AEI Consultants

July 30, 2019

LIMITED PHASE II SUBSURFACE INVESTIGATION REPORT

Property Identification:
31-57 South B Street and 349 1st Avenue
San Mateo, California 94401

AEI Project No. 407966

Prepared for:
Prometheus Real Estate Group
1450 Chapin Avenue, 2nd Floor
Burlingame, California 94010

Prepared by:
AEI Consultants
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(408) 559-7600

Environmental Due Diligence

Building Assessments

Site Investigation & Remediation

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1450 Chapin Avenue, 2nd Floor
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Subject: **Limited Phase II Subsurface Investigation Report**
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San Mateo, California 94401
AEI Project No. 407966

AEI Consultants (AEI) is pleased to provide this report which describes the activities and results of the Limited Phase II Subsurface Investigation (Phase II) performed at 31-57 South B Street & 349 1st Avenue in San Mateo, California ("the Site"). This investigation was completed in general accordance with the authorized scope of services outlined in our authorized proposal number 95061. The investigation activities are presented below.

1.0 SITE DESCRIPTION

The Site is located at 31-57 South B Street and 349 1st Avenue in San Mateo, California. The Site consists of 0.32 acres of commercial land. Two buildings are present on the Site. One of the buildings is approximately 3,728 square feet (sq ft) and is located on the northwestern portion of the Site. The other building is approximately 5,608 sq ft and is located on the southeastern portion of the Site. Figure 1 presents the Site location and vicinity. Figure 2 presents the Site plan.

A one-story building located on the Site is currently occupied by China Bee Restaurant (31 South B Street), Saigon Barber Shop (35 South B Street), Poke Island Creasian Kitchen (43 South B Street), and Eggettes (47 South B Street). The southeastern building is a single-story building occupied by Donut Deliite (57 South B Street) and Van Dalen Scales Corporation (349 1st Avenue). The remainder of the Site is covered by asphalt and the general use in the vicinity of the Site is commercial land use.

The Site is relatively flat at an elevation of about 30 feet above mean sea level. The regional topographic gradient direction slopes toward the north-northwest and, therefore, the direction of groundwater flow beneath the subject property is inferred to be to the northwest. The San Francisco Bay is located approximately 1.5 miles to the northeast of the Site.

Based on a review of the United States Geological Survey (USGS) San Francisco Bay Quadrangle Geologic Map, the area surrounding the subject property is underlain by the Santa Clara Formation and the Quaternary age alluvial deposits.

Refer to Section 4.1 below for additional information on the site geology and groundwater conditions.

2.0 BACKGROUND

A Phase I Environmental Site Assessment (ESA) was performed by Geosyntec as detailed in a report dated June 20, 2019. Described in the Phase I ESA, two offsite facilities operated as dry cleaners and used chlorinated solvents or have open remediation cases for chlorinated solvents in the vicinity of the Site.

3.0 INVESTIGATION EFFORTS

AEI was requested to perform additional investigation, including the collection of groundwater and soil gas samples to evaluate whether the Site has been significantly impacted by Tetrachloroethylene (PCE) and associated breakdown products.

3.1 Health and Safety Plan

A site-specific health and safety plan was prepared, reviewed by onsite personnel, and kept onsite for the duration of the fieldwork.

3.2 Permitting and Utility Clearance

Drilling permits were obtained from San Mateo County Environmental Health Services for this investigation, a copy of which is included in Appendix A. The public underground utility locating service (USANorth) was notified to identify public utilities in the work area. Private utility locating was conducted by Ground Penetrating Radar Services, Inc. of San Jose, California to identify underground utilities on the Site.

3.3 Drilling and Soil Sample Collection

On July 16, 2019, three (3) soil borings (SB-1 through SB-3) were advance on the Site at the locations shown on Figure 2. AEI contracted Environmental Control Associates (ECA) of Aptos, California, to advance each of the soil borings using a truck-mounted direct push drilling rig. The borings were advanced to depths between 15 and 20 feet below ground surface (bgs). The soil boring locations are shown on Figure 2 and were located across the Site to characterize the potential presence and distribution of volatile organic compounds (VOCs) in soil gas and groundwater beneath the Site.

Soil core from each of the soil borings was continuously collected for the purposes of lithologic logging, headspace testing and sample collection for potential laboratory analyses. Soil samples were obtained using a single-walled coring system approximately 2.25-inches and 4-feet in length containing plastic liners. The coring system was connected to 1-inch diameter, flush-jointed drill rod that was hydraulically driven (pushed) by the rig to each target sample depth. Upon retrieval from each sample depth interval, the coring system was opened, followed by the removal and opening of the plastic liners and preparation of soil samples for laboratory analyses. After opening the liners, the soils also were visually inspected for the potential presence of impacted soils. Recovered soils were described on field boring logs in general conformance with the United Soil Classification System (USCS). Additional lithologic descriptions and drilling information were recorded on the boring logs presented in Appendix B.

The soil borings were logged using the Unified Soil Classification System. The soil samples were collected for potential chemical analysis by cutting 6-inch increments from the acetate liner, sealing the ends with Teflon™ tape and plastic endcaps. The soil samples were labeled with the project name, project number, boring number, sample depth, and sampling date/time then placed into a ice-chilled cooler for transport to the analytical laboratory and placed on hold depending on future analyses. Chain-of-custody documentation was completed and accompanied the samples during transport to the analytical laboratory.

Drilling and sampling equipment were cleaned prior to and/or after drilling each boring. The equipment was cleaned using a triple-rinse method, which consisted of an initial rinse containing an Alconox and water solution, followed by two tap water rinses (second and third, final rinses).

3.3.1 Headspace Testing

Headspace testing was performed with a photo-ionization detector (PID) equipped with an electrodeless 10.6 eV ultraviolet lamp or equivalent for detecting the presence of total volatile organic compounds (VOCs) in the soil samples. To initiate the headspace testing procedure, soil samples were removed from the sample liners, placed into labeled, plastic bags, and sealed for conducting the tests. After sufficient time had elapsed for gas build-up inside the bag, each bag was punctured with the probe tip of the PID to allow for measurement of the headspace. Measurements of the headspace were obtained in the parts per million (ppm) range for total VOCs. The PID readings were recorded on the boring logs presented in Appendix B.

3.4 Groundwater Sample Collection

Upon reaching the drilling refusal at 50 feet bgs, borings SB-1 through SB-3 were completed as temporary groundwater wells. Temporary well materials consisting of 0.75-inch diameter, 0.010 slotted, poly vinyl chloride (PVC) casing were installed into each borehole to facilitate groundwater infiltration and groundwater sample collection from the anticipated water-bearing zone. The temporary well materials remained in-place for approximately one to two hours to allow for infiltration of groundwater into each borehole. During this timeframe, sufficient groundwater infiltrated into the boreholes for groundwater sample collection.

Prior to the collection of the groundwater samples, groundwater (approximately 500 milliliters) was purged from each temporary casing. After purging, a groundwater sample was collected from each location utilizing a check-valve with dedicated tubing. The collected samples were then placed into laboratory-supplied sample containers, sealed, labeled with a unique identifier, and placed in an ice chilled cooler. Upon collection of each groundwater sample (including a duplicate), the equipment was thoroughly decontaminated and an equipment blank (EB-1) was collected. Chain-of-custody documentation was prepared and accompanied the groundwater samples to the analytical laboratory, a copy of which is included in Appendix C.

3.5 Soil Gas Sample Collection

Soil gas sampling was conducted in general conformance with guidance provided in the Advisory – Active Soil Gas Investigations dated July 2015 prepared by the DTSC. Upon installation, each temporary soil gas probe was allowed to equilibrate for a minimum of two hours. Prior to sampling, a series of quality assurance/quality control (QA/QC) tests, including shut-in tests and leak tests, were performed in sequential order at each location. Shut-in tests were conducted to

check for leaks in the above-ground sampling system. Leak tests were performed using helium to evaluate if leakage or ambient air was introduced into the soil gas samples during collection.

Leak check tests were performed by encapsulating the sample apparatus (Summa™ canister) and surface completion of the soil gas probe inside a gas-impermeable shroud at each location. During purging and sampling at the location, helium was introduced into the shroud atmosphere. The concentration within the shroud atmosphere was measured using a helium detection meter. A significant leak was assumed to be present inside the shroud if the ratio of the helium concentration in the soil gas sample to the helium concentration inside the shroud was greater than 5%.

Upon completion of the assembly testing at the location, a soil gas sample was obtained with one-liter Summa™ canisters fitted with laboratory-calibrated, flow controllers equipped with vacuum gauges and particulate filters. The Summa™ canister was individually checked, tested, and certified by the laboratory for air tightness and proper vacuum prior to shipping. The Summa™ canister was connected to the inert tubing, which daylighted from the borings above the ground surface. The sample was obtained at flow rates between 80 and 150 milliliters per minute. Initial and final readings on the vacuum gauge was recorded at the beginning and end of the sampling process to confirm sample collection. Sampling was completed with a slight vacuum remaining in each of the canisters.

Upon sample retrieval, the Summa™ canister was labeled with the appropriate project information, including the project name, project number, sample location and depth, date and time of sampling, sampler's name, canister identification number, and the initial and final canister vacuum. Chain-of-custody documentation was completed and accompanied the Summa™ canisters to the analytical laboratory, a copy of which is included in Appendix C.

3.6 Boring Destruction

Upon completion of sample collection and removal of probe construction materials, the borings were backfilled with neat cement grout and completed at the ground surface to match surrounding conditions. The sampling points were completed at the ground surface to match surrounding conditions.

3.7 Laboratory Analyses

The groundwater samples were labeled and placed into a cooler with ice following sampling. The groundwater and soil gas samples were transferred under appropriate chain-of-custody documentation to Pace Analytical, Inc. of Mount Juliet, Tennessee. Laboratory analytical documentation is provided in Appendix C.

Laboratory analysis of five (5) groundwater samples consisted of the following:

- VOCs by EPA Testing Method 8260B

Laboratory analysis of seven (7) soil gas consisted of the following:

- VOCs by EPA Testing Method TO-15
- Helium (leak check) using ASTM D 1946-90

3.8 Investigation Derived Wastes

Investigation derived waste was left onsite in one 55-gallon drum. Disposition of waste will be dependent upon analytical results. Upon completion of the waste profiling, removal and transport of the wastes to an appropriate disposal facility can be arranged per client approval.

4.0 FINDINGS

4.1 Subsurface Conditions

Sediment encountered in each of the borings generally consisted of gravelly sand, clay, and sandy silt. Upon drilling to fifty (50) feet bgs in borings SB-1 through SB-3, and allowing one hour for groundwater to equilibrate, groundwater was observed at approximately twenty (20) to forty (40) feet bgs.

4.2 Groundwater Sample Analytical Results

Table 1 presents a summary of the groundwater sample analytical results. The results can be further summarized as follows:

- Tetrachloroethene (PCE) and Methylene Chloride were detected in groundwater sample SB-DUP at 0.897 and 2.39 micrograms per liter (µg/L), respectively, which does not exceed their environmental screening levels (ESLs) for commercial/industrial use. However, each result exceeds the residential ESL.

No other analytes were detected in each of the groundwater samples analyzed.

4.3 Soil Gas Sample Analytical Results

Table 2 presents a summary of the soil gas sample analytical results. The results can be further summarized as follows:

- PCE was detected in three of the seven soil gas samples analyzed, at concentrations between 10.6 and 42.3 micrograms per meter cubed (µg/m^3), which does not exceed the commercial ESL of 67 µg/m^3. PCE was detected in two of the seven soil gas samples at concentrations of 19.6 µg/m^3 and 42.3 µg/m^3 which exceed the residential ESL of 15 µg/m^3.
- Benzene was detected in six of the seven soil gas samples analyzed, at concentrations between 1.56 and 6.35 µg/m^3, which does not exceed the ESL of 14 µg/m^3. Benzene was detected in four of the seven soil gas samples at concentrations between 3.32 µg/m^3 and 6.35 µg/m^3 which exceed the residential ESL of 3.2 µg/m^3.
- Toluene was detected in each of the seven soil gas samples analyzed, at concentrations between 20.5 and 46.0 µg/m^3, which does not exceed the ESL of 44,000 µg/m^3.
- Ethylbenzene was detected in six of the seven soil gas samples analyzed, at concentrations between 1.89 and 7.78 µg/m^3, which does not exceed the ESL of 160 µg/m^3.
- Total Xylenes were detected in six of the seven soil gas samples analyzed, at concentrations between 7.25 and 31.37 µg/m^3, which does not exceed the ESL of 15,000 µg/m^3.

- Methylene chloride was detected in all seven soil gas samples analyzed, at concentrations between 1.76 and 48.7 µg/m^3, which does not exceed the commercial ESL of 410 µg/m^3. Methylene chloride was detected in two of the seven soil gas samples at concentrations of 35.6 µg/m^3 and 48.7 µg/m^3 which exceed the residential ESL of 34 µg/m^3.
- Helium, used as a leak check, was detected in soil gas samples SV-1-5, SV-1-9.5, and SV-3-5 at concentrations of 1.23, 2.65, and 5.98 percent, respectively. The helium detected in SV-1-9.5 and SV-3-5 exceed the ideal allowable helium detection in a soil gas sample indicating a leak. However, the concentrations of helium detected in SV-1-9.5 and SV-3-5 are within acceptable limits and do not invalidate the results of the analysis.

Several other analytes were detected in each of the soil gas samples analyzed, however, each detection was below the corresponding ESL for commercial/industrial use, if established.

5.0 SUMMARY AND CONCLUSIONS

AEI has completed a Phase II at the subject property. AEI was requested to perform investigation, including the collection of groundwater and soil gas samples to evaluate whether the Site has been significantly impacted by Tetrachloroethylene (PCE) and associated breakdown products. A total of three borings (SB-1 through SB-3) were advanced at the Site for the collection of groundwater and soil gas samples.

The results of this investigation were compared to RWQCB ESLs (January 2019) showing Groundwater Vapor Intrusion (VI) Human Health Risk Levels for Residential and Commercial/Industrial (C/I) exposure risks.

PCE and Methylene Chloride were detected in groundwater at SB-DUP at concentrations of 0.897 and 2.39 µg/L, respectively. The result for PCE exceeds the residential ESL but does not exceed the ESL for commercial/industrial use.

Concentrations of various compounds were detected in soil gas samples SV-1 through SV-3, however, no detections were above their respective ESLs for commercial/industrial use. Benzene (Sv-2-5, SV-2-9.5, SV-3-5, and SV-DUP), PCE (SV-2-9.5 and SV-DUP), and methylene chloride SV-2-5 and SV-3-9.5) were detected at concentrations exceeding the residential ESLs.

Based on this data, additional investigation may be warranted to identify extent of impacts to the subsurface if residential redevelopment is planned for the Site.

6.0 REFERENCES

California Department of Toxic Substances Control, California Environmental Protection Agency, and Los Angeles and San Francisco Bay Regional Water Quality Control Boards, 2015. *Advisory, Active Soil Gas Investigations*. July.

California Department of Toxic Substances Control, et al., 2011. *Final: Vapor Intrusion Guidance*. October.

Geosyntec, 2019. *Phase I Environmental Site Assessment*, *31-57 South B Street & 349 1st Avenue, San Mateo, San Mateo County, California*. 20 June 2019.

San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), 2019, *Environmental Screening Levels*, dated January 2019, revision 1.

7.0 REPORT LIMITATIONS AND RELIANCE

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested information, subject to scope of work for which AEI was retained and limitations inherent in this type of work, but it cannot be assumed that they are representative of areas not sampled. This report should not be regarded as a guarantee that no further contamination beyond that which could have been detected within the scope of this investigation is present beneath the subject property. Undocumented, unauthorized releases of hazardous material, the remains of which are not readily identifiable by visual inspection and are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation.

Any conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document. These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work. No other warranty, either expressed or implied, has been made.

This investigation was prepared for the sole use and benefit of Prometheus Real Estate Group, Inc. All reports, both verbal and written, whether in draft or final, are for the benefit of Prometheus Real Estate Group, Inc. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal and Standard Terms & Conditions executed by Prometheus Real Estate Group, Inc. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.

If there are any questions regarding our investigation, please do not hesitate to contact AEI at (925) 746-6000.

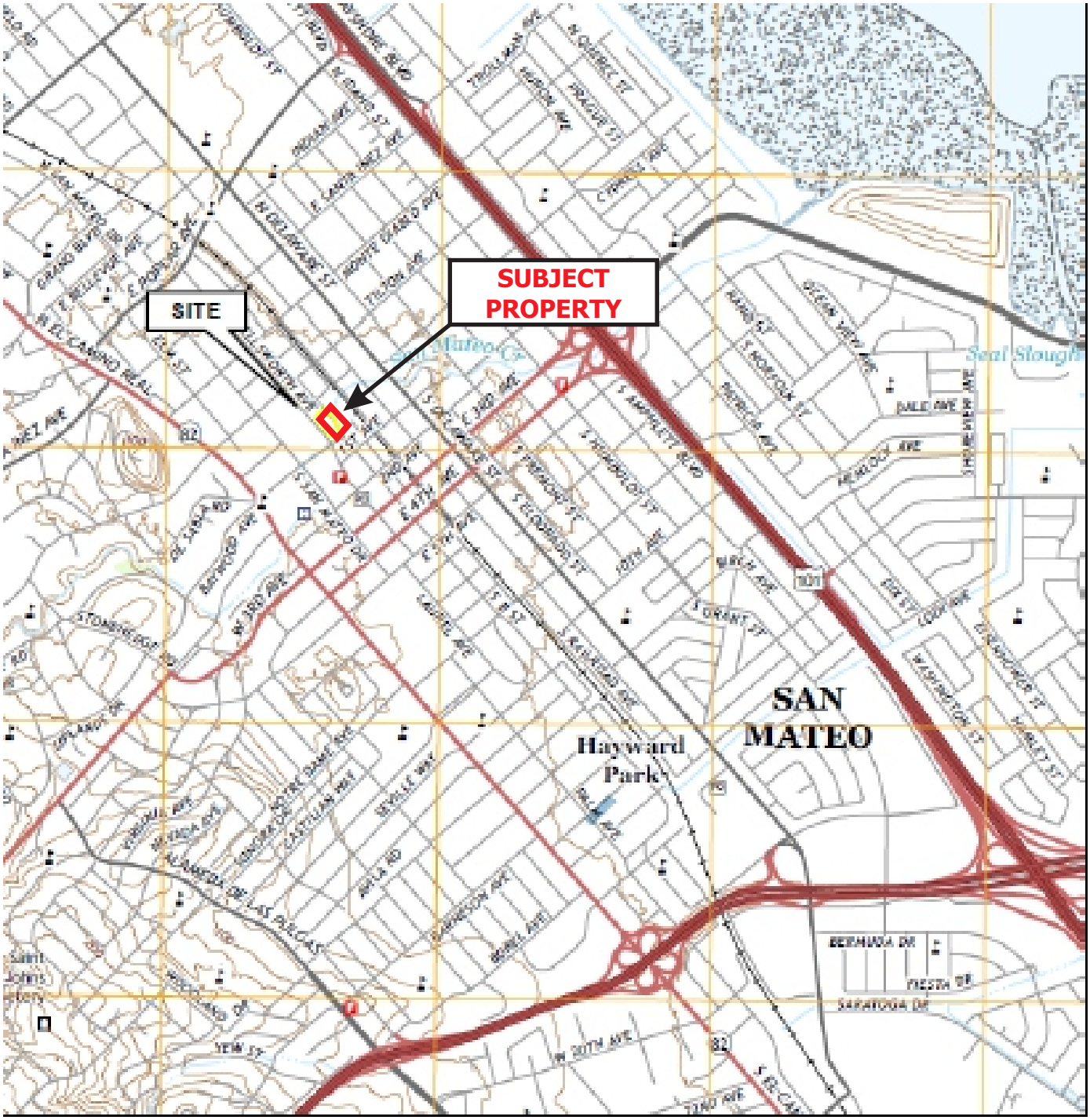
Sincerely,
AEI Consultants

DRAFT **DRAFT**

Jacob T. Henry, P.G. (Lic. No. 8504)
Senior Geologist

AEI Consultants
2500 Camino Diablo
Walnut Creek, California 94597
Phone: (925) 746-6000

FIGURES



LEGEND

N

Map: San Mateo 7.5 Minute Quadrangle
Date: 2015
Source: USGS

0 1,000 2,000
APPROXIMATE SCALE (FEET)

AEI Consultants

SITE LOCATION MAP

31-57 South B Street
& 349 1st Avenue
San Mateo, California 94401

FIGURE 1
Project No. 407966

LEGEND

- Dual-Nested Soil Vapor Sampling Location
- Groundwater Sampling Location
- Approximate Site Boundary

N

0 50

APPROXIMATE SCALE (Feet)

AEI CONSULTANTS

Site Map

31-57 South B Street &
349 1st Avenue
San Mateo, California

FIGURE 2
Project Number 407966

TABLES

TABLE 1: GROUNDWATER SAMPLE DATA SUMMARY
31-57 South B Street and 349 1st Avenue, San Mateo, California

Location ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	PCE (µg/L)	TCE (µg/L)	Methylene Chloride (µg/L)	Remaining VOCs (µg/L)
SB-1-W	7/22/2019	<2.0	<2.0	<2.0	<6.0	<2.0	<2.0	<10.0	<RDL
SB-2-W	7/22/2019	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	<RDL
SB-3-W	7/22/2019	<2.0	<2.0	<2.0	<6.0	<2.0	<2.0	<10.0	<RDL
SB-DUP-W	7/22/2019	<2.0	<2.0	<2.0	<6.0	**0.897 J**	<2.0 J4	**2.39 J**	<RDL
EB-1	7/22/2019	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0 J4	<5.0	<RDL
TB-1	7/22/2019	<1.0	<1.0	<1.0	<3.0	<1.00	<1.0 J4	<5.0	<RDL
Comparison Values:									
RWQCB ESL VI Res.		0.42	1,200	3.5	390	0.64	1.2	7.8	Various
RWQCB ESL VI C/I		1.8	4,900	15	1,600	2.8	7.5	94	Various

Notes:

µg/L	micrograms per liter
<RDL	less than the laboratory reporting limit
<	analyte not detected at or above the laboratory reporting limit
PCE	Tetrachloroethene
TCE	Trichloroethene
J	The identification of the analyte is acceptable; the reported value is an estimate
J4	The associated bartch QC was outside the established quality control range for accuracy
Bold	Detected
Bold	Exceeds residential ESL

Comparison Values:
San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) (January 2019) showing Groundwater Vapor Intrusion (VI) Human Health Risk Levels for Residential and Commercial/Industrial (C/I) exposure risks

TABLE 2: SOIL GAS SAMPLE DATA SUMMARY
31-57 South B Street and 349 1st Avenue, San Mateo, California

Location ID	Date	Depth (feet bgs)	Benzene (µg/m³)	Toluene (µg/m³)	Ethylbenzene (µg/m³)	Total Xylenes (µg/m³)	PCE (µg/m³)	TCE (µg/m³)	Methylene Chloride (µg/m³)	Remaining VOCs (µg/m³)	Helium Detected in Sample (%)	Field Helium Shroud (%)	Maximum Allowable Helium Detection in Sample (%)
SV-1-5	7/19/2019	5	**3.15**	**32.2**	**4.58**	**16.01**	<2.72	<2.14	10.6	<ESL	1.23	25.9	1.30%
SV-1-9.5	7/19/2019	9.5	**1.56**	**20.5**	**1.89**	**7.25**	<2.72	<2.14	18.7	<ESL	2.65	28.2	1.41%
SV-2-5	7/19/2019	5	**3.58**	**25.2**	**4.09**	**16.26**	**10.6**	<2.14	**48.7**	<ESL	<0.100	28.3	1.42%
SV-2-9.5	7/19/2019	9.5	**3.32**	**29.6**	**6.13**	**27.64**	**42.3**	<2.14	7.99	<ESL	<0.100	22.2	1.11%
SV-3-5	7/19/2019	5	**4.35**	**46.0**	**6.61**	**24.47**	<2.72	<2.14	1.84 B	<ESL	5.98	24.4	1.22%
SV-3-9.5	7/19/2019	9.5	<1.28	**23.0**	<1.73	<1.73	<2.72	<2.14	**35.6**	<ESL	<0.100	23.3	1.17%
SV-DUP	7/19/2019	5	**6.35**	**40.6**	**7.78**	**31.37**	**19.6**	<2.14	1.76 B	<ESL	<0.100	24.1	1.21%
Comparison Values:			3.2	10,000	37	3,500	15	16	34	Various			
ESL-Vapor Intrusion-C/I:			14	44,000	160	15,000	67	100	410	Various			

Notes:

µg/m³	micrograms per cubic meter
<ESL	less than the ESL
NA	not analyzed
bgs	below ground surface
TPHg	Total Petroleum Hydrocarbons as gasoline
PCE	Tetrachloroethene
TCE	Trichloroethene
Bold	Detected
Bold	Exceeds residential ESL

Comparison Values:

ESL - VI (C/I): ESL-Vapor Intrusion-C/I: Subslab/Soil Gas Vapor Intrusion Human Health Risk Levels for the Commercial/Industrial Use Exposure Scenario; Environmental Screening Levels (ESLs) from January 2019 ESL Summary Tables, prepared by the San Francisco Bay Regional Water Quality Control Board

APPENDIX A

PERMITS

SAN MATEO COUNTY HEALTH
ENVIRONMENTAL HEALTH SERVICES

Environmental Health Services
Groundwater Protection Program
2000 Alameda de las Pulgas, Suite #100
San Mateo, CA 94403
Phone:(650) 372-6200 | Fax: (650) 627-8244
smchealth.org/gpp

SUBSURFACE DRILLING PERMIT APPLICATION CHECKLIST

- Legibly filled in all appropriate blanks and boxes, except Signature and Date (reviewed instructions to verify appropriate to leave any lines blank or unchecked).

- Have all required signatures (can be on separate pages, do not need to be wet signatures).

- Included appropriate fee (revised **August 1, 2017**) with application.
  Can make payment by credit card over phone to (650) 372-6200 (indicate when and how application submitted).

- Included scaled site map of site in relation to cross streets and drilling location in relation to site features.

- Show approximate location(s) and ID/Name of Well/Borings,

- For well installations, indicate (i.e. mark on permit application) anticipated destruction method of these wells. May be asked to provide written description for small diameter (<2") wells.

- For well destructions via pressure grouting, included well construction logs and grout volume calculations.

- Shallow (<10') vapor wells do not need to be permitted. However, still must comply with Well Standards for installation and destruction (i.e. do not use bentonite alone in vadose zone for sanitary seal and remove all non-native material).

- Know to notify permitting inspector 2 full working days prior to start of drilling.
  Separate notification to case worker if known contaminated site.

- Know consultant must submit all required information within 60 days of drilling (preferably to drilling@smcgov.org):
  -Borings and wells require logs, site map, and analytical data
  -Wells additionally require surveyed coordinates and elevation, Well Completion Report (or indicate upload to DWR's OSWCR).

- Common mistakes to avoid on application:

  Listed potential buyer as Property Owner,

  Listed case's address rather than drilling location's address, and

  Failed to include Assessor's Parcel Number of the drilling location.

- Provided variance justification memo if temporary wells/borings may need to be left open for more than 24 hours to wait for groundwater recharge with estimate of maximum time needed.

- Permit is for **one mobilization** only. If work included in this permit cannot be done in a single mobilization, another permit may be required.

- Understand well owner must submit indication of annual use of wells (monitoring reports in association with corrective action requests satisfies this requirement); otherwise, wells need to be destroyed within year of last originally intended use.

- Any application for drilling within a landfill (Geotechnical or Environmental) must be accompanied by a work plan. Work plans must be approved by San Mateo County Local Enforcement Agency (LEA) and Groundwater Protection Program prior to drilling.

SAN MATEO COUNTY HEALTH
ENVIRONMENTAL HEALTH SERVICES

Environmental Health Services
Groundwater Protection Program
2000 Alameda de las Pulgas, Suite #100
San Mateo, CA 94403
Phone:(650) 372-6200 | Fax: (650) 627-8244
smchealth.org/gpp

SUBSURFACE DRILLING PERMIT APPLICATION

Allow three (3) full working days for processing a complete permit application which includes payment (one permit per parcel). Drilling **start date & time** must be scheduled with County staff at (650) 464-0047 or drilling@smcgov.org **at least 2 full working days (i.e. 48 hours) in advance.** Visit smchealth.org/ehfees for Groundwater Protection Program Fees

PURPOSE OF APPLICATION
☒ Groundwater Monitoring/Vapor Well Installation ☐ Construct Soil Borings (variance request if to be left open >24 hrs)
☐ Groundwater Monitoring/Vapor Well Destruction Extension of Permit # _____
No. of Wells _____ No. of Borings 6 Well/Boring Names SB-1 - SB-3; SV-1 - SV-3

PURPOSE OF DRILLING
☒ Environmental ☐ Geotechnical

LEAD AGENCY
☐ County GPP (permit approval is not to be considered work plan approval)
☐ RWQCB/DTSC/USEPA (Provide approval letter) ☐ None (i.e. voluntary)

SITE / DRILLING INFORMATION

Agency Case # _____ Assessor's Parcel # (required) 034-154-030 (one per permit)
Drilling Location Address: 31-57 South B Street & 349 1st Avenue City: San Mateo Zip: 94401
To Be Constructed In: ☐ Public Property ☒ Private Property ☐ Refuse
Maximum Proposed Depth (wells/borings) 10 or First Encountered Groundwate (feet) Drilling Method: Direct Push
Boring Diameter: 2.25 Casing Diameter: NA Filter Pack Interval: NA Screen Interval: NA
Destruction Method: ☒ Pressure Grouting (provide well construction logs and grout calcs)
(6 gallons water max/94 lb cement, up to 5% bentonite) ☐ Overdrilling (guide rods for total depth prior to starting required)

WELL/BORING OWNER (Well/boring owner name or contact person should match signature)

Name: Massimo B. Kaz Contact Person: _____
Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401
Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

It is my responsibility to notify the County of any known changes in the purpose of this well/boring from that which is indicated on this application, to submit indication of annual usage of wells to the County, and to maintain the well in good condition. (*Letter signed by well/boring owner/contact person, containing above language and attesting to knowledge of all permit requirements and conditions, may be substituted for signature.)*

Well/Boring Owner's/Contact Person's Signature: _____ Date: _____

PROPERTY OWNER (Name as appears on assessor's roles should match signature)

Name: Massimo B. Kaz Contact Person: _____
Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401
Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

I understand that a well/boring is being installed on my property. I agree to notify the County and Well Owner of any known damage or future access issues to the well *(Letter signed by property owner, containing above language, or encroachment permit may be substituted for signature)*

Property Owner's Signature: _____ Date: _____

DRILLING COMPANY

Drilling Company: Environmental Control Associates Contact Person: Tim Tyler
Address: 3011 Twin Palms Dr City, State, Zip: Aptos, CA, 95003
Telephone: (831) 662-8178 Email: tbtyler@sbcglobal.net C57 Drillers License # 695970

I certify that the well/boring will be constructed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards, and that the license listed above is considered current and active by the Contractors State License Board.

Driller's Signature: _____ Date: _____

CONSULTANT COMPANY

Consultant Company: AEI Consultants Project Manager: Jacob Henry
Address: 2500 Camino Diablo City, State, Zip: Walnut Creek, CA, 94597
Telephone: (925) 746-6000 Email: jhenry@aeiconsultants.com
Field Contact & Cell # (if known): Jeff Stromberg (949) 939-5523

I certify that this application is correct to the best of my knowledge and the well/boring will be constructed/destroyed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards. I understand that I am responsible for General Conditions E, F, K, and L of this permit and if I indicated the purpose of drilling is geotechnical, then no one will use the boring to collect any samples for environmental analyses. If there is a change in Responsible Professional, I will notify San Mateo County GPP staff.

Responsible Professional's Name (Please print legibly): Jacob T. Henry, P.G.
Responsible Professional's Signature: _____ Date: 7/5/2019
California Professional Geologist (PG) No. 8504 or Civil Engineer (PE) No. _____

SUBSURFACE DRILLING PERMIT APPLICATION

REQUIREMENTS:

An accurate and correct map **must** be submitted with the application and include the following: north arrow, existing and historic site features, existing and proposed well/boring locations with ID's to scale, property lines and any other pertinent information. A work plan describing the drilling and construction/destruction methodology may be requested by County staff. A complete application with appropriate fees must be submitted 3 working days in advance of drilling and notification of start date and time must be provided at least 2 working days prior to drilling. The permit is subject to both General and Special Conditions stated below. A copy of the approved Subsurface Drilling Permit **must** be available on site while work related to the permit is being performed. **Drilling may begin at the notified date and time whether County staff is present or not.**

GENERAL CONDITIONS:

A. Field notification must be provided to GPP drilling inspection staff at least 2 full working days prior to the start of drilling. GPP Caseworker also must be notified if site is associated with a remedial action case.

B. Well and boring construction and destruction under this permit are subject to the Standards for the Construction of Wells in San Mateo County, County Groundwater Protection Program (GPP) Guidelines, Policies & Procedures, the State Water Well Standards, and any instructions by a Health Department representative.

C. Well/Boring Owner, Driller, and Responsible Professional assume responsibility for all activities and uses under the permit, including compliance with Workmen's Compensation Laws, and indemnify, defend and save the County of San Mateo, its officers, agents and employees, free and harmless from any and all expense, cost, or liability in connection with or resulting from work or stopped-work associated with the permit, including, but not limited to, property damage, personal injury, wrongful death, and loss of income.

D. All borings **must** be properly destroyed (grouted/sealed) within 24 hours of drilling, unless special conditions are approved beforehand in writing as part of this permit, and must be continuously protected and stabilized.

E. Analytical results of all soil, vapor, and groundwater samples collected during the execution of drilling under this permit **must** be submitted to County GPP staff by the Responsible Professional within 60 days of sample collection. If contamination is discovered during drilling, verbal notification to County GPP by the Responsible Professional is **required** within 72 hours of discovery. Proper storage, labeling & disposal of investigation-derived residual wastes are the responsibility of the consultant unless stated otherwise contractually.

F. Boring logs, well construction details, and finalized as-built location map for all borings/ wells (except geotechnical borings) signed by a Responsible Professional, **must** be submitted to County GPP by the Responsible Professional within 60 days of drilling/construction/destruction. DWR Form 188 must be filed with the State per water code 13752.

G. Permit is valid only for the purpose specified herein. No change in purpose or required procedures, as described on this permit application, in the associated workplan, or in the special conditions below, will be allowed except upon written permission from the County. Construction aspects can be changed based on conditions encountered in the field.

H. **Permit is valid for one mobilization** associated with originally permitted boring/well locations only, including contingency locations, and is automatically canceled if not exercised, or if an extension is not applied for and granted within 120 days of the original permit issuance date. Failure to notify staff of cancellation or delay in start time will result in the Consultant being billed an Inspection Cancellation fee if GPP staff attempted to perform an inspection. Fees are listed at smchealth.org/ehfees

I. Wells installed under this permit may not be used for domestic, municipal, agricultural, or irrigation water supply.

J. All work performed **must** conform to Business and Profession Codes and State Water Well Standards.

K. Top-of-casing elevation of all wells **must** be surveyed to the nearest 0.01-foot relative to Mean Sea Level or NAVD88 and submitted to County GPP within 60 days of drilling, and to State GeoTracker as appropriate. Geotechnical wells are exempt from this requirement if a written variance from GPP is obtained prior to drilling.

L. Latitude and longitude of all wells **must** be surveyed with sub-meter accuracy relative to NAD83 and submitted to County GPP within 60 days of drilling, and to State GeoTracker as appropriate.

M. Violation of any requirement or general or special permit condition may result in an order by GPP staff to cease work under this permit, correct the violation, potentially re-permit the work as a new mobilization, and potential actions may be taken against the Well Owner, Property Owner, or Responsible Professional by GPP.

SPECIAL CONDITIONS: _____

(agency use only) _____

_____

_____

For Agency Use Only:

County Approval: _____ FA # _____ Date: _____

SUBSURFACE DRILLING PERMIT APPLICATION

PERMIT APPLICATION INSTRUCTIONS AND FEES

A subsurface drilling permit for borings and wells is required if groundwater is anticipated to be encountered or if drilling extends to 10 feet or deeper. Sub-slab and vapor wells shallower than 10 feet do not require a permit. Should groundwater be encountered shallower than 10 feet unexpectedly, then contact San Mateo County Health System Groundwater Protection Program (GPP) immediately and a permit application will be required retroactively. GPP is the permitting agency for all subsurface drilling for environmental and geotechnical purposes within San Mateo County except in the City of Daly City. All drilling in the City of Daly City is permitted by the City of Daly City Water and Wastewater Department at (650) 991-8200 with appropriate notification to GPP for GPP lead sites. San Mateo County Health System Land Use Program (LUP) reviews all water well permit applications (smchealth.org/environ/forms) for public supply, domestic, agricultural, cathodic protection, exploratory, and geothermal heat exchange well construction and destruction and permit applications for all reconnaissance, investigation, and excavation work strictly for land use purposes. Please contact the LUP at (650) 372-6200 to discuss permitting, notification, and drilling requirements.

A 120-day extension may be granted for permits which have not been used during the original 120-day time frame. Submit another Subsurface Drilling Permit Application and payment for the permit extension fee at 50% of the fee for the type of drilling. Extension must be requested prior to the original permit expiring. If there are several wells and borings over several contiguous assessor's parcels and public right-of-ways, then discuss the fee with the County inspector at (650) 464-0047 or drilling@smcgov.org. The County inspector may charge only one fee for borings and wells constructed across contiguous assessor's parcels and public right-of- ways. However, this is dependent on how much the County inspector believes will need to be inspected in the field and how much review time of required submittals will be needed.

Section 1: Purpose of Application

At least one of the four boxes must be selected; however, multiple boxes may be selected as long as all of the wells and borings are on the same assessor's parcel or public right-of-way (see Section 4). A **boring** under this permit application is defined as a constructed hole lasting less than 24 hours before being properly destroyed. After 24 hours, the constructed hole is considered a **well** under this permit application which needs to be constructed appropriately unless special conditions are approved as part of the permit. If Permit Extension is selected, then write in the permit number of the permit to be extended. List the number of wells and borings anticipated to be drilled and what they will be named. This number may change in the field based on conditions encountered.

Section 2: Purpose of Drilling

At least one of the two boxes must be selected; however, both boxes may be selected as long as both purposes of drilling are to be conducted on the same assessor's parcel or public right-of-way (see Section 4). Geotechnical Drilling may also be conducted under San Mateo County's Annual Geotechnical Drilling Permit in which consulting companies pay an annual fee to perform this type of drilling an unlimited amount of times for 365 days after obtaining the Annual Geotechnical Drilling Permit. Fees are listed at **smchealth.org/ehfees** Please note, a Notification Form (not available on website) similar to this Subsurface Drilling Permit Application must be completely filled out and submitted at least 2 business days (48 hours) prior to drilling under the Annual Geotechnical Drilling Permit.

Section 3: Lead Agency

One of the three boxes must be selected. The **County Groundwater Protection Program** would be selected only for investigations of known contaminated sites that the County is the lead agency. For drilling required by the Regional Water Quality Control Board **(RWQCB)**, Department of Toxic Substances Control **(DTSC)**, or the United States Environmental Protection Agency **(USEPA)**, please include a copy of their approval letter. **None** would refer to investigations required by the County CUPA (Hazardous Materials Program), County Land Use or Solid Waste Programs, County or City Planning or Building Departments or voluntary investigations for due diligence or property transactions.

Section 4: Drilling Information

All applicable spaces must be filled in. **Agency Case #** refers to the lead agency's case number, if overseen by an agency, for the project under which the investigation is being conducted. **Assessor's parcel number** is the 9-digit number corresponding to the specific private property drilling is proposed to be conducted on (can be found under Secured Property Taxes at **sanmateocountytaxcollector.org** or **here**). Each permit **must** include only one assessor's parcel number. If the drilling is to be conducted only in public right-of-ways, then the assessor's parcel number space should be filled in with NA for not applicable. If drilling is to occur on both a private property and a contiguous public right-of-way, then two permits (one for the private property and one for the public right-of-way) must be filled out. **Address, City, and Zip** refer to the location of the specific property drilling is proposed to be conducted on. The Address for a public right-of-way would simply be the name of the specific section of the public right-of-way (ie. 100 block of Main Street). **To be Constructed in** must have one box selected. Again, this differentiates between a public right-of-way and a private property. **Refuse** is a special land use designation which needs to be indicated on the permit application.

SUBSURFACE DRILLING PERMIT APPLICATION

PERMIT APPLICATION INSTRUCTIONS AND FEES (CONTINUED)

Section 4: Drilling Information (continued)

The rest of this section is self-explanatory, may change in the field based on conditions encountered, and must be filled in except **Destruction Method** for borings only. Schematics may be submitted instead of filling in the well construction details, particularly if wells will be constructed differently from each other.

Destruction Method requires the use of a maximum of 6 gallons of water per 94 pounds of cement. This measurement (for both water and cement) must be able to be demonstrated in the field upon request from the inspector (such as using a 5-gallon bucket for measuring the water and using entire bags of cement). For **pressure grouting**, the well construction log and grout calculations must be submitted. The sand pack may not be more than 3 feet above the top of the screened interval, the screened interval may not be longer than 25 feet, and the bottom of the original boring may not be more than 2 feet deeper than the bottom of the constructed well. The total depth of the well and the fact that there are no obstructions in the well must be verified in the field. Type I/II cement grout must be tremied into the well, followed by application of 25 psi pressure maintained for 5 minutes. If the well does not meet pressure grouting criteria, it must be destroyed by drilling out to the total depth of the original boring. For **overdrilling**, the well casing and all annular material must be removed using a guide rod for the entire depth of the well inserted prior to drilling, and the boring tremie grouted to the surface using Type I/II cement grout. A general observation is that grouting borings using a ¾ inch PVC pipe, typically used to collect grab groundwater samples in borings, does not work with a screened section. Free falling grout is only allowed if the boring is dry, or if water is present in less than 10% of the boring, and less than 30 feet deep. Grout calculations must be provided with application.

Section 5: Well/Boring Owner

The **name** of the entity owning the wells and borings must be listed along with their contact person (if different from the name of the well/boring owner), address, telephone number, and email address. The **contact person** must be directly associated with or an agent of the entity owning the wells and borings such as a property manager, real estate manager, contractor, or lawyer but not the environmental consultant listed on the permit application in Section 8. A **telephone** number and an **email** address must be provided to allow the inspector to contact the well/boring owner to verify information if necessary. By providing an email address, the well/ boring owner will receive an electronic copy of the permit. The permit application must be **signed** and **dated** by either the entity listed as the owner of the wells and borings or the contact person. **Signatures (Sections 5 through 8)** do not need to be original; however, one copy of the permit application must contain all of the information besides the signatures in a legible format. ALL SIGNATURES REQUIRED (SECTIONS 5 THROUGH 8) DO NOT NEED TO BE ON THE SAME COPY OF THE PERMIT APPLICATION.

Section 6: Property Owner

The **name** of the entity owning the property must be listed and needs to match the name listed with the County Assessor for this property. The **contact person** must be directly associated with or an agent of the entity owning the property such as a property manager, real estate manager, contractor, or lawyer but not the environmental consultant listed on the permit application in Section 8. A **telephone** number and an **email** address must be provided to allow the inspector to contact the property owner to verify information if necessary. By providing an email address, the property owner will receive an electronic copy of the permit. The permit application must be signed and dated by the entity listed as the property owner only. **AGENTS CANNOT SIGN FOR THE PROPERTY OWNER**. For public rights-of-way, a copy of the encroachment permit can be substituted for the property owner signature. The City of San Mateo, among others, will not issue an encroachment permit until the subsurface drilling permit is issued, but the City of San Mateo will issue a letter of intent to issue an encroachment permit which is acceptable as a substitute for the property owner signature in City of San Mateo rights-of-way.

Section 7: Drilling Company

The **name** of the company proposed to drill the wells and borings must be listed along with the drilling company **contact person**, **address**, **telephone number**, and **email address**. In addition, the **driller's C57 license number** must be provided. By providing an email address, the drilling company will receive an electronic copy of the permit. The permit application must be signed and dated by the driller's contact person. If the drilling company changes, then a new subsurface drilling permit application should be filled out completely except for Sections 5, 6, and 8.

Section 8: Consulting Company

The **name** of the company overseeing the proposed drilling of the wells and borings must be listed along with the **project manager**, address, **telephone** number, and **email** address. The responsible professional overseeing the work must **print** their name legibly, **sign** their name and date, and provide either their **California Professional Geologist or Civil Engineering** number. Field contact name and number, if known, are optional but beneficial for all parties involved.

ORDINANCE: 04023

SAN MATEO COUNTY HEALTH
ENVIRONMENTAL HEALTH SERVICES

Permit 19-1258

P/E: 2010 MONITORING WELLS - INSTALLATION/DESTRUCTION

FACILITY:
31 S B ST, SAN MATEO

OWNER:
CALIHAN, PAT
31 S B ST
SAN MATEO
WP0012380 FA0066307
034154030
AMOUNT PAID: 747.00

CONTRACTOR:
ENV CONTROL ASSOC

TERMS & CONDITIONS:

MONITORING/VAPOR WELL INSTALLATION (3)
CONSULTANT: AEI CONSULTANTS
PROJECT MGR: JACOB HENRY

KIAN ATKINSON

ENVIRONMENTAL HEALTH SPECIALIST

DATE ISSUED: 7/22/2019

EXPIRATION DATE: 11/22/2019

THIS CERTIFICATE IS NONTRANSFERABLE AND MUST BE POSTED ON-SITE IN A CONSPICUOUS PLACE.

SAN MATEO COUNTY HEALTH
ENVIRONMENTAL HEALTH SERVICES

PAID OTP
747
CC VISA

SAN MATEO COUNTY
ENVIRONMENTAL HEALTH
Environmental Health Services
Groundwater Protection Program
2000 Alameda de las Pulgas, Suite #100
San Mateo, CA 94403
Phone:(650) 372-6200 | Fax: (650) 627-8244
smchealth.org/gpp

JUL 19 2018
RECEIVED

SUBSURFACE DRILLING PERMIT APPLICATION

Allow three (3) full working days for processing a complete permit application which includes payment (one permit per parcel). Drilling start date & time must be scheduled with County staff at (650) 484-0047 or drilling@smcgov.org at least 2 full working days (i.e. 48 hours) in advance. Visit smchealth.org/ehfees for Groundwater Protection Program Fees

PURPOSE OF APPLICATION: ☒ Groundwater Monitoring/Vapor Well Installation ☐ Construct Soil Borings (variance request if to be left open >24 hrs) ☐ Groundwater Monitoring/Vapor Well Destruction Extension of Permit # _____

No. of Wells _____ No. of Borings 3 Well/Boring Names SB-1 - SB-3;

PURPOSE OF DRILLING: ☒ Environmental ☐ Geotechnical LEAD AGENCY: ☐ County GPP (permit approval is not to be considered work plan approval) ☐ RWQCB/DTSC/USEPA (Provide approval letter) ☒ None (i.e. voluntary)

SITE / DRILLING INFORMATION

Agency Case # _____ Assessor's Parcel # (required) 034-154-030 (one per permit)

Drilling Location Address: 31-57 South B Street ~~& 349 1st Avenue~~ (W) City: San Mateo Zip: 94401

To Be Constructed In: ☐ Public Property ☒ Private Property ☐ Refuse

Maximum Proposed Depth (wells/borings) 10 or First Encountered Groundwater (feet) Drilling Method: Direct Push

Boring Diameter: 2.25 Casing Diameter: NA Filter Pack Interval: NA Screen Interval: NA

Destruction Method: ☒ Pressure Grouting (provide well construction logs and grout calcs)
(6 gallons water max/94 lb cement, up to 5% bentonite) ☐ Overdrilling (guide rods for total depth prior to starting required)

WELL/BORING OWNER

(Well/boring owner name or contact person should match signature)

Name: ~~Massimo B. Kaz~~ PAT CALHAN Contact Person: MASSIMO KAZ

Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401

Telephone: (650) 931-~~3538~~ 3400 Email: mkaz@prometheusreg.com

It is my responsibility to notify the County of any known changes in the purpose of this well/boring from that which is indicated on this application, to submit indication of annual usage of wells to the County, and to maintain the well in good condition. *(Letter signed by well/boring owner/contact person, containing above language and attesting to knowledge of all permit requirements and conditions, may be substituted for signature.)*

Well/Boring Owner's/Contact Person's Signature: [signature] Date: 07/10/18

PROPERTY OWNER

(Name as appears on assessor's roles should match signature)

Name: ~~Massimo B. Kaz~~ > DEMARZIO FAMILY REVOCABLE TRUST Contact Person: _____

Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401

Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

I understand that a well/boring is being installed on my property. I agree to notify the County and Well Owner of any known damage or future access issues to the well *(Letter signed by property owner, containing above language, or encroachment permit may be substituted for signature)*

Property Owner's Signature: _____ Date: _____

DRILLING COMPANY

Drilling Company: Environmental Control Associates Contact Person: Tim Tyler

Address: 3011 Twin Palms Dr City, State, Zip: Aptos, CA, 95003

Telephone: (831) 662-8178 Email: tbtyler@sbcglobal.net C57 Drillers License # 695970

I certify that the well/boring will be constructed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards, and that the license listed above is considered current and active by the Contractors State License Board.

Driller's Signature: _____ Date: _____

CONSULTANT COMPANY

Consultant Company: AEI Consultants Project Manager: Jacob Henry

Address: 2500 Camino Diablo City, State, Zip: Walnut Creek, CA, 94597

Telephone: (925) 746-6000 Email: jhenry@aeiconsultants.com

Field Contact & Cell # (if known): Jeff Stromberg (949) 939-5523

I certify that this application is correct to the best of my knowledge and the well/boring will be constructed/destroyed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards. I understand that I am responsible for General Conditions E, F, K, and L of this permit and if I indicated the purpose of drilling is geotechnical, then no one will use the boring to collect any samples for environmental analyses. If there is a change in Responsible Professional, I will notify San Mateo County GPP staff.

Responsible Professional's Name (Please print legibly): _____

Responsible Professional's Signature: _____ Date: _____

California Professional Geologist (PG) No. _____ or Civil Engineer (PE) No. _____

REV. 08/2018

FA66307

SUBSURFACE DRILLING PERMIT APPLICATION

REQUIREMENTS:

An accurate and correct map **must** be submitted with the application and include the following: north arrow, existing and historic site features, existing and proposed well/boring locations with ID's to scale, property lines and any other pertinent information. A work plan describing the drilling and construction/destruction methodology may be requested by County staff. A complete application with appropriate fees must be submitted 3 working days in advance of drilling and notification of start date and time must be provided at least 2 working days prior to drilling. The permit is subject to both General and Special Conditions stated below. A copy of the approved Subsurface Drilling Permit **must** be available on site while work related to the permit is being performed. **Drilling may begin at the notified date and time whether County staff is present or not.**

GENERAL CONDITIONS:

A. Field notification must be provided to GPP drilling inspection staff at least 2 full working days prior to the start of drilling. GPP Caseworker also must be notified if site is associated with a remedial action case.
B. Well and boring construction and destruction under this permit are subject to the Standards for the Construction of Wells in San Mateo County, County Groundwater Protection Program (GPP) Guidelines, Policies & Procedures, the State Water Well Standards, and any instructions by a Health Department representative.
C. Well/Boring Owner, Driller, and Responsible Professional assume responsibility for all activities and uses under the permit, including compliance with Workmen's Compensation Laws, and indemnify, defend and save the County of San Mateo, its officers, agents and employees, free and harmless from any and all expense, cost, or liability in connection with or resulting from work or stopped-work associated with the permit, including, but not limited to, property damage, personal injury, wrongful death, and loss of income.
D. All borings **must** be properly destroyed (grouted/sealed) within 24 hours of drilling, unless special conditions are approved beforehand in writing as part of this permit, and must be continuously protected and stabilized.
E. Analytical results of all soil, vapor, and groundwater samples collected during the execution of drilling under this permit **must** be submitted to County GPP staff by the Responsible Professional within 60 days of sample collection. If contamination is discovered during drilling, verbal notification to County GPP by the Responsible Professional is **required** within 72 hours of discovery. Proper storage, labeling & disposal of investigation-derived residual wastes are the responsibility of the consultant unless stated otherwise contractually.
F. Boring logs, well construction details, and finalized as-built location map for all borings/ wells (except geotechnical borings) signed by a Responsible Professional, **must** be submitted to County GPP by the Responsible Professional within 60 days of drilling/construction/destruction. DWR Form 188 must be filed with the State per water code 13752.
G. Permit is valid only for the purpose specified herein. No change in purpose or required procedures, as described on this permit application, in the associated workplan, or in the special conditions below, will be allowed except upon written permission from the County. Construction aspects can be changed based on conditions encountered in the field.
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I. Wells installed under this permit may not be used for domestic, municipal, agricultural, or irrigation water supply.
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K. Top-of-casing elevation of all wells **must** be surveyed to the nearest 0.01-foot relative to Mean Sea Level or NAVD88 and submitted to County GPP within 60 days of drilling, and to State GeoTracker as appropriate. Geotechnical wells are exempt from this requirement if a written variance from GPP is obtained prior to drilling.
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M. Violation of any requirement or general or special permit condition may result in an order by GPP staff to cease work under this permit, correct the violation, potentially re-permit the work as a new mobilization, and potential actions may be taken against the Well Owner, Property Owner, or Responsible Professional by GPP.

SPECIAL CONDITIONS: _____

(agency use only) _____

_____

_____

For Agency Use Only:

County Approval: _____ FA # _____ Date: 7/19/18

SAN MATEO COUNTY HEALTH
ENVIRONMENTAL HEALTH SERVICES

Environmental Health Services
Groundwater Protection Program
2000 Alameda de las Pulgas, Suite #100
San Mateo, CA 94403
Phone:(650) 372-6200 | Fax: (650) 627-8244
smchealth.org/gpp

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☒ Groundwater Monitoring/Vapor Well Installation ☐ Construct Soil Borings (variance request if to be left open >24 hrs)
☐ Groundwater Monitoring/Vapor Well Destruction Extension of Permit # ____
No. of Wells ____ No. of Borings 6 Well/Boring Names SB-1 - SB-3; SV-1 - SV-3

PURPOSE OF DRILLING
☒ Environmental
☐ Geotechnical

LEAD AGENCY
☐ County GPP (permit approval is not to be considered work plan approval)
☐ RWQCB/DTSC/USEPA (Provide approval letter) ☒ None (i.e. voluntary)

SITE / DRILLING INFORMATION

Agency Case # ____ Assessor's Parcel # (required) 034-154-030 (one per permit)
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To Be Constructed In: ☐ Public Property ☒ Private Property ☐ Refuse
Maximum Proposed Depth (wells/borings) 10 or First Encountered Groundwat (feet) Drilling Method: Direct Push
Boring Diameter: 2.25 Casing Diameter: NA Filter Pack Interval: NA Screen Interval: NA
Destruction Method: ☒ Pressure Grouting (provide well construction logs and grout calcs)
(6 gallons water max/94 lb cement, up to 5% bentonite) ☐ Overdrilling (guide rods for total depth prior to starting required)

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Name: Massimo B. Kaz Contact Person: ____
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Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

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Well/Boring Owner's/Contact Person's Signature: ____ Date: ____

PROPERTY OWNER (Name as appears on assessor's roles should match signature)

Name: DeMartini Family Revocable Trust Contact Person: Massimo Kaz
Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401
Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

I understand that a well/boring is being installed on my property. I agree to notify the County and Well Owner of any known damage or future access issues to the well *(Letter signed by property owner, containing above language, or encroachment permit may be substituted for signature)*
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Drilling Company: Environmental Control Associates Contact Person: Tim Tyler
Address: 3011 Twin Palms Dr City, State, Zip: Aptos, CA, 95003
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Driller's Signature: ____ Date: ____

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Consultant Company: AEI Consultants Project Manager: Jacob Henry
Address: 2500 Camino Diablo City, State, Zip: Walnut Creek, CA, 94597
Telephone: (925) 746-6000 Email: jhenry@aeiconsultants.com
Field Contact & Cell # (if known): Jeff Stromberg (949) 939-6523

I certify that this application is correct to the best of my knowledge and the well/boring will be constructed/destroyed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards. I understand that I am responsible for General Conditions E, F, K, and L of this permit and if I indicated the purpose of drilling is geotechnical, then no one will use the boring to collect any samples for environmental analyses. If there is a change in Responsible Professional, I will notify San Mateo County GPP staff.
Responsible Professional's Name (Please print legibly): ____
Responsible Professional's Signature: ____ Date: ____
California Professional Geologist (PG) No. ____ or Civil Engineer (PE) No. ____

SAN MATEO COUNTY HEALTH
ENVIRONMENTAL HEALTH SERVICES

Environmental Health Services
Groundwater Protection Program
2000 Alameda de las Pulgas, Suite #100
San Mateo, CA 94403
Phone:(650) 372-6200 | Fax: (650) 627-8244
smchealth.org/gpp

SUBSURFACE DRILLING PERMIT APPLICATION

Allow three (3) full working days for processing a complete permit application which includes payment (one permit per parcel). Drilling start date & time must be scheduled with County staff at (650) 464-0047 or drilling@smcgov.org at least 2 full working days (i.e. 48 hours) in advance. Visit smchealth.org/ehfees for Groundwater Protection Program Fees

PURPOSE OF APPLICATION: ☒ Groundwater Monitoring/Vapor Well Installation ☐ Construct Soil Borings (variance request if to be left open >24 hrs) ☐ Groundwater Monitoring/Vapor Well Destruction Extension of Permit #

No. of Wells No. of Borings 6 Well/Boring Names SB-1 - SB-3; SV-1 - SV-3

PURPOSE OF DRILLING: ☒ Environmental ☐ Geotechnical LEAD AGENCY: ☐ County GPP (permit approval is not to be considered work plan approval) ☐ RWQCB/DTSC/USEPA (Provide approval letter) ☐ None (i.e. voluntary)

SITE / DRILLING INFORMATION

Agency Case # Assessor's Parcel # (required) 034-154-030 (one per permit)

Drilling Location Address: 31-57 South B Street & 349 1st Avenue City: San Mateo Zip: 94401

To Be Constructed In: ☐ Public Property ☒ Private Property ☐ Refuse

Maximum Proposed Depth (wells/borings) 10 or First Encountered Groundwater (feet) Drilling Method: Direct Push

Boring Diameter: 2.25 Casing Diameter: NA Filter Pack Interval: NA Screen Interval: NA

Destruction Method: ☒ Pressure Grouting (provide well construction logs and grout calcs)
(6 gallons water max/94 lb cement, up to 5% bentonite) ☐ Overdrilling (guide rods for total depth prior to starting required)

WELL/BORING OWNER

(Well/boring owner name or contact person should match signature)

Name: Massimo B. Kaz Contact Person:

Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401

Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

It is my responsibility to notify the County of any known changes in the purpose of this well/boring from that which is indicated on this application, to submit indication of annual usage of wells to the County, and to maintain the well in good condition. *(Letter signed by well/boring owner/contact person, containing above language and attesting to knowledge of all permit requirements and conditions, may be substituted for signature.)*

Well/Boring Owner's/Contact Person's Signature: Date:

PROPERTY OWNER

(Name as appears on assessor's roles should match signature)

Name: Massimo B. Kaz Contact Person:

Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401

Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

I understand that a well/boring is being installed on my property. I agree to notify the County and Well Owner of any known damage or future access issues to the well *(Letter signed by property owner, containing above language, or encroachment permit may be substituted for signature)*

Property Owner's Signature: Date:

DRILLING COMPANY

Drilling Company: Environmental Control Associates Contact Person: Tim Tyler

Address: 3011 Twin Palms Dr City, State, Zip: Aptos, CA, 95003

Telephone: (831) 662-8178 Email: tbtyler@sbcglobal.net C57 Drillers License # 695970

I certify that the well/boring will be constructed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards, and that the license listed above is considered current and active by the Contractors State License Board.

Driller's Signature: Date:

CONSULTANT COMPANY

Consultant Company: AEI Consultants Project Manager: Jacob Henry

Address: 2500 Camino Diablo City, State, Zip: Walnut Creek, CA, 94597

Telephone: (925) 746-6000 Email: jhenry@aeiconsultants.com

Field Contact & Cell # (if known): Jeff Stromberg (949) 939-5523

I certify that this application is correct to the best of my knowledge and the well/boring will be constructed/destroyed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards. I understand that I am responsible for General Conditions E, F, K, and L of this permit and if I indicated the purpose of drilling is geotechnical, then no one will use the boring to collect any samples for environmental analyses. If there is a change in Responsible Professional, I will notify San Mateo County GPP staff.

Responsible Professional's Name (Please print legibly): Jacob T. Henry, P.G.

Responsible Professional's Signature: Date: 7/5/2019

California Professional Geologist (PG) No. 8504 or Civil Engineer (PE) No.

REV. 09/2018

SAN MATEO COUNTY HEALTH
ENVIRONMENTAL HEALTH SERVICES

Environmental Health Services
Groundwater Protection Program
2000 Alameda de las Pulgas, Suite #100
San Mateo, CA 94403
Phone:(650) 372-6200 | Fax: (650) 627-8244
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SUBSURFACE DRILLING PERMIT APPLICATION

Allow three (3) full working days for processing a complete permit application which includes payment (one permit per parcel). Drilling start date & time must be scheduled with County staff at (650) 464-0047 or drilling@smcgov.org at least 2 full working days (i.e. 48 hours) in advance. Visit smchealth.org/ehfees for Groundwater Protection Program Fees

PURPOSE OF APPLICATION
☒ Groundwater Monitoring/Vapor Well Installation ☐ Construct Soil Borings (variance request if to be left open >24 hrs)
☐ Groundwater Monitoring/Vapor Well Destruction Extension of Permit # ____
No. of Wells ____ No. of Borings 6 Well/Boring Names SB-1 - SB-3; SV-1 - SV-3

PURPOSE OF DRILLING
☒ Environmental ☐ Geotechnical

LEAD AGENCY
☐ County GPP (permit approval is not to be considered work plan approval)
☐ RWQCB/DTSC/USEPA (Provide approval letter) ☐ None (i.e. voluntary)

SITE / DRILLING INFORMATION

Agency Case # ____ Assessor's Parcel # (required) 034-154-030 (one per permit)
Drilling Location Address: 31-57 South B Street & 349 1st Avenue City: San Mateo Zip: 94401
To Be Constructed In: ☐ Public Property ☒ Private Property ☐ Refuse
Maximum Proposed Depth (wells/borings) 10 or First Encountered Groundwate (feet) Drilling Method: Direct Push
Boring Diameter: 2.25 Casing Diameter: NA Filter Pack Interval: NA Screen Interval: NA
Destruction Method: ☒ Pressure Grouting (provide well construction logs and grout calcs)
(6 gallons water max/94 lb cement, up to 5% bentonite) ☐ Overdrilling (guide rods for total depth prior to starting required)

WELL/BORING OWNER (Well/boring owner name or contact person should match signature)

Name: Massimo B. Kaz Contact Person: ____
Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401
Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

It is my responsibility to notify the County of any known changes in the purpose of this well/boring from that which is indicated on this application, to submit indication of annual usage of wells to the County, and to maintain the well in good condition. *(Letter signed by well/boring owner/contact person, containing above language and attesting to knowledge of all permit requirements and conditions, may be substituted for signature.)*

Well/Boring Owner's/Contact Person's Signature: ____ Date: ____

PROPERTY OWNER (Name as appears on assessor's roles should match signature)

Name: Massimo B. Kaz Contact Person: ____
Address: 31-57 South B Street & 349 1st Avenue City, State, Zip: San Mateo, CA, 94401
Telephone: (650) 931-3538 Email: mkaz@prometheusreg.com

I understand that a well/boring is being installed on my property. I agree to notify the County and Well Owner of any known damage or future access issues to the well *(Letter signed by property owner, containing above language, or encroachment permit may be substituted for signature)*

Property Owner's Signature: ____ Date: ____

DRILLING COMPANY

Drilling Company: Environmental Control Associates (ECA) Contact Person: Tim Tyler
Address: 3011 Twin Palms Dr City, State, Zip: Aptos, CA, 95003
Telephone: (831) 662-8178 Email: tbtyler@sbcglobal.net C57 Drillers License # 695970

I certify that the well/boring will be constructed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards, and that the license listed above is considered current and active by the Contractors State License Board.

Driller's Signature: 7-)Y4 For ECA Date: 7/5/2019

CONSULTANT COMPANY

Consultant Company: AEI Consultants Project Manager: Jacob Henry
Address: 2500 Camino Diablo City, State, Zip: Walnut Creek, CA, 94597
Telephone: (925) 746-6000 Email: jhenry@aeiconsultants.com
Field Contact & Cell # (if known): Jeff Glusenberg (949) 939-0343

I certify that this application is correct to the best of my knowledge and the well/boring will be constructed/destroyed in compliance with the conditions of this permit (see reverse), the San Mateo County Well Ordinance, and the State Water Well Standards. I understand that I am responsible for General Conditions E, F, K, and L of this permit and if I indicated the purpose of drilling is geotechnical, then no one will use the boring to collect any samples for environmental analyses. If there is a change in Responsible Professional, I will notify San Mateo County GPP staff

Responsible Professional's Name (Please print legibly): ____
Responsible Professional's Signature: ____ Date: ____
California Professional Geologist (PG) No. ____ or Civil Engineer (PE) No. ____

LEGEND

- Proposed Dual-Nested Soil Vapor Sampling Location
- Proposed Groundwater Sampling Location
- Approximate Site Boundary

N

0 50

APPROXIMATE SCALE (Feet)

AEI CONSULTANTS

Site Map

31-57 South B Street &
349 1st Avenue
San Mateo, California

FIGURE 2
Project Number 407966

APPENDIX B

SOIL BORING LOGS

APPENDIX C

LABORATORY ANALYTICAL DATA

AEI Consultants
3880 S. Bascom Avenue
San Jose, CA 95124
408-559-7600

BORING NUMBER SB-1

CLIENT Prometheus Real Estate Group, Inc.
PROJECT NAME Limited Environmental Soil Testing Investigation
PROJECT NUMBER 407966
PROJECT LOCATION 31-57 S B Street & 349 1st Avenue, San Mateo, CA
DATE STARTED 7/16/19 **COMPLETED** 7/22/19
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING --- Not Encountered
LOGGED BY J.Stromberg **CHECKED BY** J. Henry
AT END OF DRILLING ---
NOTES
AFTER DRILLING 20.00 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					0.4 CONCRETE	
					SAND (SP), dark reddish brown (5YR 3/3), loose, moist, fine sand, coarse gravel, no odor	
					2.0 CLAY (CL) trace gravel, yellowish brown (10YR 5/8), stiff, moist, fine gravel, medium plasticity, no odor	
	SB-1-4		0.9		4.0	
5					SANDY SILT (ML), yellowish brown (10YR 5/6), very stiff, moist, fine sand, low plasticity, no odor	
	SB-1-7		0.8			
	SB-1-9		1.1			
10						
	SB-1-12		0.7			
	SB-1-14		0.9			
15						
	SB-1-16		1.1		16.0	
					SAND (SW) with gravel, yellowish brown (10YR 5/8), medium dense, moist, fine sand, coarse gravel, no odor	
					18.0	
					GRAVELLY SAND (SW), yellowish brown (10YR 5/8), dense, moist, fine sand, coarse gravel, no odor	
20					▼	
25						
30					30.0	
					SANDY CLAY (CL) trace gravel, dark yellowish brown (10YR 4/6), stiff, moist, fine sand, fine gravel, medium plasticity, no odor	
35					35.0	

(Continued Next Page)

AEI Consultants
3880 S. Bascom Avenue
San Jose, CA 95124
408-559-7600

BORING NUMBER SB-1

CLIENT Prometheus Real Estate Group, Inc. **PROJECT NAME** Limited Environmental Soil Testing Investigation

PROJECT NUMBER 407966 **PROJECT LOCATION** 31-57 S B Street & 349 1st Avenue, San Mateo, CA

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
35					GRAVELLY SAND (SW), dark yellowish brown (10YR 5/8), very dense, moist, fine sand, coarse gravel, no odor	
40					41.0 SILT (ML) some sand, trace gravel, dark yellowish brown (10YR 5/8), hard, moist, fine sand, fine gravel, low plasticity, no odor	
45					49.5	

Bottom of borehole at 49.5 feet.

AEI Consultants
3880 S. Bascom Avenue
San Jose, CA 95124
408-559-7600

BORING NUMBER SB-2

CLIENT Prometheus Real Estate Group, Inc.
PROJECT NAME Limited Environmental Soil Testing Investigation
PROJECT NUMBER 407966
PROJECT LOCATION 31-57 S B Street & 349 1st Avenue, San Mateo, CA
DATE STARTED 7/16/19 **COMPLETED** 7/16/19
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING --- Not Encountered
LOGGED BY J.Stromberg **CHECKED BY** J. Henry
AT END OF DRILLING ---
NOTES
AFTER DRILLING --- Not Encountered

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					0.5 ASPHALT	
					SANDY CLAY (CL) trace gravel, dark brown (10YR 3/3), soft, moist, fine sand, fine gravel, medium plasticity, no odor	
	SB-2-4		0.1		4.0	
5					SANDY SILT (ML), yellowish brown (10YR 5/8), medium stiff, moist, fine sand, low plasticity, no odor	
	SB-2-8		0.0			
10						
	SB-2-11		0.2			
	SB-2-13		0.5			
15						
	SB-2-16		0.7			
	SB-2-18					
20	SB-2-20		0.7		20.0	

Bottom of borehole at 20.0 feet.

AEI Consultants
3880 S. Bascom Avenue
San Jose, CA 95124
408-559-7600

BORING NUMBER SB-3

CLIENT Prometheus Real Estate Group, Inc.
PROJECT NAME Limited Environmental Soil Testing Investigation
PROJECT NUMBER 407966
PROJECT LOCATION 31-57 S B Street & 349 1st Avenue, San Mateo, CA
DATE STARTED 7/16/19 **COMPLETED** 7/16/19
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING --- Not Encountered
LOGGED BY J.Stromberg **CHECKED BY** J. Henry
AT END OF DRILLING ---
NOTES
AFTER DRILLING --- Not Encountered

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					0.5 ASPHALT	
					SANDY CLAY (CL) some gravel, dark brown (10YR 3/3), medium stiff, moist, fine sand, medium plasticity, no odor	
	SB-3-4		0.1			
5					7.0	
	SB-3-8		0.3		SANDY SILT (ML) trace gravel, dark yellowish brown (10YR 3/6), medium stiff, moist, fine sand, fine gravel, low plasticity, no odor	
10	SB-3-11		0.1			
	SB-3-13		0.2			
15	SB-3-15		0.1		15.0	

Bottom of borehole at 15.0 feet.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 26, 2019

AEI Consultants - CA

Sample Delivery Group:	L1121759
Samples Received:	07/24/2019
Project Number:	407966
Description:	

Report To: Jeff Stromberg
2500 Camino Diablo
Walnut Creek, CA 94597

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

TABLE OF CONTENTS

SB-1-W L1121759-01 GW

Collected by: Jeff Stromberg | Collected date/time: 07/22/19 13:38 | Received date/time: 07/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1318020	2	07/26/19 11:48	07/26/19 11:48	JHH	Mt. Juliet, TN

SB-2-W L1121759-02 GW

Collected by: Jeff Stromberg | Collected date/time: 07/22/19 15:30 | Received date/time: 07/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1317012	1	07/25/19 03:07	07/25/19 03:07	ZJM	Mt. Juliet, TN

SB-3-W L1121759-03 GW

Collected by: Jeff Stromberg | Collected date/time: 07/22/19 17:30 | Received date/time: 07/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1317012	2	07/25/19 03:28	07/25/19 03:28	ZJM	Mt. Juliet, TN

SB-DUP-W L1121759-04 GW

Collected by: Jeff Stromberg | Collected date/time: 07/22/19 13:43 | Received date/time: 07/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1317012	2	07/25/19 03:49	07/25/19 03:49	ZJM	Mt. Juliet, TN

EB-1 L1121759-05 GW

Collected by: Jeff Stromberg | Collected date/time: 07/22/19 17:40 | Received date/time: 07/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1317012	1	07/25/19 04:09	07/25/19 04:09	ZJM	Mt. Juliet, TN

TB-1 L1121759-06 GW

Collected by: Jeff Stromberg | Collected date/time: 07/22/19 09:00 | Received date/time: 07/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1317012	1	07/25/19 02:06	07/25/19 02:06	ZJM	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		20.0	100	2	07/26/2019 11:48	WG1318020
Acrolein	U		17.7	100	2	07/26/2019 11:48	WG1318020
Acrylonitrile	U		3.74	20.0	2	07/26/2019 11:48	WG1318020
Benzene	U		0.662	2.00	2	07/26/2019 11:48	WG1318020
Bromobenzene	U		0.704	2.00	2	07/26/2019 11:48	WG1318020
Bromodichloromethane	U		0.760	2.00	2	07/26/2019 11:48	WG1318020
Bromoform	U		0.938	2.00	2	07/26/2019 11:48	WG1318020
Bromomethane	U		1.73	10.0	2	07/26/2019 11:48	WG1318020
n-Butylbenzene	U		0.722	2.00	2	07/26/2019 11:48	WG1318020
sec-Butylbenzene	U		0.730	2.00	2	07/26/2019 11:48	WG1318020
tert-Butylbenzene	U		0.798	2.00	2	07/26/2019 11:48	WG1318020
Carbon tetrachloride	U		0.758	2.00	2	07/26/2019 11:48	WG1318020
Chlorobenzene	U		0.696	2.00	2	07/26/2019 11:48	WG1318020
Chlorodibromomethane	U		0.654	2.00	2	07/26/2019 11:48	WG1318020
Chloroethane	U		0.906	10.0	2	07/26/2019 11:48	WG1318020
Chloroform	U		0.648	10.0	2	07/26/2019 11:48	WG1318020
Chloromethane	U		0.552	5.00	2	07/26/2019 11:48	WG1318020
2-Chlorotoluene	U		0.750	2.00	2	07/26/2019 11:48	WG1318020
4-Chlorotoluene	U		0.702	2.00	2	07/26/2019 11:48	WG1318020
1,2-Dibromo-3-Chloropropane	U		2.66	10.0	2	07/26/2019 11:48	WG1318020
1,2-Dibromoethane	U		0.762	2.00	2	07/26/2019 11:48	WG1318020
Dibromomethane	U		0.692	2.00	2	07/26/2019 11:48	WG1318020
1,2-Dichlorobenzene	U		0.698	2.00	2	07/26/2019 11:48	WG1318020
1,3-Dichlorobenzene	U		0.440	2.00	2	07/26/2019 11:48	WG1318020
1,4-Dichlorobenzene	U		0.548	2.00	2	07/26/2019 11:48	WG1318020
Dichlorodifluoromethane	U		1.10	10.0	2	07/26/2019 11:48	WG1318020
1,1-Dichloroethane	U		0.518	2.00	2	07/26/2019 11:48	WG1318020
1,2-Dichloroethane	U		0.722	2.00	2	07/26/2019 11:48	WG1318020
1,1-Dichloroethene	U		0.796	2.00	2	07/26/2019 11:48	WG1318020
cis-1,2-Dichloroethene	U		0.520	2.00	2	07/26/2019 11:48	WG1318020
trans-1,2-Dichloroethene	U		0.792	2.00	2	07/26/2019 11:48	WG1318020
1,2-Dichloropropane	U		0.612	2.00	2	07/26/2019 11:48	WG1318020
1,1-Dichloropropene	U		0.704	2.00	2	07/26/2019 11:48	WG1318020
1,3-Dichloropropane	U		0.732	2.00	2	07/26/2019 11:48	WG1318020
cis-1,3-Dichloropropene	U		0.836	2.00	2	07/26/2019 11:48	WG1318020
trans-1,3-Dichloropropene	U		0.838	2.00	2	07/26/2019 11:48	WG1318020
2,2-Dichloropropane	U		0.642	2.00	2	07/26/2019 11:48	WG1318020
Di-isopropyl ether	U		0.640	2.00	2	07/26/2019 11:48	WG1318020
Ethylbenzene	U		0.768	2.00	2	07/26/2019 11:48	WG1318020
Hexachloro-1,3-butadiene	U		0.512	2.00	2	07/26/2019 11:48	WG1318020
Isopropylbenzene	U		0.652	2.00	2	07/26/2019 11:48	WG1318020
p-Isopropyltoluene	U		0.700	2.00	2	07/26/2019 11:48	WG1318020
2-Butanone (MEK)	U		7.86	20.0	2	07/26/2019 11:48	WG1318020
Methylene Chloride	U		2.00	10.0	2	07/26/2019 11:48	WG1318020
4-Methyl-2-pentanone (MIBK)	U		4.28	20.0	2	07/26/2019 11:48	WG1318020
Methyl tert-butyl ether	U		0.734	2.00	2	07/26/2019 11:48	WG1318020
Naphthalene	U		2.00	10.0	2	07/26/2019 11:48	WG1318020
n-Propylbenzene	U		0.698	2.00	2	07/26/2019 11:48	WG1318020
Styrene	U		0.614	2.00	2	07/26/2019 11:48	WG1318020
1,1,1,2-Tetrachloroethane	U		0.770	2.00	2	07/26/2019 11:48	WG1318020
1,1,2,2-Tetrachloroethane	U		0.260	2.00	2	07/26/2019 11:48	WG1318020
1,1,2-Trichlorotrifluoroethane	U		0.606	2.00	2	07/26/2019 11:48	WG1318020
Tetrachloroethene	U		0.744	2.00	2	07/26/2019 11:48	WG1318020
Toluene	U		0.824	2.00	2	07/26/2019 11:48	WG1318020
1,2,3-Trichlorobenzene	U		0.460	2.00	2	07/26/2019 11:48	WG1318020
1,2,4-Trichlorobenzene	U		0.710	2.00	2	07/26/2019 11:48	WG1318020

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,1-Trichloroethane	U		0.638	2.00	2	07/26/2019 11:48	WG1318020
1,1,2-Trichloroethane	U		0.766	2.00	2	07/26/2019 11:48	WG1318020
Trichloroethene	U		0.796	2.00	2	07/26/2019 11:48	WG1318020
Trichlorofluoromethane	U		2.40	10.0	2	07/26/2019 11:48	WG1318020
1,2,3-Trichloropropane	U		1.61	5.00	2	07/26/2019 11:48	WG1318020
1,2,4-Trimethylbenzene	U		0.746	2.00	2	07/26/2019 11:48	WG1318020
1,2,3-Trimethylbenzene	U		0.642	2.00	2	07/26/2019 11:48	WG1318020
1,3,5-Trimethylbenzene	U		0.774	2.00	2	07/26/2019 11:48	WG1318020
Vinyl chloride	U		0.518	2.00	2	07/26/2019 11:48	WG1318020
Xylenes, Total	U		2.12	6.00	2	07/26/2019 11:48	WG1318020
(S) Toluene-d8	*108*			*80.0-120*		*07/26/2019 11:48*	WG1318020
(S) 4-Bromofluorobenzene	*100*			*77.0-126*		*07/26/2019 11:48*	WG1318020
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/26/2019 11:48*	WG1318020

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		10.0	50.0	1	07/25/2019 03:07	WG1317012
Acrolein	U	J4	8.87	50.0	1	07/25/2019 03:07	WG1317012
Acrylonitrile	U		1.87	10.0	1	07/25/2019 03:07	WG1317012
Benzene	U		0.331	1.00	1	07/25/2019 03:07	WG1317012
Bromobenzene	U		0.352	1.00	1	07/25/2019 03:07	WG1317012
Bromodichloromethane	U		0.380	1.00	1	07/25/2019 03:07	WG1317012
Bromoform	U		0.469	1.00	1	07/25/2019 03:07	WG1317012
Bromomethane	U		0.866	5.00	1	07/25/2019 03:07	WG1317012
n-Butylbenzene	U		0.361	1.00	1	07/25/2019 03:07	WG1317012
sec-Butylbenzene	U		0.365	1.00	1	07/25/2019 03:07	WG1317012
tert-Butylbenzene	U		0.399	1.00	1	07/25/2019 03:07	WG1317012
Carbon tetrachloride	U		0.379	1.00	1	07/25/2019 03:07	WG1317012
Chlorobenzene	U		0.348	1.00	1	07/25/2019 03:07	WG1317012
Chlorodibromomethane	U		0.327	1.00	1	07/25/2019 03:07	WG1317012
Chloroethane	U		0.453	5.00	1	07/25/2019 03:07	WG1317012
Chloroform	U		0.324	5.00	1	07/25/2019 03:07	WG1317012
Chloromethane	U		0.276	2.50	1	07/25/2019 03:07	WG1317012
2-Chlorotoluene	U		0.375	1.00	1	07/25/2019 03:07	WG1317012
4-Chlorotoluene	U		0.351	1.00	1	07/25/2019 03:07	WG1317012
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	07/25/2019 03:07	WG1317012
1,2-Dibromoethane	U		0.381	1.00	1	07/25/2019 03:07	WG1317012
Dibromomethane	U		0.346	1.00	1	07/25/2019 03:07	WG1317012
1,2-Dichlorobenzene	U		0.349	1.00	1	07/25/2019 03:07	WG1317012
1,3-Dichlorobenzene	U		0.220	1.00	1	07/25/2019 03:07	WG1317012
1,4-Dichlorobenzene	U		0.274	1.00	1	07/25/2019 03:07	WG1317012
Dichlorodifluoromethane	U		0.551	5.00	1	07/25/2019 03:07	WG1317012
1,1-Dichloroethane	U		0.259	1.00	1	07/25/2019 03:07	WG1317012
1,2-Dichloroethane	U		0.361	1.00	1	07/25/2019 03:07	WG1317012
1,1-Dichloroethene	U	J4	0.398	1.00	1	07/25/2019 03:07	WG1317012
cis-1,2-Dichloroethene	U		0.260	1.00	1	07/25/2019 03:07	WG1317012
trans-1,2-Dichloroethene	U	J4	0.396	1.00	1	07/25/2019 03:07	WG1317012
1,2-Dichloropropane	U		0.306	1.00	1	07/25/2019 03:07	WG1317012
1,1-Dichloropropene	U		0.352	1.00	1	07/25/2019 03:07	WG1317012
1,3-Dichloropropane	U		0.366	1.00	1	07/25/2019 03:07	WG1317012
cis-1,3-Dichloropropene	U		0.418	1.00	1	07/25/2019 03:07	WG1317012
trans-1,3-Dichloropropene	U		0.419	1.00	1	07/25/2019 03:07	WG1317012
2,2-Dichloropropane	U		0.321	1.00	1	07/25/2019 03:07	WG1317012
Di-isopropyl ether	U		0.320	1.00	1	07/25/2019 03:07	WG1317012
Ethylbenzene	U		0.384	1.00	1	07/25/2019 03:07	WG1317012
Hexachloro-1,3-butadiene	U		0.256	1.00	1	07/25/2019 03:07	WG1317012
Isopropylbenzene	U		0.326	1.00	1	07/25/2019 03:07	WG1317012
p-Isopropyltoluene	U		0.350	1.00	1	07/25/2019 03:07	WG1317012
2-Butanone (MEK)	U		3.93	10.0	1	07/25/2019 03:07	WG1317012
Methylene Chloride	U		1.00	5.00	1	07/25/2019 03:07	WG1317012
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	07/25/2019 03:07	WG1317012
Methyl tert-butyl ether	U		0.367	1.00	1	07/25/2019 03:07	WG1317012
Naphthalene	U		1.00	5.00	1	07/25/2019 03:07	WG1317012
n-Propylbenzene	U		0.349	1.00	1	07/25/2019 03:07	WG1317012
Styrene	U		0.307	1.00	1	07/25/2019 03:07	WG1317012
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	07/25/2019 03:07	WG1317012
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	07/25/2019 03:07	WG1317012
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	07/25/2019 03:07	WG1317012
Tetrachloroethene	U		0.372	1.00	1	07/25/2019 03:07	WG1317012
Toluene	U		0.412	1.00	1	07/25/2019 03:07	WG1317012
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/25/2019 03:07	WG1317012
1,2,4-Trichlorobenzene	U		0.355	1.00	1	07/25/2019 03:07	WG1317012

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,1-Trichloroethane	U		0.319	1.00	1	07/25/2019 03:07	WG1317012
1,1,2-Trichloroethane	U		0.383	1.00	1	07/25/2019 03:07	WG1317012
Trichloroethene	U	J4	0.398	1.00	1	07/25/2019 03:07	WG1317012
Trichlorofluoromethane	U		1.20	5.00	1	07/25/2019 03:07	WG1317012
1,2,3-Trichloropropane	U		0.807	2.50	1	07/25/2019 03:07	WG1317012
1,2,4-Trimethylbenzene	U		0.373	1.00	1	07/25/2019 03:07	WG1317012
1,2,3-Trimethylbenzene	U		0.321	1.00	1	07/25/2019 03:07	WG1317012
1,3,5-Trimethylbenzene	U		0.387	1.00	1	07/25/2019 03:07	WG1317012
Vinyl chloride	U		0.259	1.00	1	07/25/2019 03:07	WG1317012
Xylenes, Total	U		1.06	3.00	1	07/25/2019 03:07	WG1317012
(S) Toluene-d8	*103*			*80.0-120*		*07/25/2019 03:07*	WG1317012
(S) 4-Bromofluorobenzene	*109*			*77.0-126*		*07/25/2019 03:07*	WG1317012
(S) 1,2-Dichloroethane-d4	*83.7*			*70.0-130*		*07/25/2019 03:07*	WG1317012

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		20.0	100	2	07/25/2019 03:28	WG1317012
Acrolein	U	J4	17.7	100	2	07/25/2019 03:28	WG1317012
Acrylonitrile	U		3.74	20.0	2	07/25/2019 03:28	WG1317012
Benzene	U		0.662	2.00	2	07/25/2019 03:28	WG1317012
Bromobenzene	U		0.704	2.00	2	07/25/2019 03:28	WG1317012
Bromodichloromethane	U		0.760	2.00	2	07/25/2019 03:28	WG1317012
Bromoform	U		0.938	2.00	2	07/25/2019 03:28	WG1317012
Bromomethane	U		1.73	10.0	2	07/25/2019 03:28	WG1317012
n-Butylbenzene	U		0.722	2.00	2	07/25/2019 03:28	WG1317012
sec-Butylbenzene	U		0.730	2.00	2	07/25/2019 03:28	WG1317012
tert-Butylbenzene	U		0.798	2.00	2	07/25/2019 03:28	WG1317012
Carbon tetrachloride	U		0.758	2.00	2	07/25/2019 03:28	WG1317012
Chlorobenzene	U		0.696	2.00	2	07/25/2019 03:28	WG1317012
Chlorodibromomethane	U		0.654	2.00	2	07/25/2019 03:28	WG1317012
Chloroethane	U		0.906	10.0	2	07/25/2019 03:28	WG1317012
Chloroform	U		0.648	10.0	2	07/25/2019 03:28	WG1317012
Chloromethane	U		0.552	5.00	2	07/25/2019 03:28	WG1317012
2-Chlorotoluene	U		0.750	2.00	2	07/25/2019 03:28	WG1317012
4-Chlorotoluene	U		0.702	2.00	2	07/25/2019 03:28	WG1317012
1,2-Dibromo-3-Chloropropane	U		2.66	10.0	2	07/25/2019 03:28	WG1317012
1,2-Dibromoethane	U		0.762	2.00	2	07/25/2019 03:28	WG1317012
Dibromomethane	U		0.692	2.00	2	07/25/2019 03:28	WG1317012
1,2-Dichlorobenzene	U		0.698	2.00	2	07/25/2019 03:28	WG1317012
1,3-Dichlorobenzene	U		0.440	2.00	2	07/25/2019 03:28	WG1317012
1,4-Dichlorobenzene	U		0.548	2.00	2	07/25/2019 03:28	WG1317012
Dichlorodifluoromethane	U		1.10	10.0	2	07/25/2019 03:28	WG1317012
1,1-Dichloroethane	U		0.518	2.00	2	07/25/2019 03:28	WG1317012
1,2-Dichloroethane	U		0.722	2.00	2	07/25/2019 03:28	WG1317012
1,1-Dichloroethene	U	J4	0.796	2.00	2	07/25/2019 03:28	WG1317012
cis-1,2-Dichloroethene	U		0.520	2.00	2	07/25/2019 03:28	WG1317012
trans-1,2-Dichloroethene	U	J4	0.792	2.00	2	07/25/2019 03:28	WG1317012
1,2-Dichloropropane	U		0.612	2.00	2	07/25/2019 03:28	WG1317012
1,1-Dichloropropene	U		0.704	2.00	2	07/25/2019 03:28	WG1317012
1,3-Dichloropropane	U		0.732	2.00	2	07/25/2019 03:28	WG1317012
cis-1,3-Dichloropropene	U		0.836	2.00	2	07/25/2019 03:28	WG1317012
trans-1,3-Dichloropropene	U		0.838	2.00	2	07/25/2019 03:28	WG1317012
2,2-Dichloropropane	U		0.642	2.00	2	07/25/2019 03:28	WG1317012
Di-isopropyl ether	U		0.640	2.00	2	07/25/2019 03:28	WG1317012
Ethylbenzene	U		0.768	2.00	2	07/25/2019 03:28	WG1317012
Hexachloro-1,3-butadiene	U		0.512	2.00	2	07/25/2019 03:28	WG1317012
Isopropylbenzene	U		0.652	2.00	2	07/25/2019 03:28	WG1317012
p-Isopropyltoluene	U		0.700	2.00	2	07/25/2019 03:28	WG1317012
2-Butanone (MEK)	U		7.86	20.0	2	07/25/2019 03:28	WG1317012
Methylene Chloride	U		2.00	10.0	2	07/25/2019 03:28	WG1317012
4-Methyl-2-pentanone (MIBK)	U		4.28	20.0	2	07/25/2019 03:28	WG1317012
Methyl tert-butyl ether	U		0.734	2.00	2	07/25/2019 03:28	WG1317012
Naphthalene	U		2.00	10.0	2	07/25/2019 03:28	WG1317012
n-Propylbenzene	U		0.698	2.00	2	07/25/2019 03:28	WG1317012
Styrene	U		0.614	2.00	2	07/25/2019 03:28	WG1317012
1,1,1,2-Tetrachloroethane	U		0.770	2.00	2	07/25/2019 03:28	WG1317012
1,1,2,2-Tetrachloroethane	U		0.260	2.00	2	07/25/2019 03:28	WG1317012
1,1,2-Trichlorotrifluoroethane	U		0.606	2.00	2	07/25/2019 03:28	WG1317012
Tetrachloroethene	U		0.744	2.00	2	07/25/2019 03:28	WG1317012
Toluene	U		0.824	2.00	2	07/25/2019 03:28	WG1317012
1,2,3-Trichlorobenzene	U		0.460	2.00	2	07/25/2019 03:28	WG1317012
1,2,4-Trichlorobenzene	U		0.710	2.00	2	07/25/2019 03:28	WG1317012

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,1-Trichloroethane	U		0.638	2.00	2	07/25/2019 03:28	WG1317012
1,1,2-Trichloroethane	U		0.766	2.00	2	07/25/2019 03:28	WG1317012
Trichloroethene	U	J4	0.796	2.00	2	07/25/2019 03:28	WG1317012
Trichlorofluoromethane	U		2.40	10.0	2	07/25/2019 03:28	WG1317012
1,2,3-Trichloropropane	U		1.61	5.00	2	07/25/2019 03:28	WG1317012
1,2,4-Trimethylbenzene	U		0.746	2.00	2	07/25/2019 03:28	WG1317012
1,2,3-Trimethylbenzene	U		0.642	2.00	2	07/25/2019 03:28	WG1317012
1,3,5-Trimethylbenzene	U		0.774	2.00	2	07/25/2019 03:28	WG1317012
Vinyl chloride	U		0.518	2.00	2	07/25/2019 03:28	WG1317012
Xylenes, Total	U		2.12	6.00	2	07/25/2019 03:28	WG1317012
(S) Toluene-d8	*103*			*80.0-120*		*07/25/2019 03:28*	WG1317012
(S) 4-Bromofluorobenzene	*110*			*77.0-126*		*07/25/2019 03:28*	WG1317012
(S) 1,2-Dichloroethane-d4	*88.5*			*70.0-130*		*07/25/2019 03:28*	WG1317012

Sample Narrative:

L1121759-03 WG1317012: Lowest possible dilution due to sediment in sample vial.

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		20.0	100	2	07/25/2019 03:49	WG1317012
Acrolein	U	J4	17.7	100	2	07/25/2019 03:49	WG1317012
Acrylonitrile	U		3.74	20.0	2	07/25/2019 03:49	WG1317012
Benzene	U		0.662	2.00	2	07/25/2019 03:49	WG1317012
Bromobenzene	U		0.704	2.00	2	07/25/2019 03:49	WG1317012
Bromodichloromethane	U		0.760	2.00	2	07/25/2019 03:49	WG1317012
Bromoform	U		0.938	2.00	2	07/25/2019 03:49	WG1317012
Bromomethane	U		1.73	10.0	2	07/25/2019 03:49	WG1317012
n-Butylbenzene	U		0.722	2.00	2	07/25/2019 03:49	WG1317012
sec-Butylbenzene	U		0.730	2.00	2	07/25/2019 03:49	WG1317012
tert-Butylbenzene	U		0.798	2.00	2	07/25/2019 03:49	WG1317012
Carbon tetrachloride	U		0.758	2.00	2	07/25/2019 03:49	WG1317012
Chlorobenzene	U		0.696	2.00	2	07/25/2019 03:49	WG1317012
Chlorodibromomethane	U		0.654	2.00	2	07/25/2019 03:49	WG1317012
Chloroethane	U		0.906	10.0	2	07/25/2019 03:49	WG1317012
Chloroform	U		0.648	10.0	2	07/25/2019 03:49	WG1317012
Chloromethane	U		0.552	5.00	2	07/25/2019 03:49	WG1317012
2-Chlorotoluene	U		0.750	2.00	2	07/25/2019 03:49	WG1317012
4-Chlorotoluene	U		0.702	2.00	2	07/25/2019 03:49	WG1317012
1,2-Dibromo-3-Chloropropane	U		2.66	10.0	2	07/25/2019 03:49	WG1317012
1,2-Dibromoethane	U		0.762	2.00	2	07/25/2019 03:49	WG1317012
Dibromomethane	U		0.692	2.00	2	07/25/2019 03:49	WG1317012
1,2-Dichlorobenzene	U		0.698	2.00	2	07/25/2019 03:49	WG1317012
1,3-Dichlorobenzene	U		0.440	2.00	2	07/25/2019 03:49	WG1317012
1,4-Dichlorobenzene	U		0.548	2.00	2	07/25/2019 03:49	WG1317012
Dichlorodifluoromethane	U		1.10	10.0	2	07/25/2019 03:49	WG1317012
1,1-Dichloroethane	U		0.518	2.00	2	07/25/2019 03:49	WG1317012
1,2-Dichloroethane	U		0.722	2.00	2	07/25/2019 03:49	WG1317012
1,1-Dichloroethene	U	J4	0.796	2.00	2	07/25/2019 03:49	WG1317012
cis-1,2-Dichloroethene	U		0.520	2.00	2	07/25/2019 03:49	WG1317012
trans-1,2-Dichloroethene	U	J4	0.792	2.00	2	07/25/2019 03:49	WG1317012
1,2-Dichloropropane	U		0.612	2.00	2	07/25/2019 03:49	WG1317012
1,1-Dichloropropene	U		0.704	2.00	2	07/25/2019 03:49	WG1317012
1,3-Dichloropropane	U		0.732	2.00	2	07/25/2019 03:49	WG1317012
cis-1,3-Dichloropropene	U		0.836	2.00	2	07/25/2019 03:49	WG1317012
trans-1,3-Dichloropropene	U		0.838	2.00	2	07/25/2019 03:49	WG1317012
2,2-Dichloropropane	U		0.642	2.00	2	07/25/2019 03:49	WG1317012
Di-isopropyl ether	U		0.640	2.00	2	07/25/2019 03:49	WG1317012
Ethylbenzene	U		0.768	2.00	2	07/25/2019 03:49	WG1317012
Hexachloro-1,3-butadiene	U		0.512	2.00	2	07/25/2019 03:49	WG1317012
Isopropylbenzene	U		0.652	2.00	2	07/25/2019 03:49	WG1317012
p-Isopropyltoluene	U		0.700	2.00	2	07/25/2019 03:49	WG1317012
2-Butanone (MEK)	U		7.86	20.0	2	07/25/2019 03:49	WG1317012
Methylene Chloride	2.39	J	2.00	10.0	2	07/25/2019 03:49	WG1317012
4-Methyl-2-pentanone (MIBK)	U		4.28	20.0	2	07/25/2019 03:49	WG1317012
Methyl tert-butyl ether	U		0.734	2.00	2	07/25/2019 03:49	WG1317012
Naphthalene	U		2.00	10.0	2	07/25/2019 03:49	WG1317012
n-Propylbenzene	U		0.698	2.00	2	07/25/2019 03:49	WG1317012
Styrene	U		0.614	2.00	2	07/25/2019 03:49	WG1317012
1,1,1,2-Tetrachloroethane	U		0.770	2.00	2	07/25/2019 03:49	WG1317012
1,1,2,2-Tetrachloroethane	U		0.260	2.00	2	07/25/2019 03:49	WG1317012
1,1,2-Trichlorotrifluoroethane	U		0.606	2.00	2	07/25/2019 03:49	WG1317012
Tetrachloroethene	0.897	J	0.744	2.00	2	07/25/2019 03:49	WG1317012
Toluene	U		0.824	2.00	2	07/25/2019 03:49	WG1317012
1,2,3-Trichlorobenzene	U		0.460	2.00	2	07/25/2019 03:49	WG1317012
1,2,4-Trichlorobenzene	U		0.710	2.00	2	07/25/2019 03:49	WG1317012

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,1-Trichloroethane	U		0.638	2.00	2	07/25/2019 03:49	WG1317012
1,1,2-Trichloroethane	U		0.766	2.00	2	07/25/2019 03:49	WG1317012
Trichloroethene	U	J4	0.796	2.00	2	07/25/2019 03:49	WG1317012
Trichlorofluoromethane	U		2.40	10.0	2	07/25/2019 03:49	WG1317012
1,2,3-Trichloropropane	U		1.61	5.00	2	07/25/2019 03:49	WG1317012
1,2,4-Trimethylbenzene	U		0.746	2.00	2	07/25/2019 03:49	WG1317012
1,2,3-Trimethylbenzene	U		0.642	2.00	2	07/25/2019 03:49	WG1317012
1,3,5-Trimethylbenzene	U		0.774	2.00	2	07/25/2019 03:49	WG1317012
Vinyl chloride	U		0.518	2.00	2	07/25/2019 03:49	WG1317012
Xylenes, Total	U		2.12	6.00	2	07/25/2019 03:49	WG1317012
(S) Toluene-d8	*101*			*80.0-120*		*07/25/2019 03:49*	WG1317012
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*07/25/2019 03:49*	WG1317012
(S) 1,2-Dichloroethane-d4	*87.0*			*70.0-130*		*07/25/2019 03:49*	WG1317012

Sample Narrative:

L1121759-04 WG1317012: Lowest possible dilution due to sediment in sample vial.

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		10.0	50.0	1	07/25/2019 04:09	WG1317012
Acrolein	U	J4	8.87	50.0	1	07/25/2019 04:09	WG1317012
Acrylonitrile	U		1.87	10.0	1	07/25/2019 04:09	WG1317012
Benzene	U		0.331	1.00	1	07/25/2019 04:09	WG1317012
Bromobenzene	U		0.352	1.00	1	07/25/2019 04:09	WG1317012
Bromodichloromethane	U		0.380	1.00	1	07/25/2019 04:09	WG1317012
Bromoform	U		0.469	1.00	1	07/25/2019 04:09	WG1317012
Bromomethane	U		0.866	5.00	1	07/25/2019 04:09	WG1317012
n-Butylbenzene	U		0.361	1.00	1	07/25/2019 04:09	WG1317012
sec-Butylbenzene	U		0.365	1.00	1	07/25/2019 04:09	WG1317012
tert-Butylbenzene	U		0.399	1.00	1	07/25/2019 04:09	WG1317012
Carbon tetrachloride	U		0.379	1.00	1	07/25/2019 04:09	WG1317012
Chlorobenzene	U		0.348	1.00	1	07/25/2019 04:09	WG1317012
Chlorodibromomethane	U		0.327	1.00	1	07/25/2019 04:09	WG1317012
Chloroethane	U		0.453	5.00	1	07/25/2019 04:09	WG1317012
Chloroform	U		0.324	5.00	1	07/25/2019 04:09	WG1317012
Chloromethane	U		0.276	2.50	1	07/25/2019 04:09	WG1317012
2-Chlorotoluene	U		0.375	1.00	1	07/25/2019 04:09	WG1317012
4-Chlorotoluene	U		0.351	1.00	1	07/25/2019 04:09	WG1317012
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	07/25/2019 04:09	WG1317012
1,2-Dibromoethane	U		0.381	1.00	1	07/25/2019 04:09	WG1317012
Dibromomethane	U		0.346	1.00	1	07/25/2019 04:09	WG1317012
1,2-Dichlorobenzene	U		0.349	1.00	1	07/25/2019 04:09	WG1317012
1,3-Dichlorobenzene	U		0.220	1.00	1	07/25/2019 04:09	WG1317012
1,4-Dichlorobenzene	U		0.274	1.00	1	07/25/2019 04:09	WG1317012
Dichlorodifluoromethane	U		0.551	5.00	1	07/25/2019 04:09	WG1317012
1,1-Dichloroethane	U		0.259	1.00	1	07/25/2019 04:09	WG1317012
1,2-Dichloroethane	U		0.361	1.00	1	07/25/2019 04:09	WG1317012
1,1-Dichloroethene	U	J4	0.398	1.00	1	07/25/2019 04:09	WG1317012
cis-1,2-Dichloroethene	U		0.260	1.00	1	07/25/2019 04:09	WG1317012
trans-1,2-Dichloroethene	U	J4	0.396	1.00	1	07/25/2019 04:09	WG1317012
1,2-Dichloropropane	U		0.306	1.00	1	07/25/2019 04:09	WG1317012
1,1-Dichloropropene	U		0.352	1.00	1	07/25/2019 04:09	WG1317012
1,3-Dichloropropane	U		0.366	1.00	1	07/25/2019 04:09	WG1317012
cis-1,3-Dichloropropene	U		0.418	1.00	1	07/25/2019 04:09	WG1317012
trans-1,3-Dichloropropene	U		0.419	1.00	1	07/25/2019 04:09	WG1317012
2,2-Dichloropropane	U		0.321	1.00	1	07/25/2019 04:09	WG1317012
Di-isopropyl ether	U		0.320	1.00	1	07/25/2019 04:09	WG1317012
Ethylbenzene	U		0.384	1.00	1	07/25/2019 04:09	WG1317012
Hexachloro-1,3-butadiene	U		0.256	1.00	1	07/25/2019 04:09	WG1317012
Isopropylbenzene	U		0.326	1.00	1	07/25/2019 04:09	WG1317012
p-Isopropyltoluene	U		0.350	1.00	1	07/25/2019 04:09	WG1317012
2-Butanone (MEK)	U		3.93	10.0	1	07/25/2019 04:09	WG1317012
Methylene Chloride	U		1.00	5.00	1	07/25/2019 04:09	WG1317012
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	07/25/2019 04:09	WG1317012
Methyl tert-butyl ether	U		0.367	1.00	1	07/25/2019 04:09	WG1317012
Naphthalene	U		1.00	5.00	1	07/25/2019 04:09	WG1317012
n-Propylbenzene	U		0.349	1.00	1	07/25/2019 04:09	WG1317012
Styrene	U		0.307	1.00	1	07/25/2019 04:09	WG1317012
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	07/25/2019 04:09	WG1317012
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	07/25/2019 04:09	WG1317012
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	07/25/2019 04:09	WG1317012
Tetrachloroethene	U		0.372	1.00	1	07/25/2019 04:09	WG1317012
Toluene	U		0.412	1.00	1	07/25/2019 04:09	WG1317012
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/25/2019 04:09	WG1317012
1,2,4-Trichlorobenzene	U		0.355	1.00	1	07/25/2019 04:09	WG1317012

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,1-Trichloroethane	U		0.319	1.00	1	07/25/2019 04:09	WG1317012
1,1,2-Trichloroethane	U		0.383	1.00	1	07/25/2019 04:09	WG1317012
Trichloroethene	U	J4	0.398	1.00	1	07/25/2019 04:09	WG1317012
Trichlorofluoromethane	U		1.20	5.00	1	07/25/2019 04:09	WG1317012
1,2,3-Trichloropropane	U		0.807	2.50	1	07/25/2019 04:09	WG1317012
1,2,4-Trimethylbenzene	U		0.373	1.00	1	07/25/2019 04:09	WG1317012
1,2,3-Trimethylbenzene	U		0.321	1.00	1	07/25/2019 04:09	WG1317012
1,3,5-Trimethylbenzene	U		0.387	1.00	1	07/25/2019 04:09	WG1317012
Vinyl chloride	U		0.259	1.00	1	07/25/2019 04:09	WG1317012
Xylenes, Total	U		1.06	3.00	1	07/25/2019 04:09	WG1317012
(S) Toluene-d8	*102*			*80.0-120*		*07/25/2019 04:09*	WG1317012
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*07/25/2019 04:09*	WG1317012
(S) 1,2-Dichloroethane-d4	*86.7*			*70.0-130*		*07/25/2019 04:09*	WG1317012

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		10.0	50.0	1	07/25/2019 02:06	WG1317012
Acrolein	U	J4	8.87	50.0	1	07/25/2019 02:06	WG1317012
Acrylonitrile	U		1.87	10.0	1	07/25/2019 02:06	WG1317012
Benzene	U		0.331	1.00	1	07/25/2019 02:06	WG1317012
Bromobenzene	U		0.352	1.00	1	07/25/2019 02:06	WG1317012
Bromodichloromethane	U		0.380	1.00	1	07/25/2019 02:06	WG1317012
Bromoform	U		0.469	1.00	1	07/25/2019 02:06	WG1317012
Bromomethane	U		0.866	5.00	1	07/25/2019 02:06	WG1317012
n-Butylbenzene	U		0.361	1.00	1	07/25/2019 02:06	WG1317012
sec-Butylbenzene	U		0.365	1.00	1	07/25/2019 02:06	WG1317012
tert-Butylbenzene	U		0.399	1.00	1	07/25/2019 02:06	WG1317012
Carbon tetrachloride	U		0.379	1.00	1	07/25/2019 02:06	WG1317012
Chlorobenzene	U		0.348	1.00	1	07/25/2019 02:06	WG1317012
Chlorodibromomethane	U		0.327	1.00	1	07/25/2019 02:06	WG1317012
Chloroethane	U		0.453	5.00	1	07/25/2019 02:06	WG1317012
Chloroform	U		0.324	5.00	1	07/25/2019 02:06	WG1317012
Chloromethane	U		0.276	2.50	1	07/25/2019 02:06	WG1317012
2-Chlorotoluene	U		0.375	1.00	1	07/25/2019 02:06	WG1317012
4-Chlorotoluene	U		0.351	1.00	1	07/25/2019 02:06	WG1317012
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	07/25/2019 02:06	WG1317012
1,2-Dibromoethane	U		0.381	1.00	1	07/25/2019 02:06	WG1317012
Dibromomethane	U		0.346	1.00	1	07/25/2019 02:06	WG1317012
1,2-Dichlorobenzene	U		0.349	1.00	1	07/25/2019 02:06	WG1317012
1,3-Dichlorobenzene	U		0.220	1.00	1	07/25/2019 02:06	WG1317012
1,4-Dichlorobenzene	U		0.274	1.00	1	07/25/2019 02:06	WG1317012
Dichlorodifluoromethane	U		0.551	5.00	1	07/25/2019 02:06	WG1317012
1,1-Dichloroethane	U		0.259	1.00	1	07/25/2019 02:06	WG1317012
1,2-Dichloroethane	U		0.361	1.00	1	07/25/2019 02:06	WG1317012
1,1-Dichloroethene	U	J4	0.398	1.00	1	07/25/2019 02:06	WG1317012
cis-1,2-Dichloroethene	U		0.260	1.00	1	07/25/2019 02:06	WG1317012
trans-1,2-Dichloroethene	U	J4	0.396	1.00	1	07/25/2019 02:06	WG1317012
1,2-Dichloropropane	U		0.306	1.00	1	07/25/2019 02:06	WG1317012
1,1-Dichloropropene	U		0.352	1.00	1	07/25/2019 02:06	WG1317012
1,3-Dichloropropane	U		0.366	1.00	1	07/25/2019 02:06	WG1317012
cis-1,3-Dichloropropene	U		0.418	1.00	1	07/25/2019 02:06	WG1317012
trans-1,3-Dichloropropene	U		0.419	1.00	1	07/25/2019 02:06	WG1317012
2,2-Dichloropropane	U		0.321	1.00	1	07/25/2019 02:06	WG1317012
Di-isopropyl ether	U		0.320	1.00	1	07/25/2019 02:06	WG1317012
Ethylbenzene	U		0.384	1.00	1	07/25/2019 02:06	WG1317012
Hexachloro-1,3-butadiene	U		0.256	1.00	1	07/25/2019 02:06	WG1317012
Isopropylbenzene	U		0.326	1.00	1	07/25/2019 02:06	WG1317012
p-Isopropyltoluene	U		0.350	1.00	1	07/25/2019 02:06	WG1317012
2-Butanone (MEK)	U		3.93	10.0	1	07/25/2019 02:06	WG1317012
Methylene Chloride	U		1.00	5.00	1	07/25/2019 02:06	WG1317012
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	07/25/2019 02:06	WG1317012
Methyl tert-butyl ether	U		0.367	1.00	1	07/25/2019 02:06	WG1317012
Naphthalene	U		1.00	5.00	1	07/25/2019 02:06	WG1317012
n-Propylbenzene	U		0.349	1.00	1	07/25/2019 02:06	WG1317012
Styrene	U		0.307	1.00	1	07/25/2019 02:06	WG1317012
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	07/25/2019 02:06	WG1317012
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	07/25/2019 02:06	WG1317012
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	07/25/2019 02:06	WG1317012
Tetrachloroethene	U		0.372	1.00	1	07/25/2019 02:06	WG1317012
Toluene	U		0.412	1.00	1	07/25/2019 02:06	WG1317012
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/25/2019 02:06	WG1317012
1,2,4-Trichlorobenzene	U		0.355	1.00	1	07/25/2019 02:06	WG1317012

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,1-Trichloroethane	U		0.319	1.00	1	07/25/2019 02:06	WG1317012
1,1,2-Trichloroethane	U		0.383	1.00	1	07/25/2019 02:06	WG1317012
Trichloroethene	U	J4	0.398	1.00	1	07/25/2019 02:06	WG1317012
Trichlorofluoromethane	U		1.20	5.00	1	07/25/2019 02:06	WG1317012
1,2,3-Trichloropropane	U		0.807	2.50	1	07/25/2019 02:06	WG1317012
1,2,4-Trimethylbenzene	U		0.373	1.00	1	07/25/2019 02:06	WG1317012
1,2,3-Trimethylbenzene	U		0.321	1.00	1	07/25/2019 02:06	WG1317012
1,3,5-Trimethylbenzene	U		0.387	1.00	1	07/25/2019 02:06	WG1317012
Vinyl chloride	U		0.259	1.00	1	07/25/2019 02:06	WG1317012
Xylenes, Total	U		1.06	3.00	1	07/25/2019 02:06	WG1317012
(S) Toluene-d8	*101*			*80.0-120*		*07/25/2019 02:06*	WG1317012
(S) 4-Bromofluorobenzene	*109*			*77.0-126*		*07/25/2019 02:06*	WG1317012
(S) 1,2-Dichloroethane-d4	*84.2*			*70.0-130*		*07/25/2019 02:06*	WG1317012

Method Blank (MB)

(MB) R3434366-2 07/25/19 01:46

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Acrolein	U		8.87	50.0
Acrylonitrile	U		1.87	10.0
Benzene	U		0.331	1.00
Bromobenzene	U		0.352	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
n-Butylbenzene	U		0.361	1.00
sec-Butylbenzene	U		0.365	1.00
tert-Butylbenzene	U		0.399	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
2-Chlorotoluene	U		0.375	1.00
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
Dibromomethane	U		0.346	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,1-Dichloropropene	U		0.352	1.00
1,3-Dichloropropane	U		0.366	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
2,2-Dichloropropane	U		0.321	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00
Hexachloro-1,3-butadiene	U		0.256	1.00

Method Blank (MB)

(MB) R3434366-2 07/25/19 01:46

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.326	1.00
p-Isopropyltoluene	U		0.350	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.349	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	U		0.321	1.00
1,2,4-Trimethylbenzene	U		0.373	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*110*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*84.2*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3434366-1 07/25/19 01:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	89.9	71.9	19.0-160	
Acrolein	125	201	161	10.0-160	J4
Acrylonitrile	125	110	88.1	55.0-149	
Benzene	25.0	27.6	110	70.0-123	

Laboratory Control Sample (LCS)

(LCS) R3434366-1 07/25/19 01:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromobenzene	25.0	21.6	86.6	73.0-121	
Bromodichloromethane	25.0	26.6	106	75.0-120	
Bromoform	25.0	25.5	102	68.0-132	
Bromomethane	25.0	25.9	104	10.0-160	
n-Butylbenzene	25.0	22.4	89.6	73.0-125	
sec-Butylbenzene	25.0	24.1	96.4	75.0-125	
tert-Butylbenzene	25.0	24.0	96.0	76.0-124	
Carbon tetrachloride	25.0	26.6	106	68.0-126	
Chlorobenzene	25.0	26.4	105	80.0-121	
Chlorodibromomethane	25.0	24.8	99.4	77.0-125	
Chloroethane	25.0	23.7	94.8	47.0-150	
Chloroform	25.0	25.4	102	73.0-120	
Chloromethane	25.0	25.0	99.9	41.0-142	
2-Chlorotoluene	25.0	22.0	88.0	76.0-123	
4-Chlorotoluene	25.0	22.9	91.6	75.0-122	
1,2-Dibromo-3-Chloropropane	25.0	22.3	89.2	58.0-134	
1,2-Dibromoethane	25.0	26.2	105	80.0-122	
Dibromomethane	25.0	26.6	106	80.0-120	
1,2-Dichlorobenzene	25.0	22.5	90.2	79.0-121	
1,3-Dichlorobenzene	25.0	22.8	91.3	79.0-120	
1,4-Dichlorobenzene	25.0	22.6	90.6	79.0-120	
Dichlorodifluoromethane	25.0	36.9	147	51.0-149	
1,1-Dichloroethane	25.0	26.3	105	70.0-126	
1,2-Dichloroethane	25.0	22.9	91.4	70.0-128	
1,1-Dichloroethene	25.0	31.6	126	71.0-124	J4
cis-1,2-Dichloroethene	25.0	28.2	113	73.0-120	
trans-1,2-Dichloroethene	25.0	30.7	123	73.0-120	J4
1,2-Dichloropropane	25.0	25.6	103	77.0-125	
1,1-Dichloropropene	25.0	28.6	115	74.0-126	
1,3-Dichloropropane	25.0	23.7	94.8	80.0-120	
cis-1,3-Dichloropropene	25.0	27.5	110	80.0-123	
trans-1,3-Dichloropropene	25.0	22.4	89.6	78.0-124	
2,2-Dichloropropane	25.0	24.3	97.0	58.0-130	
Di-isopropyl ether	25.0	22.3	89.3	58.0-138	
Ethylbenzene	25.0	27.6	110	79.0-123	
Hexachloro-1,3-butadiene	25.0	19.4	77.6	54.0-138	
Isopropylbenzene	25.0	25.4	102	76.0-127	
p-Isopropyltoluene	25.0	24.4	97.7	76.0-125	
2-Butanone (MEK)	125	101	80.6	44.0-160	
Methylene Chloride	25.0	26.7	107	67.0-120	

Laboratory Control Sample (LCS)

(LCS) R3434366-1 07/25/19 01:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	125	93.0	74.4	68.0-142	
Methyl tert-butyl ether	25.0	25.6	102	68.0-125	
Naphthalene	25.0	21.6	86.5	54.0-135	
n-Propylbenzene	25.0	24.0	96.2	77.0-124	
Styrene	25.0	26.3	105	73.0-130	
1,1,1,2-Tetrachloroethane	25.0	23.8	95.0	75.0-125	
1,1,2,2-Tetrachloroethane	25.0	21.7	87.0	65.0-130	
Tetrachloroethene	25.0	27.8	111	72.0-132	
Toluene	25.0	25.3	101	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	27.8	111	69.0-132	
1,2,3-Trichlorobenzene	25.0	20.3	81.3	50.0-138	
1,2,4-Trichlorobenzene	25.0	20.1	80.3	57.0-137	
1,1,1-Trichloroethane	25.0	26.2	105	73.0-124	
1,1,2-Trichloroethane	25.0	25.2	101	80.0-120	
Trichloroethene	25.0	31.4	126	78.0-124	J4
Trichlorofluoromethane	25.0	24.6	98.2	59.0-147	
1,2,3-Trichloropropane	25.0	22.6	90.4	73.0-130	
1,2,3-Trimethylbenzene	25.0	21.6	86.5	77.0-120	
1,2,4-Trimethylbenzene	25.0	23.3	93.2	76.0-121	
1,3,5-Trimethylbenzene	25.0	24.6	98.3	76.0-122	
Vinyl chloride	25.0	24.6	98.5	67.0-131	
Xylenes, Total	75.0	81.7	109	79.0-123	
(S) Toluene-d8			*96.3*	*80.0-120*	
(S) 4-Bromofluorobenzene			*105*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*91.0*	*70.0-130*	

Method Blank (MB)

(MB) R3434637-4 07/26/19 10:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Acrolein	U		8.87	50.0
Acrylonitrile	U		1.87	10.0
Benzene	U		0.331	1.00
Bromobenzene	U		0.352	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
n-Butylbenzene	U		0.361	1.00
sec-Butylbenzene	U		0.365	1.00
tert-Butylbenzene	U		0.399	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
2-Chlorotoluene	U		0.375	1.00
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
Dibromomethane	U		0.346	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,1-Dichloropropene	U		0.352	1.00
1,3-Dichloropropane	U		0.366	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
2,2-Dichloropropane	U		0.321	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00
Hexachloro-1,3-butadiene	U		0.256	1.00

Method Blank (MB)

(MB) R3434637-4 07/26/19 10:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.326	1.00
p-Isopropyltoluene	U		0.350	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.349	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	U		0.321	1.00
1,2,4-Trimethylbenzene	U		0.373	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3434637-1 07/26/19 09:14 • (LCSD) R3434637-2 07/26/19 09:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	119	120	95.1	96.3	19.0-160			1.22	27
Acrolein	125	152	160	121	128	10.0-160			4.97	26
Acrylonitrile	125	116	116	92.6	92.7	55.0-149			0.0993	20
Benzene	25.0	22.7	23.1	90.7	92.3	70.0-123			1.78	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3434637-1 07/26/19 09:14 • (LCSD) R3434637-2 07/26/19 09:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromobenzene	25.0	22.0	22.0	87.9	88.1	73.0-121			0.181	20
Bromodichloromethane	25.0	25.1	25.8	101	103	75.0-120			2.53	20
Bromoform	25.0	24.9	24.5	99.7	98.1	68.0-132			1.67	20
Bromomethane	25.0	24.6	25.0	98.4	100	10.0-160			1.85	25
n-Butylbenzene	25.0	25.3	25.8	101	103	73.0-125			2.03	20
sec-Butylbenzene	25.0	24.2	24.6	97.0	98.4	75.0-125			1.46	20
tert-Butylbenzene	25.0	24.6	24.6	98.2	98.2	76.0-124			0.0351	20
Carbon tetrachloride	25.0	26.2	26.4	105	106	68.0-126			0.703	20
Chlorobenzene	25.0	23.5	23.7	94.1	94.8	80.0-121			0.710	20
Chlorodibromomethane	25.0	25.7	25.6	103	102	77.0-125			0.352	20
Chloroethane	25.0	25.0	25.6	100	102	47.0-150			2.36	20
Chloroform	25.0	22.2	22.5	88.8	90.0	73.0-120			1.39	20
Chloromethane	25.0	27.6	28.4	110	114	41.0-142			2.79	20
2-Chlorotoluene	25.0	23.8	23.7	95.3	95.0	76.0-123			0.322	20
4-Chlorotoluene	25.0	24.1	24.4	96.4	97.6	75.0-122			1.14	20
1,2-Dibromo-3-Chloropropane	25.0	22.4	21.9	89.5	87.7	58.0-134			2.04	20
1,2-Dibromoethane	25.0	25.6	25.9	102	104	80.0-122			1.26	20
Dibromomethane	25.0	24.5	25.1	98.1	100	80.0-120			2.39	20
1,2-Dichlorobenzene	25.0	23.8	23.8	95.1	95.1	79.0-121			0.0219	20
1,3-Dichlorobenzene	25.0	23.8	24.0	95.0	95.9	79.0-120			0.901	20
1,4-Dichlorobenzene	25.0	23.5	23.0	94.0	91.9	79.0-120			2.25	20
Dichlorodifluoromethane	25.0	30.5	31.0	122	124	51.0-149			1.61	20
1,1-Dichloroethane	25.0	23.7	24.0	94.7	96.1	70.0-126			1.44	20
1,2-Dichloroethane	25.0	23.6	23.5	94.5	93.8	70.0-128			0.788	20
1,1-Dichloroethene	25.0	23.2	23.7	92.7	94.9	71.0-124			2.34	20
cis-1,2-Dichloroethene	25.0	22.4	23.1	89.8	92.2	73.0-120			2.72	20
trans-1,2-Dichloroethene	25.0	23.1	23.6	92.3	94.4	73.0-120			2.32	20
1,2-Dichloropropane	25.0	25.2	25.6	101	103	77.0-125			1.66	20
1,1-Dichloropropene	25.0	24.7	25.2	98.6	101	74.0-126			2.38	20
1,3-Dichloropropane	25.0	25.5	25.7	102	103	80.0-120			0.926	20
cis-1,3-Dichloropropene	25.0	26.5	27.0	106	108	80.0-123			1.95	20
trans-1,3-Dichloropropene	25.0	26.3	26.6	105	106	78.0-124			1.04	20
2,2-Dichloropropane	25.0	24.6	24.7	98.6	98.6	58.0-130			0.0611	20
Di-isopropyl ether	25.0	25.3	25.4	101	102	58.0-138			0.630	20
Ethylbenzene	25.0	24.0	24.1	95.9	96.2	79.0-123			0.302	20
Hexachloro-1,3-butadiene	25.0	25.8	26.1	103	105	54.0-138			1.23	20
Isopropylbenzene	25.0	23.9	24.0	95.5	96.1	76.0-127			0.540	20
p-Isopropyltoluene	25.0	24.5	24.9	98.1	99.8	76.0-125			1.71	20
2-Butanone (MEK)	125	125	127	100	101	44.0-160			1.19	20
Methylene Chloride	25.0	21.8	21.5	87.1	86.0	67.0-120			1.22	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3434637-1 07/26/19 09:14 • (LCSD) R3434637-2 07/26/19 09:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	125	122	121	97.2	96.8	68.0-142			0.387	20
Methyl tert-butyl ether	25.0	19.8	19.7	79.2	78.7	68.0-125			0.637	20
Naphthalene	25.0	23.6	23.8	94.3	95.2	54.0-135			0.912	20
n-Propylbenzene	25.0	24.5	24.9	98.1	99.4	77.0-124			1.36	20
Styrene	25.0	24.8	24.8	99.1	99.1	73.0-130			0.0126	20
1,1,1,2-Tetrachloroethane	25.0	22.1	22.4	88.5	89.8	75.0-125			1.46	20
1,1,2,2-Tetrachloroethane	25.0	23.0	22.6	92.1	90.4	65.0-130			1.85	20
Tetrachloroethene	25.0	25.2	25.7	101	103	72.0-132			2.08	20
Toluene	25.0	23.0	23.1	92.0	92.5	79.0-120			0.460	20
1,1,2-Trichlorotrifluoroethane	25.0	22.5	22.9	90.1	91.4	69.0-132			1.41	20
1,2,3-Trichlorobenzene	25.0	25.7	25.6	103	102	50.0-138			0.464	20
1,2,4-Trichlorobenzene	25.0	25.6	25.8	102	103	57.0-137			0.951	20
1,1,1-Trichloroethane	25.0	25.6	25.8	102	103	73.0-124			0.988	20
1,1,2-Trichloroethane	25.0	25.5	25.6	102	102	80.0-120			0.344	20
Trichloroethene	25.0	24.3	24.9	97.1	99.4	78.0-124			2.41	20
Trichlorofluoromethane	25.0	25.9	26.4	104	105	59.0-147			1.67	20
1,2,3-Trichloropropane	25.0	24.0	23.9	96.0	95.6	73.0-130			0.452	20
1,2,3-Trimethylbenzene	25.0	23.8	23.9	95.2	95.6	77.0-120			0.382	20
1,2,4-Trimethylbenzene	25.0	23.4	23.5	93.4	93.9	76.0-121			0.545	20
1,3,5-Trimethylbenzene	25.0	24.0	24.3	96.0	97.4	76.0-122			1.37	20
Vinyl chloride	25.0	26.7	27.3	107	109	67.0-131			2.35	20
Xylenes, Total	75.0	69.3	70.1	92.4	93.5	79.0-123			1.15	20
(S) Toluene-d8				*108*	*107*	*80.0-120*				
(S) 4-Bromofluorobenzene				*98.0*	*97.5*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*110*	*109*	*70.0-130*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

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* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

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Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
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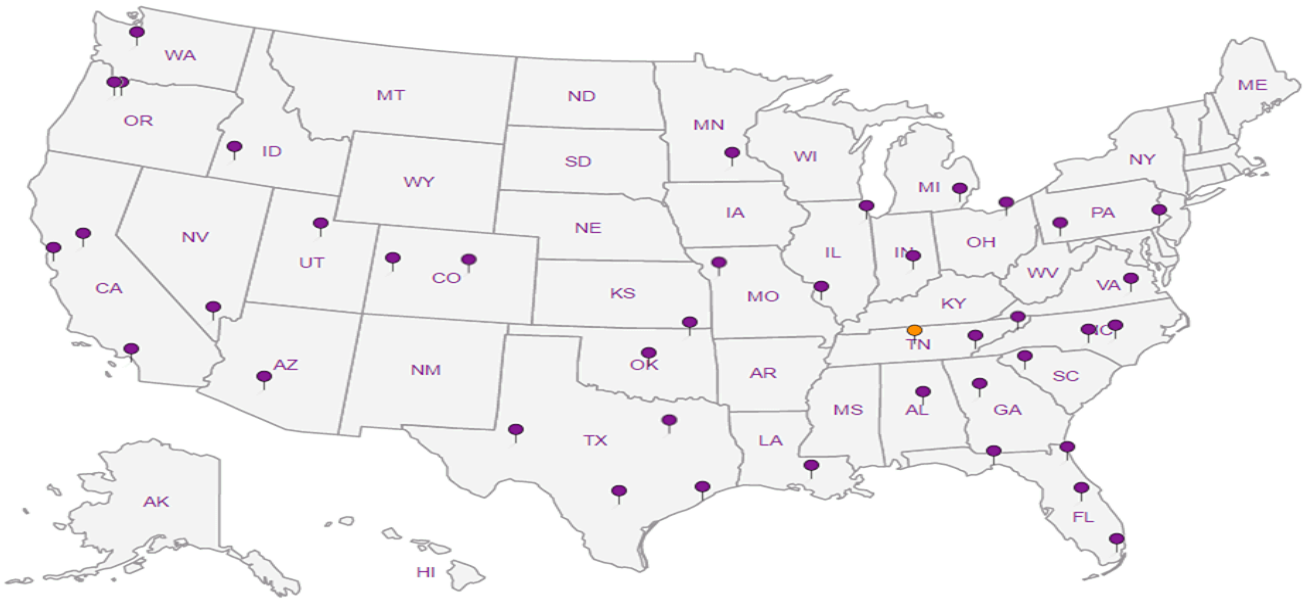
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Company Name/Address:
Jeff Stromberg
3880 S Bascom Ave, Suite 109
San Jose, CA 95124

Billing Information:
AEI Consultants

Report to:
Jeff Stromberg

Email To: jhenry@aeiconsultants.com
jstromberg@aeiconsultants.com

Project Description:

City/State Collected: San Mateo, Ca

Phone: (949) 939-5523
Fax:

Client Project # 407966

Lab Project #

Collected by (print): Jeff Stromberg

Site/Facility ID #

P.O. # 199665

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✔Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum

Analysis: VOC's 8260B

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1127159
A127

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	Rem./Contaminant	Sample # (lab only)
SB-1-W	GW		7/22/19	1338			X	-01
SB-2-W				1530			X	-02
SB-3-W				1730			X	-03
SB-DUP-W				1343			X	-04
EB-1				1740			X	-05
TB-1				0900			X	-06

Remarks: Please forward to jhenry@aeiconsultants.com

RAD SCREEN: <0.5 mR/hr

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	7/22/19	1900	Sample Verification 1905		OK
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.5 °C Bottles Received: 4.8+.2=5.0 15	COC Seal Intact: ___Y ___N ✔NA
	7/23/19	1000			
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/24/19 Time: 8:45	pH Checked: NCF:
			Hailey Nelson		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 24, 2019

AEI Consultants - CA

Sample Delivery Group:	L1120392
Samples Received:	07/19/2019
Project Number:	407966
Description:	

Report To: Jeff Stromberg
2500 Camino Diablo
Walnut Creek, CA 94597

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

TABLE OF CONTENTS

SV-1-5 L1120392-01 Air

Collected by: Jeff Stromberg | Collected date/time: 07/17/19 15:21 | Received date/time: 07/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1316416	1	07/24/19 09:57	07/24/19 09:57	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1315395	2	07/22/19 16:04	07/22/19 16:04	AMC	Mt. Juliet, TN

SV-1-9.5 L1120392-02 Air

Collected by: Jeff Stromberg | Collected date/time: 07/17/19 14:47 | Received date/time: 07/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1316416	1	07/24/19 10:01	07/24/19 10:01	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1315395	2	07/22/19 16:42	07/22/19 16:42	AMC	Mt. Juliet, TN

SV-2-5 L1120392-03 Air

Collected by: Jeff Stromberg | Collected date/time: 07/17/19 09:55 | Received date/time: 07/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1316416	1	07/24/19 10:04	07/24/19 10:04	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1315395	2	07/22/19 17:20	07/22/19 17:20	AMC	Mt. Juliet, TN

SV-2-9.5 L1120392-04 Air

Collected by: Jeff Stromberg | Collected date/time: 07/17/19 10:59 | Received date/time: 07/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1316416	1	07/24/19 10:31	07/24/19 10:31	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1315395	2	07/22/19 17:59	07/22/19 17:59	AMC	Mt. Juliet, TN

SV-3-5 L1120392-05 Air

Collected by: Jeff Stromberg | Collected date/time: 07/17/19 13:44 | Received date/time: 07/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1316416	2	07/24/19 10:53	07/24/19 10:53	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1315395	2	07/22/19 18:38	07/22/19 18:38	AMC	Mt. Juliet, TN

SV-3-9.5 L1120392-06 Air

Collected by: Jeff Stromberg | Collected date/time: 07/17/19 13:09 | Received date/time: 07/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1316416	1	07/24/19 10:45	07/24/19 10:45	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1315395	2	07/22/19 19:16	07/22/19 19:16	AMC	Mt. Juliet, TN

SV-DUP L1120392-07 Air

Collected by: Jeff Stromberg | Collected date/time: 07/17/19 12:00 | Received date/time: 07/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1316416	1	07/24/19 10:49	07/24/19 10:49	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG1315395	2	07/22/19 19:55	07/22/19 19:55	AMC	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	1.23		1	WG1316416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	16.7	39.6		2	WG1315395
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1315395
Benzene	71-43-2	78.10	0.400	1.28	0.987	3.15		2	WG1315395
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1315395
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1315395
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1315395
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1315395
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG1315395
Carbon disulfide	75-15-0	76.10	0.400	1.24	20.6	64.1		2	WG1315395
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1315395
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1315395
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1315395
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1315395
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG1315395
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1315395
Cyclohexane	110-82-7	84.20	0.400	1.38	0.902	3.11		2	WG1315395
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1315395
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1315395
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1315395
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1315395
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1315395
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1315395
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1315395
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1315395
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1315395
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1315395
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1315395
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1315395
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1315395
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1315395
Ethanol	64-17-5	46.10	1.26	2.38	8.63	16.3		2	WG1315395
Ethylbenzene	100-41-4	106	0.400	1.73	1.06	4.58		2	WG1315395
4-Ethyltoluene	622-96-8	120	0.400	1.96	ND	ND		2	WG1315395
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1315395
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	0.490	2.43		2	WG1315395
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1315395
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1315395
Heptane	142-82-5	100	0.400	1.64	1.76	7.21		2	WG1315395
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1315395
n-Hexane	110-54-3	86.20	0.400	1.41	2.14	7.56		2	WG1315395
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1315395
Methylene Chloride	75-09-2	84.90	0.400	1.39	3.04	10.6		2	WG1315395
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1315395
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	3.21	9.47		2	WG1315395
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	5.67	23.2		2	WG1315395
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1315395
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1315395
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1315395
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1315395
Propene	115-07-1	42.10	0.800	1.38	6.90	11.9		2	WG1315395

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1315395
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1315395
Tetrachloroethylene	127-18-4	166	0.400	2.72	ND	ND		2	WG1315395
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	ND	ND		2	WG1315395
Toluene	108-88-3	92.10	0.400	1.51	8.55	32.2		2	WG1315395
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1315395
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1315395
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1315395
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1315395
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	1.29	6.33		2	WG1315395
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	0.434	2.13		2	WG1315395
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	ND	ND		2	WG1315395
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1315395
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1315395
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1315395
m&p-Xylene	1330-20-7	106	0.800	3.47	2.59	11.2		2	WG1315395
o-Xylene	95-47-6	106	0.400	1.73	1.11	4.81		2	WG1315395
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	0.808	2.18		2	WG1315395
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*106*				WG1315395

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	2.65		1	WG1316416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	22.7	53.8		2	WG1315395
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1315395
Benzene	71-43-2	78.10	0.400	1.28	0.490	1.56		2	WG1315395
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1315395
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1315395
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1315395
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1315395
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG1315395
Carbon disulfide	75-15-0	76.10	0.400	1.24	4.31	13.4		2	WG1315395
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1315395
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1315395
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1315395
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1315395
Chloromethane	74-87-3	50.50	0.400	0.826	0.736	1.52		2	WG1315395
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1315395
Cyclohexane	110-82-7	84.20	0.400	1.38	1.15	3.96		2	WG1315395
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1315395
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1315395
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1315395
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1315395
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1315395
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1315395
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1315395
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1315395
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1315395
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1315395
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1315395
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1315395
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1315395
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1315395
Ethanol	64-17-5	46.10	1.26	2.38	8.82	16.6		2	WG1315395
Ethylbenzene	100-41-4	106	0.400	1.73	0.437	1.89		2	WG1315395
4-Ethyltoluene	622-96-8	120	0.400	1.96	ND	ND		2	WG1315395
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1315395
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	0.524	2.59		2	WG1315395
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1315395
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1315395
Heptane	142-82-5	100	0.400	1.64	1.89	7.74		2	WG1315395
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1315395
n-Hexane	110-54-3	86.20	0.400	1.41	3.35	11.8		2	WG1315395
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1315395
Methylene Chloride	75-09-2	84.90	0.400	1.39	5.40	18.7		2	WG1315395
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1315395
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	2.84	8.38		2	WG1315395
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1315395
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1315395
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1315395
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1315395
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1315395
Propene	115-07-1	42.10	0.800	1.38	50.3	86.7		2	WG1315395

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1315395
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1315395
Tetrachloroethylene	127-18-4	166	0.400	2.72	ND	ND		2	WG1315395
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	0.545	1.61		2	WG1315395
Toluene	108-88-3	92.10	0.400	1.51	5.45	20.5		2	WG1315395
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1315395
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1315395
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1315395
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1315395
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.467	2.29		2	WG1315395
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND		2	WG1315395
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	ND	ND		2	WG1315395
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1315395
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1315395
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1315395
m&p-Xylene	1330-20-7	106	0.800	3.47	1.17	5.07		2	WG1315395
o-Xylene	95-47-6	106	0.400	1.73	0.502	2.18		2	WG1315395
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	1.29	3.48		2	WG1315395
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.1*				WG1315395

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1316416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	35.1	83.4		2	WG1315395
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1315395
Benzene	71-43-2	78.10	0.400	1.28	1.12	3.58		2	WG1315395
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1315395
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1315395
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1315395
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1315395
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG1315395
Carbon disulfide	75-15-0	76.10	0.400	1.24	0.838	2.61		2	WG1315395
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1315395
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1315395
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1315395
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1315395
Chloromethane	74-87-3	50.50	0.400	0.826	0.443	0.916		2	WG1315395
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1315395
Cyclohexane	110-82-7	84.20	0.400	1.38	0.762	2.62		2	WG1315395
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1315395
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1315395
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1315395
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1315395
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1315395
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1315395
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1315395
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1315395
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1315395
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1315395
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1315395
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1315395
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1315395
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1315395
Ethanol	64-17-5	46.10	1.26	2.38	6.00	11.3		2	WG1315395
Ethylbenzene	100-41-4	106	0.400	1.73	0.943	4.09		2	WG1315395
4-Ethyltoluene	622-96-8	120	0.400	1.96	ND	ND		2	WG1315395
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1315395
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	0.497	2.46		2	WG1315395
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1315395
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1315395
Heptane	142-82-5	100	0.400	1.64	2.47	10.1		2	WG1315395
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1315395
n-Hexane	110-54-3	86.20	0.400	1.41	5.84	20.6		2	WG1315395
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1315395
Methylene Chloride	75-09-2	84.90	0.400	1.39	14.0	48.7		2	WG1315395
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1315395
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	9.38	27.7		2	WG1315395
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	2.97	12.2		2	WG1315395
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1315395
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1315395
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1315395
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1315395
Propene	115-07-1	42.10	0.800	1.38	32.6	56.2		2	WG1315395

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1315395
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1315395
Tetrachloroethylene	127-18-4	166	0.400	2.72	1.56	10.6		2	WG1315395
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	13.0	38.3		2	WG1315395
Toluene	108-88-3	92.10	0.400	1.51	6.69	25.2		2	WG1315395
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1315395
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1315395
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1315395
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1315395
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	1.78	8.72		2	WG1315395
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	0.722	3.54		2	WG1315395
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	ND	ND		2	WG1315395
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1315395
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1315395
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1315395
m&p-Xylene	1330-20-7	106	0.800	3.47	2.79	12.1		2	WG1315395
o-Xylene	95-47-6	106	0.400	1.73	0.960	4.16		2	WG1315395
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	0.663	1.79		2	WG1315395
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.9*				WG1315395

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1316416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	78.4	186		2	WG1315395
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1315395
Benzene	71-43-2	78.10	0.400	1.28	1.04	3.32		2	WG1315395
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1315395
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1315395
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1315395
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1315395
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG1315395
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		2	WG1315395
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1315395
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1315395
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1315395
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1315395
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG1315395
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1315395
Cyclohexane	110-82-7	84.20	0.400	1.38	ND	ND		2	WG1315395
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1315395
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1315395
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1315395
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1315395
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1315395
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1315395
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1315395
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1315395
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1315395
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1315395
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1315395
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1315395
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1315395
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1315395
Ethanol	64-17-5	46.10	1.26	2.38	14.3	26.9		2	WG1315395
Ethylbenzene	100-41-4	106	0.400	1.73	1.41	6.13		2	WG1315395
4-Ethyltoluene	622-96-8	120	0.400	1.96	0.672	3.30		2	WG1315395
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1315395
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	0.482	2.38		2	WG1315395
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1315395
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1315395
Heptane	142-82-5	100	0.400	1.64	0.733	3.00		2	WG1315395
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1315395
n-Hexane	110-54-3	86.20	0.400	1.41	0.862	3.04		2	WG1315395
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1315395
Methylene Chloride	75-09-2	84.90	0.400	1.39	2.30	7.99		2	WG1315395
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	3.16	12.9		2	WG1315395
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	27.4	80.8		2	WG1315395
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	5.17	21.2		2	WG1315395
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1315395
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1315395
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1315395
2-Propanol	67-63-0	60.10	2.50	6.15	2.61	6.42		2	WG1315395
Propene	115-07-1	42.10	0.800	1.38	3.05	5.25		2	WG1315395

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1315395
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1315395
Tetrachloroethylene	127-18-4	166	0.400	2.72	6.23	42.3		2	WG1315395
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	33.0	97.4		2	WG1315395
Toluene	108-88-3	92.10	0.400	1.51	7.87	29.6		2	WG1315395
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1315395
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1315395
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1315395
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1315395
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	4.33	21.2		2	WG1315395
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	1.72	8.46		2	WG1315395
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	ND	ND		2	WG1315395
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1315395
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1315395
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1315395
m&p-Xylene	1330-20-7	106	0.800	3.47	4.76	20.7		2	WG1315395
o-Xylene	95-47-6	106	0.400	1.73	1.60	6.94		2	WG1315395
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	5.15	13.9		2	WG1315395
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.0*				WG1315395

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.200	5.98		2	WG1316416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	23.4	55.7		2	WG1315395
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1315395
Benzene	71-43-2	78.10	0.400	1.28	1.36	4.35		2	WG1315395
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1315395
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1315395
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1315395
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1315395
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG1315395
Carbon disulfide	75-15-0	76.10	0.400	1.24	11.5	35.8		2	WG1315395
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1315395
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1315395
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1315395
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1315395
Chloromethane	74-87-3	50.50	0.400	0.826	0.578	1.19		2	WG1315395
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1315395
Cyclohexane	110-82-7	84.20	0.400	1.38	0.811	2.79		2	WG1315395
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1315395
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1315395
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1315395
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1315395
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1315395
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1315395
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1315395
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1315395
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1315395
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1315395
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1315395
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1315395
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1315395
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1315395
Ethanol	64-17-5	46.10	1.26	2.38	6.31	11.9		2	WG1315395
Ethylbenzene	100-41-4	106	0.400	1.73	1.52	6.61		2	WG1315395
4-Ethyltoluene	622-96-8	120	0.400	1.96	0.441	2.16		2	WG1315395
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1315395
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	0.420	2.08		2	WG1315395
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1315395
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1315395
Heptane	142-82-5	100	0.400	1.64	2.20	9.02		2	WG1315395
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1315395
n-Hexane	110-54-3	86.20	0.400	1.41	1.60	5.65		2	WG1315395
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1315395
Methylene Chloride	75-09-2	84.90	0.400	1.39	0.530	1.84	B	2	WG1315395
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	3.29	13.5		2	WG1315395
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	4.91	14.5		2	WG1315395
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	4.71	19.3		2	WG1315395
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1315395
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1315395
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1315395
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1315395
Propene	115-07-1	42.10	0.800	1.38	20.4	35.1		2	WG1315395

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1315395
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1315395
Tetrachloroethylene	127-18-4	166	0.400	2.72	ND	ND		2	WG1315395
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	0.565	1.67		2	WG1315395
Toluene	108-88-3	92.10	0.400	1.51	12.2	46.0		2	WG1315395
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1315395
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1315395
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1315395
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1315395
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	1.83	8.98		2	WG1315395
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	0.651	3.20		2	WG1315395
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	ND	ND		2	WG1315395
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1315395
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1315395
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1315395
m&p-Xylene	1330-20-7	106	0.800	3.47	3.98	17.2		2	WG1315395
o-Xylene	95-47-6	106	0.400	1.73	1.68	7.27		2	WG1315395
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	2.91	7.86		2	WG1315395
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*100*				WG1315395

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1316416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	20.6	49.1		2	WG1315395
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1315395
Benzene	71-43-2	78.10	0.400	1.28	ND	ND		2	WG1315395
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1315395
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1315395
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1315395
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1315395
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG1315395
Carbon disulfide	75-15-0	76.10	0.400	1.24	0.643	2.00		2	WG1315395
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1315395
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1315395
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1315395
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1315395
Chloromethane	74-87-3	50.50	0.400	0.826	0.435	0.899		2	WG1315395
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1315395
Cyclohexane	110-82-7	84.20	0.400	1.38	1.10	3.77		2	WG1315395
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1315395
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1315395
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1315395
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1315395
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1315395
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1315395
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1315395
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1315395
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1315395
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1315395
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1315395
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1315395
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1315395
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1315395
Ethanol	64-17-5	46.10	1.26	2.38	12.7	23.9		2	WG1315395
Ethylbenzene	100-41-4	106	0.400	1.73	ND	ND		2	WG1315395
4-Ethyltoluene	622-96-8	120	0.400	1.96	ND	ND		2	WG1315395
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1315395
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	0.473	2.34		2	WG1315395
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1315395
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1315395
Heptane	142-82-5	100	0.400	1.64	0.411	1.68		2	WG1315395
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1315395
n-Hexane	110-54-3	86.20	0.400	1.41	1.25	4.42		2	WG1315395
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1315395
Methylene Chloride	75-09-2	84.90	0.400	1.39	10.3	35.6		2	WG1315395
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1315395
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	2.87	8.46		2	WG1315395
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1315395
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1315395
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1315395
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1315395
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1315395
Propene	115-07-1	42.10	0.800	1.38	5.16	8.89		2	WG1315395

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1315395
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1315395
Tetrachloroethylene	127-18-4	166	0.400	2.72	ND	ND		2	WG1315395
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	ND	ND		2	WG1315395
Toluene	108-88-3	92.10	0.400	1.51	6.10	23.0		2	WG1315395
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1315395
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1315395
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1315395
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1315395
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	ND	ND		2	WG1315395
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND		2	WG1315395
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	ND	ND		2	WG1315395
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1315395
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1315395
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1315395
m&p-Xylene	1330-20-7	106	0.800	3.47	ND	ND		2	WG1315395
o-Xylene	95-47-6	106	0.400	1.73	ND	ND		2	WG1315395
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	21.8	58.8		2	WG1315395
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.1*				WG1315395

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1316416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	62.8	149		2	WG1315395
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1315395
Benzene	71-43-2	78.10	0.400	1.28	1.99	6.35		2	WG1315395
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1315395
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1315395
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1315395
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1315395
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG1315395
Carbon disulfide	75-15-0	76.10	0.400	1.24	1.18	3.68		2	WG1315395
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1315395
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1315395
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1315395
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1315395
Chloromethane	74-87-3	50.50	0.400	0.826	0.455	0.939		2	WG1315395
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1315395
Cyclohexane	110-82-7	84.20	0.400	1.38	0.934	3.22		2	WG1315395
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1315395
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1315395
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1315395
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1315395
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1315395
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1315395
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1315395
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1315395
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1315395
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1315395
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1315395
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1315395
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1315395
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1315395
Ethanol	64-17-5	46.10	1.26	2.38	6.59	12.4		2	WG1315395
Ethylbenzene	100-41-4	106	0.400	1.73	1.80	7.78		2	WG1315395
4-Ethyltoluene	622-96-8	120	0.400	1.96	0.698	3.42		2	WG1315395
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1315395
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	0.520	2.57		2	WG1315395
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1315395
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1315395
Heptane	142-82-5	100	0.400	1.64	4.32	17.7		2	WG1315395
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1315395
n-Hexane	110-54-3	86.20	0.400	1.41	5.83	20.5		2	WG1315395
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1315395
Methylene Chloride	75-09-2	84.90	0.400	1.39	0.507	1.76	B	2	WG1315395
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1315395
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	18.5	54.5		2	WG1315395
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	5.42	22.2		2	WG1315395
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1315395
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1315395
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1315395
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1315395
Propene	115-07-1	42.10	0.800	1.38	26.4	45.5		2	WG1315395

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1315395
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1315395
Tetrachloroethylene	127-18-4	166	0.400	2.72	2.88	19.6		2	WG1315395
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	27.0	79.6		2	WG1315395
Toluene	108-88-3	92.10	0.400	1.51	10.8	40.6		2	WG1315395
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1315395
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1315395
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1315395
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1315395
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	3.67	18.0		2	WG1315395
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	1.48	7.28		2	WG1315395
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	ND	ND		2	WG1315395
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1315395
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1315395
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1315395
m&p-Xylene	1330-20-7	106	0.800	3.47	5.39	23.3		2	WG1315395
o-Xylene	95-47-6	106	0.400	1.73	1.86	8.07		2	WG1315395
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	ND	ND		2	WG1315395
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1315395

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3433667-3 07/24/19 09:20

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Helium	U		0.0259	0.100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3433667-1 07/24/19 08:15 • (LCSD) R3433667-2 07/24/19 09:08

Analyte	Spike Amount %	LCS Result %	LCSD Result %	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Helium	2.50	2.70	2.76	108	111	70.0-130			2.13	25

Method Blank (MB)

(MB) R3433123-3 07/22/19 12:15

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	0.148	J	0.0569	1.25
Allyl Chloride	U		0.0546	0.200
Benzene	U		0.0460	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0436	0.200
Bromoform	U		0.0786	0.600
Bromomethane	U		0.0609	0.200
1,3-Butadiene	U		0.0563	2.00
Carbon disulfide	U		0.0544	0.200
Carbon tetrachloride	U		0.0585	0.200
Chlorobenzene	U		0.0601	0.200
Chloroethane	U		0.0489	0.200
Chloroform	U		0.0574	0.200
Chloromethane	U		0.0544	0.200
2-Chlorotoluene	U		0.0605	0.200
Cyclohexane	U		0.0534	0.200
Dibromochloromethane	U		0.0494	0.200
1,2-Dibromoethane	U		0.0185	0.200
1,2-Dichlorobenzene	U		0.0603	0.200
1,3-Dichlorobenzene	U		0.0597	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0616	0.200
1,1-Dichloroethane	U		0.0514	0.200
1,1-Dichloroethene	U		0.0490	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
1,2-Dichloropropane	U		0.0599	0.200
cis-1,3-Dichloropropene	U		0.0588	0.200
trans-1,3-Dichloropropene	U		0.0435	0.200
1,4-Dioxane	U		0.0554	0.200
Ethylbenzene	U		0.0506	0.200
4-Ethyltoluene	U		0.0666	0.200
Trichlorofluoromethane	U		0.0673	0.200
Dichlorodifluoromethane	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	U		0.0458	0.200
Heptane	U		0.0626	0.200
Hexachloro-1,3-butadiene	U		0.0656	0.630
n-Hexane	U		0.0457	0.200
Isopropylbenzene	U		0.0563	0.200

Method Blank (MB)

(MB) R3433123-3 07/22/19 12:15

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	0.0615	J	0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
Methyl Methacrylate	U		0.0773	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Propene	U		0.0932	0.400
Styrene	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
2,2,4-Trimethylpentane	U		0.0456	0.200
Vinyl chloride	U		0.0457	0.200
Vinyl Bromide	U		0.0727	0.200
Vinyl acetate	U		0.0639	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
1,1-Difluoroethane	U		0.0256	0.200
(S) 1,4-Bromofluorobenzene	*98.4*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3433123-1 07/22/19 10:53 • (LCSD) R3433123-2 07/22/19 11:35

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.55	3.50	94.7	93.4	55.0-148			1.38	25
Propene	3.75	4.29	4.33	114	115	64.0-144			0.845	25
Dichlorodifluoromethane	3.75	4.22	4.23	112	113	64.0-139			0.338	25
1,2-Dichlorotetrafluoroethane	3.75	4.16	4.20	111	112	70.0-130			0.992	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3433123-1 07/22/19 10:53 • (LCSD) R3433123-2 07/22/19 11:35

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloromethane	3.75	4.33	4.27	115	114	70.0-130			1.19	25
Vinyl chloride	3.75	4.22	4.30	113	115	70.0-130			1.69	25
1,3-Butadiene	3.75	4.15	4.26	111	114	70.0-130			2.73	25
Bromomethane	3.75	3.87	3.90	103	104	70.0-130			0.658	25
Chloroethane	3.75	4.14	4.17	110	111	70.0-130			0.814	25
Trichlorofluoromethane	3.75	3.92	4.00	104	107	70.0-130			2.00	25
1,1,2-Trichlorotrifluoroethane	3.75	4.06	4.02	108	107	70.0-130			0.921	25
1,1-Dichloroethene	3.75	4.41	4.38	118	117	70.0-130			0.832	25
1,1-Dichloroethane	3.75	4.33	4.28	116	114	70.0-130			1.10	25
Acetone	3.75	4.25	4.24	113	113	70.0-130			0.236	25
2-Propanol	3.75	4.26	4.22	114	113	70.0-139			0.798	25
Carbon disulfide	3.75	4.33	4.10	115	109	70.0-130			5.46	25
Methylene Chloride	3.75	4.13	4.09	110	109	70.0-130			0.766	25
MTBE	3.75	4.39	4.39	117	117	70.0-130			0.128	25
trans-1,2-Dichloroethene	3.75	4.40	4.36	117	116	70.0-130			0.966	25
n-Hexane	3.75	4.46	4.46	119	119	70.0-130			0.155	25
Vinyl acetate	3.75	4.36	4.35	116	116	70.0-130			0.212	25
Methyl Ethyl Ketone	3.75	4.26	4.23	114	113	70.0-130			0.804	25
cis-1,2-Dichloroethene	3.75	4.06	4.08	108	109	70.0-130			0.467	25
Chloroform	3.75	4.16	4.16	111	111	70.0-130			0.0315	25
Cyclohexane	3.75	4.45	4.43	119	118	70.0-130			0.289	25
1,1,1-Trichloroethane	3.75	4.21	4.18	112	111	70.0-130			0.701	25
Carbon tetrachloride	3.75	4.14	4.13	110	110	70.0-130			0.244	25
Benzene	3.75	4.24	4.28	113	114	70.0-130			0.903	25
1,2-Dichloroethane	3.75	4.46	4.42	119	118	70.0-130			0.780	25
Heptane	3.75	4.66	4.64	124	124	70.0-130			0.440	25
Trichloroethylene	3.75	4.17	4.16	111	111	70.0-130			0.156	25
1,2-Dichloropropane	3.75	4.39	4.34	117	116	70.0-130			1.06	25
1,4-Dioxane	3.75	4.24	4.18	113	112	70.0-140			1.35	25
Bromodichloromethane	3.75	4.32	4.28	115	114	70.0-130			0.950	25
cis-1,3-Dichloropropene	3.75	4.43	4.33	118	115	70.0-130			2.26	25
4-Methyl-2-pentanone (MIBK)	3.75	4.50	4.47	120	119	70.0-139			0.780	25
Toluene	3.75	4.32	4.26	115	114	70.0-130			1.29	25
trans-1,3-Dichloropropene	3.75	4.43	4.35	118	116	70.0-130			1.75	25
1,1,2-Trichloroethane	3.75	4.21	4.15	112	111	70.0-130			1.41	25
Tetrachloroethylene	3.75	4.19	4.18	112	111	70.0-130			0.394	25
Methyl Butyl Ketone	3.75	4.59	4.52	122	121	70.0-149			1.64	25
Dibromochloromethane	3.75	4.34	4.26	116	114	70.0-130			1.92	25
1,2-Dibromoethane	3.75	4.16	4.12	111	110	70.0-130			0.874	25
Chlorobenzene	3.75	4.31	4.25	115	113	70.0-130			1.40	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3433123-1 07/22/19 10:53 • (LCSD) R3433123-2 07/22/19 11:35

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	3.75	4.24	4.26	113	114	70.0-130			0.470	25
m&p-Xylene	7.50	8.62	8.62	115	115	70.0-130			0.00782	25
o-Xylene	3.75	4.28	4.28	114	114	70.0-130			0.0662	25
Styrene	3.75	4.33	4.32	115	115	70.0-130			0.109	25
Bromoform	3.75	4.12	4.11	110	110	70.0-130			0.0820	25
1,1,2,2-Tetrachloroethane	3.75	4.15	4.16	111	111	70.0-130			0.242	25
4-Ethyltoluene	3.75	4.31	4.30	115	115	70.0-130			0.309	25
1,3,5-Trimethylbenzene	3.75	4.36	4.33	116	115	70.0-130			0.753	25
1,2,4-Trimethylbenzene	3.75	4.29	4.30	114	115	70.0-130			0.245	25
1,3-Dichlorobenzene	3.75	4.16	4.17	111	111	70.0-130			0.0621	25
1,4-Dichlorobenzene	3.75	4.26	4.23	114	113	70.0-130			0.612	25
Benzyl Chloride	3.75	4.37	4.34	117	116	70.0-152			0.869	25
1,2-Dichlorobenzene	3.75	4.11	4.09	110	109	70.0-130			0.521	25
1,2,4-Trichlorobenzene	3.75	4.47	4.37	119	117	70.0-160			2.09	25
Hexachloro-1,3-butadiene	3.75	4.22	4.21	113	112	70.0-151			0.258	25
Naphthalene	3.75	4.37	4.33	116	115	70.0-159			0.859	25
Allyl Chloride	3.75	4.60	4.52	123	121	70.0-130			1.66	25
2-Chlorotoluene	3.75	4.22	4.18	112	111	70.0-130			0.994	25
Methyl Methacrylate	3.75	4.25	4.24	113	113	70.0-130			0.169	25
Tetrahydrofuran	3.75	4.47	4.37	119	116	70.0-137			2.37	25
2,2,4-Trimethylpentane	3.75	4.47	4.46	119	119	70.0-130			0.283	25
Vinyl Bromide	3.75	3.73	3.88	99.4	104	70.0-130			4.09	25
Isopropylbenzene	3.75	4.26	4.29	114	114	70.0-130			0.625	25
1,1-Difluoroethane	3.75	4.17	4.13	111	110	70.0-130			0.910	25
(S) 1,4-Bromofluorobenzene				*101*	*101*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

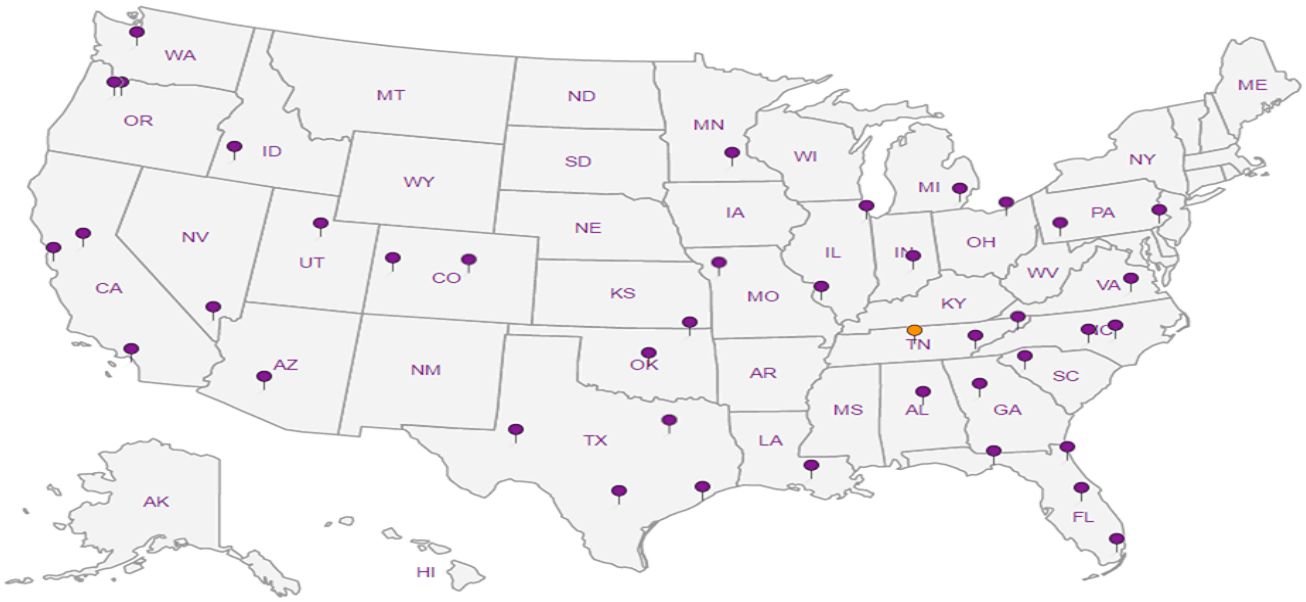
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Company Name/Address:
Jeff Stromberg
3880 S Bascom Ave, Suite 109
San Jose, CA 95124

Billing Information:
AEI Consultants

Report to:
Jeff Stromberg

Email To: Jhenry@aeiconsultants.com
jstromberg@aeiconsultants.com

Project Description: [redacted]

City/State Collected: San Mateo, Ca

Phone: (949) 939-5523
Fax:

Client Project #
407966

Lab Project #

Collected by (print):
Jeff Stromberg

Site/Facility ID #

P.O. #
199665

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
STD TAT - 5day

Email? ___No ✔Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum

Analysis: TO-15 (VOCs); Helium (leak check) ASTM 1946-90

Chain of Custody Page 1 of 3
1 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 112099
E108
T

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	Rem./Contaminant	Sample # (lab only)
SV-1-5	Soil Vapor	6933	7/17/19	1521	-28.5	-5.0		01
SV-1-9.5		8935		1447	-28.0	-5.0		02
SV-2-5		8062		0955	-26.5	-5.0		03
SV-2-9.5		[redacted]5383		1059	-27.0	-5.0		04
SV-3-5		5508		1344	-28.0	-5.0		05
SV-3-9.5		6552		1309	-27.0	-5.0		06
SV-DUP		6169		1200	-30.0	-5.0		07

Remarks: Please forward to jhenry@aeiconsultants.com 4794 8845 4873 / 4794 8844 3660

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	7/17/19	1725			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	COC Seal Intact: ___Y ___N ___NA
				4.6 7	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	pH Checked: NCF:
				7/19/19 0845	

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~~DAILY FIELD REPORT~~

Field Report

PAGE 1 OF 1

Project Name: _____ Field Person: J. Strombers

Location: 3157 SB. St & 349 1st Ave San Mateo Project Manager: J. Henry

Project No.: ~~407996~~ 407966 Date: 7/15/19 - 7/16/19 Weather: Clear

Daily Summary: GPRS / ECA

Equipment:

Materials:

	TIME	SUMMARIZE FIELD ACTIVITIES
7/15/19	0730	AEI Onsite / GPRS Utility locate
	0930	AEI offsite / GPRS offsite
7/16/19	0830	AEI onsite
	0835	ECA (Jesse/Anthony) onsite
	0900	HASP
	0910	Begin Boring SB-1
	1127	Begin Boring SB-2
	1355	Begin Boring SB-3 9.5
	1530	SV-3 Set Z tip tie = ~~10~~ ft probe
	1540	SV-2 Set " "
	1550	SV-1 Set " "
	1600	Grout Inspector onsite (Kian San Mateo County)
	1700	Grout Inspector offsite
	1700	SB-3 Hydropunch - Refusal 15'
	~~1710~~	SB-3 " " - Refusal 15'
	1720	SB-2 " " - Refusal ~~M~~ 15'
	~~1728~~	SB-2 " " - Refusal M 15'
7/17/19	0920	SV-2-5 / SV-DUP setup
	1040	SV-2-9.5 setup

Field Person Signature: _____

Project Manager Signature: _____

Revised 06-09-09

AEI CONSULTANTS
DAILY FIELD REPORT

Project Name: 0
Location: 0
Project No.: 0
Date: 01/00/00
Field Person: 0
Project Manager: 0
Weather:

Daily Summary:

Equipment:

Materials:

TIME	SUMMARIZE FIELD ACTIVITIES
1112	SV-3-5 Setup (Leak ~18%) Call Wayne: set up on SV-3-9.5
~~1224~~	~~SV-3-9.5 Setup~~ - switched Cans/manifold
	- Leak check still 18%
	- Leak check w/o shroud = 18%
1315	SV-3-5 setup (Leak ~ 12.2%)
	~~SV-3-9.5~~
1420	SV-1-9.5 Setup
1500	SV-1-5 Setup
1600	Grout SB-3
1620	Cap SV-1, 2, 3
1621	San Mateo County Grout inspector onsite (Kiran)
1628	" " " " offsite
1650	AEI offsite.

Field Person Signature:
Project Manager Signature:

AEI CONSULTANTS
DAILY FIELD REPORT

Project Name: _____
Location: 31-57 SB St. San Mateo, CA
Project No.: 407966 Date: 7/22/19
Field Person: J. Stramkens
Project Manager: J. Henry
Weather: Clear

Daily Summary: 3 borings to 50' ; 3 Groundwater Sample; 1 duplicate
1 Equipment blank, 1 Trip blank

Subcontractors: ECA
Equipment: 6600 Truck mount Rig

Materials: _____

TIME	SUMMARIZE FIELD ACTIVITIES	BREATHING ZONE Time	BREATHING ZONE PPM
0745	AEI Onsite		
0900	ECA (Dale/Brad) onsite / HASP		
0925	Begin SB-1		
1338	SB-1-W		
1343	SB-1-DUP		
1530	SB-2		
1530	Kian (Grout inspector) onsite		
1600	Grout SB-1		
1730	SB-3		
1800	Kian (Grout Inspector offsite		
1805	Grout SB-2		
1809	Grout SB-3		
1815	ECA offsite		
1819	AEI offsite		

Field Person Signature: _____ Date: 7/22/19
Project Manager Signature: _____ Date: _____

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-1-5

Project Name:		Date of Sampling:	07/16/19
Project Number:	407966	Start Time:	1500
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA	End Time:	1530
		Name of Sampler:	JRS
	Radiodetection MGD-2002 / Serial #:	Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	6933
Sampling Manifold / Flow Controller Number	7036

SHUT-IN TEST DATA				
Shut-In Test Start Time/Date	1320 7/16/19	Start Vacuum Pressure (in -Hg)	-21	Shut-in Test
Shut-In Test Stop Time/Date	1327 7/16/19	End Vacuum Pressure (in -Hg)	-21	~~Pass~~ / Fail

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes / No If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)			
Tubing Type (circle one)	Teflon Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~ Tubing: good / poor		
Depth of Probe (ft bgs)	5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / 200		
Purge Method	Summa / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1507 -14.0	End Purge Time	1513 -8.0
Moisture / Water Present in Tubing?	Yes / No		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	26.1		
Helium Detected in Sample Train	11,010		ppm / %
Helium Leak Check %	4.2 %	Leak <5%? (circle one)	~~Yes~~ / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
~~1507~~ 1517	-28.5	(3) ~~29.1~~ 30.1
1519	-15.0	24.4
1521	-5.0	25.9

Laboratory Analyses: TO-15 / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

~~SV-1-5~~

SOIL GAS PROBE ID:	SV-1-9.5

Project Name:			Date of Sampling:	07/16/19	
Project Number:	407966		Start Time:	~~SV-1-5~~	1420
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA		End Time:	1500	
			Name of Sampler:	JRS	
	Radiodetection MGD-2002	Serial #:		Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	8935
Sampling Manifold / Flow Controller Number	9338

SHUT-IN TEST DATA				
Shut-In Test Start Time/Date	0930 7/16/19	Start Vacuum Pressure (in -Hg)	-22	Shut-in Test
Shut-In Test Stop Time/Date	0936 7/16/19	End Vacuum Pressure (in -Hg)	-22	(Pass) / Fail

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1550 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~	Tubing: (good) / poor	
Depth of Probe (ft bgs)	9.5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / (200)		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1432 -24	End Purge Time	1439 -16
Moisture / Water Present in Tubing?	Yes / No		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	26.1		
Helium Detected in Sample Train	1225		(ppm) / %
Helium Leak Check %	0.47 %	Leak <5%? (circle one)	(Yes) No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
1441	-28.0	27.3
1444	-15.0	27.3
1447	-5.0	28.2

Laboratory Analyses: (TO-15) / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-2-5

Project Name:		Date of Sampling:	07/16/19
Project Number:	407966	Start Time:	0926
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA	End Time:	1000
		Name of Sampler:	JRS
Radiodetection MGD-2002	Serial #:	Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	8062
Sampling Manifold / Flow Controller Number	9336

SHUT-IN TEST DATA					
Shut-In Test Start Time/Date	0947 7/16/19	Start Vacuum Pressure (in -Hg)	-21.5	Shut-in Test	
Shut-In Test Stop Time/Date	0952 7/16/19	End Vacuum Pressure (in -Hg)	-21.5	(Pass) / Fail	

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1540 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~	Tubing: (good) / poor	
Depth of Probe (ft bgs)	5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / (200)		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	0941 -27.5	End Purge Time	0946 -24
Moisture / Water Present in Tubing?	Yes / (No)		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	23.3		
Helium Detected in Sample Train	0.0	ppm (%)	
Helium Leak Check %	0.0 %	Leak <5%? (circle one)	(Yes) / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
0951	-26.5	27.7
0953	-15.0	30.1
0955	-5.0	28.3

Laboratory Analyses: (TO-15) / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:

sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:

sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-2-9.5

Project Name:		Date of Sampling:	07/16/19
Project Number:	407966	Start Time:	1040
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA	End Time:	1110
		Name of Sampler:	JRS
Radiodetection MGD-2002	Serial #:	Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	5383
Sampling Manifold / Flow Controller Number	1825

SHUT-IN TEST DATA					
Shut-In Test Start Time/Date	1010 7/16/19	Start Vacuum Pressure (in -Hg)	-23	Shut-in Test	
Shut-In Test Stop Time/Date	1015 7/16/19	End Vacuum Pressure (in -Hg)	-23	(Pass) / Fail	

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1540 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~	Tubing: ~~good~~ / poor	
Depth of Probe (ft bgs)	9.5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / (200)		
Purge Method	~~Summa~~ Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1043 -24	End Purge Time	1052 -17.0
Moisture / Water Present in Tubing?	Yes (No)		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	23.1		
Helium Detected in Sample Train	0.0		ppm (%)
Helium Leak Check %	0.0 %	Leak <5%? (circle one)	(Yes) / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
1055	-27.0	25.5
1057	-15.0	25.3
1059	-5.0	22.2

Laboratory Analyses: (TO-15) / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-3-5

Project Name:		Date of Sampling:	07/16/19
Project Number:	407966	Start Time:	1122 / 1315
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA	End Time:	1350
		Name of Sampler:	JRS
	Radiodetection MGD-2002 / Serial #:	Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	5508
Sampling Manifold / Flow Controller Number	6027

SHUT-IN TEST DATA				
Shut-In Test Start Time/Date	0950 7/16/19	Start Vacuum Pressure (in -Hg)	-23	Shut-in Test
Shut-In Test Stop Time/Date	0956 7/16/19	End Vacuum Pressure (in -Hg)	-23	Pass / Fail

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes / (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1530 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~ Tubing: (good) poor		
Depth of Probe (ft bgs)	5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / (200)		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1128 -15	End Purge Time	1134 -10
Moisture / Water Present in Tubing?	1326 -28		Yes / (No) 1332 -24

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	26.1		
Helium Detected in Sample Train	12.2		ppm / (%)
Helium Leak Check %	%	Leak <5%? (circle one)	Yes / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
1340	-28.0	22.1
1342	-15.0	25.8
1344	-5.0	24.4

Laboratory Analyses: ~~TO-15~~ / TO-17 / Other: _____

NOTES & COMMENTS

2nd Purge: @ 1326

Helium Leak is still above 5%. Collecting Sample

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-3-9.5

Project Name:			Date of Sampling:	07/16/19	
Project Number:	407966		Start Time:	1221	
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA		End Time:	1315	
			Name of Sampler:	JRS	
	Radiodetection MGD-2002	Serial #:		Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	6552
Sampling Manifold / Flow Controller Number	8622

SHUT-IN TEST DATA					
Shut-In Test Start Time/Date	0936 7/16/19	Start Vacuum Pressure (in -Hg)	-22	Shut-in Test	
Shut-In Test Stop Time/Date	0944 7/16/19	End Vacuum Pressure (in -Hg)	-22	~~Pass~~ / Fail	

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes / No If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1530 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~	Tubing: good / poor	
Depth of Probe (ft bgs)	9.5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 (200)		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1232 -10	End Purge Time	1241 0
Moisture / Water Present in Tubing?	Yes / No		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	27.1		
Helium Detected in Sample Train	0.0 ppm / %		
Helium Leak Check %	0.0 %	Leak <5%? (circle one)	(Yes) / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
1305	-27.0	26.4
1307	-15.0	25.7
1309	-5.0	23.3

Laboratory Analyses: (~~TO-15~~) / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-DUP

Project Name:			Date of Sampling:	07/16/19	
Project Number:	407966		Start Time:	0920	
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA		End Time:	1010	
			Name of Sampler:	JRS	
	Radiodetection MGD-2002	Serial #:		Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	6169
Sampling Manifold / Flow Controller Number	9192

SHUT-IN TEST DATA					
Shut-In Test Start Time/Date	1520 7/16/19	Start Vacuum Pressure (in -Hg)	-22	Shut-in Test	
Shut-In Test Stop Time/Date	1528 7/16/19	End Vacuum Pressure (in -Hg)	-22	Pass / Fail	

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes / No If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1540 7/16/19		
Tubing Type (circle one)	Teflon Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: good / poor Tubing: good / poor		
Depth of Probe (ft bgs)	5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / 200		
Purge Method	Summa / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	0941 -27.5	End Purge Time	0946 -24.0
Moisture / Water Present in Tubing?	Yes / No		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	25.8		
Helium Detected in Sample Train	~~0.0~~ 03 ppm		
Helium Leak Check %	~~0.0~~ 03 %	Leak <5%? (circle one)	Yes / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
0957	-30.0	22.6
0959	-15.0	24.6
~~09~~ 1001	-5.0	24.1

Laboratory Analyses: TO-15 / TO-17 / Other: _____

NOTES & COMMENTS

Sample time: 1200 (SV-DUP)

No Leak Check with Duplicate Sample

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI Consultants

BORING NUMBER

PAGE 1 OF 1

SB-1

CLIENT

PROJECT NUMBER 407966

DATE/TIME STARTED 7/16/19 COMPLETED 7/16/19

DRILLING CONTRACTOR ECA

DRILLING METHOD Direct Push HOLE SIZE 2.25 inches

DRILL RIG MODEL No.

LOGGED BY J. Stromberg CHECKED BY J. Henry

NOTES

PROJECT LOCATION 31-57 S B St. & 349 1st Ave. San Mateo, CA

GROUNDWATER LEVELS (Date/Time):

FIRST-ENCOUNTERED — None encountered

AFTER DRILLING (STATIC) —

GROUNDWATER COLLECTION METHOD AND PARAMETERS:

PERI-PUMP / CHECK VALVE / BLADDER PUMP / BAILER

PURGE VOLUME:

CLARITY/COLOR:

DEPTH (ft)	SAMPLE ID/TIME	CORE INTERVAL	CORE RECOVERY (INCHES)	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0						0-0.4 Concrete
	0958 SB-1-4		48	0.9		0.4-2: Gravelly Sand (SP) dark reddish brown (5YR 3/3), loose, moist, fine sand, coarse gravel, No odor
5						
	1018 SB-1-7		36	0.8		2-4: Clay (CL) trace gravel, stiff, moist, Yellowish Brown (10YR 5/8), fine gravel, Med plast., no odor
	1023 SB-1-9		24	1.1		
10						
	1056 SB-1-12		36	0.7		4-16 Sandy Silt (ML) Yellowish brown (10YR 5/6) Very stiff, moist, fine sand, low plastic. no odor
	1100 SB-1-14		24	0.9		
15						
	1130 SB-1-16		24	1.1		TD: 16' bgs
20						
25						
30						
35						

DESTRUCTION METHOD: TREMIE / PRESSURE GROUT

OTHER:

AEI Consultants

BORING NUMBER SB-1

PAGE 1 OF 1

CLIENT

PROJECT NUMBER 407966

DATE/TIME STARTED ~~7/18/19~~ 7/22/19 COMPLETED ~~7/18/19~~ 7/22/19

DRILLING CONTRACTOR ECA

DRILLING METHOD Direct Push HOLE SIZE 2.25 inches

DRILL RIG MODEL No.

LOGGED BY J. Stromberg CHECKED BY J. Henry

NOTES

PROJECT LOCATION 31-57 S B St. & 349 1st Ave. San Mateo, CA

GROUNDWATER LEVELS (Date/Time):

FIRST-ENCOUNTERED —

AFTER DRILLING (STATIC) —

GROUNDWATER COLLECTION METHOD AND PARAMETERS:

PERI-PUMP / CHECK VALVE / BLADDER PUMP / BAILER

PURGE VOLUME:

CLARITY/COLOR:

DEPTH (ft)	SAMPLE ID/TIME	CORE INTERVAL	CORE RECOVERY (INCHES)	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
15 ~~0~~						16-18 Sand (SW) with gravel, yellowish Brown (10YR 5/8), med. dense, moist, fine sand, coarse gravel, no odor
1025 20 ~~5~~	SB-1-20					18-30 Gravelly Sand (SW), Yellowish brown (10YR5/8), dense, moist, fine sand coarse gravel, no odor
1040 25 ~~10~~	SB-1-25					30-35 Sandy Clay (CL) trace gravel, dark yellowish brown (10YR 4/6), Stiff moist, fine sand, fine gravel, med. plasticity, no odor
1058 30 ~~15~~	SB-1-30					35-41 Gravelly Sand (SW), darke yellowish brown 10YR (5/8), very dense, moist, fine sand coarse gravel, no odor
1109 35 ~~20~~	SB-1-35					41-49.5 Silt (ML), some sand, some gravel, dark yellowish brown (10YR 5/8), hard, moist, fine sand, fine gravel, low plasticity no odor.
						SB-1-W: ~~1338~~ 1338
1120 40 ~~25~~	SB-1-40					SB-DUP-W: 1343
1154 45 ~~30~~	SB-1-45					
1159	SB-1-48					
50	35					

DESTRUCTION METHOD: TREMIE / PRESSURE GROUT

OTHER:

AEI Consultants

BORING NUMBER SB-2

PAGE 1 OF 1

CLIENT

PROJECT NUMBER 407966

PROJECT LOCATION 31-57 S B St. & 349 1st Ave. San Mateo, CA

DATE/TIME STARTED 7/16/19 COMPLETED 7/16/19

GROUNDWATER LEVELS (Date/Time):

FIRST-ENCOUNTERED — None Encountered

AFTER DRILLING (STATIC) —

DRILLING CONTRACTOR ECA

DRILLING METHOD Direct Push HOLE SIZE 2.25 inches

GROUNDWATER COLLECTION METHOD AND PARAMETERS:

DRILL RIG MODEL No.

PERI-PUMP / CHECK VALVE / BLADDER PUMP / BAILER

LOGGED BY J. Stromberg CHECKED BY J. Henry

PURGE VOLUME:

NOTES

CLARITY/COLOR:

DEPTH (ft)	SAMPLE ID/TIME	CORE INTERVAL	CORE RECOVERY (INCHES)	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0						0-0.5 Asphalt
			48			0
	1136 SB-2-4			0.1		0.5-4: Sandy Clay (CL) trace gravel, dark brown (10YR 3/3) soft, moist, fine sand, fine gravel med plasticity, no odor
5			40			
	1142 SB-2-8			0.0		4-20 Sandy Silt (ML) Yellowish brown (10YR 5/4) med. stiff, moist, fine sand, Low plasticity, no odor
10			36			
	1151 SB-2-11			0.2		
	~~SB-2-12~~		24			
	1156 SB-2-13			0.5		TD: 20' bgs
15			36			
	1225 SB-2-16			0.7		
	1230 SB-2-18		24			
20	1238 SB-2-20		24	0.7		
25						
30						
35						

DESTRUCTION METHOD: TREMIE / PRESSURE GROUT

OTHER:

AEI Consultants

BORING NUMBER SB-3

PAGE 1 OF 1

CLIENT

PROJECT NUMBER 407966

PROJECT LOCATION 31-57 S B St. & 349 1st Ave. San Mateo, CA

DATE/TIME STARTED 7/16/19 COMPLETED 7/16/19

GROUNDWATER LEVELS (Date/Time):

FIRST-ENCOUNTERED — None encountered

AFTER DRILLING (STATIC) —

DRILLING CONTRACTOR ECA

DRILLING METHOD Direct Push HOLE SIZE 2.25 inches

GROUNDWATER COLLECTION METHOD AND PARAMETERS:

DRILL RIG MODEL No.

PERI-PUMP / CHECK VALVE / BLADDER PUMP / BAILER

LOGGED BY J. Stromberg CHECKED BY J. Henry

PURGE VOLUME:

NOTES

CLARITY/COLOR:

DEPTH (ft)	SAMPLE ID/TIME	CORE INTERVAL	CORE RECOVERY (INCHES)	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0						0-0.5 Asphalt
	SB-3-4 1258		48	0.1		0.5-7: Sandy Clay (CL) some gravel, dark brown (10YR 3/3) med. stiff, moist, fine sand, med plasticity, no odor, trace gravel
5						
	SB-3-8 1304		98	0.3		7-15 Sandy Silt (ML) dark yellowish brown (10YR 3/6), med. stiff, moist fine sand fine gravel, low plasticity, no odor
10						
	SB-3-11 1313		36	0.1		
	SB-3-13 1316		24	0.2		
15	SB-3-15 1320		24	0.1		TD: 15' bgs
20						
25						
30						
35						

DESTRUCTION METHOD: TREMIE / PRESSURE GROUT

OTHER:

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-1-S

Project Name:				Date of Sampling:	07/16/19
Project Number:	407966			Start Time:	1500
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA			End Time:	1530
				Name of Sampler:	JRS
	Radiodetection MGD-2002	Serial #:		Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	6933
Sampling Manifold / Flow Controller Number	7036

SHUT-IN TEST DATA					
Shut-In Test Start Time/Date	1320 7/16/19	Start Vacuum Pressure (in -Hg)	-21	Shut-in Test	
Shut-In Test Stop Time/Date	1327 7/16/19	End Vacuum Pressure (in -Hg)	-21	~~Pass~~ / Fail	

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes / (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)			
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~ Tubing: (good) / poor		
Depth of Probe (ft bgs)	5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / (200)		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1507 -14.0	End Purge Time	1513 -8.0
Moisture / Water Present in Tubing?	Yes / (No)		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	26.1		
Helium Detected in Sample Train	11,010		(ppm) / %
Helium Leak Check %	4.2 %	Leak <5%? (circle one)	~~Yes~~ / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
~~1507~~ 1517	-28.5	(83) ~~23.4~~ 30.1
1519	-15.0	24.4
1521	-5.0	
Laboratory Analyses:	(TO-15) / TO-17 / Other: _____	

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % x 100% = leak check %
helium shroud %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

~~SV-1-5~~

SOIL GAS PROBE ID:	SV-1-9.5

Project Name:			Date of Sampling:	07/16/19	
Project Number:	407966		Start Time:	~~SV-1-5~~	1420
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA		End Time:	1500	
			Name of Sampler:	JRS	
	Radiodetection MGD-2002	Serial #:		Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	8935
Sampling Manifold / Flow Controller Number	9338

SHUT-IN TEST DATA				
Shut-In Test Start Time/Date	0930 7/16/19	Start Vacuum Pressure (in -Hg)	-22	Shut-in Test
Shut-In Test Stop Time/Date	0936 7/16/19	End Vacuum Pressure (in -Hg)	-22	Pass / Fail

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1550 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~	Tubing: (good) / poor	
Depth of Probe (ft bgs)	9.5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / 200		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1432 -24	End Purge Time	1439 -16
Moisture / Water Present in Tubing?	Yes / No		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	26.1		
Helium Detected in Sample Train	1225		(ppm) / %
Helium Leak Check %	0.47 %	Leak <5%? (circle one)	(Yes) No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
1441	-28.0	27.3
1444	-15.0	27.3
1447	-5.0	28.2

Laboratory Analyses: (TO-15) / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-2-S

Project Name:		Date of Sampling:	07/16/19
Project Number:	407966	Start Time:	0926
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA	End Time:	1000
		Name of Sampler:	JRS
Radiodetection MGD-2002	Serial #:	Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	8062
Sampling Manifold / Flow Controller Number	9336

SHUT-IN TEST DATA				
Shut-In Test Start Time/Date	0947 7/16/19	Start Vacuum Pressure (in -Hg)	-21.5	Shut-in Test
Shut-In Test Stop Time/Date	0952 7/16/19	End Vacuum Pressure (in -Hg)	-21.5	(Pass) / Fail

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1540 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~	Tubing: (good) / poor	
Depth of Probe (ft bgs)	5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / (200)		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	0941 -27.5	End Purge Time	0946 -24
Moisture / Water Present in Tubing?	Yes / (No)		

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	23.3		
Helium Detected in Sample Train	0.0		ppm (%)
Helium Leak Check %	0.0 %	Leak <5%? (circle one)	(Yes) / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
0951	-26.5	27.7
0953	-15.0	30.1
0955	-5.0	28.3

Laboratory Analyses: (TO-15) / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:

sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:

sample train helium ppm / helium shroud % x 0.01 = Leak check %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-2-9.5

Project Name:		Date of Sampling:	07/16/19
Project Number:	407966	Start Time:	1040
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA	End Time:	1110
		Name of Sampler:	JRS
	Radiodetection MGD-2002 / Serial #:	Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	5383
Sampling Manifold / Flow Controller Number	1825

SHUT-IN TEST DATA					
Shut-In Test Start Time/Date	1010	7/16/19	Start Vacuum Pressure (in -Hg)	-23	Shut-in Test
Shut-In Test Stop Time/Date	1015	7/16/19	End Vacuum Pressure (in -Hg)	-23	(Pass) / Fail

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1540 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~ Tubing: (good) / poor		
Depth of Probe (ft bgs)	9.5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / (200)		
Purge Method	(Summa) Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1043 -24	End Purge Time	1052 -17.0
Moisture / Water Present in Tubing?		Yes (No)	

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	23.1		
Helium Detected in Sample Train	0.0 ppm (%)		
Helium Leak Check %	0.0 %	Leak <5%? (circle one)	(Yes) / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
1055	-27.0	25.5
1057	-15.0	25.3
1059	-5.0	22.2

Laboratory Analyses: (TO-15) / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:

sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:

sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-3-5

Project Name:				Date of Sampling:	07/16/19
Project Number:	407966			Start Time:	1122 / 1315
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA			End Time:	1350
				Name of Sampler:	JRS
	Radiodetection MGD-2002	Serial #:		Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	5508
Sampling Manifold / Flow Controller Number	6027

SHUT-IN TEST DATA				
Shut-In Test Start Time/Date	0950 7/16/19	Start Vacuum Pressure (in -Hg)	-23	Shut-in Test
Shut-In Test Stop Time/Date	0956 7/16/19	End Vacuum Pressure (in -Hg)	-23	Pass / Fail

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes / (No) If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1530 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~ Tubing: (good) poor		
Depth of Probe (ft bgs)	5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 / (200)		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1128 -15	End Purge Time	1134 -10
Moisture / Water Present in Tubing?	1326 -28	Yes / (No)	1332 -24

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	26.1		
Helium Detected in Sample Train	12.2		ppm / (%)
Helium Leak Check %	%	Leak <5%? (circle one)	Yes / No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
1340	-28.0	22.1
1342	-15.0	25.8
1344	-5.0	24.4

Laboratory Analyses: ~~TO-15~~ / TO-17 / Other: _____

NOTES & COMMENTS

2nd Purge: @ 1326

Helium Leak is still above 5%. Collecting Sample

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % x 100% = leak check %
helium shroud %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-3-9.5

Project Name:				Date of Sampling:	07/16/19
Project Number:	407966			Start Time:	1221
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA			End Time:	1315
				Name of Sampler:	JRS
	Radiodetection MGD-2002	Serial #:		Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	6552
Sampling Manifold / Flow Controller Number	8622

SHUT-IN TEST DATA					
Shut-In Test Start Time/Date	0936 7/16/19	Start Vacuum Pressure (in -Hg)	-22	Shut-in Test	
Shut-In Test Stop Time/Date	0944 7/16/19	End Vacuum Pressure (in -Hg)	-22	(Pass) / Fail	

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?	Yes / No If yes, estimate storm duration _____ day(s)		
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)	1530 7/16/19		
Tubing Type (circle one)	(Teflon) Nylaflow Other: _____		
Wellbox and Tubing Condition	Wellbox: ~~good / poor~~ Tubing: (good) / poor		
Depth of Probe (ft bgs)	9.5		
Sampling Flow Rate (mL/min) (circle one)	100 / 150 (200)		
Purge Method	(Summa) / Pump / Syringe / Other: _____		
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)	3		
Total Volume Purged (mL)			
Start Purge Time	1232 -10	End Purge Time	1241 0
Moisture / Water Present in Tubing?		Yes / No	

SAMPLING DATA			
Initial Helium Shroud Concentration (%)	27.1		
Helium Detected in Sample Train	0.0		ppm / %
Helium Leak Check %	0.0 %	Leak <5%? (circle one)	(Yes) No (if no, troubleshoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
1305	-27.0	26.4
1307	-15.0	25.7
1309	-5.0	23.3

Laboratory Analyses: (TO-15) / TO-17 / Other: _____

NOTES & COMMENTS

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % / helium shroud % x 100% = leak check %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %

AEI CONSULTANTS
SOIL GAS SAMPLING FIELD FORM

SOIL GAS PROBE ID:	SV-DUP

Project Name:		Date of Sampling:	07/16/19
Project Number:	407966	Start Time:	0920
Project Address:	31-57 S B St. & 349 1st Ave, San Mateo, CA	End Time:	1016
		Name of Sampler:	JRS
	Radiodetection MGD-2002 / Serial #:	Calibrated by:	

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Sample Container Number	6169
Sampling Manifold / Flow Controller Number	9192

SHUT-IN TEST DATA				
Shut-In Test Start Time/Date	1520 7/16/19	Start Vacuum Pressure (in -Hg)	-22	Shut-in Test
Shut-In Test Stop Time/Date	1528 7/16/19	End Vacuum Pressure (in -Hg)	-22	(Pass) / Fail

SOIL GAS PROBE DATA			
Amount of Rain (>1/2") in Last 24 hours?		Yes / (No) If yes, estimate storm duration _____ day(s)	
Time/Date Vapor Probe Set (HH:MM / MO/DAY/YEAR)		1540 7/16/19	
Tubing Type (circle one)		(Teflon) Nylaflow Other: _____	
Wellbox and Tubing Condition		Wellbox: good / poor	Tubing: (good) / poor
Depth of Probe (ft bgs)		5	
Sampling Flow Rate (mL/min) (circle one)		100 / 150 / (200)	
Purge Method		(Summa) / Pump / Syringe / Other: _____	
Number of Purge Volumes (Default: Three (3) purge volumes unless sub-slab; one (1) purge volume for 5-foot deep' soil vapor probe = 300 mL)		3	
Total Volume Purged (mL)			
Start Purge Time	0941 -27.5	End Purge Time	0946 -24.0
Moisture / Water Present in Tubing?		Yes / (No)	

SAMPLING DATA			
Initial Helium Shroud Concentration (%)		25.8	
Helium Detected in Sample Train		~~0.0~~ 09	ppm
Helium Leak Check %	~~0.00~~ 03 %	Leak <5%? (circle one)	(Yes) / No (if no, troublehoot and recheck)
Helium Leak Final Re-Check %	%	Leak <5%? (circle one)	Yes / No

Time	Canister Vacuum (in-Hg)	He Shroud %
0957	-30.0	22.6
0959	-15.0	24.6
~~09~~ 1001	-5.0	24.1

Laboratory Analyses: (TO-15) / TO-17 / Other: _____

NOTES & COMMENTS

Sample time : 1200 (SV-DUP)

No Leak Check with Duplicate Sample

Leak Check Calculation

If helium detected in sample train is in %:
sample train helium % x 100% = leak check %
helium shroud %

If helium detected in sample train is in ppm:
sample train helium ppm x 0.01 = Leak check %
helium shroud %