.0000		90.0	80 - 120			
Beryllium	44.5959	1.0	0.03	50.0000		89.2	80 - 120			
Cadmium	42.4008	1.0	0.14	50.0000		84.8	80 - 120			
Chromium	45.6650	1.0	0.26	50.0000		91.3	80 - 120			
Cobalt	44.5715	1.0	0.07	50.0000		89.1	80 - 120			
Copper	47.3240	2.0	0.19	50.0000		94.6	80 - 120			
Lead	43.3025	1.0	0.18	50.0000		86.6	80 - 120			
Molybdenum	44.1188	1.0	0.12	50.0000		88.2	80 - 120			
Nickel	44.5471	1.0	0.18	50.0000		89.1	80 - 120			
Selenium	40.5898	1.0	0.40	50.0000		81.2	80 - 120			
Silver	40.9626	1.0	0.12	50.0000		81.9	80 - 120			
Thallium	45.0212	1.0	0.38	50.0000		90.0	80 - 120			
Vanadium	46.3634	1.0	0.06	50.0000		92.7	80 - 120			
Zinc	41.4800	1.0	0.15	50.0000		83.0	80 - 120			
Matrix Spike (B9H0171-MS1)			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
Antimony	71.2989	2.2	0.56	251.256	ND	28.4	21 - 95			
Arsenic	87.9624	1.1	0.13	125.628	2.95776	67.7	46 - 97			
Barium	163.756	1.1	0.13	125.628	79.8242	66.8	24 - 123			
Beryllium	87.0010	1.1	0.03	125.628	ND	69.3	47 - 99			
Cadmium	79.7667	1.1	0.15	125.628	0.934458	62.8	43 - 95			
Chromium	100.902	1.1	0.28	125.628	15.2612	68.2	39 - 109			

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0171 - EPA 3050B_S (continued)										
Matrix Spike (B9H0171-MS1) - Continued			**Source: 1902952-15**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
Cobalt	88.3256	1.1	0.07	125.628	5.81627	65.7	45 - 101			
Copper	104.338	2.2	0.21	125.628	10.1715	75.0	44 - 118			
Lead	82.4434	1.1	0.20	125.628	0.750309	65.0	33 - 121			
Molybdenum	88.2145	1.1	0.14	125.628	2.51554	68.2	45 - 101			
Nickel	98.9734	1.1	0.20	125.628	17.4698	64.9	37 - 104			
Selenium	82.4432	1.1	0.44	125.628	ND	65.6	43 - 96			
Silver	83.6754	1.1	0.13	125.628	ND	66.6	49 - 104			
Thallium	71.9335	1.1	0.42	125.628	ND	57.3	23 - 103			
Vanadium	117.273	1.1	0.07	125.628	32.3580	67.6	42 - 109			
Zinc	115.031	1.1	0.17	125.628	37.2183	61.9	22 - 114			
Matrix Spike Dup (B9H0171-MSD1)			**Source: 1902952-15**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
Antimony	70.6335	2.2	0.56	250.000	ND	28.3	21 - 95	0.938	20	
Arsenic	88.0012	1.1	0.13	125.000	2.95776	68.0	46 - 97	0.0440	20	
Barium	164.945	1.1	0.13	125.000	79.8242	68.1	24 - 123	0.724	20	
Beryllium	87.4078	1.1	0.03	125.000	ND	69.9	47 - 99	0.466	20	
Cadmium	79.8908	1.1	0.15	125.000	0.934458	63.2	43 - 95	0.155	20	
Chromium	101.597	1.1	0.28	125.000	15.2612	69.1	39 - 109	0.686	20	
Cobalt	88.9452	1.1	0.07	125.000	5.81627	66.5	45 - 101	0.699	20	
Copper	105.211	2.2	0.21	125.000	10.1715	76.0	44 - 118	0.834	20	
Lead	82.5522	1.1	0.20	125.000	0.750309	65.4	33 - 121	0.132	20	
Molybdenum	88.5988	1.1	0.14	125.000	2.51554	68.9	45 - 101	0.435	20	
Nickel	98.9968	1.1	0.20	125.000	17.4698	65.2	37 - 104	0.0236	20	
Selenium	83.2136	1.1	0.44	125.000	ND	66.6	43 - 96	0.930	20	
Silver	84.3853	1.1	0.13	125.000	ND	67.5	49 - 104	0.845	20	
Thallium	72.8163	1.1	0.42	125.000	ND	58.3	23 - 103	1.22	20	
Vanadium	118.474	1.1	0.07	125.000	32.3580	68.9	42 - 109	1.02	20	
Zinc	115.741	1.1	0.17	125.000	37.2183	62.8	22 - 114	0.616	20	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0173 - EPA 7471_S										
Blank (B9H0173-BLK1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Mercury	ND	0.10	0.007							
LCS (B9H0173-BS1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Mercury	0.432213	0.10	0.007	0.416667		104	80 - 120			
Matrix Spike (B9H0173-MS1)			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
Mercury	0.473573	0.10	0.007	0.409836	0.022695	110	70 - 130			
Matrix Spike Dup (B9H0173-MSD1)			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
Mercury	0.492884	0.10	0.007	0.416667	0.022695	113	70 - 130	4.00	20	

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San Bernardino , CA 92408	Reported : 08/15/2019

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0173 - EPA 7471_S									
Post Spike (B9H0173-PS1)			**Source: 1902952-15**		Prepared: 8/8/2019 Analyzed: 8/8/2019				
Mercury	0.002473		2.00000E-3	0.000272	110	85 - 115			

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Stantec	Project Number : GNAP-Fullerton, 185804430
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Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0167 - GCVOA_S										
Blank (B9H0167-BLK1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
Gasoline Range Organics	ND	1.0	0.20							
Surrogate: 4-Bromofluorobenzene	*0.2128*			*0.200000*		*106*	*45 - 149*			
LCS (B9H0167-BS1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
Gasoline Range Organics	4.96000	1.0	0.20	5.00000		99.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.2297*			*0.200000*		*115*	*45 - 149*			
Matrix Spike (B9H0167-MS1)			**Source: 1902952-22**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
Gasoline Range Organics	4.16400	1.0	0.20	5.00000	ND	83.3	24 - 129			
Surrogate: 4-Bromofluorobenzene	*0.2320*			*0.200000*		*116*	*45 - 149*			
Matrix Spike Dup (B9H0167-MSD1)			**Source: 1902952-22**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
Gasoline Range Organics	4.39700	1.0	0.20	5.00000	ND	87.9	24 - 129	5.44	20	
Surrogate: 4-Bromofluorobenzene	*0.2257*			*0.200000*		*113*	*45 - 149*			

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0174 - GCSEMI_DRO_S										
Blank (B9H0174-BLK1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
DRO	ND	10	10							
ORO	ND	10	10							
Surrogate: p-Terphenyl	*91.46*			*80.0000*		*114*	*58 - 172*			
LCS (B9H0174-BS1)						Prepared: 8/8/2019 Analyzed: 8/8/2019				
DRO	1105.92	10	10	1000.00		111	71 - 165			
Surrogate: p-Terphenyl	*81.96*			*80.0000*		*102*	*58 - 172*			
Matrix Spike (B9H0174-MS1)			**Source: 1902952-03**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
DRO	1030.58	10	10	1000.00	ND	103	61 - 171			
Surrogate: p-Terphenyl	*52.56*			*80.0000*		*65.7*	*58 - 172*			
Matrix Spike Dup (B9H0174-MSD1)			**Source: 1902952-03**			Prepared: 8/8/2019 Analyzed: 8/8/2019				
DRO	997.540	10	10	1000.00	ND	99.8	61 - 171	3.26	20	
Surrogate: p-Terphenyl	*50.42*			*80.0000*		*63.0*	*58 - 172*			

Certificate of Analysis

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735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S										
Blank (B9H0186-BLK1)						Prepared: 8/7/2019 Analyzed: 8/14/2019				
4,4´-DDD	ND	2.0	0.07							
4,4´-DDD [2C]	ND	2.0	0.07							
4,4´-DDE	ND	2.0	0.11							
4,4´-DDE [2C]	ND	2.0	0.11							
4,4´-DDT	ND	2.0	0.10							
4,4´-DDT [2C]	ND	2.0	0.10							
Aldrin	ND	1.0	0.12							
Aldrin [2C]	ND	1.0	0.12							
alpha-BHC	ND	1.0	0.11							
alpha-BHC [2C]	ND	1.0	0.11							
alpha-Chlordane	ND	1.0	0.12							
alpha-Chlordane [2C]	ND	1.0	0.12							
beta-BHC	ND	1.0	0.06							
beta-BHC [2C]	ND	1.0	0.06							
Chlordane	ND	8.5	1.1							
Chlordane [2C]	ND	8.5	1.1							
delta-BHC	ND	1.0	0.12							
delta-BHC [2C]	ND	1.0	0.12							
Dieldrin	ND	2.0	0.26							
Dieldrin [2C]	ND	2.0	0.26							
Endosulfan I	ND	1.0	0.10							
Endosulfan I [2C]	ND	1.0	0.10							
Endosulfan II	ND	2.0	0.15							
Endosulfan II [2C]	ND	2.0	0.15							
Endosulfan sulfate	ND	2.0	0.16							
Endosulfan Sulfate [2C]	ND	2.0	0.16							
Endrin	ND	2.0	0.14							
Endrin [2C]	ND	2.0	0.14							
Endrin aldehyde	ND	2.0	0.31							
Endrin aldehyde [2C]	ND	2.0	0.31							
Endrin ketone	ND	2.0	0.13							
Endrin ketone [2C]	ND	2.0	0.13							
gamma-BHC	ND	1.0	0.10							
gamma-BHC [2C]	ND	1.0	0.10							
gamma-Chlordane	ND	1.0	0.89							
gamma-Chlordane [2C]	ND	1.0	0.89							
Heptachlor	ND	1.0	0.12							
Heptachlor [2C]	ND	1.0	0.12							
Heptachlor epoxide	ND	1.0	0.09							
Heptachlor epoxide [2C]	ND	1.0	0.09							
Methoxychlor	ND	5.0	0.18							

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S (continued)										
Blank (B9H0186-BLK1) - Continued					Prepared: 8/7/2019 Analyzed: 8/14/2019					
Methoxychlor [2C]	ND	5.0	0.18							
Toxaphene	ND	50	4.7							
Toxaphene [2C]	ND	50	4.7							
Surrogate: Decachlorobiphenyl	*13.09*			*16.6667*		*78.5*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*13.31*			*16.6667*		*79.8*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*12.89*			*16.6667*		*77.4*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*12.87*			*16.6667*		*77.2*	*38 - 93*			
LCS (B9H0186-BS1)					Prepared: 8/7/2019 Analyzed: 8/14/2019					
4,4´-DDD	16.4852	2.0	0.07	16.6667		98.9	66 - 112			
4,4´-DDD [2C]	15.1522	2.0	0.07	16.6667		90.9	66 - 112			
4,4´-DDE	17.7733	2.0	0.11	16.6667		107	62 - 112			
4,4´-DDE [2C]	16.2373	2.0	0.11	16.6667		97.4	62 - 112			
4,4´-DDT	19.7092	2.0	0.10	16.6667		118	48 - 90			L3
4,4´-DDT [2C]	17.4188	2.0	0.10	16.6667		105	48 - 90			L3
Aldrin	17.2962	1.0	0.12	16.6667		104	58 - 104			
Aldrin [2C]	14.9898	1.0	0.12	16.6667		89.9	58 - 104			
alpha-BHC	16.6747	1.0	0.11	16.6667		100	57 - 105			
alpha-BHC [2C]	14.3693	1.0	0.11	16.6667		86.2	57 - 105			
alpha-Chlordane	18.0437	1.0	0.12	16.6667		108	62 - 108			L3
alpha-Chlordane [2C]	15.1743	1.0	0.12	16.6667		91.0	62 - 108			
beta-BHC	17.1608	1.0	0.06	16.6667		103	59 - 106			
beta-BHC [2C]	14.9342	1.0	0.06	16.6667		89.6	59 - 106			
delta-BHC	11.5692	1.0	0.12	16.6667		69.4	63 - 115			
delta-BHC [2C]	10.5265	1.0	0.12	16.6667		63.2	63 - 115			
Dieldrin	16.9843	2.0	0.26	16.6667		102	59 - 102			
Dieldrin [2C]	15.5013	2.0	0.26	16.6667		93.0	59 - 102			
Endosulfan I	15.3778	1.0	0.10	16.6667		92.3	61 - 99			
Endosulfan I [2C]	13.9408	1.0	0.10	16.6667		83.6	61 - 99			
Endosulfan II	17.4443	2.0	0.15	16.6667		105	65 - 105			
Endosulfan II [2C]	15.9348	2.0	0.15	16.6667		95.6	65 - 105			
Endosulfan sulfate	15.7507	2.0	0.16	16.6667		94.5	59 - 107			
Endosulfan Sulfate [2C]	14.8515	2.0	0.16	16.6667		89.1	59 - 107			
Endrin	17.9012	2.0	0.14	16.6667		107	65 - 113			
Endrin [2C]	16.5408	2.0	0.14	16.6667		99.2	65 - 113			
Endrin aldehyde	16.5822	2.0	0.31	16.6667		99.5	61 - 109			
Endrin aldehyde [2C]	14.9492	2.0	0.31	16.6667		89.7	61 - 109			
Endrin ketone	18.1203	2.0	0.13	16.6667		109	56 - 97			L3
Endrin ketone [2C]	16.6793	2.0	0.13	16.6667		100	56 - 97			L3
gamma-BHC	16.6692	1.0	0.10	16.6667		100	57 - 101			
gamma-BHC [2C]	15.0193	1.0	0.10	16.6667		90.1	57 - 101			

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S (continued)										
LCS (B9H0186-BS1) - Continued					Prepared: 8/7/2019 Analyzed: 8/14/2019					
gamma-Chlordane	18.0120	1.0	0.89	16.6667		108	56 - 125			
gamma-Chlordane [2C]	15.4827	1.0	0.89	16.6667		92.9	56 - 125			
Heptachlor	17.4825	1.0	0.12	16.6667		105	61 - 105			
Heptachlor [2C]	14.7722	1.0	0.12	16.6667		88.6	61 - 105			
Heptachlor epoxide	16.6055	1.0	0.09	16.6667		99.6	59 - 97			L3
Heptachlor epoxide [2C]	14.3123	1.0	0.09	16.6667		85.9	59 - 97			
Methoxychlor	17.6023	5.0	0.18	16.6667		106	68 - 118			
Methoxychlor [2C]	19.0527	5.0	0.18	16.6667		114	68 - 118			
Surrogate: Decachlorobiphenyl	*14.84*			*16.6667*		*89.0*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.93*			*16.6667*		*89.6*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*14.71*			*16.6667*		*88.3*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*14.74*			*16.6667*		*88.4*	*38 - 93*			
Matrix Spike (B9H0186-MS1)			**Source: 1902952-15**		Prepared: 8/7/2019 Analyzed: 8/14/2019					
4,4´-DDD	15.7068	2.0	0.07	16.6667	ND	94.2	33 - 116			
4,4´-DDD [2C]	15.3867	2.0	0.07	16.6667	ND	92.3	33 - 116			
4,4´-DDE	16.1115	2.0	0.11	16.6667	ND	96.7	29 - 128			
4,4´-DDE [2C]	16.1998	2.0	0.11	16.6667	ND	97.2	29 - 128			
4,4´-DDT	20.2300	2.0	0.10	16.6667	ND	121	27 - 109			M2
4,4´-DDT [2C]	17.5658	2.0	0.10	16.6667	ND	105	27 - 109			
Aldrin	16.4507	1.0	0.12	16.6667	ND	98.7	34 - 110			
Aldrin [2C]	15.1185	1.0	0.12	16.6667	ND	90.7	34 - 110			
alpha-BHC	17.0002	1.0	0.11	16.6667	ND	102	39 - 107			
alpha-BHC [2C]	15.6443	1.0	0.11	16.6667	ND	93.9	39 - 107			
alpha-Chlordane	16.6765	1.0	0.12	16.6667	ND	100	37 - 111			
alpha-Chlordane [2C]	15.3513	1.0	0.12	16.6667	ND	92.1	37 - 111			
beta-BHC	17.0043	1.0	0.06	16.6667	ND	102	33 - 111			
beta-BHC [2C]	15.7978	1.0	0.06	16.6667	ND	94.8	33 - 111			
delta-BHC	13.8767	1.0	0.12	16.6667	ND	83.3	25 - 122			
delta-BHC [2C]	13.0572	1.0	0.12	16.6667	ND	78.3	25 - 122			
Dieldrin	16.1138	2.0	0.26	16.6667	ND	96.7	28 - 114			
Dieldrin [2C]	15.9448	2.0	0.26	16.6667	ND	95.7	28 - 114			
Endosulfan I	14.5488	1.0	0.10	16.6667	ND	87.3	35 - 107			
Endosulfan I [2C]	14.3068	1.0	0.10	16.6667	ND	85.8	35 - 107			
Endosulfan II	16.7743	2.0	0.15	16.6667	ND	101	13 - 122			
Endosulfan II [2C]	16.6003	2.0	0.15	16.6667	ND	99.6	13 - 122			
Endosulfan sulfate	15.8245	2.0	0.16	16.6667	ND	94.9	13 - 120			
Endosulfan Sulfate [2C]	15.8338	2.0	0.16	16.6667	ND	95.0	13 - 120			
Endrin	17.1997	2.0	0.14	16.6667	ND	103	31 - 121			
Endrin [2C]	17.0183	2.0	0.14	16.6667	ND	102	31 - 121			
Endrin aldehyde	16.2753	2.0	0.31	16.6667	ND	97.7	18 - 129			

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike (B9H0186-MS1) - Continued			**Source: 1902952-15**			Prepared: 8/7/2019 Analyzed: 8/14/2019				
Endrin aldehyde [2C]	16.9370	2.0	0.31	16.6667	ND	102	18 - 129			
Endrin ketone	17.3987	2.0	0.13	16.6667	ND	104	14 - 113			
Endrin ketone [2C]	17.3973	2.0	0.13	16.6667	ND	104	14 - 113			
gamma-BHC	16.8638	1.0	0.10	16.6667	ND	101	34 - 104			
gamma-BHC [2C]	16.3010	1.0	0.10	16.6667	ND	97.8	34 - 104			
gamma-Chlordane	16.6280	1.0	0.89	16.6667	ND	99.8	35 - 121			
gamma-Chlordane [2C]	15.4567	1.0	0.89	16.6667	ND	92.7	35 - 121			
Heptachlor	17.4297	1.0	0.12	16.6667	ND	105	35 - 110			
Heptachlor [2C]	15.0568	1.0	0.12	16.6667	ND	90.3	35 - 110			
Heptachlor epoxide	15.7282	1.0	0.09	16.6667	ND	94.4	31 - 106			
Heptachlor epoxide [2C]	14.6510	1.0	0.09	16.6667	ND	87.9	31 - 106			
Methoxychlor	17.5010	5.0	0.18	16.6667	ND	105	21 - 128			
Methoxychlor [2C]	18.7532	5.0	0.18	16.6667	ND	113	21 - 128			
Surrogate: Decachlorobiphenyl	*12.85*			*16.6667*		*77.1*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.40*			*16.6667*		*86.4*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*14.58*			*16.6667*		*87.5*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*15.48*			*16.6667*		*92.9*	*38 - 93*			
Matrix Spike Dup (B9H0186-MSD1)			**Source: 1902952-15**			Prepared: 8/7/2019 Analyzed: 8/14/2019				
4,4´-DDD	15.8555	2.0	0.07	16.6667	ND	95.1	33 - 116	0.942	20	
4,4´-DDD [2C]	15.5512	2.0	0.07	16.6667	ND	93.3	33 - 116	1.06	20	
4,4´-DDE	16.6253	2.0	0.11	16.6667	ND	99.8	29 - 128	3.14	20	
4,4´-DDE [2C]	16.3263	2.0	0.11	16.6667	ND	98.0	29 - 128	0.778	20	
4,4´-DDT	20.5288	2.0	0.10	16.6667	ND	123	27 - 109	1.47	20	
4,4´-DDT [2C]	17.6840	2.0	0.10	16.6667	ND	106	27 - 109	0.670	20	
Aldrin	16.7515	1.0	0.12	16.6667	ND	101	34 - 110	1.81	20	
Aldrin [2C]	15.0953	1.0	0.12	16.6667	ND	90.6	34 - 110	0.153	20	
alpha-BHC	17.1610	1.0	0.11	16.6667	ND	103	39 - 107	0.942	20	
alpha-BHC [2C]	15.5887	1.0	0.11	16.6667	ND	93.5	39 - 107	0.356	20	
alpha-Chlordane	17.1547	1.0	0.12	16.6667	ND	103	37 - 111	2.83	20	
alpha-Chlordane [2C]	15.5353	1.0	0.12	16.6667	ND	93.2	37 - 111	1.19	20	
beta-BHC	17.5587	1.0	0.06	16.6667	ND	105	33 - 111	3.21	20	
beta-BHC [2C]	15.9552	1.0	0.06	16.6667	ND	95.7	33 - 111	0.991	20	
delta-BHC	14.2667	1.0	0.12	16.6667	ND	85.6	25 - 122	2.77	20	
delta-BHC [2C]	13.2487	1.0	0.12	16.6667	ND	79.5	25 - 122	1.46	20	
Dieldrin	16.4308	2.0	0.26	16.6667	ND	98.6	28 - 114	1.95	20	
Dieldrin [2C]	15.9810	2.0	0.26	16.6667	ND	95.9	28 - 114	0.227	20	
Endosulfan I	14.9552	1.0	0.10	16.6667	ND	89.7	35 - 107	2.75	20	
Endosulfan I [2C]	14.3557	1.0	0.10	16.6667	ND	86.1	35 - 107	0.341	20	
Endosulfan II	17.2317	2.0	0.15	16.6667	ND	103	13 - 122	2.69	20	
Endosulfan II [2C]	16.7575	2.0	0.15	16.6667	ND	101	13 - 122	0.942	20	

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike Dup (B9H0186-MSD1) - Continued			**Source: 1902952-15**		Prepared: 8/7/2019 Analyzed: 8/14/2019					
Endosulfan sulfate	16.1913	2.0	0.16	16.6667	ND	97.1	13 - 120	2.29	20	
Endosulfan Sulfate [2C]	16.0150	2.0	0.16	16.6667	ND	96.1	13 - 120	1.14	20	
Endrin	17.5123	2.0	0.14	16.6667	ND	105	31 - 121	1.80	20	
Endrin [2C]	17.2105	2.0	0.14	16.6667	ND	103	31 - 121	1.12	20	
Endrin aldehyde	16.7880	2.0	0.31	16.6667	ND	101	18 - 129	3.10	20	
Endrin aldehyde [2C]	17.1137	2.0	0.31	16.6667	ND	103	18 - 129	1.04	20	
Endrin ketone	17.8327	2.0	0.13	16.6667	ND	107	14 - 113	2.46	20	
Endrin ketone [2C]	17.6607	2.0	0.13	16.6667	ND	106	14 - 113	1.50	20	
gamma-BHC	16.9830	1.0	0.10	16.6667	ND	102	34 - 104	0.704	20	
gamma-BHC [2C]	16.2492	1.0	0.10	16.6667	ND	97.5	34 - 104	0.318	20	
gamma-Chlordane	17.0485	1.0	0.89	16.6667	ND	102	35 - 121	2.50	20	
gamma-Chlordane [2C]	15.5267	1.0	0.89	16.6667	ND	93.2	35 - 121	0.452	20	
Heptachlor	17.2875	1.0	0.12	16.6667	ND	104	35 - 110	0.819	20	
Heptachlor [2C]	15.1448	1.0	0.12	16.6667	ND	90.9	35 - 110	0.583	20	
Heptachlor epoxide	16.0632	1.0	0.09	16.6667	ND	96.4	31 - 106	2.11	20	
Heptachlor epoxide [2C]	14.6975	1.0	0.09	16.6667	ND	88.2	31 - 106	0.317	20	
Methoxychlor	17.7438	5.0	0.18	16.6667	ND	106	21 - 128	1.38	20	
Methoxychlor [2C]	18.8570	5.0	0.18	16.6667	ND	113	21 - 128	0.552	20	
Surrogate: Decachlorobiphenyl	*14.00*			*16.6667*		*84.0*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.57*			*16.6667*		*87.4*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*14.78*			*16.6667*		*88.7*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*15.39*			*16.6667*		*92.3*	*38 - 93*			

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S										
Blank (B9H0187-BLK1)						Prepared: 8/7/2019 Analyzed: 8/13/2019				
4,4´-DDD	ND	2.0	0.07							
4,4´-DDD [2C]	ND	2.0	0.07							
4,4´-DDE	ND	2.0	0.11							
4,4´-DDE [2C]	ND	2.0	0.11							
4,4´-DDT	ND	2.0	0.10							
4,4´-DDT [2C]	ND	2.0	0.10							
Aldrin	ND	1.0	0.12							
Aldrin [2C]	ND	1.0	0.12							
alpha-BHC	ND	1.0	0.11							
alpha-BHC [2C]	ND	1.0	0.11							
alpha-Chlordane	ND	1.0	0.12							
alpha-Chlordane [2C]	ND	1.0	0.12							
beta-BHC	ND	1.0	0.06							
beta-BHC [2C]	ND	1.0	0.06							
Chlordane	ND	8.5	1.1							
Chlordane [2C]	ND	8.5	1.1							
delta-BHC	ND	1.0	0.12							
delta-BHC [2C]	ND	1.0	0.12							
Dieldrin	ND	2.0	0.26							
Dieldrin [2C]	ND	2.0	0.26							
Endosulfan I	ND	1.0	0.10							
Endosulfan I [2C]	ND	1.0	0.10							
Endosulfan II	ND	2.0	0.15							
Endosulfan II [2C]	ND	2.0	0.15							
Endosulfan sulfate	ND	2.0	0.16							
Endosulfan Sulfate [2C]	ND	2.0	0.16							
Endrin	ND	2.0	0.14							
Endrin [2C]	ND	2.0	0.14							
Endrin aldehyde	ND	2.0	0.31							
Endrin aldehyde [2C]	ND	2.0	0.31							
Endrin ketone	ND	2.0	0.13							
Endrin ketone [2C]	ND	2.0	0.13							
gamma-BHC	ND	1.0	0.10							
gamma-BHC [2C]	ND	1.0	0.10							
gamma-Chlordane	ND	1.0	0.89							
gamma-Chlordane [2C]	ND	1.0	0.89							
Heptachlor	ND	1.0	0.12							
Heptachlor [2C]	ND	1.0	0.12							
Heptachlor epoxide	ND	1.0	0.09							
Heptachlor epoxide [2C]	ND	1.0	0.09							
Methoxychlor	ND	5.0	0.18							

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S (continued)										
Blank (B9H0187-BLK1) - Continued					Prepared: 8/7/2019 Analyzed: 8/13/2019					
Methoxychlor [2C]	ND	5.0	0.18							
Toxaphene	ND	50	4.7							
Toxaphene [2C]	ND	50	4.7							
Surrogate: Decachlorobiphenyl	*13.86*			*16.6667*		*83.2*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.57*			*16.6667*		*87.4*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*12.92*			*16.6667*		*77.5*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*13.08*			*16.6667*		*78.5*	*38 - 93*			
LCS (B9H0187-BS1)					Prepared: 8/7/2019 Analyzed: 8/13/2019					
4,4´-DDD	15.4752	2.0	0.07	16.6667		92.9	66 - 112			
4,4´-DDD [2C]	14.0252	2.0	0.07	16.6667		84.2	66 - 112			
4,4´-DDE	16.0602	2.0	0.11	16.6667		96.4	62 - 112			
4,4´-DDE [2C]	14.7223	2.0	0.11	16.6667		88.3	62 - 112			
4,4´-DDT	12.9458	2.0	0.10	16.6667		77.7	48 - 90			
4,4´-DDT [2C]	14.9537	2.0	0.10	16.6667		89.7	48 - 90			
Aldrin	15.7765	1.0	0.12	16.6667		94.7	58 - 104			
Aldrin [2C]	13.3408	1.0	0.12	16.6667		80.0	58 - 104			
alpha-BHC	15.0585	1.0	0.11	16.6667		90.4	57 - 105			
alpha-BHC [2C]	13.4757	1.0	0.11	16.6667		80.9	57 - 105			
alpha-Chlordane	15.7870	1.0	0.12	16.6667		94.7	62 - 108			
alpha-Chlordane [2C]	13.4033	1.0	0.12	16.6667		80.4	62 - 108			
beta-BHC	15.7060	1.0	0.06	16.6667		94.2	59 - 106			
beta-BHC [2C]	13.8340	1.0	0.06	16.6667		83.0	59 - 106			
delta-BHC	10.7505	1.0	0.12	16.6667		64.5	63 - 115			
delta-BHC [2C]	9.56317	1.0	0.12	16.6667		57.4	63 - 115			L4
Dieldrin	15.0660	2.0	0.26	16.6667		90.4	59 - 102			
Dieldrin [2C]	13.8045	2.0	0.26	16.6667		82.8	59 - 102			
Endosulfan I	13.8420	1.0	0.10	16.6667		83.1	61 - 99			
Endosulfan I [2C]	12.5070	1.0	0.10	16.6667		75.0	61 - 99			
Endosulfan II	15.3687	2.0	0.15	16.6667		92.2	65 - 105			
Endosulfan II [2C]	14.4715	2.0	0.15	16.6667		86.8	65 - 105			
Endosulfan sulfate	13.6490	2.0	0.16	16.6667		81.9	59 - 107			
Endosulfan Sulfate [2C]	12.9718	2.0	0.16	16.6667		77.8	59 - 107			
Endrin	16.3858	2.0	0.14	16.6667		98.3	65 - 113			
Endrin [2C]	14.9457	2.0	0.14	16.6667		89.7	65 - 113			
Endrin aldehyde	14.7803	2.0	0.31	16.6667		88.7	61 - 109			
Endrin aldehyde [2C]	10.8960	2.0	0.31	16.6667		65.4	61 - 109			
Endrin ketone	15.2165	2.0	0.13	16.6667		91.3	56 - 97			
Endrin ketone [2C]	15.0263	2.0	0.13	16.6667		90.2	56 - 97			
gamma-BHC	15.5317	1.0	0.10	16.6667		93.2	57 - 101			
gamma-BHC [2C]	13.7162	1.0	0.10	16.6667		82.3	57 - 101			

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S (continued)										
LCS (B9H0187-BS1) - Continued						Prepared: 8/7/2019 Analyzed: 8/13/2019				
gamma-Chlordane	15.4912	1.0	0.89	16.6667		92.9	56 - 125			
gamma-Chlordane [2C]	13.5647	1.0	0.89	16.6667		81.4	56 - 125			
Heptachlor	15.6632	1.0	0.12	16.6667		94.0	61 - 105			
Heptachlor [2C]	13.5640	1.0	0.12	16.6667		81.4	61 - 105			
Heptachlor epoxide	14.7920	1.0	0.09	16.6667		88.8	59 - 97			
Heptachlor epoxide [2C]	12.9415	1.0	0.09	16.6667		77.6	59 - 97			
Methoxychlor	17.6167	5.0	0.18	16.6667		106	68 - 118			
Methoxychlor [2C]	17.7132	5.0	0.18	16.6667		106	68 - 118			
Surrogate: Decachlorobiphenyl	*13.39*			*16.6667*		*80.3*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*14.14*			*16.6667*		*84.9*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*13.38*			*16.6667*		*80.3*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*14.05*			*16.6667*		*84.3*	*38 - 93*			
Matrix Spike (B9H0187-MS1)			**Source: 1902952-07**			Prepared: 8/7/2019 Analyzed: 8/13/2019				
4,4´-DDD	12.9840	2.0	0.07	16.6667	ND	77.9	33 - 116			
4,4´-DDD [2C]	14.4295	2.0	0.07	16.6667	ND	86.6	33 - 116			
4,4´-DDE	16.9648	2.0	0.11	16.6667	ND	102	29 - 128			
4,4´-DDE [2C]	15.2487	2.0	0.11	16.6667	ND	91.5	29 - 128			
4,4´-DDT	16.1988	2.0	0.10	16.6667	ND	97.2	27 - 109			
4,4´-DDT [2C]	18.3013	2.0	0.10	16.6667	ND	110	27 - 109			M2
Aldrin	13.5413	1.0	0.12	16.6667	ND	81.2	34 - 110			
Aldrin [2C]	13.3915	1.0	0.12	16.6667	ND	80.3	34 - 110			
alpha-BHC	14.0512	1.0	0.11	16.6667	ND	84.3	39 - 107			
alpha-BHC [2C]	14.6215	1.0	0.11	16.6667	ND	87.7	39 - 107			
alpha-Chlordane	13.7272	1.0	0.12	16.6667	ND	82.4	37 - 111			
alpha-Chlordane [2C]	19.6883	1.0	0.12	16.6667	ND	118	37 - 111			M2
beta-BHC	13.8052	1.0	0.06	16.6667	ND	82.8	33 - 111			
beta-BHC [2C]	14.3200	1.0	0.06	16.6667	ND	85.9	33 - 111			
delta-BHC	11.4540	1.0	0.12	16.6667	ND	68.7	25 - 122			
delta-BHC [2C]	11.9368	1.0	0.12	16.6667	ND	71.6	25 - 122			
Dieldrin	13.3393	2.0	0.26	16.6667	ND	80.0	28 - 114			
Dieldrin [2C]	14.3970	2.0	0.26	16.6667	ND	86.4	28 - 114			
Endosulfan I	12.3245	1.0	0.10	16.6667	ND	73.9	35 - 107			
Endosulfan I [2C]	12.7712	1.0	0.10	16.6667	ND	76.6	35 - 107			
Endosulfan II	14.8457	2.0	0.15	16.6667	ND	89.1	13 - 122			
Endosulfan II [2C]	14.7952	2.0	0.15	16.6667	ND	88.8	13 - 122			
Endosulfan sulfate	13.4437	2.0	0.16	16.6667	ND	80.7	13 - 120			
Endosulfan Sulfate [2C]	14.0663	2.0	0.16	16.6667	ND	84.4	13 - 120			
Endrin	14.3012	2.0	0.14	16.6667	ND	85.8	31 - 121			
Endrin [2C]	13.4665	2.0	0.14	16.6667	ND	80.8	31 - 121			
Endrin aldehyde	12.5210	2.0	0.31	16.6667	ND	75.1	18 - 129			

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike (B9H0187-MS1) - Continued			**Source: 1902952-07**			Prepared: 8/7/2019 Analyzed: 8/13/2019				
Endrin aldehyde [2C]	14.0997	2.0	0.31	16.6667	ND	84.6	18 - 129			
Endrin ketone	13.9263	2.0	0.13	16.6667	ND	83.6	14 - 113			
Endrin ketone [2C]	16.8578	2.0	0.13	16.6667	ND	101	14 - 113			
gamma-BHC	14.2060	1.0	0.10	16.6667	ND	85.2	34 - 104			
gamma-BHC [2C]	14.6423	1.0	0.10	16.6667	ND	87.9	34 - 104			
gamma-Chlordane	13.1582	1.0	0.89	16.6667	ND	78.9	35 - 121			
gamma-Chlordane [2C]	12.9532	1.0	0.89	16.6667	ND	77.7	35 - 121			
Heptachlor	14.2097	1.0	0.12	16.6667	ND	85.3	35 - 110			
Heptachlor [2C]	14.4438	1.0	0.12	16.6667	ND	86.7	35 - 110			
Heptachlor epoxide	12.8947	1.0	0.09	16.6667	ND	77.4	31 - 106			
Heptachlor epoxide [2C]	13.2443	1.0	0.09	16.6667	ND	79.5	31 - 106			
Methoxychlor	18.6980	5.0	0.18	16.6667	ND	112	21 - 128			
Methoxychlor [2C]	19.7743	5.0	0.18	16.6667	ND	119	21 - 128			
Surrogate: Decachlorobiphenyl	*9.743*			*16.6667*		*58.5*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*12.19*			*16.6667*		*73.1*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*11.93*			*16.6667*		*71.6*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*14.14*			*16.6667*		*84.8*	*38 - 93*			
Matrix Spike Dup (B9H0187-MSD1)			**Source: 1902952-07**			Prepared: 8/7/2019 Analyzed: 8/13/2019				
4,4´-DDD	13.3978	2.0	0.07	16.6667	ND	80.4	33 - 116	3.14	20	
4,4´-DDD [2C]	14.3778	2.0	0.07	16.6667	ND	86.3	33 - 116	0.359	20	
4,4´-DDE	17.4422	2.0	0.11	16.6667	ND	105	29 - 128	2.77	20	
4,4´-DDE [2C]	14.8518	2.0	0.11	16.6667	ND	89.1	29 - 128	2.64	20	
4,4´-DDT	16.2593	2.0	0.10	16.6667	ND	97.6	27 - 109	0.373	20	
4,4´-DDT [2C]	18.7298	2.0	0.10	16.6667	ND	112	27 - 109	2.31	20	M2
Aldrin	13.5565	1.0	0.12	16.6667	ND	81.3	34 - 110	0.112	20	
Aldrin [2C]	12.9847	1.0	0.12	16.6667	ND	77.9	34 - 110	3.08	20	
alpha-BHC	14.1087	1.0	0.11	16.6667	ND	84.7	39 - 107	0.408	20	
alpha-BHC [2C]	14.1170	1.0	0.11	16.6667	ND	84.7	39 - 107	3.51	20	
alpha-Chlordane	13.7622	1.0	0.12	16.6667	ND	82.6	37 - 111	0.255	20	
alpha-Chlordane [2C]	19.1962	1.0	0.12	16.6667	ND	115	37 - 111	2.53	20	M2
beta-BHC	14.0327	1.0	0.06	16.6667	ND	84.2	33 - 111	1.63	20	
beta-BHC [2C]	13.9135	1.0	0.06	16.6667	ND	83.5	33 - 111	2.88	20	
delta-BHC	11.6253	1.0	0.12	16.6667	ND	69.8	25 - 122	1.48	20	
delta-BHC [2C]	11.6018	1.0	0.12	16.6667	ND	69.6	25 - 122	2.85	20	
Dieldrin	13.4448	2.0	0.26	16.6667	ND	80.7	28 - 114	0.788	20	
Dieldrin [2C]	14.0673	2.0	0.26	16.6667	ND	84.4	28 - 114	2.32	20	
Endosulfan I	12.4333	1.0	0.10	16.6667	ND	74.6	35 - 107	0.879	20	
Endosulfan I [2C]	12.4015	1.0	0.10	16.6667	ND	74.4	35 - 107	2.94	20	
Endosulfan II	15.1795	2.0	0.15	16.6667	ND	91.1	13 - 122	2.22	20	
Endosulfan II [2C]	14.6335	2.0	0.15	16.6667	ND	87.8	13 - 122	1.10	20	

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0187 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike Dup (B9H0187-MSD1) - Continued			**Source: 1902952-07**		Prepared: 8/7/2019 Analyzed: 8/13/2019					
Endosulfan sulfate	12.7912	2.0	0.16	16.6667	ND	76.7	13 - 120	4.97	20	
Endosulfan Sulfate [2C]	13.9362	2.0	0.16	16.6667	ND	83.6	13 - 120	0.930	20	
Endrin	14.6390	2.0	0.14	16.6667	ND	87.8	31 - 121	2.33	20	
Endrin [2C]	13.3228	2.0	0.14	16.6667	ND	79.9	31 - 121	1.07	20	
Endrin aldehyde	12.4187	2.0	0.31	16.6667	ND	74.5	18 - 129	0.821	20	
Endrin aldehyde [2C]	13.9217	2.0	0.31	16.6667	ND	83.5	18 - 129	1.27	20	
Endrin ketone	14.2180	2.0	0.13	16.6667	ND	85.3	14 - 113	2.07	20	
Endrin ketone [2C]	17.0955	2.0	0.13	16.6667	ND	103	14 - 113	1.40	20	
gamma-BHC	14.2692	1.0	0.10	16.6667	ND	85.6	34 - 104	0.444	20	
gamma-BHC [2C]	14.1602	1.0	0.10	16.6667	ND	85.0	34 - 104	3.35	20	
gamma-Chlordane	13.3048	1.0	0.89	16.6667	ND	79.8	35 - 121	1.11	20	
gamma-Chlordane [2C]	12.5747	1.0	0.89	16.6667	ND	75.4	35 - 121	2.97	20	
Heptachlor	13.8742	1.0	0.12	16.6667	ND	83.2	35 - 110	2.39	20	
Heptachlor [2C]	14.2945	1.0	0.12	16.6667	ND	85.8	35 - 110	1.04	20	
Heptachlor epoxide	12.9102	1.0	0.09	16.6667	ND	77.5	31 - 106	0.120	20	
Heptachlor epoxide [2C]	12.8720	1.0	0.09	16.6667	ND	77.2	31 - 106	2.85	20	
Methoxychlor	18.7362	5.0	0.18	16.6667	ND	112	21 - 128	0.204	20	
Methoxychlor [2C]	20.5910	5.0	0.18	16.6667	ND	124	21 - 128	4.05	20	
Surrogate: Decachlorobiphenyl	*10.38*			*16.6667*		*62.3*	*32 - 91*			
Surrogate: Decachlorobiphenyl [2	*12.25*			*16.6667*		*73.5*	*32 - 91*			
Surrogate: Tetrachloro-m-xylene	*11.10*			*16.6667*		*66.6*	*38 - 93*			
Surrogate: Tetrachloro-m-xylene [	*13.35*			*16.6667*		*80.1*	*38 - 93*			

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Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0186 - GCSEMI_PCB/PEST_S										
Blank (B9H0186-BLK2)						Prepared: 8/7/2019 Analyzed: 8/8/2019				
Aroclor 1016	ND	16	4.6							
Aroclor 1221	ND	16	4.6							
Aroclor 1232	ND	16	4.6							
Aroclor 1242	ND	16	4.6							
Aroclor 1248	ND	16	4.6							
Aroclor 1254	ND	16	4.6							
Aroclor 1260	ND	16	4.6							
Aroclor 1262	ND	16	4.6							
Aroclor 1268	ND	16	4.6							
Surrogate: Decachlorobiphenyl	*17.77*			*16.6667*		*107*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*12.74*			*16.6667*		*76.4*	*55 - 105*			
LCS (B9H0186-BS2)						Prepared: 8/7/2019 Analyzed: 8/8/2019				
Aroclor 1016	145.224	16	4.6	166.667		87.1	51 - 100			
Aroclor 1260	187.151	16	4.6	166.667		112	48 - 116			
Surrogate: Decachlorobiphenyl	*22.01*			*33.3333*		*66.0*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*18.51*			*33.3333*		*55.5*	*55 - 105*			
Matrix Spike (B9H0186-MS2)			**Source: 1902952-29**			Prepared: 8/7/2019 Analyzed: 8/8/2019				
Aroclor 1016	171.978	16	4.6	166.667	ND	103	36 - 109			
Aroclor 1260	178.402	16	4.6	166.667	ND	107	30 - 123			
Surrogate: Decachlorobiphenyl	*18.13*			*16.6667*		*109*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*13.50*			*16.6667*		*81.0*	*55 - 105*			
Matrix Spike Dup (B9H0186-MSD2)			**Source: 1902952-29**			Prepared: 8/7/2019 Analyzed: 8/8/2019				
Aroclor 1016	161.750	16	4.6	166.667	ND	97.0	36 - 109	6.13	20	
Aroclor 1260	174.852	16	4.6	166.667	ND	105	30 - 123	2.01	20	
Surrogate: Decachlorobiphenyl	*18.89*			*16.6667*		*113*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*13.10*			*16.6667*		*78.6*	*55 - 105*			

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/15/2019

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S										
Blank (B9H0142-BLK1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.96							
1,1,1-Trichloroethane	ND	5.0	1.1							
1,1,2,2-Tetrachloroethane	ND	5.0	0.62							
1,1,2-Trichloroethane	ND	5.0	1.6							
1,1-Dichloroethane	ND	5.0	0.81							
1,1-Dichloroethene	ND	5.0	2.6							
1,1-Dichloropropene	ND	5.0	2.3							
1,2,3-Trichloropropane	ND	5.0	0.54							
1,2,3-Trichlorobenzene	ND	5.0	1.2							
1,2,4-Trichlorobenzene	ND	5.0	1.1							
1,2,4-Trimethylbenzene	ND	5.0	1.5							
1,2-Dibromo-3-chloropropane	ND	10	1.6							
1,2-Dibromoethane	ND	5.0	3.2							
1,2-Dichlorobenzene	ND	5.0	1.1							
1,2-Dichloroethane	ND	5.0	1.2							
1,2-Dichloropropane	ND	5.0	1.8							
1,3,5-Trimethylbenzene	ND	5.0	1.7							
1,3-Dichlorobenzene	ND	5.0	1.3							
1,3-Dichloropropane	ND	5.0	1.1							
1,4-Dichlorobenzene	ND	5.0	1.2							
2,2-Dichloropropane	ND	5.0	1.2							
2-Chlorotoluene	ND	5.0	1.6							
4-Chlorotoluene	ND	5.0	1.5							
4-Isopropyltoluene	ND	5.0	2.3							
Benzene	ND	5.0	0.64							
Bromobenzene	ND	5.0	1.1							
Bromochloromethane	ND	5.0	0.64							
Bromodichloromethane	ND	5.0	1.2							
Bromoform	ND	5.0	0.80							
Bromomethane	ND	5.0	2.5							
Carbon disulfide	ND	5.0	3.5							
Carbon tetrachloride	ND	5.0	1.2							
Chlorobenzene	ND	5.0	1.0							
Chloroethane	ND	5.0	1.1							
Chloroform	ND	5.0	0.82							
Chloromethane	ND	5.0	1.4							
cis-1,2-Dichloroethene	ND	5.0	0.67							
cis-1,3-Dichloropropene	ND	5.0	1.9							
Di-isopropyl ether	ND	5.0	0.55							
Dibromochloromethane	ND	5.0	1.0							
Dibromomethane	ND	5.0	1.6							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Blank (B9H0142-BLK1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Dichlorodifluoromethane	ND	5.0	2.2							
Ethyl Acetate	ND	50	8.1							
Ethyl Ether	ND	50	6.1							
Ethyl tert-butyl ether	ND	5.0	0.67							
Ethylbenzene	ND	5.0	0.91							
Freon-113	ND	5.0	2.8							
Hexachlorobutadiene	ND	5.0	2.5							
Isopropylbenzene	ND	5.0	1.8							
m,p-Xylene	ND	10	1.5							
Methylene chloride	ND	5.0	2.3							
MTBE	ND	5.0	0.63							
n-Butylbenzene	ND	5.0	2.4							
n-Propylbenzene	ND	5.0	2.2							
Naphthalene	ND	5.0	0.97							
o-Xylene	ND	5.0	0.87							
sec-Butylbenzene	ND	5.0	2.3							
Styrene	ND	5.0	1.5							
tert-Amyl methyl ether	ND	5.0	0.59							
tert-Butanol	ND	100	19							
tert-Butylbenzene	ND	5.0	2.0							
Tetrachloroethene	ND	5.0	1.6							
Toluene	ND	5.0	0.94							
trans-1,2-Dichloroethene	ND	5.0	0.59							
trans-1,3-Dichloropropene	ND	5.0	2.1							
Trichloroethene	ND	5.0	3.1							
Trichlorofluoromethane	ND	5.0	1.4							
Vinyl acetate	ND	50	9.8							
Vinyl chloride	ND	5.0	1.7							
Surrogate: 1,2-Dichloroethane-d4	*43.73*			*50.0000*		*87.5*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*46.42*			*50.0000*		*92.8*	*68 - 121*			
Surrogate: Dibromofluoromethane	*47.75*			*50.0000*		*95.5*	*65 - 137*			
Surrogate: Toluene-d8	*47.89*			*50.0000*		*95.8*	*82 - 119*			
LCS (B9H0142-BS1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	52.5300	5.0	0.96	50.0000		105	82 - 114			
1,1,1-Trichloroethane	48.9100	5.0	1.1	50.0000		97.8	70 - 121			
1,1,2,2-Tetrachloroethane	49.1500	5.0	0.62	50.0000		98.3	65 - 116			
1,1,2-Trichloroethane	47.0300	5.0	1.6	50.0000		94.1	73 - 114			
1,1-Dichloroethane	44.0200	5.0	0.81	50.0000		88.0	69 - 117			
1,1-Dichloroethene	41.5500	5.0	2.6	50.0000		83.1	57 - 128			
1,1-Dichloropropene	53.5300	5.0	2.3	50.0000		107	76 - 122			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS (B9H0142-BS1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,2,3-Trichloropropane	49.8400	5.0	0.54	50.0000		99.7	65 - 116			
1,2,3-Trichlorobenzene	61.1300	5.0	1.2	50.0000		122	72 - 130			
1,2,4-Trichlorobenzene	63.2600	5.0	1.1	50.0000		127	74 - 141			
1,2,4-Trimethylbenzene	55.9300	5.0	1.5	50.0000		112	81 - 126			
1,2-Dibromo-3-chloropropane	52.6100	10	1.6	50.0000		105	63 - 126			
1,2-Dibromoethane	47.2200	5.0	3.2	50.0000		94.4	75 - 113			
1,2-Dichlorobenzene	54.3300	5.0	1.1	50.0000		109	83 - 114			
1,2-Dichloroethane	44.4600	5.0	1.2	50.0000		88.9	73 - 115			
1,2-Dichloropropane	46.3900	5.0	1.8	50.0000		92.8	75 - 117			
1,3,5-Trimethylbenzene	56.9200	5.0	1.7	50.0000		114	80 - 126			
1,3-Dichlorobenzene	54.5000	5.0	1.3	50.0000		109	83 - 113			
1,3-Dichloropropane	48.9500	5.0	1.1	50.0000		97.9	79 - 108			
1,4-Dichlorobenzene	53.8100	5.0	1.2	50.0000		108	82 - 114			
2,2-Dichloropropane	49.3900	5.0	1.2	50.0000		98.8	66 - 135			
2-Chlorotoluene	54.6600	5.0	1.6	50.0000		109	79 - 117			
4-Chlorotoluene	53.9500	5.0	1.5	50.0000		108	77 - 118			
4-Isopropyltoluene	62.5800	5.0	2.3	50.0000		125	81 - 129			
Benzene	90.9400	5.0	0.64	100.000		90.9	78 - 112			
Bromobenzene	53.8400	5.0	1.1	50.0000		108	79 - 111			
Bromochloromethane	43.0600	5.0	0.64	50.0000		86.1	69 - 116			
Bromodichloromethane	47.3200	5.0	1.2	50.0000		94.6	79 - 111			
Bromoform	49.8300	5.0	0.80	50.0000		99.7	75 - 119			
Bromomethane	56.9200	5.0	2.5	50.0000		114	31 - 168			
Carbon disulfide	41.4600	5.0	3.5	50.0000		82.9	54 - 141			
Carbon tetrachloride	52.3800	5.0	1.2	50.0000		105	74 - 125			
Chlorobenzene	51.8500	5.0	1.0	50.0000		104	83 - 112			
Chloroethane	50.7200	5.0	1.1	50.0000		101	53 - 144			
Chloroform	45.1000	5.0	0.82	50.0000		90.2	69 - 118			
Chloromethane	44.5800	5.0	1.4	50.0000		89.2	46 - 137			
cis-1,2-Dichloroethene	45.8100	5.0	0.67	50.0000		91.6	68 - 118			
cis-1,3-Dichloropropene	56.4000	5.0	1.9	50.0000		113	77 - 121			
Di-isopropyl ether	41.5300	5.0	0.55	50.0000		83.1	60 - 129			
Dibromochloromethane	52.0500	5.0	1.0	50.0000		104	80 - 111			
Dibromomethane	45.5300	5.0	1.6	50.0000		91.1	78 - 108			
Dichlorodifluoromethane	43.7400	5.0	2.2	50.0000		87.5	41 - 146			
Ethyl Acetate	353.710	50	8.1	500.000		70.7	52 - 130			
Ethyl Ether	324.040	50	6.1	500.000		64.8	54 - 138			
Ethyl tert-butyl ether	41.1300	5.0	0.67	50.0000		82.3	52 - 141			
Ethylbenzene	103.320	5.0	0.91	100.000		103	82 - 121			
Freon-113	46.4300	5.0	2.8	50.0000		92.9	59 - 139			
Hexachlorobutadiene	70.7300	5.0	2.5	50.0000		141	69 - 143			
Isopropylbenzene	63.4600	5.0	1.8	50.0000		127	78 - 124			L3

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS (B9H0142-BS1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
m,p-Xylene	107.010	10	1.5	100.000		107	85 - 118			
Methylene chloride	35.8900	5.0	2.3	50.0000		71.8	44 - 146			
MTBE	39.4400	5.0	0.63	50.0000		78.9	61 - 122			
n-Butylbenzene	63.0800	5.0	2.4	50.0000		126	78 - 135			
n-Propylbenzene	57.2400	5.0	2.2	50.0000		114	78 - 127			
Naphthalene	55.8000	5.0	0.97	50.0000		112	68 - 129			
o-Xylene	108.450	5.0	0.87	100.000		108	86 - 118			
sec-Butylbenzene	59.5500	5.0	2.3	50.0000		119	80 - 127			
Styrene	54.7800	5.0	1.5	50.0000		110	85 - 117			
tert-Amyl methyl ether	41.3900	5.0	0.59	50.0000		82.8	48 - 135			
tert-Butanol	39.4500	100	19	250.000		15.8	0 - 175			
tert-Butylbenzene	60.7100	5.0	2.0	50.0000		121	81 - 122			
Tetrachloroethene	56.2800	5.0	1.6	50.0000		113	77 - 122			
Toluene	98.3000	5.0	0.94	100.000		98.3	79 - 114			
trans-1,2-Dichloroethene	44.2000	5.0	0.59	50.0000		88.4	66 - 125			
trans-1,3-Dichloropropene	48.3800	5.0	2.1	50.0000		96.8	76 - 120			
Trichloroethene	51.7400	5.0	3.1	50.0000		103	79 - 117			
Trichlorofluoromethane	44.9900	5.0	1.4	50.0000		90.0	55 - 133			
Vinyl acetate	425.270	50	9.8	500.000		85.1	52 - 141			
Vinyl chloride	44.9700	5.0	1.7	50.0000		89.9	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*42.49*			*50.0000*		*85.0*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*48.67*			*50.0000*		*97.3*	*68 - 121*			
Surrogate: Dibromofluoromethane	*45.23*			*50.0000*		*90.5*	*65 - 137*			
Surrogate: Toluene-d8	*48.44*			*50.0000*		*96.9*	*82 - 119*			
LCS Dup (B9H0142-BSD1)					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	50.7100	5.0	0.96	50.0000		101	82 - 114	3.53	20	
1,1,1-Trichloroethane	46.1700	5.0	1.1	50.0000		92.3	70 - 121	5.76	20	
1,1,2,2-Tetrachloroethane	47.5800	5.0	0.62	50.0000		95.2	65 - 116	3.25	20	
1,1,2-Trichloroethane	47.2200	5.0	1.6	50.0000		94.4	73 - 114	0.403	20	
1,1-Dichloroethane	42.3700	5.0	0.81	50.0000		84.7	69 - 117	3.82	20	
1,1-Dichloroethene	40.7900	5.0	2.6	50.0000		81.6	57 - 128	1.85	20	
1,1-Dichloropropene	49.3200	5.0	2.3	50.0000		98.6	76 - 122	8.19	20	
1,2,3-Trichloropropane	48.2400	5.0	0.54	50.0000		96.5	65 - 116	3.26	20	
1,2,3-Trichlorobenzene	58.9500	5.0	1.2	50.0000		118	72 - 130	3.63	20	
1,2,4-Trichlorobenzene	61.0500	5.0	1.1	50.0000		122	74 - 141	3.56	20	
1,2,4-Trimethylbenzene	51.8400	5.0	1.5	50.0000		104	81 - 126	7.59	20	
1,2-Dibromo-3-chloropropane	51.0400	10	1.6	50.0000		102	63 - 126	3.03	20	
1,2-Dibromoethane	47.7500	5.0	3.2	50.0000		95.5	75 - 113	1.12	20	
1,2-Dichlorobenzene	51.9200	5.0	1.1	50.0000		104	83 - 114	4.54	20	
1,2-Dichloroethane	43.9500	5.0	1.2	50.0000		87.9	73 - 115	1.15	20	

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS Dup (B9H0142-BSD1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,2-Dichloropropane	45.6900	5.0	1.8	50.0000		91.4	75 - 117	1.52	20	
1,3,5-Trimethylbenzene	52.9300	5.0	1.7	50.0000		106	80 - 126	7.26	20	
1,3-Dichlorobenzene	51.0200	5.0	1.3	50.0000		102	83 - 113	6.60	20	
1,3-Dichloropropane	48.8800	5.0	1.1	50.0000		97.8	79 - 108	0.143	20	
1,4-Dichlorobenzene	51.2200	5.0	1.2	50.0000		102	82 - 114	4.93	20	
2,2-Dichloropropane	47.3200	5.0	1.2	50.0000		94.6	66 - 135	4.28	20	
2-Chlorotoluene	49.8600	5.0	1.6	50.0000		99.7	79 - 117	9.18	20	
4-Chlorotoluene	50.3100	5.0	1.5	50.0000		101	77 - 118	6.98	20	
4-Isopropyltoluene	57.1500	5.0	2.3	50.0000		114	81 - 129	9.07	20	
Benzene	87.2500	5.0	0.64	100.000		87.2	78 - 112	4.14	20	
Bromobenzene	50.3400	5.0	1.1	50.0000		101	79 - 111	6.72	20	
Bromochloromethane	41.9400	5.0	0.64	50.0000		83.9	69 - 116	2.64	20	
Bromodichloromethane	46.1600	5.0	1.2	50.0000		92.3	79 - 111	2.48	20	
Bromoform	50.9300	5.0	0.80	50.0000		102	75 - 119	2.18	20	
Bromomethane	54.6400	5.0	2.5	50.0000		109	31 - 168	4.09	20	
Carbon disulfide	39.1000	5.0	3.5	50.0000		78.2	54 - 141	5.86	20	
Carbon tetrachloride	50.2600	5.0	1.2	50.0000		101	74 - 125	4.13	20	
Chlorobenzene	50.1500	5.0	1.0	50.0000		100	83 - 112	3.33	20	
Chloroethane	46.3000	5.0	1.1	50.0000		92.6	53 - 144	9.11	20	
Chloroform	43.8700	5.0	0.82	50.0000		87.7	69 - 118	2.76	20	
Chloromethane	42.0900	5.0	1.4	50.0000		84.2	46 - 137	5.75	20	
cis-1,2-Dichloroethene	43.4100	5.0	0.67	50.0000		86.8	68 - 118	5.38	20	
cis-1,3-Dichloropropene	55.0500	5.0	1.9	50.0000		110	77 - 121	2.42	20	
Di-isopropyl ether	42.0800	5.0	0.55	50.0000		84.2	60 - 129	1.32	20	
Dibromochloromethane	50.4600	5.0	1.0	50.0000		101	80 - 111	3.10	20	
Dibromomethane	45.5100	5.0	1.6	50.0000		91.0	78 - 108	0.0439	20	
Dichlorodifluoromethane	40.4000	5.0	2.2	50.0000		80.8	41 - 146	7.94	20	
Ethyl Acetate	363.830	50	8.1	500.000		72.8	52 - 130	2.82	20	
Ethyl Ether	330.460	50	6.1	500.000		66.1	54 - 138	1.96	20	
Ethyl tert-butyl ether	40.4700	5.0	0.67	50.0000		80.9	52 - 141	1.62	20	
Ethylbenzene	98.8900	5.0	0.91	100.000		98.9	82 - 121	4.38	20	
Freon-113	43.9300	5.0	2.8	50.0000		87.9	59 - 139	5.53	20	
Hexachlorobutadiene	65.3400	5.0	2.5	50.0000		131	69 - 143	7.92	20	
Isopropylbenzene	58.0500	5.0	1.8	50.0000		116	78 - 124	8.90	20	
m,p-Xylene	102.740	10	1.5	100.000		103	85 - 118	4.07	20	
Methylene chloride	42.8200	5.0	2.3	50.0000		85.6	44 - 146	17.6	20	
MTBE	39.2500	5.0	0.63	50.0000		78.5	61 - 122	0.483	20	
n-Butylbenzene	58.0000	5.0	2.4	50.0000		116	78 - 135	8.39	20	
n-Propylbenzene	52.6100	5.0	2.2	50.0000		105	78 - 127	8.43	20	
Naphthalene	55.9500	5.0	0.97	50.0000		112	68 - 129	0.268	20	
o-Xylene	103.890	5.0	0.87	100.000		104	86 - 118	4.29	20	
sec-Butylbenzene	55.5500	5.0	2.3	50.0000		111	80 - 127	6.95	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
LCS Dup (B9H0142-BSD1) - Continued					Prepared: 8/7/2019 Analyzed: 8/7/2019					
Styrene	53.5000	5.0	1.5	50.0000		107	85 - 117	2.36	20	
tert-Amyl methyl ether	41.0500	5.0	0.59	50.0000		82.1	48 - 135	0.825	20	
tert-Butanol	222.060	100	19	250.000		88.8	0 - 175	140	20	R
tert-Butylbenzene	55.9800	5.0	2.0	50.0000		112	81 - 122	8.11	20	
Tetrachloroethene	53.3100	5.0	1.6	50.0000		107	77 - 122	5.42	20	
Toluene	93.9400	5.0	0.94	100.000		93.9	79 - 114	4.54	20	
trans-1,2-Dichloroethene	42.2200	5.0	0.59	50.0000		84.4	66 - 125	4.58	20	
trans-1,3-Dichloropropene	48.3500	5.0	2.1	50.0000		96.7	76 - 120	0.0620	20	
Trichloroethene	48.9300	5.0	3.1	50.0000		97.9	79 - 117	5.58	20	
Trichlorofluoromethane	42.1300	5.0	1.4	50.0000		84.3	55 - 133	6.57	20	
Vinyl acetate	432.390	50	9.8	500.000		86.5	52 - 141	1.66	20	
Vinyl chloride	41.0400	5.0	1.7	50.0000		82.1	58 - 132	9.14	20	
Surrogate: 1,2-Dichloroethane-d4	*43.96*			*50.0000*		*87.9*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*49.03*			*50.0000*		*98.1*	*68 - 121*			
Surrogate: Dibromofluoromethane	*47.06*			*50.0000*		*94.1*	*65 - 137*			
Surrogate: Toluene-d8	*48.70*			*50.0000*		*97.4*	*82 - 119*			
Matrix Spike (B9H0142-MS1)			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	46.9300	5.0	0.96	50.0000	ND	93.9	45 - 121			
1,1,1-Trichloroethane	42.5800	5.0	1.1	50.0000	ND	85.2	43 - 127			
1,1,2,2-Tetrachloroethane	45.1500	5.0	0.62	50.0000	ND	90.3	32 - 128			
1,1,2-Trichloroethane	44.0500	5.0	1.6	50.0000	ND	88.1	45 - 121			
1,1-Dichloroethane	38.9800	5.0	0.81	50.0000	ND	78.0	46 - 119			
1,1-Dichloroethene	37.3000	5.0	2.6	50.0000	ND	74.6	40 - 130			
1,1-Dichloropropene	46.3700	5.0	2.3	50.0000	ND	92.7	45 - 130			
1,2,3-Trichloropropane	46.1000	5.0	0.54	50.0000	ND	92.2	42 - 124			
1,2,3-Trichlorobenzene	48.5300	5.0	1.2	50.0000	ND	97.1	4 - 135			
1,2,4-Trichlorobenzene	49.3100	5.0	1.1	50.0000	ND	98.6	8 - 141			
1,2,4-Trimethylbenzene	46.6900	5.0	1.5	50.0000	ND	93.4	30 - 136			
1,2-Dibromo-3-chloropropane	50.0300	10	1.6	50.0000	ND	100	38 - 132			
1,2-Dibromoethane	46.1700	5.0	3.2	50.0000	ND	92.3	45 - 121			
1,2-Dichlorobenzene	46.0000	5.0	1.1	50.0000	ND	92.0	30 - 125			
1,2-Dichloroethane	40.5900	5.0	1.2	50.0000	ND	81.2	51 - 115			
1,2-Dichloropropane	41.2300	5.0	1.8	50.0000	ND	82.5	50 - 118			
1,3,5-Trimethylbenzene	47.1500	5.0	1.7	50.0000	ND	94.3	29 - 137			
1,3-Dichlorobenzene	44.5500	5.0	1.3	50.0000	ND	89.1	30 - 124			
1,3-Dichloropropane	46.1200	5.0	1.1	50.0000	ND	92.2	49 - 116			
1,4-Dichlorobenzene	44.4000	5.0	1.2	50.0000	ND	88.8	31 - 124			
2,2-Dichloropropane	42.4800	5.0	1.2	50.0000	ND	85.0	41 - 134			
2-Chlorotoluene	44.0800	5.0	1.6	50.0000	ND	88.2	32 - 127			
4-Chlorotoluene	43.9100	5.0	1.5	50.0000	ND	87.8	34 - 124			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike (B9H0142-MS1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
4-Isopropyltoluene	49.8800	5.0	2.3	50.0000	ND	99.8	26 - 141			
Benzene	79.2700	5.0	0.64	100.000	ND	79.3	48 - 117			
Bromobenzene	44.8100	5.0	1.1	50.0000	ND	89.6	40 - 117			
Bromochloromethane	39.8300	5.0	0.64	50.0000	ND	79.7	48 - 117			
Bromodichloromethane	42.4700	5.0	1.2	50.0000	ND	84.9	49 - 115			
Bromoform	47.7600	5.0	0.80	50.0000	ND	95.5	42 - 127			
Bromomethane	48.7600	5.0	2.5	50.0000	ND	97.5	19 - 157			
Carbon disulfide	34.6300	5.0	3.5	50.0000	ND	69.3	34 - 138			
Carbon tetrachloride	44.6600	5.0	1.2	50.0000	ND	89.3	43 - 130			
Chlorobenzene	44.2700	5.0	1.0	50.0000	ND	88.5	41 - 122			
Chloroethane	40.2400	5.0	1.1	50.0000	ND	80.5	32 - 145			
Chloroform	39.9900	5.0	0.82	50.0000	ND	80.0	46 - 118			
Chloromethane	36.2500	5.0	1.4	50.0000	ND	72.5	34 - 132			
cis-1,2-Dichloroethene	40.3400	5.0	0.67	50.0000	ND	80.7	44 - 119			
cis-1,3-Dichloropropene	49.5400	5.0	1.9	50.0000	ND	99.1	44 - 126			
Di-isopropyl ether	39.2200	5.0	0.55	50.0000	ND	78.4	42 - 126			
Dibromochloromethane	47.4100	5.0	1.0	50.0000	ND	94.8	46 - 119			
Dibromomethane	42.3800	5.0	1.6	50.0000	ND	84.8	52 - 114			
Dichlorodifluoromethane	38.9900	5.0	2.2	50.0000	ND	78.0	22 - 147			
Ethyl Acetate	322.280	50	8.1	500.000	ND	64.5	9 - 140			
Ethyl Ether	323.070	50	6.1	500.000	ND	64.6	45 - 131			
Ethyl tert-butyl ether	39.3100	5.0	0.67	50.0000	ND	78.6	33 - 138			
Ethylbenzene	89.1500	5.0	0.91	100.000	ND	89.2	38 - 131			
Freon-113	39.7800	5.0	2.8	50.0000	ND	79.6	38 - 140			
Hexachlorobutadiene	50.5000	5.0	2.5	50.0000	ND	101	4 - 141			
Isopropylbenzene	51.2100	5.0	1.8	50.0000	ND	102	35 - 133			
m,p-Xylene	93.5500	10	1.5	100.000	ND	93.6	38 - 130			
Methylene chloride	39.6900	5.0	2.3	50.0000	ND	79.4	26 - 137			
MTBE	39.1700	5.0	0.63	50.0000	ND	78.3	45 - 121			
n-Butylbenzene	48.9100	5.0	2.4	50.0000	ND	97.8	18 - 144			
n-Propylbenzene	46.1400	5.0	2.2	50.0000	ND	92.3	30 - 137			
Naphthalene	47.9900	5.0	0.97	50.0000	ND	96.0	14 - 137			
o-Xylene	94.9800	5.0	0.87	100.000	ND	95.0	41 - 129			
sec-Butylbenzene	48.4000	5.0	2.3	50.0000	ND	96.8	24 - 140			
Styrene	48.2000	5.0	1.5	50.0000	ND	96.4	41 - 125			
tert-Amyl methyl ether	40.2600	5.0	0.59	50.0000	ND	80.5	31 - 133			
tert-Butanol	ND	100	19	250.000	ND	NR	0 - 201			
tert-Butylbenzene	49.5700	5.0	2.0	50.0000	ND	99.1	30 - 134			
Tetrachloroethene	47.2100	5.0	1.6	50.0000	ND	94.4	37 - 130			
Toluene	84.5300	5.0	0.94	100.000	ND	84.5	45 - 122			
trans-1,2-Dichloroethene	38.2400	5.0	0.59	50.0000	ND	76.5	46 - 122			
trans-1,3-Dichloropropene	44.6700	5.0	2.1	50.0000	ND	89.3	44 - 124			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike (B9H0142-MS1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Trichloroethene	43.7400	5.0	3.1	50.0000	ND	87.5	36 - 142			
Trichlorofluoromethane	38.8200	5.0	1.4	50.0000	ND	77.6	37 - 135			
Vinyl acetate	287.060	50	9.8	500.000	ND	57.4	0 - 136			
Vinyl chloride	37.3000	5.0	1.7	50.0000	ND	74.6	42 - 131			
Surrogate: 1,2-Dichloroethane-d4	*46.11*			*50.0000*		*92.2*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*50.22*			*50.0000*		*100*	*68 - 121*			
Surrogate: Dibromofluoromethane	*47.60*			*50.0000*		*95.2*	*65 - 137*			
Surrogate: Toluene-d8	*49.00*			*50.0000*		*98.0*	*82 - 119*			
Matrix Spike Dup (B9H0142-MSD1)			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
1,1,1,2-Tetrachloroethane	46.2800	5.0	0.96	50.0000	ND	92.6	45 - 121	1.39	20	
1,1,1-Trichloroethane	46.8900	5.0	1.1	50.0000	ND	93.8	43 - 127	9.63	20	
1,1,2,2-Tetrachloroethane	43.6600	5.0	0.62	50.0000	ND	87.3	32 - 128	3.36	20	
1,1,2-Trichloroethane	45.4700	5.0	1.6	50.0000	ND	90.9	45 - 121	3.17	20	
1,1-Dichloroethane	43.4100	5.0	0.81	50.0000	ND	86.8	46 - 119	10.8	20	
1,1-Dichloroethene	42.2400	5.0	2.6	50.0000	ND	84.5	40 - 130	12.4	20	
1,1-Dichloropropene	48.1900	5.0	2.3	50.0000	ND	96.4	45 - 130	3.85	20	
1,2,3-Trichloropropane	44.8200	5.0	0.54	50.0000	ND	89.6	42 - 124	2.82	20	
1,2,3-Trichlorobenzene	40.8900	5.0	1.2	50.0000	ND	81.8	4 - 135	17.1	20	
1,2,4-Trichlorobenzene	42.6800	5.0	1.1	50.0000	ND	85.4	8 - 141	14.4	20	
1,2,4-Trimethylbenzene	43.5300	5.0	1.5	50.0000	ND	87.1	30 - 136	7.01	20	
1,2-Dibromo-3-chloropropane	48.4200	10	1.6	50.0000	ND	96.8	38 - 132	3.27	20	
1,2-Dibromoethane	47.3600	5.0	3.2	50.0000	ND	94.7	45 - 121	2.54	20	
1,2-Dichlorobenzene	43.4100	5.0	1.1	50.0000	ND	86.8	30 - 125	5.79	20	
1,2-Dichloroethane	45.0900	5.0	1.2	50.0000	ND	90.2	51 - 115	10.5	20	
1,2-Dichloropropane	43.5500	5.0	1.8	50.0000	ND	87.1	50 - 118	5.47	20	
1,3,5-Trimethylbenzene	44.0800	5.0	1.7	50.0000	ND	88.2	29 - 137	6.73	20	
1,3-Dichlorobenzene	42.2500	5.0	1.3	50.0000	ND	84.5	30 - 124	5.30	20	
1,3-Dichloropropane	46.5400	5.0	1.1	50.0000	ND	93.1	49 - 116	0.907	20	
1,4-Dichlorobenzene	42.4800	5.0	1.2	50.0000	ND	85.0	31 - 124	4.42	20	
2,2-Dichloropropane	46.4300	5.0	1.2	50.0000	ND	92.9	41 - 134	8.89	20	
2-Chlorotoluene	42.9300	5.0	1.6	50.0000	ND	85.9	32 - 127	2.64	20	
4-Chlorotoluene	41.9100	5.0	1.5	50.0000	ND	83.8	34 - 124	4.66	20	
4-Isopropyltoluene	45.9300	5.0	2.3	50.0000	ND	91.9	26 - 141	8.25	20	
Benzene	85.4400	5.0	0.64	100.000	ND	85.4	48 - 117	7.49	20	
Bromobenzene	43.9300	5.0	1.1	50.0000	ND	87.9	40 - 117	1.98	20	
Bromochloromethane	45.6900	5.0	0.64	50.0000	ND	91.4	48 - 117	13.7	20	
Bromodichloromethane	44.9600	5.0	1.2	50.0000	ND	89.9	49 - 115	5.70	20	
Bromoform	46.2400	5.0	0.80	50.0000	ND	92.5	42 - 127	3.23	20	
Bromomethane	61.5200	5.0	2.5	50.0000	ND	123	19 - 157	23.1	20	R
Carbon disulfide	38.3600	5.0	3.5	50.0000	ND	76.7	34 - 138	10.2	20	

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)										
Matrix Spike Dup (B9H0142-MSD1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019					
Carbon tetrachloride	47.9000	5.0	1.2	50.0000	ND	95.8	43 - 130	7.00	20	
Chlorobenzene	44.0700	5.0	1.0	50.0000	ND	88.1	41 - 122	0.453	20	
Chloroethane	42.7100	5.0	1.1	50.0000	ND	85.4	32 - 145	5.96	20	
Chloroform	44.4600	5.0	0.82	50.0000	ND	88.9	46 - 118	10.6	20	
Chloromethane	36.7900	5.0	1.4	50.0000	ND	73.6	34 - 132	1.48	20	
cis-1,2-Dichloroethene	44.1800	5.0	0.67	50.0000	ND	88.4	44 - 119	9.09	20	
cis-1,3-Dichloropropene	51.1800	5.0	1.9	50.0000	ND	102	44 - 126	3.26	20	
Di-isopropyl ether	43.0300	5.0	0.55	50.0000	ND	86.1	42 - 126	9.26	20	
Dibromochloromethane	46.3700	5.0	1.0	50.0000	ND	92.7	46 - 119	2.22	20	
Dibromomethane	46.2000	5.0	1.6	50.0000	ND	92.4	52 - 114	8.62	20	
Dichlorodifluoromethane	37.7200	5.0	2.2	50.0000	ND	75.4	22 - 147	3.31	20	
Ethyl Acetate	349.090	50	8.1	500.000	ND	69.8	9 - 140	7.99	20	
Ethyl Ether	384.310	50	6.1	500.000	ND	76.9	45 - 131	17.3	20	
Ethyl tert-butyl ether	39.9700	5.0	0.67	50.0000	ND	79.9	33 - 138	1.66	20	
Ethylbenzene	86.6900	5.0	0.91	100.000	ND	86.7	38 - 131	2.80	20	
Freon-113	45.1700	5.0	2.8	50.0000	ND	90.3	38 - 140	12.7	20	
Hexachlorobutadiene	45.1300	5.0	2.5	50.0000	ND	90.3	4 - 141	11.2	20	
Isopropylbenzene	48.6500	5.0	1.8	50.0000	ND	97.3	35 - 133	5.13	20	
m,p-Xylene	88.3200	10	1.5	100.000	ND	88.3	38 - 130	5.75	20	
Methylene chloride	38.7300	5.0	2.3	50.0000	ND	77.5	26 - 137	2.45	20	
MTBE	41.3200	5.0	0.63	50.0000	ND	82.6	45 - 121	5.34	20	
n-Butylbenzene	44.4700	5.0	2.4	50.0000	ND	88.9	18 - 144	9.51	20	
n-Propylbenzene	43.7500	5.0	2.2	50.0000	ND	87.5	30 - 137	5.32	20	
Naphthalene	39.5500	5.0	0.97	50.0000	ND	79.1	14 - 137	19.3	20	
o-Xylene	90.4900	5.0	0.87	100.000	ND	90.5	41 - 129	4.84	20	
sec-Butylbenzene	44.7200	5.0	2.3	50.0000	ND	89.4	24 - 140	7.90	20	
Styrene	46.2400	5.0	1.5	50.0000	ND	92.5	41 - 125	4.15	20	
tert-Amyl methyl ether	38.7400	5.0	0.59	50.0000	ND	77.5	31 - 133	3.85	20	
tert-Butanol	ND	100	19	250.000	ND	NR	0 - 201	NR	20	
tert-Butylbenzene	45.9200	5.0	2.0	50.0000	ND	91.8	30 - 134	7.64	20	
Tetrachloroethene	46.1300	5.0	1.6	50.0000	ND	92.3	37 - 130	2.31	20	
Toluene	88.9800	5.0	0.94	100.000	ND	89.0	45 - 122	5.13	20	
trans-1,2-Dichloroethene	42.5200	5.0	0.59	50.0000	ND	85.0	46 - 122	10.6	20	
trans-1,3-Dichloropropene	46.6700	5.0	2.1	50.0000	ND	93.3	44 - 124	4.38	20	
Trichloroethene	46.4600	5.0	3.1	50.0000	ND	92.9	36 - 142	6.03	20	
Trichlorofluoromethane	41.2600	5.0	1.4	50.0000	ND	82.5	37 - 135	6.09	20	
Vinyl acetate	284.800	50	9.8	500.000	ND	57.0	0 - 136	0.790	20	
Vinyl chloride	39.1300	5.0	1.7	50.0000	ND	78.3	42 - 131	4.79	20	
Surrogate: 1,2-Dichloroethane-d4	*47.62*			*50.0000*		*95.2*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*49.20*			*50.0000*		*98.4*	*68 - 121*			
Surrogate: Dibromofluoromethane	*49.85*			*50.0000*		*99.7*	*65 - 137*			

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Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0142 - MSVOA_S (continued)									
Matrix Spike Dup (B9H0142-MSD1) - Continued			**Source: 1902935-03**		Prepared: 8/7/2019 Analyzed: 8/7/2019				
Surrogate: Toluene-d8	*49.16*		*50.0000*		*98.3*	*82 - 119*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W										
Blank (B9H0170-BLK1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.11							
1,1,1-Trichloroethane	ND	5.0	0.07							
1,1,2,2-Tetrachloroethane	ND	5.0	0.36							
1,1,2-Trichloroethane	ND	5.0	0.25							
1,1-Dichloroethane	ND	5.0	0.09							
1,1-Dichloroethene	ND	5.0	0.13							
1,1-Dichloropropene	ND	5.0	0.13							
1,2,3-Trichloropropane	ND	5.0	0.39							
1,2,3-Trichlorobenzene	ND	5.0	0.18							
1,2,4-Trichlorobenzene	ND	5.0	0.16							
1,2,4-Trimethylbenzene	ND	5.0	0.14							
1,2-Dibromo-3-chloropropane	ND	5.0	0.41							
1,2-Dibromoethane	ND	5.0	0.24							
1,2-Dichlorobenzene	ND	5.0	0.20							
1,2-Dichloroethane	ND	5.0	0.20							
1,2-Dichloropropane	ND	5.0	0.15							
1,3,5-Trimethylbenzene	ND	5.0	0.13							
1,3-Dichlorobenzene	ND	5.0	0.16							
1,3-Dichloropropane	ND	5.0	0.21							
1,4-Dichlorobenzene	ND	5.0	0.17							
2,2-Dichloropropane	ND	5.0	0.38							
2-Chlorotoluene	ND	5.0	0.11							
4-Chlorotoluene	ND	5.0	0.12							
4-Isopropyltoluene	ND	5.0	0.11							
Benzene	ND	5.0	0.13							
Bromobenzene	ND	5.0	0.21							
Bromochloromethane	ND	5.0	0.16							
Bromodichloromethane	ND	5.0	0.14							
Bromoform	ND	5.0	0.20							
Bromomethane	ND	5.0	0.17							
Carbon disulfide	ND	5.0	0.07							
Carbon tetrachloride	ND	5.0	0.09							
Chlorobenzene	ND	5.0	0.13							
Chloroethane	ND	5.0	0.15							
Chloroform	ND	5.0	0.11							
Chloromethane	ND	5.0	0.12							
cis-1,2-Dichloroethene	ND	5.0	0.14							
cis-1,3-Dichloropropene	ND	5.0	0.13							
Di-isopropyl ether	ND	5.0	0.15							
Dibromochloromethane	ND	5.0	0.16							
Dibromomethane	ND	5.0	0.19							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
Blank (B9H0170-BLK1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Dichlorodifluoromethane	ND	5.0	0.05							
Ethyl Acetate	ND	50	3.1							
Ethyl Ether	ND	50	2.0							
Ethyl tert-butyl ether	ND	5.0	0.21							
Ethylbenzene	ND	5.0	0.13							
Freon-113	ND	5.0	0.13							
Hexachlorobutadiene	ND	5.0	0.15							
Isopropylbenzene	ND	5.0	0.10							
m,p-Xylene	ND	10	0.19							
Methylene chloride	ND	5.0	0.71							
MTBE	ND	5.0	0.26							
n-Butylbenzene	ND	5.0	0.11							
n-Propylbenzene	ND	5.0	0.10							
Naphthalene	ND	5.0	0.41							
o-Xylene	ND	5.0	0.13							
sec-Butylbenzene	ND	5.0	0.09							
Styrene	ND	5.0	0.13							
tert-Amyl methyl ether	ND	5.0	0.41							
tert-Butanol	ND	100	2.4							
tert-Butylbenzene	ND	5.0	0.09							
Tetrachloroethene	ND	5.0	0.10							
Toluene	ND	5.0	0.12							
trans-1,2-Dichloroethene	ND	5.0	0.09							
trans-1,3-Dichloropropene	ND	5.0	0.23							
Trichloroethene	ND	5.0	0.10							
Trichlorofluoromethane	ND	5.0	0.10							
Vinyl acetate	ND	50	1.7							
Vinyl chloride	ND	5.0	0.05							
Surrogate: 1,2-Dichloroethane-d4	*24.94*			*25.0000*		*99.8*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.16*			*25.0000*		*101*	*71 - 127*			
Surrogate: Dibromofluoromethane	*27.73*			*25.0000*		*111*	*66 - 147*			
Surrogate: Toluene-d8	*26.48*			*25.0000*		*106*	*77 - 138*			
LCS (B9H0170-BS1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1,1,2-Tetrachloroethane	17.1700	5.0	0.11	20.0000		85.8	71 - 133			
1,1,1-Trichloroethane	18.4700	5.0	0.07	20.0000		92.4	62 - 124			
1,1,2,2-Tetrachloroethane	17.4600	5.0	0.36	20.0000		87.3	50 - 131			
1,1,2-Trichloroethane	17.8300	5.0	0.25	20.0000		89.2	77 - 121			
1,1-Dichloroethane	18.8500	5.0	0.09	20.0000		94.2	52 - 130			
1,1-Dichloroethene	18.9200	5.0	0.13	20.0000		94.6	61 - 136			
1,1-Dichloropropene	20.1500	5.0	0.13	20.0000		101	80 - 128			

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS (B9H0170-BS1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,2,3-Trichloropropane	17.7100	5.0	0.39	20.0000		88.6	59 - 126			
1,2,3-Trichlorobenzene	17.4100	5.0	0.18	20.0000		87.0	69 - 138			
1,2,4-Trichlorobenzene	18.2300	5.0	0.16	20.0000		91.2	78 - 125			
1,2,4-Trimethylbenzene	17.9900	5.0	0.14	20.0000		90.0	70 - 126			
1,2-Dibromo-3-chloropropane	15.6200	5.0	0.41	20.0000		78.1	58 - 127			
1,2-Dibromoethane	18.1000	5.0	0.24	20.0000		90.5	76 - 120			
1,2-Dichlorobenzene	19.4000	5.0	0.20	20.0000		97.0	82 - 117			
1,2-Dichloroethane	19.4900	5.0	0.20	20.0000		97.4	66 - 126			
1,2-Dichloropropane	18.5800	5.0	0.15	20.0000		92.9	70 - 117			
1,3,5-Trimethylbenzene	18.3100	5.0	0.13	20.0000		91.6	71 - 125			
1,3-Dichlorobenzene	18.2100	5.0	0.16	20.0000		91.0	81 - 116			
1,3-Dichloropropane	18.5400	5.0	0.21	20.0000		92.7	69 - 124			
1,4-Dichlorobenzene	19.0700	5.0	0.17	20.0000		95.4	80 - 114			
2,2-Dichloropropane	19.1800	5.0	0.38	20.0000		95.9	58 - 132			
2-Chlorotoluene	18.5400	5.0	0.11	20.0000		92.7	71 - 119			
4-Chlorotoluene	18.5300	5.0	0.12	20.0000		92.6	72 - 122			
4-Isopropyltoluene	17.8600	5.0	0.11	20.0000		89.3	69 - 126			
Benzene	39.6100	5.0	0.13	40.0000		99.0	80 - 116			
Bromobenzene	18.8300	5.0	0.21	20.0000		94.2	77 - 118			
Bromochloromethane	18.2500	5.0	0.16	20.0000		91.2	68 - 121			
Bromodichloromethane	17.5000	5.0	0.14	20.0000		87.5	73 - 118			
Bromoform	15.4000	5.0	0.20	20.0000		77.0	65 - 133			
Bromomethane	21.5500	5.0	0.17	20.0000		108	7 - 205			
Carbon disulfide	18.4100	5.0	0.07	20.0000		92.0	55 - 131			
Carbon tetrachloride	17.2600	5.0	0.09	20.0000		86.3	63 - 133			
Chlorobenzene	19.0100	5.0	0.13	20.0000		95.0	86 - 113			
Chloroethane	22.5600	5.0	0.15	20.0000		113	66 - 141			
Chloroform	19.3500	5.0	0.11	20.0000		96.8	63 - 127			
Chloromethane	19.7400	5.0	0.12	20.0000		98.7	0 - 207			
cis-1,2-Dichloroethene	18.9400	5.0	0.14	20.0000		94.7	64 - 126			
cis-1,3-Dichloropropene	19.2400	5.0	0.13	20.0000		96.2	70 - 141			
Di-isopropyl ether	18.0500	5.0	0.15	20.0000		90.2	56 - 131			
Dibromochloromethane	16.6000	5.0	0.16	20.0000		83.0	67 - 135			
Dibromomethane	19.0700	5.0	0.19	20.0000		95.4	74 - 118			
Dichlorodifluoromethane	18.7000	5.0	0.05	20.0000		93.5	14 - 181			
Ethyl Acetate	190.940	50	3.1	200.000		95.5	49 - 128			
Ethyl Ether	172.440	50	2.0	200.000		86.2	53 - 143			
Ethyl tert-butyl ether	18.9100	5.0	0.21	20.0000		94.6	54 - 132			
Ethylbenzene	34.2000	5.0	0.13	40.0000		85.5	77 - 118			
Freon-113	18.5500	5.0	0.13	20.0000		92.8	68 - 145			
Hexachlorobutadiene	18.1800	5.0	0.15	20.0000		90.9	66 - 125			
Isopropylbenzene	19.0500	5.0	0.10	20.0000		95.2	68 - 137			

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS (B9H0170-BS1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
m,p-Xylene	37.0200	10	0.19	40.0000		92.6	78 - 126			
Methylene chloride	15.4100	5.0	0.71	20.0000		77.0	51 - 149			
MTBE	18.5200	5.0	0.26	20.0000		92.6	63 - 128			
n-Butylbenzene	18.0800	5.0	0.11	20.0000		90.4	63 - 127			
n-Propylbenzene	18.2300	5.0	0.10	20.0000		91.2	69 - 124			
Naphthalene	16.6800	5.0	0.41	20.0000		83.4	60 - 126			
o-Xylene	35.1100	5.0	0.13	40.0000		87.8	79 - 126			
sec-Butylbenzene	18.2300	5.0	0.09	20.0000		91.2	69 - 124			
Styrene	18.4900	5.0	0.13	20.0000		92.4	80 - 127			
tert-Amyl methyl ether	19.5000	5.0	0.41	20.0000		97.5	49 - 130			
tert-Butanol	78.6000	100	2.4	100.000		78.6	29 - 163			
tert-Butylbenzene	18.1300	5.0	0.09	20.0000		90.6	71 - 124			
Tetrachloroethene	17.5400	5.0	0.10	20.0000		87.7	73 - 129			
Toluene	39.1700	5.0	0.12	40.0000		97.9	78 - 121			
trans-1,2-Dichloroethene	19.3300	5.0	0.09	20.0000		96.6	58 - 141			
trans-1,3-Dichloropropene	16.4500	5.0	0.23	20.0000		82.2	68 - 128			
Trichloroethene	18.1300	5.0	0.10	20.0000		90.6	73 - 126			
Trichlorofluoromethane	19.3600	5.0	0.10	20.0000		96.8	62 - 146			
Vinyl acetate	219.430	50	1.7	200.000		110	53 - 153			
Vinyl chloride	19.5600	5.0	0.05	20.0000		97.8	61 - 137			
Surrogate: 1,2-Dichloroethane-d4	*24.50*			*25.0000*		*98.0*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.60*			*25.0000*		*102*	*71 - 127*			
Surrogate: Dibromofluoromethane	*26.00*			*25.0000*		*104*	*66 - 147*			
Surrogate: Toluene-d8	*25.70*			*25.0000*		*103*	*77 - 138*			
LCS Dup (B9H0170-BSD1)					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,1,1,2-Tetrachloroethane	19.1900	5.0	0.11	20.0000		96.0	71 - 133	11.1	20	
1,1,1-Trichloroethane	20.0600	5.0	0.07	20.0000		100	62 - 124	8.25	20	
1,1,2,2-Tetrachloroethane	19.4300	5.0	0.36	20.0000		97.2	50 - 131	10.7	20	
1,1,2-Trichloroethane	19.8200	5.0	0.25	20.0000		99.1	77 - 121	10.6	20	
1,1-Dichloroethane	20.2400	5.0	0.09	20.0000		101	52 - 130	7.11	20	
1,1-Dichloroethene	20.7300	5.0	0.13	20.0000		104	61 - 136	9.13	20	
1,1-Dichloropropene	21.7000	5.0	0.13	20.0000		108	80 - 128	7.41	20	
1,2,3-Trichloropropane	19.1700	5.0	0.39	20.0000		95.8	59 - 126	7.92	20	
1,2,3-Trichlorobenzene	18.6800	5.0	0.18	20.0000		93.4	69 - 138	7.04	20	
1,2,4-Trichlorobenzene	19.3900	5.0	0.16	20.0000		97.0	78 - 125	6.17	20	
1,2,4-Trimethylbenzene	19.6200	5.0	0.14	20.0000		98.1	70 - 126	8.67	20	
1,2-Dibromo-3-chloropropane	17.4800	5.0	0.41	20.0000		87.4	58 - 127	11.2	20	
1,2-Dibromoethane	19.6200	5.0	0.24	20.0000		98.1	76 - 120	8.06	20	
1,2-Dichlorobenzene	21.8000	5.0	0.20	20.0000		109	82 - 117	11.7	20	
1,2-Dichloroethane	22.2400	5.0	0.20	20.0000		111	66 - 126	13.2	20	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS Dup (B9H0170-BSD1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
1,2-Dichloropropane	20.4200	5.0	0.15	20.0000		102	70 - 117	9.44	20	
1,3,5-Trimethylbenzene	19.9800	5.0	0.13	20.0000		99.9	71 - 125	8.72	20	
1,3-Dichlorobenzene	19.6700	5.0	0.16	20.0000		98.4	81 - 116	7.71	20	
1,3-Dichloropropane	19.8700	5.0	0.21	20.0000		99.4	69 - 124	6.93	20	
1,4-Dichlorobenzene	20.7400	5.0	0.17	20.0000		104	80 - 114	8.39	20	
2,2-Dichloropropane	20.7700	5.0	0.38	20.0000		104	58 - 132	7.96	20	
2-Chlorotoluene	20.3600	5.0	0.11	20.0000		102	71 - 119	9.36	20	
4-Chlorotoluene	20.3800	5.0	0.12	20.0000		102	72 - 122	9.51	20	
4-Isopropyltoluene	19.7300	5.0	0.11	20.0000		98.6	69 - 126	9.95	20	
Benzene	43.5300	5.0	0.13	40.0000		109	80 - 116	9.43	20	
Bromobenzene	21.2500	5.0	0.21	20.0000		106	77 - 118	12.1	20	
Bromochloromethane	18.4600	5.0	0.16	20.0000		92.3	68 - 121	1.14	20	
Bromodichloromethane	18.9900	5.0	0.14	20.0000		95.0	73 - 118	8.17	20	
Bromoform	16.9500	5.0	0.20	20.0000		84.8	65 - 133	9.58	20	
Bromomethane	19.4900	5.0	0.17	20.0000		97.4	7 - 205	10.0	20	
Carbon disulfide	21.1000	5.0	0.07	20.0000		106	55 - 131	13.6	20	
Carbon tetrachloride	19.8200	5.0	0.09	20.0000		99.1	63 - 133	13.8	20	
Chlorobenzene	21.4500	5.0	0.13	20.0000		107	86 - 113	12.1	20	
Chloroethane	20.1100	5.0	0.15	20.0000		101	66 - 141	11.5	20	
Chloroform	20.0400	5.0	0.11	20.0000		100	63 - 127	3.50	20	
Chloromethane	19.2900	5.0	0.12	20.0000		96.4	0 - 207	2.31	20	
cis-1,2-Dichloroethene	20.7100	5.0	0.14	20.0000		104	64 - 126	8.93	20	
cis-1,3-Dichloropropene	21.0400	5.0	0.13	20.0000		105	70 - 141	8.94	20	
Di-isopropyl ether	19.6600	5.0	0.15	20.0000		98.3	56 - 131	8.54	20	
Dibromochloromethane	18.0200	5.0	0.16	20.0000		90.1	67 - 135	8.20	20	
Dibromomethane	20.1700	5.0	0.19	20.0000		101	74 - 118	5.61	20	
Dichlorodifluoromethane	18.2200	5.0	0.05	20.0000		91.1	14 - 181	2.60	20	
Ethyl Acetate	186.160	50	3.1	200.000		93.1	49 - 128	2.54	20	
Ethyl Ether	180.950	50	2.0	200.000		90.5	53 - 143	4.82	20	
Ethyl tert-butyl ether	19.0900	5.0	0.21	20.0000		95.4	54 - 132	0.947	20	
Ethylbenzene	37.5400	5.0	0.13	40.0000		93.8	77 - 118	9.31	20	
Freon-113	20.4300	5.0	0.13	20.0000		102	68 - 145	9.65	20	
Hexachlorobutadiene	19.6600	5.0	0.15	20.0000		98.3	66 - 125	7.82	20	
Isopropylbenzene	21.2000	5.0	0.10	20.0000		106	68 - 137	10.7	20	
m,p-Xylene	40.6200	10	0.19	40.0000		102	78 - 126	9.27	20	
Methylene chloride	16.8000	5.0	0.71	20.0000		84.0	51 - 149	8.63	20	
MTBE	19.6200	5.0	0.26	20.0000		98.1	63 - 128	5.77	20	
n-Butylbenzene	19.6000	5.0	0.11	20.0000		98.0	63 - 127	8.07	20	
n-Propylbenzene	20.2200	5.0	0.10	20.0000		101	69 - 124	10.4	20	
Naphthalene	17.7300	5.0	0.41	20.0000		88.6	60 - 126	6.10	20	
o-Xylene	38.1200	5.0	0.13	40.0000		95.3	79 - 126	8.22	20	
sec-Butylbenzene	19.9300	5.0	0.09	20.0000		99.6	69 - 124	8.91	20	

Stantec	Project Number : GNAP-Fullerton, 185804430
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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0170 - MSVOA_W (continued)										
LCS Dup (B9H0170-BSD1) - Continued					Prepared: 8/8/2019 Analyzed: 8/8/2019					
Styrene	20.0600	5.0	0.13	20.0000		100	80 - 127	8.15	20	
tert-Amyl methyl ether	18.8900	5.0	0.41	20.0000		94.4	49 - 130	3.18	20	
tert-Butanol	85.7700	100	2.4	100.000		85.8	29 - 163	8.72	20	
tert-Butylbenzene	20.0500	5.0	0.09	20.0000		100	71 - 124	10.1	20	
Tetrachloroethene	19.1000	5.0	0.10	20.0000		95.5	73 - 129	8.52	20	
Toluene	43.7100	5.0	0.12	40.0000		109	78 - 121	11.0	20	
trans-1,2-Dichloroethene	20.4200	5.0	0.09	20.0000		102	58 - 141	5.48	20	
trans-1,3-Dichloropropene	19.0000	5.0	0.23	20.0000		95.0	68 - 128	14.4	20	
Trichloroethene	19.7100	5.0	0.10	20.0000		98.6	73 - 126	8.35	20	
Trichlorofluoromethane	18.9100	5.0	0.10	20.0000		94.6	62 - 146	2.35	20	
Vinyl acetate	232.170	50	1.7	200.000		116	53 - 153	5.64	20	
Vinyl chloride	19.2100	5.0	0.05	20.0000		96.0	61 - 137	1.81	20	
Surrogate: 1,2-Dichloroethane-d4	*23.95*			*25.0000*		*95.8*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.51*			*25.0000*		*102*	*71 - 127*			
Surrogate: Dibromofluoromethane	*25.72*			*25.0000*		*103*	*66 - 147*			
Surrogate: Toluene-d8	*25.76*			*25.0000*		*103*	*77 - 138*			

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/15/2019

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0177 - Prep_WC1_S										
Duplicate (B9H0177-DUP1)			**Source: 1902943-01**		Prepared: 8/8/2019 Analyzed: 8/8/2019					
pH	8.22000	0.10	0.10		8.23000			0.122	20	

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/15/2019

Notes and Definitions

S10	Surrogate recovery was outside of laboratory acceptance limit due to possible matrix interference.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
L3	Laboratory control sample outside in-house established limits but within method criteria.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY FORM

Stantec
735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

1902952

Client Name/Address:	Project/PO Number:
Stantec 735 E. Carnegie Dr, Suite 280 San Bernardino, CA 92408	**GNAP-Fullerton / 185804430**
Project Manager: Brian Viggiano Email Address: brian.viggiano@stantec.com Sampler: Josh Sargent	Phone Number: : **(909)289-7111** Fax Number: **(909)335-6120**

	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	PCB 8082A	PAH 8270C	Dioxin/Furan 8290	Pesticides 8081A	Arsenic/Lead 6010B			Special Instructions
01	TB-20190807	W	VOA	2	8.7.19		HCl		X								
02	EB-20190807	W	VOA	6			HCl		X								
03	HA-10-5	S	5oz	1		0853	ICE	X	X	X	X						
04	HA-10-8					0855		X	X	X	X	X					*Dioxin/Furan 1-week TAT
05	HA-15-5					0838		X	X	X	X						
06	HA-15-10					0907		X	X	X	X	X					*Dioxin/Furan 1-week TAT
07	HA-6-1					1045							X	X			
08	HA-6-3					1046							X	X			
09	HA-7-1					1037							X	X			
10	HA-7-3					1038							X	X			
11	HA-5-1					1050							X	X			
12	HA-5-3					1052							X	X			
13	HA-4-1					1102							X	X			
14	HA-4-3					1104							X	X			

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/ Time: 8/7/19 1525
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours
48 hours
5 days
normal

Sample Integrity: (Check)
intact _____ on ice _____

: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for ces is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Stantec

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

Client Name/Address:
Stantec
735 E. Carnegie Dr, Suite 280
San Bernardino, CA 92408

Project/PO Number:
GNAP-Fullerton / 185804430

Project Manager: Brian Viggiano

Phone Number: : **(909)289-7111**

Email Address:
brian.viggiano@stantec.com
Sampler: Josh Sargent

Fax Number: **(909)335-6120**

	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	Pesticides 8081A	Arsenic/Lead 6010	TPH w/ silica gel	PLBC 8082A				Special Instructions
15	HA-9-1	S	8oz	1	8.7.19	1235	ICE	X		X	X	X	X				
16	HA-9-3					1237		X		X	X	X					
17	HA-8-1					1247		X		X	X	X	X				
18	HA-8-3					1250		X		X	X	X					
19	HA-10-1					1307		X		X	X	X	X				
20	HA-10-3					1311		X		X	X	X					
21	HA-11-1					1328		X		X	X	X	X				
22	HA-11-3					1330		X		X	X	X					
23	HA-2-1					1356				X	X						
24	HA-2-3					1358				X	X						
25	HA-3-1					1408				X	X						
26	HA-3-3					1410				X	X						
27	HA-1-1					1427				X	X						
28	HA-1-3					1430				X	X						

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/ Time: 8/7/19 1525
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours 5 days
48 hours normal

Sample Integrity: (Check)
intact on ice

Note: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

CHAIN OF CUSTODY FORM

Stantec
735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

Client Name/Address:	Project/PO Number:
Stantec 735 E. Carnegie Dr, Suite 280 San Bernardino, CA 92408	**GNAP-Fullerton / 185804430**
Project Manager: Brian Viggiano Email Address: brian.viggiano@stantec.com Sampler: Josh Sargent	Phone Number: : **(909)289-7111** Fax Number: (**909)335-6120**

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	Pesticides 8081A	Title 22 metals 6010/7471	PCBs 8082					Special Instructions
24 HA-12-1	S	8oz	1	8.7.19	1456	ICE	X		X	X	X					
38 HA-12-3	S	8oz	1	8.7.19	1458	ICE	X		X	X						

Relinquished By:	Date/Time: 8.7.19 1525	Received By:	Date/ Time: 8/7/19 1525	Turnaround: same day / 24 hours / 48 hours — Time: (Check) 5 days / normal
Relinquished By:	Date/Time: 8/7/19 1615	Received By:	Date/Time: 8/7/19 1615	
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;	Sample Integrity: (Check) intact _____ on ice _____

Note: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

ADVANCED TECHNOLOGY LABORATORIES

August 12, 2019

Brian Viggiano
Stantec
735 E. Carnegie Drive, Suite 280
San Bernardino, CA 92408
Tel: (909) 255-8204
Fax:(909) 335-6120

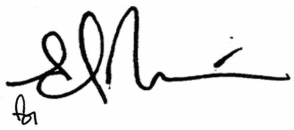
ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1902993
Client Reference : GNAP-Fullerton, 185804430

Enclosed are the results for sample(s) received on August 09, 2019 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Edgar Caballero
President & Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec		Project Number :	GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280		Report To :	Brian Viggiano
San Bernardino , CA 92408		Reported :	08/12/2019

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-20190809	1902993-01	Water	8/09/19 0:00	8/09/19 15:45
EB-20190809	1902993-02	Water	8/09/19 10:20	8/09/19 15:45
SV-4-10	1902993-04	Soil	8/09/19 10:45	8/09/19 15:45
SV-4-15	1902993-05	Soil	8/09/19 10:48	8/09/19 15:45
SB-1-5	1902993-08	Soil	8/09/19 11:35	8/09/19 15:45
SB-5-5	1902993-10	Soil	8/09/19 14:35	8/09/19 15:45
SB-5-10	1902993-11	Soil	8/09/19 14:40	8/09/19 15:45
SV-12-5	1902993-13	Soil	8/09/19 15:20	8/09/19 15:45
SV-12-10	1902993-14	Soil	8/09/19 15:30	8/09/19 15:45

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: TB-20190809

Lab ID: 1902993-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,1,1-Trichloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,1,2-Trichloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,1-Dichloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,1-Dichloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,1-Dichloropropene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2,3-Trichloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2-Dibromo-3-chloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2-Dibromoethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2-Dichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2-Dichloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,2-Dichloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,3-Dichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,3-Dichloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
1,4-Dichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
2,2-Dichloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
2-Chlorotoluene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
4-Chlorotoluene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
4-Isopropyltoluene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Benzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Bromobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Bromochloromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Bromodichloromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Bromoform	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Bromomethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Carbon disulfide	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Carbon tetrachloride	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Chlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Chloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Chloroform	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Chloromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: TB-20190809

Lab ID: 1902993-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Di-isopropyl ether	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Dibromochloromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Dibromomethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Dichlorodifluoromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Ethyl Acetate	ND	50	1	B9H0235	08/12/2019	08/12/19 10:34	
Ethyl Ether	ND	50	1	B9H0235	08/12/2019	08/12/19 10:34	
Ethyl tert-butyl ether	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Ethylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Freon-113	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Hexachlorobutadiene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Isopropylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
m,p-Xylene	ND	10	1	B9H0235	08/12/2019	08/12/19 10:34	
Methylene chloride	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
MTBE	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
n-Butylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
n-Propylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Naphthalene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
o-Xylene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
sec-Butylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Styrene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
tert-Amyl methyl ether	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
tert-Butanol	ND	100	1	B9H0235	08/12/2019	08/12/19 10:34	
tert-Butylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Tetrachloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Toluene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Trichloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Trichlorofluoromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Vinyl acetate	ND	50	1	B9H0235	08/12/2019	08/12/19 10:34	
Vinyl chloride	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:34	
Surrogate: 1,2-Dichloroethane-d4	*114 %*	*59 - 158*		B9H0235	08/12/2019	*08/12/19 10:34*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*71 - 127*		B9H0235	08/12/2019	*08/12/19 10:34*	
Surrogate: Dibromofluoromethane	*119 %*	*66 - 147*		B9H0235	08/12/2019	*08/12/19 10:34*	
Surrogate: Toluene-d8	*113 %*	*77 - 138*		B9H0235	08/12/2019	*08/12/19 10:34*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: EB-20190809

Lab ID: 1902993-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,1,1-Trichloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,1,2-Trichloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,1-Dichloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,1-Dichloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,1-Dichloropropene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2,3-Trichloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2-Dibromo-3-chloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2-Dibromoethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2-Dichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2-Dichloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,2-Dichloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,3-Dichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,3-Dichloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
1,4-Dichlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
2,2-Dichloropropane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
2-Chlorotoluene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
4-Chlorotoluene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
4-Isopropyltoluene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Benzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Bromobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Bromochloromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Bromodichloromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Bromoform	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Bromomethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Carbon disulfide	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Carbon tetrachloride	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Chlorobenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Chloroethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Chloroform	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Chloromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: EB-20190809

Lab ID: 1902993-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Di-isopropyl ether	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Dibromochloromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Dibromomethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Dichlorodifluoromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Ethyl Acetate	ND	50	1	B9H0235	08/12/2019	08/12/19 10:58	
Ethyl Ether	ND	50	1	B9H0235	08/12/2019	08/12/19 10:58	
Ethyl tert-butyl ether	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Ethylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Freon-113	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Hexachlorobutadiene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Isopropylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
m,p-Xylene	ND	10	1	B9H0235	08/12/2019	08/12/19 10:58	
Methylene chloride	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
MTBE	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
n-Butylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
n-Propylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Naphthalene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
o-Xylene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
sec-Butylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Styrene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
tert-Amyl methyl ether	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
tert-Butanol	ND	100	1	B9H0235	08/12/2019	08/12/19 10:58	
tert-Butylbenzene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Tetrachloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Toluene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Trichloroethene	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Trichlorofluoromethane	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Vinyl acetate	ND	50	1	B9H0235	08/12/2019	08/12/19 10:58	
Vinyl chloride	ND	5.0	1	B9H0235	08/12/2019	08/12/19 10:58	
Surrogate: 1,2-Dichloroethane-d4	*119 %*	*59 - 158*		B9H0235	08/12/2019	*08/12/19 10:58*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*71 - 127*		B9H0235	08/12/2019	*08/12/19 10:58*	
Surrogate: Dibromofluoromethane	*125 %*	*66 - 147*		B9H0235	08/12/2019	*08/12/19 10:58*	
Surrogate: Toluene-d8	*104 %*	*77 - 138*		B9H0235	08/12/2019	*08/12/19 10:58*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-4-10

Lab ID: 1902993-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Arsenic	**3.6**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Barium	**87**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Beryllium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Cadmium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Chromium	**17**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Cobalt	**7.7**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Copper	**14**	2.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Lead	**2.9**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Molybdenum	**1.9**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Nickel	**15**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Selenium	**1.0**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Silver	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Thallium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Vanadium	**34**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	
Zinc	**45**	1.0	1	B9H0241	08/12/2019	08/12/19 15:11	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0242	08/12/2019	08/12/19 15:17	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0212	08/09/2019	08/09/19 17:47	
Surrogate: 4-Bromofluorobenzene	*108 %*	*45 - 149*		B9H0212	08/09/2019	*08/09/19 17:47*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0229	08/11/2019	08/12/19 13:50	
ORO	ND	10	1	B9H0229	08/11/2019	08/12/19 13:50	

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Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-4-10

Lab ID: 1902993-04

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*108 %*	*58 - 172*		B9H0229	08/11/2019	*08/12/19 13:50*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Aroclor 1221	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Aroclor 1232	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Aroclor 1242	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Aroclor 1248	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Aroclor 1254	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Aroclor 1260	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Aroclor 1262	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Aroclor 1268	ND	16	1	B9H0230	08/11/2019	08/12/19 01:14	
Surrogate: Decachlorobiphenyl	*72.7 %*	*40 - 121*		B9H0230	08/11/2019	*08/12/19 01:14*	
Surrogate: Tetrachloro-m-xylene	*78.8 %*	*55 - 105*		B9H0230	08/11/2019	*08/12/19 01:14*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,1,1-Trichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,1,2-Trichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,1-Dichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,1-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,1-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,2,3-Trichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0197	08/09/2019	08/09/19 18:44	
1,2-Dibromoethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,2-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,2-Dichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-4-10

Lab ID: 1902993-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,3-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,3-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
1,4-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
2,2-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
2-Chlorotoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
4-Chlorotoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
4-Isopropyltoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Benzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Bromobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Bromochloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Bromodichloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Bromoform	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Bromomethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Carbon disulfide	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Carbon tetrachloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Chlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Chloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Chloroform	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Chloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Di-isopropyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Dibromochloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Dibromomethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Dichlorodifluoromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Ethyl Acetate	ND	50	1	B9H0197	08/09/2019	08/09/19 18:44	
Ethyl Ether	ND	50	1	B9H0197	08/09/2019	08/09/19 18:44	
Ethyl tert-butyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Ethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Freon-113	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Hexachlorobutadiene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Isopropylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
m,p-Xylene	ND	10	1	B9H0197	08/09/2019	08/09/19 18:44	
Methylene chloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
MTBE	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-4-10

Lab ID: 1902993-04

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
n-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
n-Propylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Naphthalene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
o-Xylene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
sec-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Styrene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
tert-Amyl methyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
tert-Butanol	ND	100	1	B9H0197	08/09/2019	08/09/19 18:44	
tert-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Tetrachloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Toluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Trichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Trichlorofluoromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Vinyl acetate	ND	50	1	B9H0197	08/09/2019	08/09/19 18:44	
Vinyl chloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 18:44	
Surrogate: 1,2-Dichloroethane-d4	*98.6 %*	*60 - 145*		B9H0197	08/09/2019	*08/09/19 18:44*	
Surrogate: 4-Bromofluorobenzene	*95.1 %*	*68 - 121*		B9H0197	08/09/2019	*08/09/19 18:44*	
Surrogate: Dibromofluoromethane	*103 %*	*65 - 137*		B9H0197	08/09/2019	*08/09/19 18:44*	
Surrogate: Toluene-d8	*97.6 %*	*82 - 119*		B9H0197	08/09/2019	*08/09/19 18:44*	

pH by EPA 9045C

Analyst: DT

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**8.2**	0.10	1	B9H0233	08/12/2019	08/12/19 14:55	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-4-15

Lab ID: 1902993-05

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0212	08/09/2019	08/09/19 18:06	
Surrogate: 4-Bromofluorobenzene	*104 %*		*45 - 149*		B9H0212	08/09/2019	*08/09/19 18:06*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0229	08/11/2019	08/12/19 12:42	
ORO		ND	10	1	B9H0229	08/11/2019	08/12/19 12:42	
Surrogate: p-Terphenyl	*114 %*		*58 - 172*		B9H0229	08/11/2019	*08/12/19 12:42*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,1,1-Trichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,1,2-Trichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,1-Dichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,1-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,1-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2,3-Trichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2-Dibromoethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2-Dichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,2-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,3-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,3-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
1,4-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
2,2-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
2-Chlorotoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-4-15

Lab ID: 1902993-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
4-Isopropyltoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Benzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Bromobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Bromochloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Bromodichloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Bromoform	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Bromomethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Carbon disulfide	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Carbon tetrachloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Chlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Chloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Chloroform	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Chloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Di-isopropyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Dibromochloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Dibromomethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Dichlorodifluoromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Ethyl Acetate	ND	50	1	B9H0197	08/09/2019	08/09/19 19:02	
Ethyl Ether	ND	50	1	B9H0197	08/09/2019	08/09/19 19:02	
Ethyl tert-butyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Ethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Freon-113	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Hexachlorobutadiene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Isopropylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
m,p-Xylene	ND	10	1	B9H0197	08/09/2019	08/09/19 19:02	
Methylene chloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
MTBE	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
n-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
n-Propylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Naphthalene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
o-Xylene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
sec-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Styrene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
tert-Amyl methyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-4-15

Lab ID: 1902993-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	100	1	B9H0197	08/09/2019	08/09/19 19:02	
tert-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Tetrachloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Toluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Trichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Trichlorofluoromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Vinyl acetate	ND	50	1	B9H0197	08/09/2019	08/09/19 19:02	
Vinyl chloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:02	
Surrogate: 1,2-Dichloroethane-d4	*95.2 %*	*60 - 145*		B9H0197	08/09/2019	*08/09/19 19:02*	
Surrogate: 4-Bromofluorobenzene	*91.7 %*	*68 - 121*		B9H0197	08/09/2019	*08/09/19 19:02*	
Surrogate: Dibromofluoromethane	*103 %*	*65 - 137*		B9H0197	08/09/2019	*08/09/19 19:02*	
Surrogate: Toluene-d8	*96.3 %*	*82 - 119*		B9H0197	08/09/2019	*08/09/19 19:02*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SB-1-5

Lab ID: 1902993-08

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Arsenic	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Barium	**23**	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Beryllium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Cadmium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Chromium	**4.7**	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Cobalt	**3.1**	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Copper	**2.9**	2.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Lead	**1.1**	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Molybdenum	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Nickel	**3.3**	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Selenium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Silver	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Thallium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Vanadium	**12**	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	
Zinc	**18**	1.0	1	B9H0241	08/12/2019	08/12/19 15:12	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0242	08/12/2019	08/12/19 15:19	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0212	08/09/2019	08/09/19 18:25	
Surrogate: 4-Bromofluorobenzene	*104 %*	*45 - 149*		B9H0212	08/09/2019	*08/09/19 18:25*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0229	08/11/2019	08/12/19 12:25	
ORO	ND	10	1	B9H0229	08/11/2019	08/12/19 12:25	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SB-1-5

Lab ID: 1902993-08

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*110 %*	*58 - 172*		B9H0229	08/11/2019	*08/12/19 12:25*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Aroclor 1221	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Aroclor 1232	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Aroclor 1242	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Aroclor 1248	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Aroclor 1254	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Aroclor 1260	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Aroclor 1262	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Aroclor 1268	ND	16	1	B9H0230	08/11/2019	08/12/19 01:33	
Surrogate: Decachlorobiphenyl	*105 %*	*40 - 121*		B9H0230	08/11/2019	*08/12/19 01:33*	
Surrogate: Tetrachloro-m-xylene	*101 %*	*55 - 105*		B9H0230	08/11/2019	*08/12/19 01:33*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,1,1-Trichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,1,2-Trichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,1-Dichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,1-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,1-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,2,3-Trichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0197	08/09/2019	08/09/19 19:21	
1,2-Dibromoethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,2-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,2-Dichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SB-1-5

Lab ID: 1902993-08

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,3-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,3-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
1,4-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
2,2-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
2-Chlorotoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
4-Chlorotoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
4-Isopropyltoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Benzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Bromobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Bromochloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Bromodichloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Bromoform	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Bromomethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Carbon disulfide	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Carbon tetrachloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Chlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Chloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Chloroform	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Chloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Di-isopropyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Dibromochloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Dibromomethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Dichlorodifluoromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Ethyl Acetate	ND	50	1	B9H0197	08/09/2019	08/09/19 19:21	
Ethyl Ether	ND	50	1	B9H0197	08/09/2019	08/09/19 19:21	
Ethyl tert-butyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Ethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Freon-113	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Hexachlorobutadiene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Isopropylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
m,p-Xylene	ND	10	1	B9H0197	08/09/2019	08/09/19 19:21	
Methylene chloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
MTBE	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SB-1-5

Lab ID: 1902993-08

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
n-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
n-Propylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Naphthalene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
o-Xylene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
sec-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Styrene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
tert-Amyl methyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
tert-Butanol	ND	100	1	B9H0197	08/09/2019	08/09/19 19:21	
tert-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Tetrachloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Toluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Trichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Trichlorofluoromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Vinyl acetate	ND	50	1	B9H0197	08/09/2019	08/09/19 19:21	
Vinyl chloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:21	
Surrogate: 1,2-Dichloroethane-d4	*98.4 %*	*60 - 145*		B9H0197	08/09/2019	*08/09/19 19:21*	
Surrogate: 4-Bromofluorobenzene	*93.3 %*	*68 - 121*		B9H0197	08/09/2019	*08/09/19 19:21*	
Surrogate: Dibromofluoromethane	*105 %*	*65 - 137*		B9H0197	08/09/2019	*08/09/19 19:21*	
Surrogate: Toluene-d8	*97.8 %*	*82 - 119*		B9H0197	08/09/2019	*08/09/19 19:21*	

pH by EPA 9045C

Analyst: DT

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**8.5**	0.10	1	B9H0233	08/12/2019	08/12/19 14:55	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SB-5-5

Lab ID: 1902993-10

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0212	08/09/2019	08/09/19 18:44	
Surrogate: 4-Bromofluorobenzene	*103 %*		*45 - 149*		B9H0212	08/09/2019	*08/09/19 18:44*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B9H0229	08/11/2019	08/12/19 12:59	
ORO		ND	10	1	B9H0229	08/11/2019	08/12/19 12:59	
Surrogate: p-Terphenyl	*112 %*		*58 - 172*		B9H0229	08/11/2019	*08/12/19 12:59*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KD

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Aroclor 1221		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Aroclor 1232		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Aroclor 1242		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Aroclor 1248		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Aroclor 1254		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Aroclor 1260		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Aroclor 1262		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Aroclor 1268		ND	16	1	B9H0230	08/11/2019	08/12/19 01:52	
Surrogate: Decachlorobiphenyl	*105 %*		*40 - 121*		B9H0230	08/11/2019	*08/12/19 01:52*	
Surrogate: Tetrachloro-m-xylene	*103 %*		*55 - 105*		B9H0230	08/11/2019	*08/12/19 01:52*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,1,1-Trichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,1,2-Trichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,1-Dichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SB-5-5

Lab ID: 1902993-10

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,1-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2,3-Trichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2-Dibromoethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2-Dichloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,2-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,3-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,3-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
1,4-Dichlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
2,2-Dichloropropane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
2-Chlorotoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
4-Chlorotoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
4-Isopropyltoluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Benzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Bromobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Bromochloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Bromodichloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Bromoform	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Bromomethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Carbon disulfide	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Carbon tetrachloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Chlorobenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Chloroethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Chloroform	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Chloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Di-isopropyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Dibromochloromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Dibromomethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Dichlorodifluoromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	

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Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SB-5-5

Lab ID: 1902993-10

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Ethyl Acetate	ND	50	1	B9H0197	08/09/2019	08/09/19 19:40	
Ethyl Ether	ND	50	1	B9H0197	08/09/2019	08/09/19 19:40	
Ethyl tert-butyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Ethylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Freon-113	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Hexachlorobutadiene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Isopropylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
m,p-Xylene	ND	10	1	B9H0197	08/09/2019	08/09/19 19:40	
Methylene chloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
MTBE	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
n-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
n-Propylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Naphthalene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
o-Xylene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
sec-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Styrene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
tert-Amyl methyl ether	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
tert-Butanol	ND	100	1	B9H0197	08/09/2019	08/09/19 19:40	
tert-Butylbenzene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Tetrachloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Toluene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Trichloroethene	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Trichlorofluoromethane	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Vinyl acetate	ND	50	1	B9H0197	08/09/2019	08/09/19 19:40	
Vinyl chloride	ND	5.0	1	B9H0197	08/09/2019	08/09/19 19:40	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*60 - 145*		B9H0197	08/09/2019	*08/09/19 19:40*	
Surrogate: 4-Bromofluorobenzene	*93.6 %*	*68 - 121*		B9H0197	08/09/2019	*08/09/19 19:40*	
Surrogate: Dibromofluoromethane	*103 %*	*65 - 137*		B9H0197	08/09/2019	*08/09/19 19:40*	
Surrogate: Toluene-d8	*96.5 %*	*82 - 119*		B9H0197	08/09/2019	*08/09/19 19:40*	

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Lab ID: 1902993-11

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B9H0212	08/09/2019	08/09/19 19:02	
Surrogate: 4-Bromofluorobenzene	*102 %*		*45 - 149*		B9H0212	08/09/2019	*08/09/19 19:02*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**14**	10	1	B9H0229	08/11/2019	08/12/19 13:16	
ORO		ND	10	1	B9H0229	08/11/2019	08/12/19 13:16	
Surrogate: p-Terphenyl	*130 %*		*58 - 172*		B9H0229	08/11/2019	*08/12/19 13:16*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,1,1-Trichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,1,2-Trichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,1-Dichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,1-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,1-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2,3-Trichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2-Dibromoethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2-Dichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,2-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,3-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,3-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
1,4-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
2,2-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
2-Chlorotoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	

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Lab ID: 1902993-11

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
4-Isopropyltoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Benzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Bromobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Bromochloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Bromodichloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Bromoform	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Bromomethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Carbon disulfide	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Carbon tetrachloride	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Chlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Chloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Chloroform	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Chloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Di-isopropyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Dibromochloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Dibromomethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Dichlorodifluoromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Ethyl Acetate	ND	50	1	B9H0246	08/12/2019	08/12/19 14:20	
Ethyl Ether	ND	50	1	B9H0246	08/12/2019	08/12/19 14:20	
Ethyl tert-butyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Ethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Freon-113	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Hexachlorobutadiene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Isopropylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
m,p-Xylene	ND	10	1	B9H0246	08/12/2019	08/12/19 14:20	
Methylene chloride	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
MTBE	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
n-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
n-Propylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Naphthalene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
o-Xylene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
sec-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Styrene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
tert-Amyl methyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	

Certificate of Analysis

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Client Sample ID: SB-5-10

Lab ID: 1902993-11

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	100	1	B9H0246	08/12/2019	08/12/19 14:20	
tert-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Tetrachloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Toluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Trichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Trichlorofluoromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Vinyl acetate	ND	50	1	B9H0246	08/12/2019	08/12/19 14:20	
Vinyl chloride	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:20	
Surrogate: 1,2-Dichloroethane-d4	*99.3 %*	*60 - 145*		B9H0246	08/12/2019	*08/12/19 14:20*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*68 - 121*		B9H0246	08/12/2019	*08/12/19 14:20*	
Surrogate: Dibromofluoromethane	*103 %*	*65 - 137*		B9H0246	08/12/2019	*08/12/19 14:20*	
Surrogate: Toluene-d8	*105 %*	*82 - 119*		B9H0246	08/12/2019	*08/12/19 14:20*	

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Client Sample ID: SV-12-5

Lab ID: 1902993-13

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Arsenic	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Barium	**37**	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Beryllium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Cadmium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Chromium	**7.2**	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Cobalt	**4.1**	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Copper	**5.2**	2.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Lead	**1.7**	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Molybdenum	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Nickel	**4.9**	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Selenium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Silver	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Thallium	ND	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Vanadium	**17**	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	
Zinc	**23**	1.0	1	B9H0241	08/12/2019	08/12/19 15:13	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B9H0242	08/12/2019	08/12/19 15:22	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B9H0212	08/09/2019	08/09/19 19:21	
Surrogate: 4-Bromofluorobenzene	*102 %*	*45 - 149*		B9H0212	08/09/2019	*08/09/19 19:21*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B9H0229	08/11/2019	08/12/19 13:34	
ORO	ND	10	1	B9H0229	08/11/2019	08/12/19 13:34	

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Lab ID: 1902993-13

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: p-Terphenyl	*117 %*	*58 - 172*		B9H0229	08/11/2019	*08/12/19 13:34*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,1,1-Trichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,1,2-Trichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,1-Dichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,1-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,1-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2,3-Trichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2-Dibromoethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2-Dichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,2-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,3-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,3-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
1,4-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
2,2-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
2-Chlorotoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
4-Chlorotoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
4-Isopropyltoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Benzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Bromobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Bromochloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Bromodichloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Bromoform	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Bromomethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Carbon disulfide	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	

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Lab ID: 1902993-13

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon tetrachloride	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Chlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Chloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Chloroform	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Chloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
cis-1,3-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Di-isopropyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Dibromochloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Dibromomethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Dichlorodifluoromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Ethyl Acetate	ND	50	1	B9H0246	08/12/2019	08/12/19 14:02	
Ethyl Ether	ND	50	1	B9H0246	08/12/2019	08/12/19 14:02	
Ethyl tert-butyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Ethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Freon-113	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Hexachlorobutadiene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Isopropylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
m,p-Xylene	ND	10	1	B9H0246	08/12/2019	08/12/19 14:02	
Methylene chloride	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
MTBE	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
n-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
n-Propylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Naphthalene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
o-Xylene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
sec-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Styrene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
tert-Amyl methyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
tert-Butanol	ND	100	1	B9H0246	08/12/2019	08/12/19 14:02	
tert-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Tetrachloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Toluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Trichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Trichlorofluoromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Vinyl acetate	ND	50	1	B9H0246	08/12/2019	08/12/19 14:02	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-12-5

Lab ID: 1902993-13

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride		ND	5.0	1	B9H0246	08/12/2019	08/12/19 14:02	
Surrogate: 1,2-Dichloroethane-d4	*95.8 %*		*60 - 145*		B9H0246	08/12/2019	*08/12/19 14:02*	
Surrogate: 4-Bromofluorobenzene	*106 %*		*68 - 121*		B9H0246	08/12/2019	*08/12/19 14:02*	
Surrogate: Dibromofluoromethane	*97.9 %*		*65 - 137*		B9H0246	08/12/2019	*08/12/19 14:02*	
Surrogate: Toluene-d8	*105 %*		*82 - 119*		B9H0246	08/12/2019	*08/12/19 14:02*	

pH by EPA 9045C

Analyst: DT

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**7.9**	0.10	1	B9H0233	08/12/2019	08/12/19 14:55	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-12-10

Lab ID: 1902993-14

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,1,1-Trichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,1,2-Trichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,1-Dichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,1-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,1-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2,3-Trichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2,3-Trichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2,4-Trichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2,4-Trimethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2-Dibromo-3-chloropropane	ND	10	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2-Dibromoethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2-Dichloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,2-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,3,5-Trimethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,3-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,3-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
1,4-Dichlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
2,2-Dichloropropane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
2-Chlorotoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
4-Chlorotoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
4-Isopropyltoluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Benzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Bromobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Bromochloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Bromodichloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Bromoform	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Bromomethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Carbon disulfide	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Carbon tetrachloride	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Chlorobenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Chloroethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Chloroform	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Chloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
cis-1,2-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Client Sample ID: SV-12-10

Lab ID: 1902993-14

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Di-isopropyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Dibromochloromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Dibromomethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Dichlorodifluoromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Ethyl Acetate	ND	50	1	B9H0246	08/12/2019	08/12/19 13:43	
Ethyl Ether	ND	50	1	B9H0246	08/12/2019	08/12/19 13:43	
Ethyl tert-butyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Ethylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Freon-113	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Hexachlorobutadiene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Isopropylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
m,p-Xylene	ND	10	1	B9H0246	08/12/2019	08/12/19 13:43	
Methylene chloride	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
MTBE	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
n-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
n-Propylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Naphthalene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
o-Xylene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
sec-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Styrene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
tert-Amyl methyl ether	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
tert-Butanol	ND	100	1	B9H0246	08/12/2019	08/12/19 13:43	
tert-Butylbenzene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Tetrachloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Toluene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
trans-1,2-Dichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
trans-1,3-Dichloropropene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Trichloroethene	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Trichlorofluoromethane	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Vinyl acetate	ND	50	1	B9H0246	08/12/2019	08/12/19 13:43	
Vinyl chloride	ND	5.0	1	B9H0246	08/12/2019	08/12/19 13:43	
Surrogate: 1,2-Dichloroethane-d4	*98.7 %*	*60 - 145*		B9H0246	08/12/2019	*08/12/19 13:43*	
Surrogate: 4-Bromofluorobenzene	*100 %*	*68 - 121*		B9H0246	08/12/2019	*08/12/19 13:43*	
Surrogate: Dibromofluoromethane	*100 %*	*65 - 137*		B9H0246	08/12/2019	*08/12/19 13:43*	
Surrogate: Toluene-d8	*103 %*	*82 - 119*		B9H0246	08/12/2019	*08/12/19 13:43*	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0241 - EPA 3050B_S										
Blank (B9H0241-BLK1)						Prepared: 8/12/2019 Analyzed: 8/12/2019				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B9H0241-BS1)						Prepared: 8/12/2019 Analyzed: 8/12/2019				
Antimony	44.4987	2.0	0.51	50.0000		89.0	80 - 120			
Arsenic	44.2329	1.0	0.12	50.0000		88.5	80 - 120			
Barium	46.6966	1.0	0.12	50.0000		93.4	80 - 120			
Beryllium	43.9609	1.0	0.03	50.0000		87.9	80 - 120			
Cadmium	44.6167	1.0	0.14	50.0000		89.2	80 - 120			
Chromium	47.2621	1.0	0.26	50.0000		94.5	80 - 120			
Cobalt	46.9216	1.0	0.07	50.0000		93.8	80 - 120			
Copper	47.8190	2.0	0.19	50.0000		95.6	80 - 120			
Lead	44.8866	1.0	0.18	50.0000		89.8	80 - 120			
Molybdenum	46.7609	1.0	0.12	50.0000		93.5	80 - 120			
Nickel	46.5191	1.0	0.18	50.0000		93.0	80 - 120			
Selenium	42.3194	1.0	0.40	50.0000		84.6	80 - 120			
Silver	40.4255	1.0	0.12	50.0000		80.9	80 - 120			
Thallium	45.4016	1.0	0.38	50.0000		90.8	80 - 120			
Vanadium	47.4921	1.0	0.06	50.0000		95.0	80 - 120			
Zinc	43.8436	1.0	0.15	50.0000		87.7	80 - 120			
Matrix Spike (B9H0241-MS1)			**Source: 1902983-01**			Prepared: 8/12/2019 Analyzed: 8/12/2019				
Antimony	81.4576	2.0	0.51	250.000	ND	32.6	21 - 95			
Arsenic	104.687	1.0	0.12	125.000	3.06777	81.3	46 - 97			
Barium	127.798	1.0	0.12	125.000	27.7171	80.1	24 - 123			
Beryllium	98.7457	1.0	0.03	125.000	ND	79.0	47 - 99			

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San Bernardino , CA 92408	Reported : 08/12/2019

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0241 - EPA 3050B_S (continued)										
Matrix Spike (B9H0241-MS1) - Continued			**Source: 1902983-01**			Prepared: 8/12/2019 Analyzed: 8/12/2019				
Cadmium	90.5336	1.0	0.14	125.000	0.189479	72.3	43 - 95			
Chromium	127.859	1.0	0.26	125.000	27.8520	80.0	39 - 109			
Cobalt	98.8578	1.0	0.07	125.000	4.19678	75.7	45 - 101			
Copper	117.039	2.0	0.19	125.000	6.11443	88.7	44 - 118			
Lead	94.1162	1.0	0.18	125.000	2.05966	73.6	33 - 121			
Molybdenum	100.742	1.0	0.12	125.000	0.432954	80.2	45 - 101			
Nickel	126.619	1.0	0.18	125.000	33.8950	74.2	37 - 104			
Selenium	97.6343	1.0	0.40	125.000	ND	78.1	43 - 96			
Silver	103.452	1.0	0.12	125.000	ND	82.8	49 - 104			
Thallium	89.3372	1.0	0.38	125.000	ND	71.5	23 - 103			
Vanadium	113.717	1.0	0.06	125.000	13.7659	80.0	42 - 109			
Zinc	107.839	1.0	0.15	125.000	20.0130	70.3	22 - 114			
Matrix Spike Dup (B9H0241-MSD1)			**Source: 1902983-01**			Prepared: 8/12/2019 Analyzed: 8/12/2019				
Antimony	82.9123	2.0	0.51	251.256	ND	33.0	21 - 95	1.77	20	
Arsenic	106.794	1.0	0.12	125.628	3.06777	82.6	46 - 97	1.99	20	
Barium	133.104	1.0	0.12	125.628	27.7171	83.9	24 - 123	4.07	20	
Beryllium	101.473	1.0	0.03	125.628	ND	80.8	47 - 99	2.72	20	
Cadmium	94.5251	1.0	0.14	125.628	0.189479	75.1	43 - 95	4.31	20	
Chromium	136.193	1.0	0.26	125.628	27.8520	86.2	39 - 109	6.31	20	
Cobalt	103.296	1.0	0.07	125.628	4.19678	78.9	45 - 101	4.39	20	
Copper	120.667	2.0	0.19	125.628	6.11443	91.2	44 - 118	3.05	20	
Lead	97.1320	1.0	0.18	125.628	2.05966	75.7	33 - 121	3.15	20	
Molybdenum	103.719	1.0	0.12	125.628	0.432954	82.2	45 - 101	2.91	20	
Nickel	132.936	1.0	0.18	125.628	33.8950	78.8	37 - 104	4.87	20	
Selenium	99.0852	1.0	0.40	125.628	ND	78.9	43 - 96	1.48	20	
Silver	106.584	1.0	0.12	125.628	ND	84.8	49 - 104	2.98	20	
Thallium	92.8472	1.0	0.38	125.628	ND	73.9	23 - 103	3.85	20	
Vanadium	118.330	1.0	0.06	125.628	13.7659	83.2	42 - 109	3.98	20	
Zinc	113.040	1.0	0.15	125.628	20.0130	74.0	22 - 114	4.71	20	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0242 - EPA 7471_S										
Blank (B9H0242-BLK1)					Prepared: 8/12/2019 Analyzed: 8/12/2019					
Mercury	ND	0.10	0.007							
LCS (B9H0242-BS1)					Prepared: 8/12/2019 Analyzed: 8/12/2019					
Mercury	0.862374	0.10	0.007	0.833333		103	80 - 120			
Matrix Spike (B9H0242-MS1)			**Source: 1902983-01**		Prepared: 8/12/2019 Analyzed: 8/12/2019					
Mercury	0.964189	0.10	0.007	0.833333	0.060358	108	70 - 130			
Matrix Spike Dup (B9H0242-MSD1)			**Source: 1902983-01**		Prepared: 8/12/2019 Analyzed: 8/12/2019					
Mercury	0.948807	0.10	0.007	0.833333	0.060358	107	70 - 130	1.61	20	

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0242 - EPA 7471_S									
Post Spike (B9H0242-PS1)			**Source: 1902983-01**	Prepared: 8/12/2019 Analyzed: 8/12/2019					
Mercury	0.003307		2.00000E-3	0.000724	129	85 - 115			M1

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Stantec	Project Number : GNAP-Fullerton, 185804430
735 E. Carnegie Drive, Suite 280	Report To : Brian Viggiano
San Bernardino , CA 92408	Reported : 08/12/2019

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0212 - GCVOA_S										
Blank (B9H0212-BLK1)						Prepared: 8/9/2019 Analyzed: 8/9/2019				
Gasoline Range Organics	ND	1.0	0.20							
Surrogate: 4-Bromofluorobenzene	*0.2086*			*0.200000*		*104*	*45 - 149*			
LCS (B9H0212-BS1)						Prepared: 8/9/2019 Analyzed: 8/9/2019				
Gasoline Range Organics	4.54000	1.0	0.20	5.00000		90.8	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.2079*			*0.200000*		*104*	*45 - 149*			
Matrix Spike (B9H0212-MS1)			**Source: 1902982-04**			Prepared: 8/9/2019 Analyzed: 8/9/2019				
Gasoline Range Organics	4.82200	1.0	0.20	5.00000	ND	96.4	24 - 129			
Surrogate: 4-Bromofluorobenzene	*0.2295*			*0.200000*		*115*	*45 - 149*			
Matrix Spike Dup (B9H0212-MSD1)			**Source: 1902982-04**			Prepared: 8/9/2019 Analyzed: 8/9/2019				
Gasoline Range Organics	4.05300	1.0	0.20	5.00000	ND	81.1	24 - 129	17.3	20	
Surrogate: 4-Bromofluorobenzene	*0.2264*			*0.200000*		*113*	*45 - 149*			

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Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0229 - GCSEMI_DRO_S										
Blank (B9H0229-BLK1)						Prepared: 8/11/2019 Analyzed: 8/12/2019				
DRO	ND	10	10							
ORO	ND	10	10							
Surrogate: p-Terphenyl	*89.31*			*80.0000*		*112*	*58 - 172*			
LCS (B9H0229-BS1)						Prepared: 8/11/2019 Analyzed: 8/12/2019				
DRO	891.860	10	10	1000.00		89.2	71 - 165			
Surrogate: p-Terphenyl	*91.68*			*80.0000*		*115*	*58 - 172*			
Matrix Spike (B9H0229-MS1)			**Source: 1902993-08**			Prepared: 8/11/2019 Analyzed: 8/12/2019				
DRO	977.660	10	10	1000.00	ND	97.8	61 - 171			
Surrogate: p-Terphenyl	*90.63*			*80.0000*		*113*	*58 - 172*			
Matrix Spike Dup (B9H0229-MSD1)			**Source: 1902993-08**			Prepared: 8/11/2019 Analyzed: 8/12/2019				
DRO	1085.27	10	10	1000.00	ND	109	61 - 171	10.4	20	
Surrogate: p-Terphenyl	*101.7*			*80.0000*		*127*	*58 - 172*			

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Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0230 - GCSEMI_PCB/PEST_S										
Blank (B9H0230-BLK1)						Prepared: 8/11/2019 Analyzed: 8/11/2019				
Aroclor 1016	ND	16	4.6							
Aroclor 1221	ND	16	4.6							
Aroclor 1232	ND	16	4.6							
Aroclor 1242	ND	16	4.6							
Aroclor 1248	ND	16	4.6							
Aroclor 1254	ND	16	4.6							
Aroclor 1260	ND	16	4.6							
Aroclor 1262	ND	16	4.6							
Aroclor 1268	ND	16	4.6							
Surrogate: Decachlorobiphenyl	*17.37*			*16.6667*		*104*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*16.58*			*16.6667*		*99.5*	*55 - 105*			
LCS (B9H0230-BS1)						Prepared: 8/11/2019 Analyzed: 8/11/2019				
Aroclor 1016	149.340	16	4.6	166.667		89.6	51 - 100			
Aroclor 1260	186.064	16	4.6	166.667		112	48 - 116			
Surrogate: Decachlorobiphenyl	*17.86*			*16.6667*		*107*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*16.75*			*16.6667*		*100*	*55 - 105*			
Matrix Spike (B9H0230-MS1)			**Source: 1902993-08**			Prepared: 8/11/2019 Analyzed: 8/12/2019				
Aroclor 1016	151.743	16	4.6	166.667	ND	91.0	36 - 109			
Aroclor 1260	185.193	16	4.6	166.667	ND	111	30 - 123			
Surrogate: Decachlorobiphenyl	*17.29*			*16.6667*		*104*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*16.37*			*16.6667*		*98.2*	*55 - 105*			
Matrix Spike Dup (B9H0230-MSD1)			**Source: 1902993-08**			Prepared: 8/11/2019 Analyzed: 8/12/2019				
Aroclor 1016	149.629	16	4.6	166.667	ND	89.8	36 - 109	1.40	20	
Aroclor 1260	184.718	16	4.6	166.667	ND	111	30 - 123	0.257	20	
Surrogate: Decachlorobiphenyl	*17.21*			*16.6667*		*103*	*40 - 121*			
Surrogate: Tetrachloro-m-xylene	*16.33*			*16.6667*		*98.0*	*55 - 105*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S										
Blank (B9H0197-BLK1)					Prepared: 8/9/2019 Analyzed: 8/9/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.96							
1,1,1-Trichloroethane	ND	5.0	1.1							
1,1,2,2-Tetrachloroethane	ND	5.0	0.62							
1,1,2-Trichloroethane	ND	5.0	1.6							
1,1-Dichloroethane	ND	5.0	0.81							
1,1-Dichloroethene	ND	5.0	2.6							
1,1-Dichloropropene	ND	5.0	2.3							
1,2,3-Trichloropropane	ND	5.0	0.54							
1,2,3-Trichlorobenzene	ND	5.0	1.2							
1,2,4-Trichlorobenzene	ND	5.0	1.1							
1,2,4-Trimethylbenzene	ND	5.0	1.5							
1,2-Dibromo-3-chloropropane	ND	10	1.6							
1,2-Dibromoethane	ND	5.0	3.2							
1,2-Dichlorobenzene	ND	5.0	1.1							
1,2-Dichloroethane	ND	5.0	1.2							
1,2-Dichloropropane	ND	5.0	1.8							
1,3,5-Trimethylbenzene	ND	5.0	1.7							
1,3-Dichlorobenzene	ND	5.0	1.3							
1,3-Dichloropropane	ND	5.0	1.1							
1,4-Dichlorobenzene	ND	5.0	1.2							
2,2-Dichloropropane	ND	5.0	1.2							
2-Chlorotoluene	ND	5.0	1.6							
4-Chlorotoluene	ND	5.0	1.5							
4-Isopropyltoluene	ND	5.0	2.3							
Benzene	ND	5.0	0.64							
Bromobenzene	ND	5.0	1.1							
Bromochloromethane	ND	5.0	0.64							
Bromodichloromethane	ND	5.0	1.2							
Bromoform	ND	5.0	0.80							
Bromomethane	ND	5.0	2.5							
Carbon disulfide	ND	5.0	3.5							
Carbon tetrachloride	ND	5.0	1.2							
Chlorobenzene	ND	5.0	1.0							
Chloroethane	ND	5.0	1.1							
Chloroform	ND	5.0	0.82							
Chloromethane	ND	5.0	1.4							
cis-1,2-Dichloroethene	ND	5.0	0.67							
cis-1,3-Dichloropropene	ND	5.0	1.9							
Di-isopropyl ether	ND	5.0	0.55							
Dibromochloromethane	ND	5.0	1.0							
Dibromomethane	ND	5.0	1.6							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)										
Blank (B9H0197-BLK1) - Continued					Prepared: 8/9/2019 Analyzed: 8/9/2019					
Dichlorodifluoromethane	ND	5.0	2.2							
Ethyl Acetate	ND	50	8.1							
Ethyl Ether	ND	50	6.1							
Ethyl tert-butyl ether	ND	5.0	0.67							
Ethylbenzene	ND	5.0	0.91							
Freon-113	ND	5.0	2.8							
Hexachlorobutadiene	ND	5.0	2.5							
Isopropylbenzene	ND	5.0	1.8							
m,p-Xylene	ND	10	1.5							
Methylene chloride	ND	5.0	2.3							
MTBE	ND	5.0	0.63							
n-Butylbenzene	ND	5.0	2.4							
n-Propylbenzene	ND	5.0	2.2							
Naphthalene	ND	5.0	0.97							
o-Xylene	ND	5.0	0.87							
sec-Butylbenzene	ND	5.0	2.3							
Styrene	ND	5.0	1.5							
tert-Amyl methyl ether	ND	5.0	0.59							
tert-Butanol	ND	100	19							
tert-Butylbenzene	ND	5.0	2.0							
Tetrachloroethene	ND	5.0	1.6							
Toluene	ND	5.0	0.94							
trans-1,2-Dichloroethene	ND	5.0	0.59							
trans-1,3-Dichloropropene	ND	5.0	2.1							
Trichloroethene	ND	5.0	3.1							
Trichlorofluoromethane	ND	5.0	1.4							
Vinyl acetate	ND	50	9.8							
Vinyl chloride	ND	5.0	1.7							
Surrogate: 1,2-Dichloroethane-d4	*46.59*			*50.0000*		*93.2*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*43.26*			*50.0000*		*86.5*	*68 - 121*			
Surrogate: Dibromofluoromethan	*49.30*			*50.0000*		*98.6*	*65 - 137*			
Surrogate: Toluene-d8	*46.12*			*50.0000*		*92.2*	*82 - 119*			
LCS (B9H0197-BS1)					Prepared: 8/9/2019 Analyzed: 8/9/2019					
1,1,1,2-Tetrachloroethane	53.2300	5.0	0.96	50.0000		106	82 - 114			
1,1,1-Trichloroethane	53.5700	5.0	1.1	50.0000		107	70 - 121			
1,1,2,2-Tetrachloroethane	45.7800	5.0	0.62	50.0000		91.6	65 - 116			
1,1,2-Trichloroethane	47.6200	5.0	1.6	50.0000		95.2	73 - 114			
1,1-Dichloroethane	48.8800	5.0	0.81	50.0000		97.8	69 - 117			
1,1-Dichloroethene	46.3600	5.0	2.6	50.0000		92.7	57 - 128			
1,1-Dichloropropene	58.4800	5.0	2.3	50.0000		117	76 - 122			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)										
LCS (B9H0197-BS1) - Continued					Prepared: 8/9/2019 Analyzed: 8/9/2019					
1,2,3-Trichloropropane	46.5800	5.0	0.54	50.0000		93.2	65 - 116			
1,2,3-Trichlorobenzene	54.7800	5.0	1.2	50.0000		110	72 - 130			
1,2,4-Trichlorobenzene	58.3600	5.0	1.1	50.0000		117	74 - 141			
1,2,4-Trimethylbenzene	54.5600	5.0	1.5	50.0000		109	81 - 126			
1,2-Dibromo-3-chloropropane	45.1700	10	1.6	50.0000		90.3	63 - 126			
1,2-Dibromoethane	47.7300	5.0	3.2	50.0000		95.5	75 - 113			
1,2-Dichlorobenzene	52.6700	5.0	1.1	50.0000		105	83 - 114			
1,2-Dichloroethane	47.5000	5.0	1.2	50.0000		95.0	73 - 115			
1,2-Dichloropropane	50.7400	5.0	1.8	50.0000		101	75 - 117			
1,3,5-Trimethylbenzene	55.9600	5.0	1.7	50.0000		112	80 - 126			
1,3-Dichlorobenzene	53.1700	5.0	1.3	50.0000		106	83 - 113			
1,3-Dichloropropane	50.2200	5.0	1.1	50.0000		100	79 - 108			
1,4-Dichlorobenzene	52.4700	5.0	1.2	50.0000		105	82 - 114			
2,2-Dichloropropane	53.7600	5.0	1.2	50.0000		108	66 - 135			
2-Chlorotoluene	53.0400	5.0	1.6	50.0000		106	79 - 117			
4-Chlorotoluene	53.3800	5.0	1.5	50.0000		107	77 - 118			
4-Isopropyltoluene	59.3200	5.0	2.3	50.0000		119	81 - 129			
Benzene	100.520	5.0	0.64	100.000		101	78 - 112			
Bromobenzene	51.9800	5.0	1.1	50.0000		104	79 - 111			
Bromochloromethane	47.3500	5.0	0.64	50.0000		94.7	69 - 116			
Bromodichloromethane	49.2100	5.0	1.2	50.0000		98.4	79 - 111			
Bromoform	47.8600	5.0	0.80	50.0000		95.7	75 - 119			
Bromomethane	61.6500	5.0	2.5	50.0000		123	31 - 168			
Carbon disulfide	43.8000	5.0	3.5	50.0000		87.6	54 - 141			
Carbon tetrachloride	55.7300	5.0	1.2	50.0000		111	74 - 125			
Chlorobenzene	52.8100	5.0	1.0	50.0000		106	83 - 112			
Chloroethane	57.9200	5.0	1.1	50.0000		116	53 - 144			
Chloroform	48.9500	5.0	0.82	50.0000		97.9	69 - 118			
Chloromethane	44.2700	5.0	1.4	50.0000		88.5	46 - 137			
cis-1,2-Dichloroethene	49.4800	5.0	0.67	50.0000		99.0	68 - 118			
cis-1,3-Dichloropropene	57.6300	5.0	1.9	50.0000		115	77 - 121			
Di-isopropyl ether	46.6100	5.0	0.55	50.0000		93.2	60 - 129			
Dibromochloromethane	50.6600	5.0	1.0	50.0000		101	80 - 111			
Dibromomethane	48.3400	5.0	1.6	50.0000		96.7	78 - 108			
Dichlorodifluoromethane	43.2600	5.0	2.2	50.0000		86.5	41 - 146			
Ethyl Acetate	370.160	50	8.1	500.000		74.0	52 - 130			
Ethyl Ether	375.520	50	6.1	500.000		75.1	54 - 138			
Ethyl tert-butyl ether	42.9800	5.0	0.67	50.0000		86.0	52 - 141			
Ethylbenzene	106.810	5.0	0.91	100.000		107	82 - 121			
Freon-113	51.3100	5.0	2.8	50.0000		103	59 - 139			
Hexachlorobutadiene	60.6600	5.0	2.5	50.0000		121	69 - 143			
Isopropylbenzene	61.2500	5.0	1.8	50.0000		122	78 - 124			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)										
LCS (B9H0197-BS1) - Continued					Prepared: 8/9/2019 Analyzed: 8/9/2019					
m,p-Xylene	111.240	10	1.5	100.000		111	85 - 118			
Methylene chloride	42.2700	5.0	2.3	50.0000		84.5	44 - 146			
MTBE	41.8900	5.0	0.63	50.0000		83.8	61 - 122			
n-Butylbenzene	59.3800	5.0	2.4	50.0000		119	78 - 135			
n-Propylbenzene	55.9600	5.0	2.2	50.0000		112	78 - 127			
Naphthalene	48.6900	5.0	0.97	50.0000		97.4	68 - 129			
o-Xylene	112.370	5.0	0.87	100.000		112	86 - 118			
sec-Butylbenzene	57.3600	5.0	2.3	50.0000		115	80 - 127			
Styrene	57.5400	5.0	1.5	50.0000		115	85 - 117			
tert-Amyl methyl ether	40.6900	5.0	0.59	50.0000		81.4	48 - 135			
tert-Butanol	ND	100	19	250.000		NR	0 - 175			
tert-Butylbenzene	58.3800	5.0	2.0	50.0000		117	81 - 122			
Tetrachloroethene	57.5900	5.0	1.6	50.0000		115	77 - 122			
Toluene	105.250	5.0	0.94	100.000		105	79 - 114			
trans-1,2-Dichloroethene	43.5000	5.0	0.59	50.0000		87.0	66 - 125			
trans-1,3-Dichloropropene	49.5600	5.0	2.1	50.0000		99.1	76 - 120			
Trichloroethene	55.2200	5.0	3.1	50.0000		110	79 - 117			
Trichlorofluoromethane	48.9600	5.0	1.4	50.0000		97.9	55 - 133			
Vinyl acetate	466.430	50	9.8	500.000		93.3	52 - 141			
Vinyl chloride	47.2000	5.0	1.7	50.0000		94.4	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*43.04*			*50.0000*		*86.1*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*49.19*			*50.0000*		*98.4*	*68 - 121*			
Surrogate: Dibromofluoromethan	*45.93*			*50.0000*		*91.9*	*65 - 137*			
Surrogate: Toluene-d8	*48.02*			*50.0000*		*96.0*	*82 - 119*			
LCS Dup (B9H0197-BSD1)					Prepared: 8/9/2019 Analyzed: 8/9/2019					
1,1,1,2-Tetrachloroethane	49.5800	5.0	0.96	50.0000		99.2	82 - 114	7.10	20	
1,1,1-Trichloroethane	49.0800	5.0	1.1	50.0000		98.2	70 - 121	8.75	20	
1,1,2,2-Tetrachloroethane	43.7600	5.0	0.62	50.0000		87.5	65 - 116	4.51	20	
1,1,2-Trichloroethane	46.2500	5.0	1.6	50.0000		92.5	73 - 114	2.92	20	
1,1-Dichloroethane	46.0800	5.0	0.81	50.0000		92.2	69 - 117	5.90	20	
1,1-Dichloroethene	43.9100	5.0	2.6	50.0000		87.8	57 - 128	5.43	20	
1,1-Dichloropropene	52.1900	5.0	2.3	50.0000		104	76 - 122	11.4	20	
1,2,3-Trichloropropane	44.1400	5.0	0.54	50.0000		88.3	65 - 116	5.38	20	
1,2,3-Trichlorobenzene	50.6300	5.0	1.2	50.0000		101	72 - 130	7.87	20	
1,2,4-Trichlorobenzene	53.6800	5.0	1.1	50.0000		107	74 - 141	8.35	20	
1,2,4-Trimethylbenzene	50.4700	5.0	1.5	50.0000		101	81 - 126	7.79	20	
1,2-Dibromo-3-chloropropane	45.6200	10	1.6	50.0000		91.2	63 - 126	0.991	20	
1,2-Dibromoethane	47.0000	5.0	3.2	50.0000		94.0	75 - 113	1.54	20	
1,2-Dichlorobenzene	49.1200	5.0	1.1	50.0000		98.2	83 - 114	6.98	20	
1,2-Dichloroethane	45.3500	5.0	1.2	50.0000		90.7	73 - 115	4.63	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)										
LCS Dup (B9H0197-BSD1) - Continued					Prepared: 8/9/2019 Analyzed: 8/9/2019					
1,2-Dichloropropane	47.7200	5.0	1.8	50.0000		95.4	75 - 117	6.13	20	
1,3,5-Trimethylbenzene	51.0300	5.0	1.7	50.0000		102	80 - 126	9.22	20	
1,3-Dichlorobenzene	49.4100	5.0	1.3	50.0000		98.8	83 - 113	7.33	20	
1,3-Dichloropropane	46.8300	5.0	1.1	50.0000		93.7	79 - 108	6.99	20	
1,4-Dichlorobenzene	48.9200	5.0	1.2	50.0000		97.8	82 - 114	7.00	20	
2,2-Dichloropropane	50.4300	5.0	1.2	50.0000		101	66 - 135	6.39	20	
2-Chlorotoluene	49.1200	5.0	1.6	50.0000		98.2	79 - 117	7.67	20	
4-Chlorotoluene	49.0100	5.0	1.5	50.0000		98.0	77 - 118	8.54	20	
4-Isopropyltoluene	52.9500	5.0	2.3	50.0000		106	81 - 129	11.3	20	
Benzene	92.8400	5.0	0.64	100.000		92.8	78 - 112	7.94	20	
Bromobenzene	48.3000	5.0	1.1	50.0000		96.6	79 - 111	7.34	20	
Bromochloromethane	44.7700	5.0	0.64	50.0000		89.5	69 - 116	5.60	20	
Bromodichloromethane	46.5600	5.0	1.2	50.0000		93.1	79 - 111	5.53	20	
Bromoform	46.6200	5.0	0.80	50.0000		93.2	75 - 119	2.62	20	
Bromomethane	57.8400	5.0	2.5	50.0000		116	31 - 168	6.38	20	
Carbon disulfide	40.4100	5.0	3.5	50.0000		80.8	54 - 141	8.05	20	
Carbon tetrachloride	49.8700	5.0	1.2	50.0000		99.7	74 - 125	11.1	20	
Chlorobenzene	49.0100	5.0	1.0	50.0000		98.0	83 - 112	7.46	20	
Chloroethane	52.9400	5.0	1.1	50.0000		106	53 - 144	8.98	20	
Chloroform	46.4000	5.0	0.82	50.0000		92.8	69 - 118	5.35	20	
Chloromethane	40.5900	5.0	1.4	50.0000		81.2	46 - 137	8.67	20	
cis-1,2-Dichloroethene	46.8200	5.0	0.67	50.0000		93.6	68 - 118	5.52	20	
cis-1,3-Dichloropropene	55.5800	5.0	1.9	50.0000		111	77 - 121	3.62	20	
Di-isopropyl ether	44.0400	5.0	0.55	50.0000		88.1	60 - 129	5.67	20	
Dibromochloromethane	48.5600	5.0	1.0	50.0000		97.1	80 - 111	4.23	20	
Dibromomethane	46.6900	5.0	1.6	50.0000		93.4	78 - 108	3.47	20	
Dichlorodifluoromethane	39.4000	5.0	2.2	50.0000		78.8	41 - 146	9.34	20	
Ethyl Acetate	366.050	50	8.1	500.000		73.2	52 - 130	1.12	20	
Ethyl Ether	363.550	50	6.1	500.000		72.7	54 - 138	3.24	20	
Ethyl tert-butyl ether	43.8900	5.0	0.67	50.0000		87.8	52 - 141	2.10	20	
Ethylbenzene	97.1700	5.0	0.91	100.000		97.2	82 - 121	9.45	20	
Freon-113	46.5900	5.0	2.8	50.0000		93.2	59 - 139	9.64	20	
Hexachlorobutadiene	53.7000	5.0	2.5	50.0000		107	69 - 143	12.2	20	
Isopropylbenzene	55.0000	5.0	1.8	50.0000		110	78 - 124	10.8	20	
m,p-Xylene	101.890	10	1.5	100.000		102	85 - 118	8.77	20	
Methylene chloride	39.4000	5.0	2.3	50.0000		78.8	44 - 146	7.03	20	
MTBE	41.5000	5.0	0.63	50.0000		83.0	61 - 122	0.935	20	
n-Butylbenzene	52.6300	5.0	2.4	50.0000		105	78 - 135	12.1	20	
n-Propylbenzene	50.5600	5.0	2.2	50.0000		101	78 - 127	10.1	20	
Naphthalene	46.9600	5.0	0.97	50.0000		93.9	68 - 129	3.62	20	
o-Xylene	104.420	5.0	0.87	100.000		104	86 - 118	7.33	20	
sec-Butylbenzene	51.5900	5.0	2.3	50.0000		103	80 - 127	10.6	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)										
LCS Dup (B9H0197-BSD1) - Continued					Prepared: 8/9/2019 Analyzed: 8/9/2019					
Styrene	53.0200	5.0	1.5	50.0000		106	85 - 117	8.18	20	
tert-Amyl methyl ether	43.8500	5.0	0.59	50.0000		87.7	48 - 135	7.48	20	
tert-Butanol	ND	100	19	250.000		NR	0 - 175		20	
tert-Butylbenzene	52.6400	5.0	2.0	50.0000		105	81 - 122	10.3	20	
Tetrachloroethene	52.0300	5.0	1.6	50.0000		104	77 - 122	10.1	20	
Toluene	96.2000	5.0	0.94	100.000		96.2	79 - 114	8.98	20	
trans-1,2-Dichloroethene	38.9300	5.0	0.59	50.0000		77.9	66 - 125	11.1	20	
trans-1,3-Dichloropropene	47.5400	5.0	2.1	50.0000		95.1	76 - 120	4.16	20	
Trichloroethene	50.1200	5.0	3.1	50.0000		100	79 - 117	9.68	20	
Trichlorofluoromethane	43.8800	5.0	1.4	50.0000		87.8	55 - 133	10.9	20	
Vinyl acetate	451.850	50	9.8	500.000		90.4	52 - 141	3.18	20	
Vinyl chloride	42.1800	5.0	1.7	50.0000		84.4	58 - 132	11.2	20	
Surrogate: 1,2-Dichloroethane-d4	*42.39*			*50.0000*		*84.8*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*47.96*			*50.0000*		*95.9*	*68 - 121*			
Surrogate: Dibromofluoromethan	*45.47*			*50.0000*		*90.9*	*65 - 137*			
Surrogate: Toluene-d8	*47.48*			*50.0000*		*95.0*	*82 - 119*			
Matrix Spike (B9H0197-MS1)				**Source: 1902966-03**	Prepared: 8/9/2019 Analyzed: 8/9/2019					
1,1,1,2-Tetrachloroethane	46.9000	5.0	0.96	50.0000	ND	93.8	45 - 121			
1,1,1-Trichloroethane	47.6500	5.0	1.1	50.0000	ND	95.3	43 - 127			
1,1,2,2-Tetrachloroethane	41.1900	5.0	0.62	50.0000	ND	82.4	32 - 128			
1,1,2-Trichloroethane	44.7300	5.0	1.6	50.0000	ND	89.5	45 - 121			
1,1-Dichloroethane	44.5700	5.0	0.81	50.0000	ND	89.1	46 - 119			
1,1-Dichloroethene	43.8600	5.0	2.6	50.0000	ND	87.7	40 - 130			
1,1-Dichloropropene	51.2000	5.0	2.3	50.0000	ND	102	45 - 130			
1,2,3-Trichloropropane	42.3700	5.0	0.54	50.0000	ND	84.7	42 - 124			
1,2,3-Trichlorobenzene	46.9200	5.0	1.2	50.0000	ND	93.8	4 - 135			
1,2,4-Trichlorobenzene	49.0800	5.0	1.1	50.0000	ND	98.2	8 - 141			
1,2,4-Trimethylbenzene	46.6400	5.0	1.5	50.0000	ND	93.3	30 - 136			
1,2-Dibromo-3-chloropropane	45.7400	10	1.6	50.0000	ND	91.5	38 - 132			
1,2-Dibromoethane	46.2700	5.0	3.2	50.0000	ND	92.5	45 - 121			
1,2-Dichlorobenzene	46.3000	5.0	1.1	50.0000	ND	92.6	30 - 125			
1,2-Dichloroethane	44.5100	5.0	1.2	50.0000	ND	89.0	51 - 115			
1,2-Dichloropropane	44.0300	5.0	1.8	50.0000	ND	88.1	50 - 118			
1,3,5-Trimethylbenzene	46.9100	5.0	1.7	50.0000	ND	93.8	29 - 137			
1,3-Dichlorobenzene	45.9000	5.0	1.3	50.0000	ND	91.8	30 - 124			
1,3-Dichloropropane	45.8200	5.0	1.1	50.0000	ND	91.6	49 - 116			
1,4-Dichlorobenzene	45.5400	5.0	1.2	50.0000	ND	91.1	31 - 124			
2,2-Dichloropropane	47.9500	5.0	1.2	50.0000	ND	95.9	41 - 134			
2-Chlorotoluene	45.3000	5.0	1.6	50.0000	ND	90.6	32 - 127			
4-Chlorotoluene	45.9900	5.0	1.5	50.0000	ND	92.0	34 - 124			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)										
Matrix Spike (B9H0197-MS1) - Continued			**Source: 1902966-03**		Prepared: 8/9/2019 Analyzed: 8/9/2019					
4-Isopropyltoluene	49.4600	5.0	2.3	50.0000	ND	98.9	26 - 141			
Benzene	88.8800	5.0	0.64	100.000	ND	88.9	48 - 117			
Bromobenzene	45.5500	5.0	1.1	50.0000	ND	91.1	40 - 117			
Bromochloromethane	44.4300	5.0	0.64	50.0000	ND	88.9	48 - 117			
Bromodichloromethane	45.3000	5.0	1.2	50.0000	ND	90.6	49 - 115			
Bromoform	45.8100	5.0	0.80	50.0000	ND	91.6	42 - 127			
Bromomethane	61.5800	5.0	2.5	50.0000	ND	123	19 - 157			
Carbon disulfide	40.5400	5.0	3.5	50.0000	ND	81.1	34 - 138			
Carbon tetrachloride	48.9300	5.0	1.2	50.0000	ND	97.9	43 - 130			
Chlorobenzene	46.7900	5.0	1.0	50.0000	ND	93.6	41 - 122			
Chloroethane	46.6400	5.0	1.1	50.0000	ND	93.3	32 - 145			
Chloroform	44.8400	5.0	0.82	50.0000	ND	89.7	46 - 118			
Chloromethane	38.8100	5.0	1.4	50.0000	ND	77.6	34 - 132			
cis-1,2-Dichloroethene	46.3200	5.0	0.67	50.0000	ND	92.6	44 - 119			
cis-1,3-Dichloropropene	52.7300	5.0	1.9	50.0000	ND	105	44 - 126			
Di-isopropyl ether	43.2200	5.0	0.55	50.0000	ND	86.4	42 - 126			
Dibromochloromethane	46.5500	5.0	1.0	50.0000	ND	93.1	46 - 119			
Dibromomethane	45.2500	5.0	1.6	50.0000	ND	90.5	52 - 114			
Dichlorodifluoromethane	39.4100	5.0	2.2	50.0000	ND	78.8	22 - 147			
Ethyl Acetate	374.500	50	8.1	500.000	ND	74.9	9 - 140			
Ethyl Ether	390.330	50	6.1	500.000	ND	78.1	45 - 131			
Ethyl tert-butyl ether	40.5700	5.0	0.67	50.0000	ND	81.1	33 - 138			
Ethylbenzene	92.6600	5.0	0.91	100.000	ND	92.7	38 - 131			
Freon-113	46.9100	5.0	2.8	50.0000	ND	93.8	38 - 140			
Hexachlorobutadiene	50.0000	5.0	2.5	50.0000	ND	100	4 - 141			
Isopropylbenzene	51.5100	5.0	1.8	50.0000	ND	103	35 - 133			
m,p-Xylene	97.4700	10	1.5	100.000	ND	97.5	38 - 130			
Methylene chloride	39.9600	5.0	2.3	50.0000	ND	79.9	26 - 137			
MTBE	39.5800	5.0	0.63	50.0000	ND	79.2	45 - 121			
n-Butylbenzene	49.3700	5.0	2.4	50.0000	ND	98.7	18 - 144			
n-Propylbenzene	47.0900	5.0	2.2	50.0000	ND	94.2	30 - 137			
Naphthalene	43.8300	5.0	0.97	50.0000	ND	87.7	14 - 137			
o-Xylene	97.4800	5.0	0.87	100.000	ND	97.5	41 - 129			
sec-Butylbenzene	48.6800	5.0	2.3	50.0000	ND	97.4	24 - 140			
Styrene	50.0100	5.0	1.5	50.0000	ND	100	41 - 125			
tert-Amyl methyl ether	39.6800	5.0	0.59	50.0000	ND	79.4	31 - 133			
tert-Butanol	101.780	100	19	250.000	ND	40.7	0 - 201			
tert-Butylbenzene	48.9000	5.0	2.0	50.0000	ND	97.8	30 - 134			
Tetrachloroethene	50.0500	5.0	1.6	50.0000	ND	100	37 - 130			
Toluene	91.9900	5.0	0.94	100.000	ND	92.0	45 - 122			
trans-1,2-Dichloroethene	43.6300	5.0	0.59	50.0000	ND	87.3	46 - 122			
trans-1,3-Dichloropropene	46.3700	5.0	2.1	50.0000	ND	92.7	44 - 124			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)										
Matrix Spike (B9H0197-MS1) - Continued			**Source: 1902966-03**		Prepared: 8/9/2019 Analyzed: 8/9/2019					
Trichloroethene	49.7200	5.0	3.1	50.0000	ND	99.4	36 - 142			
Trichlorofluoromethane	42.9900	5.0	1.4	50.0000	ND	86.0	37 - 135			
Vinyl acetate	377.910	50	9.8	500.000	ND	75.6	0 - 136			
Vinyl chloride	41.2100	5.0	1.7	50.0000	ND	82.4	42 - 131			
Surrogate: 1,2-Dichloroethane-d4	*45.90*			*50.0000*		*91.8*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*49.05*			*50.0000*		*98.1*	*68 - 121*			
Surrogate: Dibromofluoromethan	*47.72*			*50.0000*		*95.4*	*65 - 137*			
Surrogate: Toluene-d8	*48.30*			*50.0000*		*96.6*	*82 - 119*			
Matrix Spike Dup (B9H0197-MSD1)			**Source: 1902966-03**		Prepared: 8/9/2019 Analyzed: 8/9/2019					
1,1,1,2-Tetrachloroethane	48.7700	5.0	0.96	50.0000	ND	97.5	45 - 121	3.91	20	
1,1,1-Trichloroethane	51.7000	5.0	1.1	50.0000	ND	103	43 - 127	8.15	20	
1,1,2,2-Tetrachloroethane	41.2200	5.0	0.62	50.0000	ND	82.4	32 - 128	0.0728	20	
1,1,2-Trichloroethane	46.7000	5.0	1.6	50.0000	ND	93.4	45 - 121	4.31	20	
1,1-Dichloroethane	48.3000	5.0	0.81	50.0000	ND	96.6	46 - 119	8.03	20	
1,1-Dichloroethene	47.2500	5.0	2.6	50.0000	ND	94.5	40 - 130	7.44	20	
1,1-Dichloropropene	51.5500	5.0	2.3	50.0000	ND	103	45 - 130	0.681	20	
1,2,3-Trichloropropane	45.0600	5.0	0.54	50.0000	ND	90.1	42 - 124	6.15	20	
1,2,3-Trichlorobenzene	49.3800	5.0	1.2	50.0000	ND	98.8	4 - 135	5.11	20	
1,2,4-Trichlorobenzene	52.1200	5.0	1.1	50.0000	ND	104	8 - 141	6.01	20	
1,2,4-Trimethylbenzene	48.1600	5.0	1.5	50.0000	ND	96.3	30 - 136	3.21	20	
1,2-Dibromo-3-chloropropane	53.5000	10	1.6	50.0000	ND	107	38 - 132	15.6	20	
1,2-Dibromoethane	48.0500	5.0	3.2	50.0000	ND	96.1	45 - 121	3.77	20	
1,2-Dichlorobenzene	47.8900	5.0	1.1	50.0000	ND	95.8	30 - 125	3.38	20	
1,2-Dichloroethane	45.5800	5.0	1.2	50.0000	ND	91.2	51 - 115	2.38	20	
1,2-Dichloropropane	46.6600	5.0	1.8	50.0000	ND	93.3	50 - 118	5.80	20	
1,3,5-Trimethylbenzene	49.2200	5.0	1.7	50.0000	ND	98.4	29 - 137	4.81	20	
1,3-Dichlorobenzene	47.1700	5.0	1.3	50.0000	ND	94.3	30 - 124	2.73	20	
1,3-Dichloropropane	47.3700	5.0	1.1	50.0000	ND	94.7	49 - 116	3.33	20	
1,4-Dichlorobenzene	47.1000	5.0	1.2	50.0000	ND	94.2	31 - 124	3.37	20	
2,2-Dichloropropane	52.1400	5.0	1.2	50.0000	ND	104	41 - 134	8.37	20	
2-Chlorotoluene	46.9200	5.0	1.6	50.0000	ND	93.8	32 - 127	3.51	20	
4-Chlorotoluene	47.2900	5.0	1.5	50.0000	ND	94.6	34 - 124	2.79	20	
4-Isopropyltoluene	51.4500	5.0	2.3	50.0000	ND	103	26 - 141	3.94	20	
Benzene	91.7300	5.0	0.64	100.000	ND	91.7	48 - 117	3.16	20	
Bromobenzene	46.9900	5.0	1.1	50.0000	ND	94.0	40 - 117	3.11	20	
Bromochloromethane	46.9600	5.0	0.64	50.0000	ND	93.9	48 - 117	5.54	20	
Bromodichloromethane	45.7600	5.0	1.2	50.0000	ND	91.5	49 - 115	1.01	20	
Bromoform	46.4300	5.0	0.80	50.0000	ND	92.9	42 - 127	1.34	20	
Bromomethane	56.3200	5.0	2.5	50.0000	ND	113	19 - 157	8.92	20	
Carbon disulfide	42.9800	5.0	3.5	50.0000	ND	86.0	34 - 138	5.84	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)										
Matrix Spike Dup (B9H0197-MSD1) - Continued			**Source: 1902966-03**		Prepared: 8/9/2019 Analyzed: 8/9/2019					
Carbon tetrachloride	51.1500	5.0	1.2	50.0000	ND	102	43 - 130	4.44	20	
Chlorobenzene	47.6900	5.0	1.0	50.0000	ND	95.4	41 - 122	1.91	20	
Chloroethane	38.1300	5.0	1.1	50.0000	ND	76.3	32 - 145	20.1	20	R
Chloroform	47.6700	5.0	0.82	50.0000	ND	95.3	46 - 118	6.12	20	
Chloromethane	41.6900	5.0	1.4	50.0000	ND	83.4	34 - 132	7.16	20	
cis-1,2-Dichloroethene	47.9000	5.0	0.67	50.0000	ND	95.8	44 - 119	3.35	20	
cis-1,3-Dichloropropene	55.0600	5.0	1.9	50.0000	ND	110	44 - 126	4.32	20	
Di-isopropyl ether	46.6500	5.0	0.55	50.0000	ND	93.3	42 - 126	7.63	20	
Dibromochloromethane	47.5000	5.0	1.0	50.0000	ND	95.0	46 - 119	2.02	20	
Dibromomethane	46.7400	5.0	1.6	50.0000	ND	93.5	52 - 114	3.24	20	
Dichlorodifluoromethane	42.9400	5.0	2.2	50.0000	ND	85.9	22 - 147	8.57	20	
Ethyl Acetate	409.360	50	8.1	500.000	ND	81.9	9 - 140	8.89	20	
Ethyl Ether	428.670	50	6.1	500.000	ND	85.7	45 - 131	9.36	20	
Ethyl tert-butyl ether	43.4500	5.0	0.67	50.0000	ND	86.9	33 - 138	6.86	20	
Ethylbenzene	94.9400	5.0	0.91	100.000	ND	94.9	38 - 131	2.43	20	
Freon-113	49.3500	5.0	2.8	50.0000	ND	98.7	38 - 140	5.07	20	
Hexachlorobutadiene	51.6900	5.0	2.5	50.0000	ND	103	4 - 141	3.32	20	
Isopropylbenzene	53.7100	5.0	1.8	50.0000	ND	107	35 - 133	4.18	20	
m,p-Xylene	98.9600	10	1.5	100.000	ND	99.0	38 - 130	1.52	20	
Methylene chloride	45.7100	5.0	2.3	50.0000	ND	91.4	26 - 137	13.4	20	
MTBE	43.0000	5.0	0.63	50.0000	ND	86.0	45 - 121	8.28	20	
n-Butylbenzene	51.8900	5.0	2.4	50.0000	ND	104	18 - 144	4.98	20	
n-Propylbenzene	49.0500	5.0	2.2	50.0000	ND	98.1	30 - 137	4.08	20	
Naphthalene	48.8700	5.0	0.97	50.0000	ND	97.7	14 - 137	10.9	20	
o-Xylene	100.660	5.0	0.87	100.000	ND	101	41 - 129	3.21	20	
sec-Butylbenzene	50.7200	5.0	2.3	50.0000	ND	101	24 - 140	4.10	20	
Styrene	51.1400	5.0	1.5	50.0000	ND	102	41 - 125	2.23	20	
tert-Amyl methyl ether	42.8000	5.0	0.59	50.0000	ND	85.6	31 - 133	7.57	20	
tert-Butanol	379.090	100	19	250.000	ND	152	0 - 201	115	20	R
tert-Butylbenzene	51.3300	5.0	2.0	50.0000	ND	103	30 - 134	4.85	20	
Tetrachloroethene	52.1000	5.0	1.6	50.0000	ND	104	37 - 130	4.01	20	
Toluene	95.7700	5.0	0.94	100.000	ND	95.8	45 - 122	4.03	20	
trans-1,2-Dichloroethene	46.6000	5.0	0.59	50.0000	ND	93.2	46 - 122	6.58	20	
trans-1,3-Dichloropropene	47.7500	5.0	2.1	50.0000	ND	95.5	44 - 124	2.93	20	
Trichloroethene	53.0600	5.0	3.1	50.0000	ND	106	36 - 142	6.50	20	
Trichlorofluoromethane	45.5300	5.0	1.4	50.0000	ND	91.1	37 - 135	5.74	20	
Vinyl acetate	354.190	50	9.8	500.000	ND	70.8	0 - 136	6.48	20	
Vinyl chloride	43.5700	5.0	1.7	50.0000	ND	87.1	42 - 131	5.57	20	
Surrogate: 1,2-Dichloroethane-d4	*46.71*			*50.0000*		*93.4*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*50.00*			*50.0000*		*100*	*68 - 121*			
Surrogate: Dibromofluoromethan	*49.78*			*50.0000*		*99.6*	*65 - 137*			

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/12/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0197 - MSVOA_S (continued)									
Matrix Spike Dup (B9H0197-MSD1) - Continued			**Source: 1902966-03**		Prepared: 8/9/2019 Analyzed: 8/9/2019				
Surrogate: Toluene-d8	*49.54*		*50.0000*		*99.1*	*82 - 119*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0235 - MSVOA_W										
Blank (B9H0235-BLK1)					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.11							
1,1,1-Trichloroethane	ND	5.0	0.07							
1,1,2,2-Tetrachloroethane	ND	5.0	0.36							
1,1,2-Trichloroethane	ND	5.0	0.25							
1,1-Dichloroethane	ND	5.0	0.09							
1,1-Dichloroethene	ND	5.0	0.13							
1,1-Dichloropropene	ND	5.0	0.13							
1,2,3-Trichloropropane	ND	5.0	0.39							
1,2,3-Trichlorobenzene	ND	5.0	0.18							
1,2,4-Trichlorobenzene	ND	5.0	0.16							
1,2,4-Trimethylbenzene	ND	5.0	0.14							
1,2-Dibromo-3-chloropropane	ND	5.0	0.41							
1,2-Dibromoethane	ND	5.0	0.24							
1,2-Dichlorobenzene	ND	5.0	0.20							
1,2-Dichloroethane	ND	5.0	0.20							
1,2-Dichloropropane	ND	5.0	0.15							
1,3,5-Trimethylbenzene	ND	5.0	0.13							
1,3-Dichlorobenzene	ND	5.0	0.16							
1,3-Dichloropropane	ND	5.0	0.21							
1,4-Dichlorobenzene	ND	5.0	0.17							
2,2-Dichloropropane	ND	5.0	0.38							
2-Chlorotoluene	ND	5.0	0.11							
4-Chlorotoluene	ND	5.0	0.12							
4-Isopropyltoluene	ND	5.0	0.11							
Benzene	ND	5.0	0.13							
Bromobenzene	ND	5.0	0.21							
Bromochloromethane	ND	5.0	0.16							
Bromodichloromethane	ND	5.0	0.14							
Bromoform	ND	5.0	0.20							
Bromomethane	ND	5.0	0.17							
Carbon disulfide	ND	5.0	0.07							
Carbon tetrachloride	ND	5.0	0.09							
Chlorobenzene	ND	5.0	0.13							
Chloroethane	ND	5.0	0.15							
Chloroform	ND	5.0	0.11							
Chloromethane	ND	5.0	0.12							
cis-1,2-Dichloroethene	ND	5.0	0.14							
cis-1,3-Dichloropropene	ND	5.0	0.13							
Di-isopropyl ether	ND	5.0	0.15							
Dibromochloromethane	ND	5.0	0.16							
Dibromomethane	ND	5.0	0.19							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0235 - MSVOA_W (continued)										
Blank (B9H0235-BLK1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
Dichlorodifluoromethane	ND	5.0	0.05							
Ethyl Acetate	ND	50	3.1							
Ethyl Ether	ND	50	2.0							
Ethyl tert-butyl ether	ND	5.0	0.21							
Ethylbenzene	ND	5.0	0.13							
Freon-113	ND	5.0	0.13							
Hexachlorobutadiene	ND	5.0	0.15							
Isopropylbenzene	ND	5.0	0.10							
m,p-Xylene	ND	10	0.19							
Methylene chloride	ND	5.0	0.71							
MTBE	ND	5.0	0.26							
n-Butylbenzene	ND	5.0	0.11							
n-Propylbenzene	ND	5.0	0.10							
Naphthalene	ND	5.0	0.41							
o-Xylene	ND	5.0	0.13							
sec-Butylbenzene	ND	5.0	0.09							
Styrene	ND	5.0	0.13							
tert-Amyl methyl ether	ND	5.0	0.41							
tert-Butanol	ND	100	2.4							
tert-Butylbenzene	ND	5.0	0.09							
Tetrachloroethene	ND	5.0	0.10							
Toluene	ND	5.0	0.12							
trans-1,2-Dichloroethene	ND	5.0	0.09							
trans-1,3-Dichloropropene	ND	5.0	0.23							
Trichloroethene	ND	5.0	0.10							
Trichlorofluoromethane	ND	5.0	0.10							
Vinyl acetate	ND	50	1.7							
Vinyl chloride	ND	5.0	0.05							
Surrogate: 1,2-Dichloroethane-d4	*27.67*			*25.0000*		*111*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.19*			*25.0000*		*101*	*71 - 127*			
Surrogate: Dibromofluoromethan	*29.46*			*25.0000*		*118*	*66 - 147*			
Surrogate: Toluene-d8	*27.07*			*25.0000*		*108*	*77 - 138*			
LCS (B9H0235-BS1)					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,1,1,2-Tetrachloroethane	20.2100	5.0	0.11	20.0000		101	71 - 133			
1,1,1-Trichloroethane	23.6400	5.0	0.07	20.0000		118	62 - 124			
1,1,2,2-Tetrachloroethane	18.9200	5.0	0.36	20.0000		94.6	50 - 131			
1,1,2-Trichloroethane	20.5800	5.0	0.25	20.0000		103	77 - 121			
1,1-Dichloroethane	23.2500	5.0	0.09	20.0000		116	52 - 130			
1,1-Dichloroethene	23.9600	5.0	0.13	20.0000		120	61 - 136			
1,1-Dichloropropene	22.0100	5.0	0.13	20.0000		110	80 - 128			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0235 - MSVOA_W (continued)										
LCS (B9H0235-BS1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,2,3-Trichloropropane	18.6300	5.0	0.39	20.0000		93.2	59 - 126			
1,2,3-Trichlorobenzene	19.4100	5.0	0.18	20.0000		97.0	69 - 138			
1,2,4-Trichlorobenzene	20.3400	5.0	0.16	20.0000		102	78 - 125			
1,2,4-Trimethylbenzene	21.2000	5.0	0.14	20.0000		106	70 - 126			
1,2-Dibromo-3-chloropropane	18.0400	5.0	0.41	20.0000		90.2	58 - 127			
1,2-Dibromoethane	20.0900	5.0	0.24	20.0000		100	76 - 120			
1,2-Dichlorobenzene	22.4100	5.0	0.20	20.0000		112	82 - 117			
1,2-Dichloroethane	23.9200	5.0	0.20	20.0000		120	66 - 126			
1,2-Dichloropropane	21.2700	5.0	0.15	20.0000		106	70 - 117			
1,3,5-Trimethylbenzene	21.7000	5.0	0.13	20.0000		108	71 - 125			
1,3-Dichlorobenzene	21.2200	5.0	0.16	20.0000		106	81 - 116			
1,3-Dichloropropane	19.7900	5.0	0.21	20.0000		99.0	69 - 124			
1,4-Dichlorobenzene	22.1000	5.0	0.17	20.0000		110	80 - 114			
2,2-Dichloropropane	25.4600	5.0	0.38	20.0000		127	58 - 132			
2-Chlorotoluene	21.6900	5.0	0.11	20.0000		108	71 - 119			
4-Chlorotoluene	22.0300	5.0	0.12	20.0000		110	72 - 122			
4-Isopropyltoluene	21.3800	5.0	0.11	20.0000		107	69 - 126			
Benzene	47.6700	5.0	0.13	40.0000		119	80 - 116			L4
Bromobenzene	21.8900	5.0	0.21	20.0000		109	77 - 118			
Bromochloromethane	21.0000	5.0	0.16	20.0000		105	68 - 121			
Bromodichloromethane	21.3400	5.0	0.14	20.0000		107	73 - 118			
Bromoform	18.1500	5.0	0.20	20.0000		90.8	65 - 133			
Bromomethane	25.4200	5.0	0.17	20.0000		127	7 - 205			
Carbon disulfide	24.2000	5.0	0.07	20.0000		121	55 - 131			
Carbon tetrachloride	22.0900	5.0	0.09	20.0000		110	63 - 133			
Chlorobenzene	23.3100	5.0	0.13	20.0000		117	86 - 113			L4
Chloroethane	22.1200	5.0	0.15	20.0000		111	66 - 141			
Chloroform	23.3700	5.0	0.11	20.0000		117	63 - 127			
Chloromethane	18.5400	5.0	0.12	20.0000		92.7	0 - 207			
cis-1,2-Dichloroethene	22.8100	5.0	0.14	20.0000		114	64 - 126			
cis-1,3-Dichloropropene	22.3800	5.0	0.13	20.0000		112	70 - 141			
Di-isopropyl ether	22.3900	5.0	0.15	20.0000		112	56 - 131			
Dibromochloromethane	19.0200	5.0	0.16	20.0000		95.1	67 - 135			
Dibromomethane	20.2200	5.0	0.19	20.0000		101	74 - 118			
Dichlorodifluoromethane	20.7900	5.0	0.05	20.0000		104	14 - 181			
Ethyl Acetate	199.490	50	3.1	200.000		99.7	49 - 128			
Ethyl Ether	195.170	50	2.0	200.000		97.6	53 - 143			
Ethyl tert-butyl ether	22.2700	5.0	0.21	20.0000		111	54 - 132			
Ethylbenzene	40.3000	5.0	0.13	40.0000		101	77 - 118			
Freon-113	24.5900	5.0	0.13	20.0000		123	68 - 145			
Hexachlorobutadiene	21.7700	5.0	0.15	20.0000		109	66 - 125			
Isopropylbenzene	22.4500	5.0	0.10	20.0000		112	68 - 137			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0235 - MSVOA_W (continued)										
LCS (B9H0235-BS1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
m,p-Xylene	43.4700	10	0.19	40.0000		109	78 - 126			
Methylene chloride	19.5700	5.0	0.71	20.0000		97.8	51 - 149			
MTBE	21.5000	5.0	0.26	20.0000		108	63 - 128			
n-Butylbenzene	21.2300	5.0	0.11	20.0000		106	63 - 127			
n-Propylbenzene	21.8000	5.0	0.10	20.0000		109	69 - 124			
Naphthalene	16.7600	5.0	0.41	20.0000		83.8	60 - 126			
o-Xylene	40.2700	5.0	0.13	40.0000		101	79 - 126			
sec-Butylbenzene	21.6900	5.0	0.09	20.0000		108	69 - 124			
Styrene	20.7300	5.0	0.13	20.0000		104	80 - 127			
tert-Amyl methyl ether	22.6300	5.0	0.41	20.0000		113	49 - 130			
tert-Butanol	46.4400	100	2.4	100.000		46.4	29 - 163			
tert-Butylbenzene	21.4800	5.0	0.09	20.0000		107	71 - 124			
Tetrachloroethene	21.1600	5.0	0.10	20.0000		106	73 - 129			
Toluene	47.6100	5.0	0.12	40.0000		119	78 - 121			
trans-1,2-Dichloroethene	23.9200	5.0	0.09	20.0000		120	58 - 141			
trans-1,3-Dichloropropene	20.1900	5.0	0.23	20.0000		101	68 - 128			
Trichloroethene	21.7300	5.0	0.10	20.0000		109	73 - 126			
Trichlorofluoromethane	20.5900	5.0	0.10	20.0000		103	62 - 146			
Vinyl acetate	250.320	50	1.7	200.000		125	53 - 153			
Vinyl chloride	18.1800	5.0	0.05	20.0000		90.9	61 - 137			
Surrogate: 1,2-Dichloroethane-d4	*25.51*			*25.0000*		*102*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*25.75*			*25.0000*		*103*	*71 - 127*			
Surrogate: Dibromofluoromethan	*27.12*			*25.0000*		*108*	*66 - 147*			
Surrogate: Toluene-d8	*26.80*			*25.0000*		*107*	*77 - 138*			
LCS Dup (B9H0235-BSD1)					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,1,1,2-Tetrachloroethane	17.8600	5.0	0.11	20.0000		89.3	71 - 133	12.3	20	
1,1,1-Trichloroethane	20.1300	5.0	0.07	20.0000		101	62 - 124	16.0	20	
1,1,2,2-Tetrachloroethane	17.8700	5.0	0.36	20.0000		89.4	50 - 131	5.71	20	
1,1,2-Trichloroethane	17.4300	5.0	0.25	20.0000		87.2	77 - 121	16.6	20	
1,1-Dichloroethane	19.3500	5.0	0.09	20.0000		96.8	52 - 130	18.3	20	
1,1-Dichloroethene	20.1200	5.0	0.13	20.0000		101	61 - 136	17.4	20	
1,1-Dichloropropene	19.6000	5.0	0.13	20.0000		98.0	80 - 128	11.6	20	
1,2,3-Trichloropropane	18.4500	5.0	0.39	20.0000		92.2	59 - 126	0.971	20	
1,2,3-Trichlorobenzene	16.7900	5.0	0.18	20.0000		84.0	69 - 138	14.5	20	
1,2,4-Trichlorobenzene	17.2800	5.0	0.16	20.0000		86.4	78 - 125	16.3	20	
1,2,4-Trimethylbenzene	17.9500	5.0	0.14	20.0000		89.8	70 - 126	16.6	20	
1,2-Dibromo-3-chloropropane	16.1600	5.0	0.41	20.0000		80.8	58 - 127	11.0	20	
1,2-Dibromoethane	16.8800	5.0	0.24	20.0000		84.4	76 - 120	17.4	20	
1,2-Dichlorobenzene	18.9300	5.0	0.20	20.0000		94.6	82 - 117	16.8	20	
1,2-Dichloroethane	20.9100	5.0	0.20	20.0000		105	66 - 126	13.4	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0235 - MSVOA_W (continued)										
LCS Dup (B9H0235-BSD1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,2-Dichloropropane	17.9400	5.0	0.15	20.0000		89.7	70 - 117	17.0	20	
1,3,5-Trimethylbenzene	18.0600	5.0	0.13	20.0000		90.3	71 - 125	18.3	20	
1,3-Dichlorobenzene	18.0200	5.0	0.16	20.0000		90.1	81 - 116	16.3	20	
1,3-Dichloropropane	17.7300	5.0	0.21	20.0000		88.6	69 - 124	11.0	20	
1,4-Dichlorobenzene	18.9600	5.0	0.17	20.0000		94.8	80 - 114	15.3	20	
2,2-Dichloropropane	20.9000	5.0	0.38	20.0000		104	58 - 132	19.7	20	
2-Chlorotoluene	18.5600	5.0	0.11	20.0000		92.8	71 - 119	15.6	20	
4-Chlorotoluene	18.3500	5.0	0.12	20.0000		91.8	72 - 122	18.2	20	
4-Isopropyltoluene	17.7100	5.0	0.11	20.0000		88.6	69 - 126	18.8	20	
Benzene	39.4700	5.0	0.13	40.0000		98.7	80 - 116	18.8	20	
Bromobenzene	19.1300	5.0	0.21	20.0000		95.6	77 - 118	13.5	20	
Bromochloromethane	19.3000	5.0	0.16	20.0000		96.5	68 - 121	8.44	20	
Bromodichloromethane	17.8900	5.0	0.14	20.0000		89.4	73 - 118	17.6	20	
Bromoform	15.8200	5.0	0.20	20.0000		79.1	65 - 133	13.7	20	
Bromomethane	20.8800	5.0	0.17	20.0000		104	7 - 205	19.6	20	
Carbon disulfide	19.9900	5.0	0.07	20.0000		100	55 - 131	19.1	20	
Carbon tetrachloride	18.3700	5.0	0.09	20.0000		91.8	63 - 133	18.4	20	
Chlorobenzene	19.1300	5.0	0.13	20.0000		95.6	86 - 113	19.7	20	
Chloroethane	22.9800	5.0	0.15	20.0000		115	66 - 141	3.81	20	
Chloroform	19.8000	5.0	0.11	20.0000		99.0	63 - 127	16.5	20	
Chloromethane	20.8600	5.0	0.12	20.0000		104	0 - 207	11.8	20	
cis-1,2-Dichloroethene	19.4200	5.0	0.14	20.0000		97.1	64 - 126	16.1	20	
cis-1,3-Dichloropropene	18.9300	5.0	0.13	20.0000		94.6	70 - 141	16.7	20	
Di-isopropyl ether	18.7800	5.0	0.15	20.0000		93.9	56 - 131	17.5	20	
Dibromochloromethane	16.3100	5.0	0.16	20.0000		81.6	67 - 135	15.3	20	
Dibromomethane	18.2700	5.0	0.19	20.0000		91.4	74 - 118	10.1	20	
Dichlorodifluoromethane	20.2700	5.0	0.05	20.0000		101	14 - 181	2.53	20	
Ethyl Acetate	201.750	50	3.1	200.000		101	49 - 128	1.13	20	
Ethyl Ether	179.800	50	2.0	200.000		89.9	53 - 143	8.20	20	
Ethyl tert-butyl ether	18.7000	5.0	0.21	20.0000		93.5	54 - 132	17.4	20	
Ethylbenzene	34.0700	5.0	0.13	40.0000		85.2	77 - 118	16.8	20	
Freon-113	19.4900	5.0	0.13	20.0000		97.4	68 - 145	23.1	20	R
Hexachlorobutadiene	17.7200	5.0	0.15	20.0000		88.6	66 - 125	20.5	20	R
Isopropylbenzene	19.3800	5.0	0.10	20.0000		96.9	68 - 137	14.7	20	
m,p-Xylene	36.5700	10	0.19	40.0000		91.4	78 - 126	17.2	20	
Methylene chloride	16.0100	5.0	0.71	20.0000		80.0	51 - 149	20.0	20	R
MTBE	18.7200	5.0	0.26	20.0000		93.6	63 - 128	13.8	20	
n-Butylbenzene	17.8900	5.0	0.11	20.0000		89.4	63 - 127	17.1	20	
n-Propylbenzene	18.3400	5.0	0.10	20.0000		91.7	69 - 124	17.2	20	
Naphthalene	16.1100	5.0	0.41	20.0000		80.6	60 - 126	3.95	20	
o-Xylene	34.3900	5.0	0.13	40.0000		86.0	79 - 126	15.8	20	
sec-Butylbenzene	18.0000	5.0	0.09	20.0000		90.0	69 - 124	18.6	20	

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Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0235 - MSVOA_W (continued)										
LCS Dup (B9H0235-BSD1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
Styrene	18.3000	5.0	0.13	20.0000		91.5	80 - 127	12.5	20	
tert-Amyl methyl ether	18.8800	5.0	0.41	20.0000		94.4	49 - 130	18.1	20	
tert-Butanol	72.8100	100	2.4	100.000		72.8	29 - 163	44.2	20	R
tert-Butylbenzene	18.2500	5.0	0.09	20.0000		91.2	71 - 124	16.3	20	
Tetrachloroethene	17.6300	5.0	0.10	20.0000		88.2	73 - 129	18.2	20	
Toluene	38.8000	5.0	0.12	40.0000		97.0	78 - 121	20.4	20	R
trans-1,2-Dichloroethene	19.8100	5.0	0.09	20.0000		99.0	58 - 141	18.8	20	
trans-1,3-Dichloropropene	17.0900	5.0	0.23	20.0000		85.4	68 - 128	16.6	20	
Trichloroethene	17.6400	5.0	0.10	20.0000		88.2	73 - 126	20.8	20	R
Trichlorofluoromethane	20.5600	5.0	0.10	20.0000		103	62 - 146	0.146	20	
Vinyl acetate	217.350	50	1.7	200.000		109	53 - 153	14.1	20	
Vinyl chloride	20.4400	5.0	0.05	20.0000		102	61 - 137	11.7	20	
Surrogate: 1,2-Dichloroethane-d4	*26.31*			*25.0000*		*105*	*59 - 158*			
Surrogate: 4-Bromofluorobenzene	*26.15*			*25.0000*		*105*	*71 - 127*			
Surrogate: Dibromofluoromethan	*29.06*			*25.0000*		*116*	*66 - 147*			
Surrogate: Toluene-d8	*26.27*			*25.0000*		*105*	*77 - 138*			

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/12/2019

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S										
Blank (B9H0246-BLK1)					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,1,1,2-Tetrachloroethane	ND	5.0	0.96							
1,1,1-Trichloroethane	ND	5.0	1.1							
1,1,2,2-Tetrachloroethane	ND	5.0	0.62							
1,1,2-Trichloroethane	ND	5.0	1.6							
1,1-Dichloroethane	ND	5.0	0.81							
1,1-Dichloroethene	ND	5.0	2.6							
1,1-Dichloropropene	ND	5.0	2.3							
1,2,3-Trichloropropane	ND	5.0	0.54							
1,2,3-Trichlorobenzene	ND	5.0	1.2							
1,2,4-Trichlorobenzene	ND	5.0	1.1							
1,2,4-Trimethylbenzene	ND	5.0	1.5							
1,2-Dibromo-3-chloropropane	ND	10	1.6							
1,2-Dibromoethane	ND	5.0	3.2							
1,2-Dichlorobenzene	ND	5.0	1.1							
1,2-Dichloroethane	ND	5.0	1.2							
1,2-Dichloropropane	ND	5.0	1.8							
1,3,5-Trimethylbenzene	ND	5.0	1.7							
1,3-Dichlorobenzene	ND	5.0	1.3							
1,3-Dichloropropane	ND	5.0	1.1							
1,4-Dichlorobenzene	ND	5.0	1.2							
2,2-Dichloropropane	ND	5.0	1.2							
2-Chlorotoluene	ND	5.0	1.6							
4-Chlorotoluene	ND	5.0	1.5							
4-Isopropyltoluene	ND	5.0	2.3							
Benzene	ND	5.0	0.64							
Bromobenzene	ND	5.0	1.1							
Bromochloromethane	ND	5.0	0.64							
Bromodichloromethane	ND	5.0	1.2							
Bromoform	ND	5.0	0.80							
Bromomethane	ND	5.0	2.5							
Carbon disulfide	ND	5.0	3.5							
Carbon tetrachloride	ND	5.0	1.2							
Chlorobenzene	ND	5.0	1.0							
Chloroethane	ND	5.0	1.1							
Chloroform	ND	5.0	0.82							
Chloromethane	ND	5.0	1.4							
cis-1,2-Dichloroethene	ND	5.0	0.67							
cis-1,3-Dichloropropene	ND	5.0	1.9							
Di-isopropyl ether	ND	5.0	0.55							
Dibromochloromethane	ND	5.0	1.0							
Dibromomethane	ND	5.0	1.6							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)										
Blank (B9H0246-BLK1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
Dichlorodifluoromethane	ND	5.0	2.2							
Ethyl Acetate	ND	50	8.1							
Ethyl Ether	ND	50	6.1							
Ethyl tert-butyl ether	ND	5.0	0.67							
Ethylbenzene	ND	5.0	0.91							
Freon-113	ND	5.0	2.8							
Hexachlorobutadiene	ND	5.0	2.5							
Isopropylbenzene	ND	5.0	1.8							
m,p-Xylene	ND	10	1.5							
Methylene chloride	ND	5.0	2.3							
MTBE	ND	5.0	0.63							
n-Butylbenzene	ND	5.0	2.4							
n-Propylbenzene	ND	5.0	2.2							
Naphthalene	ND	5.0	0.97							
o-Xylene	ND	5.0	0.87							
sec-Butylbenzene	ND	5.0	2.3							
Styrene	ND	5.0	1.5							
tert-Amyl methyl ether	ND	5.0	0.59							
tert-Butanol	ND	100	19							
tert-Butylbenzene	ND	5.0	2.0							
Tetrachloroethene	ND	5.0	1.6							
Toluene	ND	5.0	0.94							
trans-1,2-Dichloroethene	ND	5.0	0.59							
trans-1,3-Dichloropropene	ND	5.0	2.1							
Trichloroethene	ND	5.0	3.1							
Trichlorofluoromethane	ND	5.0	1.4							
Vinyl acetate	ND	50	9.8							
Vinyl chloride	ND	5.0	1.7							
Surrogate: 1,2-Dichloroethane-d4	*47.88*			*50.0000*		*95.8*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*53.13*			*50.0000*		*106*	*68 - 121*			
Surrogate: Dibromofluoromethan	*48.72*			*50.0000*		*97.4*	*65 - 137*			
Surrogate: Toluene-d8	*52.40*			*50.0000*		*105*	*82 - 119*			
LCS (B9H0246-BS1)					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,1,1,2-Tetrachloroethane	46.7400	5.0	0.96	50.0000		93.5	82 - 114			
1,1,1-Trichloroethane	50.2000	5.0	1.1	50.0000		100	70 - 121			
1,1,2,2-Tetrachloroethane	46.3700	5.0	0.62	50.0000		92.7	65 - 116			
1,1,2-Trichloroethane	47.7900	5.0	1.6	50.0000		95.6	73 - 114			
1,1-Dichloroethane	52.4500	5.0	0.81	50.0000		105	69 - 117			
1,1-Dichloroethene	49.2300	5.0	2.6	50.0000		98.5	57 - 128			
1,1-Dichloropropene	48.7600	5.0	2.3	50.0000		97.5	76 - 122			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)										
LCS (B9H0246-BS1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,2,3-Trichloropropane	48.7300	5.0	0.54	50.0000		97.5	65 - 116			
1,2,3-Trichlorobenzene	39.6600	5.0	1.2	50.0000		79.3	72 - 130			
1,2,4-Trichlorobenzene	42.3200	5.0	1.1	50.0000		84.6	74 - 141			
1,2,4-Trimethylbenzene	44.6300	5.0	1.5	50.0000		89.3	81 - 126			
1,2-Dibromo-3-chloropropane	47.2000	10	1.6	50.0000		94.4	63 - 126			
1,2-Dibromoethane	45.3100	5.0	3.2	50.0000		90.6	75 - 113			
1,2-Dichlorobenzene	45.6600	5.0	1.1	50.0000		91.3	83 - 114			
1,2-Dichloroethane	48.0800	5.0	1.2	50.0000		96.2	73 - 115			
1,2-Dichloropropane	51.1600	5.0	1.8	50.0000		102	75 - 117			
1,3,5-Trimethylbenzene	47.3200	5.0	1.7	50.0000		94.6	80 - 126			
1,3-Dichlorobenzene	45.3600	5.0	1.3	50.0000		90.7	83 - 113			
1,3-Dichloropropane	48.6300	5.0	1.1	50.0000		97.3	79 - 108			
1,4-Dichlorobenzene	45.6500	5.0	1.2	50.0000		91.3	82 - 114			
2,2-Dichloropropane	50.0600	5.0	1.2	50.0000		100	66 - 135			
2-Chlorotoluene	47.1500	5.0	1.6	50.0000		94.3	79 - 117			
4-Chlorotoluene	48.2900	5.0	1.5	50.0000		96.6	77 - 118			
4-Isopropyltoluene	46.9100	5.0	2.3	50.0000		93.8	81 - 129			
Benzene	98.2900	5.0	0.64	100.000		98.3	78 - 112			
Bromobenzene	44.6200	5.0	1.1	50.0000		89.2	79 - 111			
Bromochloromethane	47.0500	5.0	0.64	50.0000		94.1	69 - 116			
Bromodichloromethane	47.1600	5.0	1.2	50.0000		94.3	79 - 111			
Bromoform	45.0100	5.0	0.80	50.0000		90.0	75 - 119			
Bromomethane	50.8800	5.0	2.5	50.0000		102	31 - 168			
Carbon disulfide	53.5600	5.0	3.5	50.0000		107	54 - 141			
Carbon tetrachloride	47.3800	5.0	1.2	50.0000		94.8	74 - 125			
Chlorobenzene	47.4900	5.0	1.0	50.0000		95.0	83 - 112			
Chloroethane	55.2100	5.0	1.1	50.0000		110	53 - 144			
Chloroform	48.7800	5.0	0.82	50.0000		97.6	69 - 118			
Chloromethane	60.8700	5.0	1.4	50.0000		122	46 - 137			
cis-1,2-Dichloroethene	48.3700	5.0	0.67	50.0000		96.7	68 - 118			
cis-1,3-Dichloropropene	54.3100	5.0	1.9	50.0000		109	77 - 121			
Di-isopropyl ether	50.7100	5.0	0.55	50.0000		101	60 - 129			
Dibromochloromethane	44.0500	5.0	1.0	50.0000		88.1	80 - 111			
Dibromomethane	47.3700	5.0	1.6	50.0000		94.7	78 - 108			
Dichlorodifluoromethane	62.2700	5.0	2.2	50.0000		125	41 - 146			
Ethyl Acetate	564.400	50	8.1	500.000		113	52 - 130			
Ethyl Ether	452.590	50	6.1	500.000		90.5	54 - 138			
Ethyl tert-butyl ether	46.8800	5.0	0.67	50.0000		93.8	52 - 141			
Ethylbenzene	98.5600	5.0	0.91	100.000		98.6	82 - 121			
Freon-113	48.7600	5.0	2.8	50.0000		97.5	59 - 139			
Hexachlorobutadiene	43.1200	5.0	2.5	50.0000		86.2	69 - 143			
Isopropylbenzene	50.5000	5.0	1.8	50.0000		101	78 - 124			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)										
LCS (B9H0246-BS1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
m,p-Xylene	97.1500	10	1.5	100.000		97.2	85 - 118			
Methylene chloride	51.4000	5.0	2.3	50.0000		103	44 - 146			
MTBE	47.2400	5.0	0.63	50.0000		94.5	61 - 122			
n-Butylbenzene	46.8800	5.0	2.4	50.0000		93.8	78 - 135			
n-Propylbenzene	48.1400	5.0	2.2	50.0000		96.3	78 - 127			
Naphthalene	42.8800	5.0	0.97	50.0000		85.8	68 - 129			
o-Xylene	99.0400	5.0	0.87	100.000		99.0	86 - 118			
sec-Butylbenzene	46.9700	5.0	2.3	50.0000		93.9	80 - 127			
Styrene	49.4800	5.0	1.5	50.0000		99.0	85 - 117			
tert-Amyl methyl ether	47.2100	5.0	0.59	50.0000		94.4	48 - 135			
tert-Butanol	214.400	100	19	250.000		85.8	0 - 175			
tert-Butylbenzene	47.6100	5.0	2.0	50.0000		95.2	81 - 122			
Tetrachloroethene	47.0700	5.0	1.6	50.0000		94.1	77 - 122			
Toluene	100.330	5.0	0.94	100.000		100	79 - 114			
trans-1,2-Dichloroethene	49.3300	5.0	0.59	50.0000		98.7	66 - 125			
trans-1,3-Dichloropropene	45.9400	5.0	2.1	50.0000		91.9	76 - 120			
Trichloroethene	49.1200	5.0	3.1	50.0000		98.2	79 - 117			
Trichlorofluoromethane	47.2500	5.0	1.4	50.0000		94.5	55 - 133			
Vinyl acetate	498.760	50	9.8	500.000		99.8	52 - 141			
Vinyl chloride	61.1200	5.0	1.7	50.0000		122	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*47.23*			*50.0000*		*94.5*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*52.83*			*50.0000*		*106*	*68 - 121*			
Surrogate: Dibromofluoromethan	*51.41*			*50.0000*		*103*	*65 - 137*			
Surrogate: Toluene-d8	*52.86*			*50.0000*		*106*	*82 - 119*			
LCS Dup (B9H0246-BSD1)					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,1,1,2-Tetrachloroethane	49.0400	5.0	0.96	50.0000		98.1	82 - 114	4.80	20	
1,1,1-Trichloroethane	48.4500	5.0	1.1	50.0000		96.9	70 - 121	3.55	20	
1,1,2,2-Tetrachloroethane	54.0800	5.0	0.62	50.0000		108	65 - 116	15.4	20	
1,1,2-Trichloroethane	52.4300	5.0	1.6	50.0000		105	73 - 114	9.26	20	
1,1-Dichloroethane	51.0900	5.0	0.81	50.0000		102	69 - 117	2.63	20	
1,1-Dichloroethene	51.1600	5.0	2.6	50.0000		102	57 - 128	3.85	20	
1,1-Dichloropropene	47.4500	5.0	2.3	50.0000		94.9	76 - 122	2.72	20	
1,2,3-Trichloropropane	53.8100	5.0	0.54	50.0000		108	65 - 116	9.91	20	
1,2,3-Trichlorobenzene	44.3800	5.0	1.2	50.0000		88.8	72 - 130	11.2	20	
1,2,4-Trichlorobenzene	46.4600	5.0	1.1	50.0000		92.9	74 - 141	9.33	20	
1,2,4-Trimethylbenzene	49.5800	5.0	1.5	50.0000		99.2	81 - 126	10.5	20	
1,2-Dibromo-3-chloropropane	46.8500	10	1.6	50.0000		93.7	63 - 126	0.744	20	
1,2-Dibromoethane	45.9900	5.0	3.2	50.0000		92.0	75 - 113	1.49	20	
1,2-Dichlorobenzene	51.4500	5.0	1.1	50.0000		103	83 - 114	11.9	20	
1,2-Dichloroethane	51.2600	5.0	1.2	50.0000		103	73 - 115	6.40	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)										
LCS Dup (B9H0246-BSD1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,2-Dichloropropane	49.9000	5.0	1.8	50.0000		99.8	75 - 117	2.49	20	
1,3,5-Trimethylbenzene	51.5300	5.0	1.7	50.0000		103	80 - 126	8.52	20	
1,3-Dichlorobenzene	51.5800	5.0	1.3	50.0000		103	83 - 113	12.8	20	
1,3-Dichloropropane	49.2200	5.0	1.1	50.0000		98.4	79 - 108	1.21	20	
1,4-Dichlorobenzene	49.8900	5.0	1.2	50.0000		99.8	82 - 114	8.88	20	
2,2-Dichloropropane	52.5700	5.0	1.2	50.0000		105	66 - 135	4.89	20	
2-Chlorotoluene	52.2000	5.0	1.6	50.0000		104	79 - 117	10.2	20	
4-Chlorotoluene	51.4500	5.0	1.5	50.0000		103	77 - 118	6.34	20	
4-Isopropyltoluene	50.5300	5.0	2.3	50.0000		101	81 - 129	7.43	20	
Benzene	98.7000	5.0	0.64	100.000		98.7	78 - 112	0.416	20	
Bromobenzene	49.4800	5.0	1.1	50.0000		99.0	79 - 111	10.3	20	
Bromochloromethane	46.6900	5.0	0.64	50.0000		93.4	69 - 116	0.768	20	
Bromodichloromethane	50.0300	5.0	1.2	50.0000		100	79 - 111	5.91	20	
Bromoform	47.5200	5.0	0.80	50.0000		95.0	75 - 119	5.43	20	
Bromomethane	51.3400	5.0	2.5	50.0000		103	31 - 168	0.900	20	
Carbon disulfide	61.8900	5.0	3.5	50.0000		124	54 - 141	14.4	20	
Carbon tetrachloride	49.7200	5.0	1.2	50.0000		99.4	74 - 125	4.82	20	
Chlorobenzene	49.8900	5.0	1.0	50.0000		99.8	83 - 112	4.93	20	
Chloroethane	49.2100	5.0	1.1	50.0000		98.4	53 - 144	11.5	20	
Chloroform	49.9900	5.0	0.82	50.0000		100	69 - 118	2.45	20	
Chloromethane	58.3300	5.0	1.4	50.0000		117	46 - 137	4.26	20	
cis-1,2-Dichloroethene	48.4400	5.0	0.67	50.0000		96.9	68 - 118	0.145	20	
cis-1,3-Dichloropropene	55.3500	5.0	1.9	50.0000		111	77 - 121	1.90	20	
Di-isopropyl ether	51.2100	5.0	0.55	50.0000		102	60 - 129	0.981	20	
Dibromochloromethane	46.6700	5.0	1.0	50.0000		93.3	80 - 111	5.78	20	
Dibromomethane	50.4100	5.0	1.6	50.0000		101	78 - 108	6.22	20	
Dichlorodifluoromethane	61.6300	5.0	2.2	50.0000		123	41 - 146	1.03	20	
Ethyl Acetate	631.280	50	8.1	500.000		126	52 - 130	11.2	20	
Ethyl Ether	455.040	50	6.1	500.000		91.0	54 - 138	0.540	20	
Ethyl tert-butyl ether	50.2800	5.0	0.67	50.0000		101	52 - 141	7.00	20	
Ethylbenzene	99.8500	5.0	0.91	100.000		99.8	82 - 121	1.30	20	
Freon-113	55.7300	5.0	2.8	50.0000		111	59 - 139	13.3	20	
Hexachlorobutadiene	53.7000	5.0	2.5	50.0000		107	69 - 143	21.9	20	R
Isopropylbenzene	54.2900	5.0	1.8	50.0000		109	78 - 124	7.23	20	
m,p-Xylene	101.650	10	1.5	100.000		102	85 - 118	4.53	20	
Methylene chloride	54.4500	5.0	2.3	50.0000		109	44 - 146	5.76	20	
MTBE	47.3800	5.0	0.63	50.0000		94.8	61 - 122	0.296	20	
n-Butylbenzene	52.0900	5.0	2.4	50.0000		104	78 - 135	10.5	20	
n-Propylbenzene	52.1700	5.0	2.2	50.0000		104	78 - 127	8.04	20	
Naphthalene	48.1300	5.0	0.97	50.0000		96.3	68 - 129	11.5	20	
o-Xylene	102.860	5.0	0.87	100.000		103	86 - 118	3.78	20	
sec-Butylbenzene	51.7800	5.0	2.3	50.0000		104	80 - 127	9.74	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)										
LCS Dup (B9H0246-BSD1) - Continued					Prepared: 8/12/2019 Analyzed: 8/12/2019					
Styrene	49.6100	5.0	1.5	50.0000		99.2	85 - 117	0.262	20	
tert-Amyl methyl ether	47.2100	5.0	0.59	50.0000		94.4	48 - 135	0.00	20	
tert-Butanol	253.480	100	19	250.000		101	0 - 175	16.7	20	
tert-Butylbenzene	50.9000	5.0	2.0	50.0000		102	81 - 122	6.68	20	
Tetrachloroethene	47.3600	5.0	1.6	50.0000		94.7	77 - 122	0.614	20	
Toluene	103.520	5.0	0.94	100.000		104	79 - 114	3.13	20	
trans-1,2-Dichloroethene	48.8600	5.0	0.59	50.0000		97.7	66 - 125	0.957	20	
trans-1,3-Dichloropropene	47.9500	5.0	2.1	50.0000		95.9	76 - 120	4.28	20	
Trichloroethene	49.6000	5.0	3.1	50.0000		99.2	79 - 117	0.972	20	
Trichlorofluoromethane	44.6200	5.0	1.4	50.0000		89.2	55 - 133	5.73	20	
Vinyl acetate	509.890	50	9.8	500.000		102	52 - 141	2.21	20	
Vinyl chloride	59.2300	5.0	1.7	50.0000		118	58 - 132	3.14	20	
Surrogate: 1,2-Dichloroethane-d4	*46.84*			*50.0000*		*93.7*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*52.68*			*50.0000*		*105*	*68 - 121*			
Surrogate: Dibromofluoromethan	*50.94*			*50.0000*		*102*	*65 - 137*			
Surrogate: Toluene-d8	*52.93*			*50.0000*		*106*	*82 - 119*			
Matrix Spike (B9H0246-MS1)				**Source: 1902993-14**	Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,1,1,2-Tetrachloroethane	46.9900	5.0	0.96	50.0000	ND	94.0	45 - 121			
1,1,1-Trichloroethane	52.3800	5.0	1.1	50.0000	ND	105	43 - 127			
1,1,2,2-Tetrachloroethane	45.2800	5.0	0.62	50.0000	ND	90.6	32 - 128			
1,1,2-Trichloroethane	47.2000	5.0	1.6	50.0000	ND	94.4	45 - 121			
1,1-Dichloroethane	51.2300	5.0	0.81	50.0000	ND	102	46 - 119			
1,1-Dichloroethene	51.1500	5.0	2.6	50.0000	ND	102	40 - 130			
1,1-Dichloropropene	52.9700	5.0	2.3	50.0000	ND	106	45 - 130			
1,2,3-Trichloropropane	48.3400	5.0	0.54	50.0000	ND	96.7	42 - 124			
1,2,3-Trichlorobenzene	41.9300	5.0	1.2	50.0000	ND	83.9	4 - 135			
1,2,4-Trichlorobenzene	45.5900	5.0	1.1	50.0000	ND	91.2	8 - 141			
1,2,4-Trimethylbenzene	48.9400	5.0	1.5	50.0000	ND	97.9	30 - 136			
1,2-Dibromo-3-chloropropane	39.7600	10	1.6	50.0000	ND	79.5	38 - 132			
1,2-Dibromoethane	45.1400	5.0	3.2	50.0000	ND	90.3	45 - 121			
1,2-Dichlorobenzene	47.7800	5.0	1.1	50.0000	ND	95.6	30 - 125			
1,2-Dichloroethane	47.0900	5.0	1.2	50.0000	ND	94.2	51 - 115			
1,2-Dichloropropane	47.4600	5.0	1.8	50.0000	ND	94.9	50 - 118			
1,3,5-Trimethylbenzene	50.9000	5.0	1.7	50.0000	ND	102	29 - 137			
1,3-Dichlorobenzene	48.2000	5.0	1.3	50.0000	ND	96.4	30 - 124			
1,3-Dichloropropane	47.2300	5.0	1.1	50.0000	ND	94.5	49 - 116			
1,4-Dichlorobenzene	45.7000	5.0	1.2	50.0000	ND	91.4	31 - 124			
2,2-Dichloropropane	54.8800	5.0	1.2	50.0000	ND	110	41 - 134			
2-Chlorotoluene	51.3400	5.0	1.6	50.0000	ND	103	32 - 127			
4-Chlorotoluene	48.7400	5.0	1.5	50.0000	ND	97.5	34 - 124			

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Project Number : GNAP-Fullerton, 185804430
Report To : Brian Viggiano
Reported : 08/12/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)										
Matrix Spike (B9H0246-MS1) - Continued			**Source: 1902993-14**		Prepared: 8/12/2019 Analyzed: 8/12/2019					
4-Isopropyltoluene	51.1200	5.0	2.3	50.0000	ND	102	26 - 141			
Benzene	99.1200	5.0	0.64	100.000	ND	99.1	48 - 117			
Bromobenzene	45.2900	5.0	1.1	50.0000	ND	90.6	40 - 117			
Bromochloromethane	45.2400	5.0	0.64	50.0000	ND	90.5	48 - 117			
Bromodichloromethane	45.1700	5.0	1.2	50.0000	ND	90.3	49 - 115			
Bromoform	42.9200	5.0	0.80	50.0000	ND	85.8	42 - 127			
Bromomethane	45.5600	5.0	2.5	50.0000	ND	91.1	19 - 157			
Carbon disulfide	50.3600	5.0	3.5	50.0000	ND	101	34 - 138			
Carbon tetrachloride	54.1800	5.0	1.2	50.0000	ND	108	43 - 130			
Chlorobenzene	48.0300	5.0	1.0	50.0000	ND	96.1	41 - 122			
Chloroethane	51.7800	5.0	1.1	50.0000	ND	104	32 - 145			
Chloroform	49.1300	5.0	0.82	50.0000	ND	98.3	46 - 118			
Chloromethane	54.1000	5.0	1.4	50.0000	ND	108	34 - 132			
cis-1,2-Dichloroethene	46.3200	5.0	0.67	50.0000	ND	92.6	44 - 119			
cis-1,3-Dichloropropene	52.2700	5.0	1.9	50.0000	ND	105	44 - 126			
Di-isopropyl ether	47.4700	5.0	0.55	50.0000	ND	94.9	42 - 126			
Dibromochloromethane	44.2300	5.0	1.0	50.0000	ND	88.5	46 - 119			
Dibromomethane	46.7300	5.0	1.6	50.0000	ND	93.5	52 - 114			
Dichlorodifluoromethane	58.2900	5.0	2.2	50.0000	ND	117	22 - 147			
Ethyl Acetate	486.760	50	8.1	500.000	30.5400	91.2	9 - 140			
Ethyl Ether	415.140	50	6.1	500.000	ND	83.0	45 - 131			
Ethyl tert-butyl ether	44.1700	5.0	0.67	50.0000	ND	88.3	33 - 138			
Ethylbenzene	102.680	5.0	0.91	100.000	ND	103	38 - 131			
Freon-113	52.1500	5.0	2.8	50.0000	ND	104	38 - 140			
Hexachlorobutadiene	47.4100	5.0	2.5	50.0000	ND	94.8	4 - 141			
Isopropylbenzene	53.6200	5.0	1.8	50.0000	ND	107	35 - 133			
m,p-Xylene	102.890	10	1.5	100.000	ND	103	38 - 130			
Methylene chloride	48.0400	5.0	2.3	50.0000	ND	96.1	26 - 137			
MTBE	45.0400	5.0	0.63	50.0000	ND	90.1	45 - 121			
n-Butylbenzene	51.3500	5.0	2.4	50.0000	ND	103	18 - 144			
n-Propylbenzene	52.2000	5.0	2.2	50.0000	ND	104	30 - 137			
Naphthalene	42.3500	5.0	0.97	50.0000	ND	84.7	14 - 137			
o-Xylene	102.690	5.0	0.87	100.000	ND	103	41 - 129			
sec-Butylbenzene	50.4900	5.0	2.3	50.0000	ND	101	24 - 140			
Styrene	49.1900	5.0	1.5	50.0000	ND	98.4	41 - 125			
tert-Amyl methyl ether	44.0500	5.0	0.59	50.0000	ND	88.1	31 - 133			
tert-Butanol	241.150	100	19	250.000	ND	96.5	0 - 201			
tert-Butylbenzene	52.7700	5.0	2.0	50.0000	ND	106	30 - 134			
Tetrachloroethene	50.6100	5.0	1.6	50.0000	ND	101	37 - 130			
Toluene	102.580	5.0	0.94	100.000	ND	103	45 - 122			
trans-1,2-Dichloroethene	52.1300	5.0	0.59	50.0000	ND	104	46 - 122			
trans-1,3-Dichloropropene	44.8900	5.0	2.1	50.0000	ND	89.8	44 - 124			

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/12/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)										
Matrix Spike (B9H0246-MS1) - Continued			**Source: 1902993-14**		Prepared: 8/12/2019 Analyzed: 8/12/2019					
Trichloroethene	50.2000	5.0	3.1	50.0000	ND	100	36 - 142			
Trichlorofluoromethane	42.1900	5.0	1.4	50.0000	ND	84.4	37 - 135			
Vinyl acetate	449.340	50	9.8	500.000	ND	89.9	0 - 136			
Vinyl chloride	56.0700	5.0	1.7	50.0000	ND	112	42 - 131			
Surrogate: 1,2-Dichloroethane-d4	*48.10*			*50.0000*		*96.2*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*52.69*			*50.0000*		*105*	*68 - 121*			
Surrogate: Dibromofluoromethan	*50.56*			*50.0000*		*101*	*65 - 137*			
Surrogate: Toluene-d8	*53.49*			*50.0000*		*107*	*82 - 119*			
Matrix Spike Dup (B9H0246-MSD1)			**Source: 1902993-14**		Prepared: 8/12/2019 Analyzed: 8/12/2019					
1,1,1,2-Tetrachloroethane	45.7800	5.0	0.96	50.0000	ND	91.6	45 - 121	2.61	20	
1,1,1-Trichloroethane	51.3000	5.0	1.1	50.0000	ND	103	43 - 127	2.08	20	
1,1,2,2-Tetrachloroethane	46.3700	5.0	0.62	50.0000	ND	92.7	32 - 128	2.38	20	
1,1,2-Trichloroethane	46.4700	5.0	1.6	50.0000	ND	92.9	45 - 121	1.56	20	
1,1-Dichloroethane	50.9000	5.0	0.81	50.0000	ND	102	46 - 119	0.646	20	
1,1-Dichloroethene	46.6400	5.0	2.6	50.0000	ND	93.3	40 - 130	9.22	20	
1,1-Dichloropropene	48.2200	5.0	2.3	50.0000	ND	96.4	45 - 130	9.39	20	
1,2,3-Trichloropropane	47.9400	5.0	0.54	50.0000	ND	95.9	42 - 124	0.831	20	
1,2,3-Trichlorobenzene	38.5800	5.0	1.2	50.0000	ND	77.2	4 - 135	8.32	20	
1,2,4-Trichlorobenzene	41.0100	5.0	1.1	50.0000	ND	82.0	8 - 141	10.6	20	
1,2,4-Trimethylbenzene	43.7100	5.0	1.5	50.0000	ND	87.4	30 - 136	11.3	20	
1,2-Dibromo-3-chloropropane	40.9500	10	1.6	50.0000	ND	81.9	38 - 132	2.95	20	
1,2-Dibromoethane	42.2700	5.0	3.2	50.0000	ND	84.5	45 - 121	6.57	20	
1,2-Dichlorobenzene	46.2700	5.0	1.1	50.0000	ND	92.5	30 - 125	3.21	20	
1,2-Dichloroethane	45.4100	5.0	1.2	50.0000	ND	90.8	51 - 115	3.63	20	
1,2-Dichloropropane	48.2400	5.0	1.8	50.0000	ND	96.5	50 - 118	1.63	20	
1,3,5-Trimethylbenzene	47.5400	5.0	1.7	50.0000	ND	95.1	29 - 137	6.83	20	
1,3-Dichlorobenzene	44.7800	5.0	1.3	50.0000	ND	89.6	30 - 124	7.36	20	
1,3-Dichloropropane	46.1200	5.0	1.1	50.0000	ND	92.2	49 - 116	2.38	20	
1,4-Dichlorobenzene	44.7500	5.0	1.2	50.0000	ND	89.5	31 - 124	2.10	20	
2,2-Dichloropropane	49.7200	5.0	1.2	50.0000	ND	99.4	41 - 134	9.87	20	
2-Chlorotoluene	46.8500	5.0	1.6	50.0000	ND	93.7	32 - 127	9.15	20	
4-Chlorotoluene	46.6600	5.0	1.5	50.0000	ND	93.3	34 - 124	4.36	20	
4-Isopropyltoluene	45.8500	5.0	2.3	50.0000	ND	91.7	26 - 141	10.9	20	
Benzene	92.4000	5.0	0.64	100.000	ND	92.4	48 - 117	7.02	20	
Bromobenzene	44.9500	5.0	1.1	50.0000	ND	89.9	40 - 117	0.754	20	
Bromochloromethane	46.1100	5.0	0.64	50.0000	ND	92.2	48 - 117	1.90	20	
Bromodichloromethane	46.3300	5.0	1.2	50.0000	ND	92.7	49 - 115	2.54	20	
Bromoform	44.3900	5.0	0.80	50.0000	ND	88.8	42 - 127	3.37	20	
Bromomethane	45.0200	5.0	2.5	50.0000	ND	90.0	19 - 157	1.19	20	
Carbon disulfide	47.4200	5.0	3.5	50.0000	ND	94.8	34 - 138	6.01	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)										
Matrix Spike Dup (B9H0246-MSD1) - Continued			**Source: 1902993-14**		Prepared: 8/12/2019 Analyzed: 8/12/2019					
Carbon tetrachloride	47.6200	5.0	1.2	50.0000	ND	95.2	43 - 130	12.9	20	
Chlorobenzene	44.9900	5.0	1.0	50.0000	ND	90.0	41 - 122	6.54	20	
Chloroethane	45.6100	5.0	1.1	50.0000	ND	91.2	32 - 145	12.7	20	
Chloroform	46.4000	5.0	0.82	50.0000	ND	92.8	46 - 118	5.72	20	
Chloromethane	52.1500	5.0	1.4	50.0000	ND	104	34 - 132	3.67	20	
cis-1,2-Dichloroethene	46.1100	5.0	0.67	50.0000	ND	92.2	44 - 119	0.454	20	
cis-1,3-Dichloropropene	49.7800	5.0	1.9	50.0000	ND	99.6	44 - 126	4.88	20	
Di-isopropyl ether	48.2800	5.0	0.55	50.0000	ND	96.6	42 - 126	1.69	20	
Dibromochloromethane	41.8200	5.0	1.0	50.0000	ND	83.6	46 - 119	5.60	20	
Dibromomethane	43.9700	5.0	1.6	50.0000	ND	87.9	52 - 114	6.09	20	
Dichlorodifluoromethane	57.2700	5.0	2.2	50.0000	ND	115	22 - 147	1.77	20	
Ethyl Acetate	522.490	50	8.1	500.000	30.5400	98.4	9 - 140	7.08	20	
Ethyl Ether	419.580	50	6.1	500.000	ND	83.9	45 - 131	1.06	20	
Ethyl tert-butyl ether	45.7400	5.0	0.67	50.0000	ND	91.5	33 - 138	3.49	20	
Ethylbenzene	96.8400	5.0	0.91	100.000	ND	96.8	38 - 131	5.85	20	
Freon-113	49.1500	5.0	2.8	50.0000	ND	98.3	38 - 140	5.92	20	
Hexachlorobutadiene	40.6700	5.0	2.5	50.0000	ND	81.3	4 - 141	15.3	20	
Isopropylbenzene	50.9200	5.0	1.8	50.0000	ND	102	35 - 133	5.17	20	
m,p-Xylene	98.4400	10	1.5	100.000	ND	98.4	38 - 130	4.42	20	
Methylene chloride	47.0800	5.0	2.3	50.0000	ND	94.2	26 - 137	2.02	20	
MTBE	46.7700	5.0	0.63	50.0000	ND	93.5	45 - 121	3.77	20	
n-Butylbenzene	45.1900	5.0	2.4	50.0000	ND	90.4	18 - 144	12.8	20	
n-Propylbenzene	47.7900	5.0	2.2	50.0000	ND	95.6	30 - 137	8.82	20	
Naphthalene	42.9000	5.0	0.97	50.0000	ND	85.8	14 - 137	1.29	20	
o-Xylene	98.1800	5.0	0.87	100.000	ND	98.2	41 - 129	4.49	20	
sec-Butylbenzene	45.6600	5.0	2.3	50.0000	ND	91.3	24 - 140	10.0	20	
Styrene	47.7200	5.0	1.5	50.0000	ND	95.4	41 - 125	3.03	20	
tert-Amyl methyl ether	46.6900	5.0	0.59	50.0000	ND	93.4	31 - 133	5.82	20	
tert-Butanol	262.090	100	19	250.000	ND	105	0 - 201	8.32	20	
tert-Butylbenzene	48.1200	5.0	2.0	50.0000	ND	96.2	30 - 134	9.22	20	
Tetrachloroethene	47.2400	5.0	1.6	50.0000	ND	94.5	37 - 130	6.89	20	
Toluene	97.9700	5.0	0.94	100.000	ND	98.0	45 - 122	4.60	20	
trans-1,2-Dichloroethene	45.5100	5.0	0.59	50.0000	ND	91.0	46 - 122	13.6	20	
trans-1,3-Dichloropropene	44.5600	5.0	2.1	50.0000	ND	89.1	44 - 124	0.738	20	
Trichloroethene	46.5000	5.0	3.1	50.0000	ND	93.0	36 - 142	7.65	20	
Trichlorofluoromethane	42.6700	5.0	1.4	50.0000	ND	85.3	37 - 135	1.13	20	
Vinyl acetate	432.560	50	9.8	500.000	ND	86.5	0 - 136	3.81	20	
Vinyl chloride	53.1500	5.0	1.7	50.0000	ND	106	42 - 131	5.35	20	
Surrogate: 1,2-Dichloroethane-d4	*48.88*			*50.0000*		*97.8*	*60 - 145*			
Surrogate: 4-Bromofluorobenzene	*53.39*			*50.0000*		*107*	*68 - 121*			
Surrogate: Dibromofluoromethan	*49.53*			*50.0000*		*99.1*	*65 - 137*			

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/12/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0246 - MSVOA_S (continued)									
Matrix Spike Dup (B9H0246-MSD1) - Continued			**Source: 1902993-14**		Prepared: 8/12/2019 Analyzed: 8/12/2019				
Surrogate: Toluene-d8	*51.92*		*50.0000*		*104*	*82 - 119*			

Certificate of Analysis

Stantec	Project Number : GNAP-Fullerton, 185804430
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San Bernardino , CA 92408	Reported : 08/12/2019

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9H0233 - Prep_WC1_S										
Duplicate (B9H0233-DUP1)				**Source: 1902950-01**	Prepared: 8/12/2019 Analyzed: 8/12/2019					
pH	8.16000	0.10	0.10		8.18000			0.245	20	

Certificate of Analysis

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San Bernardino , CA 92408	Reported : 08/12/2019

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Stantec

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

1902993

Client Name/Address:	Project/PO Number:
Stantec 735 E. Carnegie Dr, Suite 280 San Bernardino, CA 92408	**GNAP-Fullerton / 185804430**
Project Manager: Brian Viggiano	Phone Number: : **(909)289-7111**
Email Address: brian.viggiano@stantec.com Sampler: Josh Sargent	Fax Number: **(909)335-6120**

	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TPH (GRO/DRO/ORO) EPA Method 8015	VOCs by EPA Method 8260B	PCB 8082	Title 22 metals 6010/7471	PAH 8270 SIM	HOLD				Special Instructions
01	TB-20190809	W	VOA	2			HCl		X								
02	EB-20190809	W	VOA	6	8.9.19	1020	HCl		X								
03	SV-4-5	S	8oz	1		1035	ICE	X	X	X	X	X	X				
04	SV-4-10		Acetate			1045		X	X	X	X	X					
05	SV-4-15					1048		X	X				X				
06	SV-4-20					1052							X				
07	SV-4-25					1055							X				
08	SB-1-5		8oz			1135		X	X	X	X	X					
09	SB-1-10		Acetate			1145							X				
10	SB-5-5		8oz			1435		X	X	X							
11	SB-5-10		Acetate			1440		X	X								
12	SB-5-15					1445			X				X				
13	SV-12-5		8oz			1520		X	X		X	X					
14	SV-12-10		Acetate			1530			X								

Relinquished By:	Date/Time: 8.9.19 1545	Received By:	Date/ Time: 8/9/19 1545
Relinquished By:	Date/Time: 8/9/19 1655	Received By:	Date/Time: 8.9.19 1655
Relinquished By:	Date/Time:	Received In Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours
48 hours
5 days
normal

Sample Integrity: (Check)
intact _____ on ice _____

NOTE: By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Stantec

CHAIN OF CUSTODY FORM

735 E. Carnegie Dr., Suite 280, San Bernardino, CA 92408 (909)335-6116, Fax (909) 335-6120

1902993

Page 2 of 2

Client Name/Address:	Project/PO Number:
Stantec 735 E. Carnegie Dr, Suite 280 San Bernardino, CA 92408	**GNAP-Fullerton / 185804430**
Project Manager: Brian Viggiano Email Address: brian.viggiano@stantec.com Sampler: Josh Sargent	Phone Number: : **(909)289-7111** Fax Number: (**909)335-6120**

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: TPH (GRO/DRO/ORO) EPA Method 8015	Analysis Required: VOCs by EPA Method 8260B	Analysis Required: Hold	Special Instructions
SW-12-15	S	Acetate	1	8.9.19	1535	ICE			X	

Relinquished By:	Date/Time:	Received By:	Date/ Time:
	8.9.19 1545		8/9/19 1545
Relinquished By:	Date/Time:	Received By:	Date/Time:
	8/9/19 1655		8.9.19 1655
Relinquished By:	Date/Time:	Received in Lab By:	Date/ Time;

Turnaround Time: (Check)
same day
24 hours 5 days
48 hours normal
Sample Integrity: (Check)
intact _____ on ice _____

By relinquishing samples, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Appendix B
Boring Logs

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/6/19** COMPLETED: **8/6/19**
INSTALLATION: STARTED **8/6/19** COMPLETED: **8/6/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **HA-13** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **5.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 6".							Concrete 4".
		SM	**SILTY SAND** ; SM; 2.5Y 5/4 light olive brown; fine to coarse grained sand; some fines; moist; no staining; no odor.		1250 HA-13-1			0.0		
		CL	**SANDY CLAY** ; CL; 2.5Y 3/2 very dark grayish brown; some very fine to fine grained sand; medium to high plasticity fines; moist; no staining; no odor.							Hydrated bentonite granules.
					1255 HA-13-5			0.0		
5			Hole terminated at 5 feet.						5	
10									10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/6/19** COMPLETED: **8/6/19**
INSTALLATION: STARTED **8/6/19** COMPLETED: **8/6/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **HA-14** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 4".							Concrete 4".
		SW	**WELL GRADED SAND** ; SW; 2.5Y 7/3 pale brown; fine to coarse grained sand; trace fines; moist; no staining; no odor.							
5			Soft; borehole prone to collapse.		1440 HA-14-5			0.0	5	Hydrated bentonite granules.
		SM	**SILTY SAND** ; SM; 2.5Y 4/4 olive brown; very fine to fine grained sand; some fines; moist; no staining; no odor.							
10			Hole terminated at 10 feet.		1502 HA-14-10			0.0	10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/7/19** COMPLETED: **8/7/19**
INSTALLATION: STARTED **8/7/19** COMPLETED: **8/7/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **HA-15** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 7".							Concrete 4".
		SM	**SILTY SAND** ; SM; 2.5Y 5/3 light olive brown; fine to medium grained sand; some fines; wet; no staining; no odor.							
			Soil becomes moist.		0858 HA-15-5			0.0		
5									5	Hydrated bentonite granules.
		SW-SM	**WELL GRADED SAND WITH SILT** ; SW-SM; 2.5Y 5/3 light olive brown; fine to medium grained sand; little fines; moist; no staining; no odor.							
					0907 HA-15-10			0.0		
10			Hole terminated at 10 feet.						10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/7/19** COMPLETED: **8/7/19**
INSTALLATION: STARTED **8/7/19** COMPLETED: **8/7/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **HA-16** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **8.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 7".							Concrete 4".
		SM	**SILTY SAND** ; SM; 2.5Y 4/3 brown; very fine to medium grained sand; some fines; moist; no staining; no odor.							
			Coarse rounded gravel, intermitent to terminal depth.							
5					0830 HA-16-5			0.0	5	Hydrated bentonite granules.
			Borehole keeps collapsing at 8'.		0835 HA-16-8			0.0		
			Hole terminated at 8 feet.							
10									10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SB-1** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Asphalt 4".							Backfill with cold-pactch asphalt.
		SM	**SILTY SAND** ; SM; 10YR 3/3 dark brown; some coarse gravel; fine to medium grained sand; some fines; moist; no staining; no odor.							
		SW	**WELL GRADED SAND** ; SW; 2.5Y 5/3 light yellowish brown; fine to coarse graiend sand; trace fines; moist; no staining; no odor.							
5					1135 SB-1-5			0.0	5	Backfill with hydrated bentonite granules.
		SM	**SILTY SAND** ; SM; 2.5Y 4/3 olive; very fine to fine grained sand; some fines; moist; no staining; no odor.		1145 SB-1-10			0.0		
10			Hole terminated at 10 feet.						10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/8/19** COMPLETED: **8/8/19**
INSTALLATION: STARTED **8/8/19** COMPLETED: **8/8/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 540m**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SB-2** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 6".							Backfill with rapid-set concrete.
		SC	**CLAYEY SAND** ; SC; 10YR 3/3 dark brown; fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		--			0.0		
		SW	**WELL GRADED SAND** ; SW; 2.5Y 6/4 light yellowish brown; fine to coarse grained sand; trace fines; moist; no staining; no odor.							
5					1310 SB-2-5			0.0	5	Backfill with hydrated bentonite granules.
					--			0.0		
					1315 SB-2-10			0.0		
10			Hole terminated at 10 feet.						10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/8/19** COMPLETED: **8/8/19**
INSTALLATION: STARTED **8/8/19** COMPLETED: **8/8/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 540m**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SB-3** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 6".							Backfill with rapid-set concrete, and surface patch with epoxy coating.
		SC	**CLAYEY SAND** ; SC; 10YR 3/2 very dark grayish brown; little coarse rounded gravel; fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		--			0.0		
		SW-SM	**WELL GRADED SAND WITH SILT** ; SW-SM; 2.5Y 5/3 light olive brown; fine to coarse grained sand; littel fines; moist; no staining; no odor.		--			0.0		
		SW	**WELL GRADED SAND** ; SW; 2.5Y 6/3 light yellowish brown; fine to coarse grained sand; trace fines; moist; no staining; no odor.							
5					0730 SB-3-5			0.0	5	Backfill with hydrated bentonite granules.
					--			0.0		
					0740 SB-3-10			0.0		
10			Hole terminated at 10 feet.						10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/8/19** COMPLETED: **8/8/19**
INSTALLATION: STARTED **8/8/19** COMPLETED: **8/8/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 540m**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SB-4** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **15.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 6".							Backfill with rapid-set concrete.
		SC	**CLAYEY SAND** ; SC; 2.5Y 4/2 dark grayish brown; fine to medium grained sand; medium plasticity fines; very moist; no staining; slight septic odor.		--			0.0		
5		SW	**WELL GRADED SAND** ; SW; 2.5Y 6/3 light yellowish brown; fine to coarse grained sand; trace fines; moist; no staining; no odor.		1110 SB-4-5			0.0	5	
					--			0.0		Backfill with hydrated bentonite granules.
10					1120 SB-4-10			0.0	10	
					--			0.0		
15			Hole terminated at 15 feet.		1125 SB-4-15			0.0	15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SB-5** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **15.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 6".							Backfill with rapid-set concrete.
		SC	**CLAYEY SAND** ; SC; 10YR 3/3 dark brown; fine to medium grained sand; some medium plasticity fines; very moist; no staining; no odor.		--			0.0		
		SP-SM	**POORLY GRADED SAND WITH SILT** ; SP-SM; 2.5Y 5/3 light yellowish brown; fine grained sand; little fines; moist; no staining; no odor.							
5		SW	**WELL GRADED SAND** ; SW; 2.5Y 5/3 light yellowish brown; fine to coarse grained sand; trace fines; moist; no staining; no odor.		1435 SB-5-5			0.0	5	
					--			0.0		Backfill with hydrated bentonite granules.
10					1440 SB-5-10			0.0	10	
					--			0.0		
15					1445 SB-5-15			0.0	15	
			Hole terminated at 15 feet.							

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-1** PAGE 1 OF 2
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **25.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Asphalt 4".							
		SM	**SILTY SAND** ; SM; 10YR 3/3 dark brown; fine to medium grained sand; some fines; moist; no staining; no odor.							Hydrated bentonite granules.
										Dry bentonite granules.
		SW	**WELL GRADED SAND** ; SW; 2.5Y 5/3 light yellowish brown; fine to coarse grained sand; trace fines; moist; no staining; no odor.		--			0.0		#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
5									5	
					--			0.0		Hydrated bentonite granules.
10									10	
					--			0.0		Dry bentonite granules. #3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
15									15	
					--			0.0		Hydrated bentonite granules.

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-1** PAGE 2 OF 2
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **25.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
		SW								Dry bentonite granules.
		SC	**CLAYEY SAND** ; SC; 10YR 4/4 brown; fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		--			0.0		#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
25			Hole terminated at 25 feet.						25	
30									30	
35									35	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-2** PAGE 1 OF 2
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **25.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Asphalt 3".							
		CL	**SANDY CLAY** ; CL; 2.5Y 2.5/1 black; some very fine to fine grained sand; high plasticity fines; moist; no hydrcarbon staining; minor organic odor.							Hydrated bentonite granules.
		SM	**SILTY SAND** ; SM; 2.5Y 5/3 olive; very fine to fine grained sand; some fines; moist; no staining; no odor.							Dry bentonite granules.
5					--			0.0	5	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
		SP	**POORLY GRADED SAND** ; SP; 2.5Y 6/3 light yellowish brown; fine grained sand; trace fines; moist; no staining; no odor.							
10					--			0.0	10	Hydrated bentonite granules.
										Dry bentonite granules.
15					--			0.0	15	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
		SW	**WELL GRADED SAND** ; SW; 2.5Y 5/3 light yellowish brown; fine to coarse sand; trace fine; moist; no staining; no odor.							Hydrated bentonite granules.
					--			0.0		

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-2** PAGE 2 OF 2
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **25.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
25		SW	Hole terminated at 25 feet.		--			0.0	25	Dry bentonite granules. #3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
30									30	
35									35	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-3** PAGE 1 OF 2
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **25.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
5		SM	**SILTY SAND** ; SM; 2.5Y 4/4 olive brown; very fine to medium grained sand; some fines; moist; no staiing; no odor.		--			0.0	5	Hydrated bentonite granules. Dry bentonite granules. #3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
10					--			0.0	10	Hydrated bentonite granules. Dry bentonite granules. #3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
15					--			0.0	15	
					--			0.0		Hydrated bentonite granules.

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-3** PAGE 2 OF 2
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **25.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
		SW-SM	**WELL GRADED SAND WITH SILT** ; SW-SM; 2.5Y 6/3 light yellowish brown; very fine to fine grained sand; little fines; moist; no staining; no odor.							
		SW	**WELL GRADED SAND** ; SW; 2.5Y 6/3 light yellowish brown; very fine to coarse grained sand; trace fines; moist; no staining; no odor.		--			0.0		
25			Hole terminated at 25 feet.						25	Dry bentonite granules. #3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
30									30	
35									35	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-4** PAGE 1 OF 2
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **25.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
		GP-GM	**POORLY GRADED GRAVEL WITH SILT** ; GP-GM; Coarse grave; some fine grained sand; some silt; dry; no staining; no odor.							
		SM	**SILTY SAND** ; SM; 10YR 3/3 dark brown; fine to medium grained sand; some fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
5					1035 SV-4-5			0.0	5	Dry bentonite granules. #3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
		CL	**SANDY CLAY** ; CL; 10YR 3/3 dark brown; some very fine to fine grained sand; medium plasticity fines; moist; no staining; no odor.		--			0.0		
10		SC	**SANDY CLAY** ; SC; 10YR 3/3 dark brown; very fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		1045 SV-4-10			0.0	10	Hydrated bentonite granules.
		SM	**SILTY SAND** ; SM; 10YR 3/3 dark brown; very fine to medium grained sand; some fines; moist; no staining; no odor.		--			0.0		Dry bentonite granules.
15					1048 SV-4-15			0.0	15	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
		CL	**SANDY CLAY** ; CL; 10YR 3/3 dark brown; some very fine to fine grained sand; medium plasticity fines; moist; no staining; no odor.		--			0.0		
		SP-SM	**POORLY GRADED SAND WITH SILT** ; SP-SM; 10YR 5/4 yellowish brown; fine grained sand; little fines; moist ; no staining; no odor.		1052 SV-4-20			0.0		Hydrated bentonite granules.

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-4** PAGE 2 OF 2

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NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **25.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
		SP-SM			--			0.0		Dry bentonite granules.
					1055 SV-4-25			0.0		#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
25			Hole terminated at 25 feet.						25	
30									30	
35									35	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/6/19** COMPLETED: **8/6/19**
INSTALLATION: STARTED **8/6/19** COMPLETED: **8/6/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **SV-6** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 6".							
		SW	**WELL GRADED SAND** ; SW; 2.5Y 6/4 light yellowish brown; fine to coarse grained sand; trace fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
										Dry bentonite granules.
5		CL	**CLAY WITH SAND** ; CL; 2.5Y 3/2 very dark grayish brown; little fine grained sand; high plasticity fines; moist; no staining; no odor.		0828 SV-6-5			0.0	5	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
		SW-SM	**WELL GRADED SAND WITH SILT** ; SW-SM; 2.5Y 4/2 dark grayish brown; fine to coarse grained sand; little fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
					0835 SV-6-10			0.0		
10			Hole terminated at 10 feet.						10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/6/19** COMPLETED: **8/6/19**
INSTALLATION: STARTED **8/6/19** COMPLETED: **8/6/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **SV-7** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 7".							
		SM	**SILTY SAND WITH GRAVEL** ; SM; 2.5Y 5/3 light olive brown; some fine to coarse gravel; fine to coarse grained sand; some fines; moist; no staining; no odor.							
		CL	**SANDY CLAY** ; CL; 2.5Y 4/2 dark grayish brown; some fine to medium grained sand; high plasticity fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
										Dry bentonite granules.
		SC	**CLAYEY SAND** ; SC; 2.5Y 4/2 dark grayish brown; fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		0925 SV-7-5			0.0		#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
5									5	
		SW-SM	**WELL GRADED SAND WITH SILT** ; SW-SM; 2.5Y 5/3 light olive brown; fine to coarse grained sand; little fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
					0935 SV-7-10			0.0		
10			Hole terminated at 10 feet.						10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/6/19** COMPLETED: **8/6/19**
INSTALLATION: STARTED **8/6/19** COMPLETED: **8/6/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **SV-8** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **5.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 19".							
		SM	**SILTY SAND** ; SM; 2.5Y 4/4 olive brown; fine to coarse grained sand; some fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
		SC	**CLAYEY SAND** ; SC; 2.5Y 3/3 dark olive brown; fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		1010 SV-8-5			0.0		Dry bentonite granules.
5			Hole terminated at 5 feet.						5	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
10									10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/6/19** COMPLETED: **8/6/19**
INSTALLATION: STARTED **8/6/19** COMPLETED: **8/6/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **SV-9** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **5.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 6".							
		SW-SM	**WELL GRADED SAND WITH SILT** ; SW-SM; 2.5Y 6/3 light yellowish brown; fine to coarse grained sand; little fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
		SM	**SILTY SAND** ; SM; 2.5Y 4/3 olive brown; very fine to medium grained sand; some fines; moist; no staining; no odor.		1045 SV-9-5			0.0		Dry bentonite granules.
5			Hole terminated at 5 feet.						5	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
10									10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/8/19** COMPLETED: **8/8/19**
INSTALLATION: STARTED **8/8/19** COMPLETED: **8/8/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 540m**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-11** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **15.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 21".							
		SC	**CLAYEY SAND** ; SC; 2.5Y 4/4 olive brown; very fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
		SM	**SILTY SAND** ; SM; 2.5Y 3/3 dark olive brown; fine to medium grained sand; some fines; moist; no staining; no odor.							Dry bentonite granules.
5		SW	**WELL GRADED SAND** ; SW; 2.5Y 6/3 light yellowish brown; fine to coarse grained sand; trace fines; moist; no staining; no odor.	☒	0810 SV-11-5			0.0	5	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
					--			0.0		
10				☒	0835 SV-11-10			0.0	10	Hydrated bentonite granules.
					--			0.0		Dry bentonite granules.
15				☒	0840 SV-11-15			0.0	15	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
			Hole terminated at 15 feet.							

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/9/19** COMPLETED: **8/9/19**
INSTALLATION: STARTED **8/9/19** COMPLETED: **8/9/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 6620 DT**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-12** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **15.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 6".							
		SC	**CLAYEY SAND** ; SC; 2.5Y 4/2 dark grayish brown; fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
										Dry bentonite granules.
5		SP-SM	**POORLY GRADED SAND WITH SILT** ; SP-SM; 2.5Y 5/2 grayish brown; fine graiend sand; little fines; moist; no staining; no odor.		1520 SV-12-5			0.0	5	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
					--			0.0		
10					1530 SV-12-10			0.0	10	Hydrated bentonite granules.
					--			0.0		
										Dry bentonite granules.
15					1535 SV-12-15			0.0	15	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
			Hole terminated at 15 feet.							

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/8/19** COMPLETED: **8/8/19**
INSTALLATION: STARTED **8/8/19** COMPLETED: **8/8/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 540m**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-13** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **15.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 7".							
		SC	**CLAYEY SAND** ; SC; 2.5Y 3/3 dark olive brown; fine to medium grained sand; some medium plasticity fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
										Dry bentonite granules.
		SM	**SILTY SAND** ; SM; 2.5Y 5/3 light yellowish brown; fine to medium grained sand; some fines; moist; no staining; no odor.		0933 SV-13-5			0.0		#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
5									5	
		SW-SM	**WELL GRADED SAND WITH SILT** ; SW-SM; 2.5Y 6/4 light yellowish brown; very fine to medium grained sand; little fines; moist; no staining; no odor.		--			0.0		
					0953 SV-13-10			0.0		Hydrated bentonite granules.
10									10	
					--			0.0		Dry bentonite granules.
					0958 SV-13-15			0.0		#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
15			Hole terminated at 15 feet.						15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/6/19** COMPLETED: **8/6/19**
INSTALLATION: STARTED **8/6/19** COMPLETED: **8/6/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **SV-14** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **5.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 7".							
		SM	**SILTY SAND** ; SM; 2.5Y 4/3 olive brown; fine to coarse grained sand; some fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
										Dry bentonite granules.
					1405 SV-14-5			0.0		#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
5			Hole terminated at 5 feet.						5	
10									10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/6/19** COMPLETED: **8/6/19**
INSTALLATION: STARTED **8/6/19** COMPLETED: **8/6/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Hand Auger**
DRILLING METHOD: **Hand Auger**
SAMPLING EQUIPMENT: **Glass Jar**

WELL / TEST PIT / BOREHOLE NO: **SV-15** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **5.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.5**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
			Concrete 7".							
		SM	**SILTY SAND** ; SM; 2.5Y 4/3 olive brown; fine to coarse grained sand; some fines; moist; no staining; no odor.		--			0.0		Hydrated bentonite granules.
										Dry bentonite granules.
					1340 SV-15-5			0.0		#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
5			Hole terminated at 5 feet.						5	
10									10	
15									15	

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19

PROJECT: **GNAP Fullerton**
LOCATION: **2001 East Orangethorpe, Fullerton, California**
PROJECT NUMBER: **185804430**
DRILLING: STARTED **8/8/19** COMPLETED: **8/8/19**
INSTALLATION: STARTED **8/8/19** COMPLETED: **8/8/19**
DRILLING COMPANY: **Strongarm Environmental Field Services**
DRILLING EQUIPMENT: **Geoprobe 540m**
DRILLING METHOD: **Direct Push Technology**
SAMPLING EQUIPMENT: **Acetate Liner**

WELL / TEST PIT / BOREHOLE NO: **SV-16** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **15.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **2.25**
LOGGED BY: **J. Sargent** CHECKED BY: **B. Viggiano**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)	Borehole Backfill
		SM	**SILTY SAND** ; SM; 2.5Y 5/3 light olive brown; very fine to medium grained sand; some fines; moist; no staining; no odor.							Hydrated bentonite granules.
		SW	**WELL GRADED SAND** ; SW; 2.5Y 6/4 light yellowish brown; little fine gravel; fine to coarse grained sand; trace fines; moist; no staining; no odor.		--			0.0		Dry bentonite granules.
5									5	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.
					--			0.0		Hydrated bentonite granules.
10									10	
					--			0.0		Dry bentonite granules.
15			Hole terminated at 15 feet.						15	#3 Lone Star sand pack. 2" airstone connected to 1/4" Nylaflow tubing.

GEO FORM 304 GNAP_FULLERTON_BORING_LOGS.GPJ SECOR INTL.GDT 8/15/19