November 15, 2016

UPDATED SITE CONCEPTUAL MODEL AND SOIL AND SOIL VAPOR INVESTIGATION REPORT

Property Identification:
Zimmerman Property
3441 Adeline Street
Oakland, California

AEI Project No. 281939
ACEH Site: RO0002936

Prepared for:
Steffi R. Zimmerman Trust
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November 15, 2016

Ms. Karel Detterman
Alameda County Environmental Health
1131 Harbon Parkway, Suite 250
Alameda, California 94502

Subject: **Perjury Statement and Report Transmittal**
Zimmerman Property
3442 Adeline Street
Oakland, CA
AEI Project No. 281939
ACDEH Fuel Leak Case No. RO0002936

Dear Ms. Detterman:

I declare under penalty of perjury that the information and/or recommendations contained in the attached report, *Updated Site Conceptual Model and Soil and Soil Vapor Investigation Report* dated 11/15/2016 for the above-referenced site are true and correct to the best of my knowledge.

If you have questions or need additional information, please contact me at (925) 457 – 5607 or Mr. Jonathan Sanders at AEI Consultants at (925) 250 – 6009

Sincerely,

Bill Mouat

Bill Mouat
Representative of the Steffi R. Zimmerman Trust

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SIGNATURES

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1. INTRODUCTION

On behalf of the Steffi Zimmerman Trust (the Trust), AEI Consultants (AEI) has prepared this *Updated Site Conceptual Model and Soil and Soil Vapor Investigation Report* for the property located at 3442 Adeline Street in the City of Oakland, Alameda County, California (" the Site"). The purposes of this report are to:

1) Document the implementation of the *Updated Site Conceptual Model and Data Gap Investigation Work Plan* dated June 29, 2016 (the Work Plan) which was approved by the Alameda County Department of Environmental Health (ACDEH) in an email dated September 2, 2016;
2) Update the Site Conceptual Model with the newly collected data; and
3) Provide recommendations for achieving regulatory case closure for the Site under the requirements of the California State Water Resources Control Board (WRCB) Low-Threat Underground Storage Tank Case Closure Policy (LTCP).

2. SITE SETTING

2.1. Site Location and Description

The Site is an approximately one acre parcel located on the southwest corner of 35th Street and Chestnut Street in an urban mixed commercial/industrial and residential area of the city of Oakland in California. The Site is fully developed with two conjoined warehouse buildings and attached canopy. Ground cover at the site consists of concrete paving throughout with no asphalt and no landscaped areas. Within the interior of easternmost warehouse building, the concrete paving is overlain by artificial turf or heavy rubber mats. The Site is fully enclosed by exterior walls to on-site improvements where present and a perimeter fence where no buildings are present. Access to the site is through a gate along Adeline street or through four roll-up doors along chestnut street. The general location of the Site is depicted in Figure 1 while the layout of the Site is depicted on Figure 2.

2.2. Summary of Previous Environmental Work

On February 22, 2000, Clearwater Group (Clearwater) reportedly removed a 3,750-gallon steel single-wall underground storage tank (UST) from a location immediately adjacent to the eastern property boundary. Sidewall soil samples (NW and SE) and a grab groundwater sample (Pit Water) were collected from the tank excavation for chemical analysis. Each of the two sidewall soil samples and the one groundwater sample yielded elevated concentrations of petroleum hydrocarbons suggesting a release of petroleum hydrocarbons had occurred from the former UST.

Subsurface investigations to characterize the lateral and vertical extent of petroleum hydrocarbons released from the former UST commenced in 2006. The investigation activities have included:

- Between 2006 and 2009, a total of 43 soil borings were advanced by Clearwater and AEI for the collection of soil and grab groundwater samples from both on-site and off-site locations. Analytical soil and groundwater data from these investigations are summarized in Table 2 and Table 3 respectively.
- In April 2009, seven groundwater monitoring wells (MW-1 through MW-7) were installed. Each well was installed with a screened interval from 7 to 17 feet bgs. Periodic groundwater monitoring of the groundwater in each of the monitoring wells has been performed since their installation.

Remedial activities at the Site have consisted of the following:

- In March and April of 2009 AEI conducted an interim remedial excavation. This excavation is described in detail in the *Interim Corrective Action Report* dated August 31, 2009 and is described briefly below:
  - The excavation was performed on-site and immediately down-gradient of the former UST location and inside one of the on-site warehouse buildings.
  - Approximately 1,100 tons of petroleum impacted soil was removed from a roughly 35 feet wide, 75 feet long, and 12 feet deep area.
  - The lateral extents of the excavation were determined by screening soils with a photoionization detector (PID) until measurements were below 100 parts per million by volume (ppmv).
  - The vertical extent of the excavation was terminated within a yellowish brown clay.
  - Confirmation soil samples were collected from ten locations (SW1 through SW10) along the excavation sidewalls at depths of between 5.5 and 8 feet bgs and 11.5 and 12 feet bgs and from four locations (B-1 through B-4) along the base of the excavation
  - Dewatering during excavation generated approximately 5,000 gallons of water which was discharged under permit to the sanitary sewer.
  - Five dewatering wells (BF-1 through BF-5) and three horizontal soil vapor extraction wells (SVE-1 through SVE-3) were installed during excavation and subsequent backfilling operations. The SVE wells were installed at a depth of seven-feet bgs along the north (SVE-1), east (SVE-2), and south (SVE-3) sides of the excavation.
- In May 2009, one sparge well (IW-1) was installed within the former UST location for potential remedial activities. No further remedial activities involving this well have been conducted.
- Following evaluation of soil vapor concentrations in the horizontal vapor extraction wells, SVE-1 through SVE-3 and BF-4 were filled in place with neat cement grout on January 19, 2010 as documented in the *Work Plan for Remedial Investigation and Feasibility Study* dated April 30, 2010.

3. DATA GAP INVESTIGATION

AEI performed the data gap investigation in general accordance with the Work Plan, whichwas intended to fill data gaps related to shallow soil and soil vapor analytical data necessary to evaluate the Site under the LTCP, including:

1) Collect additional data on benzene, ethylebenzene, naphthalene, and total petroleum hydrocarbons (TPH) in shallow soils across the Site; and
2) Collected additional soil vapor data for benzene, ethylebenzene, naphthalene, and oxygen at locations across the Site.

The location of soil borings and soil vapor probes completed as part of the Work Plan are shown on Figure 2.

The following activities were conducted as part of the implementation of the Data Gap Investigation.

3.1. Health and Safety

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

3.2. Permitting and Utility Clearance

Soil boring permits, W2016-0734 and W2016-0735, were obtained from the Alameda County Public Works Agency for the advancement of soil borings and the installation of permanent soil vapor probes respectively. An application for a minor encroachment permit for the installation of two permanent soil vapor probes (VB-4 and VB-5) in the sidewalk adjacent and to the south east of the Site was submitted to the City of Oakland, however, at the time of this report, no response to the application has been received. As such, neither VB-4 nor VB-5 were advanced or installed as part of this investigation.

Prior to conducting any subsurface field work, the public underground utility locating service 811 North was notified to identify public utilities in the work area. Private utility locating was conducted on October 6, 2016 by 1st Call Utility Locating Services of Richmond California to identify underground utilities and clear a 10-square foot area around VB-4 through VB-16 and SB-32.

3.3. Drilling and Soil Sample Collection

Two borings (SB-32 and VB-12) were advanced on October 6, 2016, however, due to issues with the drilling equipment, the installation of the remaining ten soil borings (VB-6 through VB-16) was delayed until October 12, 2016. The twelve soil borings completed as part of this investigation were advanced by Environmental Control Associates, Inc. (ECA) of Aptos, California using a track mounted direct push rig. Each boring was advanced to a total depth of 10 feet bgs using four-foot long rods and a four-foot long, 2.25-inch outer diameter core barrel with an acetate sample liner. After each interval, the core was retrieved, core barrel disassembled, and the sample liner was removed and transferred to the onsite AEI field geologist.

The soil core collected from each soil boring was described using the Unified Soil Classification System. Soil samples were collected from the sample liner by cutting a roughly six-inch segment from the acetate liner and sealing both ends with Teflon tape and plastic end caps. A photo ionization detector (PID) was used to screen soil samples in the field and the PID readings for each sample were included on the soil boring logs presented in Appendix A.

Following the completion of each boring, down-hole equipment was decontaminated using a triple rinse system with a non-phosphate based detergent and drinking water quality water.

3.4. Soil Vapor Probe Installation and Boring Destruction

Upon completion, borings VB-6 through VB-16, permanent soil vapor probes were constructed. Each vapor probe was constructed in general accordance with the *Active Soil Gas Investigations Advisory* dated July 2015 (the *Advisory*) by the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substance Control (DTSC), et la. Each soil vapor probe was constructed as follows:

- Between the depths of 10 to 5.5 feet bgs, the annular space of the boreholes was backfilled with hydrated lifts of granular bentonite. This procedure mirrors the recommendations in the *Advisory* for sealing the annular space between probes in nested soil vapor probes and is therefore appropriate for this application.
- Vapor probes consisted of a 6-inch long stainless steel mesh probe tip with a ribbed nipple connected to ¼ inch outer diameter Nylaflow® tubing that terminated into a stainless-steel ball valve. These probes were installed in each boring with the mesh probe tip roughly centered at 5 feet bgs.
- From 5.5 to 4.5 feet bgs, a sand pack consisting of #3 Monterey sand was emplaced in the annular space.
- From 4.5 to 3.5 feet bgs, a transition seal consisting of one foot of dry granular bentonite was emplaced in the annular space.
- From 3.5 feet bgs to 8 inches bgs, an annular seal of hydrated granular bentonite was emplaced in the annular space.
- From 8 inches bgs to grade, the vapor probe was completed with neat cement grout and a 4-inch diameter traffic rated well box.

SB-32 was not converted to a vapor probe and was instead backfilled with hydrated lifts of granular bentonite to within 8 inches bgs. The remaining annular space was backfilled with neat cement grout

3.5. Soil Vapor Sample Collection

Soil vapor sampling was conducted on October 14, 2016 in general accordance with the guidelines outlined in the *Advisory*. Notable deviations from the *Advisory* are described below:

- VB-16 was sampled roughly 42 hours after installation instead of the recommended 48 hours after installation due to an impending rain event.
- VB-7 through VB-15 were sampled during a rain event. However, each of these samples was collected from within the footprint of the on-site improvements and the impact of soil wetting on the soil vapor concentration is therefore assumed to be minimal.

The soil vapor samples were collected from VB-7 through VB-16 separately into sorbent tubes and one-liter evacuated canisters:

- Sorbent tube samples were collected by installing the tube in-line with the vapor probe and inducing a vacuum. Sorbent tube samples were collected by extracting a total of 200 milliliters

of soil vapor to flow at a rate of less than 200 millimeters per minute through the sorption media using a syringe equipped with a three-way valve to allow for venting.

- Evacuated canister samples were collected through a laboratory-supplied regulator set at 200 milliliters per minute into one-liter evacuated canisters. Each canister was individually checked, tested and certified by the laboratory for air tightness and proper vacuum prior to shipping. Prior to sampling, a minimum of three probe volumes were purged from each vapor probe. Sampling manifolds included dual vacuum gauges to monitor down-hole vacuum and sample container vacuum. The initial and final sample container vacuum for each sample was recorded and samples were completed with a slight vacuum remaining to ensure sample integrity during transport.

For quality assurance and quality control (QA/QC) purposes, soil vapor sample equipment was tested for leaks by conducting a vacuum tightness shut-in test prior to sampling and by conducting a leak check test during purging and sampling. The leak check test was conducted by encapsulating the surface completion of the vapor probe and the vapor sampling assembly within a shroud. An atmosphere of at least 15% helium was then induced and maintained within the shroud throughout the duration of the sampling.

3.6. Laboratory Analyses

Soil samples and sorbent tubes were labeled and placed into an ice-chilled cooler immediately following sampling. Evacuated canister soil vapor samples and soil samples were transferred under appropriate chain-of-custody documentation to ESC Lab Sciences of Mt. Juliet, Tennessee. Sorbent tube soil vapor samples were transferred under chain-of-custody documentation to Eurofins Air Toxics of Folsom, California.

A total of 24 soil samples were analyzed for the following analyses (with results reported on a dry-weight basis):

- TPH multi-range using US EPA Testing Method 8015B, modified
- Benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, and fuel oxygenates using US EPA Testing Method 8260C

Laboratory analysis of 10 soil gas samples consisted of the following:

- TPH-g, BTEX, and MTBE using US EPA Testing Method TO-15
- Naphthalene using US EPA Testing Method TO-17
- Metabolic gases methane, oxygen, carbon dioxide, and carbon monoxide, and leak check compound, Helium, using ASTM Method D 1946-90

3.7. Investigation Derived Wastes

Investigation derived waste is currently containerized on-site in a 55-gallon drum awaiting disposal.

3.8. Deviations and Exclusions

The following deviations and/or exclusions from the Work Plan were encountered during the implementation of the investigation.

1) **Deviation**: The approved Work Plan described advancing twinned borings at multiple locations (VB-7 through VB-15) with one soil boring being advanced to a depth of 10-feet bgs for the collection of soil samples and one soil boring being advanced to a depth of 5.5 feet bgs for the installation of a permanent soil vapor probe. To reduce damage to the installed artificial turf surfacing within the building interior, AEI modified the scope of work to use a single borehole for both the collection of soil samples and for the installation of the vapor probes. Details of the vapor probe installation are discussed in Section 3.4.
2) **Deviation**: One additional vapor probe (VB-16) was installed to the northeast of the on-site warehouse building. This vapor probe was intended to help characterize the lateral extent of petroleum hydrocarbons in soil vapor within the northwestern portion of the Site.
3) **Exclusion**: VB-4 and VB-5 were not advanced pending the receipt of an encroachment permit by the City of Oakland. AEI intends to re-mobilize for the installation of these permeant vapor probes once the permit has been obtained. AEI will contact the ACDEH prior to remobilization and will issue a separate report documenting the installation of these vapor probes.
4) **Exclusion**: Sampling of VB-6 was attempted on October 14, 2016, however, due to the lack of vapor conductivity in the probe, AEI was unable to extract sufficient sample volume for sample analysis. AEI will attempt to collect another sample during the next sampling event.
5) **Exclusion**: Nitrogen gas in soil vapor samples was not analyzed as part of the investigation. The Work Plan specified that soil vapor samples were to be analyzed for atmospheric gases, including nitrogen. To present the highest quality soil vapor data, AEI chose to use helium as a leak check compound. For the analysis of vapor samples using US EPA Testing Method TO-15, a carrier gas is required to mobilize the sample through the instrumentation. Choices of carrier gas are limited to nitrogen or helium. Because helium was used as a leak check compound, nitrogen was selected as the carrier gas and thus could not be analyzed. The lack of nitrogen data is not expected to significantly influence the evaluation of the remaining data set.

4. RESULTS

4.1. Geology and Hydrogeology

Consistent with previous investigations, shallow soils encountered throughout the Site consist predominantly of fine grained soil (high and low plasticity clays). A generally narrow and discontinuous band of clay with between 30 and 40% course grained soils (sands and gravels) was observed throughout the Site at depths ranging from 3 to 8 feet bgs. Groundwater was not encountered during the investigation, however, soil moisture observations in the soil core collected indicated that the capillary fringe may have extended to approximately 7 or 8 feet bgs. Soil boring logs from the investigation are provided in Appendix A.

4.2. Soil Sample Analytical Results

Table 1 presents a summary of compounds detected in soil samples collected. Table 2 presents a summary of current and historical soil sample results for select compounds. Figure 7 presents

the recent soil sample results for TPHg and benzene. Copies of the laboratory analytical reports are included in Appendix B.

A total of 12 shallow soil samples (<5 ft bgs) collected and analyzed as part of the investigation, and the result were generally similar to the eight historical shallow soil samples from 2006 and 2007. In both the new and historic shallow soil samples, TPH-g, TPH-d, and benzene are only present at low levels, however, as was the case in the historical samples, TPH-d was persistently present at concentrations ranging from 5.28 to 1.00 mg/kg. Toluene, ethylbenzene, and xylenes were not detected in the shallow soil samples collected and analyzed as part of this investigation, and the only fuel oxygenate detected was tert-butyl alcohol which was present in VB-9 and VB-12 at a maximum concentration of 0.0536 mg/kg.

With the exception of two anomalies (VB-9 and VB-12) deeper soil samples (6 to 8 feet bgs) collected and analyzed similarly yielded low levels of TPH-d (26.4 to 1.68 mg/kg) and occasional detections of low level TPH-g (14.7 to 0.0623 mg/kg), TPH-mo (4.64 to 1.76 mg/kg), and benzene, toluene, ethylbenzene, and xylenes (0.00555 to 0.000647 mg/kg).

VB-12 was identified as an anomaly because it exhibited elevated levels of TPH-g (214 mg/kg) and benzene (0.187 mg/kg) relative to other samples collected during the investigation. Ethylbenzene and xylenes were also present at levels greater than in other deep soil samples, however these detections were still relatively low (0.496 and 0.821 mg/kg respectively)

VB-9 was identified as an anomaly due to the detection of large chain hydrocarbons in the C-22 to C-32 range (60.6 mg/kg) and in the C-32 to C-40 range (69.0 mg/kg). These long chain hydrocarbons were not present above the laboratory reporting limit in other samples except for a small detection of the C-22 to C-32 range hydrocarbons in VB-13 (4.64 mg/kg). These long chain hydrocarbons were accompanied by slightly elevated levels of TPH-d (19.8 mg/kg) and BTEX (0.0797, 0.0235, 0.0359, and 0.0516 mg/kg respectively).

Fuel oxygenates were not reported as present in the 20 of the 24 soil samples collected as part of this investigation, except for tert-butyl alcohol (TBA) which was identified in the shallow soil samples for VB-9 and VB-12 and the deep soil samples for VB-12 and VB-15. The maximum concentration of TBA was 0.0586 in VB-12 at a depth of 8 feet bgs. Similarly, naphthalene was not reported as present except in VB-12 (0.102 mg/kg) and SB-32 (0.0921) at depths of 8 and 10 feet bgs respectively.

The shallow and deep soil analytical data collected as part of this investigation has closed the data gaps identified for soil characterization, including collecting additional data on benzene, ethylebenzene, naphthalene, and total petroleum hydrocarbons (TPH) in shallow soils across the Site.

4.3. Soil Vapor Sample Analytical Results

Table 1 presents a summary of the compounds detected in soil vapor samples collected as part of this investigation. Table 3 presents a summary of current and historical soil vapor sample

results for select compounds and metabolic gases. Figure 9 presents isoconcentration contours for TPHg and benzene in soil vapor samples collected and analyzed as part of this investigation. Laboratory analytical reports are included in Appendix B. The results can be summarized as follows:

- Benzene was reported as present above the laboratory reporting limit in 8 of the 10 the soil vapor samples, with the exception of VB-9 and VB-15 which had reporting limits of 294 µg/m^3 and 51.1 µg/m^3, respectively. Detections of benzene ranged from 44.4 µg/m^3 in VB-11 to 15,400 µg/m^3 in VB-12.

- TPH-g was present above the laboratory reporting limit in each of the 10 soil vapor samples collected as part of this investigation. Most samples exhibited TPH-g concentrations in the range of thousands to tens of thousands of µg/m^3.Three samples, VB-9 (4,690,000 µg/m^3), VB-12 (1,490,000 µg/m^3), and VB-15 (406,000 µg/m^3), yielded concentrations of TPH-g outside this range.

- Except for VB-9, VB-12, and VB-15, toluene, ethylbenzene, and xylenes were present at low levels in each of the soil vapor samples collected as part of this investigation with maximum detections of 1,090 µg/m^3, 148 µg/m^3, and 538 µg/m^3 respectively. In VB-12, benzene was reported at a concentration of 15,400 µg/m^3 causing elevated laboratory reporting limits for toluene, ethylbenzene, and xylenes. As such, none of these other analytes were reported as present above the laboratory reporting limit in VB-12. VB-15 was non-detect for BTEX compounds.

- Naphthalene and MTBE were not reported as present in any samples except for in VB-15 which had a reported MTBE concentration of 95.1 µg/m^3.

As expected the results of the metabolic gas analysis indicates that portions of the Site with the most elevated petroleum hydrocarbon concentrations yielded lowered oxygen concentrations and elevated carbon dioxide concentrations, which also corresponds to covered areas that further limit gas exchange with the atmosphere. Vapor samples collected from within the on-site improvements (VB-9, VB-10, and VB-12) appear to be have lower oxygen content (3.40% to <2.00%). In VB-9 and VB-12, this decreased oxygen content is accompanied by an increased carbon dioxide content (10.9% and 13.6% respectively) and low level detections of methane (0.806% and 0.416%). Excepting VB-15, vapor probes nearer the edges of the on-site improvements appear to be under aerobic conditions with oxygen content ranging from 7.81% to 13.6%. VB-15 is anomalous in that the probe is located near the edge of the concrete foundation, however due to the proximity of a nearby residential structure, there is very little exposed earth in the vicinity to facilitate in oxygen exchange between the atmosphere and the soil. Oxygen content in VB-15 is low (2.09%), but carbon dioxide is elevated (10.4%).

No soil vapor samples failed the helium leak check test ($\geq$5.0 % leak), with the exception of VB-13 where a leak of approximately 6.0% was detected. Based on these results, soil vapor analytical results from VB-13 are assumed to be slightly biased low, but still valid. Isopropyl alcohol (IPA) was not used as a leak check compound during this investigation, however, minor detections of

IPA were reported VB-14 (8.04 µg/m^3), VB-11 (32.4 µg/m^3), and VB-8 (67.8 µg/m^3). These three samples are located along the southern bound of the Site. A larger detection of 10,500 µg/m^3 of IPA was also reported in VB-7 which is the northeastern most sample location.

5. UPDATED CONCEPTUAL SITE MODEL

5.1. Site Geology and Hydrogeology

The Site lies on the distal end of the Temescal Creek Alluvial Fan at an elevation of approximately 45 feet above North American Vertical Datum 1988 (NAVD88). The Temescal Alluvial Fan is a low relief broad alluvial fan sloping westerly and southwesterly from the mouth of the Temescal Creek. The Holocene age alluvial fan deposits are mapped as Quaternary Holocene alluvial fan deposits (Qhaf) (Helley 1997). The sediments are described as typically, brown to tan gravelly sand or sandy gravel, which generally grades upward into sandy or silty clay.

Figure 3 presents and updated lithologic cross-section, updated with 2016 monitoring data. Sediments encountered at the Site in the upper four to five feet underlying the Site consist of black silty clay – clayey silt containing variable amounts of scattered gravel. These sediments are considered to be bay margin sediments.

The shallow fine grained surface layer is underlain by alluvial deposits of intercalated, lenticular bodies of silt, clay, sand, and gravel. The sediments are typically highly variable mixtures of the four primary soil types. Permeability (transmissivity) of the coarse-grained sediments is typically low due to the presence of interstitial clay; however, scattered clean sands and gravels are present with good permeability. These individual permeable channel deposits appear to act as preferential channels for groundwater flow across the Site and are the likely cause of the slightly sinuous, asymmetric appearance of the hydrocarbon plume in the soil and groundwater.

Groundwater elevation generally has fluctuated between 22.3 and 25.1 feet NAVD88 (approximately 6.2 to 9.0 feet bgs) with a historical maximum groundwater elevation of 27.1 feet above NAVD88 and a minimum of 17.5 feet above NAVD88. The groundwater potentiometric surface is portrayed in Figure 4. Groundwater elevation measurements collected during historic groundwater monitoring events are presented in Table 4 while the general groundwater gradient and direction of flow are summarized in Table 5.

5.2. Primary Source Identification and Chemicals of Potential Concern

5.2.1. Potential On-Site Sources

Previous environmental investigations have identified a single walled, steel 3,750-gallon underground storage tank (UST) located under the sidewalk at the south east corner of the property. This UST was removed in February 2000 and was used to store fuel hydrocarbons. Investigations performed to-date have shown that this UST is the primary source of petroleum hydrocarbons which have been identified in soil, soil vapor, and groundwater at the Site. The presence of elevated concentrations of benzene in soil and groundwater samples collected suggest that the UST likely stored gasoline.

5.2.2. Potential Off-site Sources

AEI has identified two potential off-site sources of contamination at the Site:

- A closed release case is located adjacent and to the east of the Site at 3501 San Pablo Avenue. There is limited information provided on the GeoTracker database beyond noted soil contamination of waste oil, motor, hydraulic, and lubricating oils and that a remedial excavation was performed. No groundwater data is available for this facility.
- An adjacent site, the Former City of Paris Cleaners (3516 Adeline Street), located northwest of the Site. A release from USTs of Stoddard Solvent, a dry cleaning solvent used during operation of the dry cleaning facility until the 1960s when the facility was closed. In 1990, one 750-gallon and two 1,000-gallon underground tanks used to store Stoddard Solvent were removed from the site. In 1991, an additional 250-gallon UST was removed. The site is referenced at eligible for closure as of February 2016.

Based on these facilities' locations and the available historical analytical data for the Site, neither are considered to have impacted the Site.

5.2.3. Chemicals of Concern

Based on the nature of the identified sources, contamination at the Site is assumed to be caused by fuel hydrocarbons released from the on-site UST. As such, the following COCs have been identified based on the requirements and supporting technical justification documents of the LTCP:

- TPH-g
- Benzene
- Ethylbenzene
- Naphthalene
- Methyl tert-butyl ether (MTBE)

The following chemicals of potential concern (COPCs) have historically been identified or sampled for at the request of the ACDEH, however, based on the requirements of the LTCP are not considered to be drivers of risk related to the protection of human health and environmental receptors:

- Long chain hydrocarbons (C22-C32 or C32-C40)
- Toluene
- Xylenes
- Additional Fuel Oxygenates
- Semi-volatile organic compounds (SVOCs)

5.3. Receptors and Exposure Pathways

Potential receptors and exposure pathways for COCs at the Site are summarized in Figure 5. Justification for each exposure pathway is presented in the sections below. Although the Site is currently developed as a commercial/light industrial space, residential land use both on-site and in the vicinity of the Site are likely and anticipated. Furthermore, according the property manager, the Site is and has been zoned for residential use. As such, residents, commercial workers, and subsurface utility workers are all considered as potential receptors.

5.3.1. Preferential Pathways

A utility survey to identify potential preferential pathways and sensitive receptors has been performed for the Site. AEI requested utility maps from Pacific Gas and Electric (PG&E) and East Bay Municipal District (EBMUD). AEI performed a geophysical survey to confirm the accuracy of these maps. The survey included ground penetrating radar (GPR), passive and active electromagnetic detectors. The geophysical survey identified a sanitary sewer, gas main, water lines and lateral lines along Adeline Street. A sanitary sewer, two gas lines, two water lines and lateral lines were located along Chestnut Street.

Based on the results of the utility survey and the underlying geology, the following preferential pathways have been identified:

- A utility trench along Chestnut Street may have acted as a preferential pathway for lateral migration of contaminants. The locations of identified utility conduits are shown on Figure 2.
- As described in Section 4.1, scattered clean sands and gravels are present throughout the subsurface which may act as preferential channels for groundwater and soil vapor flow across the Site.

5.3.2. Local Public Water System and Well Search

The Site is located within the service area of the East Bay Municipal District (EBMUD). The EBMUD provides potable water to the Site and surrounding residential and commercial properties.

To confirm that no drinking water wells were installed on or near the Site, AEI obtained the Well Drillers reports from the California Department of Water resources (DWR) for all wells within 1,000 feet of the subject site. Additionally, as requested in the ACEH's April 22, 2106 directive letter, this well survey was amended by reviewing Alameda County Public Works Agency (ACPWA) for all wells within 1,500 feet of the subject site. The DWR and ACPWA results of the well survey demonstrate that no wells are threatened by the petroleum hydrocarbon plume. The locations of these wells are shown on Figure 6.

Based on the results of the well search and the location of the Site within the EBMUD, groundwater is not considered to be used for irrigation or drinking purposes.

5.3.3. Soil

Ground cover at the Site consists of paving throughout with no landscaped or exposed areas. As such, ingestion, inhalation, and dermal contact are considered incomplete pathways for both on-site workers and residents. Subsurface utility workers who may cut through the existing concrete may still be exposed to on-site soils. As such, these exposure pathways are considered complete for subsurface utility workers.

5.3.4. Groundwater

As discussed in Section 4.3.2, groundwater at or near the Site is not in use as a source of drinking or irrigation water. As such, the dermal contact, inhalation, and ingestion exposure pathways for residents and on-site workers are considered incomplete. Due to the shallow depth to groundwater, these exposure pathways are still considered complete for subsurface utility workers.

5.3.5. Surface Water

According the National Fish and Wildlife Service's Wetland Mapper, the nearest surface water body is an estuarian wetland located approximately 0.8 miles west by northwest of the Site. Storm water runoff from the Site discharges to the municipal storm water system through curbside conveyances. No on-site French drains or other sub-surface storm water conveyances were identified at the Site. As such, storm water runoff does not come in to contact with potentially contaminated media and is therefore not considered as a complete transport pathway.

5.3.6. Air

Soil vapor analytical suggests that the volatilization of COCs from soil and groundwater to soil vapor is a complete transport mechanism. Intrusion of impacted soil vapor to the indoor air of both on-site and off-site improvements are considered a complete exposure pathway for both residents and on-site workers. Additionally, subsurface utility workers may be exposed to soil vapors contaminated by COCs.

5.4. Nature and Extent of Petroleum Hydrocabon Impacts

5.4.1. Soil

Table 2 presents a summary of the historic soil sample analytical results for the Site for select petroleum hydrocarbons. Current COC concentrations in soil are shown on Figure 7. Petroleum hydrocarbons in the unsaturated zone are present near the former UST location, but in general COCs are only present at residual levels in shallow soils (<5 feet bgs).

Analytical data from deeper soils, particularly within the smear zone (6 to 9 feet bgs) suggest that migration of petroleum hydrocarbons towards the west and south within the smear zone has occurred. The over-excavation at the time of the UST removal and interim remedial excavation performed removed much of the on-site shallow soils that could have potentially acted as secondary sources. Sidewall samples indicated that the extents of the excavation were reasonably sufficient. Soil samples collected at depths of less than 7.5 feet have not yielded significant concentrations of COCs. At depths below 7.5 feet bgs and above 9 feet bgs elevated concentrations of COCs are present at the location of the former UST and the along the south end of the interim remedial excavation.

At depths below 9 feet bgs, saturated soil samples analyzed yielded COCs near the former UST excavation and along the south and east sides of the source removal excavation. The impacted soil in this interval appears to be related to COC-impacted groundwater migrating in the more-permeable layers at the Site.

5.4.2. Groundwater

Tables 6 and 7 present a summary of COC concentrations in grab groundwater and monitoring well samples collected. Figure 8 present the current extent of TPH-g and benzene in groundwater at the Site.

With the exception of groundwater samples collected from MW-03 and MW-07, located within the heart of the plume and are discussed in greater detail below, contaminant mass, specifically TPH-g, benzene, and ethylbenzene, have been historically present in each of the on-site monitoring

wells, but have attenuated to below or near their respective detection limits. MTBE has been present above the laboratory reporting limit in only one sample at a concentration of 31 µg/L which was collected from MW-7 in January of 2016. The natural processes including biological degradation, dispersion, and dilution have significantly reduced COC concentrations and their extent in groundwater beneath the Site and the benzene and TPH-g are stable and/or decreasing in size and concentration.

MW-03, which is located immediately west of the remedial excavation area, exhibited an increase in both TPH-g (16,000 µg/L from 4,900 µg/L) and benzene (5,000 µg/L from 890 µg/L) during the most recent groundwater monitoring event conducted in July 2016 when compared to the next most recent groundwater sample from this monitoring well which was collected in December 2009. Both TPH-g and benzene were at or near their historical high concentrations of 17,000 µg/L and 3,800 µg/L respectively. Groundwater during the July 2016 monitoring event was approximately 1.4 feet below the minimum groundwater elevation observed during previous groundwater monitoring events and this increase in the presence of TPH-g and benzene may have been the result of the mobilization of previously submerged pockets of separate phase hydrocarbons.

MW-07, which is located immediately to the east of the historic UST, has overall exhibited a trend of decreasing TPH-g and benzene concentrations, however the groundwater analytical from the most recent groundwater monitoring event (July 2016) exhibited a significant rebound in hydrocarbon concentrations, including TPH-g (6,700 µg/L), benzene (1,400 µg/L), and ethylbenzene (36 µg/L). As with MW-03, groundwater elevations in MW-7 are at a historic low of 23.68 feet NAVD88 which is roughly 0.77 feet below the previous historic low of 24.45 feet NAVD 88 in October 2010 and 1.75 feet below the groundwater elevation of the next most recent groundwater monitoring event from January 2016.

Figure 8 presents isoconcentration contours for both benzene and TPH-g. In accordance with the LTCP, the Tier I environmental screening level (ESL) from the California Regional Water Quality Control Board, San Francisco Bay Region ("the Regional Water Board") were selected as the water quality objectives that define the extents of the benzene and TPH-g groundwater plumes. Figure 8 incorporates grab groundwater analytical data from 2007 and 2008 to present the extent of benzene and TPH-g in groundwater.

The observed fluctuations in TPH-g and benzene detected in groundwater samples collected from MW-03 and MW-07 are likely caused by interaction between residual separate phase petroleum hydrocarbons within the smear zone. Additional groundwater samples to the north to characterize current petroleum hydrocarbon concentrations in groundwater would provide additional detail.

5.4.3. Soil Vapor

Table 3 presents the soil vapor analytical data available for the Site and Figure 9 presents a depiction of the soil vapor plumes for TPH-g and Benzene.

TPH-g and BTEX were reported as present above the laboratory reporting limit in each of the historic samples (VB-1 through VB-3) and each of the newly installed soil vapor probe samples (VB-7 through VB-16) with the exception of VB-9. Although benzene was not reported above the

method detection limit in VB-9, TPH-g was reported at a concentration of 4,690,000 µg/m^3, resulting in the reporting limit for benzene in VB-9 being elevated to 294 µg/m^3 which is greater than all detections of benzene in soil vapor except for VB-12 (15,400 µg/m^3). In general, both benzene and TPH-g soil vapor concentrations appear to be centered around VB-12 and VB-9.

The extents of the TPH-g plume in soil vapor, as defined by the Tier I ESL of 300,000 µg/m^3 is depicted in Figure 9. The existing body of analytical data is sufficient to define the TPH-g vapor plume to the north, east, and south. The westernmost soil vapor probe (VB-15) yielded a TPH-g result of 406,000 µg/m^3 which is an order of magnitude greater than what was observed in other nearby vapor probes. The extent of the TPH-g plume to the west is not characterized and represents a data gap relative to the completeness of the CSM.

The extent of benzene in soil vapor, as defined by the as defined by the Tier I ESL (48 µg/m^3) extends to the west and north. The extent of the benzene plume are well defined to the west, south, and east, however is unbounded to the north. Additional soil vapor points to the west and north is warranted to further define the lateral extent of TPH-g and benzene in soil vapor.

Based on the available soil and groundwater data, soil vapor contamination is likely primarily from volatilization from groundwater and from residual separate phase COCs within the smear zone. Figure 10 and Figure 11 provide an overlay of the soil vapor and groundwater plumes for TPH-g and benzene respectively.

5.5. Natural Attenuation

Throughout the course of the environmental investigations conducted at the Site (2009 to present), contaminant mass in groundwater monitoring wells and adjacent soil samples have been reduced significantly. Metabolic gases (oxygen and carbon dioxide) analytical data collected during this investigation and dissolved oxygen measurements taken during groundwater monitoring events indicate that hydrocarbon metabolizing microbial communities are likely present in soil and groundwater at the Site. Soil vapor concentrations of COCs and respirable gases further indicate that a bioattenuation zone is present within the top five feet of soil throughout most of the Site, however, oxygen infiltration to the center of the on-site warehouse building is inadequate to maintain a uniform bioattenuation zone throughout. In general, oxygen content decreases as the distance from soils which can undergo oxygen exchange with the atmosphere increases. Figure 12 depicts dissolved oxygen groundwater data from the July 2016 groundwater monitoring event and soil vapor oxygen data.

Based on the available soil vapor and groundwater oxygen data and COC analytical data, microbial degradation of COCs in soil vapor and groundwater are most likely predominantly aerobic and oxygen limited.

5.6. Data Gaps

The investigation performed provided additional information for the identified data gaps in the Work Plan including shallow soil and soil vapor data. However, the following data gaps remain open:

- **Temporal soil vapor data** – The current CSM is based on soil vapor data collected predominantly from a single sampling event. Additional sampling events should be conducted

to confirm that the available soil vapor data is representative and that diurnal or seasonal variations in soil vapor do not significantly alter the extents of the COC soil vapor plumes.

- **Extent of the Soil Vapor Investigation** – As described in Section 4.4.3, the available soil vapor analytical data set is insufficient to adequately bound the lateral extent of the benzene and TPH-g soil vapor plumes to the west and north.
- **Temporal Groundwater Data** – As described in Section 4.4.2, the benzene and TPH-g plumes have been approximated from an amalgamation of grab groundwater samples from 2007 and 2008 and from samples from groundwater monitoring events. The lack of more recent groundwater analytical data to bound the extents of the groundwater benzene and TPH-g plumes represents a significant data gap.
- **Nitrogen Soil Vapor Analytical Data** – Nitrogen soil vapor data was requested by the ACDEH, however, was unable to be collected due to the use of the Helium as a leak check compound. The lack of nitrogen represents a data gap relative to the completeness of the CSM for this Site, however, based on the available oxygen, carbon dioxide, carbon monoxide, and methane soil vapor analytical data, the lack of Nitrogen soil vapor data does not represent a significant data gap.

6. EVALUATION OF THE LOW THREAT CLOSURE POLICY CRITERIA

This section presents AEI's evaluation of the Site under the LTCP criteria to identify what further actions may be necessary.

The California State Water Resources Control Board's LTCP was developed as an evaluation method to close low-threat petroleum release cases. Therefore, AEI has developed the following evaluation of whether this Site meets the criteria of the LTCP. The LTCP presents general criteria and media specific criteria that must be met for the Site to be considered low-threat and acceptable for closure. A matrix presenting the LTCP criteria, site-specific comments, and identified data gaps are presented in Table 8.

Based on the LTCP evaluation, the Site does not currently satisfy the requirements for regulatory case closure under the LTCP.

6.1. General Closure Criteria

The general closure criteria under the LTCP are as follows:

a) The unauthorized release is located within the service area of a public water system;
b) The unauthorized release consists only of petroleum;
c) The unauthorized ("primary") release from the UST system has been stopped;
d) Free product has been removed to the maximum extent practicable;
e) A CSM that assesses the nature, extent, and mobility of the release has been developed;
f) Secondary source has been removed to the extent practicable;
g) Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15; and
h) Nuisance as defined by Water Code section 13050 does not exist at the Site.

Based on AEI's review of the general closure criteria, the Site does not meet criteria d) or f). AEI's review of these criteria and AEI's evaluation of the Site are presented below.

a) The unauthorized release is located within the service area of a public water system – The Site is located within the EBMUD as described in the CSM. There are no on-site groundwater wells used for drinking and/or irrigation.

b) The unauthorized release consists only of petroleum – The identified release is consistent as being from the former UST that was removed in February of 2000. No non-petroleum related compounds have been detected in samples collected from the Site.

c) The unauthorized ("primary") release from the UST system has been stopped – The former UST was removed from the Site in February of 2000.

d) **Free product has been removed to the maximum extent practicable** – Free product has not been observed during the investigation activities performed, however, based on the concentrations of TPH-g observed in groundwater samples and soil vapor samples, and as discussed in the CSM, residual separate phase petroleum hydrocarbons are likely present in a limited area of the Site within the smear zone.

e) A CSM that assesses the nature, extent, and mobility of the release has been developed – Section 4 above presents the CSM for the Site.

f) **Secondary source has been removed to the extent practicable** – Although interim remedial actions have been completed at the Site, limited residual separate phase petroleum hydrocarbons are still present at the Site. Additional remedial actions such as excavation, enhanced biodegradation, and/or soil vapor extraction should be evaluated to determine if they are practically able to remove remaining free phase petroleum.

g) Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15 – As presented above, MTBE has not been reported in any of the soil, groundwater, or soil vapor samples except for minor detections of 31 µg/L MTBE in a groundwater sample for MW-7 in January of 2016 and 95.1 µg/m^3 in a soil vapor sample from VB-15 in October 2016

h) **Nuisance as defined by Water Code section 13050 does not exist at the Site** – The residual petroleum hydrocarbons present at the Site do not currently represent a nuisance as defined.

6.2. Media Specific Criteria

The LTCP includes media specific criteria, including groundwater, vapor intrusion to indoor air, and direct contact and outdoor air exposure. Each of these are presented below.

6.2.1. Groundwater

The LTCP outlines five classes of sites that would allow for closure of the Site under the LTCP. Based upon our evaluation of the five classes, this Site fits most closely within Class 3, as described below:

a) The contaminant plume that exceeds water quality objectives is less than 250 feet in length – Based on the available historical groundwater grab samples and monitoring well samples, the likely extents of the benzene and TPH-g groundwater plumes can be estimated

and are depicted in Figure 8. However, as discussed in the CSM, due to data gaps, the existing analytical data set is inadequate to reliably calculate the benzene and TPH-g plume lengths.

b) **Free product has been removed to the maximum extent practicable, may still be present below the site where the release originated, but does not extend off-site** – As presented above, free product was not observed in soil and/or groundwater during the investigations. However, petroleum hydrocarbon concentrations in groundwater suggest that free product may be present. Further removal of free product may be necessary to meet closure criteria under the LTCP.

c) **The plume has been stable or decreasing for a minimum of five years**. As presented in the CSM, the current dataset is unable to adequately temporally define the extents of the benzene and TPH-g groundwater plumes. As such, there is inadequate data to support a claim that this criterion has been satisfied.

d) **The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary** – As discussed in Section 4.3.2 and 4.3.5, no water supply wells or surface water bodies have been identified within 1,000 feet of the Site.

e) **The property owner is willing to accept a land use restriction if the regulatory agency requires a land use restriction as a condition of closure.** – The property owner is willing to work with the ACDEH to accept land use restrictions as necessary to support to redevelopment of the Site for residential land use.

6.2.2. Petroleum Vapor Intrusion to Indoor Air

The LTCP presents four potential exposure scenarios for the evaluation of a Site for closure under the LTCP. The exposure scenarios are based upon the presence of a sufficient bioattenuation zone that includes a separation of the building from free product in soil and/or on groundwater, and dissolved benzene in groundwater. In lieu of using the exposure scenarios, soil vapor samples were directly collected. The detected petroleum hydrocarbon concentrations in soil vapor were compared to ESLs and the LTCP vapor intrusion criteria from Scenario 4. Based on these criteria, soil vapor samples from VB-9, VB-10, and VB-15 exceed the requirements of the LTCP. Based on these results, remediation or the institution of engineered controls as a part of land use restriction would be necessary to meet the requirements of the LTCP.

6.2.3. Direct Contact and Outdoor Air Exposure

To evaluate the direct contact and outdoor air exposure routes, AEI compared the concentrations of petroleum hydrocarbon in soil to the commercial screening levels presented in Table 1 of the LTCP. None of the current concentrations of petroleum hydrocarbons were found to exceed the LTCP cleanup level.

7. CONCLUSIONS AND RECOMMENDATIONS

Based on the updated CSM and the findings of the investigation performed, AEI has concluded that the Site does not meet the requirements for regulatory case closure under the LTCP at this time.

AEI recommends the following actions be taken to continue to move the Site towards closure under the LTCP:

- **Collect Additional Soil Vapor Analytical Data** - Two data gaps associated with soil vapor analytical data were identified as part of this assessment: The lack of temporal soil vapor analytical data and the lack of soil vapor analytical data bounding the extents of the benzene and soil vapor plumes. To address these data gaps, AEI recommends that additional soil vapor probes be installed at the locations shown on Figure 13. AEI recommends that at least one more round of soil vapor samples be collected to further characterize the benzene and TPH-g soil vapor plumes well characterized and stable.
- **Collect additional Groundwater Analytical Data**- The extents of the current groundwater monitoring well network was identified as a data gap. To rectify this data gap, AEI recommends that additional grab groundwater samples or monitoring wells be installed to meet the data quality needs of the LTCP.
- **Prepare a Response Action Plan** - COCs in groundwater and soil vapor do not currently meet the LTCP criteria for regulatory closure. Based on the CSM, it is believed that these exceedances are caused by residual separate phase petroleum hydrocarbons trapped within pore spaces of the smear zone. AEI recommends that a response action plan be developed to address these areas of contamination.

8. ADDITIONAL SUBSURFACE INVESTIGATION WORK PLAN

AEI proposes the following work plan to address the data gaps identified in this report:

- Advance seven soil borings (VB-4 & VB-5, and VB-17 through VB-21) for the collection of grab groundwater samples and for the installation of permeant soil vapor probes.
- Collect an additional round of soil vapor samples from VB-4 through VB-21.

Each of these activities are presented below.

8.1. Preliminary Field Activities

Prior to performing the additional investigation activities proposed, AEI will perform the following: Obtain a subsurface drilling permit will be obtained from the ACWD prior to drilling activities.

- Notify the ACDEH of the proposed field schedule.
- Notify Underground Services Alert of the activities to identify the location of public utilities.
- Contract a private utility locator to clear the boring locations of subsurface utility conflicts.
- Acquire encroachment permit for the installation of VB-4 and VB-5 within the City of Oakland right-of-way.

8.2. Soil Sampling

Based on the CSM, no additional soil samples are warranted.

8.3. Grab-groundwater sampling

AEI proposes to advance seven soil borings (VB-4, VB-5, and VB-17 through VB-21) at locations depicted on Figure 13. These soil borings will be advanced to a depth of 15 feet bgs or first encountered groundwater.

Each soil boring will be advanced with a direct-push drilling rig (GeoProbe or similar) using 2.25-inch diameter drilling rods to a total approximate depth of ten-feet bgs. AEI will contract a State of California licensed drilling contractor (C-57) to advance the soil borings.

Soil will be continuously collected from each boring in approximately 4-foot long, 2-inch diameter acrylic liners. The borings will be logged by an AEI field geologist or engineer, under the direction of a California Professional Geologist or Professional Engineer. Soils will be described using the Unified Soil Classification System (USCS).

Upon completion soil borings advanced as part of this additional investigation will be converted to temporary monitoring wells and allowed to equilibrate until a stable groundwater elevation is achieved. The presence or absence of an immiscible layer will be determined using a membrane interface probe. Grab groundwater samples will be collected from each boring where groundwater is encountered. Grab groundwater samples will be analyzed for TPH multi range, MTBE, and BTEX.

8.4. Soil Vapor Probes

AEI proposed to convert each of the soil borings advanced as part of this additional investigation to permeant soil vapor probes. These vapor probes will be constructed in general accordance with the *Advisory* and will generally follow the construction outlined in Section 3.4 of this Report.

8.4.1. Soil Vapor Sample Collection

Soil vapor samples will be collected from each of the permanent soil vapor probes (VB-4 through VB-21) no sooner than 48 hours after the construction of the soil vapor probes is complete. Soil vapor sampling will be completed in general accordance with the *Advisory* as described in Section 3.5 of this report. Helium will be used as a leak check compound for soil vapor samples collected as part of this additional investigation.

8.4.2. Soil Gas Sample Analyses

The collected soil gas samples will be submitted to a State of California-certified laboratory for analysis of BTEX, MTBE, and TPH-g using US EPA Testing Method TO-15, naphthalene using US EPA Testing Method TO-17, and for metabolic gases oxygen (O2), methane (CH4), and carbon dioxide (CO2) and leak check compound helium using ASTM Method D 1946-90.

8.5. Equipment Decontamination and Waste Handling

The probe rods, soil samplers, augers, and other tooling used during the characterization work will be decontaminated between soil borings using a non-phosphate detergent such as Alconox™ and rinsed with clean water to minimize the potential for cross-contamination. Soil cuttings, rinsate, and other investigation-derived wastes (IDWs) will be temporarily stored in sealed 55-gallon drums or sealed 5-gallon buckets in a secure location on-site pending proper disposal. IDW will include soil cuttings, plastic sample liners, and other sampling disposables. Equipment rinse water will also be stored in 55-gallon drums or 5-gallon buckets, separate from solid IDW. Upon receipt of analytical results, the waste will be profiled into appropriate disposal or recycling facilities and transported from the site under appropriate manifest. Copies of manifest(s) will be made available once final copies are received from the disposal facility(s).

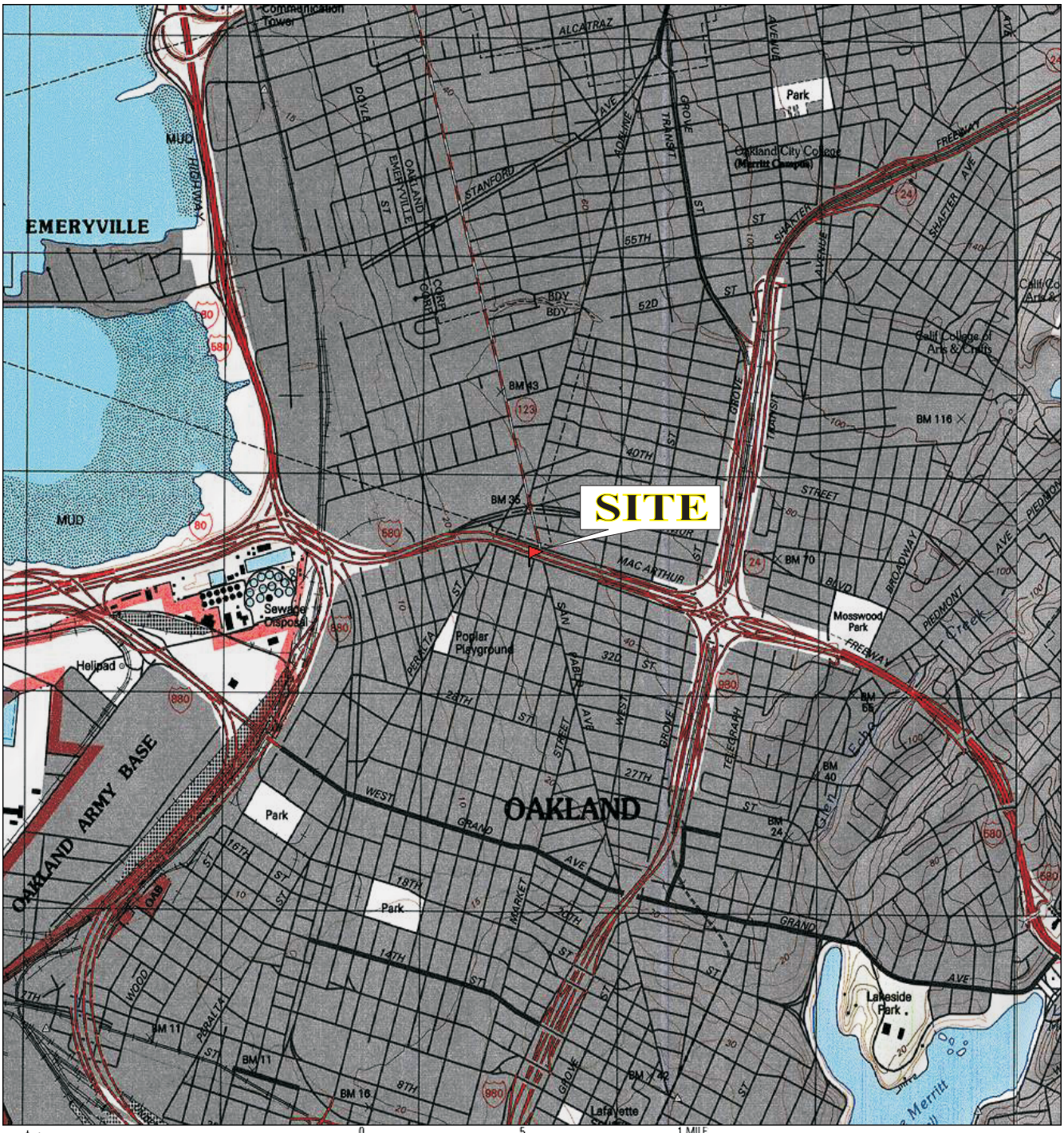
8.6. Reporting

Following receipt of all laboratory analytical, a technical report will be prepared. The report will detail the results of soil sample analyses and the installation and sampling of the soil gas wells. The final report will include figures, data tables, logs of borings and soil gas well construction details, an updated Site Conceptual Model, an updated comparison to the LTCP, and make recommendations for next steps or closure. The technical report will be uploaded to the ACEH FTP site and Geotracker. All other relevant data will be uploaded to the Geotracker database, as necessary.

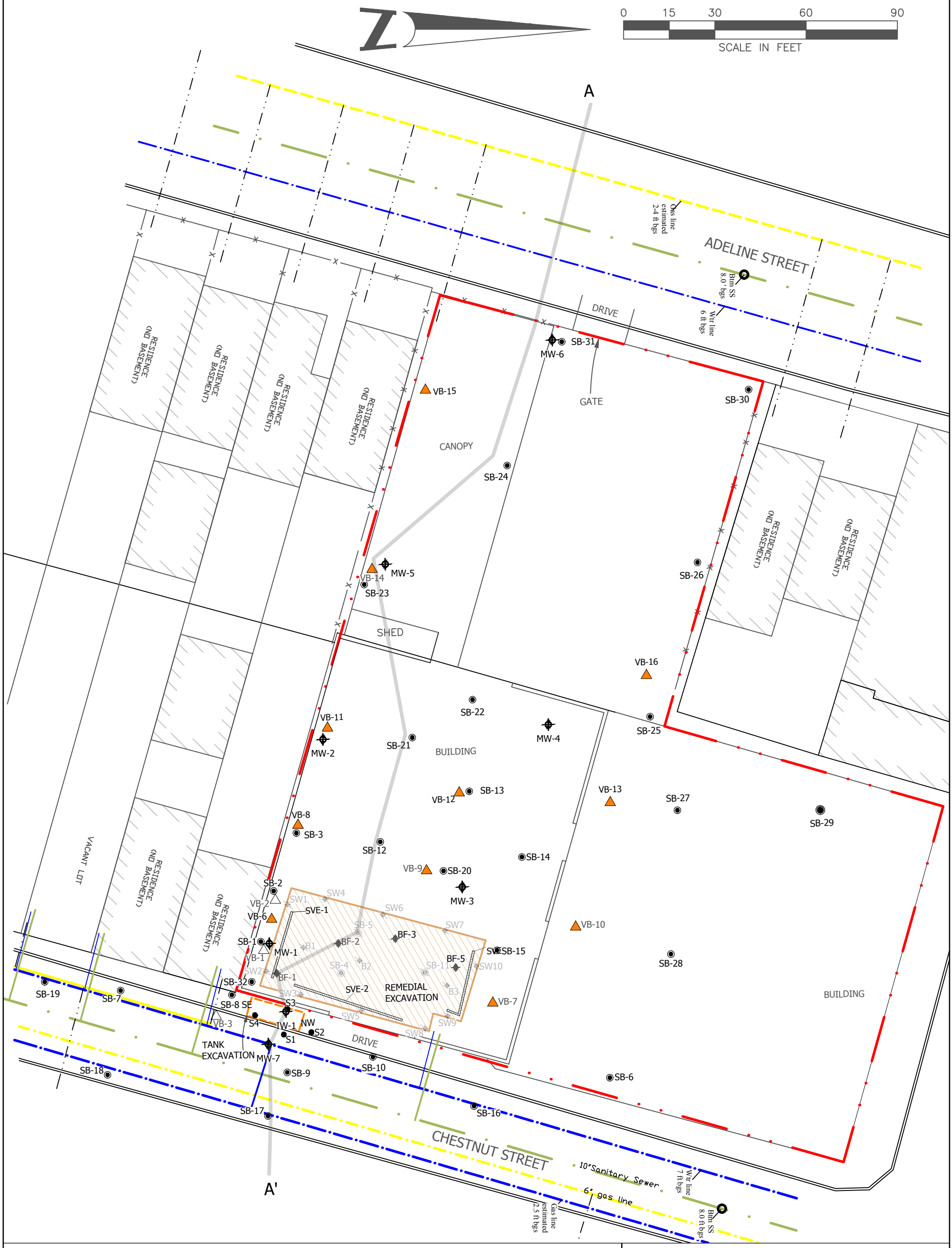
9. CLOSING

AEI appreciates working with the ACDEH to move this Site towards closure and trust that this document meets with your approval. Please contact either of the undersigned at (925) 746-6000 if you have any questions or need any additional information.

FIGURES



AEI CONSULTANTS 2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597	
Site Location Map	
3442 Adeline Street Oakland, CA 94608	**FIGURE 1** Job No: 281939



LEGEND

DRAFTED BY JES

- Site Boundary
- AEI Soil Boring
- Clear Water Soil Boring (2006)
- Monitoring Well/Backfill Casings
- Temporary Soil Vapor Sample (2007)
- Permanent Soil Vapor Probe
- Excavation Confirmation Sample
- SB-4 Sample Location Removed
- Former Gasoline UST
- Interim Source Removal Excavation
- A' / A Cross Section
- Sanitary Sewer
- Water Main
- Natural Gas Main

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2500 CAMINO DIABLO, WALNUT CREEK

SITE MAP

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 2
PROJECT NO. 281939

A

A'

MW-6 SB-24 MW-5 SB-21 SB-12 SB-5 BF-1 IW-1 MW-7 SB-17

Gas Mains | Sanitary Sewer | Water Mains

Vertical Scale in Feet: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24

16" Gas line dead | 6" Gas line | water line

Clayey Silt, black, 5 % fine gravel, slightly plastic, slightly moist

Gravelly Sand - Sandy Gravel, yellowish red, clayey, firm very slightly moist FILL 22

TPH-g 63 (1/12/16)

High Groundwater level in well.

Low Groundwater level in wells.

Clay, olive gray, silty, 5% gravel slightly plastic, becoming increasingly sandy silty downward

Clayey Silt, - Clayey Sand olive gray, v fine gr, 5-10% gravel moderately firm, moist

23

Gravelly Sand - Sandy Gravel, olive gray, clayey, coarse sand - medium garvel, wet

Clayey Gravelly Sand, brown - yellowish brown, coarse grained , wet

270

Clayey Gravelly Sand, brown - yellowish brown, coarse grained , wet

1.8

Sand, brown - yellowish brown, med. grained moderately firm, wet

Gravelly Clay, dark reddish brown, very moist

<1.0

Fill

Silty Clay, black, fine gravel, stiff, dry

Gravelly Silt, dark reddish brown, moderately loose

Silty Gravel, very dark gray - dark greenish gray, loose

<1.0

Silth Clay, light yellowish brown - grayish green mottling moist

15

Clayey Silt, light yellowish brown, grayish green mottling moist

41

TPH-g 11,000

Silty Clay, greenish black, 10% fine gravel, soft, moist moderate plasticity

Silty Clay, strong brown, hard, dry

TPH-g 110 (1/12/16)

Silty Clay, dark greenish gray, firm, moist

Silty Gravel, grn gry- dark greenish gray, mod. loose, wet

Silty Clay, dark grn. gray, stiff, moist

Silty Gravel, grn gry- dark greenish gray, mod. loose, wet

61

Clayey, dark greenish gray- grn gray - olive yellow - lite yellowish brn, mod. soft, moist

18

Clay, strong brown, gravelly, firm, moist

Clayey Sand, strong brown - yellowish brown, gravelly, mod soft, moist

Gravelly Sand, strong brown - yellowish brown, fine - coarse grain, moderastely firm, wet

Sandy Gravel, strong brown, clayey, firm, wet

Fill

Silty Clay, black, 5% fine gravel, stiff

Gravelly Silty Clay, dark gray, 10 % fine gravel, stiff

Silty Clay, greenish gray, 10 % fine gravel, moderate plasticity

25

Very Gravelly Clay, multicolored - green, blue, orange, brown, soft

<1.0

Silty Clay, light yellowish brown - greenish gray mottled, moderately plasticity, moist

26

Clay, light yellowish brown, 10% fine gravel moist

Clay, light yellowish brown with orange streaks high plasticity, moist

TPH-g 8,100

Silty Clay, light grayish green, w/s orange mottling

Gravelly Silty Sand dark greenish gray, clayey, soft

Gravelly Silty Clay, yellowish brown, orange mottling, gravel increasing downward, moist

490

TPH-g 1,200

82

Gravelly Sand, light yellowish brown, wet

Silty Clay, light yellowish brown, orange mottling gravelly, moist

20

TPH-g 35,000

Silty Clay, black, 5% fine gravel, stiff, dry

SiltyClay, olive gray, orangge streaks, moderate plasticity, moist

<1.0

TPH-g 22,000

FILL

Silty Clay, lt. olive brown - yellowish brown, dk bluish gray - red mottling moderately plastic, moist

<1.0

13

Asphalt

Silty Clay, greenish black, 10% fine gravel, soft, moist moderate plasticity

Gravelly Silt, dark greenish gray, 25% gravel, very stiff, hard, dry

Silty Gravel, greenish gray, fine gravel, loose

Clay, dark greenish gray - greenish gray, gravelly, very hard, dry

<1.0

TPH-g 1,800 (1/12/16)

Very Clayey Sand - Sandy Clay, locally Clayey Sandy Gravel olive - olive yellow - brownish yellow, firm, very moist

Clayey Gravel, dark greenish gray, hard, wet

<1.0

TPH-g 1,000

Asphalt

Silty Clay, black, fine gravel, hard, low plasticity, dry

Water line

Gravelly Silty Sand, darkel brown, silty gray grayish green mottling, gravelly, firm, moist

High Groundwater level in wells.

Low Groundwater level in wells.

Silty Sandy Clay, dark brownish gray mottled grayish green, fine gravel, moderately soft, very slightly moist

Silty Clay, dark grayish green, stiff, slightly moist

Gravelly Silty Clay - Clayey Gravel light olive brown, fine - medium gravel, moderately stiff, wet

Silty Clay, olive yellow, w/s brownish yellow, moderately plastic, moist

<1.0

Sandy Gravel, strong brown - light olive, hard, wet

Gravelly Sand, strong brown - light olive, coarse grained, moderately soft, wet

Gravelly Silty Clay, strong brown - light olive brown, moderatly plastic, wet

TPH-g 11,000 Grab Water Sample - ug/L

TPH-g 14,000 Monitoring Well Sample - ug/L (date)

41 TPH-g Soil Analysis - mg/kg

0 25 50 75 100

SCALE IN FEET

Clay

Silt

Gravel

Sand

Clayey Sediments

Permeable Intervals

Fill Material

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2500 CAMINO DIABLO, WALNUT CREEK

Soil Cross Section A-A'

3442 Adeline Street
Oakland, California

Figure 3

PROJECT NO. 281939

0 15 30 60 90

SCALE IN FEET

ADELINE STREET

DRIVE

RESIDENCE (NO BASEMENT)

RESIDENCE (NO BASEMENT)

RESIDENCE (NO BASEMENT)

RESIDENCE (NO BASEMENT)

19

MW-6
18.94

VB-15

GATE

CANOPY

20

RESIDENCE (NO BASEMENT)

RESIDENCE (NO BASEMENT)

VB-14

MW-5
20.64

SHED

VB-16

21

VB-11

MW-2
21.25

MW-4
21.18

BUILDING

VB-12

VB-13

VB-8

VACANT LOT

RESIDENCE (NO BASEMENT)

RESIDENCE (NO BASEMENT)

VB-9

22

MW-3
22.09

VB-6

VB-10

BF-2

BF-3

23

MW-1
22.27

BF-5
23.33

BF-1
23.47

REMEDIAL EXCAVATION

VB-7

BUILDING

SE

NW

IW-1
23.35

TANK EXCAVATION

MW-7
23.68

DRIVE

CHESTNUT STREET

LEGEND

DRAFTED BY JES

- Site Boundary
- Monitoring Well/Backfill Casings
- Permanent Soil Vapor Probe
- Sample Location Removed
- Former Gasoline UST
- Interim Source Removal Excavation
- Groundwater Potentiometric Surface

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

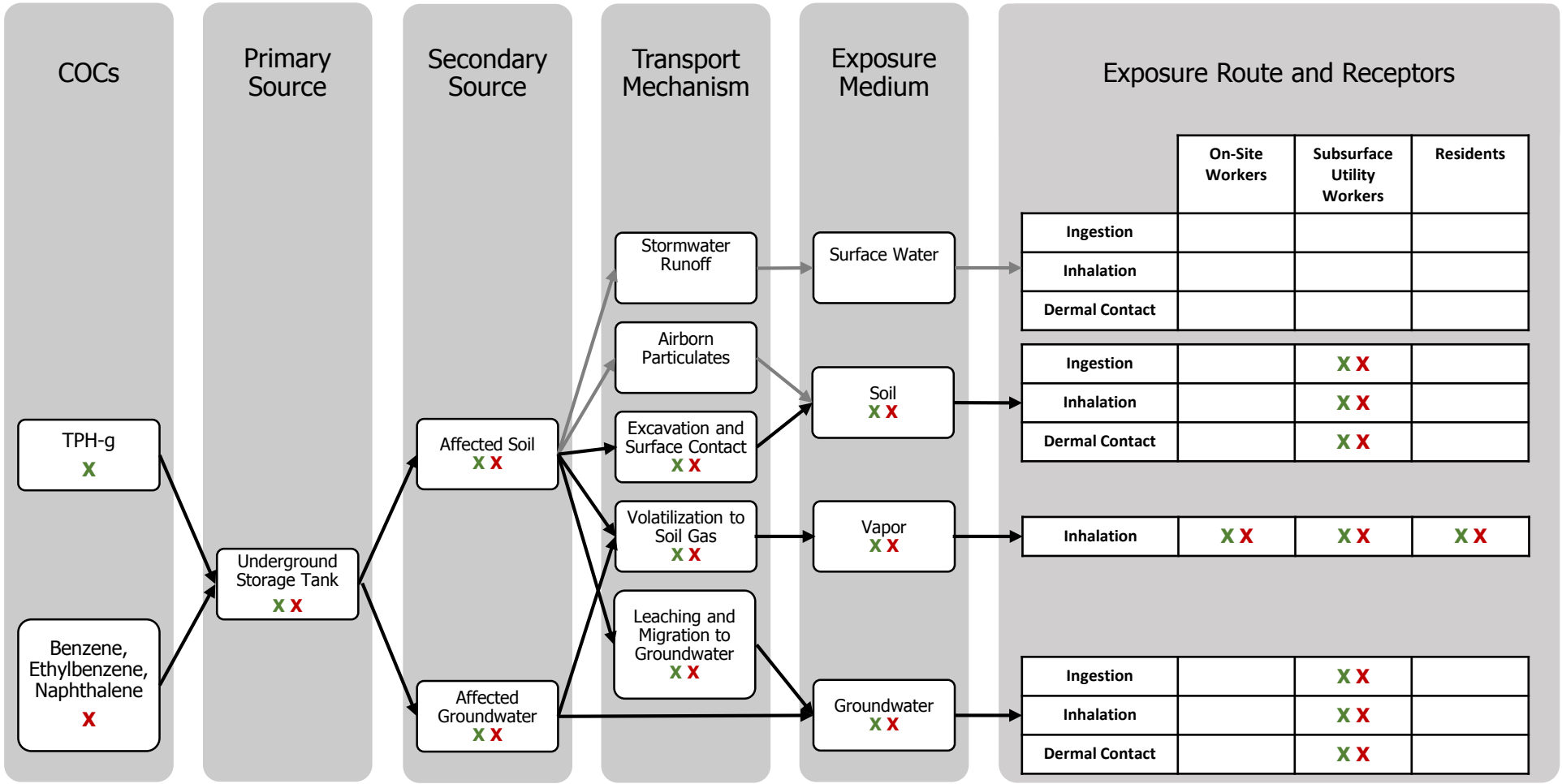
Groundwater Potentiometric Surface

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 4

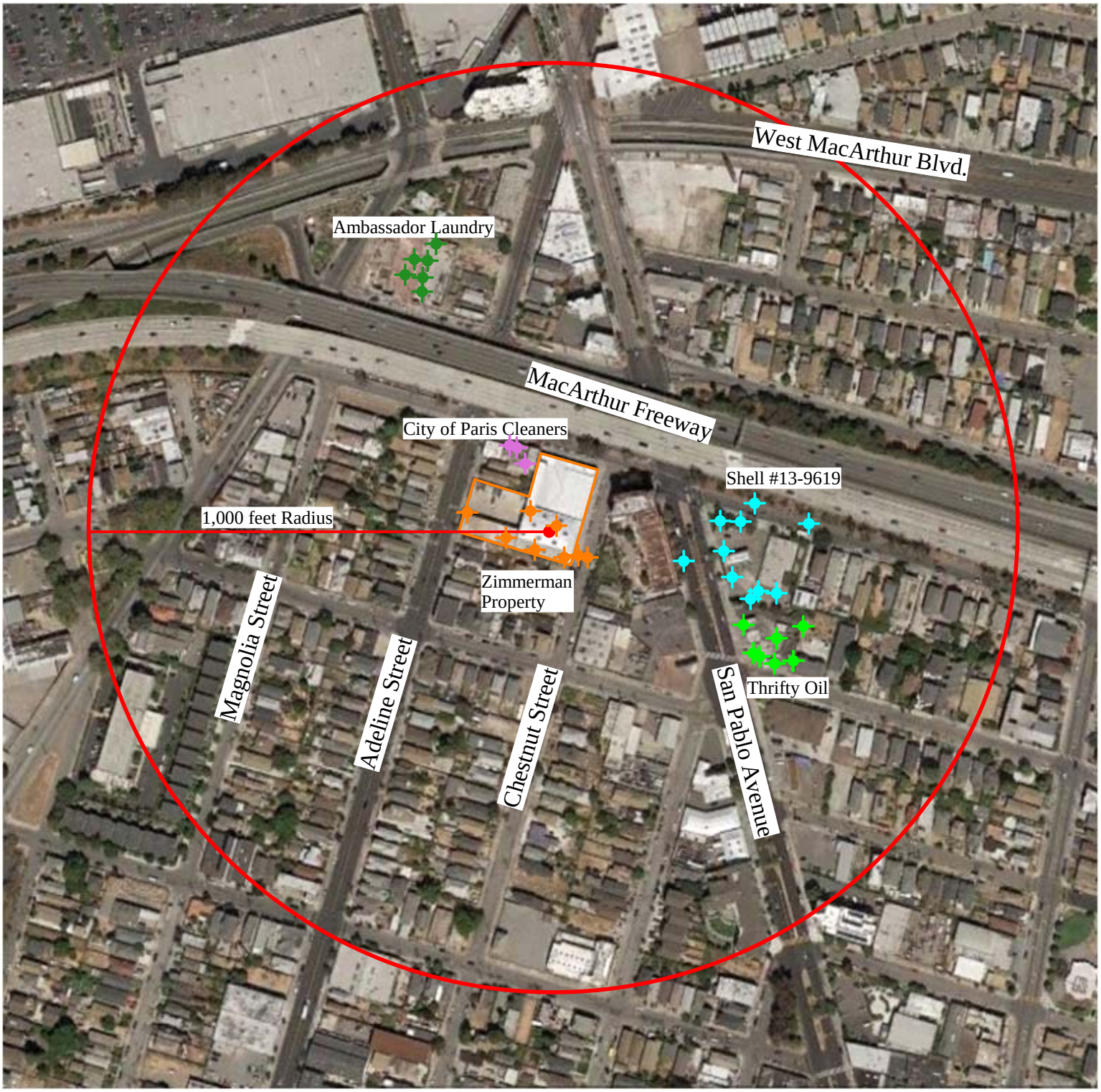
PROJECT NO. 281939

FIGURE 5
CONCEPTUAL SITE MODEL EXPOSURE PATHWAYS
Zimmerman Properties
3442 Adeline Street
Oakland, CA



Notes:
COCs Constituents of Concern
TPH-g Gasoline range petroleum hydrocarbons
→ Pathway considered complete for one or more constituent of concern
→ Pathway incomplete for all constituents of concern

AEI Consultants
AEI Proj. No. 281939



- Zimmerman Property
- Ambassador Laundry
- City of Paris Cleaners
- Shell #13-9619
- Thrifty Oil

Subject Property

AEI CONSULTANTS

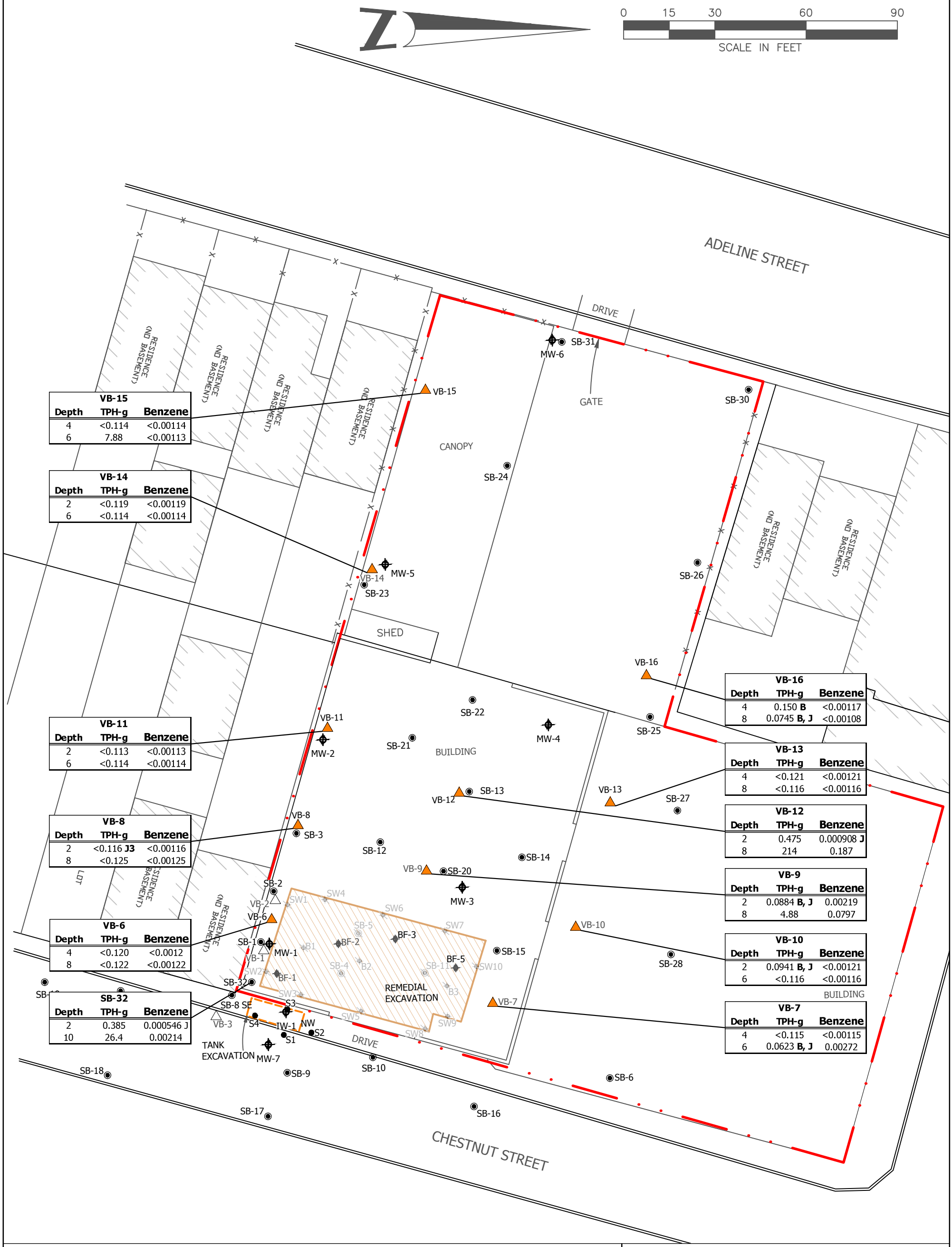
2500 CAMINO DIABLO, WALNUT CREEK

ACPWA and DWP Well Survey Results

3442 Adeline Street
Oakland, California

Figure 6

PROJECT NO. 281939



VB-15		
Depth	TPH-g	Benzene
4	<0.114	<0.00114
6	7.88	<0.00113

VB-14		
Depth	TPH-g	Benzene
2	<0.119	<0.00119
6	<0.114	<0.00114

VB-11		
Depth	TPH-g	Benzene
2	<0.113	<0.00113
6	<0.114	<0.00114

VB-8		
Depth	TPH-g	Benzene
2	<0.116 **J3**	<0.00116
8	<0.125	<0.00125

VB-6		
Depth	TPH-g	Benzene
4	<0.120	<0.0012
8	<0.122	<0.00122

SB-32		
Depth	TPH-g	Benzene
2	0.385	0.000546 J
10	26.4	0.00214

VB-16		
Depth	TPH-g	Benzene
4	0.150 **B**	<0.00117
8	0.0745 **B, J**	<0.00108

VB-13		
Depth	TPH-g	Benzene
4	<0.121	<0.00121
8	<0.116	<0.00116

VB-12		
Depth	TPH-g	Benzene
2	0.475	0.000908 **J**
8	214	0.187

VB-9		
Depth	TPH-g	Benzene
2	0.0884 **B, J**	0.00219
8	4.88	0.0797

VB-10		
Depth	TPH-g	Benzene
2	0.0941 **B, J**	<0.00121
6	<0.116	<0.00116

VB-7		
Depth	TPH-g	Benzene
4	<0.115	<0.00115
6	0.0623 **B, J**	0.00272

LEGEND

DRAFTED BY JES

- Site Boundary
- AEI Soil Boring
- Clear Water Soil Boring (2006)
- Monitoring Well/Backfill Casings
- Temporary Soil Vapor Sample (2007)
- Permanent Soil Vapor Probe
- Excavation Confirmation Sample
- SB-4 Sample Location Removed
- Former Gasoline UST
- Interim Source Removal Excavation

Notes:
Depths in feet below ground surface
Results in mg of analyte per kg of soil

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

TPH-g and Benzene in Soil

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 7
PROJECT NO. 281939

0 15 30 60 90

SCALE IN FEET

ADELINE STREET

DRIVE

MW-6	
TPH-g	Benzene
<50	<0.5

MW-6 SB-31 GATE

VB-15 SB-30

CANOPY

SB-24

RESIDENCE (NO BASEMENT)

MW-5	
TPH-g	Benzene
<50	<0.5

MW-5 VB-14 SB-23

SHED

SB-26

MW-4	
TPH-g	Benzene
<50	<0.5

VB-16 SB-25 MW-4

MW-2	
TPH-g	Benzene
<50	1.9

VB-11 MW-2 SB-21 SB-22

1 10 100 1,000

BUILDING

VB-12 SB-13 VB-13 SB-27 SB-29

VB-8 SB-3 SB-12 SB-14

MW-1	
TPH-g	Benzene
<50	<0.5

VACANT LOT

VB-9 SB-20 MW-3 SB-2

1,000 100

VB-6 VB-10

IW-1	
TPH-g	Benzene
<50	<0.5

SB-1 MW-1 BF-2 BF-3 BF-5 SB-15 SB-28

MW-3	
TPH-g	Benzene
16,000	4,800

BF-1 REMEDIAL EXCAVATION VB-7

SB-19 SB-7 SB-32 SB-8 SE S3 S4 IW-1 NW S2 S1

1 10 100 1,000

TANK EXCAVATION MW-7 DRIVE SB-10 SB-6

MW-7	
TPH-g	Benzene
6,700	1,400

SB-18 SB-9 SB-17 SB-16

1,000 100

CHESTNUT STREET

LEGEND

DRAFTED BY JES

- Site Boundary
- AEI Soil Boring
- Clear Water Soil Boring (2006)
- Monitoring Well/Backfill Casings
- Permanent Soil Vapor Probe
- Former Gasoline UST
- Interim Source Removal Excavation
- Benzene Groundwater Isocontour (ug/L)
- TPH-g Groundwater Isocontour (ug/L)

Notes:
All units in micro grams of analyte per liter of sample

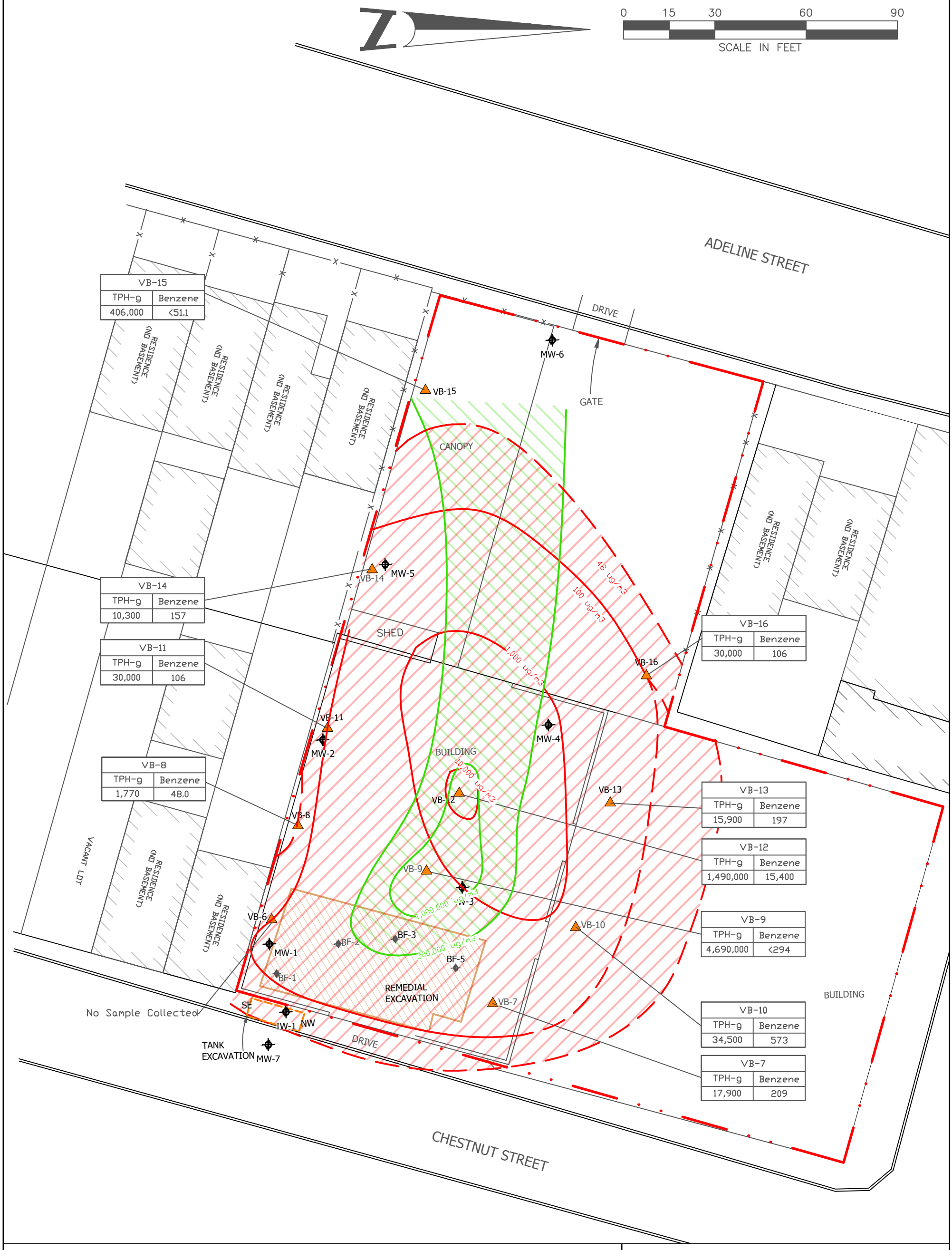
AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

TPH-g and Benzene in Groundwater

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 8
PROJECT NO. 281939



LEGEND

DRAFTED BY JES

- Site Boundary
- Monitoring Well/Backfill Casings
- Permanent Soil Vapor Probe
- Former Gasoline UST
- Interim Source Removal Excavation
- Benzene Soil Vapor Isocontour (ug/m3)
- TPH-g Soil Vapor Isocontour (ug/m3)

Notes:
All units in micro grams of analyte per cubic meter of sample

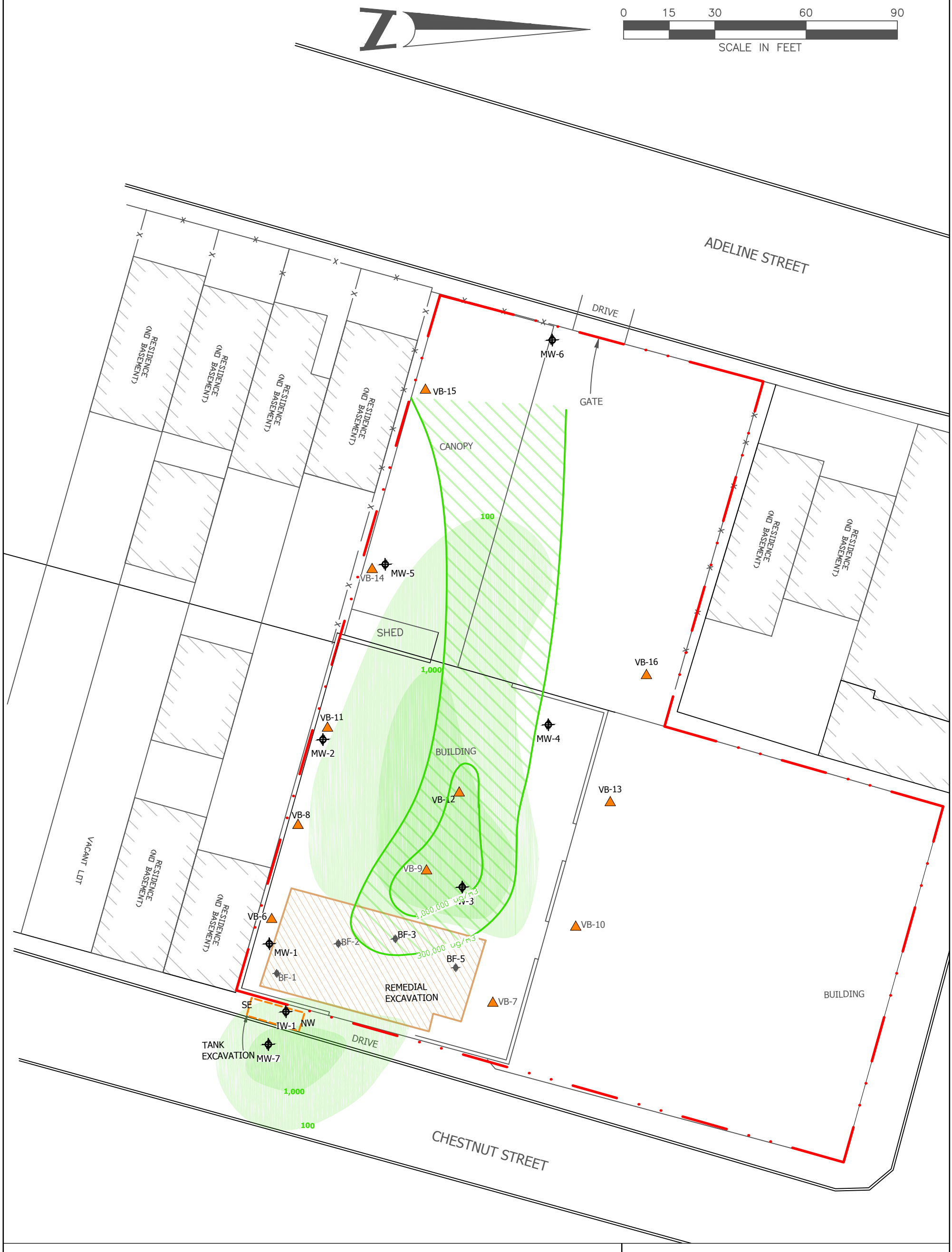
AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

TPH-g and Benzene in Soil Vapor

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 9
PROJECT NO. 281939



LEGEND

DRAFTED BY JES

- Site Boundary
- Monitoring Well/Backfill Casings
- Permanent Soil Vapor Probe
- Former Gasoline UST
- Interim Source Removal Excavation
- TPH-g Groundwater Isocontour (ug/L)
- TPH-g Soil Vapor Isocontour (ug/m3)

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2500 CAMINO DIABLO, WALNUT CREEK

TPH-g in Soil Vapor & Groundwater

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 10
PROJECT NO. 281939

LEGEND

DRAFTED BY JES

- Site Boundary
- Monitoring Well/Backfill Casings
- Permanent Soil Vapor Probe
- Former Gasoline UST
- Interim Source Removal Excavation
- Benzene Groundwater Isocontour (ug/L)
- Benzne Soil Vapor Isocontour (ug/m3)

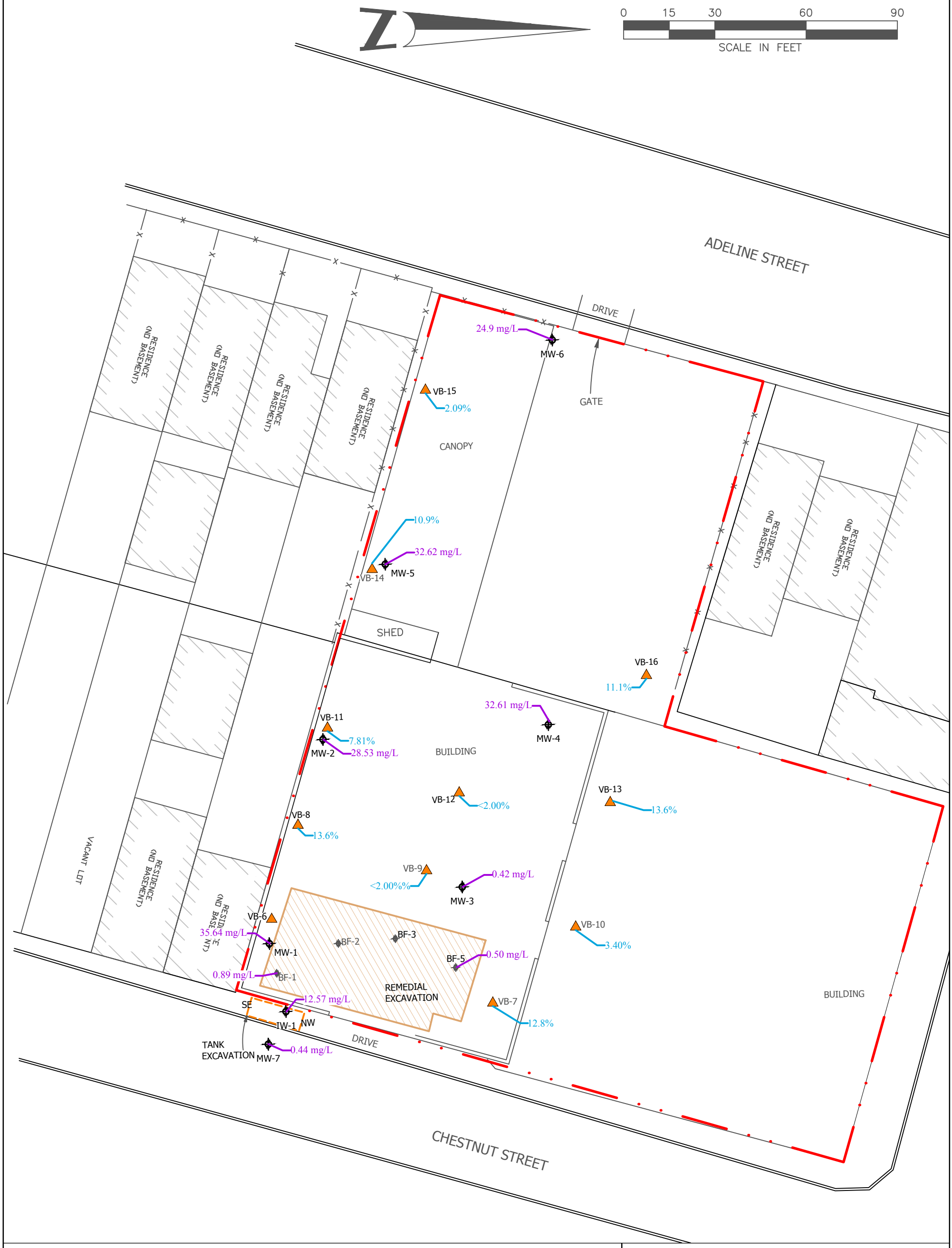
AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

Benzene in Soil Vapor & Groundwater

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 11
PROJECT NO. 281939



LEGEND

DRAFTED BY JES

- Site Boundary
- Monitoring Well/Backfill Casings
- Permanent Soil Vapor Probe
- Former Gasoline UST
- Interim Source Removal Excavation
- 2.09% — Oxygen in Soil Vapor (%)
- 10.32 mg/L — Dissolved oxygen (mg/L)

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

Oxygen in Soil Vapor and Groundwater

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 12
PROJECT NO. 281939

0 15 30 60 90

SCALE IN FEET

A

A'

ADELINE STREET

CHESTNUT STREET

DRIVE

GATE

SHED

BUILDING

CANOPY

TANK EXCAVATION

REMEDIAL EXCAVATION

RESIDENCE (NO BASEMENT)

VACANT LOT

Obs line estimated 2-4 ft bgs

Btm SS 8.0' bgs

Wtr line 6 ft bgs

10" Sanitary Sewer

6" gas line

Gas line estimated 2.5 ft bgs

Wtr line 7 ft bgs

Btm SS 8.0 ft bgs

48 ug/m3

100 ug/m3

1,000 ug/m3

10,000 ug/m3

100,000 ug/m3

300,000 ug/m3

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SE SB-9 SB-10 SB-11 SB-12 SB-13 SB-14 SB-15 SB-16 SB-17 SB-18 SB-19 SB-20 SB-21 SB-22 SB-23 SB-24 SB-25 SB-26 SB-27 SB-28 SB-29 SB-30 SB-31 SB-32

VB-1 VB-2 VB-3 VB-04 VB-05 VB-6 VB-7 VB-8 VB-9 VB-10 VB-11 VB-12 VB-13 VB-14 VB-15 VB-16 VB-17 VB-18 VB-19 VB-20 VB-21

SVE-1 SVE-2

BF-1 BF-2 BF-3 BF-5

IW-1

S1 S2 S3 S4

SW1 SW2 SW3 SW4 SW5 SW6 SW7 SW8 SW9 SW10

B1 B2 B3

LEGEND

DRAFTED BY JES

- Site Boundary
- AEI Soil Boring
- Clear Water Soil Boring (2006)
- Monitoring Well/Backfill Casings
- Temporary Soil Vapor Sample (2007)
- Proposed Permanent Soil Gas Probe
- Permanent Soil Vapor Probe
- Excavation Confirmation Sample
- SB-4 Sample Location Removed
- Former Gasoline UST
- Interim Source Removal Excavation
- A' / A Cross Section
- Sanitary Sewer
- Water Main
- Natural Gas Main

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

Recommended Additional Investigation

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 13

PROJECT NO. 281939

TABLES

TABLE 1
Summary of Detections
Zimmerman Property
3442 Adeline Street
Oakland, CA 94608

Sample Location	Sample Date	Sample Depth (feet bgs)	Analyte	Result (mg/kg)	Qualifier
Soil					
VB-6	10/12/2016	4	C12-C22 HYDROCARBONS	1.00	J
			C22-C32 HYDROCARBONS	2.25	J
			ACETONE	0.0163	J
			CARBON DISULFIDE	0.00374	
		8	C12-C22 HYDROCARBONS	6.52	
			C22-C32 HYDROCARBONS	2.48	J
			CARBON DISULFIDE	0.000469	J
VB-7	10/12/2016	4	ACETONE	0.0159	J
		6	TPHG C5 - C12	0.0623	J
			C12-C22 HYDROCARBONS	1.68	J
			C22-C32 HYDROCARBONS	1.79	J
			ACETONE	0.0122	J
			BENZENE	0.00272	
			CARBON DISULFIDE	0.00191	
VB-8	10/12/2016	2	C12-C22 HYDROCARBONS	3.49	J
			ACETONE	0.0232	J
		8	C12-C22 HYDROCARBONS	7.16	
			C22-C32 HYDROCARBONS	1.77	J
VB-9	10/12/2016	2	TPHG C5 - C12	0.0884	B, J
			C12-C22 HYDROCARBONS	1.15	J
			T-AMYL ALCOHOL	0.0553	
			TERT-BUTYL ALCOHOL	0.0433	
			ACETONE	0.0963	
			BENZENE	0.00219	
			SEC-BUTYLBENZENE	0.000271	J
			CARBON DISULFIDE	0.000933	J
			2-BUTANONE (MEK)	0.0246	
			N-PROPYLBENZENE	0.000346	J
			1,2,4-TRIMETHYLBENZENE	0.00026	J
		8	TPHG C5 - C12	4.88	
			C12-C22 HYDROCARBONS	19.8	J
			C22-C32 HYDROCARBONS	60.6	
			C32-C40 HYDROCARBONS	69	
			BENZENE	0.0797	
			N-BUTYLBENZENE	1.45	
			SEC-BUTYLBENZENE	0.445	
			TERT-BUTYLBENZENE	0.0336	
			ETHYLBENZENE	0.0359	
			ISOPROPYLBENZENE	0.239	
			N-PROPYLBENZENE	1.22	
			TOLUENE	0.0235	J

TABLE 1
Summary of Detections
Zimmerman Property
3442 Adeline Street
Oakland, CA 94608

Sample Location	Sample Date	Sample Depth (feet bgs)	Analyte	Result (mg/kg)	Qualifier
			1,2,4-TRIMETHYLBENZENE	0.0188	J
			1,2,3-TRIMETHYLBENZENE	0.0173	J
			1,3,5-TRIMETHYLBENZENE	0.0109	J
			XYLENES, TOTAL	0.0516	J
VB-10	10/12/2016	2	TPHG C5 - C12	0.0941	B, J
			C12-C22 HYDROCARBONS	3.35	J
			ACETONE	0.023	J
		6	C12-C22 HYDROCARBONS	4.82	
VB-11	10/12/2016	2	C12-C22 HYDROCARBONS	1.99	J
			ACETONE	0.0198	J
		6	C12-C22 HYDROCARBONS	1.94	J
			ETHYLBENZENE	0.000647	J
			TOLUENE	0.00225	J
			1,2,4-TRIMETHYLBENZENE	0.000332	J
			XYLENES, TOTAL	0.00309	J
VB-12	10/6/2016	2	TPHG C5 - C12	0.475	
			C12-C22 HYDROCARBONS	3.19	J
			C22-C32 HYDROCARBONS	2.79	J
			T-AMYL ALCOHOL	0.0573	J
			TERT-BUTYL ALCOHOL	0.0536	
			ACETONE	0.0127	J
			BENZENE	0.000908	J
			SEC-BUTYLBENZENE	0.000342	J
			CARBON DISULFIDE	0.000369	J
			CHLOROMETHANE	0.000564	J
			N-PROPYLBENZENE	0.000493	J
			1,2,4-TRIMETHYLBENZENE	0.000916	J
			1,2,3-TRIMETHYLBENZENE	0.000416	J
			1,3,5-TRIMETHYLBENZENE	0.000316	J
		8	TPHG C5 - C12	214	
			C12-C22 HYDROCARBONS	4.12	J
			C22-C32 HYDROCARBONS	2.37	J
			T-AMYL ALCOHOL	0.507	
			TERT-BUTYL ALCOHOL	0.0586	
			BENZENE	0.187	
			N-BUTYLBENZENE	0.0246	
			SEC-BUTYLBENZENE	0.00981	
			TERT-BUTYLBENZENE	0.00206	
			CARBON DISULFIDE	0.000416	J
			ETHYLBENZENE	0.496	
			ISOPROPYLBENZENE	0.0272	
			P-ISOPROPYLTOLUENE	0.00525	
			NAPHTHALENE	0.102	
			N-PROPYLBENZENE	0.101	
			TOLUENE	0.00322	J

TABLE 1
Summary of Detections
Zimmerman Property
3442 Adeline Street
Oakland, CA 94608

Sample Location	Sample Date	Sample Depth (feet bgs)	Analyte	Result (mg/kg)	Qualifier
			1,2,3-TRIMETHYLBENZENE	0.116	
			1,3,5-TRIMETHYLBENZENE	0.125	
			XYLENES, TOTAL	0.821	
VB-13	10/12/2016	4	ACETONE	0.0209	J
		8	C12-C22 HYDROCARBONS	2.02	J
VB-14	10/12/2016	2	C12-C22 HYDROCARBONS	5.28	
			ACETONE	0.0211	J
		6	C12-C22 HYDROCARBONS	4.7	
			ACETONE	0.0194	J
			CARBON DISULFIDE	0.00838	
			2-BUTANONE (MEK)	0.00536	
VB-15	10/12/2016	4	C12-C22 HYDROCARBONS	3.94	J
		6	TPHG C5 - C12	7.88	
			C12-C22 HYDROCARBONS	4.06	J
			TERT-BUTYL ALCOHOL	0.00497	J
			ACETONE	0.0162	J
VB-16	10/12/2016	4	TPHG C5 - C12	0.15	B
			C12-C22 HYDROCARBONS	2.15	
		8	TPHG C5 - C12	0.0745	
			C12-C22 HYDROCARBONS	8.31	J
			C22-C32 HYDROCARBONS	1.76	
			ACETONE	0.0117	
SB-32	10/6/2016	2	TPHG C5 - C12	0.385	
			C12-C22 HYDROCARBONS	2.25	J
			ACETONE	0.0181	J
			BENZENE	0.000546	J
			CHLOROMETHANE	0.00053	J
			1,2,4-TRIMETHYLBENZENE	0.000566	J
		10	TPHG C5 - C12	26.4	
			C12-C22 HYDROCARBONS	14.7	
			ACETONE	0.156	
			BENZENE	0.00214	
			N-BUTYLBENZENE	0.0409	
			SEC-BUTYLBENZENE	0.015	
			TERT-BUTYLBENZENE	0.0156	
			CARBON DISULFIDE	0.000602	J
			ETHYLBENZENE	0.00162	
			ISOPROPYLBENZENE	0.0263	
			P-ISOPROPYLTOLUENE	0.00523	
			NAPHTHALENE	0.0921	
			N-PROPYLBENZENE	0.0633	

TABLE 1
Summary of Detections
Zimmerman Property
3442 Adeline Street
Oakland, CA 94608

Sample Location	Sample Date	Sample Depth (feet bgs)	Analyte	Result (mg/kg)	Qualifier
			TOLUENE	0.0013	J
			1,2,4-TRIMETHYLBENZENE	0.0361	
			1,2,3-TRIMETHYLBENZENE	0.0271	
			1,3,5-TRIMETHYLBENZENE	0.00278	
			XYLENES, TOTAL	0.00555	
Soil Vapor				Result (µg/m3)	
VB-7	10/14/2016	5	TPH (GC/MS) LOW FRACTION	17,900	
			BENZENE	206	
			ETHYLBENZENE	148	
			2-PROPANOL	10,500	
			TOLUENE	1,090	
			M&P-XYLENE	509	
			O-XYLENE	127	
VB-8	10/14/2016	5	TPH (GC/MS) LOW FRACTION	1,770	
			BENZENE	48	
			ETHYLBENZENE	25.3	
			2-PROPANOL	67.6	
			TOLUENE	287	
			M&P-XYLENE	94.3	
			O-XYLENE	25.1	
VB-9	10/14/2016	5	TPH (GC/MS) LOW FRACTION	4,690,000	
VB-10	10/14/2016	5	TPH (GC/MS) LOW FRACTION	34,500	
			BENZENE	573	
			ETHYLBENZENE	77.3	
			TOLUENE	827	
			M&P-XYLENE	235	
			O-XYLENE	64.2	
VB-11	10/14/2016	5	TPH (GC/MS) LOW FRACTION	3,420	
			BENZENE	44.4	
			ETHYLBENZENE	62.3	
			2-PROPANOL	32.4	
			TOLUENE	343	
			M&P-XYLENE	215	
			O-XYLENE	57.5	
VB-12	10/14/2016	5	TPH (GC/MS) LOW FRACTION	1,490,000	
			BENZENE	15,400	
VB-13	10/14/2016	5	TPH (GC/MS) LOW FRACTION	15,900	
			BENZENE	197	
			ETHYLBENZENE	73.6	
			TOLUENE	855	
			M&P-XYLENE	255	

TABLE 1
Summary of Detections
Zimmerman Property
3442 Adeline Street
Oakland, CA 94608

Sample Location	Sample Date	Sample Depth (feet bgs)	Analyte	Result (mg/kg)	Qualifier
			O-XYLENE	67.7	
VB-14	10/14/2016	5	TPH (GC/MS) LOW FRACTION	10,300	
			BENZENE	157	
			ETHYLBENZENE	63.1	
			2-PROPANOL	8.04	
			TOLUENE	605	
			M&P-XYLENE	214	
			O-XYLENE	56.2	
VB-15	10/14/2016	5	TPH (GC/MS) LOW FRACTION	406,000	
			METHYL TERT-BUTYL ETHER	95.1	
VB-16	10/14/2016	5	TPH (GC/MS) LOW FRACTION	30,000	
			BENZENE	106	
			ETHYLBENZENE	116	
			TOLUENE	1,010	
			M&P-XYLENE	430	
			O-XYLENE	108	

Notes:

mg/kg	miligrams of analyte per kilogram of sample
bgs	below ground surface
BOLD	analyte present above the applicable comparizon value
--	not established
*	use combined C22-C32 and C32-C40 values against the comparison value

Qualifiers:

B:	The same analyte is found in the associated blank
J:	The identification of the analyte is acceptable; the reported value is an estimate due to being lower than the Reported Detection Limit

TABLE 2
Summary of Soil Analytical Data
Zimmerman Property
3442 Adeline Street, Oakland, CA 94608

Sample ID	Depth (ft)	Date	TPH-g (C5-C12) (mg/kg)	TPH-d (C12-C22) (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Napthalene (mg/kg)	MTBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)
UST Removal Samples														
NW	6.5	2/22/00	130	130	0.16	0.26	0.73	6.3		---	---	---	---	---
SE	6.5	2/22/00	920	850	0.3	0.37	5.3	22		---	---	---	---	---
2006-2008 Soil Borings														
S-1	5	6/23/06	<1.0	5.6	0.011	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---
	8		100	26	1.3	0.22	2.0	7.2	---	---	---	---	---	---
	12		67	45	0.098	<0.025	0.73	0.39	---	---	---	---	---	---
	14.5		<1.0	1.2	<0.0050	<0.0050	<0.0050	0.01	---	---	---	---	---	---
S-2	4	6/23/06	<1.0	4.7	0.016	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---
	7.5		460	84	1.2	0.36	9.4	24	---	---	---	---	---	---
	12		61	49	0.33	0.055	0.84	2.4	---	---	---	---	---	---
	14		<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---
S-3	3.5	6/23/06	<1.0	3.1	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---
	7.5		1,200	250	0.47	0.52	18	100	---	---	---	---	---	---
	10		220	76	0.26	<0.040	6.2	7.2	---	---	---	---	---	---
	14.5		<1.0	1.3	<0.0050	<0.0050	0.0056	0.016	---	---	---	---	---	---
S-4	3.5	6/23/06	<1.0	3.5	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---
	7.5		820	240	<0.20	<0.20	6.7	4.4	---	---	---	---	---	---
	11.5		500	120	0.079	<0.040	3.5	4.8	---	---	---	---	---	---
	14.5		<1.0	1.3	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---
SB-1	4	10/1/07	2.9	---	0.016	0.0079	<0.005	0.0094	---	<0.05	---	---	---	---
	7.5		1,200	450	3.1	2.5	24	110	---	<5.0	---	---	---	---
	11.5		640	90	0.40	1.5	9.3	23	---	<2.5	<0.33	<3.3	<0.33	<0.33
	15.5		<1.0	---	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-2	7.5	10/1/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005		<0.05	---	---	---	---
	11		53	6.1	<0.005	0.24	0.0084	0.19	---	<0.05	<0.005	<0.05	<0.005	<0.005
SB-3	7.5	10/1/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	11.5		<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	<0.005	<0.05	<0.005	<0.005
SB-4	3.5	10/1/07	~~1.2~~	~~---~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	---	~~<0.05~~	~~---~~	~~---~~	~~---~~	~~---~~
	7.5		~~430~~	~~170~~	~~1.2~~	~~0.99~~	~~3.6~~	~~1.2~~	---	~~<1.0~~	~~---~~	~~---~~	~~---~~	~~---~~
	11.5		~~340~~	~~25~~	~~2.4~~	~~0.92~~	~~7.1~~	~~9.7~~	---	~~<1.0~~	~~<0.005~~	~~<0.05~~	~~<0.005~~	~~<0.005~~
	15.5		<1.0	---	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-5	~~3.5~~	10/1/07	~~<1.0~~	~~---~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	---	~~<0.05~~	~~---~~	~~---~~	~~---~~	~~---~~
	~~7.5~~		~~420~~	~~54~~	~~4.0~~	~~1.1~~	~~9.5~~	~~18~~	---	~~<1.5~~	~~---~~	~~---~~	~~---~~	~~---~~
	~~11.5~~		~~130~~	~~22~~	~~0.43~~	~~0.10~~	~~1.2~~	~~0.77~~	---	~~<1.0~~	~~<0.005~~	~~<0.05~~	~~<0.005~~	~~<0.005~~
	15.5		<1.0	---	0.017	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-6	7.5	10/1/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	11.5		<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	<0.005	<0.05	<0.005	<0.005
SB-7	7.5	10/3/07	310	90	<0.10	0.48	0.28	0.38		<1.0	---	---	---	---
	11.5		120	37	0.21	0.069	0.39	0.22	---	<0.50	<0.020	<0.20	<0.020	<0.020
SB-8	7.5	10/3/07	53	23	<0.010	0.030	0.034	0.13	---	<0.10	---	---	---	---
	11.5		99	13	0.24	0.070	0.66	0.46	---	<0.17	<0.010	<0.10	<0.010	<0.010
SB-9	4	10/3/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	11.5		<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	<0.005	<0.05	<0.005	<0.005
SB-10	7.5	10/3/07	35	5.1	0.72	0.024	0.47	0.079		<0.10	---	---	---	---
	11.5		750	74	6.9	1.6	13	33	---	<10	<0.10	<1.0	<0.10	<0.10
	15.5		<1.0	---	0.012	<0.005	<0.005	0.0052	---	<0.05	---	---	---	---
SB-11	~~11.5~~	10/3/07	~~39~~	~~13~~	~~0.68~~	~~0.086~~	~~0.76~~	~~2.3~~	---	~~<0.3~~	~~---~~	~~---~~	~~---~~	~~---~~
	15.5		41	10	1.1	0.071	0.55	1.5	---	0.14	---	---	---	---
SB-12	8	12/20/07	25	1.8	0.097	0.024	0.81	1.3	---	<0.10	---	---	---	---
	12		82	23	0.74	0.14	1.5	2.9	---	<0.50	---	---	---	---
	16		20	---	0.51	0.083	0.48	1.8	---	<0.25	---	---	---	---
SB-13	8	12/20/07	180	66	0.46	0.10	2.5	2.7	---	<0.50	---	---	---	---
	12		170	74	1.1	0.21	2.4	6.7	---	<0.50	---	---	---	---
	16		5.7	<50	0.87	0.017	0.12	0.10	---	<0.05	---	---	---	---
SB-14	8	12/20/07	<1.0	<1.0	0.0092	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		910	83	3.3	0.43	10	16	---	<2.5	---	---	---	---
	16		<1.0	---	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-15	8	12/20/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005		<0.05	---	---	---	---
	12		390	61	2.7	0.47	6.7	13	---	<2.5	---	---	---	---
	16		40	---	0.26	0.047	0.37	1.3	---	<0.1	---	---	---	---
SB-16	8	12/20/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-17	8	12/20/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-18	8	12/20/07	<1.0	18	<0.005	<0.005	<0.005	<0.005		<0.05	---	---	---	---
SB-19	8	12/20/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		6.7	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-20	8	12/20/07	89	9.7	0.070	0.14	0.050	0.14	---	<0.25	---	---	---	---

TABLE 2
Summary of Soil Analytical Data
Zimmerman Property
3442 Adeline Street, Oakland, CA 94608

Sample ID	Depth (ft)	Date	TPH-g (C5-C12) (mg/kg)	TPH-d (C12-C22) (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Napthalene (mg/kg)	MTBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)
	12		99	32	0.61	0.061	1.6	1.4	---	<0.17	---	---	---	---
	16		<1.0	---	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-21	8	12/21/07	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005		<0.05	---	---	---	---
	12		26	5.8	0.28	0.048	0.31	0.30	---	<0.05	---	---	---	---
SB-22	8	12/21/07	24	<1.0	<0.005	0.070	0.016	0.059	---	<0.05	---	---	---	---
	12		310	150	0.17	<0.17	4.1	3.2	---	<1.7	---	---	---	---
	16		9.2	---	0.021	0.032	0.0052	0.0083	---	<0.05	---	---	---	---
SB-23	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		310	73	1.3	0.31	4.3	0.11	---	<3.0	---	---	---	---
SB-24	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		15	3.4	0.011	0.023	0.020	0.044	---	<0.15	---	---	---	---
	16		41	<1.0	<0.050	<0.050	0.11	0.11	---	<0.50	---	---	---	---
SB-25	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		48	12	0.027	0.079	0.029	0.11	---	<0.50	---	---	---	---
SB-26	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		<1.0	<1.0	<0.005	<0.005	<0.005	<0.005		<0.05	---	---	---	---
SB-27	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		27	4.2	<0.005	0.10	<0.005	0.061	---	<0.05	---	---	---	---
	16		4.8	1.5	0.0053	0.020	<0.005	0.0074	---	<0.05	---	---	---	---
SB-28	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		19	1.6	0.24	0.034	0.031	0.036	---	<0.05	---	---	---	---
SB-29	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005		<0.05	---	---	---	---
	12		<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-30	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SB-31	8	5/7/08	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12		1.9	<1.0	<0.005	0.016	<0.005	<0.005	---	<0.05	---	---	---	---
SB-32	2	10/6/16	0.385	2.25 **J**	0.000546 **J**	<0.006	<0.001	<0.00351	<0.00620	<0.00117	<0.00117	<0.00585	<0.00117	<0.00117
	10	10/6/16	26.4	14.7	0.00214	0.00130 **J**	0.00162	0.00555	0.0921	<0.00117	<0.00117	<0.00585	<0.00117	<0.00117
<u>Excavation Samples</u>														
Sidewall Samples														
SW1	7.0	3/4/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	11.5	3/4/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SW2	8.0	3/4/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	11.5	3/4/09	24	5.8	0.17	<0.005	0.26	0.19	---	<0.05	---	---	---	---
SW3	7.5	3/4/09	180	65	0.88	0.28	2.9	4.2	---	<1.0	---	---	---	---
	11.5	3/4/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
SW4	6.0	3/5/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	11.5	3/5/09	100	21	0.49	0.10	1.5	4.2	---	<1.0	---	---	---	---
SW5	6.5	3/5/09	87	16	0.23	0.11	0.62	0.49	---	<0.50	---	---	---	---
SW6	6.5	3/5/09	17	<1.0	0.02	<0.010	<0.010	0.032	---	<0.10	---	---	---	---
	12	3/11/09	4.9	<1.0	0.54	<0.005	0.15	0.16	---	<0.05	---	---	---	---
SW7	6.5	3/5/09	200	210	0.2	<0.10	0.49	0.71	---	<1.0	---	---	---	---
	11.5	3/9/09	1,200	310	2.3	1.4	18	41	---	<2.5	---	---	---	---
SW8	6.5	3/11/09	12	5.2	0.085	0.0084	0.027	0.07	---	<0.05	---	---	---	---
	11.5	3/11/09	12	1.1	0.0091	0.0091	0.15	0.19	---	<0.05	---	---	---	---
SW9	6.5	3/11/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
	12	3/11/09	5.0	<1.0	0.82	<0.005	0.2	0.2	---	<0.05	---	---	---	---
SW10	6.5	3/11/09	5.6	<1.0	0.045	0.0062	0.0089	0.012	---	<0.05	---	---	---	---
Bottom Samples														
B-1	13	3/4/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
B-2	13	3/4/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
B-3	11	3/9/09	38	3.6	2.6	<0.050	0.49	0.58	---	<0.50	---	---	---	---
B-4 *	11	3/11/09	130	13	0.81	0.12	1.5	2.5	---	<0.50	---	---	---	---
<u>Well Installation Samples</u>														
MW-1	12	4/1/09	30	1.5	0.034	0.26	0.042	0.11	---	<0.05	---	---	---	---
	15	4/1/09	<1.0	<1.0	<0.05	<0.05	<0.05	<0.05	---	<1.0	---	---	---	---
MW-2	12	4/1/09	140	21	0.81	<0.10	1.9	2.6	---	<1.0	---	---	---	---
	16	4/1/09	2.3	<1.0	0.62	<0.005	0.016	0.0091	---	<1.0	---	---	---	---
	19	4/1/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<1.0	---	---	---	---
MW-3	12	4/1/09	27	4.3	0.57	0.049	0.69	0.62	---	<1.0	---	---	---	---

TABLE 2
Summary of Soil Analytical Data
Zimmerman Property
3442 Adeline Street, Oakland, CA 94608

Sample ID	Depth (ft)	Date	TPH-g (C5-C12) (mg/kg)	TPH-d (C12-C22) (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Napthalene (mg/kg)	MTBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)
	16	4/1/09	<1.0	<1.0	0.018	0.0059	0.0061	0.023	---	<0.05	---	---	---	---
MW-4	12	4/1/09	1100	99	<1.0	2.9	1.1	1.3	---	<10	---	---	---	---
	16	4/1/09	<1.0	<1.0	0.018	0.0059	1.0061	0.023	---	<0.05	---	---	---	---
MW-5	12	5/12/09	61	31	0.27	0.12	0.66	0.92	---	<1.0	---	---	---	---
	16	5/12/09	18	1.9	0.15	0.0055	0.23	0.33	---	<0.05	---	---	---	---
MW-6	12	4/2/09	23	2.3	0.12	0.018	0.15	0.34	---	<0.05	---	---	---	---
	16	4/2/09	270	29	<0.25	0.67	0.43	0.81	---	<2.5	---	---	---	---
	19	4/2/09	1.8	5	<0.005	<0.005	<0.005	<0.005	---	0.12	---	---	---	---
	25	4/2/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	0.029	---	---	---	---
MW-7	12	5/13/09	13	<1.0	0.067	0.03	0.042	0.02	---	<0.05	---	---	---	---
	16		<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
IW-1	10.5	5/12/09	490	86	0.19	0.69	6.7	3.5	---	<1.0	---	---	---	---
	15	5/12/09	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.05	---	---	---	---
Vapor Well Installation Samples														
VB-6	4	10/12/16	<0.120	1.00 **J**	<0.0012	<0.00601	<0.0012	<0.00361	<0.00601	<0.0012	<0.0012	<0.00601	<0.0012	<0.0012
	8	10/12/16	<0.122	6.52	<0.00122	<0.0061	<0.00122	<0.00366	<0.00601	<0.00122	<0.00122	<0.0061	<0.00122	<0.00122
VB-7	4	10/12/16	<0.115	<4.6	<0.00115	<0.00575	<0.00115	<0.00345	<0.00575	<0.00115	<0.00115	<0.00575	<0.00115	<0.00115
	6	10/12/16	0.0623 **B, J**	1.68 **J**	0.00272	<0.0058	<0.00116	<0.00348	<0.00580	<0.00116	<0.00116	<0.0058	<0.00116	<0.00116
VB-8	2	10/12/16	<0.116 **J3**	3.49 **J**	<0.00116	<0.00578	<0.00116	<0.00347	<0.00578	<0.00116	<0.00116	<0.00578	<0.00116	<0.00116
	8	10/12/16	<0.125	7.16	<0.00125	<0.00625	<0.00125	<0.00375	<0.00625	<0.00125	<0.00125	<0.00625	<0.00125	<0.00125
VB-9	2	10/12/16	0.0884 **B, J**	1.15 **J**	0.00219	<0.00581	<0.00116	<0.00348	<0.00581	<0.00116	<0.00116	0.0433	<0.00116	<0.00116
	8	10/12/16	4.88	19.8 **J**	0.0797	0.0235 **J**	0.0359	0.0516 **J**	<0.154	<0.0309	<0.0309	<0.154	<0.0309	<0.0309
VB-10	2	10/12/16	0.0941 **B, J**	3.35 **J**	<0.00121	<0.00605	<0.00121	<0.00363	<0.00605	<0.00121	<0.00121	<0.00605	<0.00121	<0.00121
	6	10/12/16	<0.116	4.82	<0.00116	<0.00582	<0.00116	<0.00349	<0.00582	<0.00116	<0.00116	<0.00582	<0.00116	<0.00116
VB-11	2	10/12/16	<0.113	1.99 **J**	<0.00113	<0.00566	<0.00113	<0.0034	<0.00566	<0.00113	<0.00113	<0.00566	<0.00113	<0.00113
	6	10/12/16	<0.114	1.94 **J**	<0.00114	0.00225 **J**	0.000647	0.00309 **J**	<0.00571	<0.00114	<0.00114	<0.00571	<0.00114	<0.00114
VB-12	2	10/6/16	0.475	3.19 **J**	0.000908 **J**	<0.00588	<0.00118	<0.00353	<0.00588	<0.00118	<0.00118	0.0536 **J**	<0.00118	<0.00118
	8	10/6/16	214	4.12 **J**	0.187	0.00322 **J**	0.496	0.821	0.102	<0.00116	<0.00116	0.0586 **J**	<0.00116	<0.00116
VB-13	4	10/12/16	<0.121	<4.86	<0.00121	<0.00607	<0.00121	<0.00364	<0.00607	<0.00121	<0.00121	<0.00607	<0.00121	<0.00121
	8	10/12/16	<0.116	2.02 **J**	<0.00116	<0.00579	<0.00116	<0.00348	<0.00579	<0.00116	<0.00116	<0.00579	<0.00116	<0.00116
VB-14	2	10/12/16	<0.119	5.28	<0.00119	<0.00596	<0.00119	<0.00358	<0.00596	<0.00119	<0.00119	<0.00596	<0.00119	<0.00119
	6	10/12/16	<0.114	4.7	<0.00114	<0.00568	<0.00114	<0.00341	<0.00568	<0.00114	<0.00114	<0.00568	<0.00114	<0.00114
VB-15	4	10/12/16	<0.114	3.94 **J**	<0.00114	<0.00568	<0.00114	<0.00341	<0.00568	<0.00114	<0.00114	<0.00568	<0.00114	<0.00114
	6	10/12/16	7.88	4.06 **J**	<0.00113	<0.00563	<0.00113	<0.00338	<0.00563	<0.00113	<0.00113	0.00497	<0.00113	<0.00113
VB-16	4	10/12/16	0.150 **B**	2.15 **J**	<0.00117	<0.00584	<0.00117	<0.0035	<0.00584	<0.00117	<0.00117	<0.00584	<0.00117	<0.00117
	8	10/12/16	0.0745 **B, J**	8.31	<0.00108	<0.00542	<0.00108	<0.00325	<0.00542	<0.00108	<0.00108	<0.00542	<0.00108	<0.00108

Notes:

---	No Data	TAME	tert-amyl methyl ether
DIPE	Di-isopropyl Ether	TBA	tertiary butyl alcohol
ETBE	ethyl tert-butyl ether	TPH-d	total petroleum hydrocarbons as diesel (C12-C-22)
mg/kg	milligrams per kilogram	TPH-g	total petroleum hydrocarbons as gasoline (C5-C12)
MTBE	methyl tert-butyl ether	B-4 *	Sample mislabeled in field and identified in report as "B-3(B-4-11)"
~~Strikethrough~~	Removed during 2009 Excavation	J	The identification of the analyte is acceptable; the reported value is an estimate
B	The analyte was present in the method blank		Analytical data collected as part of the Data Gap Investigation

TABLE 3
Summary of Soil Vapor Analytical Data
Zimmerman Property
3442 Adeline Street
Oakland, CA 94608

Boring	Date	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	Oxygen	Carbon Monoxide	Carbon Dioxide	Methane	Leak Check Result
		µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	%	%	%	%	% Leak
VB-1	10/1/2007	1,900	130	35	<8.8	<27	<48	---	---	---	---	---	NIPA
VB-2	10/1/2007	3,100	32	42	11	50	<48	---	---	---	---	---	NIPA
VB-3	10/1/2007	2,500	40	42	16	49	<48	---	---	---	---	---	NIPA
VB-7	10/14/2016	17,900	206	1,090	148	636	<18	<25	12.8	<2.00	0.65	<0.400	4.0%
VB-8	10/14/2016	1,770	48.0	287	25.3	119.4	<1.44	<6.60	13.6	<2.00	1.55	<0.400	0.65%
VB-9	10/14/2016	4,690,000	<294 *	<1,510	<347	<1,041	<288	<25 **Q**	<2.00	<2.00	10.9	0.806	<0.043%
VB-10	10/14/2016	34,500	573	827	77.3	87.7	<18	<25	3.40	<2.00	3.93	<0.400	4.8%
VB-11	10/14/2016	3,420	44.4	343	62.3	272.5	<1.44	<6.6	7.81	<2.00	1.83	<0.400	1.5%
VB-12	10/14/2016	1,490,000	15,400	<603	<694	<2,084	<577	<25 **Q**	<2.00	<2.00	13.6	0.416	<0.043%
VB-13	10/14/2016	15,900	197	855	73.6	322.7	<1.44	<6.6	13.6	<2.00	<0.500	<0.400	6.0%
VB-14	10/14/2016	10,300	157	605	63.1	270.2	<1.44	<6.6	10.9	<2.00	2.35	<0.400	4.7%
VB-15	10/14/2016	406,000	<51.1	<60.3	<69.4	<208	95.1	<25 **Q**	2.09	<2.00	10.4	<0.400	1.2%
VB-16	10/14/2016	30,000	106	1,010	116	538	<18	<6.6	11.1	<2.00	2.97	<0.400	4.5%

Notes:

---	No Data
% Leak	Ratio of the concentration of the leak check compound in the shroud to the concentraiton of the leak check compound in the sample
*	Analyte reported at the method detection limit
µg/m^3	micrograms of analyte per cubic meter of sample under standard conditions
MTBE	methyl tert-butyl ether
NIPA	Isopropyl alcohol was not present in the sample above the laboratory reporting limit
Q	The internal standard associated with the analyte exceeded acceptable limits
TPH-g	total petroleum hydrocarbons as gasoline
	Soil vapor samples collected from probes at an approximate depth of 5 feet below ground surface

TABLE 4
Groundwater Elevation Data

Zimmerman Property
3442 Adeline Street
Oakland, CA

Well ID (Screen Interval)	Date Collected	Top of Casing Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)
MW-1 (7-17)	6/10/09	31.12	7.01	24.11
	8/27/09	31.12	6.96	24.16
	12/15/09	31.12	5.96	25.16
	3/12/10	31.12	5.06	26.06
	10/21/10	31.12	7.00	24.12
	5/5/11	31.12	5.88	25.24
	4/25/12	31.12	5.33	25.79
	12/12/12	31.12	5.35	25.77
	4/4/13	31.12	6.63	24.49
	4/30/14	31.12	5.42	25.70
	1/12/16	31.12	6.07	25.05
	7/22/16	31.12	8.85	22.27
MW-2 (7-17)	6/10/09	31.19	9.50	21.69
	8/27/09	31.19	10.50	20.69
	12/15/09	31.19	8.68	22.51
	3/12/10	31.19	5.09	26.10
	10/21/10	31.19	7.51	23.68
	5/5/11	31.19	6.68	24.51
	4/25/12	31.19	5.58	25.61
	12/12/12	31.19	6.47	24.72
	4/4/13	31.19	7.56	23.63
	4/30/14	31.19	6.62	24.57
	1/13/16	31.19	7.06	24.13
	7/22/16	31.19	9.94	21.25
MW-3 (7-17)	6/10/09	32.07	8.44	23.63
	8/27/09	32.07	8.59	23.48
	12/15/09	32.07	7.66	24.41
	3/12/10	Well inaccessible	----	----
	10/21/10	Well inaccessible	----	----
	7/22/16	32.07	9.98	22.09
MW-4 (7-17)	6/10/09	31.68	9.45	22.23
	8/27/09	31.68	10.29	21.39
	12/15/09	31.68	8.19	23.49
	3/12/10	31.68	5.45	26.23
	10/21/10	31.68	9.93	21.75
	5/5/11	31.68	6.60	25.08
	4/25/12	31.68	5.73	25.95
	12/12/12	31.68	6.21	25.47
	4/4/13	31.68	7.88	23.80
	4/30/14	31.68	6.92	24.76
	1/13/16	31.68	6.34	25.34
	7/22/16	31.68	10.50	21.18

TABLE 4
Groundwater Elevation Data
Zimmerman Property
3442 Adeline Street
Oakland, CA

Well ID (Screen Interval)	Date Collected	Top of Casing Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)
MW-5 (7-17)	6/10/09	30.39	9.13	21.26
	8/27/09	30.39	9.54	20.85
	12/15/09	30.39	8.33	22.06
	3/12/10	Well inaccessible	----	----
	10/21/10	30.39	6.85	23.54
	5/5/11	30.39	3.25	27.14
	4/25/12	30.39	4.50	25.89
	12/12/12	30.39	5.43	24.96
	4/4/13	30.39	7.25	23.14
	4/30/14	Well inaccessible	----	----
	1/12/16	30.39	5.65	24.74
	7/21/16	**30.39**	**9.75**	**20.64**
MW-6 (7-17)	6/10/09	29.34	9.98	19.36
	8/27/09	29.34	11.84	17.50
	12/15/09	29.34	8.33	21.01
	3/12/10	29.34	4.66	24.68
	10/21/10	29.34	10.00	19.34
	5/5/11	29.34	5.59	23.75
	4/25/12	29.34	4.82	24.52
	12/20/12	29.34	5.23	24.11
	4/4/13	29.34	7.37	21.97
	4/30/14	29.34	5.89	23.45
	1/12/16	29.34	5.67	23.67
	7/21/16	29.34	10.40	18.94
MW-7 (7-17)	6/10/09	31.04	6.53	24.51
	8/27/09	31.04	6.19	24.85
	12/15/09	31.04	5.71	25.33
	3/12/10	31.04	5.34	25.70
	10/21/10	31.04	6.59	24.45
	5/5/11	31.04	5.98	25.06
	4/25/12	31.04	5.71	25.33
	12/20/12	Well inaccessible	----	----
	4/4/13	31.04	6.18	24.86
	4/30/14	31.04	6.29	24.75
	1/12/16	31.04	5.61	25.43
	7/21/16	31.04	7.36	23.68

TABLE 4
Groundwater Elevation Data
Zimmerman Property
3442 Adeline Street
Oakland, CA

Well ID (Screen Interval)	Date Collected	Top of Casing Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)
IW-1 (13-15)	6/10/09	31.66	7.65	24.01
	8/27/09	31.66	7.70	23.96
	12/15/09	31.66	10.99	20.67
	3/12/10	31.66	6.00	25.66
	10/21/10	31.66	9.35	22.31
	5/5/11	31.66	6.73	24.93
	4/25/12	31.66	8.05	23.61
	12/20/12	31.66	12.88	18.78
	4/4/13	31.66	12.81	18.85
	4/30/14	31.66	6.01	25.65
	1/12/16	31.66	6.33	25.33
	7/21/16	31.66	8.31	23.35
BF-1 (9-13)	7/21/16	31.87	8.40	23.47
BF-5 (9-13)	7/21/16	32.28	8.95	23.33

Notes:

most recent elevation data

Elevations provided in feet above North American Vertical Datum 1988

TABLE 5
Summary of Groundwater Elevation and Flow

Zimmerman Property
3442 Adeline Street
Oakland, CA

Date	Average Water Table Elevation (ft)	Change from Previous Episode (ft)	Flow Direction (gradient) (ft/ft)
6/10/2009	22.40	----	West (0.0186)
8/27/2009	21.85	-0.55	West (0.0186)
12/15/2009	23.42	1.58	West (0.0181)
3/12/2010	25.75	2.33	West (0.004)
10/21/2010	22.81	-2.94	North Northwest (0.041)
5/5/2011	25.13	2.32	West (0.01)
4/25/2012	25.52	0.38	West (0.01)
12/20/2012	25.01	-0.51	West (0.01)
4/4/2013	23.41	-1.60	West (0.01)
4/30/2014	24.62	1.21	West (0.01)
1/12-13/2016	24.55	-0.07	West (0.01)
7/21-22/2016	20.91	-3.64	West (0.01)

Notes:
Elevations provided in reference to North American Vertical Datum 1988

TABLE 6
Summary of Grab Groundwater Analytical Data
Zimmerman Property
3442 Adeline Street
Oakland, CA

Sample ID	Date	TPH-g µg/L	TPH-d µg/L	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	MTBE µg/L	TAME µg/L	ETBE µg/L	TBA µg/L	DIPE µg/L
Pit Water	02/22/00	7,400	34,000	3,300	930	400	6,200	---	---	---	---	---
S-1	6/23/06	20,000	<10,000	980	70	1,500	1,100	---	---	---	---	---
S-2	6/23/06	31,000	<4,000	7,000	260	920	2,800	---	---	---	---	---
S-3	6/23/06	23,000	<1,500	490	67	1,200	3,300	---	---	---	---	---
S-4	6/23/06	120,000	<40,000	200	<15	3,500	2,900	---	---	---	---	---
SB-1	10/1/2007	28,000	6,100	2,000	77	1,600	4,100	<25	<25	<25	<250	<25
SB-2	10/1/2007	640	300	1.8	2.2	1.1	4.9	<0.5	<0.5	<0.5	<5.0	<0.5
SB-3	10/1/2007	84	<50	2.4	<0.5	4.2	11	<0.5	<0.5	<0.5	<5.0	<0.5
SB-4	10/1/2007	20,000	2,200	6,600	110	390	430	<17	<17	<17	430	<17
SB-5	10/1/2007	22,000	7,400	1,900	86	1,200	2,100	<5.0	<5.0	<5.0	120	<5.0
SB-6	10/1/2007	440	---	17	<0.5	0.99	2.2	2.0	<0.5	<0.5	18	<0.5
SB-7	10/3/2007	2,000	1,000	30	5.1	56	82	6.1	<0.5	<0.5.	<5.0	<0.5
SB-8	10/3/2007	6,700	1,600	110	6.3	160	140	<0.5	<0.5	<0.5	12	<0.5
SB-9	10/3/2007	11,000	5,700	440	14	720	1,000	<1.7	<1.7	<1.7	37	<1.7
SB-10	10/3/2007	17,000	1,700	3,800	55	420	830	<10	<10	<10	510	11
SB-11	10/3/2007	83,000	4,300	10,000	640	2,700	7,900	<25	<25	<25	840	<25
SB-12	12/20/2007	35,000	4,900	5,200	110	1,000	1,800	<450	---	---	---	---
SB-13	12/20/2007	29,000	5,100	5,300	80	1,400	3,900	<250	---	---	---	---
SB-14	12/20/2007	23,000	12,000	2,600	15	1,500	1,800	<240	---	---	---	---

TABLE 6
Summary of Grab Groundwater Analytical Data
Zimmerman Property
3442 Adeline Street
Oakland, CA

Sample ID	Date	TPH-g	TPH-d	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	TAME	ETBE	TBA	DIPE
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
SB-15	12/20/2007	36,000	3,000	7,700	190	1,600	4,700	<350	---	---	---	---
SB-16	12/20/2007	88	480	0.60	<0.5	<0.5	0.83	<5.0	---	---	---	---
SB-17	12/20/2007	1,100	320	<0.5	6.2	<0.5	4.2	<5.0	---	---	---	---
SB-18	12/20/2007	<50	1,800	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
SB-19	12/20/2007	<50	280	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
SB-20	12/20/2007	28,000	3,900	3,400	22	1,200	930	<160	---	---	---	---
SB-21	12/21/2007	8,100	1,200	1,600	<5.0	160	84	<50	---	---	---	---
SB-22	12/21/2007	2,600	620	110	0.90	150	55	<10	---	---	---	---
SB-23	5/14/2008	46,000	4,800	9,000	40	2,300	5,200	<450	---	---	---	---
SB-24	5/14/2008	11,000	2,900	80	<5.0	440	290	<50	---	---	---	---
SB-25	5/9/2008	3,600	1,300	42	1.90	65	36	<5.0	---	---	---	---
SB-26	5/14/2008	2,300	770	22	2.1	<1.0	2.4	<10	---	---	---	---
SB-27	5/14/2008	740	180	7.4	3.70	<0.5	1.0	<5.0	---	---	---	---
SB-28	5/16/2008	290	72	1.3	0.93	2.7	4.0	<5.0	---	---	---	---
SB-29	5/16/2008	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
SB-30	5/14/2008	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---
SB-31	5/14/2008	5,100	770	270	6.3	79	7.2	<110	---	---	---	---

Notes:

µg/L	micrograms of analyte per liter of sample	TAME	tert-amyl methyl ether	TPH-g	total petroleum hydrocarbons as gasoline
DIPE	Di-isopropyl Ether	TBA	tertiary butyl alcohol	MTBE	methyl tert-butyl ether
ETBE	ethyl tert-butyl ether	TPH-d	total petroleum hydrocarbons as diesel	---	No Data

TABLE 7
Summary of Groundwater Monitoring Well Analytical Data
Zimmerman Property
3442 Adeline Street
Oakland, CA

Sample ID	Date	Depth to Water (ft)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-1	04/17/09	7.01	220	97	10	<0.5	3.0	5.4	<5.0
	08/27/09	6.96	7,000	----	610	10	320	220	<180
	09/17/09	----	92	----	0.91	0.70	<0.5	<0.5	<15
	12/15/09	5.96	2500	----	170	6.4	66	120	<50
	03/12/10	5.06	500	----	4.0	1.1	0.6	0.7	<5.0
	10/21/10	7.00	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	05/05/11	5.88	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/25/12	5.33	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	12/20/12	5.35	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/04/13	6.63	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/30/14	5.42	83	----	<0.5	0.53	<0.5	<0.5	<5.0
	01/12/16	6.07	<50	----	<0.5	<0.5	<0.5	<1.5	<5.0
	07/22/16	8.85	<50	----	<0.5/0.5	<0.5	<0.5	<1.5	<5.0
MW-2	04/17/09	9.50	7,000	2,200	850	19	93	470	<100
	08/27/09	10.50	26,000	----	3,600	<25	1,200	3,000	<1,200
	12/15/09	8.68	25,000	----	2,900	70	1,500	2,400	<250
	03/12/10	5.69	7,300	----	590	7.0	6.4	680	<350
	10/21/10	7.51	1,900	----	140	1.4	28	140	<15
	05/05/11	6.68	27,000	----	2,300	13	1,700	2,600	<180
	04/25/12	5.58	9,600	----	440	8.8	260	920	<120
	12/20/12	6.47	2,900	----	63	2.6	21	85	<35
	04/04/13	7.56	7,900	----	960	10	380	690	<150
	04/30/14	6.62	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	01/13/16	7.06	330	----	97	<0.5	2.5	14	<5.0
	07/22/16	9.94	<50	----	1.9/2.0	<0.5	<0.5	<1.5	<5.0
MW-3	04/17/09	8.44	10,000	2,200	930	5.6	270	920	<110
	08/27/09	8.59	17,000	----	3,800	38	730	710	<250
	09/17/09	----	260	----	1.8	1.0	<0.5	2.1	<15
	10/14/09	----	1,800	----	220	13	37	130	<30
	12/15/09	7.66	4,900	----	890	13	160	130	<50
	03/12/10	Well inaccessible							
	10/21/10	Well inaccessible							
	07/22/16	9.98	16,000	----	4,800/5,100	28	52	42	<150
MW-4	04/17/09	9.45	4,700	1,200	140	2.0	28	18	<30
	08/27/09	10.29	4,300	----	75	11	8.6	3.4	<25
	12/15/09	8.19	3,000	----	64	11	5.6	3.3	<15
	03/12/10	5.45	6,100	----	1,200	14	170	6.2	<35
	10/21/10	9.93	1,900	----	120	4.7	5.7	1.8	<15
	05/05/11	6.60	4,900	----	560	2.6	41	17	<25
	04/25/12	5.73	330	----	23	1.4	2.0	4.2	<5.0

TABLE 7
Summary of Groundwater Monitoring Well Analytical Data
Zimmerman Property
3442 Adeline Street
Oakland, CA

Sample ID	Date	Depth to Water (ft)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
	12/20/12	6.21	150	----	5.8	<0.5	<0.5	<0.5	<5.0
	04/04/13	7.88	1,000	----	30	4.6	0.61	0.65	<5.0
	04/30/14	6.92	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	01/13/16	6.34	<50	----	<0.5	<0.5	<0.5	<1.5	<5.0
	07/22/16	10.50	<50	----	<0.5/0.5	<0.5	<0.5	<1.5	<5.0
MW-5	05/22/09	9.13	14,000	2,800	3,000	12	340	420	<100
	08/27/09	9.54	25,000	----	3,300	36	110	160	<400
	12/15/09	8.33	8,200	----	1,200	6.9	300	610	<250
	03/12/10	Well inaccessible							
	10/21/10	6.85	<50	----	1.3	<0.5	<0.5	<0.5	<5.0
	05/05/11	3.25	790	----	140	1.0	29	30	<20
	04/25/12	4.51	67	----	3.4	<0.5	1.4	0.83	<5.0
	12/20/12	5.43	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/04/13	7.25	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/30/14	Well inaccessible			----	----	----	----	----
	01/12/16	5.65	110	----	2.7	<0.5	<0.5	<1.5	<5.0
	07/21/16	9.75	<50	----	<0.5/0.5	<0.5	<0.5	<1.5	<5.0
MW-6	04/17/09	9.98	5,600	1,000	210	3.0	180	160	<300
	08/27/09	11.84	2,200	----	98	7.9	20	1.1	<120
	12/15/09	8.59	4,700	----	370	6.9	260	300	<250
	03/12/10	4.66	9,300	----	210	12	250	110	<90
	10/21/10	10.00	380	----	35	1.2	4.6	3.8	<5.0
	05/05/11	5.59	7,000	----	80	2.9	120	28	<75
	04/25/12	4.82	7,400	----	99	11.0	100	27	<150
	12/20/12	5.23	5,500	----	81	3.1	78	16	<50
	04/04/13	7.37	5,300	----	76	5.7	50	12	<70
	04/30/14	5.89	670	----	12	2.4	2.3	0.77	<5.0
	01/12/16	5.67	63	----	1.8	<0.5	<0.5	<1.5	<5.0
	07/21/16	10.40	<50	----	<0.5/0.5	<0.5	<0.5	<1.5	<5.0
MW-7	04/17/09	6.53	12,000	3,700	1,000	37	100	36	<120
	08/27/09	6.19	12,000	----	550	30	130	33	<100
	12/15/09	5.71	9,600	----	620	26	140	20	<100
	03/12/10	5.34	10,000	----	850	33	87	28	<25
	10/21/10	6.59	7,900	----	1,100	22	44	21	<180
	05/05/11	5.98	9,300	----	690	23	42	21	<200
	04/25/12	5.71	8,600	----	1,000	31	10	20	<75
	12/20/12	Well inaccessible							
	04/04/13	6.18	12,000	----	2,800	51	96	37	<210
	04/30/14	6.29	220	----	39	0.75	0.53	<0.5	<5.0
	01/12/16	5.61	1,800	----	400	6.8	9.7	7.6	31

TABLE 7
Summary of Groundwater Monitoring Well Analytical Data

Zimmerman Property
3442 Adeline Street
Oakland, CA

Sample ID	Date	Depth to Water (ft)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
	07/21/16	7.36	6,700	----	1,400/1,400	29	36	28	<400
IW-1	05/22/09	7.65	1,200	680	58	2.7	2.3	18	<15
	08/27/09	7.70	160	----	4.1	0.5	0.8	1.6	<5.0
	09/17/09	----	300	----	8.0	1.5	1.4	0.85	<5.0
	12/15/09	10.99	220	----	5.4	1.4	0.65	0.7	<5.0
	03/12/10	6.00	<50	----	1.9	<0.5	<0.5	<0.5	<5.0
	10/21/10	9.35	<50	**----**	<0.5	<0.5	<0.5	<0.5	<5.0
	05/05/11	6.73	<50	**----**	<0.5	<0.5	<0.5	<0.5	<5.0
	04/25/12	8.05	<50	**----**	0.91	<0.5	<0.5	0.57	<5.0
	12/20/12	12.88	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/04/13	12.81	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/30/14	6.01	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	01/12/16	6.33	<50	----	<0.5	<0.5	<0.5	<1.5	<5.0
	07/21/16	6.33	<50	----	<0.5/0.5	<0.5	<0.5	<1.5	<5.0
BF-1	03/27/09	----	19,000	----	890	27	460	1,200	<250
	06/17/09	----	6,700	----	840	19	170	150	<150
	08/10/09	----	11,000	----	710	14	440	290	<120
	08/27/09	----	9,600	----	590	14	350	220	<90
	09/13/09	----	<50	----	1.2	<0.5	<0.5	<0.5	<5.0
	10/14/09	----	2,400	----	83	1.9	5.0	120	<10
	12/11/09	6.70	200	----	12	<0.5	2.2	9.6	<5.0
	03/12/10	5.61	<50	----	2.9	<0.5	<0.5	<0.5	<0.5
	10/21/10	7.95	560	----	68	1.5	6.7	25	<5.0
	05/05/11	6.25	<50	----	0.65	<0.5	<0.5	<0.5	<5.0
	04/25/12	5.85	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	12/20/12	5.82	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/04/13	6.78	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/30/14	5.36	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	01/12/16	6.58	<50	----	<0.5	<0.5	<0.5	<1.5	<5.0
	07/22/16	8.40	<50	----	<0.5/0.5	<0.5	<0.5	<1.5	<5.0
BF-5	08/27/09	----	170	----	32	0.55	4.2	220	<25
	10/14/09	----	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/09	7.25	130	**----**	40	<0.5	0.91	<0.5	<5.0
	03/12/10	6.09	<50	**----**	4.3	<0.5	0.91	<0.5	<5.0
	10/21/10	8.62	80	**----**	8.8	<0.5	1.4	4.5	<5.0
	05/05/11	6.75	<50	**----**	<0.5	<0.5	<0.5	<0.5	<5.0
	04/25/12	6.37	<50	**----**	<0.5	<0.5	<0.5	<0.5	<5.0
	12/20/12	6.33	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/04/13	7.25	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0
	04/30/14	5.83	<50	----	<0.5	<0.5	<0.5	<0.5	<5.0

TABLE 7
Summary of Groundwater Monitoring Well Analytical Data

Zimmerman Property
3442 Adeline Street
Oakland, CA

Sample ID	Date	Depth to Water (ft)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
	01/12/16	7.09	<50	----	<0.5	<0.5	<0.5	<1.5	<5.0
	07/22/16	8.95	<50	----	<0.5/0.5	<0.5	<0.5	<1.5	<5.0

Notes:

µg/L	micrograms of analyte per liter of sample
	most recent sample
MTBE	methyl tert-butyl ether
TPH-d	total petroleum hydrocarbons as diesel
TPH-g	total petroleum hydrocarbons as gasoline
---	No Data

TABLE 9
ACEH Low Threat Closure Policy Checklist
Zimmerman Property
3442 Adeline Street
Oakland, CA

Low Threat Closure Policy General Criteria	Site-Specific Comments	Data Gap / How to Address
General Criteria a: The unauthorized release is located within the service area of a public water system.	The site meets the required criteria as water is currently provided to the Site and surounding area by the East Bay Municipal Utility District (EBMD).	None.
Required Information: Please identify the local provider for the public water system and confirm that the property has a hook-up and uses the public water system. Identify any other sources of water for the property such as wells, cisterns, or other water capture systems.		
General Criteria b: The unauthorized release consists only of petroleum.	The only known source is a former UST that reportedly contained gasoline. Investigation efforts have focused petroleum hydrocarbons. No information to suggest that other chemicals were released from the UST has not been identified.	None.
Required Information: Please describe the site history, types of products or chemicals used at the site, and history of any types of releases other than petroleum. Present the sampling results for all chemicals other than petroleum such as volatile organic compounds, metals, semi-volatile organic compounds, PCBs, phenol, 1,4-dioxane, dibenzofurans, or dioxins.		
General Criteria c: The unauthorized ("primary") release from the UST system has been stopped.	The primary release from the UST system was stopped with the removal of the UST from the subsurface.	None.
Required Information: Please describe the history of releases and the actions that were taken to stop each release. Please evaluate and account for changing contaminant concentrations over the full time period of site investigations.		
General Criteria d: Free product has been removed to the maximum extent practicable.	No measurable free product or light non-aqueous phase liquid (LNAPL) has been identified in the monitoring well network, however, aqueouse phase concentrations of TPH-g and benzene are indicative of the presence of residual free phase concentrations which may need to be addressed in order to meet LTCP closure criteria.	Remedial action or Implemenation of administrative and/or engineered controls
Required Information: Please describe the investigation and monitoring activities that have been undertaken to assess whether free product is present. Present data including tables and figures showing any observations and measurements of free product. Describe the corrective actions that were taken to remove free product, dates of the removal actions, and volume removed. If free product remains at the site, present an evaluation of whether free product removal is practicable. If free product removal is not practicable, fully describe the conditions that prevent free product removal.		

ACEH Low Threat Closure Policy Checklist

Zimmerman Property
3442 Adeline Street
Oakland, CA

Low Threat Closure Policy General Criteria	Site-Specific Comments	Data Gap / How to Address
General Criteria e: A conceptual site model has been developed. Required Information: Please present your complete conceptual site model (CSM) that includes a site history, receptor survey, description of releases, geologic and hydrogeologic assessment, identified stratigraphic and manmade migration pathways, identified controls on contaminant migration, delineation of the lateral and vertical extent of contamination in all affected media, assessment of vapor intrusion pathways, groundwater monitoring and evaluation of plume stability, and description of the type and effectiveness of corrective actions. The CSM must be complete and thorough enough to evaluate whether site characterization is complete and identify any remaining data gaps.	The conceptual site model has for the Site has been prepared and included in the accompanying document. Data gaps to the completeness of the CSM are documented in Section 5.6	Temporal soil vapor data; Extents of soil vapor investigation; Extents of Monitoring Well Network;
General Criteria f: Secondary source removal has been addressed. The secondary source is the petroleum-impacted soil, free product, or groundwater that acts as a long-term source releasing contamination to the surrounding area. Unless site conditions prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable. Required Information: Please present the history of corrective actions for the site including the types of cleanup actions taken, dates of the actions, mass removed, figures depicting the location of the removal action, and confirmation sampling results which demonstrate the effectiveness of secondary source removal, as well as a brief narrative description of the actions and areas of success or infeasibility of actions. For any in-situ corrective actions, long-term monitoring data must be presented that demonstrate that concentrations have not rebounded following the cessation of corrective action.	The interim remedial excavation performed removed approximately 1,098.21 tons of petroleum hydrocarbon-impacted soils that were accessible. Available soil and groundwater analytical data indicated that the soil secondary source has been removed to the extent practical and necessary, however, residual free phase petroleum remains within the smear zone at the Site. This free phase petroleum is likely contributing to the elevated levels of TPH-g and benzene in groundwater and soil vapor and will need to be addressed before the Site meets LTCP closure criteria.	Address residual free phase petroluem within the smear zone.
General Criteria g: Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15. Required Information: Please present sufficient data to assess whether MTBE is or was present in soil and groundwater at the site.	MBTE has not been detected in any of the grab groundwater samples, but has been historically detected in soil samples at relatively low levels and in one groundwater sample (MW-7) at 31 ug/L.	None.

ACEH Low Threat Closure Policy Checklist

Zimmerman Property
3442 Adeline Street
Oakland, CA

Low Threat Closure Policy General Criteria	Site-Specific Comments	Data Gap / How to Address
General Criteria h: Nuisance as defined by Water Code section 13050 does not exist at the site.	As presented in the conceptual site model, there are no residual petroleum hydrocarbon concentrations that may pose a nuisance condition.	None.
Required Information: Please present sufficient data to support your evaluation of whether a nuisance condition currently exists or potentially could exist in the future. This evaluation should describe whether any site contamination is present in locations that have the potential to pose nuisance conditions during common or reasonably expected site activities. This data should be incorporated into the CSM. These locations would include but not necessarily be limited to surface soils, near surface soils, utility corridors, and basements or other subsurface structures. The types of data presented should include descriptions of the type and vertical and lateral extent of shallow soil or lateral extent of surface soil contamination, depths to contamination, analytical results for surface soil, shallow soil, and groundwater samples, discussion of any odors or visual evidence of contamination, preferential pathway and utility conduit surveys, review of potential points for exposure (such as groundwater seeps into basements), current use of the site, expected future use of site, and description of surface water runoff from the property to storm drains or other sites.		

ACEH Low Threat Closure Policy Checklist

Zimmerman Property
3442 Adeline Street
Oakland, CA

Low Threat Closure Policy General Criteria	Site-Specific Comments	Data Gap / How to Address
Media-Specific Criteria 1. Groundwater: If groundwater with a designated beneficial use is affected by an unauthorized release, to satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed in the Policy. A plume that is "stable or decreasing" is a contaminant mass that has expanded to its maximum extent: the distance from the release where attenuation exceeds migration.	As described in Section 6.2, based upon the conceptual site model the most appropriate media specific criteria for groundwater at the Site would be Class 3: <u>Groundwater Specific Criteria #3</u> a) The contaminant plume that exceeds water quality objectives is less than 250 feet in length b) Free product has been removed to the maximum extent practicable, may still be present below the site where the release originated, but does not extend off-site c) The plume has been stable or decreasing for a minimum of five years. d) The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary e) The property owner is willing to accept a land use restriction if the regulatory agency requires a land use restriction as a condition of closure	Temporal Groundwater Data
Required Information: In general, the Low-Threat Groundwater Classes are classified on stable or decreasing plumes, status of free product removal, distance to the nearest groundwater or surface water receptor from the plume boundary, and other factors that may be required to demonstrate a low-threat. Sufficient data must be presented to demonstrate that site characterization activities have defined the horizontal and vertical extent of the plume and that the plume is stable. Plume stability must be demonstrated using a valid technical analysis that considers the accuracy of data from the wells, well placement within the plume, changes in areal extent of the plume, and valid concentration trends within the plume. Factors such as seasonal variability, water level changes, sampling methods, well construction, and other factors that can affect data quality must be considered. Plotting of decreasing concentrations using data from a single well is not likely to be sufficient. A recent well survey that uses all available well from both the Department of Water Resources and local agencies (Zone 7 Water Agency or Alameda County Public Works as appropriate) is required. Water supply wells located within 2,000 feet of the site are to be presented on a site figure with a table identifying each well along with the well construction details. Following completion of a complete CSM and consideration of the above factors, please present your evaluation of whether your site fits within one of the five classes in the Policy.		

ACEH Low Threat Closure Policy Checklist

Zimmerman Property
3442 Adeline Street
Oakland, CA

Low Threat Closure Policy General Criteria	Site-Specific Comments	Data Gap / How to Address
Media-Specific Criteria 2. Petroleum Vapor Intrusion to Indoor Air: The low-threat vapor-intrusion criteria in the Policy apply to release sites and impacted or potentially impacted adjacent parcels when: (1) existing buildings are occupied or may be reasonably expected to be occupied in the future, or (2) buildings for human occupancy are reasonably expected to be constructed in the near future.	As discussed in Section 6.2.2, soil vapor analytical data, including metabolic gas data, was collected from ten soil vapor probes during the October 2016 data gap investigation. These data indicate that the portions of the Site in which sufficient oxygen is present to consititue the presence of a bioattenuation zone meet LTCP closure requirements, however, oxygen content at three locations (VB-9, VB-10, and VB-15) was inadequate to satisfy the requirements of the bioattenuation zone. These locations do no meet the requirements of the LTCP when evaluating this locates against the criteria for soil vapor without the presence of a bioattenuation zone. Furthermore, as identified previously, the extents of the current soil vapor probe network need to be expanded to address data gaps related defining the extents of the soil vapor contamination.	Soil vapor within three locations does not meet the closure criteria of the LTCP; Additional soil vapor sampling is needed to address data gaps related to temporal variability and to better define the extents of the benzene and TPH-g soil vapor plumes that exceed screening levels.
Required Information: Sufficient data must be presented to demonstrate that site characterization is complete and that the data demonstrate that the site-specific conditions satisfy all the assumptions, characteristics, and screening criteria of scenarios 1 through 3 or all of the characteristics and screening criteria of scenario 4 of the Policy. Input to the scenarios include any evidence of LNAPL, soil data and where applicable, soil gas data to demonstrate that a continuous bioattenuation zone is or is not present, concentrations of benzene in groundwater, and direct measurements of soil gas concentrations. Results from preferential pathway and utility conduit surveys are to be presented and evaluated to determine whether a continuous bioattenuation zone is present. Please present site data using figures, tables, and text in a complete CSM that evaluates site data relative to the conditions defined by the vapor intrusion scenarios in the Policy. Such factors as data representativeness, quality, spatial distribution relative to current or potential receptors and sources, and temporal variability must be considered in the evaluation. Following completion of a comprehensive CSM and consideration of the above factors, please present your evaluation of whether your site fits within one of the vapor intrusion scenarios in the Policy or site-specific risk assessment for the vapor intrusion pathway demonstrates that human health is protected. Although satisfaction of media-specific criteria is not required for active commercial fueling facilities except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk, the above evaluation is required to assess whether nearby facilities potentially may be impacted by petroleum vapor intrusion.		

ACEH Low Threat Closure Policy Checklist

Zimmerman Property
3442 Adeline Street
Oakland, CA

Low Threat Closure Policy General Criteria	Site-Specific Comments	Data Gap / How to Address
Media-Specific Criteria 3. Direct Contact and Outdoor Air Exposure. Release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if they meet any of the following: a. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs). The concentration limits for 0 to 5 feet bgs protect from ingestion of soil, dermal contact with soil, inhalation of volatile soil emissions and inhalation of particulate emissions, and the 5 to 10 feet bgs concentration limits protect from inhalation of volatile soil emissions. Both the 0 to 5 feet bgs concentration limits and the 5 to 10 feet bgs concentration limits for the appropriate site classification (Residential or Commercial/Industrial) shall be satisfied. In addition, if exposure to construction workers or utility trench workers are reasonably anticipated, the concentration limits for Utility Worker shall also be satisfied; or b. Maximum concentrations of petroleum constituents in soil are less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health; or c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health.	There is no current direct exposure route to shallows soils at the Site other than by a potential future construction worker. There is little evidence that shallow soil remains impacted by residual petroleum hydrocarbons since the former UST has been removed and the interim remedial excavation was performed.	None.
Required Information: Sufficient data must be presented to demonstrate that site characterization is complete for the prescribed depth ranges of 0 to 5 feet and 5 to 10 feet bgs in order to assess potential direct contact and outdoor air exposure. Please present figures and tables showing the soil data for each of the prescribed depth ranges with a comparison to the screening levels for each exposure scenario. Analytical data for all chemicals of concern including total petroleum hydrocarbons are to be presented in order to assess whether unique conditions not considered in the Policy may exist at the site. For all data, such factors as data representativeness, quality, spatial distribution relative to current or potential receptors and sources, and temporal variability must be considered in the evaluation. In addition, please describe the current and expected future land use, redevelopment, or construction for the site.		

APPENDIX A

SOIL BORING LOGS

AEI Consultants
Environmental & Engineering Services

AEI Consultants

BORING NUMBER SB - 32

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/6/16 **COMPLETED** 10/6/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0.0					CONCRETE	
					0.8	
					CLAY (CH), Black (2/1 10YR), medium stiff, moist, high plasticity.	
	SB-32-2		7.5			
2.5						
	SB-32-4		6.7			
5.0					5.0	
					CLAY (CH), Olive (5/3 5Y), stiff, moist, high plasticity.	
	SB-32-6		46.8			
7.5						
	SB-32-8		86.9		8.0	
					SANDY CLAY (CL), Very Dark Greyish Green (3/2 5GY), soft, moist, medium plasticity.	
	SB-32-10		255.6			
10.0					10.0	

Bottom of borehole at 10.0 feet.

AEI Consultants
Environmental & Engineering Services

AEI Consultants

BORING NUMBER VB - 6

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0.0					CONCRETE	Neat cement grout and 4 in. wellbox, well teminates to capped ballvalve
0.8					CLAY (CH), Black (2/1 10YR), medium stiff, moist, high plasticity.	
	VB-6-2		3.4			Hydrated lifts of bentonite with .25 in. outer diameter Nylaflow tubing
2.5						
	VB-6-4		11.5			Dry Bentonite
5.0						6 in. stainless steel mesh probe tip
5.5					Transition zone from Black Clay (CH) to Sandy Clay (CL)	#30 Sand
	VB-6-6		8.6		SANDY CLAY (CL), Very Dark Grey Green (3/2 5GY), soft, moist, medium to low plasticity.	
6.5					CLAY (CH), Very Dark Grey Green (3/2 5GY), medium stiff, moist, high plasticity. Olive Brown mottling after 7 feet to end of boring.	
7.5						
	VB-6-8		8.8			Hydrated lifts of bentonite
	VB-6-10		2.6			
10.0					10.0	

Bottom of borehole at 10.0 feet.

AEI Consultants
Environmental & Engineering Services

AEI Consultants

BORING NUMBER VB - 7

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					CONCRETE
0.8					Fire debris and redbrick
1.5					CLAY (CH), Black (2/1 10YR), medium stiff, moist, high plasticity.
	VB-7-2		6.7		
2.5					
	VB-7-4		13.3		
4.0					CLAY (CH), Olive Brown (4/3 2.5Y), medium stiff, moist, high plasticity.
5.0					
	VB-7-6		3.4		
6.0					GRAVELLY CLAY (CL), Very Dark Grey Green (3/2 5GY), soft, moist, medium to low plasticity, brown mottling after 7 feet to end of boring.
7.5					
	VB-7-8		12.8		
	VB-7-10		17.1		
10.0					

COMPLETION:
- Neat cement grout and 4 in. wellbox, well teminates to capped ballvalve
- Hydrated lifts of bentonite with .25 in. outer diameter Nylaflow tubing
- Dry Bentonite
- 6 in. stainless steel mesh probe tip
- #30 Sand
- Hydrated lifts of bentonite

Bottom of borehole at 10.0 feet.

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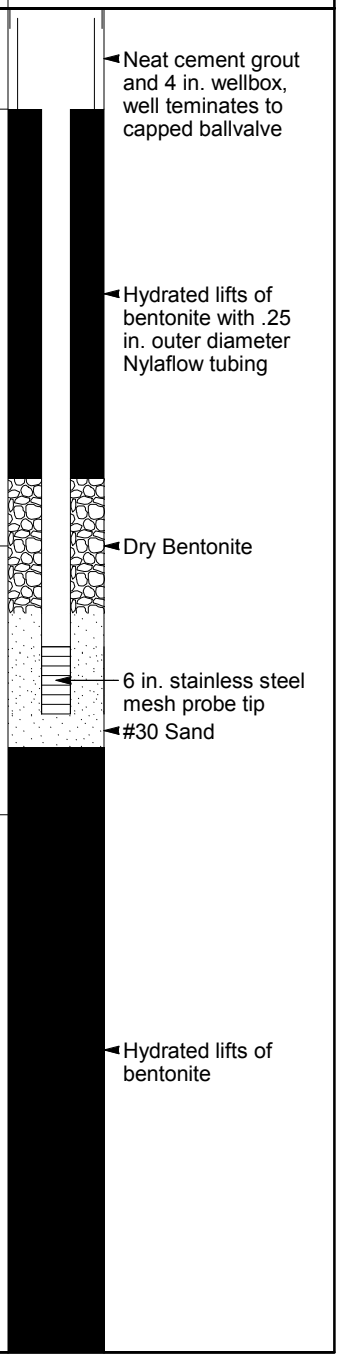
BORING NUMBER VB - 8

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					CONCRETE
0.8					GRAVELLY CLAY (CL), Black (2/1 10YR), medium stiff, moist, high plasticity.
2.5	VB-8-2		3.0		
4.0					GRAVELLY CLAY (CL), Olive Brown (4/4 2.5Y), soft, moist, low plasticity, fine gravel is angular and makes up about 35% to 40% of interval.
5.0	VB-8-4		5.0		
6.0	VB-8-6		6.8		CLAY (CL), Olive Brown (4/4 2.5Y), soft, moist, medium plasticity. Minor light brown mottling from 8 feet to end of boring.
7.5	VB-8-8		10.9		
10.0	VB-8-10		6.9		
10.0					Bottom of borehole at 10.0 feet.

COMPLETION



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BORING NUMBER VB - 9

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					CONCRETE
0.8					CLAY (CH), Black (2/1 10YR), medium stiff, moist, high plasticity, minor gravel at very top of interval.
	VB-9-2		11.2		
2.5					
3.5					CLAY (CL), Very Dark Grey Green (3/2 5GY), stiff, medium plasticity, moist.
	VB-9-4		10.1		
4.5					GRAVELLY CLAY (CL), Very Dark Grey Green (3/2 5GY), soft, low plasticity, moist, minor light green mottling.
5.0					
	VB-9-6		9.5		
7.5					
	VB-9-8		26.4		
8.3					CLAY (CH), Olive Brown (4/3 2.5Y), medium stiff, moist, high plasticity.
	VB-9-10		73.3		
10.0					

COMPLETION:
- Neat cement grout and 4 in. wellbox, well teminates to capped ballvalve
- Hydrated lifts of bentonite with .25 in. outer diameter Nylaflow tubing
- Dry Bentonite
- 6 in. stainless steel mesh probe tip
- #30 Sand
- Hydrated lifts of bentonite

Bottom of borehole at 10.0 feet.

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BORING NUMBER VB - 10

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0.0					CONCRETE	Neat cement grout and 4 in. wellbox, well teminates to capped ballvalve
					0.8 CLAY (CH), Black (2/1 10YR), stiff, moist, high plasticity.	
	VB-10-2		12.1			Hydrated lifts of bentonite with .25 in. outer diameter Nylaflow tubing
2.5						
	VB-10-4		11.4		4.0	Dry Bentonite
					SILTY GRAVEL (GM), Dark Yellowish Brown (3/6 10YR), loose, moist, no plasticity, gravel is sub-angular, about 20% fines. 4.4	
5.0					CLAY (CH), Dark Yellowish Brown (3/6 10YR), medium stiff to stiff, high plasticity, burnt orange mottling. 3 inch zones of gravel in clay where composition is about 25% gravel.	6 in. stainless steel mesh probe tip
	VB-10-6		6.8			#30 Sand
7.5						
	VB-10-8		3.6		8.0	Hydrated lifts of bentonite
					Transition zone with green mottling. 8.5	
					CLAY (CH), Very Dark Grey Green (3/2 5GY), stiff, moist, high plasticity. Burnt orange mottling.	
	VB-10-10		13.4		10.0	
10.0						

Bottom of borehole at 10.0 feet.

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BORING NUMBER VB - 11

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0.0					CONCRETE	Neat cement grout and 4 in. wellbox, well teminates to capped ballvalve
0.8					CLAY (CH), Black (2/1 10YR), medium stiff, moist, high plasticity.	
2.5	VB-11-2		3.8			Hydrated lifts of bentonite with .25 in. outer diameter Nylaflow tubing
4.0	VB-11-4		3.2		GRAVELLY CLAY (CL), Olive Brown (4/4 2.5Y), soft, moist, low plasticity, gravel is angular, fine, and about 35% of compostion.	Dry Bentonite
5.0						6 in. stainless steel mesh probe tip
						#30 Sand
6.0	VB-11-6		10.8		CLAY (CL), Olive Brown (4/4 2.5Y), soft, moist, medium plasticity, gravel is angular, fine, and about 35% of compostion.	
7.5	VB-11-8		4.2			Hydrated lifts of bentonite
8.0					Transition from low plasticity clay to high plasticity clay	
8.5					CLAY (CH), Very Dark Grey Green (3/2 5GY), stiff, moist, high plasticity.	
10.0	VB-11-10		49.0			
10.0					Bottom of borehole at 10.0 feet.	

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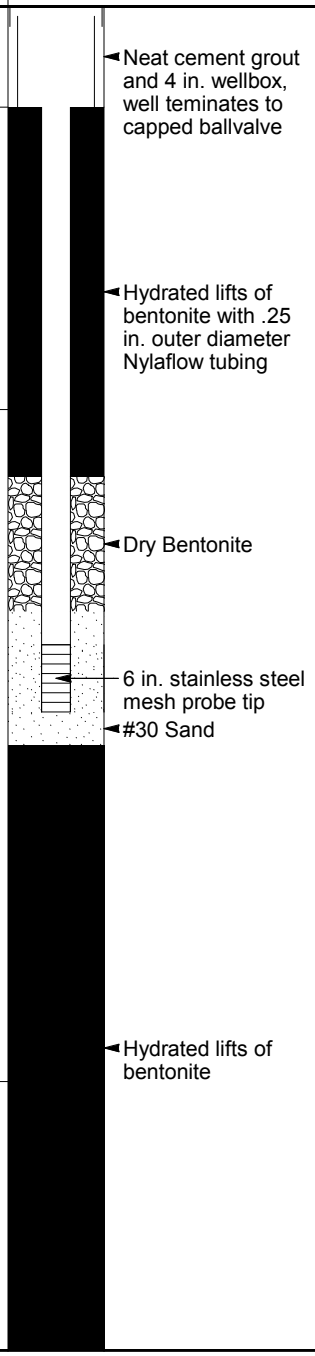
BORING NUMBER VB - 12

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/6/16 **COMPLETED** 10/6/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					CONCRETE
0.8					CLAY (CL), Black (2/1 10YR), medium stiff, moist, medium plasticity.
2.5	VB-12-2		12.6		
3.0					CLAY (CL), Very Dark Grey Green (3/2 5GY), stiff, moist, medium plasticity. Trace gravel after 5 feet, sub-angular, fine grained.
5.0	VB-12-4		8.2		
5.0	VB-12-6		14.5		
7.5	VB-12-8		36.4		
8.0					CLAY (CH), Olive (5/3 5Y), stiff, moist, high plasticity. Green mottling and trace sand present after 8.5 feet to end of boring.
10.0	VB-12-10		38.2		
10.0					Bottom of borehole at 10.0 feet.



COMPLETION

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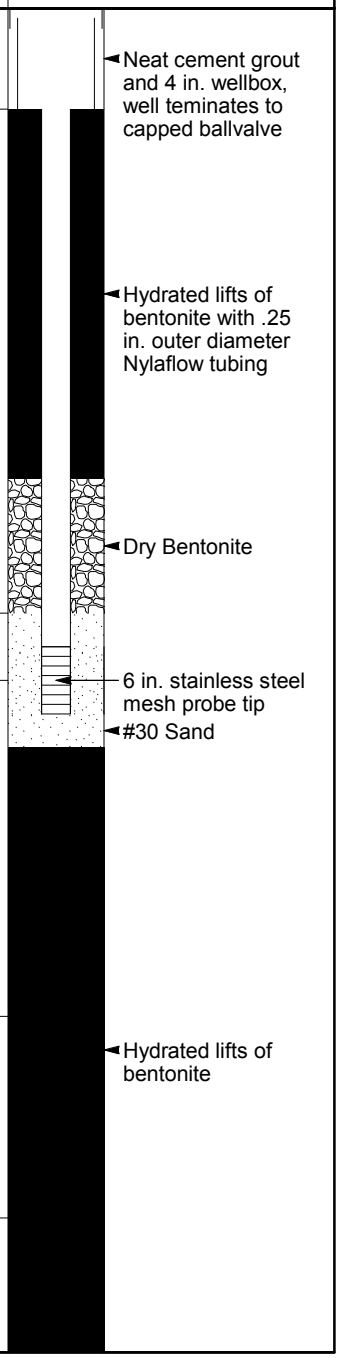
BORING NUMBER VB - 13

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					CONCRETE
0.8					CLAY (CH), Black (2/1 10YR), medium stiff, moist, high plasticity.
2.5	VB-13-2		3.3		
4.5					Transition from Black Clay to Olive Brown Clay.
5.0	VB-13-4		7.8		CLAY (CH), Olive Brown (4/4 2.5Y), stiff, moist, high plasticity.
7.5	VB-13-6		5.4		
9.0	VB-13-8		12.5		GRAVELLY CLAY (CL), Dark Yellowish Brown (3/6 10YR), medium stiff, moist, gravel is fine, angular, and make up about 40% of the overall composition, low to no plasticity.
10.0	VB-13-10		15.6		CLAY (CH), Very Dark Grey Green (3/2 5GY), stiff, moist, high plasticity, light brown mottling.



Bottom of borehole at 10.0 feet.

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BORING NUMBER VB - 14

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0.0					CONCRETE	Neat cement grout and 4 in. wellbox, well teminates to capped ballvalve
0.8					CLAY (CH), Black (2/1 10YR), soft, moist, high plasticity.	
	VB-14-2		16.1			
2.0					Transition from Black Clay to Very Dark Grey Green Clay.	Hydrated lifts of bentonite with .25 in. outer diameter Nylaflow tubing
2.5						
3.0					CLAY (CH), Very Dark Grey Green (3/2 5GY), stiff, moist, high plasticity.	
	VB-14-4		12.4			Dry Bentonite
5.0						6 in. stainless steel mesh probe tip
						#30 Sand
	VB-14-6		10.5			
7.5						
	VB-14-8		11.4			Hydrated lifts of bentonite
	VB-14-10		56.4			
10.0					10.0	

Bottom of borehole at 10.0 feet.

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BORING NUMBER VB - 15

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0.0					CONCRETE	Neat cement grout and 4 in. wellbox, well teminates to capped ballvalve
0.8					CLAY (CH), Black (2/1 10YR), soft, moist, high plasticity.	
	VB-15-2		7.3			Hydrated lifts of bentonite with .25 in. outer diameter Nylaflow tubing
2.5						
3.0					GAVELLY CLAY (CL), Dark Yellowish Brown (3/6 10YR), medium stiff, moist, gravel is fine and makes up about 10% of total composition, medium plasticity.	
	VB-15-4		8.6			Dry Bentonite
4.0					GAVELLY CLAY (CL), Dark Yellowish Brown (3/6 10YR), medium stiff, moist, gravel is fine and makes up about 35% of total composition, low plasticity.	
5.0						6 in. stainless steel mesh probe tip
	VB-15-6		118.0			#30 Sand
6.0					CLAY (CL), Olive Brown (4/4 2.5Y), medium stiff, moist, high plasticity. Grey green mottling after 7 feet to end of boring.	
7.5						
	VB-15-8		5.6			Hydrated lifts of bentonite
10.0	VB-15-10		11.4			
10.0					Bottom of borehole at 10.0 feet.	

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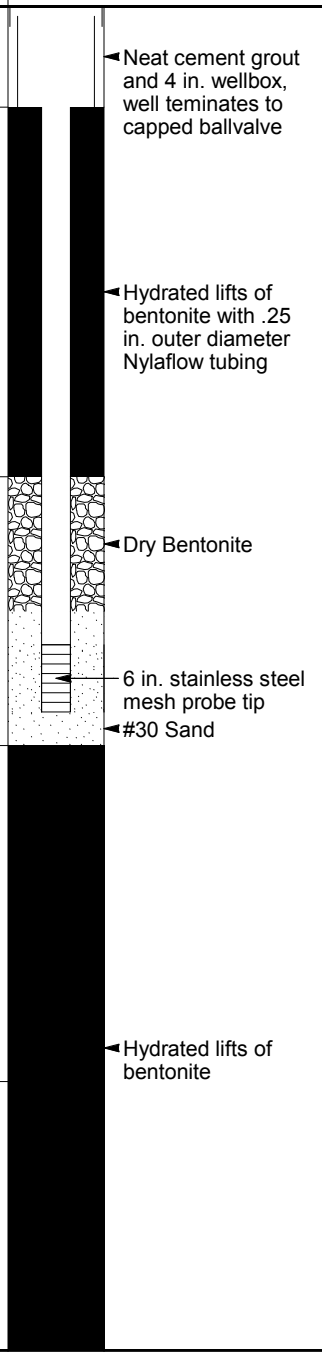
BORING NUMBER VB - 16

CLIENT Steffi Zimmerman Trust
PROJECT NAME Zimmerman
PROJECT NUMBER 281939
PROJECT LOCATION 3442 Adeline Street, Oakland, California
DATE STARTED 10/12/16 **COMPLETED** 10/12/16
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR ECA
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Nathan Bricker **CHECKED BY** J. Sanders
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0					CONCRETE
0.8					CLAY (CH), Black (2/1 10YR), soft, moist, high plasticity.
	VB-16-2		3.1		
2.5					
3.5					Transition form high platicity clay to gravelly clay
	VB-16-4		4.8		
5.0					
5.5					GRAVELLY CLAY (CL), Dark Yellowish Brown (3/6 10YR), medium stiff, moist, gravel is fine, angular, and makes up about 30% of the interval.
	VB-16-6		4.6		
7.5					
	VB-16-8		6.7		
8.0					CLAY (CH), Very Dark Grey Green (3/2 5GY), stiff, moist, high plasticity. Light brown mottling.
	VB-16-10		18.5		
10.0					



Bottom of borehole at 10.0 feet.

APPENDIX B

LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

October 20, 2016

AEI Consultants - CA

Sample Delivery Group:	L866089
Samples Received:	10/13/2016
Project Number:	281939
Description:	3442 Adeline Street, Oakland

Report To: Jonathan Sanders
1200 Main Street, Suite D
Irvine, CA 92614

Entire Report Reviewed By:

Brian Ford
Technical Service Representative

VB-6-4 L866089-01 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 09:05
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 12:47	DMG
Total Solids by Method 2540 G-2011	WG917457	1	10/15/16 06:51	10/15/16 06:59	KDW
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 12:22	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 01:58	JHH

VB-6-8 L866089-02 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 09:23
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 13:20	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 12:44	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 02:17	JHH

VB-7-4 L866089-03 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 08:37
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 10:49	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 13:06	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 02:36	JHH

VB-7-6 L866089-04 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 08:44
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 11:56	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 13:28	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 02:55	JHH

VB-8-2 L866089-05 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 09:37
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 11:07	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 13:51	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 03:14	JHH

VB-8-8 L866089-06 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 10:02
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 16:12	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 14:13	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 03:33	JHH

VB-9-2 L866089-07 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 07:57
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 12:31	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 14:35	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 03:52	JHH

VB-9-8 L866089-08 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 08:19
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	10	10/18/16 22:39	10/19/16 20:12	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 14:57	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	24.25	10/16/16 19:01	10/20/16 07:57	JHH

VB-10-2 L866089-09 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 13:53
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 11:24	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 15:20	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 04:11	JHH

VB-10-6 L866089-10 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 14:01
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 14:11	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 15:42	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 04:31	JHH

VB-11-2 L866089-11 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 10:19
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 12:14	DMG
Total Solids by Method 2540 G-2011	WG917458	1	10/17/16 11:15	10/17/16 11:23	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 16:04	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 04:49	JHH

VB-11-6 L866089-12 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 10:27
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 14:29	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 16:26	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 05:08	JHH

VB-13-4 L866089-13 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 13:17
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 11:41	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 16:49	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 05:27	JHH

VB-13-8 L866089-14 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 13:16
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 13:37	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 17:11	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 05:46	JHH

VB-14-2 L866089-15 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 10:47
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 15:20	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 17:33	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 06:04	JHH

VB-14-6 L866089-16 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 10:55
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 15:38	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 17:55	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 06:23	JHH

VB-15-4 L866089-17 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 11:53
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 15:56	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 18:18	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 06:42	JHH

VB-15-6 L866089-18 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 12:04
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 13:03	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/17/16 18:40	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 07:01	JHH

VB-16-4 L866089-19 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 12:33
Received date/time: 10/13/16 09:00

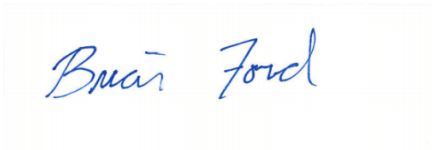
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 13:55	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/20/16 09:56	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 07:19	JHH

VB-16-8 L866089-20 Solid

Collected by: Nate Bricker
Collected date/time: 10/12/16 12:56
Received date/time: 10/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG918428	1	10/18/16 22:39	10/19/16 23:35	DMG
Total Solids by Method 2540 G-2011	WG917459	1	10/17/16 11:05	10/17/16 11:14	MEL
Volatile Organic Compounds (GC) by Method 8015	WG917734	1	10/16/16 20:00	10/20/16 10:25	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918054	1	10/16/16 19:01	10/20/16 07:38	JHH

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.2		1	10/15/2016 06:59	WG917457

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0399	0.120	1	10/17/2016 12:22	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*93.9*			*59.0-128*		*10/17/2016 12:22*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0163	J	0.0120	0.0601	1	10/20/2016 01:58	WG918054
Acrylonitrile	U		0.00215	0.0120	1	10/20/2016 01:58	WG918054
Benzene	U		0.000324	0.00120	1	10/20/2016 01:58	WG918054
Bromobenzene	U		0.000341	0.00120	1	10/20/2016 01:58	WG918054
Bromodichloromethane	U		0.000305	0.00120	1	10/20/2016 01:58	WG918054
Bromoform	U		0.000510	0.00120	1	10/20/2016 01:58	WG918054
Bromomethane	U		0.00161	0.00601	1	10/20/2016 01:58	WG918054
n-Butylbenzene	U		0.000310	0.00120	1	10/20/2016 01:58	WG918054
sec-Butylbenzene	U		0.000242	0.00120	1	10/20/2016 01:58	WG918054
tert-Butylbenzene	U		0.000248	0.00120	1	10/20/2016 01:58	WG918054
Carbon tetrachloride	U		0.000394	0.00120	1	10/20/2016 01:58	WG918054
Carbon disulfide	0.00374		0.000266	0.00120	1	10/20/2016 01:58	WG918054
Chlorobenzene	U		0.000255	0.00120	1	10/20/2016 01:58	WG918054
Chlorodibromomethane	U		0.000448	0.00120	1	10/20/2016 01:58	WG918054
Chloroethane	U		0.00114	0.00601	1	10/20/2016 01:58	WG918054
2-Chloroethyl vinyl ether	U		0.00281	0.0601	1	10/20/2016 01:58	WG918054
Chloroform	U		0.000275	0.00601	1	10/20/2016 01:58	WG918054
Chloromethane	U		0.000451	0.00300	1	10/20/2016 01:58	WG918054
2-Chlorotoluene	U		0.000362	0.00120	1	10/20/2016 01:58	WG918054
4-Chlorotoluene	U		0.000288	0.00120	1	10/20/2016 01:58	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00126	0.00601	1	10/20/2016 01:58	WG918054
1,2-Dibromoethane	U		0.000412	0.00120	1	10/20/2016 01:58	WG918054
Dibromomethane	U		0.000459	0.00120	1	10/20/2016 01:58	WG918054
1,2-Dichlorobenzene	U		0.000367	0.00120	1	10/20/2016 01:58	WG918054
1,3-Dichlorobenzene	U		0.000287	0.00120	1	10/20/2016 01:58	WG918054
1,4-Dichlorobenzene	U		0.000272	0.00120	1	10/20/2016 01:58	WG918054
Dichlorodifluoromethane	U		0.000857	0.00601	1	10/20/2016 01:58	WG918054
1,1-Dichloroethane	U		0.000239	0.00120	1	10/20/2016 01:58	WG918054
1,2-Dichloroethane	U		0.000318	0.00120	1	10/20/2016 01:58	WG918054
1,1-Dichloroethene	U		0.000364	0.00120	1	10/20/2016 01:58	WG918054
cis-1,2-Dichloroethene	U		0.000282	0.00120	1	10/20/2016 01:58	WG918054
trans-1,2-Dichloroethene	U		0.000317	0.00120	1	10/20/2016 01:58	WG918054
1,2-Dichloropropane	U		0.000430	0.00120	1	10/20/2016 01:58	WG918054
1,1-Dichloropropene	U		0.000381	0.00120	1	10/20/2016 01:58	WG918054
1,3-Dichloropropane	U		0.000249	0.00120	1	10/20/2016 01:58	WG918054
cis-1,3-Dichloropropene	U		0.000315	0.00120	1	10/20/2016 01:58	WG918054
trans-1,3-Dichloropropene	U		0.000321	0.00120	1	10/20/2016 01:58	WG918054
2,2-Dichloropropane	U		0.000335	0.00120	1	10/20/2016 01:58	WG918054
Ethylbenzene	U		0.000357	0.00120	1	10/20/2016 01:58	WG918054
Hexachloro-1,3-butadiene	U		0.000411	0.00120	1	10/20/2016 01:58	WG918054
Isopropylbenzene	U		0.000292	0.00120	1	10/20/2016 01:58	WG918054
p-Isopropyltoluene	U		0.000245	0.00120	1	10/20/2016 01:58	WG918054
2-Butanone (MEK)	U		0.00562	0.0120	1	10/20/2016 01:58	WG918054
Methylene Chloride	U		0.00120	0.00601	1	10/20/2016 01:58	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00226	0.0120	1	10/20/2016 01:58	WG918054
Naphthalene	U		0.00120	0.00601	1	10/20/2016 01:58	WG918054
n-Propylbenzene	U		0.000248	0.00120	1	10/20/2016 01:58	WG918054
Styrene	U		0.000281	0.00120	1	10/20/2016 01:58	WG918054
1,1,1,2-Tetrachloroethane	U		0.000317	0.00120	1	10/20/2016 01:58	WG918054
1,1,2,2-Tetrachloroethane	U		0.000439	0.00120	1	10/20/2016 01:58	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000439	0.00120	1	10/20/2016 01:58	WG918054
Tetrachloroethene	U		0.000332	0.00120	1	10/20/2016 01:58	WG918054
Toluene	U		0.000522	0.00601	1	10/20/2016 01:58	WG918054
1,2,3-Trichlorobenzene	U		0.000368	0.00120	1	10/20/2016 01:58	WG918054
1,2,4-Trichlorobenzene	U		0.000466	0.00120	1	10/20/2016 01:58	WG918054
1,1,1-Trichloroethane	U		0.000344	0.00120	1	10/20/2016 01:58	WG918054
1,1,2-Trichloroethane	U		0.000333	0.00120	1	10/20/2016 01:58	WG918054
Trichloroethene	U		0.000335	0.00120	1	10/20/2016 01:58	WG918054
Trichlorofluoromethane	U		0.000459	0.00601	1	10/20/2016 01:58	WG918054
1,2,3-Trichloropropane	U		0.000891	0.00300	1	10/20/2016 01:58	WG918054
1,2,4-Trimethylbenzene	U		0.000254	0.00120	1	10/20/2016 01:58	WG918054
1,2,3-Trimethylbenzene	U		0.000345	0.00120	1	10/20/2016 01:58	WG918054
1,3,5-Trimethylbenzene	U		0.000320	0.00120	1	10/20/2016 01:58	WG918054
Vinyl chloride	U		0.000350	0.00120	1	10/20/2016 01:58	WG918054
Xylenes, Total	U		0.000839	0.00361	1	10/20/2016 01:58	WG918054
Di-isopropyl ether	U		0.000298	0.00120	1	10/20/2016 01:58	WG918054
Ethanol	U		0.0589	0.120	1	10/20/2016 01:58	WG918054
Ethyl tert-butyl ether	U		0.000481	0.00120	1	10/20/2016 01:58	WG918054
Methyl tert-butyl ether	U		0.000255	0.00120	1	10/20/2016 01:58	WG918054
t-Amyl Alcohol	U		0.00505	0.0601	1	10/20/2016 01:58	WG918054
tert-Amyl Methyl Ether	U		0.000324	0.00120	1	10/20/2016 01:58	WG918054
tert-Butyl alcohol	U		0.00240	0.00601	1	10/20/2016 01:58	WG918054
(S) Toluene-d8	*105*			*88.7-115*		*10/20/2016 01:58*	WG918054
(S) Dibromofluoromethane	*100*			*76.3-123*		*10/20/2016 01:58*	WG918054
(S) 4-Bromofluorobenzene	*92.2*			*69.7-129*		*10/20/2016 01:58*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	1.00	J	0.881	4.81	1	10/19/2016 12:47	WG918428
C22-C32 Hydrocarbons	2.25	J	1.60	4.81	1	10/19/2016 12:47	WG918428
C32-C40 Hydrocarbons	U		1.60	4.81	1	10/19/2016 12:47	WG918428
(S) o-Terphenyl	*89.7*			*50.0-150*		*10/19/2016 12:47*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.0		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0405	0.122	1	10/17/2016 12:44	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*93.9*			*59.0-128*		*10/17/2016 12:44*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0122	0.0610	1	10/20/2016 02:17	WG918054
Acrylonitrile	U		0.00218	0.0122	1	10/20/2016 02:17	WG918054
Benzene	U		0.000329	0.00122	1	10/20/2016 02:17	WG918054
Bromobenzene	U		0.000346	0.00122	1	10/20/2016 02:17	WG918054
Bromodichloromethane	U		0.000310	0.00122	1	10/20/2016 02:17	WG918054
Bromoform	U		0.000517	0.00122	1	10/20/2016 02:17	WG918054
Bromomethane	U		0.00163	0.00610	1	10/20/2016 02:17	WG918054
n-Butylbenzene	U		0.000315	0.00122	1	10/20/2016 02:17	WG918054
sec-Butylbenzene	U		0.000245	0.00122	1	10/20/2016 02:17	WG918054
tert-Butylbenzene	U		0.000251	0.00122	1	10/20/2016 02:17	WG918054
Carbon tetrachloride	U		0.000400	0.00122	1	10/20/2016 02:17	WG918054
Carbon disulfide	0.000469	J	0.000269	0.00122	1	10/20/2016 02:17	WG918054
Chlorobenzene	U		0.000258	0.00122	1	10/20/2016 02:17	WG918054
Chlorodibromomethane	U		0.000455	0.00122	1	10/20/2016 02:17	WG918054
Chloroethane	U		0.00115	0.00610	1	10/20/2016 02:17	WG918054
2-Chloroethyl vinyl ether	U		0.00285	0.0610	1	10/20/2016 02:17	WG918054
Chloroform	U		0.000279	0.00610	1	10/20/2016 02:17	WG918054
Chloromethane	U		0.000457	0.00305	1	10/20/2016 02:17	WG918054
2-Chlorotoluene	U		0.000367	0.00122	1	10/20/2016 02:17	WG918054
4-Chlorotoluene	U		0.000293	0.00122	1	10/20/2016 02:17	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00128	0.00610	1	10/20/2016 02:17	WG918054
1,2-Dibromoethane	U		0.000418	0.00122	1	10/20/2016 02:17	WG918054
Dibromomethane	U		0.000466	0.00122	1	10/20/2016 02:17	WG918054
1,2-Dichlorobenzene	U		0.000372	0.00122	1	10/20/2016 02:17	WG918054
1,3-Dichlorobenzene	U		0.000291	0.00122	1	10/20/2016 02:17	WG918054
1,4-Dichlorobenzene	U		0.000276	0.00122	1	10/20/2016 02:17	WG918054
Dichlorodifluoromethane	U		0.000869	0.00610	1	10/20/2016 02:17	WG918054
1,1-Dichloroethane	U		0.000243	0.00122	1	10/20/2016 02:17	WG918054
1,2-Dichloroethane	U		0.000323	0.00122	1	10/20/2016 02:17	WG918054
1,1-Dichloroethene	U		0.000369	0.00122	1	10/20/2016 02:17	WG918054
cis-1,2-Dichloroethene	U		0.000287	0.00122	1	10/20/2016 02:17	WG918054
trans-1,2-Dichloroethene	U		0.000322	0.00122	1	10/20/2016 02:17	WG918054
1,2-Dichloropropane	U		0.000436	0.00122	1	10/20/2016 02:17	WG918054
1,1-Dichloropropene	U		0.000386	0.00122	1	10/20/2016 02:17	WG918054
1,3-Dichloropropane	U		0.000252	0.00122	1	10/20/2016 02:17	WG918054
cis-1,3-Dichloropropene	U		0.000319	0.00122	1	10/20/2016 02:17	WG918054
trans-1,3-Dichloropropene	U		0.000326	0.00122	1	10/20/2016 02:17	WG918054
2,2-Dichloropropane	U		0.000340	0.00122	1	10/20/2016 02:17	WG918054
Ethylbenzene	U		0.000362	0.00122	1	10/20/2016 02:17	WG918054
Hexachloro-1,3-butadiene	U		0.000417	0.00122	1	10/20/2016 02:17	WG918054
Isopropylbenzene	U		0.000296	0.00122	1	10/20/2016 02:17	WG918054
p-Isopropyltoluene	U		0.000249	0.00122	1	10/20/2016 02:17	WG918054
2-Butanone (MEK)	U		0.00571	0.0122	1	10/20/2016 02:17	WG918054
Methylene Chloride	U		0.00122	0.00610	1	10/20/2016 02:17	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00229	0.0122	1	10/20/2016 02:17	WG918054
Naphthalene	U		0.00122	0.00610	1	10/20/2016 02:17	WG918054
n-Propylbenzene	U		0.000251	0.00122	1	10/20/2016 02:17	WG918054
Styrene	U		0.000285	0.00122	1	10/20/2016 02:17	WG918054
1,1,1,2-Tetrachloroethane	U		0.000322	0.00122	1	10/20/2016 02:17	WG918054
1,1,2,2-Tetrachloroethane	U		0.000445	0.00122	1	10/20/2016 02:17	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000445	0.00122	1	10/20/2016 02:17	WG918054
Tetrachloroethene	U		0.000337	0.00122	1	10/20/2016 02:17	WG918054
Toluene	U		0.000529	0.00610	1	10/20/2016 02:17	WG918054
1,2,3-Trichlorobenzene	U		0.000373	0.00122	1	10/20/2016 02:17	WG918054
1,2,4-Trichlorobenzene	U		0.000473	0.00122	1	10/20/2016 02:17	WG918054
1,1,1-Trichloroethane	U		0.000349	0.00122	1	10/20/2016 02:17	WG918054
1,1,2-Trichloroethane	U		0.000338	0.00122	1	10/20/2016 02:17	WG918054
Trichloroethene	U		0.000340	0.00122	1	10/20/2016 02:17	WG918054
Trichlorofluoromethane	U		0.000466	0.00610	1	10/20/2016 02:17	WG918054
1,2,3-Trichloropropane	U		0.000903	0.00305	1	10/20/2016 02:17	WG918054
1,2,4-Trimethylbenzene	U		0.000257	0.00122	1	10/20/2016 02:17	WG918054
1,2,3-Trimethylbenzene	U		0.000350	0.00122	1	10/20/2016 02:17	WG918054
1,3,5-Trimethylbenzene	U		0.000324	0.00122	1	10/20/2016 02:17	WG918054
Vinyl chloride	U		0.000355	0.00122	1	10/20/2016 02:17	WG918054
Xylenes, Total	U		0.000851	0.00366	1	10/20/2016 02:17	WG918054
Di-isopropyl ether	U		0.000302	0.00122	1	10/20/2016 02:17	WG918054
Ethanol	U		0.0597	0.122	1	10/20/2016 02:17	WG918054
Ethyl tert-butyl ether	U		0.000488	0.00122	1	10/20/2016 02:17	WG918054
Methyl tert-butyl ether	U		0.000258	0.00122	1	10/20/2016 02:17	WG918054
t-Amyl Alcohol	U		0.00512	0.0610	1	10/20/2016 02:17	WG918054
tert-Amyl Methyl Ether	U		0.000329	0.00122	1	10/20/2016 02:17	WG918054
tert-Butyl alcohol	U		0.00244	0.00610	1	10/20/2016 02:17	WG918054
(S) Toluene-d8	*107*			*88.7-115*		*10/20/2016 02:17*	WG918054
(S) Dibromofluoromethane	*100*			*76.3-123*		*10/20/2016 02:17*	WG918054
(S) 4-Bromofluorobenzene	*90.4*			*69.7-129*		*10/20/2016 02:17*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	6.52		0.894	4.88	1	10/19/2016 13:20	WG918428
C22-C32 Hydrocarbons	2.48	J	1.62	4.88	1	10/19/2016 13:20	WG918428
C32-C40 Hydrocarbons	U		1.62	4.88	1	10/19/2016 13:20	WG918428
(S) o-Terphenyl	*90.4*			*50.0-150*		*10/19/2016 13:20*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.0		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0382	0.115	1	10/17/2016 13:06	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*93.6*			*59.0-128*		*10/17/2016 13:06*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0159	J	0.0115	0.0575	1	10/20/2016 02:36	WG918054
Acrylonitrile	U		0.00206	0.0115	1	10/20/2016 02:36	WG918054
Benzene	U		0.000310	0.00115	1	10/20/2016 02:36	WG918054
Bromobenzene	U		0.000327	0.00115	1	10/20/2016 02:36	WG918054
Bromodichloromethane	U		0.000292	0.00115	1	10/20/2016 02:36	WG918054
Bromoform	U		0.000488	0.00115	1	10/20/2016 02:36	WG918054
Bromomethane	U		0.00154	0.00575	1	10/20/2016 02:36	WG918054
n-Butylbenzene	U		0.000297	0.00115	1	10/20/2016 02:36	WG918054
sec-Butylbenzene	U		0.000231	0.00115	1	10/20/2016 02:36	WG918054
tert-Butylbenzene	U		0.000237	0.00115	1	10/20/2016 02:36	WG918054
Carbon tetrachloride	U		0.000377	0.00115	1	10/20/2016 02:36	WG918054
Carbon disulfide	U		0.000254	0.00115	1	10/20/2016 02:36	WG918054
Chlorobenzene	U		0.000244	0.00115	1	10/20/2016 02:36	WG918054
Chlorodibromomethane	U		0.000429	0.00115	1	10/20/2016 02:36	WG918054
Chloroethane	U		0.00109	0.00575	1	10/20/2016 02:36	WG918054
2-Chloroethyl vinyl ether	U		0.00269	0.0575	1	10/20/2016 02:36	WG918054
Chloroform	U		0.000263	0.00575	1	10/20/2016 02:36	WG918054
Chloromethane	U		0.000431	0.00287	1	10/20/2016 02:36	WG918054
2-Chlorotoluene	U		0.000346	0.00115	1	10/20/2016 02:36	WG918054
4-Chlorotoluene	U		0.000276	0.00115	1	10/20/2016 02:36	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00121	0.00575	1	10/20/2016 02:36	WG918054
1,2-Dibromoethane	U		0.000394	0.00115	1	10/20/2016 02:36	WG918054
Dibromomethane	U		0.000439	0.00115	1	10/20/2016 02:36	WG918054
1,2-Dichlorobenzene	U		0.000351	0.00115	1	10/20/2016 02:36	WG918054
1,3-Dichlorobenzene	U		0.000275	0.00115	1	10/20/2016 02:36	WG918054
1,4-Dichlorobenzene	U		0.000260	0.00115	1	10/20/2016 02:36	WG918054
Dichlorodifluoromethane	U		0.000820	0.00575	1	10/20/2016 02:36	WG918054
1,1-Dichloroethane	U		0.000229	0.00115	1	10/20/2016 02:36	WG918054
1,2-Dichloroethane	U		0.000305	0.00115	1	10/20/2016 02:36	WG918054
1,1-Dichloroethene	U		0.000348	0.00115	1	10/20/2016 02:36	WG918054
cis-1,2-Dichloroethene	U		0.000270	0.00115	1	10/20/2016 02:36	WG918054
trans-1,2-Dichloroethene	U		0.000304	0.00115	1	10/20/2016 02:36	WG918054
1,2-Dichloropropane	U		0.000412	0.00115	1	10/20/2016 02:36	WG918054
1,1-Dichloropropene	U		0.000364	0.00115	1	10/20/2016 02:36	WG918054
1,3-Dichloropropane	U		0.000238	0.00115	1	10/20/2016 02:36	WG918054
cis-1,3-Dichloropropene	U		0.000301	0.00115	1	10/20/2016 02:36	WG918054
trans-1,3-Dichloropropene	U		0.000307	0.00115	1	10/20/2016 02:36	WG918054
2,2-Dichloropropane	U		0.000321	0.00115	1	10/20/2016 02:36	WG918054
Ethylbenzene	U		0.000341	0.00115	1	10/20/2016 02:36	WG918054
Hexachloro-1,3-butadiene	U		0.000393	0.00115	1	10/20/2016 02:36	WG918054
Isopropylbenzene	U		0.000279	0.00115	1	10/20/2016 02:36	WG918054
p-Isopropyltoluene	U		0.000235	0.00115	1	10/20/2016 02:36	WG918054
2-Butanone (MEK)	U		0.00538	0.0115	1	10/20/2016 02:36	WG918054
Methylene Chloride	U		0.00115	0.00575	1	10/20/2016 02:36	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00216	0.0115	1	10/20/2016 02:36	WG918054
Naphthalene	U		0.00115	0.00575	1	10/20/2016 02:36	WG918054
n-Propylbenzene	U		0.000237	0.00115	1	10/20/2016 02:36	WG918054
Styrene	U		0.000269	0.00115	1	10/20/2016 02:36	WG918054
1,1,1,2-Tetrachloroethane	U		0.000304	0.00115	1	10/20/2016 02:36	WG918054
1,1,2,2-Tetrachloroethane	U		0.000420	0.00115	1	10/20/2016 02:36	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000420	0.00115	1	10/20/2016 02:36	WG918054
Tetrachloroethene	U		0.000317	0.00115	1	10/20/2016 02:36	WG918054
Toluene	U		0.000499	0.00575	1	10/20/2016 02:36	WG918054
1,2,3-Trichlorobenzene	U		0.000352	0.00115	1	10/20/2016 02:36	WG918054
1,2,4-Trichlorobenzene	U		0.000446	0.00115	1	10/20/2016 02:36	WG918054
1,1,1-Trichloroethane	U		0.000329	0.00115	1	10/20/2016 02:36	WG918054
1,1,2-Trichloroethane	U		0.000319	0.00115	1	10/20/2016 02:36	WG918054
Trichloroethene	U		0.000321	0.00115	1	10/20/2016 02:36	WG918054
Trichlorofluoromethane	U		0.000439	0.00575	1	10/20/2016 02:36	WG918054
1,2,3-Trichloropropane	U		0.000852	0.00287	1	10/20/2016 02:36	WG918054
1,2,4-Trimethylbenzene	U		0.000243	0.00115	1	10/20/2016 02:36	WG918054
1,2,3-Trimethylbenzene	U		0.000330	0.00115	1	10/20/2016 02:36	WG918054
1,3,5-Trimethylbenzene	U		0.000306	0.00115	1	10/20/2016 02:36	WG918054
Vinyl chloride	U		0.000335	0.00115	1	10/20/2016 02:36	WG918054
Xylenes, Total	U		0.000803	0.00345	1	10/20/2016 02:36	WG918054
Di-isopropyl ether	U		0.000285	0.00115	1	10/20/2016 02:36	WG918054
Ethanol	U		0.0563	0.115	1	10/20/2016 02:36	WG918054
Ethyl tert-butyl ether	U		0.000460	0.00115	1	10/20/2016 02:36	WG918054
Methyl tert-butyl ether	U		0.000244	0.00115	1	10/20/2016 02:36	WG918054
t-Amyl Alcohol	U		0.00483	0.0575	1	10/20/2016 02:36	WG918054
tert-Amyl Methyl Ether	U		0.000310	0.00115	1	10/20/2016 02:36	WG918054
tert-Butyl alcohol	U		0.00230	0.00575	1	10/20/2016 02:36	WG918054
(S) Toluene-d8	*106*			*88.7-115*		*10/20/2016 02:36*	WG918054
(S) Dibromofluoromethane	*101*			*76.3-123*		*10/20/2016 02:36*	WG918054
(S) 4-Bromofluorobenzene	*89.7*			*69.7-129*		*10/20/2016 02:36*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	U		0.843	4.60	1	10/19/2016 10:49	WG918428
C22-C32 Hydrocarbons	U		1.53	4.60	1	10/19/2016 10:49	WG918428
C32-C40 Hydrocarbons	U		1.53	4.60	1	10/19/2016 10:49	WG918428
(S) o-Terphenyl	*89.2*			*50.0-150*		*10/19/2016 10:49*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.1		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	0.0623	B J	0.0385	0.116	1	10/17/2016 13:28	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.1*			*59.0-128*		*10/17/2016 13:28*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0122	J	0.0116	0.0580	1	10/20/2016 02:55	WG918054
Acrylonitrile	U		0.00208	0.0116	1	10/20/2016 02:55	WG918054
Benzene	0.00272		0.000313	0.00116	1	10/20/2016 02:55	WG918054
Bromobenzene	U		0.000330	0.00116	1	10/20/2016 02:55	WG918054
Bromodichloromethane	U		0.000295	0.00116	1	10/20/2016 02:55	WG918054
Bromoform	U		0.000492	0.00116	1	10/20/2016 02:55	WG918054
Bromomethane	U		0.00156	0.00580	1	10/20/2016 02:55	WG918054
n-Butylbenzene	U		0.000300	0.00116	1	10/20/2016 02:55	WG918054
sec-Butylbenzene	U		0.000233	0.00116	1	10/20/2016 02:55	WG918054
tert-Butylbenzene	U		0.000239	0.00116	1	10/20/2016 02:55	WG918054
Carbon tetrachloride	U		0.000381	0.00116	1	10/20/2016 02:55	WG918054
Carbon disulfide	0.00191		0.000257	0.00116	1	10/20/2016 02:55	WG918054
Chlorobenzene	U		0.000246	0.00116	1	10/20/2016 02:55	WG918054
Chlorodibromomethane	U		0.000433	0.00116	1	10/20/2016 02:55	WG918054
Chloroethane	U		0.00110	0.00580	1	10/20/2016 02:55	WG918054
2-Chloroethyl vinyl ether	U		0.00272	0.0580	1	10/20/2016 02:55	WG918054
Chloroform	U		0.000266	0.00580	1	10/20/2016 02:55	WG918054
Chloromethane	U		0.000435	0.00290	1	10/20/2016 02:55	WG918054
2-Chlorotoluene	U		0.000349	0.00116	1	10/20/2016 02:55	WG918054
4-Chlorotoluene	U		0.000279	0.00116	1	10/20/2016 02:55	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00122	0.00580	1	10/20/2016 02:55	WG918054
1,2-Dibromoethane	U		0.000398	0.00116	1	10/20/2016 02:55	WG918054
Dibromomethane	U		0.000443	0.00116	1	10/20/2016 02:55	WG918054
1,2-Dichlorobenzene	U		0.000354	0.00116	1	10/20/2016 02:55	WG918054
1,3-Dichlorobenzene	U		0.000277	0.00116	1	10/20/2016 02:55	WG918054
1,4-Dichlorobenzene	U		0.000262	0.00116	1	10/20/2016 02:55	WG918054
Dichlorodifluoromethane	U		0.000828	0.00580	1	10/20/2016 02:55	WG918054
1,1-Dichloroethane	U		0.000231	0.00116	1	10/20/2016 02:55	WG918054
1,2-Dichloroethane	U		0.000308	0.00116	1	10/20/2016 02:55	WG918054
1,1-Dichloroethene	U		0.000352	0.00116	1	10/20/2016 02:55	WG918054
cis-1,2-Dichloroethene	U		0.000273	0.00116	1	10/20/2016 02:55	WG918054
trans-1,2-Dichloroethene	U		0.000306	0.00116	1	10/20/2016 02:55	WG918054
1,2-Dichloropropane	U		0.000416	0.00116	1	10/20/2016 02:55	WG918054
1,1-Dichloropropene	U		0.000368	0.00116	1	10/20/2016 02:55	WG918054
1,3-Dichloropropane	U		0.000240	0.00116	1	10/20/2016 02:55	WG918054
cis-1,3-Dichloropropene	U		0.000304	0.00116	1	10/20/2016 02:55	WG918054
trans-1,3-Dichloropropene	U		0.000310	0.00116	1	10/20/2016 02:55	WG918054
2,2-Dichloropropane	U		0.000324	0.00116	1	10/20/2016 02:55	WG918054
Ethylbenzene	U		0.000345	0.00116	1	10/20/2016 02:55	WG918054
Hexachloro-1,3-butadiene	U		0.000397	0.00116	1	10/20/2016 02:55	WG918054
Isopropylbenzene	U		0.000282	0.00116	1	10/20/2016 02:55	WG918054
p-Isopropyltoluene	U		0.000237	0.00116	1	10/20/2016 02:55	WG918054
2-Butanone (MEK)	U		0.00543	0.0116	1	10/20/2016 02:55	WG918054
Methylene Chloride	U		0.00116	0.00580	1	10/20/2016 02:55	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00218	0.0116	1	10/20/2016 02:55	WG918054
Naphthalene	U		0.00116	0.00580	1	10/20/2016 02:55	WG918054
n-Propylbenzene	U		0.000239	0.00116	1	10/20/2016 02:55	WG918054
Styrene	U		0.000272	0.00116	1	10/20/2016 02:55	WG918054
1,1,1,2-Tetrachloroethane	U		0.000306	0.00116	1	10/20/2016 02:55	WG918054
1,1,2,2-Tetrachloroethane	U		0.000424	0.00116	1	10/20/2016 02:55	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000424	0.00116	1	10/20/2016 02:55	WG918054
Tetrachloroethene	U		0.000320	0.00116	1	10/20/2016 02:55	WG918054
Toluene	U		0.000504	0.00580	1	10/20/2016 02:55	WG918054
1,2,3-Trichlorobenzene	U		0.000355	0.00116	1	10/20/2016 02:55	WG918054
1,2,4-Trichlorobenzene	U		0.000450	0.00116	1	10/20/2016 02:55	WG918054
1,1,1-Trichloroethane	U		0.000332	0.00116	1	10/20/2016 02:55	WG918054
1,1,2-Trichloroethane	U		0.000322	0.00116	1	10/20/2016 02:55	WG918054
Trichloroethene	U		0.000324	0.00116	1	10/20/2016 02:55	WG918054
Trichlorofluoromethane	U		0.000443	0.00580	1	10/20/2016 02:55	WG918054
1,2,3-Trichloropropane	U		0.000860	0.00290	1	10/20/2016 02:55	WG918054
1,2,4-Trimethylbenzene	U		0.000245	0.00116	1	10/20/2016 02:55	WG918054
1,2,3-Trimethylbenzene	U		0.000333	0.00116	1	10/20/2016 02:55	WG918054
1,3,5-Trimethylbenzene	U		0.000309	0.00116	1	10/20/2016 02:55	WG918054
Vinyl chloride	U		0.000338	0.00116	1	10/20/2016 02:55	WG918054
Xylenes, Total	U		0.000810	0.00348	1	10/20/2016 02:55	WG918054
Di-isopropyl ether	U		0.000288	0.00116	1	10/20/2016 02:55	WG918054
Ethanol	U		0.0569	0.116	1	10/20/2016 02:55	WG918054
Ethyl tert-butyl ether	U		0.000464	0.00116	1	10/20/2016 02:55	WG918054
Methyl tert-butyl ether	U		0.000246	0.00116	1	10/20/2016 02:55	WG918054
t-Amyl Alcohol	U		0.00488	0.0580	1	10/20/2016 02:55	WG918054
tert-Amyl Methyl Ether	U		0.000313	0.00116	1	10/20/2016 02:55	WG918054
tert-Butyl alcohol	U		0.00232	0.00580	1	10/20/2016 02:55	WG918054
(S) Toluene-d8	*105*			*88.7-115*		*10/20/2016 02:55*	WG918054
(S) Dibromofluoromethane	*100*			*76.3-123*		*10/20/2016 02:55*	WG918054
(S) 4-Bromofluorobenzene	*89.6*			*69.7-129*		*10/20/2016 02:55*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	1.68	J	0.851	4.64	1	10/19/2016 11:56	WG918428
C22-C32 Hydrocarbons	1.79	J	1.54	4.64	1	10/19/2016 11:56	WG918428
C32-C40 Hydrocarbons	U		1.54	4.64	1	10/19/2016 11:56	WG918428
(S) o-Terphenyl	*95.8*			*50.0-150*		*10/19/2016 11:56*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.5		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U	J3	0.0384	0.116	1	10/17/2016 13:51	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*93.0*			*59.0-128*		*10/17/2016 13:51*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0232	J	0.0116	0.0578	1	10/20/2016 03:14	WG918054
Acrylonitrile	U		0.00207	0.0116	1	10/20/2016 03:14	WG918054
Benzene	U		0.000312	0.00116	1	10/20/2016 03:14	WG918054
Bromobenzene	U		0.000328	0.00116	1	10/20/2016 03:14	WG918054
Bromodichloromethane	U		0.000294	0.00116	1	10/20/2016 03:14	WG918054
Bromoform	U		0.000490	0.00116	1	10/20/2016 03:14	WG918054
Bromomethane	U		0.00155	0.00578	1	10/20/2016 03:14	WG918054
n-Butylbenzene	U		0.000298	0.00116	1	10/20/2016 03:14	WG918054
sec-Butylbenzene	U		0.000232	0.00116	1	10/20/2016 03:14	WG918054
tert-Butylbenzene	U		0.000238	0.00116	1	10/20/2016 03:14	WG918054
Carbon tetrachloride	U		0.000379	0.00116	1	10/20/2016 03:14	WG918054
Carbon disulfide	U		0.000255	0.00116	1	10/20/2016 03:14	WG918054
Chlorobenzene	U		0.000245	0.00116	1	10/20/2016 03:14	WG918054
Chlorodibromomethane	U		0.000431	0.00116	1	10/20/2016 03:14	WG918054
Chloroethane	U		0.00109	0.00578	1	10/20/2016 03:14	WG918054
2-Chloroethyl vinyl ether	U		0.00270	0.0578	1	10/20/2016 03:14	WG918054
Chloroform	U		0.000265	0.00578	1	10/20/2016 03:14	WG918054
Chloromethane	U		0.000433	0.00289	1	10/20/2016 03:14	WG918054
2-Chlorotoluene	U		0.000348	0.00116	1	10/20/2016 03:14	WG918054
4-Chlorotoluene	U		0.000277	0.00116	1	10/20/2016 03:14	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00121	0.00578	1	10/20/2016 03:14	WG918054
1,2-Dibromoethane	U		0.000396	0.00116	1	10/20/2016 03:14	WG918054
Dibromomethane	U		0.000441	0.00116	1	10/20/2016 03:14	WG918054
1,2-Dichlorobenzene	U		0.000352	0.00116	1	10/20/2016 03:14	WG918054
1,3-Dichlorobenzene	U		0.000276	0.00116	1	10/20/2016 03:14	WG918054
1,4-Dichlorobenzene	U		0.000261	0.00116	1	10/20/2016 03:14	WG918054
Dichlorodifluoromethane	U		0.000824	0.00578	1	10/20/2016 03:14	WG918054
1,1-Dichloroethane	U		0.000230	0.00116	1	10/20/2016 03:14	WG918054
1,2-Dichloroethane	U		0.000306	0.00116	1	10/20/2016 03:14	WG918054
1,1-Dichloroethene	U		0.000350	0.00116	1	10/20/2016 03:14	WG918054
cis-1,2-Dichloroethene	U		0.000272	0.00116	1	10/20/2016 03:14	WG918054
trans-1,2-Dichloroethene	U		0.000305	0.00116	1	10/20/2016 03:14	WG918054
1,2-Dichloropropane	U		0.000414	0.00116	1	10/20/2016 03:14	WG918054
1,1-Dichloropropene	U		0.000366	0.00116	1	10/20/2016 03:14	WG918054
1,3-Dichloropropane	U		0.000239	0.00116	1	10/20/2016 03:14	WG918054
cis-1,3-Dichloropropene	U		0.000303	0.00116	1	10/20/2016 03:14	WG918054
trans-1,3-Dichloropropene	U		0.000309	0.00116	1	10/20/2016 03:14	WG918054
2,2-Dichloropropane	U		0.000322	0.00116	1	10/20/2016 03:14	WG918054
Ethylbenzene	U		0.000343	0.00116	1	10/20/2016 03:14	WG918054
Hexachloro-1,3-butadiene	U		0.000395	0.00116	1	10/20/2016 03:14	WG918054
Isopropylbenzene	U		0.000281	0.00116	1	10/20/2016 03:14	WG918054
p-Isopropyltoluene	U		0.000236	0.00116	1	10/20/2016 03:14	WG918054
2-Butanone (MEK)	U		0.00541	0.0116	1	10/20/2016 03:14	WG918054
Methylene Chloride	U		0.00116	0.00578	1	10/20/2016 03:14	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00217	0.0116	1	10/20/2016 03:14	WG918054
Naphthalene	U		0.00116	0.00578	1	10/20/2016 03:14	WG918054
n-Propylbenzene	U		0.000238	0.00116	1	10/20/2016 03:14	WG918054
Styrene	U		0.000270	0.00116	1	10/20/2016 03:14	WG918054
1,1,1,2-Tetrachloroethane	U		0.000305	0.00116	1	10/20/2016 03:14	WG918054
1,1,2,2-Tetrachloroethane	U		0.000422	0.00116	1	10/20/2016 03:14	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000422	0.00116	1	10/20/2016 03:14	WG918054
Tetrachloroethene	U		0.000319	0.00116	1	10/20/2016 03:14	WG918054
Toluene	U		0.000502	0.00578	1	10/20/2016 03:14	WG918054
1,2,3-Trichlorobenzene	U		0.000354	0.00116	1	10/20/2016 03:14	WG918054
1,2,4-Trichlorobenzene	U		0.000448	0.00116	1	10/20/2016 03:14	WG918054
1,1,1-Trichloroethane	U		0.000330	0.00116	1	10/20/2016 03:14	WG918054
1,1,2-Trichloroethane	U		0.000320	0.00116	1	10/20/2016 03:14	WG918054
Trichloroethene	U		0.000322	0.00116	1	10/20/2016 03:14	WG918054
Trichlorofluoromethane	U		0.000441	0.00578	1	10/20/2016 03:14	WG918054
1,2,3-Trichloropropane	U		0.000856	0.00289	1	10/20/2016 03:14	WG918054
1,2,4-Trimethylbenzene	U		0.000244	0.00116	1	10/20/2016 03:14	WG918054
1,2,3-Trimethylbenzene	U		0.000332	0.00116	1	10/20/2016 03:14	WG918054
1,3,5-Trimethylbenzene	U		0.000307	0.00116	1	10/20/2016 03:14	WG918054
Vinyl chloride	U		0.000336	0.00116	1	10/20/2016 03:14	WG918054
Xylenes, Total	U		0.000807	0.00347	1	10/20/2016 03:14	WG918054
Di-isopropyl ether	U		0.000287	0.00116	1	10/20/2016 03:14	WG918054
Ethanol	U		0.0566	0.116	1	10/20/2016 03:14	WG918054
Ethyl tert-butyl ether	U		0.000462	0.00116	1	10/20/2016 03:14	WG918054
Methyl tert-butyl ether	U		0.000245	0.00116	1	10/20/2016 03:14	WG918054
t-Amyl Alcohol	U		0.00485	0.0578	1	10/20/2016 03:14	WG918054
tert-Amyl Methyl Ether	U		0.000312	0.00116	1	10/20/2016 03:14	WG918054
tert-Butyl alcohol	U		0.00231	0.00578	1	10/20/2016 03:14	WG918054
(S) Toluene-d8	*105*			*88.7-115*		*10/20/2016 03:14*	WG918054
(S) Dibromofluoromethane	*100*			*76.3-123*		*10/20/2016 03:14*	WG918054
(S) 4-Bromofluorobenzene	*89.0*			*69.7-129*		*10/20/2016 03:14*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	3.49	J	0.847	4.62	1	10/19/2016 11:07	WG918428
C22-C32 Hydrocarbons	U		1.54	4.62	1	10/19/2016 11:07	WG918428
C32-C40 Hydrocarbons	U		1.54	4.62	1	10/19/2016 11:07	WG918428
(S) o-Terphenyl	*74.5*			*50.0-150*		*10/19/2016 11:07*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.0		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0415	0.125	1	10/17/2016 14:13	WG917734
(S) α,α,α-Trifluorotoluene(FID)	*92.9*			*59.0-128*		*10/17/2016 14:13*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0125	0.0625	1	10/20/2016 03:33	WG918054
Acrylonitrile	U		0.00224	0.0125	1	10/20/2016 03:33	WG918054
Benzene	U		0.000337	0.00125	1	10/20/2016 03:33	WG918054
Bromobenzene	U		0.000355	0.00125	1	10/20/2016 03:33	WG918054
Bromodichloromethane	U		0.000317	0.00125	1	10/20/2016 03:33	WG918054
Bromoform	U		0.000530	0.00125	1	10/20/2016 03:33	WG918054
Bromomethane	U		0.00167	0.00625	1	10/20/2016 03:33	WG918054
n-Butylbenzene	U		0.000322	0.00125	1	10/20/2016 03:33	WG918054
sec-Butylbenzene	U		0.000251	0.00125	1	10/20/2016 03:33	WG918054
tert-Butylbenzene	U		0.000257	0.00125	1	10/20/2016 03:33	WG918054
Carbon tetrachloride	U		0.000410	0.00125	1	10/20/2016 03:33	WG918054
Carbon disulfide	U		0.000276	0.00125	1	10/20/2016 03:33	WG918054
Chlorobenzene	U		0.000265	0.00125	1	10/20/2016 03:33	WG918054
Chlorodibromomethane	U		0.000466	0.00125	1	10/20/2016 03:33	WG918054
Chloroethane	U		0.00118	0.00625	1	10/20/2016 03:33	WG918054
2-Chloroethyl vinyl ether	U		0.00292	0.0625	1	10/20/2016 03:33	WG918054
Chloroform	U		0.000286	0.00625	1	10/20/2016 03:33	WG918054
Chloromethane	U		0.000469	0.00312	1	10/20/2016 03:33	WG918054
2-Chlorotoluene	U		0.000376	0.00125	1	10/20/2016 03:33	WG918054
4-Chlorotoluene	U		0.000300	0.00125	1	10/20/2016 03:33	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00131	0.00625	1	10/20/2016 03:33	WG918054
1,2-Dibromoethane	U		0.000429	0.00125	1	10/20/2016 03:33	WG918054
Dibromomethane	U		0.000477	0.00125	1	10/20/2016 03:33	WG918054
1,2-Dichlorobenzene	U		0.000381	0.00125	1	10/20/2016 03:33	WG918054
1,3-Dichlorobenzene	U		0.000299	0.00125	1	10/20/2016 03:33	WG918054
1,4-Dichlorobenzene	U		0.000282	0.00125	1	10/20/2016 03:33	WG918054
Dichlorodifluoromethane	U		0.000891	0.00625	1	10/20/2016 03:33	WG918054
1,1-Dichloroethane	U		0.000249	0.00125	1	10/20/2016 03:33	WG918054
1,2-Dichloroethane	U		0.000331	0.00125	1	10/20/2016 03:33	WG918054
1,1-Dichloroethene	U		0.000379	0.00125	1	10/20/2016 03:33	WG918054
cis-1,2-Dichloroethene	U		0.000294	0.00125	1	10/20/2016 03:33	WG918054
trans-1,2-Dichloroethene	U		0.000330	0.00125	1	10/20/2016 03:33	WG918054
1,2-Dichloropropane	U		0.000447	0.00125	1	10/20/2016 03:33	WG918054
1,1-Dichloropropene	U		0.000396	0.00125	1	10/20/2016 03:33	WG918054
1,3-Dichloropropane	U		0.000259	0.00125	1	10/20/2016 03:33	WG918054
cis-1,3-Dichloropropene	U		0.000327	0.00125	1	10/20/2016 03:33	WG918054
trans-1,3-Dichloropropene	U		0.000334	0.00125	1	10/20/2016 03:33	WG918054
2,2-Dichloropropane	U		0.000349	0.00125	1	10/20/2016 03:33	WG918054
Ethylbenzene	U		0.000371	0.00125	1	10/20/2016 03:33	WG918054
Hexachloro-1,3-butadiene	U		0.000427	0.00125	1	10/20/2016 03:33	WG918054
Isopropylbenzene	U		0.000304	0.00125	1	10/20/2016 03:33	WG918054
p-Isopropyltoluene	U		0.000255	0.00125	1	10/20/2016 03:33	WG918054
2-Butanone (MEK)	U		0.00585	0.0125	1	10/20/2016 03:33	WG918054
Methylene Chloride	U		0.00125	0.00625	1	10/20/2016 03:33	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00235	0.0125	1	10/20/2016 03:33	WG918054
Naphthalene	U		0.00125	0.00625	1	10/20/2016 03:33	WG918054
n-Propylbenzene	U		0.000257	0.00125	1	10/20/2016 03:33	WG918054
Styrene	U		0.000292	0.00125	1	10/20/2016 03:33	WG918054
1,1,1,2-Tetrachloroethane	U		0.000330	0.00125	1	10/20/2016 03:33	WG918054
1,1,2,2-Tetrachloroethane	U		0.000456	0.00125	1	10/20/2016 03:33	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000456	0.00125	1	10/20/2016 03:33	WG918054
Tetrachloroethene	U		0.000345	0.00125	1	10/20/2016 03:33	WG918054
Toluene	U		0.000542	0.00625	1	10/20/2016 03:33	WG918054
1,2,3-Trichlorobenzene	U		0.000382	0.00125	1	10/20/2016 03:33	WG918054
1,2,4-Trichlorobenzene	U		0.000485	0.00125	1	10/20/2016 03:33	WG918054
1,1,1-Trichloroethane	U		0.000357	0.00125	1	10/20/2016 03:33	WG918054
1,1,2-Trichloroethane	U		0.000346	0.00125	1	10/20/2016 03:33	WG918054
Trichloroethene	U		0.000349	0.00125	1	10/20/2016 03:33	WG918054
Trichlorofluoromethane	U		0.000477	0.00625	1	10/20/2016 03:33	WG918054
1,2,3-Trichloropropane	U		0.000926	0.00312	1	10/20/2016 03:33	WG918054
1,2,4-Trimethylbenzene	U		0.000264	0.00125	1	10/20/2016 03:33	WG918054
1,2,3-Trimethylbenzene	U		0.000359	0.00125	1	10/20/2016 03:33	WG918054
1,3,5-Trimethylbenzene	U		0.000332	0.00125	1	10/20/2016 03:33	WG918054
Vinyl chloride	U		0.000364	0.00125	1	10/20/2016 03:33	WG918054
Xylenes, Total	U		0.000872	0.00375	1	10/20/2016 03:33	WG918054
Di-isopropyl ether	U		0.000310	0.00125	1	10/20/2016 03:33	WG918054
Ethanol	U		0.0612	0.125	1	10/20/2016 03:33	WG918054
Ethyl tert-butyl ether	U		0.000500	0.00125	1	10/20/2016 03:33	WG918054
Methyl tert-butyl ether	U		0.000265	0.00125	1	10/20/2016 03:33	WG918054
t-Amyl Alcohol	U		0.00525	0.0625	1	10/20/2016 03:33	WG918054
tert-Amyl Methyl Ether	U		0.000337	0.00125	1	10/20/2016 03:33	WG918054
tert-Butyl alcohol	U		0.00250	0.00625	1	10/20/2016 03:33	WG918054
(S) Toluene-d8	*105*			*88.7-115*		*10/20/2016 03:33*	WG918054
(S) Dibromofluoromethane	*101*			*76.3-123*		*10/20/2016 03:33*	WG918054
(S) 4-Bromofluorobenzene	*89.9*			*69.7-129*		*10/20/2016 03:33*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	7.16		0.916	5.00	1	10/19/2016 16:12	WG918428
C22-C32 Hydrocarbons	1.77	J	1.66	5.00	1	10/19/2016 16:12	WG918428
C32-C40 Hydrocarbons	U		1.66	5.00	1	10/19/2016 16:12	WG918428
(S) o-Terphenyl	*88.6*			*50.0-150*		*10/19/2016 16:12*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.1		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	0.0884	B J	0.0386	0.116	1	10/17/2016 14:35	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.7*			*59.0-128*		*10/17/2016 14:35*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0963		0.0116	0.0581	1	10/20/2016 03:52	WG918054
Acrylonitrile	U		0.00208	0.0116	1	10/20/2016 03:52	WG918054
Benzene	0.00219		0.000314	0.00116	1	10/20/2016 03:52	WG918054
Bromobenzene	U		0.000330	0.00116	1	10/20/2016 03:52	WG918054
Bromodichloromethane	U		0.000295	0.00116	1	10/20/2016 03:52	WG918054
Bromoform	U		0.000492	0.00116	1	10/20/2016 03:52	WG918054
Bromomethane	U		0.00156	0.00581	1	10/20/2016 03:52	WG918054
n-Butylbenzene	U		0.000300	0.00116	1	10/20/2016 03:52	WG918054
sec-Butylbenzene	0.000271	J	0.000233	0.00116	1	10/20/2016 03:52	WG918054
tert-Butylbenzene	U		0.000239	0.00116	1	10/20/2016 03:52	WG918054
Carbon tetrachloride	U		0.000381	0.00116	1	10/20/2016 03:52	WG918054
Carbon disulfide	0.000933	J	0.000257	0.00116	1	10/20/2016 03:52	WG918054
Chlorobenzene	U		0.000246	0.00116	1	10/20/2016 03:52	WG918054
Chlorodibromomethane	U		0.000433	0.00116	1	10/20/2016 03:52	WG918054
Chloroethane	U		0.00110	0.00581	1	10/20/2016 03:52	WG918054
2-Chloroethyl vinyl ether	U		0.00272	0.0581	1	10/20/2016 03:52	WG918054
Chloroform	U		0.000266	0.00581	1	10/20/2016 03:52	WG918054
Chloromethane	U		0.000436	0.00290	1	10/20/2016 03:52	WG918054
2-Chlorotoluene	U		0.000350	0.00116	1	10/20/2016 03:52	WG918054
4-Chlorotoluene	U		0.000279	0.00116	1	10/20/2016 03:52	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00122	0.00581	1	10/20/2016 03:52	WG918054
1,2-Dibromoethane	U		0.000398	0.00116	1	10/20/2016 03:52	WG918054
Dibromomethane	U		0.000444	0.00116	1	10/20/2016 03:52	WG918054
1,2-Dichlorobenzene	U		0.000354	0.00116	1	10/20/2016 03:52	WG918054
1,3-Dichlorobenzene	U		0.000278	0.00116	1	10/20/2016 03:52	WG918054
1,4-Dichlorobenzene	U		0.000262	0.00116	1	10/20/2016 03:52	WG918054
Dichlorodifluoromethane	U		0.000828	0.00581	1	10/20/2016 03:52	WG918054
1,1-Dichloroethane	U		0.000231	0.00116	1	10/20/2016 03:52	WG918054
1,2-Dichloroethane	U		0.000308	0.00116	1	10/20/2016 03:52	WG918054
1,1-Dichloroethene	U		0.000352	0.00116	1	10/20/2016 03:52	WG918054
cis-1,2-Dichloroethene	U		0.000273	0.00116	1	10/20/2016 03:52	WG918054
trans-1,2-Dichloroethene	U		0.000307	0.00116	1	10/20/2016 03:52	WG918054
1,2-Dichloropropane	U		0.000416	0.00116	1	10/20/2016 03:52	WG918054
1,1-Dichloropropene	U		0.000368	0.00116	1	10/20/2016 03:52	WG918054
1,3-Dichloropropane	U		0.000240	0.00116	1	10/20/2016 03:52	WG918054
cis-1,3-Dichloropropene	U		0.000304	0.00116	1	10/20/2016 03:52	WG918054
trans-1,3-Dichloropropene	U		0.000310	0.00116	1	10/20/2016 03:52	WG918054
2,2-Dichloropropane	U		0.000324	0.00116	1	10/20/2016 03:52	WG918054
Ethylbenzene	U		0.000345	0.00116	1	10/20/2016 03:52	WG918054
Hexachloro-1,3-butadiene	U		0.000397	0.00116	1	10/20/2016 03:52	WG918054
Isopropylbenzene	U		0.000282	0.00116	1	10/20/2016 03:52	WG918054
p-Isopropyltoluene	U		0.000237	0.00116	1	10/20/2016 03:52	WG918054
2-Butanone (MEK)	0.0246		0.00544	0.0116	1	10/20/2016 03:52	WG918054
Methylene Chloride	U		0.00116	0.00581	1	10/20/2016 03:52	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00218	0.0116	1	10/20/2016 03:52	WG918054
Naphthalene	U		0.00116	0.00581	1	10/20/2016 03:52	WG918054
n-Propylbenzene	0.000346	J	0.000239	0.00116	1	10/20/2016 03:52	WG918054
Styrene	U		0.000272	0.00116	1	10/20/2016 03:52	WG918054
1,1,1,2-Tetrachloroethane	U		0.000307	0.00116	1	10/20/2016 03:52	WG918054
1,1,2,2-Tetrachloroethane	U		0.000424	0.00116	1	10/20/2016 03:52	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000424	0.00116	1	10/20/2016 03:52	WG918054
Tetrachloroethene	U		0.000321	0.00116	1	10/20/2016 03:52	WG918054
Toluene	U		0.000504	0.00581	1	10/20/2016 03:52	WG918054
1,2,3-Trichlorobenzene	U		0.000355	0.00116	1	10/20/2016 03:52	WG918054
1,2,4-Trichlorobenzene	U		0.000451	0.00116	1	10/20/2016 03:52	WG918054
1,1,1-Trichloroethane	U		0.000332	0.00116	1	10/20/2016 03:52	WG918054
1,1,2-Trichloroethane	U		0.000322	0.00116	1	10/20/2016 03:52	WG918054
Trichloroethene	U		0.000324	0.00116	1	10/20/2016 03:52	WG918054
Trichlorofluoromethane	U		0.000444	0.00581	1	10/20/2016 03:52	WG918054
1,2,3-Trichloropropane	U		0.000861	0.00290	1	10/20/2016 03:52	WG918054
1,2,4-Trimethylbenzene	0.000260	J	0.000245	0.00116	1	10/20/2016 03:52	WG918054
1,2,3-Trimethylbenzene	U		0.000333	0.00116	1	10/20/2016 03:52	WG918054
1,3,5-Trimethylbenzene	U		0.000309	0.00116	1	10/20/2016 03:52	WG918054
Vinyl chloride	U		0.000338	0.00116	1	10/20/2016 03:52	WG918054
Xylenes, Total	U		0.000811	0.00348	1	10/20/2016 03:52	WG918054
Di-isopropyl ether	U		0.000288	0.00116	1	10/20/2016 03:52	WG918054
Ethanol	U		0.0569	0.116	1	10/20/2016 03:52	WG918054
Ethyl tert-butyl ether	U		0.000465	0.00116	1	10/20/2016 03:52	WG918054
Methyl tert-butyl ether	U		0.000246	0.00116	1	10/20/2016 03:52	WG918054
t-Amyl Alcohol	0.0553	J	0.00488	0.0581	1	10/20/2016 03:52	WG918054
tert-Amyl Methyl Ether	U		0.000314	0.00116	1	10/20/2016 03:52	WG918054
tert-Butyl alcohol	0.0433		0.00232	0.00581	1	10/20/2016 03:52	WG918054
(S) Toluene-d8	*105*			*88.7-115*		*10/20/2016 03:52*	WG918054
(S) Dibromofluoromethane	*101*			*76.3-123*		*10/20/2016 03:52*	WG918054
(S) 4-Bromofluorobenzene	*89.2*			*69.7-129*		*10/20/2016 03:52*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	1.15	J	0.851	4.65	1	10/19/2016 12:31	WG918428
C22-C32 Hydrocarbons	U		1.54	4.65	1	10/19/2016 12:31	WG918428
C32-C40 Hydrocarbons	U		1.54	4.65	1	10/19/2016 12:31	WG918428
(S) o-Terphenyl	*74.2*			*50.0-150*		*10/19/2016 12:31*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.6		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	4.88		0.0422	0.127	1	10/17/2016 14:57	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.1*			*59.0-128*		*10/17/2016 14:57*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.308	1.54	24.25	10/20/2016 07:57	WG918054
Acrylonitrile	U		0.0552	0.309	24.25	10/20/2016 07:57	WG918054
Benzene	0.0797		0.00833	0.0309	24.25	10/20/2016 07:57	WG918054
Bromobenzene	U		0.00877	0.0309	24.25	10/20/2016 07:57	WG918054
Bromodichloromethane	U		0.00784	0.0309	24.25	10/20/2016 07:57	WG918054
Bromoform	U		0.0131	0.0309	24.25	10/20/2016 07:57	WG918054
Bromomethane	U		0.0414	0.154	24.25	10/20/2016 07:57	WG918054
n-Butylbenzene	1.45		0.00797	0.0309	24.25	10/20/2016 07:57	WG918054
sec-Butylbenzene	0.445		0.00620	0.0309	24.25	10/20/2016 07:57	WG918054
tert-Butylbenzene	0.0336		0.00636	0.0309	24.25	10/20/2016 07:57	WG918054
Carbon tetrachloride	U		0.0101	0.0309	24.25	10/20/2016 07:57	WG918054
Carbon disulfide	U		0.00682	0.0309	24.25	10/20/2016 07:57	WG918054
Chlorobenzene	U		0.00654	0.0309	24.25	10/20/2016 07:57	WG918054
Chlorodibromomethane	U		0.0115	0.0309	24.25	10/20/2016 07:57	WG918054
Chloroethane	U		0.0291	0.154	24.25	10/20/2016 07:57	WG918054
2-Chloroethyl vinyl ether	U		0.0722	1.54	24.25	10/20/2016 07:57	WG918054
Chloroform	U		0.00706	0.154	24.25	10/20/2016 07:57	WG918054
Chloromethane	U		0.0116	0.0771	24.25	10/20/2016 07:57	WG918054
2-Chlorotoluene	U		0.00929	0.0309	24.25	10/20/2016 07:57	WG918054
4-Chlorotoluene	U		0.00741	0.0309	24.25	10/20/2016 07:57	WG918054
1,2-Dibromo-3-Chloropropane	U		0.0324	0.154	24.25	10/20/2016 07:57	WG918054
1,2-Dibromoethane	U		0.0106	0.0309	24.25	10/20/2016 07:57	WG918054
Dibromomethane	U		0.0118	0.0309	24.25	10/20/2016 07:57	WG918054
1,2-Dichlorobenzene	U		0.00942	0.0309	24.25	10/20/2016 07:57	WG918054
1,3-Dichlorobenzene	U		0.00738	0.0309	24.25	10/20/2016 07:57	WG918054
1,4-Dichlorobenzene	U		0.00697	0.0309	24.25	10/20/2016 07:57	WG918054
Dichlorodifluoromethane	U		0.0220	0.154	24.25	10/20/2016 07:57	WG918054
1,1-Dichloroethane	U		0.00613	0.0309	24.25	10/20/2016 07:57	WG918054
1,2-Dichloroethane	U		0.00818	0.0309	24.25	10/20/2016 07:57	WG918054
1,1-Dichloroethene	U		0.00935	0.0309	24.25	10/20/2016 07:57	WG918054
cis-1,2-Dichloroethene	U		0.00725	0.0309	24.25	10/20/2016 07:57	WG918054
trans-1,2-Dichloroethene	U		0.00814	0.0309	24.25	10/20/2016 07:57	WG918054
1,2-Dichloropropane	U		0.0110	0.0309	24.25	10/20/2016 07:57	WG918054
1,1-Dichloropropene	U		0.00979	0.0309	24.25	10/20/2016 07:57	WG918054
1,3-Dichloropropane	U		0.00639	0.0309	24.25	10/20/2016 07:57	WG918054
cis-1,3-Dichloropropene	U		0.00808	0.0309	24.25	10/20/2016 07:57	WG918054
trans-1,3-Dichloropropene	U		0.00823	0.0309	24.25	10/20/2016 07:57	WG918054
2,2-Dichloropropane	U		0.00860	0.0309	24.25	10/20/2016 07:57	WG918054
Ethylbenzene	0.0359		0.00916	0.0309	24.25	10/20/2016 07:57	WG918054
Hexachloro-1,3-butadiene	U		0.0105	0.0309	24.25	10/20/2016 07:57	WG918054
Isopropylbenzene	0.239		0.00750	0.0309	24.25	10/20/2016 07:57	WG918054
p-Isopropyltoluene	U		0.00630	0.0309	24.25	10/20/2016 07:57	WG918054
2-Butanone (MEK)	U		0.144	0.309	24.25	10/20/2016 07:57	WG918054
Methylene Chloride	U		0.0308	0.154	24.25	10/20/2016 07:57	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.0580	0.309	24.25	10/20/2016 07:57	WG918054
Naphthalene	U		0.0308	0.154	24.25	10/20/2016 07:57	WG918054
n-Propylbenzene	1.22		0.00636	0.0309	24.25	10/20/2016 07:57	WG918054
Styrene	U		0.00722	0.0309	24.25	10/20/2016 07:57	WG918054
1,1,1,2-Tetrachloroethane	U		0.00814	0.0309	24.25	10/20/2016 07:57	WG918054
1,1,2,2-Tetrachloroethane	U		0.0113	0.0309	24.25	10/20/2016 07:57	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.0113	0.0309	24.25	10/20/2016 07:57	WG918054
Tetrachloroethene	U		0.00851	0.0309	24.25	10/20/2016 07:57	WG918054
Toluene	0.0235	J	0.0134	0.154	24.25	10/20/2016 07:57	WG918054
1,2,3-Trichlorobenzene	U		0.00944	0.0309	24.25	10/20/2016 07:57	WG918054
1,2,4-Trichlorobenzene	U		0.0120	0.0309	24.25	10/20/2016 07:57	WG918054
1,1,1-Trichloroethane	U		0.00883	0.0309	24.25	10/20/2016 07:57	WG918054
1,1,2-Trichloroethane	U		0.00855	0.0309	24.25	10/20/2016 07:57	WG918054
Trichloroethene	U		0.00860	0.0309	24.25	10/20/2016 07:57	WG918054
Trichlorofluoromethane	U		0.0118	0.154	24.25	10/20/2016 07:57	WG918054
1,2,3-Trichloropropane	U		0.0229	0.0771	24.25	10/20/2016 07:57	WG918054
1,2,4-Trimethylbenzene	0.0188	J	0.00652	0.0309	24.25	10/20/2016 07:57	WG918054
1,2,3-Trimethylbenzene	0.0173	J	0.00886	0.0309	24.25	10/20/2016 07:57	WG918054
1,3,5-Trimethylbenzene	0.0109	J	0.00821	0.0309	24.25	10/20/2016 07:57	WG918054
Vinyl chloride	U		0.00898	0.0309	24.25	10/20/2016 07:57	WG918054
Xylenes, Total	0.0516	J	0.0215	0.0926	24.25	10/20/2016 07:57	WG918054
Di-isopropyl ether	U		0.00765	0.0309	24.25	10/20/2016 07:57	WG918054
Ethanol	U		1.51	3.09	24.25	10/20/2016 07:57	WG918054
Ethyl tert-butyl ether	U		0.0123	0.0309	24.25	10/20/2016 07:57	WG918054
Methyl tert-butyl ether	U		0.00654	0.0309	24.25	10/20/2016 07:57	WG918054
t-Amyl Alcohol	U		0.130	1.54	24.25	10/20/2016 07:57	WG918054
tert-Amyl Methyl Ether	U		0.00833	0.0309	24.25	10/20/2016 07:57	WG918054
tert-Butyl alcohol	U		0.0617	0.154	24.25	10/20/2016 07:57	WG918054
(S) Toluene-d8	*103*			*88.7-115*		*10/20/2016 07:57*	WG918054
(S) Dibromofluoromethane	*91.1*			*76.3-123*		*10/20/2016 07:57*	WG918054
(S) 4-Bromofluorobenzene	*109*			*69.7-129*		*10/20/2016 07:57*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	19.8	J	9.33	50.9	10	10/19/2016 20:12	WG918428
C22-C32 Hydrocarbons	60.6		16.9	50.9	10	10/19/2016 20:12	WG918428
C32-C40 Hydrocarbons	69.0		16.9	50.9	10	10/19/2016 20:12	WG918428
(S) o-Terphenyl	*102*			*50.0-150*		*10/19/2016 20:12*	WG918428

Sample Narrative:

8015 L866089-08 WG918428: Cannot run at lower dilution due to viscosity of extract

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.7		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	0.0941	B J	0.0402	0.121	1	10/17/2016 15:20	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.9*			*59.0-128*		*10/17/2016 15:20*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0230	J	0.0121	0.0605	1	10/20/2016 04:11	WG918054
Acrylonitrile	U		0.00217	0.0121	1	10/20/2016 04:11	WG918054
Benzene	U		0.000327	0.00121	1	10/20/2016 04:11	WG918054
Bromobenzene	U		0.000344	0.00121	1	10/20/2016 04:11	WG918054
Bromodichloromethane	U		0.000307	0.00121	1	10/20/2016 04:11	WG918054
Bromoform	U		0.000513	0.00121	1	10/20/2016 04:11	WG918054
Bromomethane	U		0.00162	0.00605	1	10/20/2016 04:11	WG918054
n-Butylbenzene	U		0.000312	0.00121	1	10/20/2016 04:11	WG918054
sec-Butylbenzene	U		0.000243	0.00121	1	10/20/2016 04:11	WG918054
tert-Butylbenzene	U		0.000249	0.00121	1	10/20/2016 04:11	WG918054
Carbon tetrachloride	U		0.000397	0.00121	1	10/20/2016 04:11	WG918054
Carbon disulfide	U		0.000267	0.00121	1	10/20/2016 04:11	WG918054
Chlorobenzene	U		0.000256	0.00121	1	10/20/2016 04:11	WG918054
Chlorodibromomethane	U		0.000451	0.00121	1	10/20/2016 04:11	WG918054
Chloroethane	U		0.00114	0.00605	1	10/20/2016 04:11	WG918054
2-Chloroethyl vinyl ether	U		0.00283	0.0605	1	10/20/2016 04:11	WG918054
Chloroform	U		0.000277	0.00605	1	10/20/2016 04:11	WG918054
Chloromethane	U		0.000454	0.00302	1	10/20/2016 04:11	WG918054
2-Chlorotoluene	U		0.000364	0.00121	1	10/20/2016 04:11	WG918054
4-Chlorotoluene	U		0.000290	0.00121	1	10/20/2016 04:11	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00127	0.00605	1	10/20/2016 04:11	WG918054
1,2-Dibromoethane	U		0.000415	0.00121	1	10/20/2016 04:11	WG918054
Dibromomethane	U		0.000462	0.00121	1	10/20/2016 04:11	WG918054
1,2-Dichlorobenzene	U		0.000369	0.00121	1	10/20/2016 04:11	WG918054
1,3-Dichlorobenzene	U		0.000289	0.00121	1	10/20/2016 04:11	WG918054
1,4-Dichlorobenzene	U		0.000273	0.00121	1	10/20/2016 04:11	WG918054
Dichlorodifluoromethane	U		0.000863	0.00605	1	10/20/2016 04:11	WG918054
1,1-Dichloroethane	U		0.000241	0.00121	1	10/20/2016 04:11	WG918054
1,2-Dichloroethane	U		0.000321	0.00121	1	10/20/2016 04:11	WG918054
1,1-Dichloroethene	U		0.000367	0.00121	1	10/20/2016 04:11	WG918054
cis-1,2-Dichloroethene	U		0.000284	0.00121	1	10/20/2016 04:11	WG918054
trans-1,2-Dichloroethene	U		0.000319	0.00121	1	10/20/2016 04:11	WG918054
1,2-Dichloropropane	U		0.000433	0.00121	1	10/20/2016 04:11	WG918054
1,1-Dichloropropene	U		0.000384	0.00121	1	10/20/2016 04:11	WG918054
1,3-Dichloropropane	U		0.000250	0.00121	1	10/20/2016 04:11	WG918054
cis-1,3-Dichloropropene	U		0.000317	0.00121	1	10/20/2016 04:11	WG918054
trans-1,3-Dichloropropene	U		0.000323	0.00121	1	10/20/2016 04:11	WG918054
2,2-Dichloropropane	U		0.000338	0.00121	1	10/20/2016 04:11	WG918054
Ethylbenzene	U		0.000359	0.00121	1	10/20/2016 04:11	WG918054
Hexachloro-1,3-butadiene	U		0.000414	0.00121	1	10/20/2016 04:11	WG918054
Isopropylbenzene	U		0.000294	0.00121	1	10/20/2016 04:11	WG918054
p-Isopropyltoluene	U		0.000247	0.00121	1	10/20/2016 04:11	WG918054
2-Butanone (MEK)	U		0.00566	0.0121	1	10/20/2016 04:11	WG918054
Methylene Chloride	U		0.00121	0.00605	1	10/20/2016 04:11	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00227	0.0121	1	10/20/2016 04:11	WG918054
Naphthalene	U		0.00121	0.00605	1	10/20/2016 04:11	WG918054
n-Propylbenzene	U		0.000249	0.00121	1	10/20/2016 04:11	WG918054
Styrene	U		0.000283	0.00121	1	10/20/2016 04:11	WG918054
1,1,1,2-Tetrachloroethane	U		0.000319	0.00121	1	10/20/2016 04:11	WG918054
1,1,2,2-Tetrachloroethane	U		0.000442	0.00121	1	10/20/2016 04:11	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000442	0.00121	1	10/20/2016 04:11	WG918054
Tetrachloroethene	U		0.000334	0.00121	1	10/20/2016 04:11	WG918054
Toluene	U		0.000525	0.00605	1	10/20/2016 04:11	WG918054
1,2,3-Trichlorobenzene	U		0.000370	0.00121	1	10/20/2016 04:11	WG918054
1,2,4-Trichlorobenzene	U		0.000469	0.00121	1	10/20/2016 04:11	WG918054
1,1,1-Trichloroethane	U		0.000346	0.00121	1	10/20/2016 04:11	WG918054
1,1,2-Trichloroethane	U		0.000335	0.00121	1	10/20/2016 04:11	WG918054
Trichloroethene	U		0.000338	0.00121	1	10/20/2016 04:11	WG918054
Trichlorofluoromethane	U		0.000462	0.00605	1	10/20/2016 04:11	WG918054
1,2,3-Trichloropropane	U		0.000896	0.00302	1	10/20/2016 04:11	WG918054
1,2,4-Trimethylbenzene	U		0.000255	0.00121	1	10/20/2016 04:11	WG918054
1,2,3-Trimethylbenzene	U		0.000347	0.00121	1	10/20/2016 04:11	WG918054
1,3,5-Trimethylbenzene	U		0.000322	0.00121	1	10/20/2016 04:11	WG918054
Vinyl chloride	U		0.000352	0.00121	1	10/20/2016 04:11	WG918054
Xylenes, Total	U		0.000844	0.00363	1	10/20/2016 04:11	WG918054
Di-isopropyl ether	U		0.000300	0.00121	1	10/20/2016 04:11	WG918054
Ethanol	U		0.0593	0.121	1	10/20/2016 04:11	WG918054
Ethyl tert-butyl ether	U		0.000484	0.00121	1	10/20/2016 04:11	WG918054
Methyl tert-butyl ether	U		0.000256	0.00121	1	10/20/2016 04:11	WG918054
t-Amyl Alcohol	U		0.00508	0.0605	1	10/20/2016 04:11	WG918054
tert-Amyl Methyl Ether	U		0.000327	0.00121	1	10/20/2016 04:11	WG918054
tert-Butyl alcohol	U		0.00242	0.00605	1	10/20/2016 04:11	WG918054
(S) Toluene-d8	*106*			*88.7-115*		*10/20/2016 04:11*	WG918054
(S) Dibromofluoromethane	*101*			*76.3-123*		*10/20/2016 04:11*	WG918054
(S) 4-Bromofluorobenzene	*92.3*			*69.7-129*		*10/20/2016 04:11*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	3.35	J	0.887	4.84	1	10/19/2016 11:24	WG918428
C22-C32 Hydrocarbons	U		1.61	4.84	1	10/19/2016 11:24	WG918428
C32-C40 Hydrocarbons	U		1.61	4.84	1	10/19/2016 11:24	WG918428
(S) o-Terphenyl	*61.5*			*50.0-150*		*10/19/2016 11:24*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.8		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0387	0.116	1	10/17/2016 15:42	WG917734
(S) α,α,α-Trifluorotoluene(FID)	*93.4*			*59.0-128*		*10/17/2016 15:42*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0116	0.0582	1	10/20/2016 04:31	WG918054
Acrylonitrile	U		0.00209	0.0116	1	10/20/2016 04:31	WG918054
Benzene	U		0.000315	0.00116	1	10/20/2016 04:31	WG918054
Bromobenzene	U		0.000331	0.00116	1	10/20/2016 04:31	WG918054
Bromodichloromethane	U		0.000296	0.00116	1	10/20/2016 04:31	WG918054
Bromoform	U		0.000494	0.00116	1	10/20/2016 04:31	WG918054
Bromomethane	U		0.00156	0.00582	1	10/20/2016 04:31	WG918054
n-Butylbenzene	U		0.000301	0.00116	1	10/20/2016 04:31	WG918054
sec-Butylbenzene	U		0.000234	0.00116	1	10/20/2016 04:31	WG918054
tert-Butylbenzene	U		0.000240	0.00116	1	10/20/2016 04:31	WG918054
Carbon tetrachloride	U		0.000382	0.00116	1	10/20/2016 04:31	WG918054
Carbon disulfide	U		0.000257	0.00116	1	10/20/2016 04:31	WG918054
Chlorobenzene	U		0.000247	0.00116	1	10/20/2016 04:31	WG918054
Chlorodibromomethane	U		0.000435	0.00116	1	10/20/2016 04:31	WG918054
Chloroethane	U		0.00110	0.00582	1	10/20/2016 04:31	WG918054
2-Chloroethyl vinyl ether	U		0.00273	0.0582	1	10/20/2016 04:31	WG918054
Chloroform	U		0.000267	0.00582	1	10/20/2016 04:31	WG918054
Chloromethane	U		0.000437	0.00291	1	10/20/2016 04:31	WG918054
2-Chlorotoluene	U		0.000351	0.00116	1	10/20/2016 04:31	WG918054
4-Chlorotoluene	U		0.000280	0.00116	1	10/20/2016 04:31	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00122	0.00582	1	10/20/2016 04:31	WG918054
1,2-Dibromoethane	U		0.000400	0.00116	1	10/20/2016 04:31	WG918054
Dibromomethane	U		0.000445	0.00116	1	10/20/2016 04:31	WG918054
1,2-Dichlorobenzene	U		0.000355	0.00116	1	10/20/2016 04:31	WG918054
1,3-Dichlorobenzene	U		0.000278	0.00116	1	10/20/2016 04:31	WG918054
1,4-Dichlorobenzene	U		0.000263	0.00116	1	10/20/2016 04:31	WG918054
Dichlorodifluoromethane	U		0.000831	0.00582	1	10/20/2016 04:31	WG918054
1,1-Dichloroethane	U		0.000232	0.00116	1	10/20/2016 04:31	WG918054
1,2-Dichloroethane	U		0.000309	0.00116	1	10/20/2016 04:31	WG918054
1,1-Dichloroethene	U		0.000353	0.00116	1	10/20/2016 04:31	WG918054
cis-1,2-Dichloroethene	U		0.000274	0.00116	1	10/20/2016 04:31	WG918054
trans-1,2-Dichloroethene	U		0.000308	0.00116	1	10/20/2016 04:31	WG918054
1,2-Dichloropropane	U		0.000417	0.00116	1	10/20/2016 04:31	WG918054
1,1-Dichloropropene	U		0.000369	0.00116	1	10/20/2016 04:31	WG918054
1,3-Dichloropropane	U		0.000241	0.00116	1	10/20/2016 04:31	WG918054
cis-1,3-Dichloropropene	U		0.000305	0.00116	1	10/20/2016 04:31	WG918054
trans-1,3-Dichloropropene	U		0.000311	0.00116	1	10/20/2016 04:31	WG918054
2,2-Dichloropropane	U		0.000325	0.00116	1	10/20/2016 04:31	WG918054
Ethylbenzene	U		0.000346	0.00116	1	10/20/2016 04:31	WG918054
Hexachloro-1,3-butadiene	U		0.000398	0.00116	1	10/20/2016 04:31	WG918054
Isopropylbenzene	U		0.000283	0.00116	1	10/20/2016 04:31	WG918054
p-Isopropyltoluene	U		0.000238	0.00116	1	10/20/2016 04:31	WG918054
2-Butanone (MEK)	U		0.00545	0.0116	1	10/20/2016 04:31	WG918054
Methylene Chloride	U		0.00116	0.00582	1	10/20/2016 04:31	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00219	0.0116	1	10/20/2016 04:31	WG918054
Naphthalene	U		0.00116	0.00582	1	10/20/2016 04:31	WG918054
n-Propylbenzene	U		0.000240	0.00116	1	10/20/2016 04:31	WG918054
Styrene	U		0.000273	0.00116	1	10/20/2016 04:31	WG918054
1,1,1,2-Tetrachloroethane	U		0.000308	0.00116	1	10/20/2016 04:31	WG918054
1,1,2,2-Tetrachloroethane	U		0.000425	0.00116	1	10/20/2016 04:31	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000425	0.00116	1	10/20/2016 04:31	WG918054
Tetrachloroethene	U		0.000322	0.00116	1	10/20/2016 04:31	WG918054
Toluene	U		0.000506	0.00582	1	10/20/2016 04:31	WG918054
1,2,3-Trichlorobenzene	U		0.000356	0.00116	1	10/20/2016 04:31	WG918054
1,2,4-Trichlorobenzene	U		0.000452	0.00116	1	10/20/2016 04:31	WG918054
1,1,1-Trichloroethane	U		0.000333	0.00116	1	10/20/2016 04:31	WG918054
1,1,2-Trichloroethane	U		0.000323	0.00116	1	10/20/2016 04:31	WG918054
Trichloroethene	U		0.000325	0.00116	1	10/20/2016 04:31	WG918054
Trichlorofluoromethane	U		0.000445	0.00582	1	10/20/2016 04:31	WG918054
1,2,3-Trichloropropane	U		0.000863	0.00291	1	10/20/2016 04:31	WG918054
1,2,4-Trimethylbenzene	U		0.000246	0.00116	1	10/20/2016 04:31	WG918054
1,2,3-Trimethylbenzene	U		0.000334	0.00116	1	10/20/2016 04:31	WG918054
1,3,5-Trimethylbenzene	U		0.000310	0.00116	1	10/20/2016 04:31	WG918054
Vinyl chloride	U		0.000339	0.00116	1	10/20/2016 04:31	WG918054
Xylenes, Total	U		0.000813	0.00349	1	10/20/2016 04:31	WG918054
Di-isopropyl ether	U		0.000289	0.00116	1	10/20/2016 04:31	WG918054
Ethanol	U		0.0571	0.116	1	10/20/2016 04:31	WG918054
Ethyl tert-butyl ether	U		0.000466	0.00116	1	10/20/2016 04:31	WG918054
Methyl tert-butyl ether	U		0.000247	0.00116	1	10/20/2016 04:31	WG918054
t-Amyl Alcohol	U		0.00489	0.0582	1	10/20/2016 04:31	WG918054
tert-Amyl Methyl Ether	U		0.000315	0.00116	1	10/20/2016 04:31	WG918054
tert-Butyl alcohol	U		0.00233	0.00582	1	10/20/2016 04:31	WG918054
(S) Toluene-d8	*107*			*88.7-115*		*10/20/2016 04:31*	WG918054
(S) Dibromofluoromethane	*101*			*76.3-123*		*10/20/2016 04:31*	WG918054
(S) 4-Bromofluorobenzene	*91.0*			*69.7-129*		*10/20/2016 04:31*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	4.82		0.854	4.66	1	10/19/2016 14:11	WG918428
C22-C32 Hydrocarbons	U		1.55	4.66	1	10/19/2016 14:11	WG918428
C32-C40 Hydrocarbons	U		1.55	4.66	1	10/19/2016 14:11	WG918428
(S) o-Terphenyl	*86.7*			*50.0-150*		*10/19/2016 14:11*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.4		1	10/17/2016 11:23	WG917458

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0376	0.113	1	10/17/2016 16:04	WG917734
(S) α,α,α-Trifluorotoluene(FID)	*92.8*			*59.0-128*		*10/17/2016 16:04*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0198	J	0.0113	0.0566	1	10/20/2016 04:49	WG918054
Acrylonitrile	U		0.00203	0.0113	1	10/20/2016 04:49	WG918054
Benzene	U		0.000306	0.00113	1	10/20/2016 04:49	WG918054
Bromobenzene	U		0.000321	0.00113	1	10/20/2016 04:49	WG918054
Bromodichloromethane	U		0.000287	0.00113	1	10/20/2016 04:49	WG918054
Bromoform	U		0.000480	0.00113	1	10/20/2016 04:49	WG918054
Bromomethane	U		0.00152	0.00566	1	10/20/2016 04:49	WG918054
n-Butylbenzene	U		0.000292	0.00113	1	10/20/2016 04:49	WG918054
sec-Butylbenzene	U		0.000227	0.00113	1	10/20/2016 04:49	WG918054
tert-Butylbenzene	U		0.000233	0.00113	1	10/20/2016 04:49	WG918054
Carbon tetrachloride	U		0.000371	0.00113	1	10/20/2016 04:49	WG918054
Carbon disulfide	U		0.000250	0.00113	1	10/20/2016 04:49	WG918054
Chlorobenzene	U		0.000240	0.00113	1	10/20/2016 04:49	WG918054
Chlorodibromomethane	U		0.000422	0.00113	1	10/20/2016 04:49	WG918054
Chloroethane	U		0.00107	0.00566	1	10/20/2016 04:49	WG918054
2-Chloroethyl vinyl ether	U		0.00265	0.0566	1	10/20/2016 04:49	WG918054
Chloroform	U		0.000259	0.00566	1	10/20/2016 04:49	WG918054
Chloromethane	U		0.000424	0.00283	1	10/20/2016 04:49	WG918054
2-Chlorotoluene	U		0.000341	0.00113	1	10/20/2016 04:49	WG918054
4-Chlorotoluene	U		0.000272	0.00113	1	10/20/2016 04:49	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00119	0.00566	1	10/20/2016 04:49	WG918054
1,2-Dibromoethane	U		0.000388	0.00113	1	10/20/2016 04:49	WG918054
Dibromomethane	U		0.000432	0.00113	1	10/20/2016 04:49	WG918054
1,2-Dichlorobenzene	U		0.000345	0.00113	1	10/20/2016 04:49	WG918054
1,3-Dichlorobenzene	U		0.000270	0.00113	1	10/20/2016 04:49	WG918054
1,4-Dichlorobenzene	U		0.000256	0.00113	1	10/20/2016 04:49	WG918054
Dichlorodifluoromethane	U		0.000807	0.00566	1	10/20/2016 04:49	WG918054
1,1-Dichloroethane	U		0.000225	0.00113	1	10/20/2016 04:49	WG918054
1,2-Dichloroethane	U		0.000300	0.00113	1	10/20/2016 04:49	WG918054
1,1-Dichloroethene	U		0.000343	0.00113	1	10/20/2016 04:49	WG918054
cis-1,2-Dichloroethene	U		0.000266	0.00113	1	10/20/2016 04:49	WG918054
trans-1,2-Dichloroethene	U		0.000299	0.00113	1	10/20/2016 04:49	WG918054
1,2-Dichloropropane	U		0.000405	0.00113	1	10/20/2016 04:49	WG918054
1,1-Dichloropropene	U		0.000359	0.00113	1	10/20/2016 04:49	WG918054
1,3-Dichloropropane	U		0.000234	0.00113	1	10/20/2016 04:49	WG918054
cis-1,3-Dichloropropene	U		0.000297	0.00113	1	10/20/2016 04:49	WG918054
trans-1,3-Dichloropropene	U		0.000302	0.00113	1	10/20/2016 04:49	WG918054
2,2-Dichloropropane	U		0.000316	0.00113	1	10/20/2016 04:49	WG918054
Ethylbenzene	U		0.000336	0.00113	1	10/20/2016 04:49	WG918054
Hexachloro-1,3-butadiene	U		0.000387	0.00113	1	10/20/2016 04:49	WG918054
Isopropylbenzene	U		0.000275	0.00113	1	10/20/2016 04:49	WG918054
p-Isopropyltoluene	U		0.000231	0.00113	1	10/20/2016 04:49	WG918054
2-Butanone (MEK)	U		0.00530	0.0113	1	10/20/2016 04:49	WG918054
Methylene Chloride	U		0.00113	0.00566	1	10/20/2016 04:49	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00213	0.0113	1	10/20/2016 04:49	WG918054
Naphthalene	U		0.00113	0.00566	1	10/20/2016 04:49	WG918054
n-Propylbenzene	U		0.000233	0.00113	1	10/20/2016 04:49	WG918054
Styrene	U		0.000265	0.00113	1	10/20/2016 04:49	WG918054
1,1,1,2-Tetrachloroethane	U		0.000299	0.00113	1	10/20/2016 04:49	WG918054
1,1,2,2-Tetrachloroethane	U		0.000413	0.00113	1	10/20/2016 04:49	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000413	0.00113	1	10/20/2016 04:49	WG918054
Tetrachloroethene	U		0.000312	0.00113	1	10/20/2016 04:49	WG918054
Toluene	U		0.000491	0.00566	1	10/20/2016 04:49	WG918054
1,2,3-Trichlorobenzene	U		0.000346	0.00113	1	10/20/2016 04:49	WG918054
1,2,4-Trichlorobenzene	U		0.000439	0.00113	1	10/20/2016 04:49	WG918054
1,1,1-Trichloroethane	U		0.000324	0.00113	1	10/20/2016 04:49	WG918054
1,1,2-Trichloroethane	U		0.000313	0.00113	1	10/20/2016 04:49	WG918054
Trichloroethene	U		0.000316	0.00113	1	10/20/2016 04:49	WG918054
Trichlorofluoromethane	U		0.000432	0.00566	1	10/20/2016 04:49	WG918054
1,2,3-Trichloropropane	U		0.000839	0.00283	1	10/20/2016 04:49	WG918054
1,2,4-Trimethylbenzene	U		0.000239	0.00113	1	10/20/2016 04:49	WG918054
1,2,3-Trimethylbenzene	U		0.000325	0.00113	1	10/20/2016 04:49	WG918054
1,3,5-Trimethylbenzene	U		0.000301	0.00113	1	10/20/2016 04:49	WG918054
Vinyl chloride	U		0.000329	0.00113	1	10/20/2016 04:49	WG918054
Xylenes, Total	U		0.000790	0.00340	1	10/20/2016 04:49	WG918054
Di-isopropyl ether	U		0.000281	0.00113	1	10/20/2016 04:49	WG918054
Ethanol	U		0.0555	0.113	1	10/20/2016 04:49	WG918054
Ethyl tert-butyl ether	U		0.000453	0.00113	1	10/20/2016 04:49	WG918054
Methyl tert-butyl ether	U		0.000240	0.00113	1	10/20/2016 04:49	WG918054
t-Amyl Alcohol	U		0.00475	0.0566	1	10/20/2016 04:49	WG918054
tert-Amyl Methyl Ether	U		0.000306	0.00113	1	10/20/2016 04:49	WG918054
tert-Butyl alcohol	U		0.00226	0.00566	1	10/20/2016 04:49	WG918054
(S) Toluene-d8	*104*			*88.7-115*		*10/20/2016 04:49*	WG918054
(S) Dibromofluoromethane	*99.6*			*76.3-123*		*10/20/2016 04:49*	WG918054
(S) 4-Bromofluorobenzene	*88.6*			*69.7-129*		*10/20/2016 04:49*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	1.99	J	0.830	4.53	1	10/19/2016 12:14	WG918428
C22-C32 Hydrocarbons	U		1.51	4.53	1	10/19/2016 12:14	WG918428
C32-C40 Hydrocarbons	U		1.51	4.53	1	10/19/2016 12:14	WG918428
(S) o-Terphenyl	*77.6*			*50.0-150*		*10/19/2016 12:14*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.6		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0379	0.114	1	10/17/2016 16:26	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.6*			*59.0-128*		*10/17/2016 16:26*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0114	0.0571	1	10/20/2016 05:08	WG918054
Acrylonitrile	U		0.00204	0.0114	1	10/20/2016 05:08	WG918054
Benzene	U		0.000308	0.00114	1	10/20/2016 05:08	WG918054
Bromobenzene	U		0.000324	0.00114	1	10/20/2016 05:08	WG918054
Bromodichloromethane	U		0.000290	0.00114	1	10/20/2016 05:08	WG918054
Bromoform	U		0.000484	0.00114	1	10/20/2016 05:08	WG918054
Bromomethane	U		0.00153	0.00571	1	10/20/2016 05:08	WG918054
n-Butylbenzene	U		0.000294	0.00114	1	10/20/2016 05:08	WG918054
sec-Butylbenzene	U		0.000229	0.00114	1	10/20/2016 05:08	WG918054
tert-Butylbenzene	U		0.000235	0.00114	1	10/20/2016 05:08	WG918054
Carbon tetrachloride	U		0.000374	0.00114	1	10/20/2016 05:08	WG918054
Carbon disulfide	U		0.000252	0.00114	1	10/20/2016 05:08	WG918054
Chlorobenzene	U		0.000242	0.00114	1	10/20/2016 05:08	WG918054
Chlorodibromomethane	U		0.000426	0.00114	1	10/20/2016 05:08	WG918054
Chloroethane	U		0.00108	0.00571	1	10/20/2016 05:08	WG918054
2-Chloroethyl vinyl ether	U		0.00267	0.0571	1	10/20/2016 05:08	WG918054
Chloroform	U		0.000261	0.00571	1	10/20/2016 05:08	WG918054
Chloromethane	U		0.000428	0.00285	1	10/20/2016 05:08	WG918054
2-Chlorotoluene	U		0.000343	0.00114	1	10/20/2016 05:08	WG918054
4-Chlorotoluene	U		0.000274	0.00114	1	10/20/2016 05:08	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00120	0.00571	1	10/20/2016 05:08	WG918054
1,2-Dibromoethane	U		0.000391	0.00114	1	10/20/2016 05:08	WG918054
Dibromomethane	U		0.000436	0.00114	1	10/20/2016 05:08	WG918054
1,2-Dichlorobenzene	U		0.000348	0.00114	1	10/20/2016 05:08	WG918054
1,3-Dichlorobenzene	U		0.000273	0.00114	1	10/20/2016 05:08	WG918054
1,4-Dichlorobenzene	U		0.000258	0.00114	1	10/20/2016 05:08	WG918054
Dichlorodifluoromethane	U		0.000814	0.00571	1	10/20/2016 05:08	WG918054
1,1-Dichloroethane	U		0.000227	0.00114	1	10/20/2016 05:08	WG918054
1,2-Dichloroethane	U		0.000302	0.00114	1	10/20/2016 05:08	WG918054
1,1-Dichloroethene	U		0.000346	0.00114	1	10/20/2016 05:08	WG918054
cis-1,2-Dichloroethene	U		0.000268	0.00114	1	10/20/2016 05:08	WG918054
trans-1,2-Dichloroethene	U		0.000301	0.00114	1	10/20/2016 05:08	WG918054
1,2-Dichloropropane	U		0.000409	0.00114	1	10/20/2016 05:08	WG918054
1,1-Dichloropropene	U		0.000362	0.00114	1	10/20/2016 05:08	WG918054
1,3-Dichloropropane	U		0.000236	0.00114	1	10/20/2016 05:08	WG918054
cis-1,3-Dichloropropene	U		0.000299	0.00114	1	10/20/2016 05:08	WG918054
trans-1,3-Dichloropropene	U		0.000305	0.00114	1	10/20/2016 05:08	WG918054
2,2-Dichloropropane	U		0.000318	0.00114	1	10/20/2016 05:08	WG918054
Ethylbenzene	0.000647	J	0.000339	0.00114	1	10/20/2016 05:08	WG918054
Hexachloro-1,3-butadiene	U		0.000390	0.00114	1	10/20/2016 05:08	WG918054
Isopropylbenzene	U		0.000277	0.00114	1	10/20/2016 05:08	WG918054
p-Isopropyltoluene	U		0.000233	0.00114	1	10/20/2016 05:08	WG918054
2-Butanone (MEK)	U		0.00534	0.0114	1	10/20/2016 05:08	WG918054
Methylene Chloride	U		0.00114	0.00571	1	10/20/2016 05:08	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00215	0.0114	1	10/20/2016 05:08	WG918054
Naphthalene	U		0.00114	0.00571	1	10/20/2016 05:08	WG918054
n-Propylbenzene	U		0.000235	0.00114	1	10/20/2016 05:08	WG918054
Styrene	U		0.000267	0.00114	1	10/20/2016 05:08	WG918054
1,1,1,2-Tetrachloroethane	U		0.000301	0.00114	1	10/20/2016 05:08	WG918054
1,1,2,2-Tetrachloroethane	U		0.000416	0.00114	1	10/20/2016 05:08	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000416	0.00114	1	10/20/2016 05:08	WG918054
Tetrachloroethene	U		0.000315	0.00114	1	10/20/2016 05:08	WG918054
Toluene	0.00225	J	0.000495	0.00571	1	10/20/2016 05:08	WG918054
1,2,3-Trichlorobenzene	U		0.000349	0.00114	1	10/20/2016 05:08	WG918054
1,2,4-Trichlorobenzene	U		0.000443	0.00114	1	10/20/2016 05:08	WG918054
1,1,1-Trichloroethane	U		0.000326	0.00114	1	10/20/2016 05:08	WG918054
1,1,2-Trichloroethane	U		0.000316	0.00114	1	10/20/2016 05:08	WG918054
Trichloroethene	U		0.000318	0.00114	1	10/20/2016 05:08	WG918054
Trichlorofluoromethane	U		0.000436	0.00571	1	10/20/2016 05:08	WG918054
1,2,3-Trichloropropane	U		0.000846	0.00285	1	10/20/2016 05:08	WG918054
1,2,4-Trimethylbenzene	0.000332	J	0.000241	0.00114	1	10/20/2016 05:08	WG918054
1,2,3-Trimethylbenzene	U		0.000327	0.00114	1	10/20/2016 05:08	WG918054
1,3,5-Trimethylbenzene	U		0.000304	0.00114	1	10/20/2016 05:08	WG918054
Vinyl chloride	U		0.000332	0.00114	1	10/20/2016 05:08	WG918054
Xylenes, Total	0.00309	J	0.000796	0.00342	1	10/20/2016 05:08	WG918054
Di-isopropyl ether	U		0.000283	0.00114	1	10/20/2016 05:08	WG918054
Ethanol	U		0.0559	0.114	1	10/20/2016 05:08	WG918054
Ethyl tert-butyl ether	U		0.000456	0.00114	1	10/20/2016 05:08	WG918054
Methyl tert-butyl ether	U		0.000242	0.00114	1	10/20/2016 05:08	WG918054
t-Amyl Alcohol	U		0.00479	0.0571	1	10/20/2016 05:08	WG918054
tert-Amyl Methyl Ether	U		0.000308	0.00114	1	10/20/2016 05:08	WG918054
tert-Butyl alcohol	U		0.00228	0.00571	1	10/20/2016 05:08	WG918054
(S) Toluene-d8	*107*			*88.7-115*		*10/20/2016 05:08*	WG918054
(S) Dibromofluoromethane	*100*			*76.3-123*		*10/20/2016 05:08*	WG918054
(S) 4-Bromofluorobenzene	*88.6*			*69.7-129*		*10/20/2016 05:08*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	1.94	J	0.836	4.56	1	10/19/2016 14:29	WG918428
C22-C32 Hydrocarbons	U		1.52	4.56	1	10/19/2016 14:29	WG918428
C32-C40 Hydrocarbons	U		1.52	4.56	1	10/19/2016 14:29	WG918428
(S) o-Terphenyl	*101*			*50.0-150*		*10/19/2016 14:29*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.3		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0403	0.121	1	10/17/2016 16:49	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.2*			*59.0-128*		*10/17/2016 16:49*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0209	J	0.0121	0.0607	1	10/20/2016 05:27	WG918054
Acrylonitrile	U		0.00217	0.0121	1	10/20/2016 05:27	WG918054
Benzene	U		0.000328	0.00121	1	10/20/2016 05:27	WG918054
Bromobenzene	U		0.000345	0.00121	1	10/20/2016 05:27	WG918054
Bromodichloromethane	U		0.000308	0.00121	1	10/20/2016 05:27	WG918054
Bromoform	U		0.000515	0.00121	1	10/20/2016 05:27	WG918054
Bromomethane	U		0.00163	0.00607	1	10/20/2016 05:27	WG918054
n-Butylbenzene	U		0.000313	0.00121	1	10/20/2016 05:27	WG918054
sec-Butylbenzene	U		0.000244	0.00121	1	10/20/2016 05:27	WG918054
tert-Butylbenzene	U		0.000250	0.00121	1	10/20/2016 05:27	WG918054
Carbon tetrachloride	U		0.000398	0.00121	1	10/20/2016 05:27	WG918054
Carbon disulfide	U		0.000268	0.00121	1	10/20/2016 05:27	WG918054
Chlorobenzene	U		0.000257	0.00121	1	10/20/2016 05:27	WG918054
Chlorodibromomethane	U		0.000453	0.00121	1	10/20/2016 05:27	WG918054
Chloroethane	U		0.00115	0.00607	1	10/20/2016 05:27	WG918054
2-Chloroethyl vinyl ether	U		0.00284	0.0607	1	10/20/2016 05:27	WG918054
Chloroform	U		0.000278	0.00607	1	10/20/2016 05:27	WG918054
Chloromethane	U		0.000455	0.00304	1	10/20/2016 05:27	WG918054
2-Chlorotoluene	U		0.000366	0.00121	1	10/20/2016 05:27	WG918054
4-Chlorotoluene	U		0.000291	0.00121	1	10/20/2016 05:27	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00128	0.00607	1	10/20/2016 05:27	WG918054
1,2-Dibromoethane	U		0.000417	0.00121	1	10/20/2016 05:27	WG918054
Dibromomethane	U		0.000464	0.00121	1	10/20/2016 05:27	WG918054
1,2-Dichlorobenzene	U		0.000370	0.00121	1	10/20/2016 05:27	WG918054
1,3-Dichlorobenzene	U		0.000290	0.00121	1	10/20/2016 05:27	WG918054
1,4-Dichlorobenzene	U		0.000274	0.00121	1	10/20/2016 05:27	WG918054
Dichlorodifluoromethane	U		0.000866	0.00607	1	10/20/2016 05:27	WG918054
1,1-Dichloroethane	U		0.000242	0.00121	1	10/20/2016 05:27	WG918054
1,2-Dichloroethane	U		0.000322	0.00121	1	10/20/2016 05:27	WG918054
1,1-Dichloroethene	U		0.000368	0.00121	1	10/20/2016 05:27	WG918054
cis-1,2-Dichloroethene	U		0.000285	0.00121	1	10/20/2016 05:27	WG918054
trans-1,2-Dichloroethene	U		0.000321	0.00121	1	10/20/2016 05:27	WG918054
1,2-Dichloropropane	U		0.000435	0.00121	1	10/20/2016 05:27	WG918054
1,1-Dichloropropene	U		0.000385	0.00121	1	10/20/2016 05:27	WG918054
1,3-Dichloropropane	U		0.000251	0.00121	1	10/20/2016 05:27	WG918054
cis-1,3-Dichloropropene	U		0.000318	0.00121	1	10/20/2016 05:27	WG918054
trans-1,3-Dichloropropene	U		0.000324	0.00121	1	10/20/2016 05:27	WG918054
2,2-Dichloropropane	U		0.000339	0.00121	1	10/20/2016 05:27	WG918054
Ethylbenzene	U		0.000361	0.00121	1	10/20/2016 05:27	WG918054
Hexachloro-1,3-butadiene	U		0.000415	0.00121	1	10/20/2016 05:27	WG918054
Isopropylbenzene	U		0.000295	0.00121	1	10/20/2016 05:27	WG918054
p-Isopropyltoluene	U		0.000248	0.00121	1	10/20/2016 05:27	WG918054
2-Butanone (MEK)	U		0.00568	0.0121	1	10/20/2016 05:27	WG918054
Methylene Chloride	U		0.00121	0.00607	1	10/20/2016 05:27	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0121	1	10/20/2016 05:27	WG918054
Naphthalene	U		0.00121	0.00607	1	10/20/2016 05:27	WG918054
n-Propylbenzene	U		0.000250	0.00121	1	10/20/2016 05:27	WG918054
Styrene	U		0.000284	0.00121	1	10/20/2016 05:27	WG918054
1,1,1,2-Tetrachloroethane	U		0.000321	0.00121	1	10/20/2016 05:27	WG918054
1,1,2,2-Tetrachloroethane	U		0.000443	0.00121	1	10/20/2016 05:27	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000443	0.00121	1	10/20/2016 05:27	WG918054
Tetrachloroethene	U		0.000335	0.00121	1	10/20/2016 05:27	WG918054
Toluene	U		0.000527	0.00607	1	10/20/2016 05:27	WG918054
1,2,3-Trichlorobenzene	U		0.000372	0.00121	1	10/20/2016 05:27	WG918054
1,2,4-Trichlorobenzene	U		0.000471	0.00121	1	10/20/2016 05:27	WG918054
1,1,1-Trichloroethane	U		0.000347	0.00121	1	10/20/2016 05:27	WG918054
1,1,2-Trichloroethane	U		0.000336	0.00121	1	10/20/2016 05:27	WG918054
Trichloroethene	U		0.000339	0.00121	1	10/20/2016 05:27	WG918054
Trichlorofluoromethane	U		0.000464	0.00607	1	10/20/2016 05:27	WG918054
1,2,3-Trichloropropane	U		0.000900	0.00304	1	10/20/2016 05:27	WG918054
1,2,4-Trimethylbenzene	U		0.000256	0.00121	1	10/20/2016 05:27	WG918054
1,2,3-Trimethylbenzene	U		0.000349	0.00121	1	10/20/2016 05:27	WG918054
1,3,5-Trimethylbenzene	U		0.000323	0.00121	1	10/20/2016 05:27	WG918054
Vinyl chloride	U		0.000353	0.00121	1	10/20/2016 05:27	WG918054
Xylenes, Total	U		0.000848	0.00364	1	10/20/2016 05:27	WG918054
Di-isopropyl ether	U		0.000301	0.00121	1	10/20/2016 05:27	WG918054
Ethanol	U		0.0595	0.121	1	10/20/2016 05:27	WG918054
Ethyl tert-butyl ether	U		0.000486	0.00121	1	10/20/2016 05:27	WG918054
Methyl tert-butyl ether	U		0.000257	0.00121	1	10/20/2016 05:27	WG918054
t-Amyl Alcohol	U		0.00510	0.0607	1	10/20/2016 05:27	WG918054
tert-Amyl Methyl Ether	U		0.000328	0.00121	1	10/20/2016 05:27	WG918054
tert-Butyl alcohol	U		0.00243	0.00607	1	10/20/2016 05:27	WG918054
(S) Toluene-d8	*107*			*88.7-115*		*10/20/2016 05:27*	WG918054
(S) Dibromofluoromethane	*102*			*76.3-123*		*10/20/2016 05:27*	WG918054
(S) 4-Bromofluorobenzene	*86.0*			*69.7-129*		*10/20/2016 05:27*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	U		0.890	4.86	1	10/19/2016 11:41	WG918428
C22-C32 Hydrocarbons	U		1.62	4.86	1	10/19/2016 11:41	WG918428
C32-C40 Hydrocarbons	U		1.62	4.86	1	10/19/2016 11:41	WG918428
(S) o-Terphenyl	*79.0*			*50.0-150*		*10/19/2016 11:41*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.3		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0385	0.116	1	10/17/2016 17:11	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.9*			*59.0-128*		*10/17/2016 17:11*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0116	0.0579	1	10/20/2016 05:46	WG918054
Acrylonitrile	U		0.00207	0.0116	1	10/20/2016 05:46	WG918054
Benzene	U		0.000313	0.00116	1	10/20/2016 05:46	WG918054
Bromobenzene	U		0.000329	0.00116	1	10/20/2016 05:46	WG918054
Bromodichloromethane	U		0.000294	0.00116	1	10/20/2016 05:46	WG918054
Bromoform	U		0.000491	0.00116	1	10/20/2016 05:46	WG918054
Bromomethane	U		0.00155	0.00579	1	10/20/2016 05:46	WG918054
n-Butylbenzene	U		0.000299	0.00116	1	10/20/2016 05:46	WG918054
sec-Butylbenzene	U		0.000233	0.00116	1	10/20/2016 05:46	WG918054
tert-Butylbenzene	U		0.000239	0.00116	1	10/20/2016 05:46	WG918054
Carbon tetrachloride	U		0.000380	0.00116	1	10/20/2016 05:46	WG918054
Carbon disulfide	U		0.000256	0.00116	1	10/20/2016 05:46	WG918054
Chlorobenzene	U		0.000246	0.00116	1	10/20/2016 05:46	WG918054
Chlorodibromomethane	U		0.000432	0.00116	1	10/20/2016 05:46	WG918054
Chloroethane	U		0.00110	0.00579	1	10/20/2016 05:46	WG918054
2-Chloroethyl vinyl ether	U		0.00271	0.0579	1	10/20/2016 05:46	WG918054
Chloroform	U		0.000265	0.00579	1	10/20/2016 05:46	WG918054
Chloromethane	U		0.000435	0.00290	1	10/20/2016 05:46	WG918054
2-Chlorotoluene	U		0.000349	0.00116	1	10/20/2016 05:46	WG918054
4-Chlorotoluene	U		0.000278	0.00116	1	10/20/2016 05:46	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00122	0.00579	1	10/20/2016 05:46	WG918054
1,2-Dibromoethane	U		0.000397	0.00116	1	10/20/2016 05:46	WG918054
Dibromomethane	U		0.000443	0.00116	1	10/20/2016 05:46	WG918054
1,2-Dichlorobenzene	U		0.000353	0.00116	1	10/20/2016 05:46	WG918054
1,3-Dichlorobenzene	U		0.000277	0.00116	1	10/20/2016 05:46	WG918054
1,4-Dichlorobenzene	U		0.000262	0.00116	1	10/20/2016 05:46	WG918054
Dichlorodifluoromethane	U		0.000826	0.00579	1	10/20/2016 05:46	WG918054
1,1-Dichloroethane	U		0.000231	0.00116	1	10/20/2016 05:46	WG918054
1,2-Dichloroethane	U		0.000307	0.00116	1	10/20/2016 05:46	WG918054
1,1-Dichloroethene	U		0.000351	0.00116	1	10/20/2016 05:46	WG918054
cis-1,2-Dichloroethene	U		0.000272	0.00116	1	10/20/2016 05:46	WG918054
trans-1,2-Dichloroethene	U		0.000306	0.00116	1	10/20/2016 05:46	WG918054
1,2-Dichloropropane	U		0.000415	0.00116	1	10/20/2016 05:46	WG918054
1,1-Dichloropropene	U		0.000367	0.00116	1	10/20/2016 05:46	WG918054
1,3-Dichloropropane	U		0.000240	0.00116	1	10/20/2016 05:46	WG918054
cis-1,3-Dichloropropene	U		0.000304	0.00116	1	10/20/2016 05:46	WG918054
trans-1,3-Dichloropropene	U		0.000309	0.00116	1	10/20/2016 05:46	WG918054
2,2-Dichloropropane	U		0.000323	0.00116	1	10/20/2016 05:46	WG918054
Ethylbenzene	U		0.000344	0.00116	1	10/20/2016 05:46	WG918054
Hexachloro-1,3-butadiene	U		0.000396	0.00116	1	10/20/2016 05:46	WG918054
Isopropylbenzene	U		0.000282	0.00116	1	10/20/2016 05:46	WG918054
p-Isopropyltoluene	U		0.000236	0.00116	1	10/20/2016 05:46	WG918054
2-Butanone (MEK)	U		0.00542	0.0116	1	10/20/2016 05:46	WG918054
Methylene Chloride	U		0.00116	0.00579	1	10/20/2016 05:46	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00218	0.0116	1	10/20/2016 05:46	WG918054
Naphthalene	U		0.00116	0.00579	1	10/20/2016 05:46	WG918054
n-Propylbenzene	U		0.000239	0.00116	1	10/20/2016 05:46	WG918054
Styrene	U		0.000271	0.00116	1	10/20/2016 05:46	WG918054
1,1,1,2-Tetrachloroethane	U		0.000306	0.00116	1	10/20/2016 05:46	WG918054
1,1,2,2-Tetrachloroethane	U		0.000423	0.00116	1	10/20/2016 05:46	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000423	0.00116	1	10/20/2016 05:46	WG918054
Tetrachloroethene	U		0.000320	0.00116	1	10/20/2016 05:46	WG918054
Toluene	U		0.000503	0.00579	1	10/20/2016 05:46	WG918054
1,2,3-Trichlorobenzene	U		0.000355	0.00116	1	10/20/2016 05:46	WG918054
1,2,4-Trichlorobenzene	U		0.000450	0.00116	1	10/20/2016 05:46	WG918054
1,1,1-Trichloroethane	U		0.000331	0.00116	1	10/20/2016 05:46	WG918054
1,1,2-Trichloroethane	U		0.000321	0.00116	1	10/20/2016 05:46	WG918054
Trichloroethene	U		0.000323	0.00116	1	10/20/2016 05:46	WG918054
Trichlorofluoromethane	U		0.000443	0.00579	1	10/20/2016 05:46	WG918054
1,2,3-Trichloropropane	U		0.000859	0.00290	1	10/20/2016 05:46	WG918054
1,2,4-Trimethylbenzene	U		0.000245	0.00116	1	10/20/2016 05:46	WG918054
1,2,3-Trimethylbenzene	U		0.000333	0.00116	1	10/20/2016 05:46	WG918054
1,3,5-Trimethylbenzene	U		0.000308	0.00116	1	10/20/2016 05:46	WG918054
Vinyl chloride	U		0.000337	0.00116	1	10/20/2016 05:46	WG918054
Xylenes, Total	U		0.000809	0.00348	1	10/20/2016 05:46	WG918054
Di-isopropyl ether	U		0.000287	0.00116	1	10/20/2016 05:46	WG918054
Ethanol	U		0.0568	0.116	1	10/20/2016 05:46	WG918054
Ethyl tert-butyl ether	U		0.000464	0.00116	1	10/20/2016 05:46	WG918054
Methyl tert-butyl ether	U		0.000246	0.00116	1	10/20/2016 05:46	WG918054
t-Amyl Alcohol	U		0.00487	0.0579	1	10/20/2016 05:46	WG918054
tert-Amyl Methyl Ether	U		0.000313	0.00116	1	10/20/2016 05:46	WG918054
tert-Butyl alcohol	U		0.00232	0.00579	1	10/20/2016 05:46	WG918054
(S) Toluene-d8	*106*			*88.7-115*		*10/20/2016 05:46*	WG918054
(S) Dibromofluoromethane	*100*			*76.3-123*		*10/20/2016 05:46*	WG918054
(S) 4-Bromofluorobenzene	*90.8*			*69.7-129*		*10/20/2016 05:46*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	2.02	J	0.849	4.64	1	10/19/2016 13:37	WG918428
C22-C32 Hydrocarbons	U		1.54	4.64	1	10/19/2016 13:37	WG918428
C32-C40 Hydrocarbons	U		1.54	4.64	1	10/19/2016 13:37	WG918428
(S) o-Terphenyl	*99.0*			*50.0-150*		*10/19/2016 13:37*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.9		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0396	0.119	1	10/17/2016 17:33	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.8*			*59.0-128*		*10/17/2016 17:33*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0211	J	0.0119	0.0596	1	10/20/2016 06:04	WG918054
Acrylonitrile	U		0.00213	0.0119	1	10/20/2016 06:04	WG918054
Benzene	U		0.000322	0.00119	1	10/20/2016 06:04	WG918054
Bromobenzene	U		0.000339	0.00119	1	10/20/2016 06:04	WG918054
Bromodichloromethane	U		0.000303	0.00119	1	10/20/2016 06:04	WG918054
Bromoform	U		0.000506	0.00119	1	10/20/2016 06:04	WG918054
Bromomethane	U		0.00160	0.00596	1	10/20/2016 06:04	WG918054
n-Butylbenzene	U		0.000308	0.00119	1	10/20/2016 06:04	WG918054
sec-Butylbenzene	U		0.000240	0.00119	1	10/20/2016 06:04	WG918054
tert-Butylbenzene	U		0.000246	0.00119	1	10/20/2016 06:04	WG918054
Carbon tetrachloride	U		0.000391	0.00119	1	10/20/2016 06:04	WG918054
Carbon disulfide	U		0.000263	0.00119	1	10/20/2016 06:04	WG918054
Chlorobenzene	U		0.000253	0.00119	1	10/20/2016 06:04	WG918054
Chlorodibromomethane	U		0.000445	0.00119	1	10/20/2016 06:04	WG918054
Chloroethane	U		0.00113	0.00596	1	10/20/2016 06:04	WG918054
2-Chloroethyl vinyl ether	U		0.00279	0.0596	1	10/20/2016 06:04	WG918054
Chloroform	U		0.000273	0.00596	1	10/20/2016 06:04	WG918054
Chloromethane	U		0.000447	0.00298	1	10/20/2016 06:04	WG918054
2-Chlorotoluene	U		0.000359	0.00119	1	10/20/2016 06:04	WG918054
4-Chlorotoluene	U		0.000286	0.00119	1	10/20/2016 06:04	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00125	0.00596	1	10/20/2016 06:04	WG918054
1,2-Dibromoethane	U		0.000409	0.00119	1	10/20/2016 06:04	WG918054
Dibromomethane	U		0.000455	0.00119	1	10/20/2016 06:04	WG918054
1,2-Dichlorobenzene	U		0.000364	0.00119	1	10/20/2016 06:04	WG918054
1,3-Dichlorobenzene	U		0.000285	0.00119	1	10/20/2016 06:04	WG918054
1,4-Dichlorobenzene	U		0.000269	0.00119	1	10/20/2016 06:04	WG918054
Dichlorodifluoromethane	U		0.000850	0.00596	1	10/20/2016 06:04	WG918054
1,1-Dichloroethane	U		0.000237	0.00119	1	10/20/2016 06:04	WG918054
1,2-Dichloroethane	U		0.000316	0.00119	1	10/20/2016 06:04	WG918054
1,1-Dichloroethene	U		0.000361	0.00119	1	10/20/2016 06:04	WG918054
cis-1,2-Dichloroethene	U		0.000280	0.00119	1	10/20/2016 06:04	WG918054
trans-1,2-Dichloroethene	U		0.000315	0.00119	1	10/20/2016 06:04	WG918054
1,2-Dichloropropane	U		0.000427	0.00119	1	10/20/2016 06:04	WG918054
1,1-Dichloropropene	U		0.000378	0.00119	1	10/20/2016 06:04	WG918054
1,3-Dichloropropane	U		0.000247	0.00119	1	10/20/2016 06:04	WG918054
cis-1,3-Dichloropropene	U		0.000312	0.00119	1	10/20/2016 06:04	WG918054
trans-1,3-Dichloropropene	U		0.000318	0.00119	1	10/20/2016 06:04	WG918054
2,2-Dichloropropane	U		0.000333	0.00119	1	10/20/2016 06:04	WG918054
Ethylbenzene	U		0.000354	0.00119	1	10/20/2016 06:04	WG918054
Hexachloro-1,3-butadiene	U		0.000408	0.00119	1	10/20/2016 06:04	WG918054
Isopropylbenzene	U		0.000290	0.00119	1	10/20/2016 06:04	WG918054
p-Isopropyltoluene	U		0.000243	0.00119	1	10/20/2016 06:04	WG918054
2-Butanone (MEK)	U		0.00558	0.0119	1	10/20/2016 06:04	WG918054
Methylene Chloride	U		0.00119	0.00596	1	10/20/2016 06:04	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00224	0.0119	1	10/20/2016 06:04	WG918054
Naphthalene	U		0.00119	0.00596	1	10/20/2016 06:04	WG918054
n-Propylbenzene	U		0.000246	0.00119	1	10/20/2016 06:04	WG918054
Styrene	U		0.000279	0.00119	1	10/20/2016 06:04	WG918054
1,1,1,2-Tetrachloroethane	U		0.000315	0.00119	1	10/20/2016 06:04	WG918054
1,1,2,2-Tetrachloroethane	U		0.000435	0.00119	1	10/20/2016 06:04	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000435	0.00119	1	10/20/2016 06:04	WG918054
Tetrachloroethene	U		0.000329	0.00119	1	10/20/2016 06:04	WG918054
Toluene	U		0.000517	0.00596	1	10/20/2016 06:04	WG918054
1,2,3-Trichlorobenzene	U		0.000365	0.00119	1	10/20/2016 06:04	WG918054
1,2,4-Trichlorobenzene	U		0.000463	0.00119	1	10/20/2016 06:04	WG918054
1,1,1-Trichloroethane	U		0.000341	0.00119	1	10/20/2016 06:04	WG918054
1,1,2-Trichloroethane	U		0.000330	0.00119	1	10/20/2016 06:04	WG918054
Trichloroethene	U		0.000333	0.00119	1	10/20/2016 06:04	WG918054
Trichlorofluoromethane	U		0.000455	0.00596	1	10/20/2016 06:04	WG918054
1,2,3-Trichloropropane	U		0.000883	0.00298	1	10/20/2016 06:04	WG918054
1,2,4-Trimethylbenzene	U		0.000252	0.00119	1	10/20/2016 06:04	WG918054
1,2,3-Trimethylbenzene	U		0.000342	0.00119	1	10/20/2016 06:04	WG918054
1,3,5-Trimethylbenzene	U		0.000317	0.00119	1	10/20/2016 06:04	WG918054
Vinyl chloride	U		0.000347	0.00119	1	10/20/2016 06:04	WG918054
Xylenes, Total	U		0.000832	0.00358	1	10/20/2016 06:04	WG918054
Di-isopropyl ether	U		0.000296	0.00119	1	10/20/2016 06:04	WG918054
Ethanol	U		0.0584	0.119	1	10/20/2016 06:04	WG918054
Ethyl tert-butyl ether	U		0.000477	0.00119	1	10/20/2016 06:04	WG918054
Methyl tert-butyl ether	U		0.000253	0.00119	1	10/20/2016 06:04	WG918054
t-Amyl Alcohol	U		0.00501	0.0596	1	10/20/2016 06:04	WG918054
tert-Amyl Methyl Ether	U		0.000322	0.00119	1	10/20/2016 06:04	WG918054
tert-Butyl alcohol	U		0.00238	0.00596	1	10/20/2016 06:04	WG918054
(S) Toluene-d8	*106*			*88.7-115*		*10/20/2016 06:04*	WG918054
(S) Dibromofluoromethane	*99.7*			*76.3-123*		*10/20/2016 06:04*	WG918054
(S) 4-Bromofluorobenzene	*91.7*			*69.7-129*		*10/20/2016 06:04*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	5.28		0.874	4.77	1	10/19/2016 15:20	WG918428
C22-C32 Hydrocarbons	U		1.59	4.77	1	10/19/2016 15:20	WG918428
C32-C40 Hydrocarbons	U		1.59	4.77	1	10/19/2016 15:20	WG918428
(S) o-Terphenyl	*79.6*			*50.0-150*		*10/19/2016 15:20*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.0		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0377	0.114	1	10/17/2016 17:55	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.7*			*59.0-128*		*10/17/2016 17:55*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0194	J	0.0114	0.0568	1	10/20/2016 06:23	WG918054
Acrylonitrile	U		0.00203	0.0114	1	10/20/2016 06:23	WG918054
Benzene	U		0.000307	0.00114	1	10/20/2016 06:23	WG918054
Bromobenzene	U		0.000323	0.00114	1	10/20/2016 06:23	WG918054
Bromodichloromethane	U		0.000289	0.00114	1	10/20/2016 06:23	WG918054
Bromoform	U		0.000482	0.00114	1	10/20/2016 06:23	WG918054
Bromomethane	U		0.00152	0.00568	1	10/20/2016 06:23	WG918054
n-Butylbenzene	U		0.000293	0.00114	1	10/20/2016 06:23	WG918054
sec-Butylbenzene	U		0.000228	0.00114	1	10/20/2016 06:23	WG918054
tert-Butylbenzene	U		0.000234	0.00114	1	10/20/2016 06:23	WG918054
Carbon tetrachloride	U		0.000373	0.00114	1	10/20/2016 06:23	WG918054
Carbon disulfide	0.00838		0.000251	0.00114	1	10/20/2016 06:23	WG918054
Chlorobenzene	U		0.000241	0.00114	1	10/20/2016 06:23	WG918054
Chlorodibromomethane	U		0.000424	0.00114	1	10/20/2016 06:23	WG918054
Chloroethane	U		0.00107	0.00568	1	10/20/2016 06:23	WG918054
2-Chloroethyl vinyl ether	U		0.00266	0.0568	1	10/20/2016 06:23	WG918054
Chloroform	U		0.000260	0.00568	1	10/20/2016 06:23	WG918054
Chloromethane	U		0.000426	0.00284	1	10/20/2016 06:23	WG918054
2-Chlorotoluene	U		0.000342	0.00114	1	10/20/2016 06:23	WG918054
4-Chlorotoluene	U		0.000273	0.00114	1	10/20/2016 06:23	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00119	0.00568	1	10/20/2016 06:23	WG918054
1,2-Dibromoethane	U		0.000390	0.00114	1	10/20/2016 06:23	WG918054
Dibromomethane	U		0.000434	0.00114	1	10/20/2016 06:23	WG918054
1,2-Dichlorobenzene	U		0.000347	0.00114	1	10/20/2016 06:23	WG918054
1,3-Dichlorobenzene	U		0.000272	0.00114	1	10/20/2016 06:23	WG918054
1,4-Dichlorobenzene	U		0.000257	0.00114	1	10/20/2016 06:23	WG918054
Dichlorodifluoromethane	U		0.000810	0.00568	1	10/20/2016 06:23	WG918054
1,1-Dichloroethane	U		0.000226	0.00114	1	10/20/2016 06:23	WG918054
1,2-Dichloroethane	U		0.000301	0.00114	1	10/20/2016 06:23	WG918054
1,1-Dichloroethene	U		0.000344	0.00114	1	10/20/2016 06:23	WG918054
cis-1,2-Dichloroethene	U		0.000267	0.00114	1	10/20/2016 06:23	WG918054
trans-1,2-Dichloroethene	U		0.000300	0.00114	1	10/20/2016 06:23	WG918054
1,2-Dichloropropane	U		0.000407	0.00114	1	10/20/2016 06:23	WG918054
1,1-Dichloropropene	U		0.000360	0.00114	1	10/20/2016 06:23	WG918054
1,3-Dichloropropane	U		0.000235	0.00114	1	10/20/2016 06:23	WG918054
cis-1,3-Dichloropropene	U		0.000298	0.00114	1	10/20/2016 06:23	WG918054
trans-1,3-Dichloropropene	U		0.000303	0.00114	1	10/20/2016 06:23	WG918054
2,2-Dichloropropane	U		0.000317	0.00114	1	10/20/2016 06:23	WG918054
Ethylbenzene	U		0.000337	0.00114	1	10/20/2016 06:23	WG918054
Hexachloro-1,3-butadiene	U		0.000389	0.00114	1	10/20/2016 06:23	WG918054
Isopropylbenzene	U		0.000276	0.00114	1	10/20/2016 06:23	WG918054
p-Isopropyltoluene	U		0.000232	0.00114	1	10/20/2016 06:23	WG918054
2-Butanone (MEK)	0.00536	J	0.00532	0.0114	1	10/20/2016 06:23	WG918054
Methylene Chloride	U		0.00114	0.00568	1	10/20/2016 06:23	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0114	1	10/20/2016 06:23	WG918054
Naphthalene	U		0.00114	0.00568	1	10/20/2016 06:23	WG918054
n-Propylbenzene	U		0.000234	0.00114	1	10/20/2016 06:23	WG918054
Styrene	U		0.000266	0.00114	1	10/20/2016 06:23	WG918054
1,1,1,2-Tetrachloroethane	U		0.000300	0.00114	1	10/20/2016 06:23	WG918054
1,1,2,2-Tetrachloroethane	U		0.000415	0.00114	1	10/20/2016 06:23	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000415	0.00114	1	10/20/2016 06:23	WG918054
Tetrachloroethene	U		0.000314	0.00114	1	10/20/2016 06:23	WG918054
Toluene	U		0.000493	0.00568	1	10/20/2016 06:23	WG918054
1,2,3-Trichlorobenzene	U		0.000348	0.00114	1	10/20/2016 06:23	WG918054
1,2,4-Trichlorobenzene	U		0.000441	0.00114	1	10/20/2016 06:23	WG918054
1,1,1-Trichloroethane	U		0.000325	0.00114	1	10/20/2016 06:23	WG918054
1,1,2-Trichloroethane	U		0.000315	0.00114	1	10/20/2016 06:23	WG918054
Trichloroethene	U		0.000317	0.00114	1	10/20/2016 06:23	WG918054
Trichlorofluoromethane	U		0.000434	0.00568	1	10/20/2016 06:23	WG918054
1,2,3-Trichloropropane	U		0.000842	0.00284	1	10/20/2016 06:23	WG918054
1,2,4-Trimethylbenzene	U		0.000240	0.00114	1	10/20/2016 06:23	WG918054
1,2,3-Trimethylbenzene	U		0.000326	0.00114	1	10/20/2016 06:23	WG918054
1,3,5-Trimethylbenzene	U		0.000302	0.00114	1	10/20/2016 06:23	WG918054
Vinyl chloride	U		0.000331	0.00114	1	10/20/2016 06:23	WG918054
Xylenes, Total	U		0.000793	0.00341	1	10/20/2016 06:23	WG918054
Di-isopropyl ether	U		0.000282	0.00114	1	10/20/2016 06:23	WG918054
Ethanol	U		0.0557	0.114	1	10/20/2016 06:23	WG918054
Ethyl tert-butyl ether	U		0.000454	0.00114	1	10/20/2016 06:23	WG918054
Methyl tert-butyl ether	U		0.000241	0.00114	1	10/20/2016 06:23	WG918054
t-Amyl Alcohol	U		0.00477	0.0568	1	10/20/2016 06:23	WG918054
tert-Amyl Methyl Ether	U		0.000307	0.00114	1	10/20/2016 06:23	WG918054
tert-Butyl alcohol	U		0.00227	0.00568	1	10/20/2016 06:23	WG918054
(S) Toluene-d8	*106*			*88.7-115*		*10/20/2016 06:23*	WG918054
(S) Dibromofluoromethane	*102*			*76.3-123*		*10/20/2016 06:23*	WG918054
(S) 4-Bromofluorobenzene	*89.4*			*69.7-129*		*10/20/2016 06:23*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	4.70		0.833	4.54	1	10/19/2016 15:38	WG918428
C22-C32 Hydrocarbons	U		1.51	4.54	1	10/19/2016 15:38	WG918428
C32-C40 Hydrocarbons	U		1.51	4.54	1	10/19/2016 15:38	WG918428
(S) o-Terphenyl	*97.1*			*50.0-150*		*10/19/2016 15:38*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.1		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	U		0.0377	0.114	1	10/17/2016 18:18	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*92.9*			*59.0-128*		*10/17/2016 18:18*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0114	0.0568	1	10/20/2016 06:42	WG918054
Acrylonitrile	U		0.00203	0.0114	1	10/20/2016 06:42	WG918054
Benzene	U		0.000307	0.00114	1	10/20/2016 06:42	WG918054
Bromobenzene	U		0.000322	0.00114	1	10/20/2016 06:42	WG918054
Bromodichloromethane	U		0.000288	0.00114	1	10/20/2016 06:42	WG918054
Bromoform	U		0.000481	0.00114	1	10/20/2016 06:42	WG918054
Bromomethane	U		0.00152	0.00568	1	10/20/2016 06:42	WG918054
n-Butylbenzene	U		0.000293	0.00114	1	10/20/2016 06:42	WG918054
sec-Butylbenzene	U		0.000228	0.00114	1	10/20/2016 06:42	WG918054
tert-Butylbenzene	U		0.000234	0.00114	1	10/20/2016 06:42	WG918054
Carbon tetrachloride	U		0.000372	0.00114	1	10/20/2016 06:42	WG918054
Carbon disulfide	U		0.000251	0.00114	1	10/20/2016 06:42	WG918054
Chlorobenzene	U		0.000241	0.00114	1	10/20/2016 06:42	WG918054
Chlorodibromomethane	U		0.000424	0.00114	1	10/20/2016 06:42	WG918054
Chloroethane	U		0.00107	0.00568	1	10/20/2016 06:42	WG918054
2-Chloroethyl vinyl ether	U		0.00266	0.0568	1	10/20/2016 06:42	WG918054
Chloroform	U		0.000260	0.00568	1	10/20/2016 06:42	WG918054
Chloromethane	U		0.000426	0.00284	1	10/20/2016 06:42	WG918054
2-Chlorotoluene	U		0.000342	0.00114	1	10/20/2016 06:42	WG918054
4-Chlorotoluene	U		0.000273	0.00114	1	10/20/2016 06:42	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00119	0.00568	1	10/20/2016 06:42	WG918054
1,2-Dibromoethane	U		0.000389	0.00114	1	10/20/2016 06:42	WG918054
Dibromomethane	U		0.000434	0.00114	1	10/20/2016 06:42	WG918054
1,2-Dichlorobenzene	U		0.000346	0.00114	1	10/20/2016 06:42	WG918054
1,3-Dichlorobenzene	U		0.000271	0.00114	1	10/20/2016 06:42	WG918054
1,4-Dichlorobenzene	U		0.000257	0.00114	1	10/20/2016 06:42	WG918054
Dichlorodifluoromethane	U		0.000810	0.00568	1	10/20/2016 06:42	WG918054
1,1-Dichloroethane	U		0.000226	0.00114	1	10/20/2016 06:42	WG918054
1,2-Dichloroethane	U		0.000301	0.00114	1	10/20/2016 06:42	WG918054
1,1-Dichloroethene	U		0.000344	0.00114	1	10/20/2016 06:42	WG918054
cis-1,2-Dichloroethene	U		0.000267	0.00114	1	10/20/2016 06:42	WG918054
trans-1,2-Dichloroethene	U		0.000300	0.00114	1	10/20/2016 06:42	WG918054
1,2-Dichloropropane	U		0.000407	0.00114	1	10/20/2016 06:42	WG918054
1,1-Dichloropropene	U		0.000360	0.00114	1	10/20/2016 06:42	WG918054
1,3-Dichloropropane	U		0.000235	0.00114	1	10/20/2016 06:42	WG918054
cis-1,3-Dichloropropene	U		0.000298	0.00114	1	10/20/2016 06:42	WG918054
trans-1,3-Dichloropropene	U		0.000303	0.00114	1	10/20/2016 06:42	WG918054
2,2-Dichloropropane	U		0.000317	0.00114	1	10/20/2016 06:42	WG918054
Ethylbenzene	U		0.000337	0.00114	1	10/20/2016 06:42	WG918054
Hexachloro-1,3-butadiene	U		0.000388	0.00114	1	10/20/2016 06:42	WG918054
Isopropylbenzene	U		0.000276	0.00114	1	10/20/2016 06:42	WG918054
p-Isopropyltoluene	U		0.000232	0.00114	1	10/20/2016 06:42	WG918054
2-Butanone (MEK)	U		0.00531	0.0114	1	10/20/2016 06:42	WG918054
Methylene Chloride	U		0.00114	0.00568	1	10/20/2016 06:42	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00213	0.0114	1	10/20/2016 06:42	WG918054
Naphthalene	U		0.00114	0.00568	1	10/20/2016 06:42	WG918054
n-Propylbenzene	U		0.000234	0.00114	1	10/20/2016 06:42	WG918054
Styrene	U		0.000266	0.00114	1	10/20/2016 06:42	WG918054
1,1,1,2-Tetrachloroethane	U		0.000300	0.00114	1	10/20/2016 06:42	WG918054
1,1,2,2-Tetrachloroethane	U		0.000414	0.00114	1	10/20/2016 06:42	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000414	0.00114	1	10/20/2016 06:42	WG918054
Tetrachloroethene	U		0.000313	0.00114	1	10/20/2016 06:42	WG918054
Toluene	U		0.000493	0.00568	1	10/20/2016 06:42	WG918054
1,2,3-Trichlorobenzene	U		0.000347	0.00114	1	10/20/2016 06:42	WG918054
1,2,4-Trichlorobenzene	U		0.000441	0.00114	1	10/20/2016 06:42	WG918054
1,1,1-Trichloroethane	U		0.000325	0.00114	1	10/20/2016 06:42	WG918054
1,1,2-Trichloroethane	U		0.000315	0.00114	1	10/20/2016 06:42	WG918054
Trichloroethene	U		0.000317	0.00114	1	10/20/2016 06:42	WG918054
Trichlorofluoromethane	U		0.000434	0.00568	1	10/20/2016 06:42	WG918054
1,2,3-Trichloropropane	U		0.000841	0.00284	1	10/20/2016 06:42	WG918054
1,2,4-Trimethylbenzene	U		0.000240	0.00114	1	10/20/2016 06:42	WG918054
1,2,3-Trimethylbenzene	U		0.000326	0.00114	1	10/20/2016 06:42	WG918054
1,3,5-Trimethylbenzene	U		0.000302	0.00114	1	10/20/2016 06:42	WG918054
Vinyl chloride	U		0.000330	0.00114	1	10/20/2016 06:42	WG918054
Xylenes, Total	U		0.000793	0.00341	1	10/20/2016 06:42	WG918054
Di-isopropyl ether	U		0.000282	0.00114	1	10/20/2016 06:42	WG918054
Ethanol	U		0.0556	0.114	1	10/20/2016 06:42	WG918054
Ethyl tert-butyl ether	U		0.000454	0.00114	1	10/20/2016 06:42	WG918054
Methyl tert-butyl ether	U		0.000241	0.00114	1	10/20/2016 06:42	WG918054
t-Amyl Alcohol	U		0.00477	0.0568	1	10/20/2016 06:42	WG918054
tert-Amyl Methyl Ether	U		0.000307	0.00114	1	10/20/2016 06:42	WG918054
tert-Butyl alcohol	U		0.00227	0.00568	1	10/20/2016 06:42	WG918054
(S) Toluene-d8	*104*			*88.7-115*		*10/20/2016 06:42*	WG918054
(S) Dibromofluoromethane	*101*			*76.3-123*		*10/20/2016 06:42*	WG918054
(S) 4-Bromofluorobenzene	*90.4*			*69.7-129*		*10/20/2016 06:42*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	3.94	J	0.832	4.54	1	10/19/2016 15:56	WG918428
C22-C32 Hydrocarbons	U		1.51	4.54	1	10/19/2016 15:56	WG918428
C32-C40 Hydrocarbons	U		1.51	4.54	1	10/19/2016 15:56	WG918428
(S) o-Terphenyl	*91.7*			*50.0-150*		*10/19/2016 15:56*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.8		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	7.88		0.0374	0.113	1	10/17/2016 18:40	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*93.7*			*59.0-128*		*10/17/2016 18:40*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0162	J	0.0113	0.0563	1	10/20/2016 07:01	WG918054
Acrylonitrile	U		0.00202	0.0113	1	10/20/2016 07:01	WG918054
Benzene	U		0.000304	0.00113	1	10/20/2016 07:01	WG918054
Bromobenzene	U		0.000320	0.00113	1	10/20/2016 07:01	WG918054
Bromodichloromethane	U		0.000286	0.00113	1	10/20/2016 07:01	WG918054
Bromoform	U		0.000477	0.00113	1	10/20/2016 07:01	WG918054
Bromomethane	U		0.00151	0.00563	1	10/20/2016 07:01	WG918054
n-Butylbenzene	U		0.000290	0.00113	1	10/20/2016 07:01	WG918054
sec-Butylbenzene	U		0.000226	0.00113	1	10/20/2016 07:01	WG918054
tert-Butylbenzene	U		0.000232	0.00113	1	10/20/2016 07:01	WG918054
Carbon tetrachloride	U		0.000369	0.00113	1	10/20/2016 07:01	WG918054
Carbon disulfide	U		0.000249	0.00113	1	10/20/2016 07:01	WG918054
Chlorobenzene	U		0.000239	0.00113	1	10/20/2016 07:01	WG918054
Chlorodibromomethane	U		0.000420	0.00113	1	10/20/2016 07:01	WG918054
Chloroethane	U		0.00106	0.00563	1	10/20/2016 07:01	WG918054
2-Chloroethyl vinyl ether	U		0.00263	0.0563	1	10/20/2016 07:01	WG918054
Chloroform	U		0.000258	0.00563	1	10/20/2016 07:01	WG918054
Chloromethane	U		0.000422	0.00281	1	10/20/2016 07:01	WG918054
2-Chlorotoluene	U		0.000339	0.00113	1	10/20/2016 07:01	WG918054
4-Chlorotoluene	U		0.000270	0.00113	1	10/20/2016 07:01	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00118	0.00563	1	10/20/2016 07:01	WG918054
1,2-Dibromoethane	U		0.000386	0.00113	1	10/20/2016 07:01	WG918054
Dibromomethane	U		0.000430	0.00113	1	10/20/2016 07:01	WG918054
1,2-Dichlorobenzene	U		0.000343	0.00113	1	10/20/2016 07:01	WG918054
1,3-Dichlorobenzene	U		0.000269	0.00113	1	10/20/2016 07:01	WG918054
1,4-Dichlorobenzene	U		0.000254	0.00113	1	10/20/2016 07:01	WG918054
Dichlorodifluoromethane	U		0.000803	0.00563	1	10/20/2016 07:01	WG918054
1,1-Dichloroethane	U		0.000224	0.00113	1	10/20/2016 07:01	WG918054
1,2-Dichloroethane	U		0.000298	0.00113	1	10/20/2016 07:01	WG918054
1,1-Dichloroethene	U		0.000341	0.00113	1	10/20/2016 07:01	WG918054
cis-1,2-Dichloroethene	U		0.000265	0.00113	1	10/20/2016 07:01	WG918054
trans-1,2-Dichloroethene	U		0.000297	0.00113	1	10/20/2016 07:01	WG918054
1,2-Dichloropropane	U		0.000403	0.00113	1	10/20/2016 07:01	WG918054
1,1-Dichloropropene	U		0.000357	0.00113	1	10/20/2016 07:01	WG918054
1,3-Dichloropropane	U		0.000233	0.00113	1	10/20/2016 07:01	WG918054
cis-1,3-Dichloropropene	U		0.000295	0.00113	1	10/20/2016 07:01	WG918054
trans-1,3-Dichloropropene	U		0.000301	0.00113	1	10/20/2016 07:01	WG918054
2,2-Dichloropropane	U		0.000314	0.00113	1	10/20/2016 07:01	WG918054
Ethylbenzene	U		0.000334	0.00113	1	10/20/2016 07:01	WG918054
Hexachloro-1,3-butadiene	U		0.000385	0.00113	1	10/20/2016 07:01	WG918054
Isopropylbenzene	U		0.000274	0.00113	1	10/20/2016 07:01	WG918054
p-Isopropyltoluene	U		0.000230	0.00113	1	10/20/2016 07:01	WG918054
2-Butanone (MEK)	U		0.00527	0.0113	1	10/20/2016 07:01	WG918054
Methylene Chloride	U		0.00113	0.00563	1	10/20/2016 07:01	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00212	0.0113	1	10/20/2016 07:01	WG918054
Naphthalene	U		0.00113	0.00563	1	10/20/2016 07:01	WG918054
n-Propylbenzene	U		0.000232	0.00113	1	10/20/2016 07:01	WG918054
Styrene	U		0.000263	0.00113	1	10/20/2016 07:01	WG918054
1,1,1,2-Tetrachloroethane	U		0.000297	0.00113	1	10/20/2016 07:01	WG918054
1,1,2,2-Tetrachloroethane	U		0.000411	0.00113	1	10/20/2016 07:01	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000411	0.00113	1	10/20/2016 07:01	WG918054
Tetrachloroethene	U		0.000311	0.00113	1	10/20/2016 07:01	WG918054
Toluene	U		0.000489	0.00563	1	10/20/2016 07:01	WG918054
1,2,3-Trichlorobenzene	U		0.000344	0.00113	1	10/20/2016 07:01	WG918054
1,2,4-Trichlorobenzene	U		0.000437	0.00113	1	10/20/2016 07:01	WG918054
1,1,1-Trichloroethane	U		0.000322	0.00113	1	10/20/2016 07:01	WG918054
1,1,2-Trichloroethane	U		0.000312	0.00113	1	10/20/2016 07:01	WG918054
Trichloroethene	U		0.000314	0.00113	1	10/20/2016 07:01	WG918054
Trichlorofluoromethane	U		0.000430	0.00563	1	10/20/2016 07:01	WG918054
1,2,3-Trichloropropane	U		0.000834	0.00281	1	10/20/2016 07:01	WG918054
1,2,4-Trimethylbenzene	U		0.000238	0.00113	1	10/20/2016 07:01	WG918054
1,2,3-Trimethylbenzene	U		0.000323	0.00113	1	10/20/2016 07:01	WG918054
1,3,5-Trimethylbenzene	U		0.000299	0.00113	1	10/20/2016 07:01	WG918054
Vinyl chloride	U		0.000328	0.00113	1	10/20/2016 07:01	WG918054
Xylenes, Total	U		0.000786	0.00338	1	10/20/2016 07:01	WG918054
Di-isopropyl ether	U		0.000279	0.00113	1	10/20/2016 07:01	WG918054
Ethanol	U		0.0552	0.113	1	10/20/2016 07:01	WG918054
Ethyl tert-butyl ether	U		0.000450	0.00113	1	10/20/2016 07:01	WG918054
Methyl tert-butyl ether	U		0.000239	0.00113	1	10/20/2016 07:01	WG918054
t-Amyl Alcohol	U		0.00473	0.0563	1	10/20/2016 07:01	WG918054
tert-Amyl Methyl Ether	U		0.000304	0.00113	1	10/20/2016 07:01	WG918054
tert-Butyl alcohol	0.00497	J	0.00225	0.00563	1	10/20/2016 07:01	WG918054
(S) Toluene-d8	*106*			*88.7-115*		*10/20/2016 07:01*	WG918054
(S) Dibromofluoromethane	*102*			*76.3-123*		*10/20/2016 07:01*	WG918054
(S) 4-Bromofluorobenzene	*96.7*			*69.7-129*		*10/20/2016 07:01*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	4.06	J	0.825	4.50	1	10/19/2016 13:03	WG918428
C22-C32 Hydrocarbons	U		1.50	4.50	1	10/19/2016 13:03	WG918428
C32-C40 Hydrocarbons	U		1.50	4.50	1	10/19/2016 13:03	WG918428
(S) o-Terphenyl	*105*			*50.0-150*		*10/19/2016 13:03*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.6		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	0.150	B	0.0388	0.117	1	10/20/2016 09:56	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*104*			*59.0-128*		*10/20/2016 09:56*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0117	0.0584	1	10/20/2016 07:19	WG918054
Acrylonitrile	U		0.00209	0.0117	1	10/20/2016 07:19	WG918054
Benzene	U		0.000315	0.00117	1	10/20/2016 07:19	WG918054
Bromobenzene	U		0.000332	0.00117	1	10/20/2016 07:19	WG918054
Bromodichloromethane	U		0.000297	0.00117	1	10/20/2016 07:19	WG918054
Bromoform	U		0.000495	0.00117	1	10/20/2016 07:19	WG918054
Bromomethane	U		0.00157	0.00584	1	10/20/2016 07:19	WG918054
n-Butylbenzene	U		0.000301	0.00117	1	10/20/2016 07:19	WG918054
sec-Butylbenzene	U		0.000235	0.00117	1	10/20/2016 07:19	WG918054
tert-Butylbenzene	U		0.000241	0.00117	1	10/20/2016 07:19	WG918054
Carbon tetrachloride	U		0.000383	0.00117	1	10/20/2016 07:19	WG918054
Carbon disulfide	U		0.000258	0.00117	1	10/20/2016 07:19	WG918054
Chlorobenzene	U		0.000248	0.00117	1	10/20/2016 07:19	WG918054
Chlorodibromomethane	U		0.000436	0.00117	1	10/20/2016 07:19	WG918054
Chloroethane	U		0.00110	0.00584	1	10/20/2016 07:19	WG918054
2-Chloroethyl vinyl ether	U		0.00273	0.0584	1	10/20/2016 07:19	WG918054
Chloroform	U		0.000267	0.00584	1	10/20/2016 07:19	WG918054
Chloromethane	U		0.000438	0.00292	1	10/20/2016 07:19	WG918054
2-Chlorotoluene	U		0.000352	0.00117	1	10/20/2016 07:19	WG918054
4-Chlorotoluene	U		0.000280	0.00117	1	10/20/2016 07:19	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00123	0.00584	1	10/20/2016 07:19	WG918054
1,2-Dibromoethane	U		0.000401	0.00117	1	10/20/2016 07:19	WG918054
Dibromomethane	U		0.000446	0.00117	1	10/20/2016 07:19	WG918054
1,2-Dichlorobenzene	U		0.000356	0.00117	1	10/20/2016 07:19	WG918054
1,3-Dichlorobenzene	U		0.000279	0.00117	1	10/20/2016 07:19	WG918054
1,4-Dichlorobenzene	U		0.000264	0.00117	1	10/20/2016 07:19	WG918054
Dichlorodifluoromethane	U		0.000833	0.00584	1	10/20/2016 07:19	WG918054
1,1-Dichloroethane	U		0.000232	0.00117	1	10/20/2016 07:19	WG918054
1,2-Dichloroethane	U		0.000310	0.00117	1	10/20/2016 07:19	WG918054
1,1-Dichloroethene	U		0.000354	0.00117	1	10/20/2016 07:19	WG918054
cis-1,2-Dichloroethene	U		0.000274	0.00117	1	10/20/2016 07:19	WG918054
trans-1,2-Dichloroethene	U		0.000308	0.00117	1	10/20/2016 07:19	WG918054
1,2-Dichloropropane	U		0.000418	0.00117	1	10/20/2016 07:19	WG918054
1,1-Dichloropropene	U		0.000370	0.00117	1	10/20/2016 07:19	WG918054
1,3-Dichloropropane	U		0.000242	0.00117	1	10/20/2016 07:19	WG918054
cis-1,3-Dichloropropene	U		0.000306	0.00117	1	10/20/2016 07:19	WG918054
trans-1,3-Dichloropropene	U		0.000312	0.00117	1	10/20/2016 07:19	WG918054
2,2-Dichloropropane	U		0.000326	0.00117	1	10/20/2016 07:19	WG918054
Ethylbenzene	U		0.000347	0.00117	1	10/20/2016 07:19	WG918054
Hexachloro-1,3-butadiene	U		0.000399	0.00117	1	10/20/2016 07:19	WG918054
Isopropylbenzene	U		0.000284	0.00117	1	10/20/2016 07:19	WG918054
p-Isopropyltoluene	U		0.000238	0.00117	1	10/20/2016 07:19	WG918054
2-Butanone (MEK)	U		0.00547	0.0117	1	10/20/2016 07:19	WG918054
Methylene Chloride	U		0.00117	0.00584	1	10/20/2016 07:19	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00220	0.0117	1	10/20/2016 07:19	WG918054
Naphthalene	U		0.00117	0.00584	1	10/20/2016 07:19	WG918054
n-Propylbenzene	U		0.000241	0.00117	1	10/20/2016 07:19	WG918054
Styrene	U		0.000273	0.00117	1	10/20/2016 07:19	WG918054
1,1,1,2-Tetrachloroethane	U		0.000308	0.00117	1	10/20/2016 07:19	WG918054
1,1,2,2-Tetrachloroethane	U		0.000426	0.00117	1	10/20/2016 07:19	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000426	0.00117	1	10/20/2016 07:19	WG918054
Tetrachloroethene	U		0.000322	0.00117	1	10/20/2016 07:19	WG918054
Toluene	U		0.000507	0.00584	1	10/20/2016 07:19	WG918054
1,2,3-Trichlorobenzene	U		0.000357	0.00117	1	10/20/2016 07:19	WG918054
1,2,4-Trichlorobenzene	U		0.000453	0.00117	1	10/20/2016 07:19	WG918054
1,1,1-Trichloroethane	U		0.000334	0.00117	1	10/20/2016 07:19	WG918054
1,1,2-Trichloroethane	U		0.000324	0.00117	1	10/20/2016 07:19	WG918054
Trichloroethene	U		0.000326	0.00117	1	10/20/2016 07:19	WG918054
Trichlorofluoromethane	U		0.000446	0.00584	1	10/20/2016 07:19	WG918054
1,2,3-Trichloropropane	U		0.000865	0.00292	1	10/20/2016 07:19	WG918054
1,2,4-Trimethylbenzene	U		0.000246	0.00117	1	10/20/2016 07:19	WG918054
1,2,3-Trimethylbenzene	U		0.000335	0.00117	1	10/20/2016 07:19	WG918054
1,3,5-Trimethylbenzene	U		0.000311	0.00117	1	10/20/2016 07:19	WG918054
Vinyl chloride	U		0.000340	0.00117	1	10/20/2016 07:19	WG918054
Xylenes, Total	U		0.000815	0.00350	1	10/20/2016 07:19	WG918054
Di-isopropyl ether	U		0.000290	0.00117	1	10/20/2016 07:19	WG918054
Ethanol	U		0.0572	0.117	1	10/20/2016 07:19	WG918054
Ethyl tert-butyl ether	U		0.000467	0.00117	1	10/20/2016 07:19	WG918054
Methyl tert-butyl ether	U		0.000248	0.00117	1	10/20/2016 07:19	WG918054
t-Amyl Alcohol	U		0.00491	0.0584	1	10/20/2016 07:19	WG918054
tert-Amyl Methyl Ether	U		0.000315	0.00117	1	10/20/2016 07:19	WG918054
tert-Butyl alcohol	U		0.00234	0.00584	1	10/20/2016 07:19	WG918054
(S) Toluene-d8	*106*			*88.7-115*		*10/20/2016 07:19*	WG918054
(S) Dibromofluoromethane	*102*			*76.3-123*		*10/20/2016 07:19*	WG918054
(S) 4-Bromofluorobenzene	*89.2*			*69.7-129*		*10/20/2016 07:19*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	2.15	J	0.856	4.67	1	10/19/2016 13:55	WG918428
C22-C32 Hydrocarbons	U		1.55	4.67	1	10/19/2016 13:55	WG918428
C32-C40 Hydrocarbons	U		1.55	4.67	1	10/19/2016 13:55	WG918428
(S) o-Terphenyl	*92.5*			*50.0-150*		*10/19/2016 13:55*	WG918428

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.2		1	10/17/2016 11:14	WG917459

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	0.0745	B J	0.0360	0.108	1	10/20/2016 10:25	WG917734
(S) a,a,a-Trifluorotoluene(FID)	*103*			*59.0-128*		*10/20/2016 10:25*	WG917734

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0117	J	0.0108	0.0542	1	10/20/2016 07:38	WG918054
Acrylonitrile	U		0.00194	0.0108	1	10/20/2016 07:38	WG918054
Benzene	U		0.000293	0.00108	1	10/20/2016 07:38	WG918054
Bromobenzene	U		0.000308	0.00108	1	10/20/2016 07:38	WG918054
Bromodichloromethane	U		0.000275	0.00108	1	10/20/2016 07:38	WG918054
Bromoform	U		0.000460	0.00108	1	10/20/2016 07:38	WG918054
Bromomethane	U		0.00145	0.00542	1	10/20/2016 07:38	WG918054
n-Butylbenzene	U		0.000280	0.00108	1	10/20/2016 07:38	WG918054
sec-Butylbenzene	U		0.000218	0.00108	1	10/20/2016 07:38	WG918054
tert-Butylbenzene	U		0.000223	0.00108	1	10/20/2016 07:38	WG918054
Carbon tetrachloride	U		0.000356	0.00108	1	10/20/2016 07:38	WG918054
Carbon disulfide	U		0.000240	0.00108	1	10/20/2016 07:38	WG918054
Chlorobenzene	U		0.000230	0.00108	1	10/20/2016 07:38	WG918054
Chlorodibromomethane	U		0.000404	0.00108	1	10/20/2016 07:38	WG918054
Chloroethane	U		0.00103	0.00542	1	10/20/2016 07:38	WG918054
2-Chloroethyl vinyl ether	U		0.00254	0.0542	1	10/20/2016 07:38	WG918054
Chloroform	U		0.000248	0.00542	1	10/20/2016 07:38	WG918054
Chloromethane	U		0.000407	0.00271	1	10/20/2016 07:38	WG918054
2-Chlorotoluene	U		0.000326	0.00108	1	10/20/2016 07:38	WG918054
4-Chlorotoluene	U		0.000260	0.00108	1	10/20/2016 07:38	WG918054
1,2-Dibromo-3-Chloropropane	U		0.00114	0.00542	1	10/20/2016 07:38	WG918054
1,2-Dibromoethane	U		0.000372	0.00108	1	10/20/2016 07:38	WG918054
Dibromomethane	U		0.000414	0.00108	1	10/20/2016 07:38	WG918054
1,2-Dichlorobenzene	U		0.000331	0.00108	1	10/20/2016 07:38	WG918054
1,3-Dichlorobenzene	U		0.000259	0.00108	1	10/20/2016 07:38	WG918054
1,4-Dichlorobenzene	U		0.000245	0.00108	1	10/20/2016 07:38	WG918054
Dichlorodifluoromethane	U		0.000773	0.00542	1	10/20/2016 07:38	WG918054
1,1-Dichloroethane	U		0.000216	0.00108	1	10/20/2016 07:38	WG918054
1,2-Dichloroethane	U		0.000287	0.00108	1	10/20/2016 07:38	WG918054
1,1-Dichloroethene	U		0.000328	0.00108	1	10/20/2016 07:38	WG918054
cis-1,2-Dichloroethene	U		0.000255	0.00108	1	10/20/2016 07:38	WG918054
trans-1,2-Dichloroethene	U		0.000286	0.00108	1	10/20/2016 07:38	WG918054
1,2-Dichloropropane	U		0.000388	0.00108	1	10/20/2016 07:38	WG918054
1,1-Dichloropropene	U		0.000344	0.00108	1	10/20/2016 07:38	WG918054
1,3-Dichloropropane	U		0.000224	0.00108	1	10/20/2016 07:38	WG918054
cis-1,3-Dichloropropene	U		0.000284	0.00108	1	10/20/2016 07:38	WG918054
trans-1,3-Dichloropropene	U		0.000289	0.00108	1	10/20/2016 07:38	WG918054
2,2-Dichloropropane	U		0.000302	0.00108	1	10/20/2016 07:38	WG918054
Ethylbenzene	U		0.000322	0.00108	1	10/20/2016 07:38	WG918054
Hexachloro-1,3-butadiene	U		0.000371	0.00108	1	10/20/2016 07:38	WG918054
Isopropylbenzene	U		0.000263	0.00108	1	10/20/2016 07:38	WG918054
p-Isopropyltoluene	U		0.000221	0.00108	1	10/20/2016 07:38	WG918054
2-Butanone (MEK)	U		0.00507	0.0108	1	10/20/2016 07:38	WG918054
Methylene Chloride	U		0.00108	0.00542	1	10/20/2016 07:38	WG918054

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00204	0.0108	1	10/20/2016 07:38	WG918054
Naphthalene	U		0.00108	0.00542	1	10/20/2016 07:38	WG918054
n-Propylbenzene	U		0.000223	0.00108	1	10/20/2016 07:38	WG918054
Styrene	U		0.000254	0.00108	1	10/20/2016 07:38	WG918054
1,1,1,2-Tetrachloroethane	U		0.000286	0.00108	1	10/20/2016 07:38	WG918054
1,1,2,2-Tetrachloroethane	U		0.000396	0.00108	1	10/20/2016 07:38	WG918054
1,1,2-Trichlorotrifluoroethane	U		0.000396	0.00108	1	10/20/2016 07:38	WG918054
Tetrachloroethene	U		0.000299	0.00108	1	10/20/2016 07:38	WG918054
Toluene	U		0.000471	0.00542	1	10/20/2016 07:38	WG918054
1,2,3-Trichlorobenzene	U		0.000332	0.00108	1	10/20/2016 07:38	WG918054
1,2,4-Trichlorobenzene	U		0.000421	0.00108	1	10/20/2016 07:38	WG918054
1,1,1-Trichloroethane	U		0.000310	0.00108	1	10/20/2016 07:38	WG918054
1,1,2-Trichloroethane	U		0.000300	0.00108	1	10/20/2016 07:38	WG918054
Trichloroethene	U		0.000302	0.00108	1	10/20/2016 07:38	WG918054
Trichlorofluoromethane	U		0.000414	0.00542	1	10/20/2016 07:38	WG918054
1,2,3-Trichloropropane	U		0.000803	0.00271	1	10/20/2016 07:38	WG918054
1,2,4-Trimethylbenzene	U		0.000229	0.00108	1	10/20/2016 07:38	WG918054
1,2,3-Trimethylbenzene	U		0.000311	0.00108	1	10/20/2016 07:38	WG918054
1,3,5-Trimethylbenzene	U		0.000288	0.00108	1	10/20/2016 07:38	WG918054
Vinyl chloride	U		0.000315	0.00108	1	10/20/2016 07:38	WG918054
Xylenes, Total	U		0.000757	0.00325	1	10/20/2016 07:38	WG918054
Di-isopropyl ether	U		0.000269	0.00108	1	10/20/2016 07:38	WG918054
Ethanol	U		0.0531	0.108	1	10/20/2016 07:38	WG918054
Ethyl tert-butyl ether	U		0.000434	0.00108	1	10/20/2016 07:38	WG918054
Methyl tert-butyl ether	U		0.000230	0.00108	1	10/20/2016 07:38	WG918054
t-Amyl Alcohol	U		0.00455	0.0542	1	10/20/2016 07:38	WG918054
tert-Amyl Methyl Ether	U		0.000293	0.00108	1	10/20/2016 07:38	WG918054
tert-Butyl alcohol	U		0.00217	0.00542	1	10/20/2016 07:38	WG918054
(S) Toluene-d8	*106*			*88.7-115*		*10/20/2016 07:38*	WG918054
(S) Dibromofluoromethane	*101*			*76.3-123*		*10/20/2016 07:38*	WG918054
(S) 4-Bromofluorobenzene	*88.3*			*69.7-129*		*10/20/2016 07:38*	WG918054

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	8.31		0.795	4.34	1	10/19/2016 23:35	WG918428
C22-C32 Hydrocarbons	1.76	J	1.44	4.34	1	10/19/2016 23:35	WG918428
C32-C40 Hydrocarbons	U		1.44	4.34	1	10/19/2016 23:35	WG918428
(S) o-Terphenyl	*95.3*			*50.0-150*		*10/19/2016 23:35*	WG918428

Method Blank (MB)

(MB) R3170953-1 10/15/16 06:59

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000100			

L866089-01 Original Sample (OS) • Duplicate (DUP)

(OS) L866089-01 10/15/16 06:59 • (DUP) R3170953-3 10/15/16 06:59

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.2	83.6	1	0.429		5

Laboratory Control Sample (LCS)

(LCS) R3170953-2 10/15/16 06:59

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3171181-1 10/17/16 11:23

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000400			

L866089-04 Original Sample (OS) • Duplicate (DUP)

(OS) L866089-04 10/17/16 11:23 • (DUP) R3171181-3 10/17/16 11:23

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.1	85.8	1	0.412		5

Laboratory Control Sample (LCS)

(LCS) R3171181-2 10/17/16 11:23

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3171180-1 10/17/16 11:14

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L866041-01 Original Sample (OS) • Duplicate (DUP)

(OS) L866041-01 10/17/16 11:14 • (DUP) R3171180-3 10/17/16 11:14

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.4	81.7	1	0.388		5

Laboratory Control Sample (LCS)

(LCS) R3171180-2 10/17/16 11:14

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3171912-3 10/16/16 22:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C5 - C12	0.0619	J	0.0332	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.1*			*59.0-128*

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

(LCS) R3171912-1 10/16/16 21:12 • (LCSD) R3171912-2 10/16/16 21:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHG C5 - C12	5.50	5.21	5.13	94.7	93.2	60.0-130			1.59	20
(S) a,a,a-Trifluorotoluene(FID)				*112*	*111*	*59.0-128*				

L866089-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866089-05 10/17/16 13:51 • (MS) R3171912-4 10/17/16 11:15 • (MSD) R3171912-5 10/17/16 11:37

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHG C5 - C12	6.36	U	2.31	3.68	36.3	58.0	1	21.6-134		J3	45.9	23.9
(S) a,a,a-Trifluorotoluene(FID)					*95.5*	*97.0*		*59.0-128*				

Method Blank (MB)

(MB) R3172058-3 10/20/16 00:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromodichloromethane	U		0.000254	0.00100
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon disulfide	U		0.000221	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
2-Chloroethyl vinyl ether	U		0.00234	0.0500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethanol	U		0.0490	0.100

Method Blank (MB)

(MB) R3172058-3 10/20/16 00:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Ethylbenzene	U		0.000297	0.00100
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	U		0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
tert-Amyl Methyl Ether	U		0.000270	0.00100
Ethyl tert-butyl ether	U		0.000400	0.00100
tert-Butyl alcohol	U		0.00200	0.00500
(S) Toluene-d8	*105*			*88.7-115*
(S) Dibromofluoromethane	*95.4*			*76.3-123*
(S) 4-Bromofluorobenzene	*92.6*			*69.7-129*

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

(LCS) R3172058-1 10/19/16 22:49 • (LCSD) R3172058-2 10/19/16 23:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.165	0.183	132	146	25.3-178			9.94	22.9
Acrylonitrile	0.125	0.152	0.157	121	126	57.8-143			3.49	20
Benzene	0.0250	0.0247	0.0248	98.7	99.0	72.6-120			0.350	20
Bromobenzene	0.0250	0.0243	0.0245	97.1	97.8	80.3-115			0.760	20
Bromodichloromethane	0.0250	0.0227	0.0232	90.7	92.9	75.3-119			2.37	20
Bromoform	0.0250	0.0279	0.0284	112	113	69.1-135			1.63	20
Bromomethane	0.0250	0.0199	0.0183	79.6	73.2	23.0-191			8.39	20
n-Butylbenzene	0.0250	0.0254	0.0262	102	105	74.2-134			3.25	20
sec-Butylbenzene	0.0250	0.0253	0.0250	101	99.9	77.8-129			1.44	20
tert-Butylbenzene	0.0250	0.0257	0.0255	103	102	77.2-129			0.670	20
Carbon disulfide	0.0250	0.0222	0.0221	88.8	88.2	49.9-136			0.580	20
Carbon tetrachloride	0.0250	0.0230	0.0248	92.0	99.1	69.4-129			7.49	20
Chlorobenzene	0.0250	0.0256	0.0256	102	103	78.9-122			0.250	20
Chlorodibromomethane	0.0250	0.0263	0.0262	105	105	76.4-126			0.450	20
Chloroethane	0.0250	0.0210	0.0193	84.0	77.1	47.2-147			8.51	20
2-Chloroethyl vinyl ether	0.125	0.0340	0.0337	27.2	27.0	16.7-162			0.960	23.7
Chloroform	0.0250	0.0232	0.0238	93.0	95.2	73.3-122			2.39	20
Chloromethane	0.0250	0.0281	0.0272	113	109	53.1-135			3.39	20
2-Chlorotoluene	0.0250	0.0244	0.0249	97.5	99.7	74.6-127			2.27	20
4-Chlorotoluene	0.0250	0.0247	0.0249	98.6	99.8	79.5-123			1.13	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0268	0.0303	107	121	64.9-131			12.3	20
1,2-Dibromoethane	0.0250	0.0253	0.0256	101	102	78.7-123			1.17	20
Dibromomethane	0.0250	0.0248	0.0265	99.1	106	78.5-117			6.84	20
1,2-Dichlorobenzene	0.0250	0.0250	0.0260	100	104	83.6-119			3.84	20
1,3-Dichlorobenzene	0.0250	0.0257	0.0251	103	101	75.9-129			2.02	20
1,4-Dichlorobenzene	0.0250	0.0247	0.0260	98.7	104	81.0-115			5.10	20
Dichlorodifluoromethane	0.0250	0.0234	0.0227	93.8	90.9	50.9-139			3.09	20
1,1-Dichloroethane	0.0250	0.0261	0.0264	104	106	71.7-125			1.30	20
1,2-Dichloroethane	0.0250	0.0222	0.0230	88.9	91.9	67.2-121			3.30	20
1,1-Dichloroethene	0.0250	0.0207	0.0208	82.9	83.1	60.6-133			0.240	20
cis-1,2-Dichloroethene	0.0250	0.0233	0.0239	93.3	95.6	76.1-121			2.45	20
trans-1,2-Dichloroethene	0.0250	0.0235	0.0241	94.1	96.4	70.7-124			2.38	20
1,2-Dichloropropane	0.0250	0.0286	0.0283	114	113	76.9-123			1.10	20
1,1-Dichloropropene	0.0250	0.0254	0.0261	102	104	71.2-126			2.83	20
1,3-Dichloropropane	0.0250	0.0266	0.0274	106	110	80.3-114			3.04	20
cis-1,3-Dichloropropene	0.0250	0.0269	0.0276	107	110	77.3-123			2.73	20
trans-1,3-Dichloropropene	0.0250	0.0253	0.0263	101	105	73.0-127			3.94	20
2,2-Dichloropropane	0.0250	0.0240	0.0239	96.1	95.8	61.9-132			0.400	20
Di-isopropyl ether	0.0250	0.0260	0.0266	104	106	67.2-131			2.17	20
Ethylbenzene	0.0250	0.0245	0.0240	97.9	96.0	78.6-124			1.89	20

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

(LCS) R3172058-1 10/19/16 22:49 • (LCSD) R3172058-2 10/19/16 23:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	0.0250	0.0299	0.0300	120	120	69.2-136			0.340	20
Isopropylbenzene	0.0250	0.0247	0.0244	98.7	97.5	79.4-126			1.19	20
p-Isopropyltoluene	0.0250	0.0260	0.0259	104	104	75.4-132			0.350	20
2-Butanone (MEK)	0.125	0.162	0.178	130	143	44.5-154			9.57	21.3
Methylene Chloride	0.0250	0.0231	0.0231	92.5	92.4	68.2-119			0.190	20
4-Methyl-2-pentanone (MIBK)	0.125	0.143	0.152	114	121	61.1-138			5.98	20
Methyl tert-butyl ether	0.0250	0.0221	0.0226	88.3	90.6	70.2-122			2.55	20
Naphthalene	0.0250	0.0243	0.0262	97.3	105	69.9-132			7.45	20
n-Propylbenzene	0.0250	0.0259	0.0259	104	104	80.2-124			0.0300	20
Styrene	0.0250	0.0245	0.0251	98.1	100	79.4-124			2.17	20
1,1,1,2-Tetrachloroethane	0.0250	0.0253	0.0254	101	101	76.7-127			0.160	20
1,1,2,2-Tetrachloroethane	0.0250	0.0248	0.0255	99.2	102	78.8-124			2.61	20
Tetrachloroethene	0.0250	0.0267	0.0263	107	105	71.1-133			1.80	20
Toluene	0.0250	0.0254	0.0256	102	102	76.7-116			0.820	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0226	0.0223	90.5	89.1	62.6-138			1.52	20
1,2,3-Trichlorobenzene	0.0250	0.0274	0.0290	110	116	72.5-137			5.82	20
1,2,4-Trichlorobenzene	0.0250	0.0267	0.0285	107	114	74.0-137			6.47	20
1,1,1-Trichloroethane	0.0250	0.0241	0.0235	96.3	93.9	69.9-127			2.54	20
1,1,2-Trichloroethane	0.0250	0.0242	0.0241	96.8	96.5	81.9-119			0.340	20
Trichloroethene	0.0250	0.0267	0.0266	107	107	77.2-122			0.130	20
Trichlorofluoromethane	0.0250	0.0221	0.0218	88.4	87.1	51.5-151			1.46	20
1,2,3-Trichloropropane	0.0250	0.0266	0.0261	106	104	74.0-124			1.90	20
1,2,3-Trimethylbenzene	0.0250	0.0231	0.0242	92.3	97.0	79.4-118			4.91	20
1,2,4-Trimethylbenzene	0.0250	0.0243	0.0245	97.1	98.0	77.1-124			0.920	20
1,3,5-Trimethylbenzene	0.0250	0.0243	0.0240	97.4	96.2	79.0-125			1.26	20
Vinyl chloride	0.0250	0.0265	0.0268	106	107	58.4-134			1.13	20
Xylenes, Total	0.0750	0.0758	0.0751	101	100	78.1-123			0.830	20
(S) Toluene-d8				*105*	*105*	*88.7-115*				
(S) Dibromofluoromethane				*94.7*	*95.7*	*76.3-123*				
(S) 4-Bromofluorobenzene				*91.2*	*89.9*	*69.7-129*				

L866089-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866089-09 10/20/16 04:11 • (MS) R3172058-4 10/20/16 01:01 • (MSD) R3172058-5 10/20/16 01:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.151	0.0230	0.0914	0.0849	45.2	40.9	1	10.0-130			7.40	31.5
Acrylonitrile	0.151	U	0.119	0.140	79.0	92.8	1	39.3-152			16.0	27.2
Benzene	0.0302	U	0.0165	0.0199	54.7	65.9	1	47.8-131			18.6	22.8

L866089-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866089-09 10/20/16 04:11 • (MS) R3172058-4 10/20/16 01:01 • (MSD) R3172058-5 10/20/16 01:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromobenzene	0.0302	U	0.0150	0.0189	49.6	62.5	1	40.0-130			23.0	27.4
Bromodichloromethane	0.0302	U	0.0167	0.0201	55.3	66.5	1	50.6-128			18.3	22.8
Bromoform	0.0302	U	0.0196	0.0240	64.7	79.5	1	43.3-139			20.4	25.9
Bromomethane	0.0302	U	0.0127	0.0137	41.8	45.2	1	5.00-189			7.61	26.7
n-Butylbenzene	0.0302	U	0.0153	0.0188	50.6	62.2	1	23.6-146			20.5	39.2
sec-Butylbenzene	0.0302	U	0.0159	0.0191	52.4	63.1	1	31.0-142			18.4	34.7
tert-Butylbenzene	0.0302	U	0.0163	0.0204	53.8	67.4	1	36.9-142			22.4	31.7
Carbon disulfide	0.0302	U	0.0101	0.0121	33.4	39.9	1	21.2-135			17.7	23.8
Carbon tetrachloride	0.0302	U	0.0159	0.0206	52.7	68.1	1	46.0-140			25.5	27.2
Chlorobenzene	0.0302	U	0.0166	0.0203	55.0	67.3	1	44.1-134			20.1	25.7
Chlorodibromomethane	0.0302	U	0.0183	0.0230	60.6	75.9	1	49.7-134			22.5	24
Chloroethane	0.0302	U	0.0137	0.0152	45.2	50.4	1	5.00-164			10.9	28.4
2-Chloroethyl vinyl ether	0.151	U	0.0270	0.0322	17.9	21.3	1	5.00-159			17.5	40
Chloroform	0.0302	U	0.0169	0.0206	56.0	67.9	1	51.2-133			19.3	22.8
Chloromethane	0.0302	U	0.0179	0.0202	59.2	66.9	1	31.4-141			12.1	24.6
2-Chlorotoluene	0.0302	U	0.0153	0.0190	50.7	62.8	1	36.1-137			21.3	28.9
4-Chlorotoluene	0.0302	U	0.0151	0.0186	49.8	61.6	1	35.4-137			21.3	29.8
1,2-Dibromo-3-Chloropropane	0.0302	U	0.0195	0.0259	64.5	85.6	1	40.4-138			28.2	30.8
1,2-Dibromoethane	0.0302	U	0.0186	0.0221	61.5	72.9	1	50.2-133			17.0	23.6
Dibromomethane	0.0302	U	0.0188	0.0223	62.3	73.6	1	52.4-128			16.7	23
1,2-Dichlorobenzene	0.0302	U	0.0153	0.0195	50.5	64.3	1	34.6-139			24.0	29.9
1,3-Dichlorobenzene	0.0302	U	0.0149	0.0182	49.4	60.3	1	28.4-142			19.9	31.2
1,4-Dichlorobenzene	0.0302	U	0.0151	0.0189	49.9	62.5	1	35.0-133			22.4	31.1
Dichlorodifluoromethane	0.0302	U	0.0170	0.0208	56.1	68.6	1	31.2-144			20.1	30.2
1,1-Dichloroethane	0.0302	U	0.0187	0.0223	61.9	73.7	1	49.1-136			17.3	22.9
1,2-Dichloroethane	0.0302	U	0.0163	0.0199	53.8	65.7	1	47.1-129			19.9	22.7
1,1-Dichloroethene	0.0302	U	0.0132	0.0156	43.8	51.7	1	36.1-142			16.5	25.6
cis-1,2-Dichloroethene	0.0302	U	0.0164	0.0194	54.2	64.3	1	50.6-133			17.0	23
trans-1,2-Dichloroethene	0.0302	U	0.0154	0.0180	50.9	59.5	1	43.8-135			15.7	24.8
1,2-Dichloropropane	0.0302	U	0.0207	0.0243	68.4	80.5	1	50.3-134			16.3	22.7
1,1-Dichloropropene	0.0302	U	0.0165	0.0198	54.5	65.3	1	43.0-137			18.1	26.4
1,3-Dichloropropane	0.0302	U	0.0197	0.0239	65.2	78.9	1	51.4-127			19.0	23.1
cis-1,3-Dichloropropene	0.0302	U	0.0193	0.0234	63.8	77.3	1	48.4-134			19.1	23.6
trans-1,3-Dichloropropene	0.0302	U	0.0187	0.0222	61.7	73.5	1	46.6-135			17.3	25.3
2,2-Dichloropropane	0.0302	U	0.0182	0.0209	60.0	69.1	1	45.2-141			14.1	26.6
Di-isopropyl ether	0.0302	U	0.0196	0.0233	64.7	77.2	1	46.7-140			17.6	23.5
Ethylbenzene	0.0302	U	0.0167	0.0201	55.3	66.4	1	44.8-135			18.2	26.9
Hexachloro-1,3-butadiene	0.0302	U	0.0168	0.0209	55.6	69.1	1	10.0-149			21.6	40
Isopropylbenzene	0.0302	U	0.0158	0.0194	52.3	64.0	1	41.9-139			20.2	29.3

L866089-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866089-09 10/20/16 04:11 • (MS) R3172058-4 10/20/16 01:01 • (MSD) R3172058-5 10/20/16 01:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
p-Isopropyltoluene	0.0302	U	0.0162	0.0199	53.7	65.9	1	27.3-146			20.4	35.1
2-Butanone (MEK)	0.151	U	0.107	0.115	70.7	75.9	1	23.9-170			7.17	28.3
Methylene Chloride	0.0302	U	0.0161	0.0191	53.1	63.0	1	46.7-125			17.1	22.2
4-Methyl-2-pentanone (MIBK)	0.151	U	0.116	0.137	76.7	90.6	1	42.4-146			16.6	26.7
Methyl tert-butyl ether	0.0302	U	0.0168	0.0204	55.7	67.6	1	50.4-131			19.3	24.8
Naphthalene	0.0302	U	0.0124	0.0158	41.1	52.3	1	18.4-145			23.8	34
n-Propylbenzene	0.0302	U	0.0165	0.0201	54.6	66.4	1	35.2-139			19.5	31.9
Styrene	0.0302	U	0.0154	0.0189	50.9	62.5	1	39.7-137			20.4	28.2
1,1,1,2-Tetrachloroethane	0.0302	U	0.0178	0.0221	59.0	73.2	1	48.8-136			21.5	25.5
1,1,2,2-Tetrachloroethane	0.0302	U	0.0184	0.0221	60.9	73.1	1	45.7-140			18.3	26.4
Tetrachloroethene	0.0302	U	0.0172	0.0203	57.0	67.2	1	37.7-140			16.5	29.2
Toluene	0.0302	U	0.0174	0.0205	57.4	67.8	1	47.8-127			16.6	24.3
1,1,2-Trichlorotrifluoroethane	0.0302	U	0.0157	0.0176	52.0	58.1	1	35.7-146			11.1	28.8
1,2,3-Trichlorobenzene	0.0302	U	0.0142	0.0174	47.1	57.6	1	10.0-150			20.2	38.5
1,2,4-Trichlorobenzene	0.0302	U	0.0142	0.0175	46.8	57.8	1	10.0-153			20.9	39.3
1,1,1-Trichloroethane	0.0302	U	0.0169	0.0194	55.9	64.2	1	49.0-138			13.7	25.3
1,1,2-Trichloroethane	0.0302	U	0.0175	0.0217	57.9	71.8	1	52.3-132			21.5	23.4
Trichloroethene	0.0302	U	0.0182	0.0211	60.1	69.8	1	48.0-132			14.9	24.8
Trichlorofluoromethane	0.0302	U	0.0160	0.0177	52.7	58.6	1	12.8-169			10.5	29.7
1,2,3-Trichloropropane	0.0302	U	0.0196	0.0246	64.9	81.3	1	44.4-138			22.5	26.3
1,2,3-Trimethylbenzene	0.0302	U	0.0151	0.0190	49.9	62.7	1	41.0-133			22.8	27.6
1,2,4-Trimethylbenzene	0.0302	U	0.0161	0.0202	53.1	66.8	1	32.9-139			22.9	30.6
1,3,5-Trimethylbenzene	0.0302	U	0.0155	0.0188	51.1	62.2	1	37.1-138			19.5	30.6
Vinyl chloride	0.0302	U	0.0172	0.0205	56.8	67.7	1	32.0-146			17.5	26.3
Xylenes, Total	0.0907	U	0.0493	0.0593	54.4	65.3	1	42.7-135			18.3	26.6
(S) Toluene-d8					*106*	*105*		*88.7-115*				
(S) Dibromofluoromethane					*96.6*	*95.6*		*76.3-123*				
(S) 4-Bromofluorobenzene					*88.5*	*88.9*		*69.7-129*				

Method Blank (MB)

(MB) R3171950-1 10/19/16 09:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C12-C22 Hydrocarbons	U		0.733	4.00
C22-C32 Hydrocarbons	U		1.33	4.00
C32-C40 Hydrocarbons	U		1.33	4.00
(S) o-Terphenyl	*115*			*50.0-150*

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

(LCS) R3171950-2 10/19/16 10:16 • (LCSD) R3171950-3 10/19/16 10:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C22-C32 Hydrocarbons	30.0	23.4	23.1	77.9	76.9	50.0-150			1.31	20
C12-C22 Hydrocarbons	30.0	25.9	25.7	86.4	85.8	50.0-150			0.700	20
(S) o-Terphenyl				*98.5*	*91.2*	*50.0-150*				

L866089-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866089-12 10/19/16 14:29 • (MS) R3171950-4 10/19/16 14:45 • (MSD) R3171950-5 10/19/16 15:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C22-C32 Hydrocarbons	34.2	U	27.2	25.3	79.4	73.8	1	50.0-150			7.30	20
C12-C22 Hydrocarbons	34.2	1.94	34.0	29.1	93.5	79.3	1	50.0-150			15.4	20
(S) o-Terphenyl					*85.6*	*82.4*		*50.0-150*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(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.
Rec.	Recovery.

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.
J3	The associated batch QC was outside the established quality control range for precision.

ESC Lab Sciences 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.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

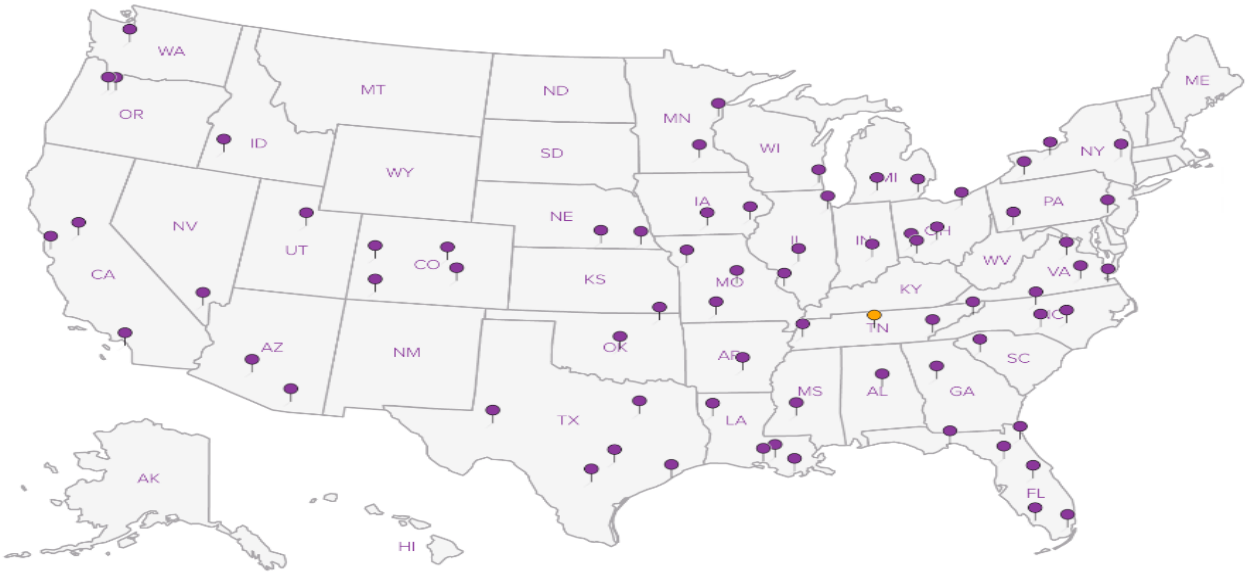
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

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

Our Locations

ESC Lab Sciences 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. **ESC Lab Sciences performs all testing at our central laboratory.**



Chain of Custody Page 1 of 2

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Company Name/Address:
AEI Consultants-CA
1200 Main Street, Suite D
Irvine, CA 92614

Billing Information:
Accounts Payable- Kent Vollmer
1200 Main Street, Suite D
Irvine CA 92614

Report to: Jonathan Sanders
Email To: jsanders@aeiconsultants.com

Project Description: 3442 Adeline Street, Oakland
City/State Collected:

Phone: 949-752-9300
Fax:
Client Project # 281939
Lab Project #

Collected by (print): Nate Bricker
Site/Facility ID #
P.O. # 118551

Collected by (signature):
Immediately Packed on Ice N ___ Y X

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

L # L866089
Table #
Acctnum: AEICONICA
Template: T116446
Prelogin: P5705667
TSR: 110-Brian Ford
Cooler:
Shipped Via: FedexGround

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DROCAER, TS	V8260OXY, GROCA	HOLD	Rem./Contaminant	Sample # (lab only)
VB-6-2	DP CORE	SS	2	10/12/16	0904	1			X		-01
VB-6-4			4		0905						-02
VB-6-6			6		0911						-03
VB-6-8			8		0923						-04
VB-6-10			10		0924						-05
VB-7-2			2		0836						-06
VB-7-4			4		0837						-07
VB-7-6			6		0844						-08
VB-7-8			8		0856						-09
VB-7-10			10		0857						-10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

10-028

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Nate Bricker	10/12/16		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.1 °C Bottles Received: 50 5/cvrs
Date: 10-13-16 Time: 9W

Condition: (lab use only) GW
COC Seal Intact: ✓ Y ___N ___NA
pH Checked: NCF:

Company Name/Address:
AEI Consultants-CA
1200 Main Street, Suite D
Irvine, CA 92614

Billing Information:
Accounts Payable- Kent Vollmer
1200 Main Street, Suite D
Irvine CA 92614

Report to: Jonathan Sanders

Email To: jsanders@aeiconsultants.com

Project Description: 3442 Adeline Street, Oakland

City/State Collected:

Phone: 949-752-9300
Fax:

Client Project # 281939

Lab Project #

Collected by (print): Nate Bricker

Site/Facility ID #

P.O. # 118551

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DROCAER, TS	V8260OXY, GROCA	HOLD	Rem./Contaminant	Sample # (lab only)
VB-8-2	DP Core	SS	2	10/12/16	0937	1			X	-05	11
VB-8-4			4		0938						12
VB-8-6			6		0956						13
VB-8-8			8		1002					-06	14
VB-8-10			10		1003						15
VB-9-2			2		0757					-07	16
VB-9-4			4		0758						17
VB-9-6			6		0808						18
VB-9-8			8		0819					-08	19
VB-9-10			10		0820						20

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Chain of Custody Page 2 of 5

ESC LAB SCIENCES
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Phone: 800-767-5859
Fax: 615-758-5859

L # L866089

Table #

Acctnum: AEICONICA
Template: **T116446**
Prelogin: **P5705667**
TSR: **110-Brian Ford**
Cooler:
Shipped Via: **FedExGround**

Hold #

Condition: (lab use only) OK

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/12/16		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.1 °C Bottles Received: 50

Date: 10-13-16 Time: 9W

Company Name/Address:
AEI Consultants-CA
1200 Main Street, Suite D
Irvine, CA 92614

Billing Information:
Accounts Payable- Kent Vollmer
1200 Main Street, Suite D
Irvine CA 92614

Report to: Jonathan Sanders
Email To: jsanders@aeiconsultants.com

Project Description: 3442 Adeline Street, Oakland
City/State Collected:

Phone: 949-752-9300
Fax:
Client Project # 281939
Lab Project #

Collected by (print): Nate Brickey
Site/Facility ID #
P.O. # 118551

Collected by (signature):
Immediately Packed on Ice N ___ Y X

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

Analysis / Container / Preservative
DROCAER, TS
V8260OXY, GROCA
HOLD

Chain of Custody Page 3 of 5

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L966089
Table #
Acctnum: AEICONICA
Template: T116446
Prelogin: P5705667
TSR: 110-Brian Ford
Cooler:
Shipped Via: FedexGround

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Rem./Contaminant	Sample # (lab only)
VB-10-2	DP CORE	SS	2	10/12/16	1353	1	-09	-24
VB-10-4			4		1354			-25
VB-10-6			6		1401		-10	-26
VB-10-8			8		1413			-27
VB-10-10			10		1414			-28
VB-11-2			2		1019		-11	-29
VB-11-4			4		1020			-30
VB-11-6			6		1027		-12	-31
VB-11-8			8		1028			-32
VB-11-10			10		1037			-33

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks:

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____
Temp: 3.1 °C Bottles Received: 50
Date: 10-13-16 Time: 900

Condition: (lab use only) OK
COC Seal Intact: 1 ___Y ___N ___NA
pH Checked: NCF:

Company Name/Address:
AEI Consultants-CA
1200 Main Street, Suite D
Irvine, CA 92614

Billing Information:
Accounts Payable- Kent Vollmer
1200 Main Street, Suite D
Irvine CA 92614

Report to: Jonathan Sanders
Email To: jsanders@aeiconsultants.com

Project Description: 3442 Adeline Street, Oakland
City/State Collected:

Phone: 949-752-9300
Fax:
Client Project # 281939
Lab Project #

Collected by (print): Nate Brickert
Site/Facility ID #
P.O. # 118551

Collected by (signature):
Immediately Packed on Ice N ___ Y X

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

Analysis / Container / Preservative

Chain of Custody Page 4 of 5

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L866089
Table #
Acctnum: AEICONICA
Template: T116446
Prelogin: P5705667
TSR: 110-Brian Ford
Cooler:
Shipped Via: FedexGround

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DROCAER, TS	V8260OXY, GROCA	HOLD	Rem./Contaminant	Sample # (lab only)
VB-13-2	DP core	SS	2	10/12/16	1316	1			X		
VB-13-4			4		1317						-13
VB-13-6			6		1323						
VB-13-8			8		1316						-14
VB-13-10			10		1317						
VB-14-2			2		1047						-15
VB-14-4			4		1048						
VB-14-6			6		1056						-16
VB-14-8			8		1056						
VB-14-10			10		1100						

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/12/16		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.1 °C Bottles Received: 50
Date: 10-13-16 Time: 9w

Condition: (lab use only) w
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

Company Name/Address:
AEI Consultants-CA
1200 Main Street, Suite D
Irvine, CA 92614

Billing Information:
Accounts Payable- Kent Vollmer
1200 Main Street, Suite D
Irvine CA 92614

Report to: Jonathan Sanders
Email To: jsanders@aeiconsultants.com

Project Description: 3442 Adeline Street, Oakland
City/State Collected:

Phone: 949-752-9300
Fax:
Client Project # 281939
Lab Project #

Collected by (print): Nate Bricker
Site/Facility ID #
P.O. # 118551

Collected by (signature):
Immediately Packed on Ice N ___ Y X

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DROCAER, TS	V8260OXY, GROCA	X HOLD	Rem./Contaminant	Sample # (lab only)
VB-15-2	DP CORE	SS	2	10/12/16	1152	1			X		
VB-15-4	↓		4	↓	1153				↓		-17
VB-15-6			6		1204						-18
VB-15-8			8		1215						
VB-15-10			10		1216						
VB-16-2			2		1232						
VB-16-4			4		1233						-19
VB-16-6			6		1242						
VB-16-8			8		1256						-20
VB-16-10	↓		10	↓	1257				↓		

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____
Temp: 3.1 °C Bottles Received: 50

Hold #
Condition: (lab use only) OK
COC Seal Intact: ✓ Y ___N ___NA
pH Checked: NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/12/16		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
	10-13-16	9:00	

Chain of Custody Page 5 of 5

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L866089
Table #
Acctnum: AEICONICA
Template: T116446
Prelogin: P5705667
TSR: 110-Brian Ford
Cooler:
Shipped Via: FedexGround

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

Cooler Receipt Form

Client: AEICONICA	SDG#	C866089
Cooler Received/Opened On: 10/13/16	Temperature Upon Receipt:	3.1 °c
Received By: Dakota Busby		
Signature: Daly		

Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?	✓		
Were custody papers properly filled out?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)			✓
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated. (If yes see attached NCF)			

ANALYTICAL REPORT

October 25, 2016

AEI Consultants - CA

Sample Delivery Group:	L866724
Samples Received:	10/18/2016
Project Number:	281939
Description:	3442 Adeline Street, Oakland

Report To: Jonathan Sanders
1200 Main Street, Suite D
Irvine, CA 92614

Entire Report Reviewed By:

Brian Ford
Technical Service Representative

VB-16 L866724-01 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 08:22 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG918599	2	10/19/16 17:57	10/19/16 17:57	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG919000	25	10/20/16 11:51	10/20/16 11:51	MBF

VB-7 L866724-02 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 11:45 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG919000	25	10/20/16 12:33	10/20/16 12:33	MBF

VB-8 L866724-03 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 13:51 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG918599	2	10/19/16 19:28	10/19/16 19:28	MBF

VB-9 L866724-04 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 12:57 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG918599	2000	10/19/16 20:11	10/19/16 20:11	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG919000	400	10/20/16 13:17	10/20/16 13:17	MBF

VB-10 L866724-05 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 11:19 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG919000	25	10/20/16 14:03	10/20/16 14:03	MBF

VB-11 L866724-06 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 14:10 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG918599	2	10/19/16 21:40	10/19/16 21:40	MBF

VB-12 L866724-07 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 13:31 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG918599	800	10/19/16 22:23	10/19/16 22:23	MBF

VB-13 L866724-08 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 10:36 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG918599	2	10/19/16 23:09	10/19/16 23:09	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG919000	25	10/20/16 14:47	10/20/16 14:47	MBF

VB-14 L866724-09 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 09:19 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG918599	2	10/19/16 23:53	10/19/16 23:53	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG919000	25	10/20/16 15:29	10/20/16 15:29	MBF

VB-15 L866724-10 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 09:57 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG918599	80	10/20/16 00:39	10/20/16 00:39	MBF

VB-16 L866724-11 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 08:22 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	5	10/23/16 10:48	10/23/16 10:48	MJ

VB-7 L866724-12 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 11:45 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	5	10/23/16 11:20	10/23/16 11:20	MJ

VB-8 L866724-13 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 13:51 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	1	10/23/16 08:42	10/23/16 08:42	MJ

VB-9 L866724-14 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 12:57 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	1	10/23/16 08:56	10/23/16 08:56	MJ

VB-10 L866724-15 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 11:19 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	10	10/23/16 11:53	10/23/16 11:53	MJ

VB-11 L866724-16 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 14:10 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	1	10/23/16 09:24	10/23/16 09:24	MJ

VB-12 L866724-17 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 13:31 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	1	10/23/16 09:37	10/23/16 09:37	MJ

VB-13 L866724-18 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 10:36 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	5	10/23/16 12:08	10/23/16 12:08	MJ

VB-14 L866724-19 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 09:19 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	10	10/23/16 12:23	10/23/16 12:23	MJ

VB-15 L866724-20 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 09:57 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG919925	1	10/23/16 10:33	10/23/16 10:33	MJ

VB-16 L866724-21 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 08:22 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 10:02	10/24/16 10:02	MJ

VB-7 L866724-22 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 11:45 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 10:17	10/24/16 10:17	MJ

VB-8 L866724-23 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 13:51 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 10:31	10/24/16 10:31	MJ

VB-9 L866724-24 Air

Collected by: Nate Bricker | Collected date/time: 10/14/16 12:57 | Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 10:44	10/24/16 10:44	MJ
Organic Compounds (GC) by Method D1946	WG920120	5	10/24/16 13:01	10/24/16 13:01	MJ

VB-10 L866724-25 Air

Collected by: Nate Bricker
Collected date/time: 10/14/16 11:19
Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 10:57	10/24/16 10:57	MJ

VB-11 L866724-26 Air

Collected by: Nate Bricker
Collected date/time: 10/14/16 14:10
Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 11:10	10/24/16 11:10	MJ

VB-12 L866724-27 Air

Collected by: Nate Bricker
Collected date/time: 10/14/16 13:31
Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 11:23	10/24/16 11:23	MJ
Organic Compounds (GC) by Method D1946	WG920120	5	10/24/16 13:25	10/24/16 13:25	MJ

VB-13 L866724-28 Air

Collected by: Nate Bricker
Collected date/time: 10/14/16 10:36
Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 11:52	10/24/16 11:52	MJ

VB-14 L866724-29 Air

Collected by: Nate Bricker
Collected date/time: 10/14/16 09:19
Received date/time: 10/18/16 09:00

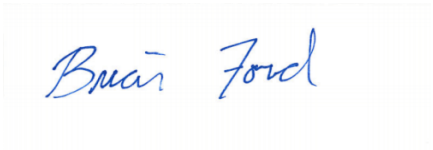
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 12:05	10/24/16 12:05	MJ

VB-15 L866724-30 Air

Collected by: Nate Bricker
Collected date/time: 10/14/16 09:57
Received date/time: 10/18/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG920120	1	10/24/16 12:47	10/24/16 12:47	MJ
Organic Compounds (GC) by Method D1946	WG920120	5	10/24/16 13:39	10/24/16 13:39	MJ

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

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
TPH (GC/MS) Low Fraction	8006-61-9	101	1250	5160	7260	30000		25	WG919000
Benzene	71-43-2	78.10	5.00	16.0	33.3	106		25	WG919000
Ethylbenzene	100-41-4	106	0.400	1.73	26.8	116		2	WG918599
MTBE	1634-04-4	88.10	5.00	18.0	ND	ND		25	WG919000
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG918599
2-Propanol	67-63-0	60.10	31.2	76.7	ND	ND		25	WG919000
Toluene	108-88-3	92.10	5.00	18.8	269	1010		25	WG919000
m&p-Xylene	1330-20-7	106	10.0	43.4	99.3	430		25	WG919000
o-Xylene	95-47-6	106	0.400	1.73	25.0	108		2	WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*111*				WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG919000

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
TPH (GC/MS) Low Fraction	8006-61-9	101	1250	5160	4340	17900		25	WG919000
Benzene	71-43-2	78.10	5.00	16.0	64.4	206		25	WG919000
Ethylbenzene	100-41-4	106	5.00	21.7	34.2	148		25	WG919000
MTBE	1634-04-4	88.10	5.00	18.0	ND	ND		25	WG919000
Naphthalene	91-20-3	128	15.8	82.7	ND	ND		25	WG919000
2-Propanol	67-63-0	60.10	31.2	76.7	4260	10500	E	25	WG919000
Toluene	108-88-3	92.10	5.00	18.8	290	1090		25	WG919000
m&p-Xylene	1330-20-7	106	10.0	43.4	117	509		25	WG919000
o-Xylene	95-47-6	106	5.00	21.7	29.3	127		25	WG919000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*116*				WG919000

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
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	429	1770		2	WG918599
Benzene	71-43-2	78.10	0.400	1.28	15.0	48.0		2	WG918599
Ethylbenzene	100-41-4	106	0.400	1.73	5.84	25.3		2	WG918599
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG918599
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG918599
2-Propanol	67-63-0	60.10	2.50	6.15	27.5	67.6		2	WG918599
Toluene	108-88-3	92.10	0.400	1.51	76.2	287		2	WG918599
m&p-Xylene	1330-20-7	106	0.800	3.47	21.8	94.3		2	WG918599
o-Xylene	95-47-6	106	0.400	1.73	5.79	25.1		2	WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.9*				WG918599

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
TPH (GC/MS) Low Fraction	8006-61-9	101	100000	413000	1140000	4690000		2000	WG918599
Benzene	71-43-2	78.10	400	1280	ND	ND		2000	WG918599
Ethylbenzene	100-41-4	106	80.0	347	ND	ND		400	WG919000
MTBE	1634-04-4	88.10	80.0	288	ND	ND		400	WG919000
Naphthalene	91-20-3	128	252	1320	ND	ND		400	WG919000
2-Propanol	67-63-0	60.10	500	1230	ND	ND		400	WG919000
Toluene	108-88-3	92.10	400	1510	ND	ND		2000	WG918599
m&p-Xylene	1330-20-7	106	160	694	ND	ND		400	WG919000
o-Xylene	95-47-6	106	80.0	347	ND	ND		400	WG919000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*109*				WG919000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*95.8*				WG918599

Sample Narrative:

TO-15 L866724-04 WG919000: Internal standard failure due to sample matrix.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ug/m3	ppbv	ug/m3			
TPH (GC/MS) Low Fraction	8006-61-9	101	1250	5160	8340	34500		25	WG919000
Benzene	71-43-2	78.10	5.00	16.0	179	573		25	WG919000
Ethylbenzene	100-41-4	106	5.00	21.7	17.8	77.3		25	WG919000
MTBE	1634-04-4	88.10	5.00	18.0	ND	ND		25	WG919000
Naphthalene	91-20-3	128	15.8	82.7	ND	ND		25	WG919000
2-Propanol	67-63-0	60.10	31.2	76.7	ND	ND		25	WG919000
Toluene	108-88-3	92.10	5.00	18.8	219	827		25	WG919000
m&p-Xylene	1330-20-7	106	10.0	43.4	54.1	235		25	WG919000
o-Xylene	95-47-6	106	5.00	21.7	14.8	64.2		25	WG919000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*102*				WG919000

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
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	827	3420		2	WG918599
Benzene	71-43-2	78.10	0.400	1.28	13.9	44.4		2	WG918599
Ethylbenzene	100-41-4	106	0.400	1.73	14.4	62.3		2	WG918599
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG918599
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG918599
2-Propanol	67-63-0	60.10	2.50	6.15	13.2	32.4		2	WG918599
Toluene	108-88-3	92.10	0.400	1.51	91.0	343		2	WG918599
m&p-Xylene	1330-20-7	106	0.800	3.47	49.5	215		2	WG918599
o-Xylene	95-47-6	106	0.400	1.73	13.3	57.5		2	WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.0*				WG918599

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
TPH (GC/MS) Low Fraction	8006-61-9	101	40000	165000	360000	1490000		800	WG918599
Benzene	71-43-2	78.10	160	511	4810	15400		800	WG918599
Ethylbenzene	100-41-4	106	160	694	ND	ND		800	WG918599
MTBE	1634-04-4	88.10	160	577	ND	ND		800	WG918599
Naphthalene	91-20-3	128	504	2640	ND	ND		800	WG918599
2-Propanol	67-63-0	60.10	1000	2460	ND	ND		800	WG918599
Toluene	108-88-3	92.10	160	603	ND	ND		800	WG918599
m&p-Xylene	1330-20-7	106	320	1390	ND	ND		800	WG918599
o-Xylene	95-47-6	106	160	694	ND	ND		800	WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.2*				WG918599

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
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	3840	15900		2	WG918599
Benzene	71-43-2	78.10	0.400	1.28	61.8	197		2	WG918599
Ethylbenzene	100-41-4	106	0.400	1.73	17.0	73.6		2	WG918599
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG918599
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG918599
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG918599
Toluene	108-88-3	92.10	5.00	18.8	227	855		25	WG919000
m&p-Xylene	1330-20-7	106	0.800	3.47	58.7	255		2	WG918599
o-Xylene	95-47-6	106	0.400	1.73	15.6	67.7		2	WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*141*		J1		WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*104*				WG919000

Sample Narrative:

TO-15 L866724-08 WG918599: Surrogate failure due to sample matrix.

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
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	2490	10300		2	WG918599
Benzene	71-43-2	78.10	0.400	1.28	49.2	157		2	WG918599
Ethylbenzene	100-41-4	106	0.400	1.73	14.6	63.1		2	WG918599
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG918599
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG918599
2-Propanol	67-63-0	60.10	2.50	6.15	3.27	8.04		2	WG918599
Toluene	108-88-3	92.10	5.00	18.8	161	605		25	WG919000
m&p-Xylene	1330-20-7	106	0.800	3.47	49.3	214		2	WG918599
o-Xylene	95-47-6	106	0.400	1.73	13.0	56.2		2	WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*134*				WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*79.5*				WG919000

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
TPH (GC/MS) Low Fraction	8006-61-9	101	4000	16500	98300	406000		80	WG918599
Benzene	71-43-2	78.10	16.0	51.1	ND	ND		80	WG918599
Ethylbenzene	100-41-4	106	16.0	69.4	ND	ND		80	WG918599
MTBE	1634-04-4	88.10	16.0	57.7	26.4	95.1		80	WG918599
Naphthalene	91-20-3	128	50.4	264	ND	ND		80	WG918599
2-Propanol	67-63-0	60.10	100	246	ND	ND		80	WG918599
Toluene	108-88-3	92.10	16.0	60.3	ND	ND		80	WG918599
m&p-Xylene	1330-20-7	106	32.0	139	ND	ND		80	WG918599
o-Xylene	95-47-6	106	16.0	69.4	ND	ND		80	WG918599
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*132*				WG918599

Sample Narrative:

TO-15 L866724-10 WG918599: IS/SURR failed on lower dilution.

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
			ppb	ppb			
Helium	7440-59-7		500000	8540000		5	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		500000	9280000		5	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		100000	1150000		1	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		100000	ND		1	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		1000000	11200000		10	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		100000	2460000		1	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		100000	ND		1	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		500000	10600000		5	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		1000000	11200000		10	WG919925

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		100000	2450000		1	WG919925

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	11.1		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	0.500	2.97		1	WG920120
Methane	74-82-8	16	0.400	ND		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	12.8		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	0.500	0.650		1	WG920120
Methane	74-82-8	16	0.400	ND		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	13.6		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	0.500	1.55		1	WG920120
Methane	74-82-8	16	0.400	ND		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	ND		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	2.50	10.9		5	WG920120
Methane	74-82-8	16	0.400	0.806		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	3.40		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	0.500	3.93		1	WG920120
Methane	74-82-8	16	0.400	ND		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	7.81		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	0.500	1.83		1	WG920120
Methane	74-82-8	16	0.400	ND		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	ND		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	2.50	13.6		5	WG920120
Methane	74-82-8	16	0.400	0.416		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			%	%			
Oxygen	7782-44-7	32	2.00	13.6		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	0.500	ND		1	WG920120
Methane	74-82-8	16	0.400	ND		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	10.9		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	0.500	2.35		1	WG920120
Methane	74-82-8	16	0.400	ND		1	WG920120

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	2.09		1	WG920120
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG920120
Carbon Dioxide	124-38-9	44.01	2.50	10.4		5	WG920120
Methane	74-82-8	16	0.400	ND		1	WG920120

Method Blank (MB)

(MB) R3172634-3 10/23/16 08:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppb		ppb	ppb
Helium	U		30000	100000

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

(LCS) R3172634-1 10/23/16 07:36 • (LCSD) R3172634-2 10/23/16 07:48

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppb	ppb	ppb	%	%	%			%	%
Helium	500000	478000	400000	95.5	80.1	70.0-130			17.6	25

Method Blank (MB)

(MB) R3171896-3 10/19/16 09:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Benzene	U		0.0460	0.200
Ethylbenzene	U		0.0506	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Toluene	U		0.0499	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
TPH (GC/MS) Low Fraction	U		6.91	50.0
(S) 1,4-Bromofluorobenzene	*101*			*60.0-140*

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

(LCS) R3171896-1 10/19/16 08:21 • (LCSD) R3171896-2 10/19/16 09:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
2-Propanol	3.75	3.66	3.74	97.7	99.8	50.4-152			2.15	25
MTBE	3.75	3.83	3.86	102	103	70.0-130			0.750	25
Benzene	3.75	3.73	3.74	99.4	99.9	70.0-130			0.450	25
Toluene	3.75	3.81	3.83	102	102	70.0-130			0.490	25
Ethylbenzene	3.75	4.10	4.17	109	111	70.0-130			1.50	25
m&p-Xylene	7.50	8.32	8.40	111	112	70.0-130			0.960	25
o-Xylene	3.75	4.30	4.36	115	116	70.0-130			1.39	25
Naphthalene	3.75	4.42	4.35	118	116	52.0-158			1.67	25
TPH (GC/MS) Low Fraction	176	197	198	112	112	70.0-130			0.560	25
(S) 1,4-Bromofluorobenzene				*108*	*108*	*60.0-140*				

Method Blank (MB)

(MB) R3172280-3 10/20/16 09:05

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0460	0.200
Ethylbenzene	U		0.0506	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Toluene	U		0.0499	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
TPH (GC/MS) Low Fraction	U		6.91	50.0
(S) 1,4-Bromofluorobenzene	*95.8*			*60.0-140*

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

(LCS) R3172280-1 10/20/16 07:35 • (LCSD) R3172280-2 10/20/16 08:19

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Propanol	3.75	3.68	3.98	98.1	106	50.4-152			7.99	25
MTBE	3.75	3.93	4.04	105	108	70.0-130			2.72	25
Benzene	3.75	3.81	3.90	101	104	70.0-130			2.37	25
Toluene	3.75	3.86	3.94	103	105	70.0-130			2.03	25
Ethylbenzene	3.75	4.11	4.30	110	115	70.0-130			4.43	25
m&p-Xylene	7.50	8.06	8.73	107	116	70.0-130			7.97	25
o-Xylene	3.75	4.13	4.50	110	120	70.0-130			8.51	25
Naphthalene	3.75	3.70	4.59	98.7	122	52.0-158			21.3	25
TPH (GC/MS) Low Fraction	176	180	208	102	118	70.0-130			14.2	25
(S) 1,4-Bromofluorobenzene				*102*	*112*	*60.0-140*				

Method Blank (MB)

(MB) R3172834-3 10/24/16 09:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Oxygen	U		0.225	2.00
Carbon Monoxide	U		0.665	2.00
Carbon Dioxide	U		0.121	0.500
Methane	U		0.0584	0.400

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

(LCS) R3172834-1 10/24/16 09:20 • (LCSD) R3172834-2 10/24/16 09:34

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	%	%	%	%	%	%			%	%
Oxygen	3.50	3.55	3.38	101	96.6	70.0-130			4.80	20
Carbon Monoxide	3.50	3.49	3.19	99.6	91.1	70.0-130			8.94	20
Carbon Dioxide	3.50	3.58	3.54	102	101	70.0-130			1.26	20
Methane	2.80	2.76	2.68	98.7	95.6	70.0-130			3.21	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(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.
Rec.	Recovery.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

ESC Lab Sciences 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.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

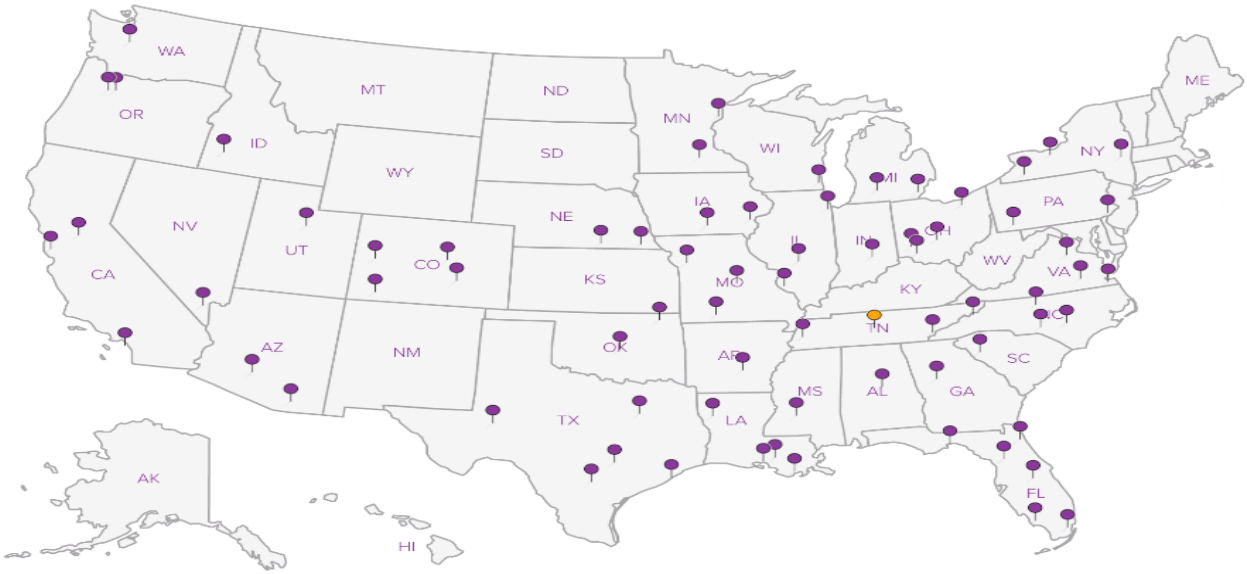
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences 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. **ESC Lab Sciences performs all testing at our central laboratory.**



AEI Consultants - CA

1200 Main Street, Suite D
Irvine, CA 92614

Billing Information:
Accounts Payable- Kent Vollmer
1200 Main Street, Suite D
Irvine, CA 92614

Report to: Jonathan Sanders

Email To: jsanders@aeiconsultants.com

Project Description: 3442 Adeline Street, Oakland

City/State Collected:

Phone: 949-752-9300
Fax:

Client Project # 281939

Lab Project # AEICONICA-281939

Collected by (print): Nate Brickner

Site/Facility ID #

P.O. # 111551

Collected by (signature):

Immediately Packed on Ice N X Y ___

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

Date Results Needed

Email? ___No X__Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15, Fix Gas, He Summa											Rem./Contaminant	Sample # (lab only)
~~VB-16~~ NB VB-16		Air	5'	10/14/16	0822	1	X												01/11/21
VB-7		Air			1145	1	X												02/12/22
VB-8		Air			1351	1	X												03/13/23
VB-9		Air			1257	1	X												04/14/24
VB-10		Air			1119	1	X												05/15/25
VB-11		Air			1410	1	X												06/16/26
VB-12		Air			1331	1	X												07/17/27
VB-13		Air			1030	1	X												08/18/28
VB-14		Air			0919	1	X												09/19/29
VB-15		Air			0957	1	X												10/20/30

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 86672y

K174

Acctnum: AEICONICA
Template: T116477
Prelogin: P570566
TSR: 110 - Brian Ford
PB:

Shipped Via: FedEX Ground

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/14/16	1736	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: Amb °C Bottles Received: 10+10ST

Date: 10-18-16 Time: 0900

Hold #

Condition: (lab use only) ok

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

Cooler Receipt Form

Client: AEI CONFICA	SDG#	86724
Cooler Received/Opened On: 10/18/16	Temperature Upon Receipt:	AMB °c
Received By: Dakota Busby		
Signature:		

Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			✓
Were custody papers properly filled out?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?			✓
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)			✓
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated. (If yes see attached NCF)			

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10/27/2016
Mr. Jonathan Sanders
AEI Consultants, Inc.
2500 Camino Diablo
Suite 200
Walnut Creek CA 94597

Project Name: Zimmerman
Project #: 281939
Workorder #: 1610303

Dear Mr. Jonathan Sanders

The following report includes the data for the above referenced project for sample(s) received on 10/17/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-17 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1610303

Work Order Summary

CLIENT:	Mr. Jonathan Sanders AEI Consultants, Inc. 2500 Camino Diablo Suite 200 Walnut Creek, CA 94597	**BILL TO:**	Accounts Payable- Walnut Creek AEI Consultants, Inc. 2500 Camino Diablo Suite 200 Walnut Creek, CA 94597
PHONE:	925-283-6000	**P.O. #**	118594
FAX:	925-283-6121	**PROJECT #**	281939 Zimmerman
DATE RECEIVED:	10/17/2016	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	10/26/2016		

FRACTION #	NAME	TEST
01A	VB-07	Modified TO-17
02A	VB-08	Modified TO-17
03A	VB-09	Modified TO-17
04A	VB-10	Modified TO-17
05A	VB-11	Modified TO-17
06A	VB-12	Modified TO-17
07A	VB-13	Modified TO-17
08A	VB-14	Modified TO-17
09A	VB-15	Modified TO-17
10A	VB-16	Modified TO-17
11A	Lab Blank	Modified TO-17
11B	Lab Blank	Modified TO-17
12A	CCV	Modified TO-17
12B	CCV	Modified TO-17
13A	LCS	Modified TO-17
13AA	LCSD	Modified TO-17
13B	LCS	Modified TO-17
13BB	LCSD	Modified TO-17

CERTIFIED BY: Heidi Hayes DATE: 10/27/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-17
AEI Consultants, Inc.
Workorder# 1610303

Ten TO-17 Tube (Tenax-TA) samples were received on October 17, 2016. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode. TO-17 sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

Receiving Notes

A Temperature Blank was not included with the shipment. Temperature was measured on a representative sample and was not within 4±2 °C. Coolant in the form of blue ice was present. Analysis proceeded.

Analytical Notes

A sampling volume of 0.200 L was used to convert ng to ug/m3 for the associated Lab Blanks.

The recovery of internal standard Bromofluorobenzene in samples VB-09 and VB-12 was outside control limits due to high level hydrocarbon matrix interference. Re-analysis of a back-up tube sample confirmed results. Data is reported as qualified.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED METHOD TO-17

Client Sample ID: VB-07

Lab ID#: 1610303-01A

No Detections Were Found.

Client Sample ID: VB-08

Lab ID#: 1610303-02A

No Detections Were Found.

Client Sample ID: VB-09

Lab ID#: 1610303-03A

No Detections Were Found.

Client Sample ID: VB-10

Lab ID#: 1610303-04A

No Detections Were Found.

Client Sample ID: VB-11

Lab ID#: 1610303-05A

No Detections Were Found.

Client Sample ID: VB-12

Lab ID#: 1610303-06A

No Detections Were Found.

Client Sample ID: VB-13

Lab ID#: 1610303-07A

No Detections Were Found.

Client Sample ID: VB-14

Lab ID#: 1610303-08A

No Detections Were Found.

Client Sample ID: VB-15

Lab ID#: 1610303-09A

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Summary of Detected Compounds
MODIFIED METHOD TO-17

Client Sample ID: VB-15

Lab ID#: 1610303-09A

No Detections Were Found.

Client Sample ID: VB-16

Lab ID#: 1610303-10A

No Detections Were Found.

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Client Sample ID: VB-07

Lab ID#: 1610303-01A

MODIFIED METHOD TO-17

File Name:	**11101807**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 11:45:00 A**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 02:29 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	86	50-150

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Client Sample ID: VB-08

Lab ID#: 1610303-02A

MODIFIED METHOD TO-17

File Name:	**11101808**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 1:51:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 03:09 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	86	50-150

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Client Sample ID: VB-09

Lab ID#: 1610303-03A

MODIFIED METHOD TO-17

File Name:	**11101809**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 12:57:00 P**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 03:50 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected Q	Not Detected Q

Air Sample Volume(L): 0.200

Q = The internal standard associated with the analyte exceeded acceptance limits.

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	65	50-150

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Client Sample ID: VB-10

Lab ID#: 1610303-04A

MODIFIED METHOD TO-17

File Name:	**11101810**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 11:19:00 A**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 04:30 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	96	50-150

eurofins | Air Toxics

Client Sample ID: VB-11

Lab ID#: 1610303-05A

MODIFIED METHOD TO-17

File Name:	**11101811**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 2:10:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 05:10 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	101	50-150

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Client Sample ID: VB-12

Lab ID#: 1610303-06A

MODIFIED METHOD TO-17

File Name:	**11101812**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 1:31:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 05:51 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected Q	Not Detected Q

Air Sample Volume(L): 0.200

Q = The internal standard associated with the analyte exceeded acceptance limits.

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	67	50-150

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Client Sample ID: VB-13

Lab ID#: 1610303-07A

MODIFIED METHOD TO-17

File Name:	**11101814**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 10:36:00 A**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 07:11 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	89	50-150

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Client Sample ID: VB-14

Lab ID#: 1610303-08A

MODIFIED METHOD TO-17

File Name:	**11101815**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 9:20:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 07:52 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	84	50-150

eurofins | Air Toxics

Client Sample ID: VB-15

Lab ID#: 1610303-09A

MODIFIED METHOD TO-17

File Name:	**11101912**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 9:58:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 10/19/16 07:01 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	84	50-150

eurofins | Air Toxics

Client Sample ID: VB-16

Lab ID#: 1610303-10A

MODIFIED METHOD TO-17

File Name:	**11101817**	**Date of Extraction: NA**	**Date of Collection: 10/14/16 8:23:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 09:12 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: TO-17 Tube (Tenax-TA)

Surrogates	%Recovery	Method Limits
Naphthalene-d8	113	50-150

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1610303-11A

MODIFIED METHOD TO-17

File Name:	**11101806**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 01:11 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	82	50-150

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1610303-11B

MODIFIED METHOD TO-17

File Name:	**11101907**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 10/19/16 03:04 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	5.0	25	Not Detected	Not Detected

Air Sample Volume(L): 0.200

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	84	50-150

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1610303-12A

MODIFIED METHOD TO-17

File Name:	**11101802**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 10:30 AM**

Compound	%Recovery
Naphthalene	101

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	78	50-150

eurofins | Air Toxics

Client Sample ID: CCV
Lab ID#: 1610303-12B
MODIFIED METHOD TO-17

File Name:	**11101902**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 10/19/16 10:44 AM**

Compound	%Recovery
Naphthalene	103

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	82	50-150

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1610303-13A

MODIFIED METHOD TO-17

File Name:	**11101803**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 11:11 AM**

Compound	%Recovery	Method Limits
Naphthalene	95	70-130

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	63	50-150

eurofins | Air Toxics

Client Sample ID: LCSD
Lab ID#: 1610303-13AA
MODIFIED METHOD TO-17

File Name:	**11101804**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 10/18/16 11:51 AM**

Compound	%Recovery	Method Limits
Naphthalene	95	70-130

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	63	50-150

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1610303-13B

MODIFIED METHOD TO-17

File Name:	**11101903**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 10/19/16 11:25 AM**

Compound	%Recovery	Method Limits
Naphthalene	92	70-130

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	76	50-150

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Client Sample ID: LCSD

Lab ID#: 1610303-13BB

MODIFIED METHOD TO-17

File Name:	**11101904**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 10/19/16 12:05 PM**

Compound	%Recovery	Method Limits
Naphthalene	93	70-130

Air Sample Volume(L): 1.00

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	77	50-150

ANALYTICAL REPORT

October 15, 2016

AEI Consultants - CA

Sample Delivery Group:	L864770
Samples Received:	10/07/2016
Project Number:	281939
Description:	3442 Adeline Street, Oakland

Report To: Jonathan Sanders
1200 Main Street, Suite D
Irvine, CA 92614

Entire Report Reviewed By:

Brian Ford
Technical Service Representative

TABLE OF CONTENTS

VB-12-2 L864770-01 Solid

Collected by: Nathan Bricker
Collected date/time: 10/06/16 09:10
Received date/time: 10/07/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG916131	1	10/13/16 03:20	10/13/16 13:16	ACM
Total Solids by Method 2540 G-2011	WG915680	1	10/10/16 10:40	10/10/16 10:49	MEL
Volatile Organic Compounds (GC) by Method 8015	WG916443	1	10/12/16 10:24	10/12/16 17:27	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG916703	1	10/13/16 21:00	10/14/16 04:47	DWR

VB-12-8 L864770-02 Solid

Collected by: Nathan Bricker
Collected date/time: 10/06/16 09:38
Received date/time: 10/07/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG916131	1	10/13/16 03:20	10/13/16 12:27	ACM
Total Solids by Method 2540 G-2011	WG915680	1	10/10/16 10:40	10/10/16 10:49	MEL
Volatile Organic Compounds (GC) by Method 8015	WG916443	24.75	10/14/16 15:38	10/14/16 16:01	CMJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG916703	1	10/12/16 10:24	10/14/16 05:09	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG916703	24.75	10/12/16 10:24	10/14/16 11:04	JAH

SB-32-2 L864770-03 Solid

Collected by: Nathan Bricker
Collected date/time: 10/06/16 10:28
Received date/time: 10/07/16 09:00

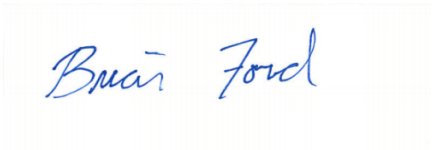
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG916131	1	10/13/16 03:20	10/13/16 12:39	ACM
Total Solids by Method 2540 G-2011	WG915680	1	10/10/16 10:40	10/10/16 10:49	MEL
Volatile Organic Compounds (GC) by Method 8015	WG916443	1	10/12/16 10:24	10/12/16 18:11	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG916703	1	10/13/16 21:00	10/14/16 05:32	DWR

SB-32-10 L864770-04 Solid

Collected by: Nathan Bricker
Collected date/time: 10/06/16 10:58
Received date/time: 10/07/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG916131	1	10/13/16 03:20	10/13/16 13:29	ACM
Total Solids by Method 2540 G-2011	WG915680	1	10/10/16 10:40	10/10/16 10:49	MEL
Volatile Organic Compounds (GC) by Method 8015	WG916443	12.5	10/14/16 15:38	10/14/16 16:23	CMJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG916703	1	10/12/16 10:24	10/14/16 05:55	DWR

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
Technical Service Representative

Sample Handling and Receiving

Analysis was performed from an improper container for the following samples.

ESC Sample ID	Project Sample ID	Method
L864770-01	VB-12-2	8015
L864770-02	VB-12-8	8015
L864770-03	SB-32-2	8015
L864770-04	SB-32-10	8015

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.1		1	10/10/2016 10:49	WG915680

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	0.475		0.0390	0.118	1	10/12/2016 17:27	WG916443
(S) α,α,α-Trifluorotoluene(FID)	*94.9*			*59.0-128*		*10/12/2016 17:27*	WG916443

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0127	J	0.0118	0.0588	1	10/14/2016 04:47	WG916703
Acrylonitrile	U		0.00210	0.0118	1	10/14/2016 04:47	WG916703
Benzene	0.000908	J	0.000317	0.00118	1	10/14/2016 04:47	WG916703
Bromobenzene	U		0.000334	0.00118	1	10/14/2016 04:47	WG916703
Bromodichloromethane	U		0.000299	0.00118	1	10/14/2016 04:47	WG916703
Bromoform	U		0.000498	0.00118	1	10/14/2016 04:47	WG916703
Bromomethane	U		0.00157	0.00588	1	10/14/2016 04:47	WG916703
n-Butylbenzene	U		0.000303	0.00118	1	10/14/2016 04:47	WG916703
sec-Butylbenzene	0.000342	J	0.000236	0.00118	1	10/14/2016 04:47	WG916703
tert-Butylbenzene	U		0.000242	0.00118	1	10/14/2016 04:47	WG916703
Carbon tetrachloride	U		0.000386	0.00118	1	10/14/2016 04:47	WG916703
Carbon disulfide	0.000369	J	0.000260	0.00118	1	10/14/2016 04:47	WG916703
Chlorobenzene	U		0.000249	0.00118	1	10/14/2016 04:47	WG916703
Chlorodibromomethane	U		0.000438	0.00118	1	10/14/2016 04:47	WG916703
Chloroethane	U		0.00111	0.00588	1	10/14/2016 04:47	WG916703
2-Chloroethyl vinyl ether	U	J3	0.00275	0.0588	1	10/14/2016 04:47	WG916703
Chloroform	U		0.000269	0.00588	1	10/14/2016 04:47	WG916703
Chloromethane	0.000564	J	0.000441	0.00294	1	10/14/2016 04:47	WG916703
2-Chlorotoluene	U		0.000354	0.00118	1	10/14/2016 04:47	WG916703
4-Chlorotoluene	U		0.000282	0.00118	1	10/14/2016 04:47	WG916703
1,2-Dibromo-3-Chloropropane	U		0.00123	0.00588	1	10/14/2016 04:47	WG916703
1,2-Dibromoethane	U		0.000403	0.00118	1	10/14/2016 04:47	WG916703
Dibromomethane	U		0.000449	0.00118	1	10/14/2016 04:47	WG916703
1,2-Dichlorobenzene	U		0.000358	0.00118	1	10/14/2016 04:47	WG916703
1,3-Dichlorobenzene	U		0.000281	0.00118	1	10/14/2016 04:47	WG916703
1,4-Dichlorobenzene	U		0.000266	0.00118	1	10/14/2016 04:47	WG916703
Dichlorodifluoromethane	U		0.000838	0.00588	1	10/14/2016 04:47	WG916703
1,1-Dichloroethane	U		0.000234	0.00118	1	10/14/2016 04:47	WG916703
1,2-Dichloroethane	U		0.000311	0.00118	1	10/14/2016 04:47	WG916703
1,1-Dichloroethene	U		0.000356	0.00118	1	10/14/2016 04:47	WG916703
cis-1,2-Dichloroethene	U		0.000276	0.00118	1	10/14/2016 04:47	WG916703
trans-1,2-Dichloroethene	U		0.000310	0.00118	1	10/14/2016 04:47	WG916703
1,2-Dichloropropane	U		0.000421	0.00118	1	10/14/2016 04:47	WG916703
1,1-Dichloropropene	U		0.000373	0.00118	1	10/14/2016 04:47	WG916703
1,3-Dichloropropane	U		0.000243	0.00118	1	10/14/2016 04:47	WG916703
cis-1,3-Dichloropropene	U		0.000308	0.00118	1	10/14/2016 04:47	WG916703
trans-1,3-Dichloropropene	U	J4	0.000314	0.00118	1	10/14/2016 04:47	WG916703
2,2-Dichloropropane	U		0.000328	0.00118	1	10/14/2016 04:47	WG916703
Ethylbenzene	U		0.000349	0.00118	1	10/14/2016 04:47	WG916703
Hexachloro-1,3-butadiene	U		0.000402	0.00118	1	10/14/2016 04:47	WG916703
Isopropylbenzene	U		0.000286	0.00118	1	10/14/2016 04:47	WG916703
p-Isopropyltoluene	U		0.000240	0.00118	1	10/14/2016 04:47	WG916703
2-Butanone (MEK)	U		0.00550	0.0118	1	10/14/2016 04:47	WG916703
Methylene Chloride	U		0.00118	0.00588	1	10/14/2016 04:47	WG916703

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00221	0.0118	1	10/14/2016 04:47	WG916703
Naphthalene	U		0.00118	0.00588	1	10/14/2016 04:47	WG916703
n-Propylbenzene	0.000493	J	0.000242	0.00118	1	10/14/2016 04:47	WG916703
Styrene	U		0.000275	0.00118	1	10/14/2016 04:47	WG916703
1,1,1,2-Tetrachloroethane	U		0.000310	0.00118	1	10/14/2016 04:47	WG916703
1,1,2,2-Tetrachloroethane	U		0.000429	0.00118	1	10/14/2016 04:47	WG916703
1,1,2-Trichlorotrifluoroethane	U		0.000429	0.00118	1	10/14/2016 04:47	WG916703
Tetrachloroethene	U		0.000324	0.00118	1	10/14/2016 04:47	WG916703
Toluene	U		0.000510	0.00588	1	10/14/2016 04:47	WG916703
1,2,3-Trichlorobenzene	U		0.000360	0.00118	1	10/14/2016 04:47	WG916703
1,2,4-Trichlorobenzene	U		0.000456	0.00118	1	10/14/2016 04:47	WG916703
1,1,1-Trichloroethane	U		0.000336	0.00118	1	10/14/2016 04:47	WG916703
1,1,2-Trichloroethane	U		0.000326	0.00118	1	10/14/2016 04:47	WG916703
Trichloroethene	U		0.000328	0.00118	1	10/14/2016 04:47	WG916703
Trichlorofluoromethane	U		0.000449	0.00588	1	10/14/2016 04:47	WG916703
1,2,3-Trichloropropane	U		0.000871	0.00294	1	10/14/2016 04:47	WG916703
1,2,4-Trimethylbenzene	0.000916	J	0.000248	0.00118	1	10/14/2016 04:47	WG916703
1,2,3-Trimethylbenzene	0.000416	J	0.000337	0.00118	1	10/14/2016 04:47	WG916703
1,3,5-Trimethylbenzene	0.000316	J	0.000313	0.00118	1	10/14/2016 04:47	WG916703
Vinyl chloride	U		0.000342	0.00118	1	10/14/2016 04:47	WG916703
Xylenes, Total	U		0.000820	0.00353	1	10/14/2016 04:47	WG916703
Di-isopropyl ether	U		0.000291	0.00118	1	10/14/2016 04:47	WG916703
Ethanol	U		0.0576	0.118	1	10/14/2016 04:47	WG916703
Ethyl tert-butyl ether	U		0.000470	0.00118	1	10/14/2016 04:47	WG916703
Methyl tert-butyl ether	U		0.000249	0.00118	1	10/14/2016 04:47	WG916703
t-Amyl Alcohol	0.0573	J	0.00494	0.0588	1	10/14/2016 04:47	WG916703
tert-Amyl Methyl Ether	U		0.000317	0.00118	1	10/14/2016 04:47	WG916703
tert-Butyl alcohol	0.0536		0.00235	0.00588	1	10/14/2016 04:47	WG916703
(S) Toluene-d8	*112*			*88.7-115*		*10/14/2016 04:47*	WG916703
(S) Dibromofluoromethane	*96.0*			*76.3-123*		*10/14/2016 04:47*	WG916703
(S) 4-Bromofluorobenzene	*93.1*			*69.7-129*		*10/14/2016 04:47*	WG916703

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	3.19	J	0.862	4.70	1	10/13/2016 13:16	WG916131
C22-C32 Hydrocarbons	2.79	J	1.56	4.70	1	10/13/2016 13:16	WG916131
C32-C40 Hydrocarbons	U		1.56	4.70	1	10/13/2016 13:16	WG916131
(S) o-Terphenyl	*100*			*50.0-150*		*10/13/2016 13:16*	WG916131

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.5		1	10/10/2016 10:49	WG915680

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	214		0.951	2.86	24.75	10/14/2016 16:01	WG916443
(S) a,a,a-Trifluorotoluene(FID)	*101*			*59.0-128*		*10/14/2016 16:01*	WG916443

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0116	0.0578	1	10/14/2016 05:09	WG916703
Acrylonitrile	U		0.00207	0.0116	1	10/14/2016 05:09	WG916703
Benzene	0.187		0.000312	0.00116	1	10/14/2016 05:09	WG916703
Bromobenzene	U		0.000328	0.00116	1	10/14/2016 05:09	WG916703
Bromodichloromethane	U		0.000294	0.00116	1	10/14/2016 05:09	WG916703
Bromoform	U		0.000490	0.00116	1	10/14/2016 05:09	WG916703
Bromomethane	U		0.00155	0.00578	1	10/14/2016 05:09	WG916703
n-Butylbenzene	0.0246		0.000298	0.00116	1	10/14/2016 05:09	WG916703
sec-Butylbenzene	0.00981		0.000232	0.00116	1	10/14/2016 05:09	WG916703
tert-Butylbenzene	0.00206		0.000238	0.00116	1	10/14/2016 05:09	WG916703
Carbon tetrachloride	U		0.000379	0.00116	1	10/14/2016 05:09	WG916703
Carbon disulfide	0.000416	J	0.000256	0.00116	1	10/14/2016 05:09	WG916703
Chlorobenzene	U		0.000245	0.00116	1	10/14/2016 05:09	WG916703
Chlorodibromomethane	U		0.000431	0.00116	1	10/14/2016 05:09	WG916703
Chloroethane	U		0.00109	0.00578	1	10/14/2016 05:09	WG916703
2-Chloroethyl vinyl ether	U	J3	0.00271	0.0578	1	10/14/2016 05:09	WG916703
Chloroform	U		0.000265	0.00578	1	10/14/2016 05:09	WG916703
Chloromethane	U		0.000434	0.00289	1	10/14/2016 05:09	WG916703
2-Chlorotoluene	U		0.000348	0.00116	1	10/14/2016 05:09	WG916703
4-Chlorotoluene	U		0.000278	0.00116	1	10/14/2016 05:09	WG916703
1,2-Dibromo-3-Chloropropane	U		0.00121	0.00578	1	10/14/2016 05:09	WG916703
1,2-Dibromoethane	U		0.000397	0.00116	1	10/14/2016 05:09	WG916703
Dibromomethane	U		0.000442	0.00116	1	10/14/2016 05:09	WG916703
1,2-Dichlorobenzene	U		0.000353	0.00116	1	10/14/2016 05:09	WG916703
1,3-Dichlorobenzene	U		0.000276	0.00116	1	10/14/2016 05:09	WG916703
1,4-Dichlorobenzene	U		0.000261	0.00116	1	10/14/2016 05:09	WG916703
Dichlorodifluoromethane	U		0.000825	0.00578	1	10/14/2016 05:09	WG916703
1,1-Dichloroethane	U		0.000230	0.00116	1	10/14/2016 05:09	WG916703
1,2-Dichloroethane	U		0.000306	0.00116	1	10/14/2016 05:09	WG916703
1,1-Dichloroethene	U		0.000350	0.00116	1	10/14/2016 05:09	WG916703
cis-1,2-Dichloroethene	U		0.000272	0.00116	1	10/14/2016 05:09	WG916703
trans-1,2-Dichloroethene	U		0.000305	0.00116	1	10/14/2016 05:09	WG916703
1,2-Dichloropropane	U		0.000414	0.00116	1	10/14/2016 05:09	WG916703
1,1-Dichloropropene	U		0.000367	0.00116	1	10/14/2016 05:09	WG916703
1,3-Dichloropropane	U		0.000239	0.00116	1	10/14/2016 05:09	WG916703
cis-1,3-Dichloropropene	U		0.000303	0.00116	1	10/14/2016 05:09	WG916703
trans-1,3-Dichloropropene	U	J4	0.000309	0.00116	1	10/14/2016 05:09	WG916703
2,2-Dichloropropane	U		0.000323	0.00116	1	10/14/2016 05:09	WG916703
Ethylbenzene	0.496		0.00850	0.0286	24.75	10/14/2016 11:04	WG916703
Hexachloro-1,3-butadiene	U		0.000396	0.00116	1	10/14/2016 05:09	WG916703
Isopropylbenzene	0.0272		0.000281	0.00116	1	10/14/2016 05:09	WG916703
p-Isopropyltoluene	0.00525		0.000236	0.00116	1	10/14/2016 05:09	WG916703
2-Butanone (MEK)	U		0.00541	0.0116	1	10/14/2016 05:09	WG916703
Methylene Chloride	U		0.00116	0.00578	1	10/14/2016 05:09	WG916703

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00217	0.0116	1	10/14/2016 05:09	WG916703
Naphthalene	0.102		0.00116	0.00578	1	10/14/2016 05:09	WG916703
n-Propylbenzene	0.101		0.000238	0.00116	1	10/14/2016 05:09	WG916703
Styrene	U		0.000271	0.00116	1	10/14/2016 05:09	WG916703
1,1,1,2-Tetrachloroethane	U		0.000305	0.00116	1	10/14/2016 05:09	WG916703
1,1,2,2-Tetrachloroethane	U		0.000422	0.00116	1	10/14/2016 05:09	WG916703
1,1,2-Trichlorotrifluoroethane	U		0.000422	0.00116	1	10/14/2016 05:09	WG916703
Tetrachloroethene	U		0.000319	0.00116	1	10/14/2016 05:09	WG916703
Toluene	0.00322	J	0.000502	0.00578	1	10/14/2016 05:09	WG916703
1,2,3-Trichlorobenzene	U		0.000354	0.00116	1	10/14/2016 05:09	WG916703
1,2,4-Trichlorobenzene	U		0.000449	0.00116	1	10/14/2016 05:09	WG916703
1,1,1-Trichloroethane	U		0.000331	0.00116	1	10/14/2016 05:09	WG916703
1,1,2-Trichloroethane	U		0.000320	0.00116	1	10/14/2016 05:09	WG916703
Trichloroethene	U		0.000323	0.00116	1	10/14/2016 05:09	WG916703
Trichlorofluoromethane	U		0.000442	0.00578	1	10/14/2016 05:09	WG916703
1,2,3-Trichloropropane	U		0.000857	0.00289	1	10/14/2016 05:09	WG916703
1,2,4-Trimethylbenzene	U		0.000244	0.00116	1	10/14/2016 05:09	WG916703
1,2,3-Trimethylbenzene	0.116		0.000332	0.00116	1	10/14/2016 05:09	WG916703
1,3,5-Trimethylbenzene	0.125		0.000308	0.00116	1	10/14/2016 05:09	WG916703
Vinyl chloride	U		0.000337	0.00116	1	10/14/2016 05:09	WG916703
Xylenes, Total	0.821		0.0200	0.0859	24.75	10/14/2016 11:04	WG916703
Di-isopropyl ether	U		0.000287	0.00116	1	10/14/2016 05:09	WG916703
Ethanol	U		0.0567	0.116	1	10/14/2016 05:09	WG916703
Ethyl tert-butyl ether	U		0.000463	0.00116	1	10/14/2016 05:09	WG916703
Methyl tert-butyl ether	U		0.000245	0.00116	1	10/14/2016 05:09	WG916703
t-Amyl Alcohol	0.507		0.00486	0.0578	1	10/14/2016 05:09	WG916703
tert-Amyl Methyl Ether	U		0.000312	0.00116	1	10/14/2016 05:09	WG916703
tert-Butyl alcohol	0.0586		0.00231	0.00578	1	10/14/2016 05:09	WG916703
(S) Toluene-d8	*103*			*88.7-115*		*10/14/2016 05:09*	WG916703
(S) Toluene-d8	*108*			*88.7-115*		*10/14/2016 11:04*	WG916703
(S) Dibromofluoromethane	*96.8*			*76.3-123*		*10/14/2016 11:04*	WG916703
(S) Dibromofluoromethane	*94.7*			*76.3-123*		*10/14/2016 05:09*	WG916703
(S) 4-Bromofluorobenzene	*96.7*			*69.7-129*		*10/14/2016 05:09*	WG916703
(S) 4-Bromofluorobenzene	*90.4*			*69.7-129*		*10/14/2016 11:04*	WG916703

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	4.12	J	0.848	4.63	1	10/13/2016 12:27	WG916131
C22-C32 Hydrocarbons	2.37	J	1.54	4.63	1	10/13/2016 12:27	WG916131
C32-C40 Hydrocarbons	U		1.54	4.63	1	10/13/2016 12:27	WG916131
(S) o-Terphenyl	*105*			*50.0-150*		*10/13/2016 12:27*	WG916131

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.7		1	10/10/2016 10:49	WG915680

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	0.385		0.0411	0.124	1	10/12/2016 18:11	WG916443
(S) a,a,a-Trifluorotoluene(FID)	*96.5*			*59.0-128*		*10/12/2016 18:11*	WG916443

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0181	J	0.0124	0.0620	1	10/14/2016 05:32	WG916703
Acrylonitrile	U		0.00222	0.0124	1	10/14/2016 05:32	WG916703
Benzene	0.000546	J	0.000335	0.00124	1	10/14/2016 05:32	WG916703
Bromobenzene	U		0.000352	0.00124	1	10/14/2016 05:32	WG916703
Bromodichloromethane	U		0.000315	0.00124	1	10/14/2016 05:32	WG916703
Bromoform	U		0.000525	0.00124	1	10/14/2016 05:32	WG916703
Bromomethane	U		0.00166	0.00620	1	10/14/2016 05:32	WG916703
n-Butylbenzene	U		0.000320	0.00124	1	10/14/2016 05:32	WG916703
sec-Butylbenzene	U		0.000249	0.00124	1	10/14/2016 05:32	WG916703
tert-Butylbenzene	U		0.000255	0.00124	1	10/14/2016 05:32	WG916703
Carbon tetrachloride	U		0.000406	0.00124	1	10/14/2016 05:32	WG916703
Carbon disulfide	U		0.000274	0.00124	1	10/14/2016 05:32	WG916703
Chlorobenzene	U		0.000263	0.00124	1	10/14/2016 05:32	WG916703
Chlorodibromomethane	U		0.000462	0.00124	1	10/14/2016 05:32	WG916703
Chloroethane	U		0.00117	0.00620	1	10/14/2016 05:32	WG916703
2-Chloroethyl vinyl ether	U	J3	0.00290	0.0620	1	10/14/2016 05:32	WG916703
Chloroform	U		0.000284	0.00620	1	10/14/2016 05:32	WG916703
Chloromethane	0.000530	J	0.000465	0.00310	1	10/14/2016 05:32	WG916703
2-Chlorotoluene	U		0.000373	0.00124	1	10/14/2016 05:32	WG916703
4-Chlorotoluene	U		0.000297	0.00124	1	10/14/2016 05:32	WG916703
1,2-Dibromo-3-Chloropropane	U		0.00130	0.00620	1	10/14/2016 05:32	WG916703
1,2-Dibromoethane	U		0.000425	0.00124	1	10/14/2016 05:32	WG916703
Dibromomethane	U		0.000473	0.00124	1	10/14/2016 05:32	WG916703
1,2-Dichlorobenzene	U		0.000378	0.00124	1	10/14/2016 05:32	WG916703
1,3-Dichlorobenzene	U		0.000296	0.00124	1	10/14/2016 05:32	WG916703
1,4-Dichlorobenzene	U		0.000280	0.00124	1	10/14/2016 05:32	WG916703
Dichlorodifluoromethane	U		0.000884	0.00620	1	10/14/2016 05:32	WG916703
1,1-Dichloroethane	U		0.000247	0.00124	1	10/14/2016 05:32	WG916703
1,2-Dichloroethane	U		0.000328	0.00124	1	10/14/2016 05:32	WG916703
1,1-Dichloroethene	U		0.000375	0.00124	1	10/14/2016 05:32	WG916703
cis-1,2-Dichloroethene	U		0.000291	0.00124	1	10/14/2016 05:32	WG916703
trans-1,2-Dichloroethene	U		0.000327	0.00124	1	10/14/2016 05:32	WG916703
1,2-Dichloropropane	U		0.000444	0.00124	1	10/14/2016 05:32	WG916703
1,1-Dichloropropene	U		0.000393	0.00124	1	10/14/2016 05:32	WG916703
1,3-Dichloropropane	U		0.000257	0.00124	1	10/14/2016 05:32	WG916703
cis-1,3-Dichloropropene	U		0.000325	0.00124	1	10/14/2016 05:32	WG916703
trans-1,3-Dichloropropene	U	J4	0.000331	0.00124	1	10/14/2016 05:32	WG916703
2,2-Dichloropropane	U		0.000346	0.00124	1	10/14/2016 05:32	WG916703
Ethylbenzene	U		0.000368	0.00124	1	10/14/2016 05:32	WG916703
Hexachloro-1,3-butadiene	U		0.000424	0.00124	1	10/14/2016 05:32	WG916703
Isopropylbenzene	U		0.000301	0.00124	1	10/14/2016 05:32	WG916703
p-Isopropyltoluene	U		0.000253	0.00124	1	10/14/2016 05:32	WG916703
2-Butanone (MEK)	U		0.00580	0.0124	1	10/14/2016 05:32	WG916703
Methylene Chloride	U		0.00124	0.00620	1	10/14/2016 05:32	WG916703

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00233	0.0124	1	10/14/2016 05:32	WG916703
Naphthalene	U		0.00124	0.00620	1	10/14/2016 05:32	WG916703
n-Propylbenzene	U		0.000255	0.00124	1	10/14/2016 05:32	WG916703
Styrene	U		0.000290	0.00124	1	10/14/2016 05:32	WG916703
1,1,1,2-Tetrachloroethane	U		0.000327	0.00124	1	10/14/2016 05:32	WG916703
1,1,2,2-Tetrachloroethane	U		0.000452	0.00124	1	10/14/2016 05:32	WG916703
1,1,2-Trichlorotrifluoroethane	U		0.000452	0.00124	1	10/14/2016 05:32	WG916703
Tetrachloroethene	U		0.000342	0.00124	1	10/14/2016 05:32	WG916703
Toluene	U		0.000538	0.00620	1	10/14/2016 05:32	WG916703
1,2,3-Trichlorobenzene	U		0.000379	0.00124	1	10/14/2016 05:32	WG916703
1,2,4-Trichlorobenzene	U		0.000481	0.00124	1	10/14/2016 05:32	WG916703
1,1,1-Trichloroethane	U		0.000354	0.00124	1	10/14/2016 05:32	WG916703
1,1,2-Trichloroethane	U		0.000343	0.00124	1	10/14/2016 05:32	WG916703
Trichloroethene	U		0.000346	0.00124	1	10/14/2016 05:32	WG916703
Trichlorofluoromethane	U		0.000473	0.00620	1	10/14/2016 05:32	WG916703
1,2,3-Trichloropropane	U		0.000918	0.00310	1	10/14/2016 05:32	WG916703
1,2,4-Trimethylbenzene	0.000566	J	0.000261	0.00124	1	10/14/2016 05:32	WG916703
1,2,3-Trimethylbenzene	U		0.000356	0.00124	1	10/14/2016 05:32	WG916703
1,3,5-Trimethylbenzene	U		0.000330	0.00124	1	10/14/2016 05:32	WG916703
Vinyl chloride	U		0.000361	0.00124	1	10/14/2016 05:32	WG916703
Xylenes, Total	U		0.000865	0.00372	1	10/14/2016 05:32	WG916703
Di-isopropyl ether	U		0.000307	0.00124	1	10/14/2016 05:32	WG916703
Ethanol	U		0.0607	0.124	1	10/14/2016 05:32	WG916703
Ethyl tert-butyl ether	U		0.000496	0.00124	1	10/14/2016 05:32	WG916703
Methyl tert-butyl ether	U		0.000263	0.00124	1	10/14/2016 05:32	WG916703
t-Amyl Alcohol	U		0.00520	0.0620	1	10/14/2016 05:32	WG916703
tert-Amyl Methyl Ether	U		0.000335	0.00124	1	10/14/2016 05:32	WG916703
tert-Butyl alcohol	U		0.00248	0.00620	1	10/14/2016 05:32	WG916703
(S) Toluene-d8	*105*			*88.7-115*		*10/14/2016 05:32*	WG916703
(S) Dibromofluoromethane	*96.4*			*76.3-123*		*10/14/2016 05:32*	WG916703
(S) 4-Bromofluorobenzene	*93.1*			*69.7-129*		*10/14/2016 05:32*	WG916703

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	2.25	J	0.908	4.96	1	10/13/2016 12:39	WG916131
C22-C32 Hydrocarbons	U		1.65	4.96	1	10/13/2016 12:39	WG916131
C32-C40 Hydrocarbons	U		1.65	4.96	1	10/13/2016 12:39	WG916131
(S) o-Terphenyl	*70.5*			*50.0-150*		*10/13/2016 12:39*	WG916131

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.5		1	10/10/2016 10:49	WG915680

Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHG C5 - C12	26.4		0.486	1.46	12.5	10/14/2016 16:23	WG916443
(S) a,a,a-Trifluorotoluene(FID)	*94.0*			*59.0-128*		*10/14/2016 16:23*	WG916443

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.156		0.0117	0.0585	1	10/14/2016 05:55	WG916703
Acrylonitrile	U		0.00209	0.0117	1	10/14/2016 05:55	WG916703
Benzene	0.00214		0.000316	0.00117	1	10/14/2016 05:55	WG916703
Bromobenzene	U		0.000332	0.00117	1	10/14/2016 05:55	WG916703
Bromodichloromethane	U		0.000297	0.00117	1	10/14/2016 05:55	WG916703
Bromoform	U		0.000496	0.00117	1	10/14/2016 05:55	WG916703
Bromomethane	U		0.00157	0.00585	1	10/14/2016 05:55	WG916703
n-Butylbenzene	0.0409		0.000302	0.00117	1	10/14/2016 05:55	WG916703
sec-Butylbenzene	0.0150		0.000235	0.00117	1	10/14/2016 05:55	WG916703
tert-Butylbenzene	0.0156		0.000241	0.00117	1	10/14/2016 05:55	WG916703
Carbon tetrachloride	U		0.000384	0.00117	1	10/14/2016 05:55	WG916703
Carbon disulfide	0.000602	J	0.000259	0.00117	1	10/14/2016 05:55	WG916703
Chlorobenzene	U		0.000248	0.00117	1	10/14/2016 05:55	WG916703
Chlorodibromomethane	U		0.000436	0.00117	1	10/14/2016 05:55	WG916703
Chloroethane	U		0.00111	0.00585	1	10/14/2016 05:55	WG916703
2-Chloroethyl vinyl ether	U	J3	0.00274	0.0585	1	10/14/2016 05:55	WG916703
Chloroform	U		0.000268	0.00585	1	10/14/2016 05:55	WG916703
Chloromethane	U		0.000439	0.00292	1	10/14/2016 05:55	WG916703
2-Chlorotoluene	U		0.000352	0.00117	1	10/14/2016 05:55	WG916703
4-Chlorotoluene	U		0.000281	0.00117	1	10/14/2016 05:55	WG916703
1,2-Dibromo-3-Chloropropane	U		0.00123	0.00585	1	10/14/2016 05:55	WG916703
1,2-Dibromoethane	U		0.000401	0.00117	1	10/14/2016 05:55	WG916703
Dibromomethane	U		0.000447	0.00117	1	10/14/2016 05:55	WG916703
1,2-Dichlorobenzene	U		0.000357	0.00117	1	10/14/2016 05:55	WG916703
1,3-Dichlorobenzene	U		0.000280	0.00117	1	10/14/2016 05:55	WG916703
1,4-Dichlorobenzene	U		0.000264	0.00117	1	10/14/2016 05:55	WG916703
Dichlorodifluoromethane	U		0.000834	0.00585	1	10/14/2016 05:55	WG916703
1,1-Dichloroethane	U		0.000233	0.00117	1	10/14/2016 05:55	WG916703
1,2-Dichloroethane	U		0.000310	0.00117	1	10/14/2016 05:55	WG916703
1,1-Dichloroethene	U		0.000354	0.00117	1	10/14/2016 05:55	WG916703
cis-1,2-Dichloroethene	U		0.000275	0.00117	1	10/14/2016 05:55	WG916703
trans-1,2-Dichloroethene	U		0.000309	0.00117	1	10/14/2016 05:55	WG916703
1,2-Dichloropropane	U		0.000419	0.00117	1	10/14/2016 05:55	WG916703
1,1-Dichloropropene	U		0.000371	0.00117	1	10/14/2016 05:55	WG916703
1,3-Dichloropropane	U		0.000242	0.00117	1	10/14/2016 05:55	WG916703
cis-1,3-Dichloropropene	U		0.000307	0.00117	1	10/14/2016 05:55	WG916703
trans-1,3-Dichloropropene	U	J4	0.000312	0.00117	1	10/14/2016 05:55	WG916703
2,2-Dichloropropane	U		0.000326	0.00117	1	10/14/2016 05:55	WG916703
Ethylbenzene	0.00162		0.000347	0.00117	1	10/14/2016 05:55	WG916703
Hexachloro-1,3-butadiene	U		0.000400	0.00117	1	10/14/2016 05:55	WG916703
Isopropylbenzene	0.0263		0.000284	0.00117	1	10/14/2016 05:55	WG916703
p-Isopropyltoluene	0.00523		0.000239	0.00117	1	10/14/2016 05:55	WG916703
2-Butanone (MEK)	U		0.00548	0.0117	1	10/14/2016 05:55	WG916703
Methylene Chloride	U		0.00117	0.00585	1	10/14/2016 05:55	WG916703

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00220	0.0117	1	10/14/2016 05:55	WG916703
Naphthalene	0.0921		0.00117	0.00585	1	10/14/2016 05:55	WG916703
n-Propylbenzene	0.0633		0.000241	0.00117	1	10/14/2016 05:55	WG916703
Styrene	U		0.000274	0.00117	1	10/14/2016 05:55	WG916703
1,1,1,2-Tetrachloroethane	U		0.000309	0.00117	1	10/14/2016 05:55	WG916703
1,1,2,2-Tetrachloroethane	U		0.000427	0.00117	1	10/14/2016 05:55	WG916703
1,1,2-Trichlorotrifluoroethane	U		0.000427	0.00117	1	10/14/2016 05:55	WG916703
Tetrachloroethene	U		0.000323	0.00117	1	10/14/2016 05:55	WG916703
Toluene	0.00130	J	0.000508	0.00585	1	10/14/2016 05:55	WG916703
1,2,3-Trichlorobenzene	U		0.000358	0.00117	1	10/14/2016 05:55	WG916703
1,2,4-Trichlorobenzene	U		0.000454	0.00117	1	10/14/2016 05:55	WG916703
1,1,1-Trichloroethane	U		0.000335	0.00117	1	10/14/2016 05:55	WG916703
1,1,2-Trichloroethane	U		0.000324	0.00117	1	10/14/2016 05:55	WG916703
Trichloroethene	U		0.000326	0.00117	1	10/14/2016 05:55	WG916703
Trichlorofluoromethane	U		0.000447	0.00585	1	10/14/2016 05:55	WG916703
1,2,3-Trichloropropane	U		0.000867	0.00292	1	10/14/2016 05:55	WG916703
1,2,4-Trimethylbenzene	0.0361		0.000247	0.00117	1	10/14/2016 05:55	WG916703
1,2,3-Trimethylbenzene	0.0271		0.000336	0.00117	1	10/14/2016 05:55	WG916703
1,3,5-Trimethylbenzene	0.00278		0.000311	0.00117	1	10/14/2016 05:55	WG916703
Vinyl chloride	U		0.000340	0.00117	1	10/14/2016 05:55	WG916703
Xylenes, Total	0.00555		0.000817	0.00351	1	10/14/2016 05:55	WG916703
Di-isopropyl ether	U		0.000290	0.00117	1	10/14/2016 05:55	WG916703
Ethanol	U		0.0573	0.117	1	10/14/2016 05:55	WG916703
Ethyl tert-butyl ether	U		0.000468	0.00117	1	10/14/2016 05:55	WG916703
Methyl tert-butyl ether	U		0.000248	0.00117	1	10/14/2016 05:55	WG916703
t-Amyl Alcohol	U		0.00491	0.0585	1	10/14/2016 05:55	WG916703
tert-Amyl Methyl Ether	U		0.000316	0.00117	1	10/14/2016 05:55	WG916703
tert-Butyl alcohol	U		0.00234	0.00585	1	10/14/2016 05:55	WG916703
(S) Toluene-d8	*103*			*88.7-115*		*10/14/2016 05:55*	WG916703
(S) Dibromofluoromethane	*93.5*			*76.3-123*		*10/14/2016 05:55*	WG916703
(S) 4-Bromofluorobenzene	*92.1*			*69.7-129*		*10/14/2016 05:55*	WG916703

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C12-C22 Hydrocarbons	14.7		0.858	4.68	1	10/13/2016 13:29	WG916131
C22-C32 Hydrocarbons	U		1.56	4.68	1	10/13/2016 13:29	WG916131
C32-C40 Hydrocarbons	U		1.56	4.68	1	10/13/2016 13:29	WG916131
(S) o-Terphenyl	*110*			*50.0-150*		*10/13/2016 13:29*	WG916131

Method Blank (MB)

(MB) R3169527-1 10/10/16 10:49

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L864757-04 Original Sample (OS) • Duplicate (DUP)

(OS) L864757-04 10/10/16 10:49 • (DUP) R3169527-3 10/10/16 10:49

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	87.8	88.4	1	0.721		5

Laboratory Control Sample (LCS)

(LCS) R3169527-2 10/10/16 10:49

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3170071-5 10/12/16 12:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C5 - C12	U		0.0332	0.100
(S) a,a,a-Trifluorotoluene(FID)	*97.2*			*59.0-128*

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

(LCS) R3170071-3 10/12/16 11:30 • (LCSD) R3170071-4 10/12/16 11:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHG C5 - C12	5.50	5.74	5.77	104	105	60.0-130			0.550	20
(S) a,a,a-Trifluorotoluene(FID)				*104*	*104*	*59.0-128*				

L864697-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L864697-05 10/12/16 14:07 • (MS) R3170071-8 10/12/16 16:20 • (MSD) R3170071-9 10/12/16 16:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHG C5 - C12	5.50	1.37	2.48	2.80	20.3	26.2	1	21.6-134	J6		12.2	23.9
(S) a,a,a-Trifluorotoluene(FID)					*95.2*	*96.0*		*59.0-128*				

Method Blank (MB)

(MB) R3170606-4 10/13/16 23:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromodichloromethane	U		0.000254	0.00100
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon disulfide	U		0.000221	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
2-Chloroethyl vinyl ether	U		0.00234	0.0500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethanol	U		0.0490	0.100

Method Blank (MB)

(MB) R3170606-4 10/13/16 23:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Ethylbenzene	U		0.000297	0.00100
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	U		0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
tert-Amyl Methyl Ether	U		0.000270	0.00100
Ethyl tert-butyl ether	U		0.000400	0.00100
tert-Butyl alcohol	U		0.00200	0.00500
(S) Toluene-d8	*105*			*88.7-115*
(S) Dibromofluoromethane	*94.8*			*76.3-123*
(S) 4-Bromofluorobenzene	*95.3*			*69.7-129*

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

(LCS) R3170606-1 10/13/16 21:55 • (LCSD) R3170606-2 10/13/16 22:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.128	0.131	103	105	25.3-178			2.10	22.9
Acrylonitrile	0.125	0.118	0.120	94.4	95.7	57.8-143			1.41	20
Benzene	0.0250	0.0234	0.0226	93.5	90.4	72.6-120			3.32	20
Bromobenzene	0.0250	0.0251	0.0251	101	100	80.3-115			0.370	20
Bromodichloromethane	0.0250	0.0288	0.0291	115	116	75.3-119			0.960	20
Bromoform	0.0250	0.0282	0.0292	113	117	69.1-135			3.53	20
Bromomethane	0.0250	0.0267	0.0255	107	102	23.0-191			4.75	20
n-Butylbenzene	0.0250	0.0262	0.0265	105	106	74.2-134			1.14	20
sec-Butylbenzene	0.0250	0.0268	0.0269	107	108	77.8-129			0.350	20
tert-Butylbenzene	0.0250	0.0273	0.0277	109	111	77.2-129			1.39	20
Carbon disulfide	0.0250	0.0179	0.0172	71.5	68.7	49.9-136			4.01	20
Carbon tetrachloride	0.0250	0.0279	0.0265	111	106	69.4-129			4.93	20
Chlorobenzene	0.0250	0.0268	0.0278	107	111	78.9-122			3.63	20
Chlorodibromomethane	0.0250	0.0293	0.0297	117	119	76.4-126			1.33	20
Chloroethane	0.0250	0.0243	0.0221	97.1	88.3	47.2-147			9.43	20
2-Chloroethyl vinyl ether	0.125	0.125	0.0952	100	76.2	16.7-162		J3	27.0	23.7
Chloroform	0.0250	0.0241	0.0234	96.5	93.6	73.3-122			2.96	20
Chloromethane	0.0250	0.0209	0.0206	83.4	82.3	53.1-135			1.36	20
2-Chlorotoluene	0.0250	0.0270	0.0268	108	107	74.6-127			0.540	20
4-Chlorotoluene	0.0250	0.0264	0.0252	106	101	79.5-123			4.69	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0251	0.0249	101	99.4	64.9-131			1.17	20
1,2-Dibromoethane	0.0250	0.0264	0.0266	106	106	78.7-123			0.540	20
Dibromomethane	0.0250	0.0246	0.0247	98.5	98.6	78.5-117			0.130	20
1,2-Dichlorobenzene	0.0250	0.0259	0.0258	104	103	83.6-119			0.600	20
1,3-Dichlorobenzene	0.0250	0.0275	0.0270	110	108	75.9-129			1.83	20
1,4-Dichlorobenzene	0.0250	0.0236	0.0243	94.2	97.4	81.0-115			3.31	20
Dichlorodifluoromethane	0.0250	0.0252	0.0237	101	94.6	50.9-139			6.32	20
1,1-Dichloroethane	0.0250	0.0236	0.0231	94.6	92.5	71.7-125			2.23	20
1,2-Dichloroethane	0.0250	0.0238	0.0244	95.2	97.6	67.2-121			2.43	20
1,1-Dichloroethene	0.0250	0.0227	0.0226	90.8	90.4	60.6-133			0.430	20
cis-1,2-Dichloroethene	0.0250	0.0228	0.0224	91.1	89.4	76.1-121			1.82	20
trans-1,2-Dichloroethene	0.0250	0.0222	0.0213	89.0	85.4	70.7-124			4.14	20
1,2-Dichloropropane	0.0250	0.0285	0.0286	114	114	76.9-123			0.0800	20
1,1-Dichloropropene	0.0250	0.0230	0.0232	91.9	92.7	71.2-126			0.920	20
1,3-Dichloropropane	0.0250	0.0267	0.0281	107	112	80.3-114			4.97	20
cis-1,3-Dichloropropene	0.0250	0.0294	0.0300	118	120	77.3-123			2.04	20
trans-1,3-Dichloropropene	0.0250	0.0319	0.0324	128	129	73.0-127	J4	J4	1.48	20
2,2-Dichloropropane	0.0250	0.0257	0.0216	103	86.4	61.9-132			17.4	20
Di-isopropyl ether	0.0250	0.0256	0.0252	102	101	67.2-131			1.44	20
Ethylbenzene	0.0250	0.0262	0.0268	105	107	78.6-124			2.43	20

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

(LCS) R3170606-1 10/13/16 21:55 • (LCSD) R3170606-2 10/13/16 22:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	0.0250	0.0285	0.0285	114	114	69.2-136			0.240	20
Isopropylbenzene	0.0250	0.0265	0.0266	106	107	79.4-126			0.440	20
p-Isopropyltoluene	0.0250	0.0278	0.0276	111	110	75.4-132			0.670	20
2-Butanone (MEK)	0.125	0.127	0.132	101	106	44.5-154			4.40	21.3
Methylene Chloride	0.0250	0.0231	0.0207	92.2	83.0	68.2-119			10.5	20
4-Methyl-2-pentanone (MIBK)	0.125	0.139	0.140	111	112	61.1-138			0.680	20
Methyl tert-butyl ether	0.0250	0.0232	0.0203	92.8	81.0	70.2-122			13.5	20
Naphthalene	0.0250	0.0231	0.0232	92.3	92.9	69.9-132			0.560	20
n-Propylbenzene	0.0250	0.0265	0.0266	106	107	80.2-124			0.500	20
Styrene	0.0250	0.0273	0.0274	109	109	79.4-124			0.220	20
1,1,1,2-Tetrachloroethane	0.0250	0.0280	0.0290	112	116	76.7-127			3.70	20
1,1,2,2-Tetrachloroethane	0.0250	0.0259	0.0268	104	107	78.8-124			3.45	20
Tetrachloroethene	0.0250	0.0265	0.0267	106	107	71.1-133			0.730	20
Toluene	0.0250	0.0267	0.0264	107	106	76.7-116			1.34	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0252	0.0238	101	95.2	62.6-138			5.69	20
1,2,3-Trichlorobenzene	0.0250	0.0264	0.0271	106	108	72.5-137			2.49	20
1,2,4-Trichlorobenzene	0.0250	0.0254	0.0261	101	104	74.0-137			2.93	20
1,1,1-Trichloroethane	0.0250	0.0259	0.0250	104	99.8	69.9-127			3.60	20
1,1,2-Trichloroethane	0.0250	0.0257	0.0275	103	110	81.9-119			6.94	20
Trichloroethene	0.0250	0.0267	0.0267	107	107	77.2-122			0.220	20
Trichlorofluoromethane	0.0250	0.0253	0.0252	101	101	51.5-151			0.570	20
1,2,3-Trichloropropane	0.0250	0.0246	0.0263	98.3	105	74.0-124			6.94	20
1,2,3-Trimethylbenzene	0.0250	0.0244	0.0251	97.7	100	79.4-118			2.49	20
1,2,4-Trimethylbenzene	0.0250	0.0265	0.0261	106	104	77.1-124			1.37	20
1,3,5-Trimethylbenzene	0.0250	0.0266	0.0271	106	109	79.0-125			2.12	20
Vinyl chloride	0.0250	0.0213	0.0206	85.1	82.6	58.4-134			3.05	20
Xylenes, Total	0.0750	0.0805	0.0805	107	107	78.1-123			0.0400	20
(S) Toluene-d8				*108*	*108*	*88.7-115*				
(S) Dibromofluoromethane				*93.6*	*94.5*	*76.3-123*				
(S) 4-Bromofluorobenzene				*99.9*	*102*	*69.7-129*				

L864500-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L864500-01 10/14/16 01:24 • (MS) R3170606-5 10/14/16 00:16 • (MSD) R3170606-6 10/14/16 00:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	ND	2.27	2.33	93.0	95.7	19.5	10.0-130			2.87	31.5
Acrylonitrile	0.125	ND	2.54	2.63	104	108	19.5	39.3-152			3.58	27.2
Benzene	0.0250	ND	0.505	0.525	104	108	19.5	47.8-131			3.93	22.8

L864500-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L864500-01 10/14/16 01:24 • (MS) R3170606-5 10/14/16 00:16 • (MSD) R3170606-6 10/14/16 00:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromobenzene	0.0250	ND	0.528	0.562	108	115	19.5	40.0-130			6.28	27.4
Bromodichloromethane	0.0250	ND	0.579	0.585	119	120	19.5	50.6-128			1.06	22.8
Bromoform	0.0250	ND	0.513	0.563	105	115	19.5	43.3-139			9.28	25.9
Bromomethane	0.0250	ND	0.619	0.683	127	140	19.5	5.00-189			9.77	26.7
n-Butylbenzene	0.0250	ND	0.573	0.568	118	117	19.5	23.6-146			0.910	39.2
sec-Butylbenzene	0.0250	ND	0.561	0.587	115	120	19.5	31.0-142			4.50	34.7
tert-Butylbenzene	0.0250	ND	0.577	0.602	118	124	19.5	36.9-142			4.26	31.7
Carbon disulfide	0.0250	ND	0.385	0.411	79.0	84.4	19.5	21.2-135			6.55	23.8
Carbon tetrachloride	0.0250	ND	0.562	0.569	115	117	19.5	46.0-140			1.33	27.2
Chlorobenzene	0.0250	ND	0.596	0.619	122	127	19.5	44.1-134			3.68	25.7
Chlorodibromomethane	0.0250	ND	0.582	0.597	119	122	19.5	49.7-134			2.43	24
Chloroethane	0.0250	ND	ND	0.400	0.000	82.1	19.5	5.00-164	J6	J3	200	28.4
2-Chloroethyl vinyl ether	0.125	ND	3.90	3.51	160	144	19.5	5.00-159	J5		10.5	40
Chloroform	0.0250	ND	0.523	0.534	107	109	19.5	51.2-133			1.93	22.8
Chloromethane	0.0250	ND	0.472	0.517	96.7	106	19.5	31.4-141			9.15	24.6
2-Chlorotoluene	0.0250	ND	0.567	0.602	116	123	19.5	36.1-137			5.96	28.9
4-Chlorotoluene	0.0250	ND	0.570	0.590	117	121	19.5	35.4-137			3.42	29.8
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.491	0.476	101	97.7	19.5	40.4-138			3.06	30.8
1,2-Dibromoethane	0.0250	ND	0.536	0.575	110	118	19.5	50.2-133			7.04	23.6
Dibromomethane	0.0250	ND	0.507	0.528	104	108	19.5	52.4-128			4.15	23
1,2-Dichlorobenzene	0.0250	ND	0.549	0.560	113	115	19.5	34.6-139			1.96	29.9
1,3-Dichlorobenzene	0.0250	ND	0.575	0.608	118	125	19.5	28.4-142			5.45	31.2
1,4-Dichlorobenzene	0.0250	ND	0.511	0.532	105	109	19.5	35.0-133			4.18	31.1
Dichlorodifluoromethane	0.0250	ND	0.556	0.603	114	124	19.5	31.2-144			8.04	30.2
1,1-Dichloroethane	0.0250	ND	0.514	0.520	105	107	19.5	49.1-136			1.10	22.9
1,2-Dichloroethane	0.0250	ND	0.507	0.527	104	108	19.5	47.1-129			3.90	22.7
1,1-Dichloroethene	0.0250	ND	0.508	0.585	104	120	19.5	36.1-142			14.2	25.6
cis-1,2-Dichloroethene	0.0250	ND	0.493	0.513	101	105	19.5	50.6-133			3.86	23
trans-1,2-Dichloroethene	0.0250	ND	0.483	0.490	99.1	100	19.5	43.8-135			1.39	24.8
1,2-Dichloropropane	0.0250	ND	0.589	0.583	121	120	19.5	50.3-134			0.970	22.7
1,1-Dichloropropene	0.0250	ND	0.523	0.534	107	110	19.5	43.0-137			2.13	26.4
1,3-Dichloropropane	0.0250	ND	0.565	0.586	116	120	19.5	51.4-127			3.63	23.1
cis-1,3-Dichloropropene	0.0250	ND	0.617	0.623	127	128	19.5	48.4-134			0.990	23.6
trans-1,3-Dichloropropene	0.0250	ND	0.656	0.679	135	139	19.5	46.6-135		J5	3.40	25.3
2,2-Dichloropropane	0.0250	ND	0.483	0.466	99.0	95.6	19.5	45.2-141			3.51	26.6
Di-isopropyl ether	0.0250	ND	0.538	0.567	110	116	19.5	46.7-140			5.21	23.5
Ethylbenzene	0.0250	ND	0.555	0.579	114	119	19.5	44.8-135			4.15	26.9
Hexachloro-1,3-butadiene	0.0250	ND	0.648	0.626	133	128	19.5	10.0-149			3.41	40
Isopropylbenzene	0.0250	ND	0.560	0.575	115	118	19.5	41.9-139			2.69	29.3
p-Isopropyltoluene	0.0250	ND	0.594	0.606	122	124	19.5	27.3-146			2.03	35.1

L864500-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L864500-01 10/14/16 01:24 • (MS) R3170606-5 10/14/16 00:16 • (MSD) R3170606-6 10/14/16 00:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	0.125	ND	2.46	2.57	101	105	19.5	23.9-170			4.48	28.3
Methylene Chloride	0.0250	ND	0.492	0.494	94.6	95.1	19.5	46.7-125			0.480	22.2
4-Methyl-2-pentanone (MIBK)	0.125	ND	2.67	2.84	110	116	19.5	42.4-146			5.91	26.7
Methyl tert-butyl ether	0.0250	ND	0.491	0.503	101	103	19.5	50.4-131			2.43	24.8
Naphthalene	0.0250	ND	0.481	0.505	98.7	104	19.5	18.4-145			4.91	34
n-Propylbenzene	0.0250	ND	0.572	0.598	117	123	19.5	35.2-139			4.48	31.9
Styrene	0.0250	ND	0.585	0.612	120	126	19.5	39.7-137			4.53	28.2
1,1,1,2-Tetrachloroethane	0.0250	ND	0.554	0.605	114	124	19.5	48.8-136			8.80	25.5
1,1,2,2-Tetrachloroethane	0.0250	ND	0.519	0.543	106	111	19.5	45.7-140			4.52	26.4
Tetrachloroethene	0.0250	0.0310	0.603	0.602	117	117	19.5	37.7-140			0.260	29.2
Toluene	0.0250	ND	0.574	0.576	118	118	19.5	47.8-127			0.350	24.3
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.545	0.624	112	128	19.5	35.7-146			13.5	28.8
1,2,3-Trichlorobenzene	0.0250	ND	0.585	0.595	120	122	19.5	10.0-150			1.59	38.5
1,2,4-Trichlorobenzene	0.0250	ND	0.588	0.608	121	125	19.5	10.0-153			3.35	39.3
1,1,1-Trichloroethane	0.0250	ND	0.553	0.555	113	114	19.5	49.0-138			0.430	25.3
1,1,2-Trichloroethane	0.0250	ND	0.546	0.569	112	117	19.5	52.3-132			4.17	23.4
Trichloroethene	0.0250	ND	0.560	0.570	115	117	19.5	48.0-132			1.77	24.8
Trichlorofluoromethane	0.0250	ND	ND	0.0203	0.000	4.17	19.5	12.8-169	J6	J3 J6	200	29.7
1,2,3-Trichloropropane	0.0250	ND	0.512	0.551	105	113	19.5	44.4-138			7.33	26.3
1,2,3-Trimethylbenzene	0.0250	ND	0.538	0.543	110	111	19.5	41.0-133			0.820	27.6
1,2,4-Trimethylbenzene	0.0250	ND	0.563	0.585	115	120	19.5	32.9-139			3.94	30.6
1,3,5-Trimethylbenzene	0.0250	ND	0.570	0.594	117	122	19.5	37.1-138			4.20	30.6
Vinyl chloride	0.0250	ND	0.474	0.511	97.2	105	19.5	32.0-146			7.58	26.3
Xylenes, Total	0.0750	ND	1.68	1.75	115	120	19.5	42.7-135			4.56	26.6
(S) Toluene-d8					*107*	*105*		*88.7-115*				
(S) Dibromofluoromethane					*93.3*	*93.6*		*76.3-123*				
(S) 4-Bromofluorobenzene					*100*	*103*		*69.7-129*				

Method Blank (MB)

(MB) R3170611-1 10/13/16 11:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C12-C22 Hydrocarbons	U		0.733	4.00
C22-C32 Hydrocarbons	U		1.33	4.00
C32-C40 Hydrocarbons	U		1.33	4.00
(S) o-Terphenyl	*103*			*50.0-150*

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

(LCS) R3170611-2 10/13/16 12:02 • (LCSD) R3170611-3 10/13/16 12:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C22-C32 Hydrocarbons	30.0	23.4	23.4	77.9	78.1	50.0-150			0.230	20
C12-C22 Hydrocarbons	30.0	27.4	27.3	91.4	91.2	50.0-150			0.220	20
(S) o-Terphenyl				*110*	*109*	*50.0-150*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(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.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ESC Lab Sciences 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.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [14]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

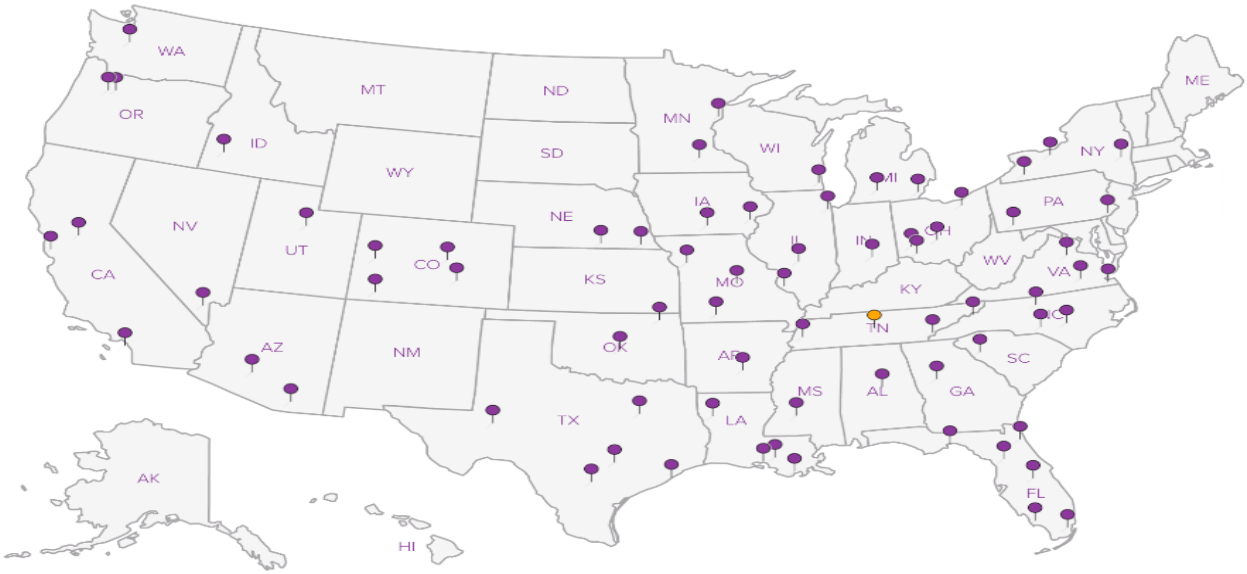
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences 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. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
AEI Consultants-CA
1200 Main Street, Suite D
Irvine, CA 92614

Billing Information:
Accounts Payable- Kent Vollmer
1200 Main Street, Suite D
Irvine CA 92614

Report to: Jonathan Sanders
Email To: sanders@aeiconsultants.com

Project Description: 3442 Adeline Street, Oakland
City/State Collected: Oakland / CA

Phone: 949-752-9300
Fax:
Client Project # 281939
Lab Project #

Collected by (print): Nathan Bricker
Site/Facility ID #
P.O. # 118551

Collected by (signature):
Immediately Packed on Ice N ___ Y X

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

Analysis / Container / Preservative: DROCAER, TS; V8260OXY, GROCA; HOLD

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L816770
Table #
Acctnum: AEICONICA
Template: T116446
Prelogin: P5705667
TSR: 110-Brian Ford
Cooler:
Shipped Via: FedexGround

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DROCAER, TS	V8260OXY, GROCA	HOLD	Rem./Contaminant	Sample # (lab only)
VB-12-2	Core	SS	2	10/6/16	0910	1			X		-01
VB-12-4			4		0914						
VB-12-6			6		0927						
VB-12-8			8		0938						-02
VB-12-10			10		0940						
SB-32-2			2		1028						-03
SB-32-4			4		1030						
SB-32-6			6		1047						
SB-32-8			8		1049						
SB-32-10			10		1058						-04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold # 10-010

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/6/16	11:24	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 1.4 °C Bottles Received: 10
Date: 10-7-16 Time: 0900

Condition: NCF (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

Andy Vann

From: Brian Ford
Sent: Friday, October 07, 2016 3:26 PM
To: Login; Sample Storage; Brian Ford
Subject: *AEICONICA* log off hold COC
Attachments: Scan1.pdf

Please log the following samples as RX due 10/14 for all analytes listed on the COC:

VB-12-2
VB-12-8
SB-32-2
SB-32-10

Thanks,

Brian Ford | Technical Service Representative
ESC Lab Sciences
12065 Lebanon Rd. | Mt. Juliet, TN 37122
Office: 615.773.9772 | Cell: 931.510.2229
bford@esclabsciences.com
www.esclabsciences.com