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April 14, 2016

Subject: Baker Road Redevelopment
20785 and 20957 Baker Road (Case #RO0003234)
Castro Valley, California

ACKNOWLEDGEMENT STATEMENT

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the State Water Resources Control Board's GeoTracker website.



Todd Deutscher
Catalyst Development Partners



SITE CHARACTERIZATION REPORT
20785 AND 20957 BAKER ROAD, CASTRO VALLEY, CALIFORNIA

DRAFT

SUBMITTED TO:

Mr. Todd Deutscher
Catalyst Development Partners
18 Crow Canyon Court, Suite 190
San Ramon, CA 94583

PREPARED BY:

ENGEO Incorporated

April 14, 2017

PROJECT NO:

13225.000.000

Project No.
13255.000.000

April 14, 2017

Mr. Todd Deutscher
Catalyst Development Partners
18 Crow Canyon Court, Suite 190
San Ramon, CA 94583

Subject: 20785 and 20957 Baker Road
Castro Valley, California

SITE CHARACTERIZATION REPORT

Dear Mr. Deutscher:

We are pleased to submit the findings from our additional site characterization undertaken at the subject site (Site) in Castro Valley, California (Site). This report summarizes the existing Site conditions, previous investigations conducted at the Site, the additional characterization activities and a summary of the analytical results. The purpose of the additional characterization was to determine if the Site has been impacted by past agricultural activities and to determine the extent and magnitude of soil vapor impact in the area of former underground storage tanks (USTs) at the Site.

If you have any questions regarding this report, please call and we will be glad to discuss them with you.

Sincerely,

ENGEO Incorporated

Divya Bhargava, PE
db/sm/bvv

Shawn Munger, CHG

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1.0 INTRODUCTION

On behalf of the developer/owner, Catalyst Development Partners; ENGEO is submitting this Site Characterization Report for the subject site in Castro Valley, California (Site). The objective of this report is to provide a summary of the previous investigations conducted at the Site, a site conceptual model, a summary of the additional characterization activities and analytical results, as well as an evaluation of the low threat closure policy for the Site.

1.1 PURPOSE

A workplan for additional site characterization was prepared for the Site and approved by the Alameda County Department of Environmental Health (ACDEH) in December 2016. The purpose of the proposed site characterization is to determine if the Site has been impacted by past agricultural activities and to determine the extent and magnitude of soil vapor impact in the area of former underground storage tanks (UST) at the Site.

1.2 SITE LOCATION AND DESCRIPTION

The Site is located at 20785 and 20957 Baker Road, northeast of Rutledge Road, and southeast of Castro Valley Boulevard in Castro Valley, California (Figure 1). The Site consists of two parcels measuring approximately 1.12 acres in area and identified with Assessor's Parcel Numbers (APNs) 84A-16-5-9 and 84A-16-6-4.

The Site is bound to the west by Rutledge Road and to the east by Baker Road. A former equipment storage yard is located to the south of the Site. Multi-family housing is present to the north and south of the Site. An automotive shop is present to the west, and multi-family housing occupies the properties to the east of Baker Road.

Currently, a fence traversing the east-west direction is present on the Site. The northwestern portion of the Site is overgrown with vegetation, and a remnant concrete building is present. The northeastern portion is occupied with a home and detached garage. The southern portion of the Site is generally covered with asphalt concrete pavement.

1.3 PROPOSED DEVELOPMENT

We understand that the proposed development will include construction of three-story townhome structures to provide 20 units with at-grade garage space, along with associated access, roadways, landscaping areas, and new underground utilities (Figure 2).

1.4 SITE GEOLOGY AND HYDROGEOLOGY

Review of published topographic maps found that the Site is at an approximate elevation of 163 feet above mean sea level. The relatively level Site has a gentle slope toward the south-southwest. According to published geologic mapping covering the site by Dibblee (2005), the Site is underlain by Quaternary Alluvial deposits consisting of alluvial gravel, sand, and clay deposits.

Based on the boring logs prepared and presented in the referenced studies, the lithology observed typically consists of 0.5 to 2 feet of gravelly clay – clayey gravel (fill material). The fill material is underlain by silty clay to depths of 3 to 4 feet below the ground surface. This material

is underlain by dark yellowish brown clayey silt, which grades into sand at between 6 and 9 feet below the ground surface. Silty and gravelly sand is present to depths of 15 to 18 feet below the ground surfaces, where it is underlain by claystone bedrock.

Based on a review of site exploration and groundwater monitoring performed between 2005 and 2008, first groundwater is encountered at depths of 8 ½ to 11 ½ feet below the ground surface. Based on a review of the 2007 and 2008 groundwater elevation data, there is a slight flow gradient generally toward the south-southwest. Borings logs are depicted in Appendix B.

2.0 PREVIOUS INVESTIGATIONS

AEI, Preliminary Site Investigation Report, 20957 Baker Road, Castro Valley, California, June 7, 2005

AEI performed a preliminary site investigation for the Site in June 2005. The scope of work was performed to determine the extent of soil contamination and impact to groundwater resulting from the hydrocarbon release from former USTs at the Site.

In April 2004, two 1,000-gallon USTs (one diesel and one gasoline) were removed from the Site. The tanks, which had been unused for over 15 years were reported to contain a small amount of fuel and sludge, but appeared to be intact with no obvious leaks. Two soil samples were collected from underneath each UST and analyzed for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylene(s) (BTEX), methyl tertiary butyl ether (MTBE), total petroleum hydrocarbons as diesel (TPH-d), and total lead. Hydrocarbons were reported in all the soil samples analyzed. TPH-g was reported at concentrations ranging from 160 milligrams per kilogram (mg/kg) to 1,400 mg/kg. TPH-d was reported at concentrations ranging from 1,400 mg/kg to 10,000 mg/kg. Lower concentrations of xylene(s) and lead were also detected.

Eight soil borings were advanced during the 2005 investigation to depths ranging from 14 to 18 feet below ground surface in the locations depicted on Figures 3 and 4. No detectable concentrations of TPH-g, TPH-d, TPH-mo, MTBE or BTEX, were reported in any of the soil samples. TPH-g was reported in one groundwater sample at concentration of 7,300 micrograms per liter (µg/L) (Figure 6). The groundwater sample from this boring also exhibited a TPH-d concentration of 23,000 µg/L. No TPH-g was reported in groundwater samples from any other boring. TPH-d was detected in other groundwater samples to a maximum concentration of 670 µg/L. TPH-motor oil (mo) was reported at concentrations ranging from 300 µg/L to 1,400 µg/L. No MTBE was reported in the groundwater samples.

Based on the findings of the study, AEI recommended the installation of four groundwater monitoring wells, a one-year monitoring program, and the preparation of a remedial action plan, if deemed necessary.

AEI, Additional Information Report, 20957 Baker Road, Castro Valley, California, November 15, 2008

AEI prepared an Additional Information Report for the 20957 Baker Road parcel in November 2008. The document provided an overview of past investigations and reporting for the Site. The

following was presented in the report, as well as supplemental information provided in a Case Closure Letter from ACDEH dated September 8, 2009.

In October 2007, five groundwater monitoring wells were installed, one on each side of the former UST location, one through the center of the tank backfill, and two downgradient of the former UST location, as shown in Figures 3 and 6. Low-level hydrocarbons were detected in samples collected in a boring near the former tank location. Depth to water at the time the wells were developed ranged from approximately 11 to 14 ½ feet below the ground surface. Groundwater samples collected during the October 2007 groundwater-monitoring event did not identify the presence of TPH-g, BTEX or MTBE in any of the groundwater samples. TPH-d was detected in one sample, but not during three subsequent events.

Following the four quarters of groundwater monitoring, AEI opined that the data for the Site met the established Regional Water Quality Control Board (RWQCB) standard for closure. Following a comment and rebuttal period between AEI and ACDEH, ACDEH did provide case closure in a letter dated September 9, 2009. In the case closure letter, ACDEH did note the absence of soil gas testing, but given the elapsed time since the release (prior to 1989); the potential for vapor intrusion appeared to be low. ACDEH did comment in the document that the closure was based on the determination that the reported release did not appear to present a risk to human health, given the Site use and conditions at the time of the closure.

ENGEO, Phase I Environmental Site Assessment, 20957 Baker Road, Castro Valley, California, Project Number 13255.000.000, August 23, 2016 (DRAFT)

ENGEO conducted a concurrent phase I environmental site assessment for the 20957 Baker Road property in August 2016. The property was reportedly used a corporation yard/storage area for heavy equipment. Prior to development in the 1950s, the property appeared to be under cultivation for row crops.

Based on the findings of the ENGEO phase I assessment and previous assessments of the property, the following potential environmental concerns were identified for the property:

- Although the former leaking USTs at the property were removed and a case closure was subsequently granted, information in the former case file indicated that potential risks via vapor intrusion may not have been adequately assessed during past characterization activities.
- Historical records for the property indicated the property was under agricultural cultivation in the past. Recalcitrant agricultural chemicals could be present in near-surface soils.

A phase II environmental assessment was recommended for the property to (1) evaluate potential vapor intrusion impacts in the area of the former USTs and (2) evaluate potential impacts to near surface soil due to the past agricultural activity.

ENGEO, Phase I Environmental Site Assessment, 20785 Baker Road, Castro Valley, California, Project Number 13255.000.000, August 23, 2016 (DRAFT)

ENGEO conducted a concurrent phase I environmental site assessment for the 20785 Baker Road property in August 2016. The property was reportedly used as a corporation yard/storage

area for heavy equipment. Prior to development in the 1950s, the property appeared to be under cultivation for row crops surrounding the single-family residential structures.

Based on the findings of the ENGEO phase I assessment and previous assessments of the property, the following potential environmental concerns were identified for the property:

- Although the former leaking USTs at the parcel to the south were removed and a case closure was subsequently granted, information in the former case file indicated that potential risks via vapor intrusion may not have been adequately assessed during past characterization activities.
- Historical records for the property indicated the property was under agricultural cultivation in the past. Recalcitrant agricultural chemicals could be present in near-surface soils.
- Lead-based paint and/or asbestos-containing building materials may be present within structures at the property.

A phase II environmental assessment was recommended for the property to evaluate potential impacts to near surface soil due to the past agricultural activity.

ENGEO, Phase II Environmental Site Assessment, 20785 Baker Road, Castro Valley, California, Project Number 13255.000.000, August 31, 2016

A phase II environmental site assessment was performed at the 20785 Baker Road property in August 2016. Soil samples were collected from a total of six locations across the property (Figure 5). Soil borings S-2 and S-3 were advanced to a total depth of 2 feet below ground surface using a Geoprobe® direct-push rig. Continuous soil cores were retrieved from each boring. Soil samples were collected at approximate depths of 3 to 9 inches and 12 to 18 inches below the ground surface from each of the borings. The remaining soil borings were advanced to 9 inches using a hand auger. Samples were collected at the approximate depth of 3 to 9 inches below the ground surface and analyzed for the presence of organochlorine pesticides (OCPs), arsenic, and lead.

Locations S-7 and S-8 exhibited low levels of detectable concentrations of OCPs. Detected analytes included gamma-chlordane, alpha-chlordane, 4,4-DDE, dieldrin, 4,4-DDT, heptachlor epoxide and chlordane; these concentrations were below respective screening levels. All of the collected soil samples exhibited detectable lead concentrations; the detected concentrations ranged between 6.49 and 49.6 milligrams per kilogram (mg/kg). These concentrations were below the corresponding residential Environmental Screening Level (ESLs)¹ established by the RWQCB.

Detected arsenic concentrations in the collected soil samples ranged between 3.88 and 27.3 mg/kg. The detected concentrations were in excess of the respective arsenic screening level assuming a residential land use scenario. Although several detected concentrations were within expected background concentrations, some detected arsenic concentrations were in excess of expected background concentrations observed in the San Francisco Bay Area. Soil data is presented in Table A and Figure 5.

¹ Regional Water Quality Control Board (RWQCB), Direct Exposure Human Health Risk Screening Levels for Soil (Residential Land Use), Table S-1, February 2016 (Revision 3).

Given the reported arsenic and pesticide concentrations, it appeared the surface soil at the Site may have been impacted from historic agricultural activities.

ENGEO, Phase II Environmental Site Assessment, 20957 Baker Road, Castro Valley, California, Project Number 13255.000.000, August 31, 2016

A phase II environmental site assessment was performed at the 20957 Baker Road property in August 2016. Soil samples were collected from two locations across the property (Figure 5). The soil borings were advanced to a total depth of 2 feet below ground surface using a Geoprobe® direct-push rig (Figure 7). Continuous soil cores were retrieved from each boring. Soil samples were collected at approximate depths of 3 to 9 inches and 12 to 18 inches below the ground surface from each of the borings and analyzed for the presence of OCPs, arsenic, and lead.

None of the soil samples exhibited detectable concentrations of OCPs. All of the collected soil samples exhibited detectable lead concentrations; the detected concentrations for S-1 and S-4 were 7.41 and 33.2 milligrams per kilogram (mg/kg), respectively. These concentrations were below the respective screening level assuming a residential land use scenario. Detected arsenic concentrations in the collected soil samples for S-1 and S-4 were 13.7 and 26.5 mg/kg, respectively. This is in excess of the respective arsenic screening level assuming a residential land use scenario and in excess of expected background concentrations observed in the San Francisco Bay Area. Given the reported arsenic concentrations, it appeared the surface soil at the property may have been impacted from historic agricultural activities.

In order to evaluate potential vapor intrusion concerns, a soil gas assessment was conducted at the property. Three temporary soil gas monitoring wells (SG-1 through SG-3) were installed at the property using a Geoprobe® rig at the locations shown in Figure 7.

Each of the soil gas samples exhibited detectable target analyte concentrations; the detected analytes are typically associated with gasoline and/or other refined petroleum hydrocarbon product. Elevated concentrations of TPH-g were detected in all three samples; however, concentrations were below the corresponding vapor intrusion human health risk ESLs². Two of the three samples exhibited ethylbenzene concentrations in excess of the human risk ESL. One sample also exhibited a naphthalene concentration in excess of the respective human risk screening level. As the soil gas samples were collected in the immediate vicinity of the former UST location, additional soil gas sampling was recommended to determine the extent of soil gas impact at the property. Soil data is presented in Table A, and soil gas data is presented in Table B.

3.0 SCOPE OF FIELD EXPLORATION

3.1 SOIL CHARACTERIZATION

The purpose of the soil characterization was to further define the vertical and lateral extent of impacts previously identified at the Site. Field sampling activities were performed on March 3 and 16, 2017. The scope of the field exploration consisted of collection of soil samples from 13 locations (SS1-9 through SS-13), as presented on Figure 5.

² RWQCB, Subslab/Soil Gas Vapor Intrusion Human Health Risk Screening Levels (Residential Land Use), Table SG-1, February 2016 (Revision 3).

A C-57 licensed drilling contractor was retained to advance soil borings (Figure 5). A total of 13 borings (SS-1 through SS-13) were advanced to a depth of approximately 2 feet below the ground surface. Soil samples were retrieved within continuous Geoprobe® acetate core liners measuring 4 feet in length. Specific soil samples were collected for laboratory analysis by cutting a 12-inch portion of the Geoprobe® soil core liners corresponding to the respective desired sampling depths in each location.

Two sets of samples were collected from two depths (for a total of 26 samples). The sample sleeves were sealed using Teflon® sheets secured by tight-fitting plastic end caps. Sample were labelled with the following information: unique sample number, sample location, time/date collected, lab analysis, and the sampler's identification. The soil samples were placed in an ice-cooled chest and submitted under documented chain-of-custody to a State-accredited fixed-base analytical laboratory.

For each sample location, two samples were recovered at approximate depths of 0 to 12 inches and 12 to 24 inches below the ground surface. Additionally, duplicate samples (Dup-1@0-12" and Dup-2@12-24") were collected from location SS-8. All samples were analyzed for OCPs (EPA Method 8081) and lead/arsenic (EPA Method 6010).

3.2 SOIL GAS CHARACTERIZATION

A total of 14 temporary soil gas monitoring borings (SG-A through SG-N) were installed in the vicinity of the former UST, as presented on Figure 7. Two borings (SG-I and SG-D) were installed within the area of the former UST excavation (Figures 7 and 8). Boring logs are presented in Appendix B. Only 2 feet of soil recovery was achieved between 2 to 6 feet for the Geoprobe sleeve for SG-D. Also, the material encountered at SG-I appeared to be native material; therefore is it uncertain if SG-D and SG-I were within UST backfill material.

The soil gas borings were installed using the following methodology:

- The installation and sampling of the soil gas monitoring wells were performed in accordance with the *Department of Toxic Substances Control (DTSC) Final Advisory Active Soil Gas Investigations (July 2015)*. As part of this task, boring permits were obtained from the Alameda County Public Works Agency (ACPWA).
- The soil gas monitoring well casings were constructed with ¼-inch-diameter Teflon tubing equipped with a filter at the base of the tubing. The well installations were performed with a direct push probe rig, which advanced an approximately 2-inch-diameter boring to a depth of 6 feet below the ground surface. Boring logs are presented in Appendix B.
- For each well, the bottom of the well tubing was equipped with a 1-inch-long filter situated at a depth of 5 feet below the ground surface, centered in the middle of a 2-foot layer of No. 3 sand. Six inches of dry bentonite was installed on top of the sand, and the remaining annular space was filled with hydrated bentonite grout to six inches below grade. The well tubing extended an additional 2.5 feet beyond the ground surface so that it could be directly connected to the sample train. When not in use, the well tubing was coiled and sealed with a threaded plug inside the well box. The well construction diagram is included as Figure 9.
- Once the installation of the annular seal is complete, a permanent Swagelok® fitting was connected on the top of the well tubing and a threaded plug was inserted. At this point, the

mandatory two-hour equilibration time commenced. After the two-hour equilibration time had elapsed, we the sample manifold was connected to the well tubing. The sample train, which consistrf of a stainless steel summa and manifold with built in flow controller set to 100-200 ml/min, was encompassed in a helium shroud provided by the analytical laboratory.

- A purge vacuum pump was attached to the manifold and a shut-in test was peformed to assess for potential leaks. The shut-in test consisted of capping the end of the manifold, then applying a vacuum with the vacuum pump, closing the purge valve, and observing the vacuum gauge for two minutes to determine if there is a drop in vacuum.
- Three tubing volumes of soil gas were purged from each well prior to sampling at flow rate of 150 ml/minute. The purge specifications are presented in the following table:

TABLE 1

TUBING LENGTH (feet)	TUBING VOLUME PER FOOT (ml)	TOTAL TUBING VOLUME (ml)	SAND PACK PORE VOLUME (ml) (50% POROSITY)	TOTAL WELL VOLUME (ml)	MINUTES (1X)	MINUTES (3X)	MINUTES (10X)
8.5	9.65	82	617.8	699.8	4.66	14	46.6

Notes: Purge minutes are based on a flowrate of 150 ml/min
Sandpack is 2 inches diameter by 2 feet in length

- After purging was completed, a 20 percent helium content was established within the shroud and confirmed with a field meter prior to sampling. Once the 20-percent helium content was established, samples were collected by opening the sample canister valve and allowing the sample canister to extract soil gas until the vacuum in the sample canister reached approximately 5 inches of mercury.
- Each sample canister was labeled with a unique identification number, sampling time, pre and post sample vacuum readings; and the soil gas samples were submitted to a State certified laboratory for analysis of TPH-g and volatile organic compounds (VOCs) (EPA Test Method TO-15) and the presence of helium and fixed gases (ASTM D-1946). Additionally, one duplicate sample (SG-DUP) was collected at location SG-N, and analyzed for the same constituents as the original sample.
- The soil gas wells were abandoned shortly after installation and sampling, in accordance with the ACPWA requirements.

3.3 QUALITY ASSURANCE/QUALITY CONTROL

Field Quality Assurance/Quality Control (QA/QC) samples were collected and analyzed during soil sampling to assess the consistency and performance of the sampling program. Field QC samples for this project included field duplicates samples. Duplicate samples were collected for soil and soil gas samples at the Site (Tables A and B). One duplicate soil gas sample (SG-DUP) was collected at location SG-N, and analyzed for the same constituents as the original sample. Duplicate soil samples (Dup-1@0-12" and Dup-2@12-24") were collected from location SS-8, and analyzed for the same constituents as the original sample.

Equipment rinsate samples were not collected, since only disposable sampling equipment was used to collect samples.

4.0 ANALYTICAL RESULTS

4.1 SOIL CHARACTERIZATION

All soil samples collected from the Site exhibited detectable concentrations of arsenic ranging between 2.47 to 19.8 mg/kg. These concentrations are within background concentrations observed in the San Francisco Bay Area, within the exception of arsenic concentrations observed in samples collected at six locations (Table A), as discussed further in Section 6.0.

Lead concentrations in three samples (SS-7@0-12", SS-11@0-12", SS-13@12-24") exceeded the corresponding residential ESL of 80 mg/kg.

Four samples (SS-7@0-12", SS-11@0-12", SS-13@0-12", and SS-13@12-24") exhibited lead concentrations exceeding 50 mg/kg (Figure 5), which is greater than 10 times the soluble threshold limit concentration (STLC) of 5 milligrams per liter (mg/L) for lead. Subsequent analysis was performed using the Waste Extraction Test (WET) to determine if the concentrations of lead were above the STLC. Soluble lead concentrations for the samples ranged between 1.55 to 4.57 mg/L, all below the STLC for lead (5 mg/L). This indicates that the material at these locations can be handled and/or disposed as Class II material.

As presented in Table A, OCPs including dieldrin, beta-BHC, delta-BHC, alpha-chlordane, gamma-chlordane, DDD, DDE, DDT, chlordane, endosulfan II, endrin aldehyde, endosulfan sulfate, and heptachlor epoxide were detected in the soil samples collected from the Site. In both shallow and deep samples collected from the Site, all OCPs were detected at levels below the corresponding residential ESLs.

The laboratory analytical reports are presented in their entirety in Appendix A.

4.2 SOIL GAS CHARACTERIZATION

Each of the soil gas samples (all collected in the immediate vicinity of the former UST location) exhibited detectable target analyte concentrations; the detected analytes are typically associated with gasoline and/or other refined petroleum hydrocarbon products. As presented in Table B, TPH-g concentrations ranged between non-detect to 13,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). All detected concentrations were below the corresponding residential ESL. All VOCs were detected below their corresponding ESLs (Figure 8). For two of the soil gas samples (SG-E and SG-F), the reporting limits for naphthalene exceeded the corresponding residential ESL. The detection limits had to be raised for these two samples due to limited sample volume resulting from tight formations.

The soil gas samples were also analyzed for mixed gases, including carbon dioxide, carbon monoxide, oxygen, and methane (Table C). Oxygen levels ranged between 1.5 to 15 percent. These levels of oxygen demonstrate that natural bioattenuation can likely occur in the subsurface. Methane and carbon monoxide were not detected in any of the soil gas samples collected from the Site. The leak check gas helium was not detected in any of the soil gas samples.

The laboratory analytical reports are presented in their entirety in Appendix A.

5.0 CONCEPTUAL SITE MODEL

Details on Site geology and hydrogeology is presented on Section 1.4. The nature and extent of environmental impacts is described below.

5.1 SURFACE SOIL

Intermittent surface soil samples exhibited low levels of detectable concentrations of OCPs; these concentrations were below respective screening levels. Lead concentrations in three samples (SS-7@0-12", SS-11@0-12", SS-13@12-24") exceeded the corresponding residential ESL of 80 mg/kg. A statistical evaluation was conducted on the lead data set for the Site. A 95 percent upper confidence level (UCL) concentration was calculated for lead concentrations following the methods established by the USEPA. A 95 percent UCL represents a threshold concentration with the following characteristic: the true mean concentration of the analyte within the study area has a 95 percent probability of being less than or equal to the UCL concentration. The analysis was performed using USEPA's ProUCL Version 5.00.00 software. The UCL value for lead was calculated to be 42.2 mg/kg, which is below its corresponding residential ESL. The UCL calculation worksheet is presented in Appendix C.

5.2 SUBSURFACE SOIL

At the time of UST removal (2004), soil samples collected from the resulting excavation exhibited elevated TPH-g, TPH-d, and xylene(s) concentrations. However, subsequent soil sampling of soil in 2005 and 2007 during site characterization and well installation events did not identify hydrocarbon impacts within soil at or near the former UST locations. Several of the samples collected were very close or corresponded to the locations of the 2004 samples. Based on these previous sampling events, it does not appear that soil hydrocarbon impact is present in subsurface soils.

5.3 GROUNDWATER

Groundwater samples were collected during the 2005 soil sampling program. Several samples exhibited detectable TPH-g and TPH-d concentrations above respective screening levels. However, when monitoring wells were installed at the Site in 2007, including wells at the locations of the 2005 sampling locations, none of the groundwater samples exhibited detectable concentrations of petroleum hydrocarbons, with the exception of a TPH-d concentration of 56 µg/L in one well. Subsequent sampling of the wells in 2008 did not identify detectable concentrations of TPH or related analytes.

5.4 SOIL GAS

Each of the 2017 soil gas samples (all collected in the immediate vicinity of the former UST location) exhibited detectable target analyte concentrations; the detected analytes are typically associated with gasoline and/or other refined petroleum hydrocarbon product. Elevated concentrations of TPH-g were detected in all three samples; however, concentrations were below the corresponding residential screening level. All VOCs were detected at concentrations below their corresponding screening levels during the 2017 sampling. Oxygen levels in the soil gas samples ranged between 1.5 to 15 percent. These levels of oxygen demonstrate that natural bioattenuation is likely occurring in the subsurface.

6.0 MITIGATION OF PESTICIDE-IMPACTED SOIL

Arsenic concentrations in soil at the Site ranged between 2.47 to 19.8 mg/kg. An internal study was conducted³ to determine the background concentrations of arsenic at the Site. This was calculated using the a Q-Q plot prepared using ProUCL software for the arsenic data collected at the Site (Appendix C). An inflection point was calculated to differentiate the anthropogenic concentrations from the background concentrations, and was found to be 14 mg/kg. Samples exhibiting arsenic concentrations above this level would need to be mitigated prior to redevelopment.

Additionally, the shallow sample collected at location SS-13 (collected in 2017), and at location S-7 (collected in 2016) exhibited elevated pesticide concentrations (specifically, chlordane and dieldrin) (Figure 5). Although pesticides were below the corresponding screening levels, there could be a potential human health risk due to the cumulative concentrations of pesticides in these locations. These locations are adjacent to the structures on the Site, and the elevated concentrations of pesticides could be due to spraying of termiticides in that area. Additional step-out sampling should be conducted to further delineate the extent of impacts adjacent to the structures.

7.0 LOW-THREAT CLOSURE EVALUATION

The Site meets the requirements for case closure outlined in the State Water Resources Control Board's (SWRCB) *Low-Threat Underground Storage Tank Case Closure Policy (LTCP)*, as described below.

7.1 GENERAL CRITERIA

- a. The unauthorized release is located within the service area of a public water system.
East Bay Municipal Utility District is the public water system for the Site and the surrounding area.
- b. The unauthorized release consists only of petroleum.
The release at the Site was from the two former USTs and associated equipment. The two former USTs (one gasoline and one diesel) were removed from the Site in 2004.
- c. The unauthorized ("primary") release from the UST system has been stopped.
The former USTs were removed from the Site in 2004. The tanks, which had been unused for over 15 years were reported to contain a small amount of fuel and sludge; however, were reported to be intact with no obvious leaks.
- d. Free product has been removed to the maximum extent practicable.
Investigations at the site have not indicated the presence of free product.
- e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.
A conceptual site model had been developed for the Site, as presented in Section 5.0.

³ Using EPA ProUCL Version 5.00.00 Software.

f. Secondary source has been removed to the extent practicable.

As mentioned previously in Section 1.2, two USTs were been removed from the Site in 2004. In the soil samples collected by AEI in 2005, No detectable concentrations of TPH-g, TPH-d, TPH-mo, MTBE or BTEX, were reported in any of the soil samples.

g. Soil or groundwater has been tested for methyl tert-butyl ether (MTBE) and results reported in accordance with Health and Safety Code section 25296.15; and

Soil and groundwater samples collected by AEI in 2004 and 2007 were analyzed for MTBE. Analytical results are presented in the referenced reports.

h. Nuisance as defined by Water Code section 13050 does not exist at the site.

Water Code section 13050 defines "nuisance" as anything which meets all of the following requirements:

(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

(2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

(3) Occurs during, or as a result of, the treatment or disposal of wastes.

Site conditions do not interfere with enjoyment of life or property, affect an entire community of neighborhood, or present a nuisance during or as a result of the treatment or disposal of wastes.

7.2 MEDIA-SPECIFIC CRITERIA

Releases from USTs can impact human health and the environment through contact with any or all of the following contaminated media: groundwater, surface water, soil, and soil vapor. Although this contact can occur through ingestion, dermal contact, or inhalation of the various media, the most common drivers of health risk are ingestion of groundwater from drinking water wells, inhalation of vapors accumulated in buildings, contact with near surface contaminated soil, and inhalation of vapors in the outdoor environment. To simplify implementation, these media and pathways have been evaluated and the most common exposure scenarios have been combined into three media-specific criteria, as follows:

7.2.1 Groundwater

Concentrations of TPH-g, TPH-d, TPH-mo, and MTBE are presented on Figure 6. Five monitoring wells were sampled on the Site for four quarters. No hydrocarbons were reported in any groundwater samples since the January 14, 2008 monitoring event, indicating that natural attenuation has reduced residual hydrocarbons to non-detectable concentrations.

Based on the Groundwater-Specific Criteria listed in the LTCP, the Site meets all four of the characteristics of a Class 2 site in the LTCP, in that the following criteria are met:

1. The contaminant plume that exceeds water quality objectives is less than 250 feet in length.

2. 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.
3. The plume has been stable or decreasing for a minimum of five years.
4. The nearest existing water supply well is greater than 1,000 feet from the defined plume boundary.

Based on the relatively low or non-detect concentrations of hydrocarbons in monitoring wells, the Site qualifies for closure as a Class 2 site.

7.2.2 Vapor Intrusion to Indoor Air

VOCs were detected in the soil gas samples collected from the Site below their corresponding ESLs. Oxygen levels ranged between 1.5 to 15 percent (Table C). According to the LTCP, these levels of oxygen demonstrate that a bioattenuation zone exists in the subsurface. Based on this evaluation, there is no significant health risk from vapor intrusion into the future residential buildings at the Site.

7.2.3 Direct Contact and Outdoor Air Exposure

Petroleum hydrocarbon concentrations in soil samples collected in the vicinity of the UST are presented on Figure 4. Maximum remaining concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 of the LTCP document. Residual hydrocarbon concentrations will have no significant risk of adversely affecting human health or the health of construction or utility workers.

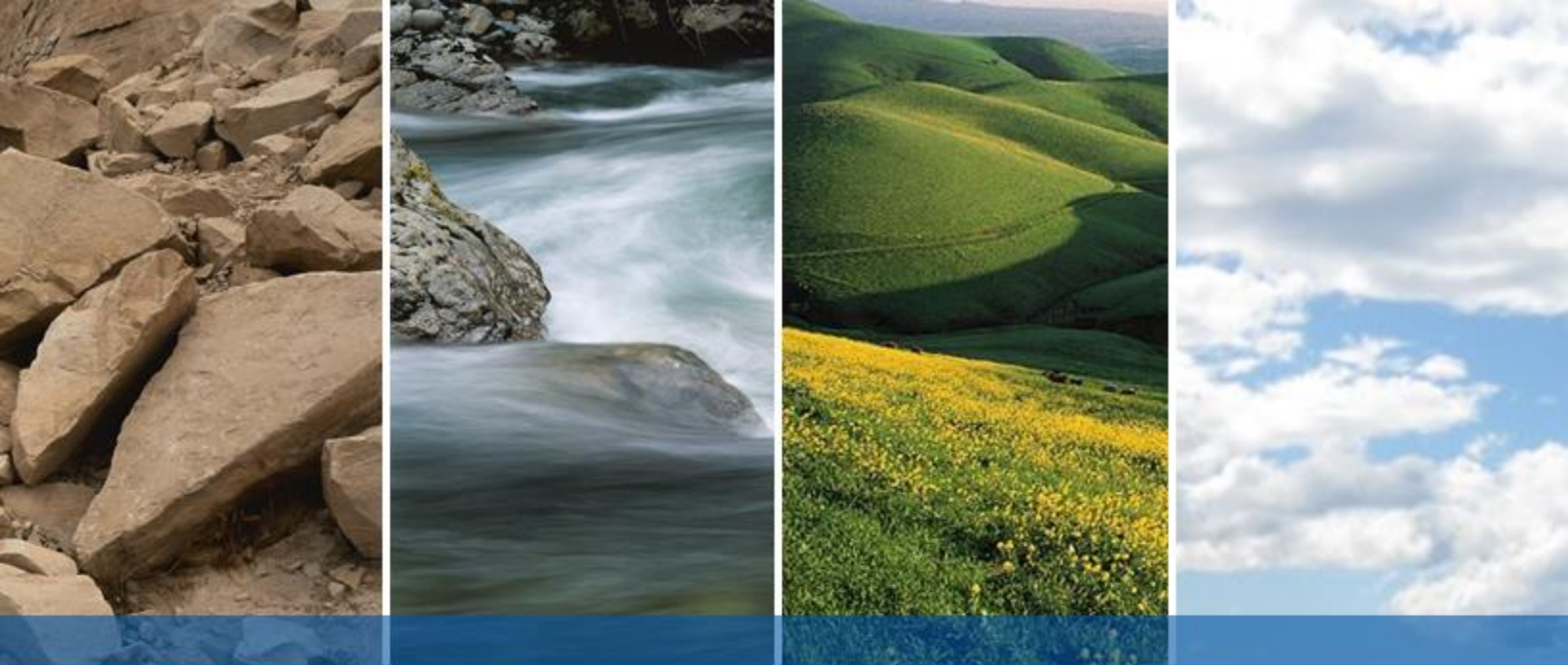
8.0 CONCLUSION

Based on the data presented, Site meets the General and Media Specific Criteria for case closure under the Low Threat Underground Storage Tank Case Closure Policy. Therefore, no further studies are warranted with respect to the former USTs at the Site.

We recommend mitigation of the arsenic and pesticide-impacted soil at the Site prior to redevelopment.

SELECTED REFERENCES

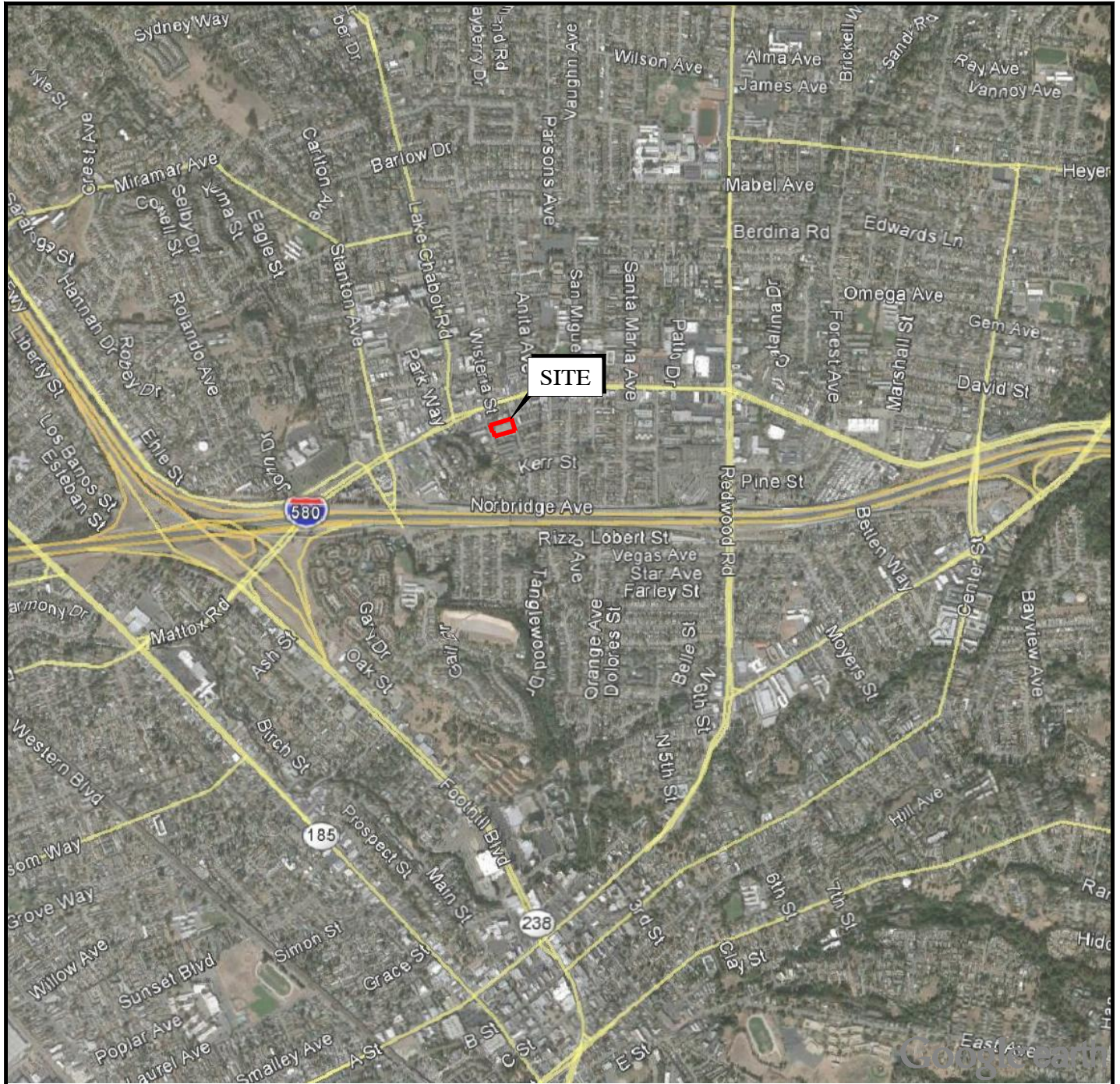
- AEI, Preliminary Site Investigation Report, 20957 Baker Road, Castro Valley, California, June 7, 2005.
- AEI, Additional Information Report, 20957 Baker Road, Castro Valley, California, November 15, 2008.
- Dibblee, T.W., Jr., 2005, Geologic Map of the Hayward Quadrangle, Alameda and Contra Costa Counties, California, DF 163, 2005.
- ENGEO, Phase I Environmental Site Assessment, 20957 Baker Road, Castro Valley, California, Project Number 13255.000.000, August 23, 2016 (DRAFT).
- ENGEO, Phase I Environmental Site Assessment, 20785 Baker Road, Castro Valley, California, Project Number 13255.000.000, August 23, 2016 (DRAFT).
- ENGEO, Phase II Environmental Site Assessment, 20785 Baker Road, Castro Valley, California, Project Number 13255.000.000, August 31, 2016.
- ENGEO, Phase II Environmental Site Assessment, 20957 Baker Road, Castro Valley, California, Project Number 13255.000.000, August 31, 2016.
- ENGEO, Workplan for Site Characterization, 20785 and 20957 Baker Road (Former Case #R00002739), Castro Valley, California, December 29, 2016.
- State Water Resources Control Board, Water Quality Control Policy for Low-Threat Underground Storage Tank Closure.



FIGURES

- | | |
|-----------------|--|
| Figure 1 | Vicinity Map |
| Figure 2 | Proposed Development Plan |
| Figure 3 | Previous Sample Locations |
| Figure 4 | UST Soil Concentrations |
| Figure 5 | Lead, Arsenic, and Pesticide Concentrations in Soil |
| Figure 6 | Groundwater Concentrations |
| Figure 7 | Soil Gas Sample Locations |
| Figure 8 | Soil Gas Concentrations |
| Figure 9 | Soil Gas Well Construction Diagram |

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BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE



VICINITY MAP
 20785 AND 20957 BAKER ROAD
 CASTRO VALLEY, CALIFORNIA

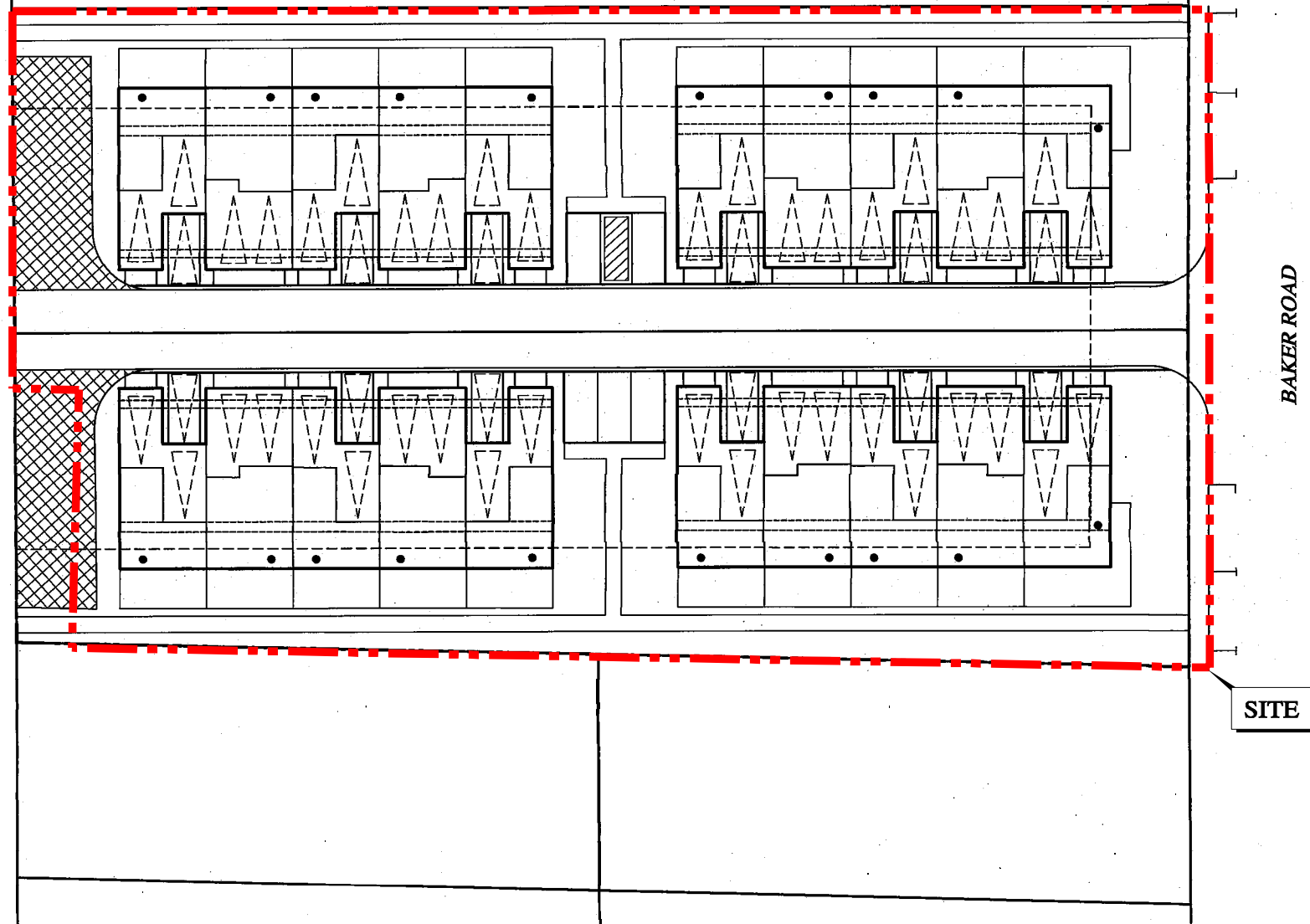
PROJECT NO.:	13255.000.000
SCALE:	AS SHOWN
DRAWN BY:	LL
CHECKED BY:	JAA

FIGURE NO.
1

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RUTLEDGE ROAD

BAKER ROAD



SITE SUMMARY

SITE ACRE	1.09 ac	
TOTAL UNITS	20 du	
Plan 2	8 du	40%
Plan 3	10 du	50%
Plan 3X	2 du	10%
DENSITY:	18.4 du/ac	

PARKING SPACES:

<u>REQUIRED</u>		
Unit Parking (2 stalls / du)	40 stalls	
Guest Parking (1 stall / du)	20 stalls	
Total	60 stalls	

PROVIDED

2 Car Garage	40 stalls
Driveway	12 stalls
Head In	5 stalls
Baker On-Street	4 stalls
Total	61 stalls

OPEN SPACE:

REQUIRED

Common	min. 200 sf / unit 25 ft min. dimension
Private	min. 300 sf/unit 10 ft min. ground floor dimension 7 ft min. balcony dimension
Total Usable	
Per Unit	min. 600 sf / unit
Total	min. 12,000 sf

PROVIDED

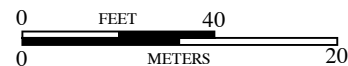
Common			
Area A:	1,531 sf	Area C:	1,837 sf
Area B:	1,581 sf	Area D:	1,909 sf
Sub-Total:	3,112 sf	Sub-Total:	3,746 sf
Total Usable			
Per Unit	343 sf / unit		
Total	6,858 sf		

Private

Ground Floor:	220 sf / unit
Balcony:	TBD
Total Usable:	
Per Unit	220 sf / unit
Total	4,400 sf

Total Open Space

Per Unit	563 sf (+ TBD Private Balcony Space)
Total	11,260 sf



BASE MAP SOURCE: WILLIAM HEZMALHALCH ARCHITECTS INC., 2016



PROPOSED DEVELOPMENT PLAN
20785 AND 20957 BAKER ROAD
CASTRO VALLEY, CALIFORNIA

PROJECT NO.: 13255.000.000
SCALE: AS SHOWN
DRAWN BY: LL CHECKED BY: JAA

FIGURE NO.
2

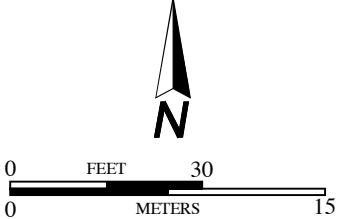
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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- S-8** ● SOIL SAMPLE (ENGEO, 2016)
- SG-3** ● PREVIOUS SOIL GAS SAMPLE (ENGEO, 2016)
- MW-5** ⊕ PREVIOUS MONITORING WELL (AEI, 2007)
- SB-8** ⊕ PREVIOUS SOIL BORING (AEI, 2005)
- GT-9** ⊕ PREVIOUS SOIL BORING (AEI, 1986)



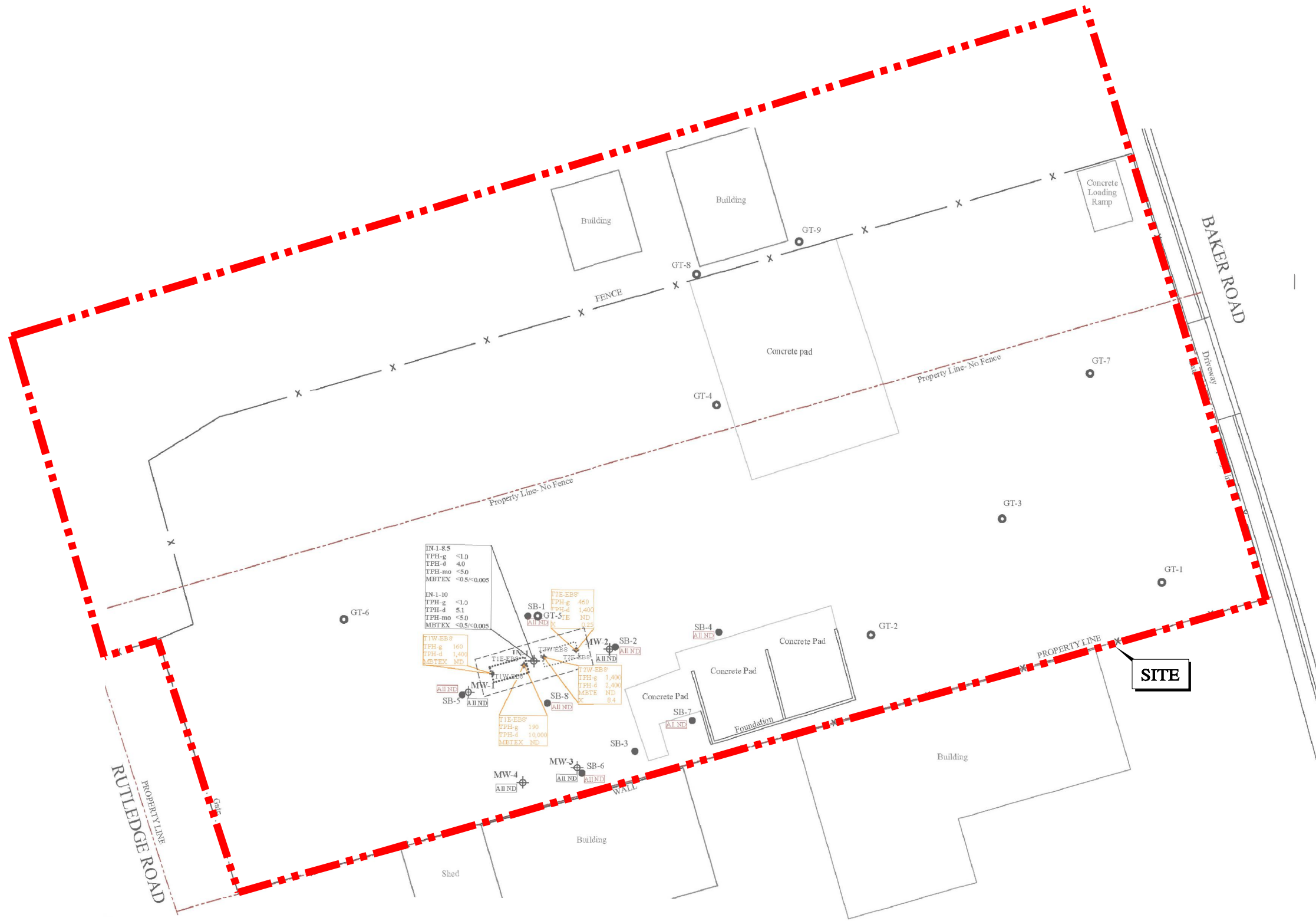
BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE, AEI CONSULTANTS, AND WILLIAM HEZMALHALCH ARCHITECTS INC., 2016



PREVIOUS SAMPLE LOCATIONS
20785 AND 20957 BAKER ROAD
CASTRO VALLEY, CALIFORNIA

PROJECT NO: 13255.000.000	FIGURE NO.
SCALE: AS SHOWN	3
DRAWN BY: LL	

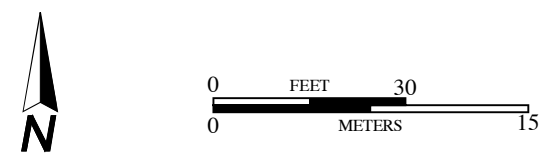
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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- SB-1 ● SOIL BORING (AEI, 2005)
- MW-1 ⊕ MONITORING WELL (AEI, 2007)
- GT-1 ● GEOTECHNICAL SOIL BORING (AEI, 1986)
- T1W-EBP
TPH-g 160
TPH-d 1,400
MBTEX ND
- ALL ND PRELIMINARY SITE INVESTIGATION (AEI, 2005)
- IN-1-10
TPH-g <1.0
TPH-d 5.1
TPH-mo <5.0
MBTEX <0.5%<0.005
- LIMIT OF TANK EXCAVATION (AEI, 2004)
- FORMER UST



BASE MAP SOURCE: AEI CONSULTANTS



UST SOIL CONCENTRATIONS
20785 AND 20957 BAKER ROAD
CASTRO VALLEY, CALIFORNIA

PROJECT NO.: 13255.000.000	FIGURE NO. 4
SCALE: AS SHOWN	
DRAWN BY: LL	CHECKED BY: JAA

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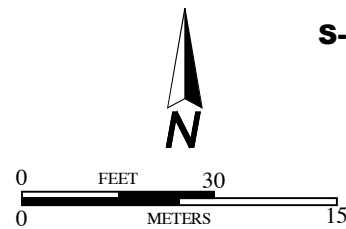


EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- SS-13 @ 12"-24"** SOIL SAMPLE (ENGEO, 2017) WITH DEPTH SHOWN IN INCHES
- S-8 @ 3"-9"** SOIL SAMPLE (ENGEO, 2016) WITH DEPTH SHOWN IN INCHES
- ARSENIC CONCENTRATION
- LEAD CONCENTRATION
- DIELDRIN CONCENTRATION

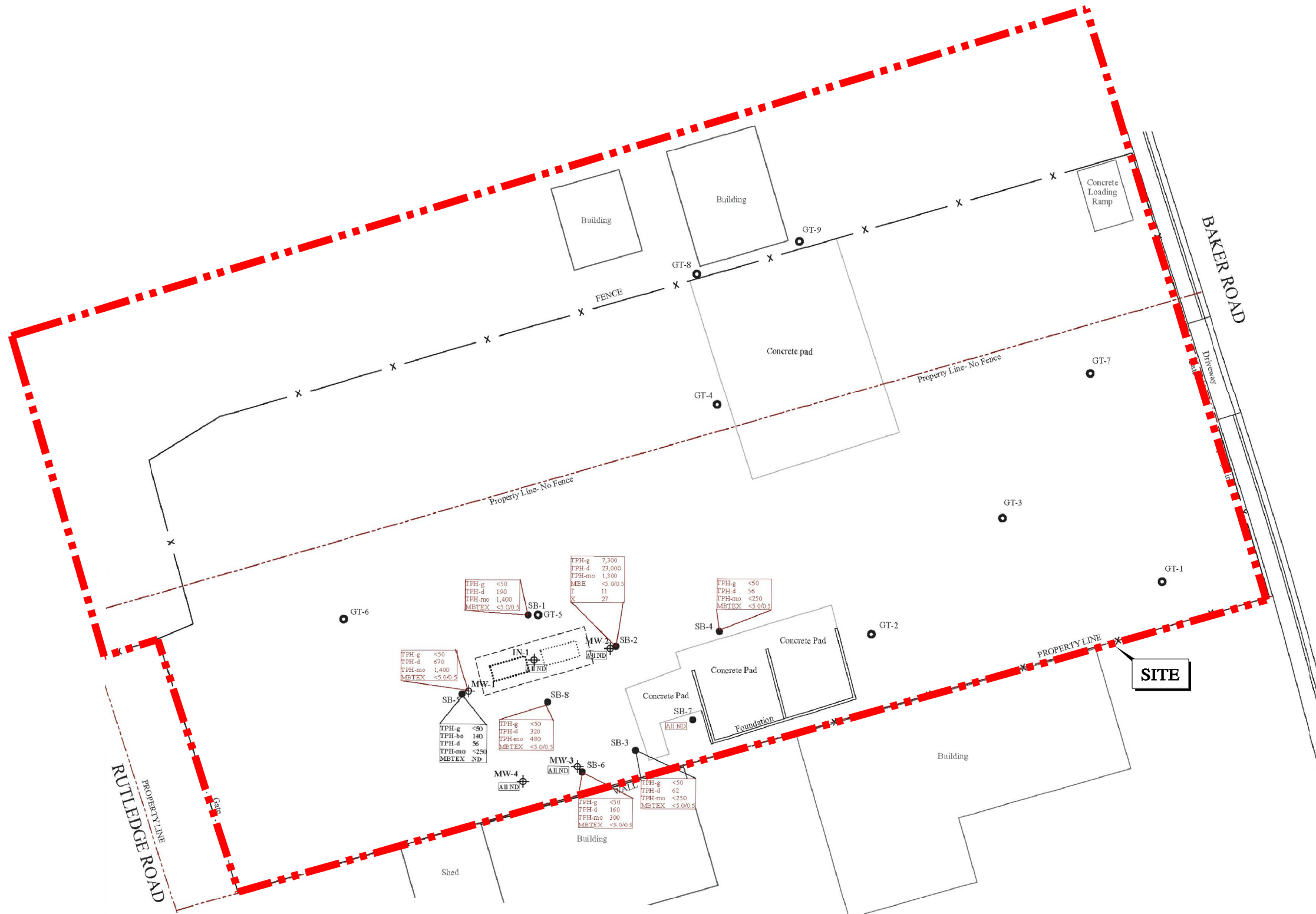
NOTE:
CONCENTRATION FOR LEAD AND ARSENIC ARE SHOWN IN mg/kg
CONCENTRATION FOR DIELDRIN ARE SHOWN IN ug/kg



BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE AND WILLIAM HEZMALHALCH ARCHITECTS INC., 2016

	LEAD, ARSENIC, AND PESTICIDE CONCENTRATIONS IN SOIL	PROJECT NO.: 13255.000.000	FIGURE NO.
	20785 AND 20957 BAKER ROAD CASTRO VALLEY, CALIFORNIA	SCALE: AS SHOWN	5
	DRAWN BY: LL	CHECKED BY: JAA	

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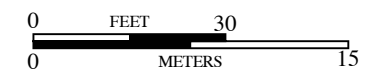
EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- SB-1 SOIL BORING (AEI, 2005)
- ⊕ MW-1 MONITORING WELL (AEI, 2007)
- GT-1 GEOTECHNICAL SOIL BORING (AEI, 1986)
- | | |
|--------|----------|
| TPH-g | 7,300 |
| TPH-d | 23,000 |
| TPH-mo | 1,300 |
| MBE | <5.0/0.5 |
| T | 11 |
| SC | 27 |

 PRELIMINARY SITE INVESTIGATION (AEI, 2005)
- | | |
|--------|------|
| TPH-g | <50 |
| TPH-bo | 140 |
| TPH-d | 56 |
| TPH-mo | <250 |
| MBTEX | ND |

 WELL INSTALLATION (AEI, 2007)
- ⬡ LIMIT OF TANK EXCAVATION (AEI, 2004)
- ⬢ FORMER UST



BASE MAP SOURCE: AEI CONSULTANTS



GROUNDWATER CONCENTRATIONS
20785 AND 20957 BAKER ROAD
CASTRO VALLEY, CALIFORNIA



PROJECT NO.: 13255.000.000	FIGURE NO.
SCALE: AS SHOWN	6
DRAWN BY: LL	

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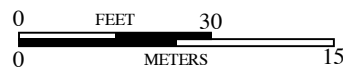


EXPLANATION


ALL LOCATIONS ARE APPROXIMATE

- SG-N**  SOIL GAS SAMPLE (ENGeo, 2017)
- SG-3**  PREVIOUS SOIL GAS SAMPLE (ENGeo, 2016)

NOTE:
CONCENTRATION ARE SHOWN IN ug/m³



BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE AND WILLIAM HEZMALHALCH ARCHITECTS INC., 2016

	SOIL GAS SAMPLE LOCATIONS 20785 AND 20957 BAKER ROAD CASTRO VALLEY, CALIFORNIA		PROJECT NO.: 13255.000.000	FIGURE NO. 7
			SCALE: AS SHOWN	
			DRAWN BY: LL	CHECKED BY: JAA

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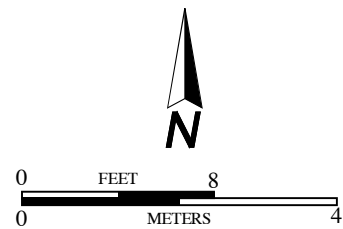


EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- SG-N** SOIL GAS SAMPLE (ENGEO, 2017)
- SG-3** PREVIOUS SOIL GAS SAMPLE (ENGEO, 2016)
- 245,000 TPH-g CONCENTRATION
- 3,700 ETHYLBENZENE CONCENTRATION
- 130 NAPHTHALENE CONCENTRATION

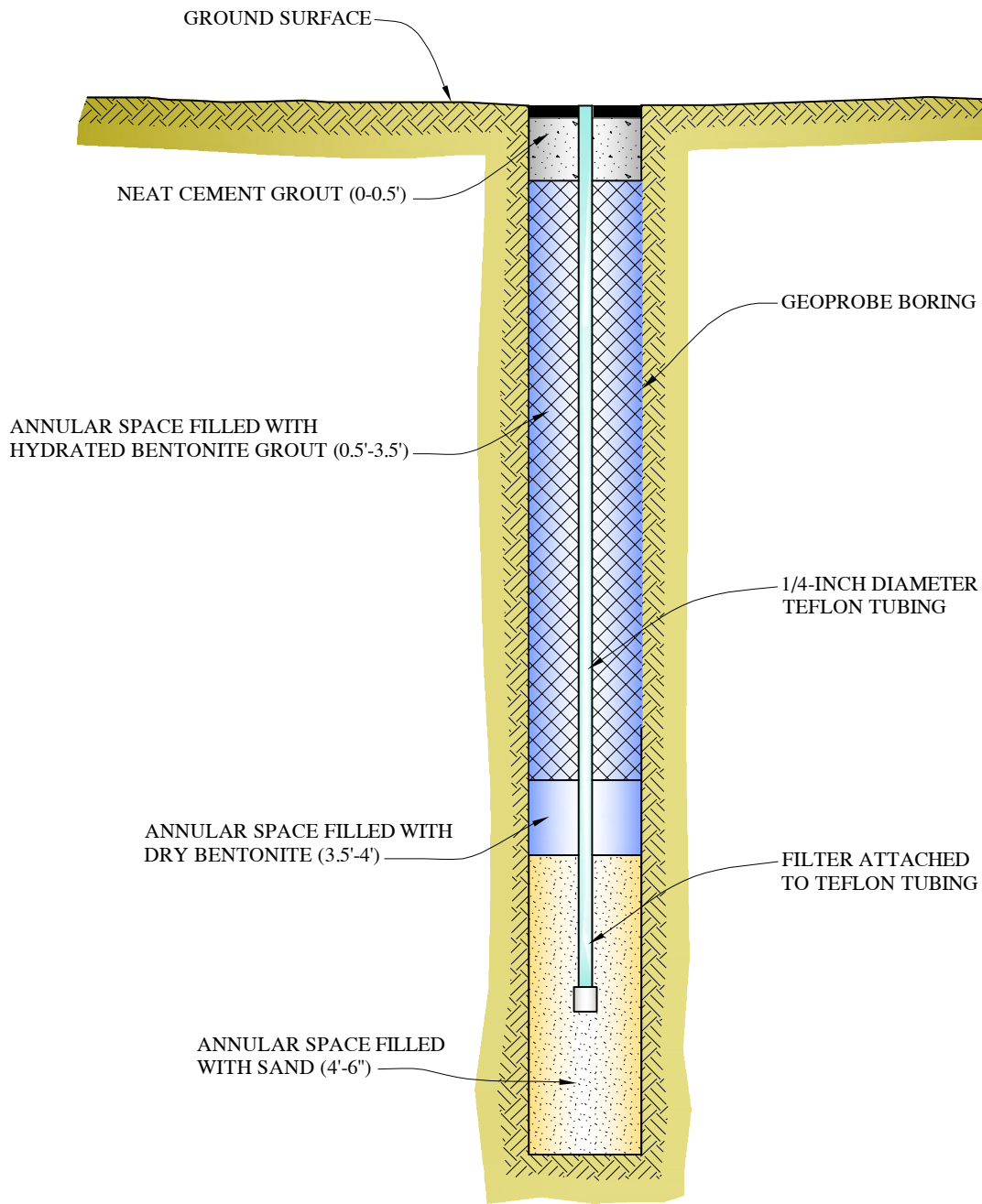
NOTE:
CONCENTRATION ARE SHOWN IN ug/m³



BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE AND WILLIAM HEZMALHALCH ARCHITECTS INC., 2016

<p>ENGEO Expect Excellence</p>	SOIL GAS CONCENTRATIONS 20785 AND 20957 BAKER ROAD CASTRO VALLEY, CALIFORNIA		PROJECT NO.: 13255.000.000	FIGURE NO.
			SCALE: AS SHOWN	8
			DRAWN BY: LL	

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SOIL GAS WELL CONSTRUCTION DIAGRAM

20785 AND 20957 BAKER ROAD
 CASTRO VALLEY, CALIFORNIA

PROJECT NO.: 13255.000.000

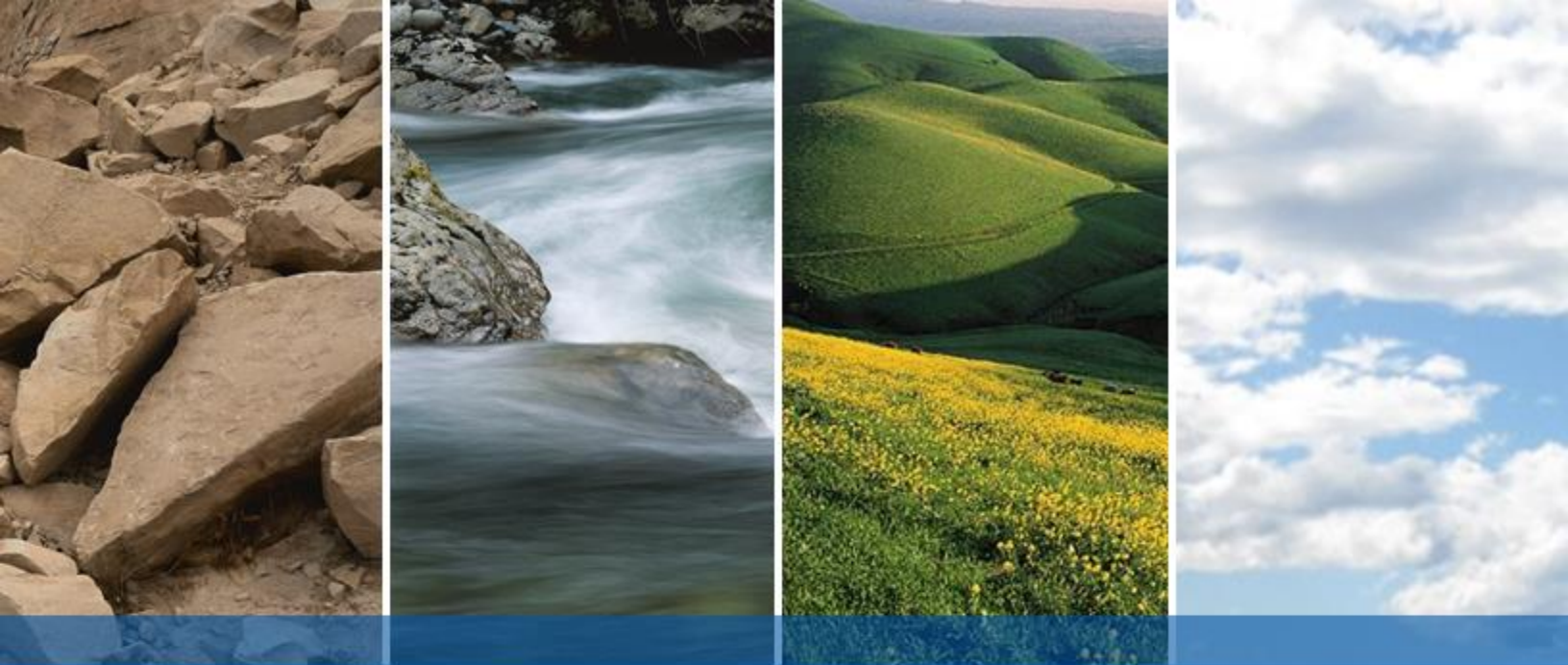
SCALE: NO SCALE

DRAWN BY: LL

CHECKED BY: JAA

FIGURE NO

9



DRAFT

APPENDIX A

**Torrent Laboratory, Inc.
Analytical Laboratory Reports**



Engeo (San Ramon)
2010 Crow Canyon Place, #250
San Ramon, California 94583
Tel: (925) 866-9000
Fax: (925) 866-0199
RE: Baker Road

Work Order No.: 1703026 Rev: 2

Dear Divya Bhargava:

Torrent Laboratory, Inc. received 26 sample(s) on March 03, 2017 for the analyses presented in the following Report.

As requested on the Chain of Custody, 13 samples were placed on hold.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

A handwritten signature in blue ink, appearing to read "Patti L. Sandrock", is written over a light blue horizontal line.

Patti L Sandrock
QA Officer

March 20, 2017

Date



Date: 3/20/2017

Client: Engeo (San Ramon)

Project: Baker Road

Work Order: 1703026

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

REVISIONS

Report revised to include analysis for all samples originally submitted on hold.

Rev. 1 (3/20/17)

Report revised to include STLC analysis on client designated samples.

STLC

Note: Extraction of 50 g sample / 500g 0.2M Sodium Citrate Solution was performed according to wet extraction procedure (WET) which was rotated in a rotary shaker for 48 hours (+/- 4 hours).

Date Prepared: 4/1/17 at 10:10 AM to 4/3/17 at 8:50 AM.

Rev. 2 (4/5/17)



Sample Result Summary

Report prepared for: Divya Bhargava
 Engeo (San Ramon)

Date Received: 03/03/17

Date Reported: 03/20/17

SS-1 @ 0-12"

1703026-001

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	9.67	mg/Kg
Lead	SW6010B	1	0.12	3.0	22.4	mg/Kg
4,4-DDE	SW8081A	10	1.9	20	6.44	ug/Kg
Dieldrin	SW8081A	10	1.5	20	1.70	ug/Kg
4,4-DDT	SW8081A	10	1.3	20	7.84	ug/Kg

SS-1 @ 12-24"

1703026-002

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	5.14	mg/Kg
Lead	SW6010B	1	0.12	3.0	9.02	mg/Kg
4,4-DDE	SW8081A	4	0.78	8.0	4.29	ug/Kg
Dieldrin	SW8081A	4	0.59	8.0	0.900	ug/Kg

SS-2 @ 0-12"

1703026-003

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	10.2	mg/Kg
Lead	SW6010B	1	0.12	3.0	12.9	mg/Kg
gamma-Chlordane	SW8081A	10	1.6	20	2.10	ug/Kg
alpha-Chlordane	SW8081A	10	1.7	20	2.34	ug/Kg
4,4-DDE	SW8081A	10	1.9	20	4.98	ug/Kg
Dieldrin	SW8081A	10	1.5	20	2.51	ug/Kg
4,4-DDT	SW8081A	10	1.3	20	12.3	ug/Kg

SS-2 @ 12-24"

1703026-004

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	8.33	mg/Kg
Lead	SW6010B	1	0.12	3.0	6.01	mg/Kg
4,4-DDE	SW8081A	10	1.9	20	4.62	ug/Kg

SS-3 @ 0-12"

1703026-005

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	13.6	mg/Kg
Lead	SW6010B	1	0.12	3.0	8.21	mg/Kg

SS-3 @ 12-24"

1703026-006

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	11.0	mg/Kg
Lead	SW6010B	1	0.12	3.0	7.96	mg/Kg
4,4-DDE	SW8081A	20	3.9	40	5.08	ug/Kg



Sample Result Summary

Report prepared for: Divya Bhargava
 Engeo (San Ramon)

Date Received: 03/03/17

Date Reported: 03/20/17

SS-4 @ 0-12"

1703026-007

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	10.7	mg/Kg
Lead	SW6010B	1	0.12	3.0	10.5	mg/Kg
beta-BHC	SW8081A	10	3.2	20	45.6	ug/Kg
delta-BHC	SW8081A	10	1.6	20	61.3	ug/Kg
Dieldrin	SW8081A	10	1.5	20	5.31	ug/Kg
4,4-DDD	SW8081A	10	5.7	20	7.88	ug/Kg
Endosulfan II	SW8081A	10	5.8	20	37.8	ug/Kg
4,4-DDT	SW8081A	10	1.3	20	10.8	ug/Kg
Endrin Aldehyde	SW8081A	10	1.5	20	72.5	ug/Kg
Endosulfan Sulfate	SW8081A	10	1.2	20	60.0	ug/Kg

SS-4 @ 12-24"

1703026-008

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	4.72	mg/Kg
Lead	SW6010B	1	0.12	3.0	6.68	mg/Kg
4,4-DDE	SW8081A	10	1.9	20	2.61	ug/Kg

SS-5 @ 0-12"

1703026-009

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	16.4	mg/Kg
Lead	SW6010B	1	0.12	3.0	5.11	mg/Kg
delta-BHC	SW8081A	10	1.6	20	5.34	ug/Kg
Endosulfan II	SW8081A	10	5.8	20	8.93	ug/Kg
Endrin Aldehyde	SW8081A	10	1.5	20	17.6	ug/Kg

SS-5 @ 12-24"

1703026-010

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	6.10	mg/Kg
Lead	SW6010B	1	0.12	3.0	7.99	mg/Kg
4,4-DDE	SW8081A	10	1.9	20	2.37	ug/Kg
Dieldrin	SW8081A	10	1.5	20	1.81	ug/Kg



Sample Result Summary

Report prepared for: Divya Bhargava
 Engeo (San Ramon)

Date Received: 03/03/17

Date Reported: 03/20/17

SS-6 @ 0-12"

1703026-011

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	8.79	mg/Kg
Lead	SW6010B	1	0.12	3.0	15.1	mg/Kg
delta-BHC	SW8081A	10	1.6	20	6.40	ug/Kg
Endosulfan II	SW8081A	10	5.8	20	13.4	ug/Kg
4,4-DDT	SW8081A	10	1.3	20	8.72	ug/Kg
Endrin Aldehyde	SW8081A	10	1.5	20	18.7	ug/Kg

SS-6 @ 12-24"

1703026-012

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	2.47	mg/Kg
Lead	SW6010B	1	0.12	3.0	3.46	mg/Kg

SS-7 @ 0-12"

1703026-013

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	10.3	mg/Kg
Lead	SW6010B	1	0.12	3.0	83.1	mg/Kg
Lead (STLC)	SW6010B	1	0.050	0.20	3.23	mg/L
Dieldrin	SW8081A	10	1.5	20	15.3	ug/Kg

SS-7 @ 12-24"

1703026-014

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	17.7	mg/Kg
Lead	SW6010B	1	0.12	3.0	10.8	mg/Kg

SS-8 @ 0-12"

1703026-015

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	13.2	mg/Kg
Lead	SW6010B	1	0.12	3.0	5.46	mg/Kg
Dieldrin	SW8081A	3	0.44	6.0	2.44	ug/Kg

SS-8 @ 12-24"

1703026-016

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	10.7	mg/Kg
Lead	SW6010B	1	0.12	3.0	10.1	mg/Kg
4,4-DDE	SW8081A	10	1.9	20	2.81	ug/Kg



Sample Result Summary

Report prepared for: Divya Bhargava
 Engeo (San Ramon)

Date Received: 03/03/17

Date Reported: 03/20/17

SS-9 @ 0-12"

1703026-017

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	11.1	mg/Kg
Lead	SW6010B	1	0.12	3.0	24.8	mg/Kg
Dieldrin	SW8081A	10	1.5	20	12.0	ug/Kg

SS-9 @ 12-24"

1703026-018

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	8.34	mg/Kg
Lead	SW6010B	1	0.12	3.0	10.0	mg/Kg
4,4-DDE	SW8081A	10	1.9	20	2.02	ug/Kg

SS-10 @ 0-12"

1703026-019

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	12.9	mg/Kg
Lead	SW6010B	1	0.12	3.0	36.2	mg/Kg
Dieldrin	SW8081A	10	1.5	20	13.5	ug/Kg

SS-10 @ 12-24"

1703026-020

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	8.79	mg/Kg
Lead	SW6010B	1	0.12	3.0	10.4	mg/Kg
4,4-DDE	SW8081A	10	1.9	20	2.11	ug/Kg
Dieldrin	SW8081A	10	1.5	20	1.78	ug/Kg

SS-11 @ 0-12"

1703026-021

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	19.8	mg/Kg
Lead	SW6010B	1	0.12	3.0	110	mg/Kg
Lead (STLC)	SW6010B	1	0.050	0.20	4.57	mg/L
Dieldrin	SW8081A	3	0.44	6.0	4.22	ug/Kg

SS-11 @ 12-24"

1703026-022

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	11.1	mg/Kg
Lead	SW6010B	1	0.12	3.0	11.5	mg/Kg



Sample Result Summary

Report prepared for: Divya Bhargava
 Engeo (San Ramon)

Date Received: 03/03/17

Date Reported: 03/20/17

SS-13 @ 0-12"

1703026-023

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	8.58	mg/Kg
Lead	SW6010B	1	0.12	3.0	64.1	mg/Kg
Lead (STLC)	SW6010B	1	0.050	0.20	1.55	mg/L
Heptachlor Epoxide	SW8081A	3	0.23	6.0	11.3	ug/Kg
gamma-Chlordane	SW8081A	3	0.49	6.0	58.3	ug/Kg
alpha-Chlordane	SW8081A	3	0.52	6.0	60.6	ug/Kg
4,4-DDE	SW8081A	3	0.58	6.0	9.08	ug/Kg
Dieldrin	SW8081A	3	0.44	6.0	32.4	ug/Kg
4,4-DDT	SW8081A	3	0.39	6.0	26.7	ug/Kg
Chlordane	SW8081A	3	6.3	60	401	ug/Kg

SS-13 @ 12-24"

1703026-024

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	8.18	mg/Kg
Lead	SW6010B	1	0.12	3.0	89.6	mg/Kg
Lead (STLC)	SW6010B	1	0.050	0.20	2.21	mg/L
Heptachlor Epoxide	SW8081A	10	0.78	20	7.92	ug/Kg
gamma-Chlordane	SW8081A	10	1.6	20	32.1	ug/Kg
alpha-Chlordane	SW8081A	10	1.7	20	37.2	ug/Kg
4,4-DDE	SW8081A	10	1.9	20	55.5	ug/Kg
Dieldrin	SW8081A	10	1.5	20	36.1	ug/Kg
4,4-DDT	SW8081A	10	1.3	20	47.3	ug/Kg
Chlordane	SW8081A	10	21	200	170	ug/Kg

Dup-1 @ 0-12"

1703026-025

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	10.1	mg/Kg
Lead	SW6010B	1	0.12	3.0	7.16	mg/Kg
Dieldrin	SW8081A	3	0.44	6.0	2.59	ug/Kg

Dup-2 @ 12-24"

1703026-026

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	8.74	mg/Kg
Lead	SW6010B	1	0.12	3.0	13.9	mg/Kg



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-1 @ 0-12"	Lab Sample ID:	1703026-001A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:00		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17 11:55:00AM
Prep Batch ID: 5502	Prep Analyst: BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	9.67		mg/Kg	03/07/17	22:03	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	22.4		mg/Kg	03/07/17	22:03	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	3:59	CC	422942
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	3:59	CC	422942
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/08/17	3:59	CC	422942
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/08/17	3:59	CC	422942
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	3:59	CC	422942
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/08/17	3:59	CC	422942
4,4-DDE	SW8081A	10	1.9	20	6.44	J	ug/Kg	03/08/17	3:59	CC	422942
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Dieldrin	SW8081A	10	1.5	20	1.70	J	ug/Kg	03/08/17	3:59	CC	422942
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	3:59	CC	422942
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/08/17	3:59	CC	422942
4,4-DDT	SW8081A	10	1.3	20	7.84	J	ug/Kg	03/08/17	3:59	CC	422942
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/08/17	3:59	CC	422942
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/08/17	3:59	CC	422942
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/08/17	3:59	CC	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	90.2		%	03/08/17	3:59	CC	422942
DCBP (S)	SW8081A		30 - 135	87.4		%	03/08/17	3:59	CC	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-1 @ 12-24"	Lab Sample ID:	1703026-002A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:05		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	5.14		mg/Kg	03/17/17	17:03	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	9.02		mg/Kg	03/17/17	17:03	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	4	0.51	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
gamma-BHC (Lindane)	SW8081A	4	0.64	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
beta-BHC	SW8081A	4	1.3	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
delta-BHC	SW8081A	4	0.62	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Heptachlor	SW8081A	4	0.42	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Aldrin	SW8081A	4	0.78	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Heptachlor Epoxide	SW8081A	4	0.31	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
gamma-Chlordane	SW8081A	4	0.65	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
alpha-Chlordane	SW8081A	4	0.69	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
4,4-DDE	SW8081A	4	0.78	8.0	4.29	J	ug/Kg	03/17/17	14:19	LA	423152
Endosulfan I	SW8081A	4	0.73	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Dieldrin	SW8081A	4	0.59	8.0	0.900	J	ug/Kg	03/17/17	14:19	LA	423152
Endrin	SW8081A	4	0.75	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
4,4-DDD	SW8081A	4	2.3	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Endosulfan II	SW8081A	4	2.3	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
4,4-DDT	SW8081A	4	0.52	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Endrin Aldehyde	SW8081A	4	0.60	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Methoxychlor	SW8081A	4	0.80	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Endosulfan Sulfate	SW8081A	4	0.47	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Endrin Ketone	SW8081A	4	0.38	8.0	ND		ug/Kg	03/17/17	14:19	LA	423152
Chlordane	SW8081A	4	8.4	80	ND		ug/Kg	03/17/17	14:19	LA	423152
Toxaphene	SW8081A	4	34	200	ND		ug/Kg	03/17/17	14:19	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	82.7		%	03/17/17	14:19	LA	423152
DCBP (S)	SW8081A		30 - 135	96.7		%	03/17/17	14:19	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-2 @ 0-12"	Lab Sample ID:	1703026-003A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:48		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17 11:55:00AM
Prep Batch ID: 5502	Prep Analyst: BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	10.2		mg/Kg	03/07/17	22:15	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	12.9		mg/Kg	03/07/17	22:15	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	4:13	CC	422942
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	4:13	CC	422942
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/08/17	4:13	CC	422942
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/08/17	4:13	CC	422942
gamma-Chlordane	SW8081A	10	1.6	20	2.10	J	ug/Kg	03/08/17	4:13	CC	422942
alpha-Chlordane	SW8081A	10	1.7	20	2.34	J	ug/Kg	03/08/17	4:13	CC	422942
4,4-DDE	SW8081A	10	1.9	20	4.98	J	ug/Kg	03/08/17	4:13	CC	422942
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Dieldrin	SW8081A	10	1.5	20	2.51	J	ug/Kg	03/08/17	4:13	CC	422942
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	4:13	CC	422942
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/08/17	4:13	CC	422942
4,4-DDT	SW8081A	10	1.3	20	12.3	J	ug/Kg	03/08/17	4:13	CC	422942
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/08/17	4:13	CC	422942
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/08/17	4:13	CC	422942
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/08/17	4:13	CC	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	95.2		%	03/08/17	4:13	CC	422942
DCBP (S)	SW8081A		30 - 135	77.8		%	03/08/17	4:13	CC	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-2 @ 12-24"	Lab Sample ID:	1703026-004A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:50		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	8.33		mg/Kg	03/17/17	17:26	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	6.01		mg/Kg	03/17/17	17:26	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	14:33	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	14:33	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	14:33	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/17/17	14:33	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	14:33	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/17/17	14:33	LA	423152
4,4-DDE	SW8081A	10	1.9	20	4.62	J	ug/Kg	03/17/17	14:33	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Dieldrin	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	14:33	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	14:33	LA	423152
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	14:33	LA	423152
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/17/17	14:33	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	14:33	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	88.6		%	03/17/17	14:33	LA	423152
DCBP (S)	SW8081A		30 - 135	110		%	03/17/17	14:33	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-3 @ 0-12"	Lab Sample ID:	1703026-005A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:40		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17	11:55:00AM
Prep Batch ID: 5502	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	13.6		mg/Kg	03/07/17	22:36	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	8.21		mg/Kg	03/07/17	22:36	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17	6:25:00PM
Prep Batch ID: 5480	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	3	0.38	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
gamma-BHC (Lindane)	SW8081A	3	0.48	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
beta-BHC	SW8081A	3	0.95	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
delta-BHC	SW8081A	3	0.47	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Heptachlor	SW8081A	3	0.32	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Aldrin	SW8081A	3	0.59	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Heptachlor Epoxide	SW8081A	3	0.23	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
gamma-Chlordane	SW8081A	3	0.49	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
alpha-Chlordane	SW8081A	3	0.52	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
4,4-DDE	SW8081A	3	0.58	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Endosulfan I	SW8081A	3	0.55	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Dieldrin	SW8081A	3	0.44	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Endrin	SW8081A	3	0.56	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
4,4-DDD	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Endosulfan II	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
4,4-DDT	SW8081A	3	0.39	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Endrin Aldehyde	SW8081A	3	0.45	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Methoxychlor	SW8081A	3	0.60	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Endosulfan Sulfate	SW8081A	3	0.35	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Endrin Ketone	SW8081A	3	0.28	6.0	ND		ug/Kg	03/08/17	4:26	CC	422942
Chlordane	SW8081A	3	6.3	60	ND		ug/Kg	03/08/17	4:26	CC	422942
Toxaphene	SW8081A	3	26	150	ND		ug/Kg	03/08/17	4:26	CC	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	81.7		%	03/08/17	4:26	CC	422942
DCBP (S)	SW8081A		30 - 135	73.3		%	03/08/17	4:26	CC	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-3 @ 12-24"	Lab Sample ID:	1703026-006A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:45		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	11.0		mg/Kg	03/17/17	17:35	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	7.96		mg/Kg	03/17/17	17:35	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	20	2.5	40	ND		ug/Kg	03/17/17	14:46	LA	423152
gamma-BHC (Lindane)	SW8081A	20	3.2	40	ND		ug/Kg	03/17/17	14:46	LA	423152
beta-BHC	SW8081A	20	6.3	40	ND		ug/Kg	03/17/17	14:46	LA	423152
delta-BHC	SW8081A	20	3.1	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Heptachlor	SW8081A	20	2.1	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Aldrin	SW8081A	20	3.9	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Heptachlor Epoxide	SW8081A	20	1.6	40	ND		ug/Kg	03/17/17	14:46	LA	423152
gamma-Chlordane	SW8081A	20	3.3	40	ND		ug/Kg	03/17/17	14:46	LA	423152
alpha-Chlordane	SW8081A	20	3.5	40	ND		ug/Kg	03/17/17	14:46	LA	423152
4,4-DDE	SW8081A	20	3.9	40	5.08	J	ug/Kg	03/17/17	14:46	LA	423152
Endosulfan I	SW8081A	20	3.7	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Dieldrin	SW8081A	20	3.0	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Endrin	SW8081A	20	3.8	40	ND		ug/Kg	03/17/17	14:46	LA	423152
4,4-DDD	SW8081A	20	11	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Endosulfan II	SW8081A	20	12	40	ND		ug/Kg	03/17/17	14:46	LA	423152
4,4-DDT	SW8081A	20	2.6	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Endrin Aldehyde	SW8081A	20	3.0	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Methoxychlor	SW8081A	20	4.0	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Endosulfan Sulfate	SW8081A	20	2.3	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Endrin Ketone	SW8081A	20	1.9	40	ND		ug/Kg	03/17/17	14:46	LA	423152
Chlordane	SW8081A	20	42	400	ND		ug/Kg	03/17/17	14:46	LA	423152
Toxaphene	SW8081A	20	170	1000	ND		ug/Kg	03/17/17	14:46	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	0.000	D	%	03/17/17	14:46	LA	423152
DCBP (S)	SW8081A		30 - 135	0.000	D	%	03/17/17	14:46	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-4 @ 0-12"	Lab Sample ID:	1703026-007A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:10		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17 11:55:00AM
Prep Batch ID: 5502	Prep Analyst: BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	10.7		mg/Kg	03/07/17	22:40	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	10.5		mg/Kg	03/07/17	22:40	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	19:33	LA	422942
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	19:33	LA	422942
beta-BHC	SW8081A	10	3.2	20	45.6		ug/Kg	03/08/17	19:33	LA	422942
delta-BHC	SW8081A	10	1.6	20	61.3		ug/Kg	03/08/17	19:33	LA	422942
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/08/17	19:33	LA	422942
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	19:33	LA	422942
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/08/17	19:33	LA	422942
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	19:33	LA	422942
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/08/17	19:33	LA	422942
4,4-DDE	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	19:33	LA	422942
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/08/17	19:33	LA	422942
Dieldrin	SW8081A	10	1.5	20	5.31	J	ug/Kg	03/08/17	19:33	LA	422942
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	19:33	LA	422942
4,4-DDD	SW8081A	10	5.7	20	7.88	J	ug/Kg	03/08/17	19:33	LA	422942
Endosulfan II	SW8081A	10	5.8	20	37.8		ug/Kg	03/08/17	19:33	LA	422942
4,4-DDT	SW8081A	10	1.3	20	10.8	J	ug/Kg	03/08/17	19:33	LA	422942
Endrin Aldehyde	SW8081A	10	1.5	20	72.5		ug/Kg	03/08/17	19:33	LA	422942
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	19:33	LA	422942
Endosulfan Sulfate	SW8081A	10	1.2	20	60.0		ug/Kg	03/08/17	19:33	LA	422942
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/08/17	19:33	LA	422942
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/08/17	19:33	LA	422942
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/08/17	19:33	LA	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	106		%	03/08/17	19:33	LA	422942
DCBP (S)	SW8081A		30 - 135	93.5		%	03/08/17	19:33	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-4 @ 12-24"	Lab Sample ID:	1703026-008A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:12		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	4.72		mg/Kg	03/17/17	17:39	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	6.68		mg/Kg	03/17/17	17:39	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	15:00	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:00	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	15:00	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/17/17	15:00	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:00	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/17/17	15:00	LA	423152
4,4-DDE	SW8081A	10	1.9	20	2.61	J	ug/Kg	03/17/17	15:00	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Dieldrin	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	15:00	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	15:00	LA	423152
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	15:00	LA	423152
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/17/17	15:00	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	15:00	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	90.7		%	03/17/17	15:00	LA	423152
DCBP (S)	SW8081A		30 - 135	93.5		%	03/17/17	15:00	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-5 @ 0-12"	Lab Sample ID:	1703026-009A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:52		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17 11:55:00AM
Prep Batch ID: 5502	Prep Analyst: BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	16.4		mg/Kg	03/07/17	22:44	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	5.11		mg/Kg	03/07/17	22:44	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	19:46	LA	422942
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	19:46	LA	422942
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/08/17	19:46	LA	422942
delta-BHC	SW8081A	10	1.6	20	5.34	J	ug/Kg	03/08/17	19:46	LA	422942
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/08/17	19:46	LA	422942
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	19:46	LA	422942
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/08/17	19:46	LA	422942
4,4-DDE	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Dieldrin	SW8081A	10	1.5	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	19:46	LA	422942
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Endosulfan II	SW8081A	10	5.8	20	8.93	J	ug/Kg	03/08/17	19:46	LA	422942
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Endrin Aldehyde	SW8081A	10	1.5	20	17.6	J	ug/Kg	03/08/17	19:46	LA	422942
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/08/17	19:46	LA	422942
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/08/17	19:46	LA	422942
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/08/17	19:46	LA	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	101		%	03/08/17	19:46	LA	422942
DCBP (S)	SW8081A		30 - 135	84.0		%	03/08/17	19:46	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-5 @ 12-24"	Lab Sample ID:	1703026-010A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:54		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	6.10		mg/Kg	03/17/17	17:47	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	7.99		mg/Kg	03/17/17	17:47	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	15:14	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:14	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	15:14	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/17/17	15:14	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:14	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/17/17	15:14	LA	423152
4,4-DDE	SW8081A	10	1.9	20	2.37	J	ug/Kg	03/17/17	15:14	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Dieldrin	SW8081A	10	1.5	20	1.81	J	ug/Kg	03/17/17	15:14	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	15:14	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	15:14	LA	423152
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	15:14	LA	423152
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/17/17	15:14	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	15:14	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	89.0		%	03/17/17	15:14	LA	423152
DCBP (S)	SW8081A		30 - 135	101		%	03/17/17	15:14	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-6 @ 0-12"	Lab Sample ID:	1703026-011A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:45		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17 11:55:00AM
Prep Batch ID: 5502	Prep Analyst: BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	8.79		mg/Kg	03/07/17	22:50	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	15.1		mg/Kg	03/07/17	22:50	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	20:00	LA	422942
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:00	LA	422942
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/08/17	20:00	LA	422942
delta-BHC	SW8081A	10	1.6	20	6.40	J	ug/Kg	03/08/17	20:00	LA	422942
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/08/17	20:00	LA	422942
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:00	LA	422942
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/08/17	20:00	LA	422942
4,4-DDE	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Dieldrin	SW8081A	10	1.5	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	20:00	LA	422942
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Endosulfan II	SW8081A	10	5.8	20	13.4	J	ug/Kg	03/08/17	20:00	LA	422942
4,4-DDT	SW8081A	10	1.3	20	8.72	J	ug/Kg	03/08/17	20:00	LA	422942
Endrin Aldehyde	SW8081A	10	1.5	20	18.7	J	ug/Kg	03/08/17	20:00	LA	422942
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/08/17	20:00	LA	422942
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/08/17	20:00	LA	422942
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/08/17	20:00	LA	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	86.9		%	03/08/17	20:00	LA	422942
DCBP (S)	SW8081A		30 - 135	76.8		%	03/08/17	20:00	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-6 @ 12-24"	Lab Sample ID:	1703026-012A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:50		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	2.47		mg/Kg	03/17/17	17:51	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	3.46		mg/Kg	03/17/17	17:51	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	15:37	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:37	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	15:37	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/17/17	15:37	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:37	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/17/17	15:37	LA	423152
4,4-DDE	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Dieldrin	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	15:37	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	15:37	LA	423152
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	15:37	LA	423152
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/17/17	15:37	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	15:37	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	90.4		%	03/17/17	15:37	LA	423152
DCBP (S)	SW8081A		30 - 135	98.5		%	03/17/17	15:37	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-7 @ 0-12"	Lab Sample ID:	1703026-013A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:15		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17	11:55:00AM
Prep Batch ID: 5502	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	10.3		mg/Kg	03/07/17	22:55	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	83.1		mg/Kg	03/07/17	22:55	PPATEL	422949

Prep Method: WET/3010B	Prep Batch Date/Time: 4/3/17	11:00:00AM
Prep Batch ID: 5946	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Lead (STLC)	SW6010B	1	0.050	0.20	3.23		mg/L	04/03/17	14:51	PPATEL	423384

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17	6:25:00PM
Prep Batch ID: 5480	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	20:14	LA	422942
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:14	LA	422942
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/08/17	20:14	LA	422942
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/08/17	20:14	LA	422942
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:14	LA	422942
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/08/17	20:14	LA	422942
4,4-DDE	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Dieldrin	SW8081A	10	1.5	20	15.3	J	ug/Kg	03/08/17	20:14	LA	422942
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	20:14	LA	422942
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/08/17	20:14	LA	422942
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/08/17	20:14	LA	422942
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/08/17	20:14	LA	422942



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-7 @ 0-12"	Lab Sample ID:	1703026-013A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:15		
SDG:			

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/08/17	20:14	LA	422942
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/08/17	20:14	LA	422942
Acceptance Limits											
TCMX (S)	SW8081A		70 - 125		90.4		%	03/08/17	20:14	LA	422942
DCBP (S)	SW8081A		30 - 135		68.7		%	03/08/17	20:14	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-7 @ 12-24"	Lab Sample ID:	1703026-014A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:20		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	17.7		mg/Kg	03/17/17	17:55	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	10.8		mg/Kg	03/17/17	17:55	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	15:51	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:51	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	15:51	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/17/17	15:51	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	15:51	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/17/17	15:51	LA	423152
4,4-DDE	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Dieldrin	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	15:51	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	15:51	LA	423152
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	15:51	LA	423152
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/17/17	15:51	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	15:51	LA	423152
Acceptance Limits											
TCMX (S)	SW8081A		70 - 125		88.5		%	03/17/17	15:51	LA	423152
DCBP (S)	SW8081A		30 - 135		97.3		%	03/17/17	15:51	LA	423152



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-8 @ 0-12"	Lab Sample ID:	1703026-015A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:00		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17 11:55:00AM
Prep Batch ID: 5502	Prep Analyst: BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	13.2		mg/Kg	03/07/17	22:59	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	5.46		mg/Kg	03/07/17	22:59	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	3	0.38	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
gamma-BHC (Lindane)	SW8081A	3	0.48	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
beta-BHC	SW8081A	3	0.95	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
delta-BHC	SW8081A	3	0.47	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Heptachlor	SW8081A	3	0.32	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Aldrin	SW8081A	3	0.59	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Heptachlor Epoxide	SW8081A	3	0.23	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
gamma-Chlordane	SW8081A	3	0.49	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
alpha-Chlordane	SW8081A	3	0.52	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
4,4-DDE	SW8081A	3	0.58	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Endosulfan I	SW8081A	3	0.55	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Dieldrin	SW8081A	3	0.44	6.0	2.44	J	ug/Kg	03/08/17	20:27	LA	422942
Endrin	SW8081A	3	0.56	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
4,4-DDD	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Endosulfan II	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
4,4-DDT	SW8081A	3	0.39	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Endrin Aldehyde	SW8081A	3	0.45	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Methoxychlor	SW8081A	3	0.60	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Endosulfan Sulfate	SW8081A	3	0.35	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Endrin Ketone	SW8081A	3	0.28	6.0	ND		ug/Kg	03/08/17	20:27	LA	422942
Chlordane	SW8081A	3	6.3	60	ND		ug/Kg	03/08/17	20:27	LA	422942
Toxaphene	SW8081A	3	26	150	ND		ug/Kg	03/08/17	20:27	LA	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	83.0		%	03/08/17	20:27	LA	422942
DCBP (S)	SW8081A		30 - 135	48.3		%	03/08/17	20:27	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-8 @ 12-24"	Lab Sample ID:	1703026-016A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:05		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17	2:50:00PM
Prep Batch ID: 5687	Prep Analyst:	PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	10.7		mg/Kg	03/17/17	17:59	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	10.1		mg/Kg	03/17/17	17:59	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17	1:20:00PM
Prep Batch ID: 5712	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	17:54	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	17:54	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	17:54	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/17/17	17:54	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	17:54	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/17/17	17:54	LA	423152
4,4-DDE	SW8081A	10	1.9	20	2.81	J	ug/Kg	03/17/17	17:54	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Dieldrin	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	17:54	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	17:54	LA	423152
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	17:54	LA	423152
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/17/17	17:54	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	17:54	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	85.8		%	03/17/17	17:54	LA	423152
DCBP (S)	SW8081A		30 - 135	103		%	03/17/17	17:54	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-9 @ 0-12"	Lab Sample ID:	1703026-017A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:15		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17 11:55:00AM
Prep Batch ID: 5502	Prep Analyst: BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	11.1		mg/Kg	03/07/17	23:03	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	24.8		mg/Kg	03/07/17	23:03	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	20:41	LA	422942
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:41	LA	422942
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/08/17	20:41	LA	422942
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/08/17	20:41	LA	422942
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:41	LA	422942
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/08/17	20:41	LA	422942
4,4-DDE	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Dieldrin	SW8081A	10	1.5	20	12.0	J	ug/Kg	03/08/17	20:41	LA	422942
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	20:41	LA	422942
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/08/17	20:41	LA	422942
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/08/17	20:41	LA	422942
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/08/17	20:41	LA	422942
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/08/17	20:41	LA	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	90.9		%	03/08/17	20:41	LA	422942
DCBP (S)	SW8081A		30 - 135	80.4		%	03/08/17	20:41	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-9 @ 12-24"	Lab Sample ID:	1703026-018A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:18		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	8.34		mg/Kg	03/17/17	18:03	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	10.0		mg/Kg	03/17/17	18:03	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	16:46	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	16:46	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	16:46	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/17/17	16:46	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	16:46	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/17/17	16:46	LA	423152
4,4-DDE	SW8081A	10	1.9	20	2.02	J	ug/Kg	03/17/17	16:46	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Dieldrin	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	16:46	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	16:46	LA	423152
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	16:46	LA	423152
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/17/17	16:46	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	16:46	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	88.7		%	03/17/17	16:46	LA	423152
DCBP (S)	SW8081A		30 - 135	125		%	03/17/17	16:46	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-10 @ 0-12"	Lab Sample ID:	1703026-019A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:30		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17 11:55:00AM
Prep Batch ID: 5502	Prep Analyst: BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	12.9		mg/Kg	03/07/17	23:07	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	36.2		mg/Kg	03/07/17	23:07	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	20:55	LA	422942
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:55	LA	422942
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/08/17	20:55	LA	422942
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/08/17	20:55	LA	422942
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/08/17	20:55	LA	422942
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/08/17	20:55	LA	422942
4,4-DDE	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Dieldrin	SW8081A	10	1.5	20	13.5	J	ug/Kg	03/08/17	20:55	LA	422942
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/08/17	20:55	LA	422942
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/08/17	20:55	LA	422942
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/08/17	20:55	LA	422942
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/08/17	20:55	LA	422942
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/08/17	20:55	LA	422942

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	90.1		%	03/08/17	20:55	LA	422942
DCBP (S)	SW8081A		30 - 135	70.3		%	03/08/17	20:55	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-10 @ 12-24"	Lab Sample ID:	1703026-020A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 10:35		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	8.79		mg/Kg	03/17/17	18:16	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	10.4		mg/Kg	03/17/17	18:16	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	16:59	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	16:59	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	16:59	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	ND		ug/Kg	03/17/17	16:59	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	16:59	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	ND		ug/Kg	03/17/17	16:59	LA	423152
4,4-DDE	SW8081A	10	1.9	20	2.11	J	ug/Kg	03/17/17	16:59	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Dieldrin	SW8081A	10	1.5	20	1.78	J	ug/Kg	03/17/17	16:59	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	16:59	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	16:59	LA	423152
4,4-DDT	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	16:59	LA	423152
Chlordane	SW8081A	10	21	200	ND		ug/Kg	03/17/17	16:59	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	16:59	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	92.5		%	03/17/17	16:59	LA	423152
DCBP (S)	SW8081A		30 - 135	109		%	03/17/17	16:59	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-11 @ 0-12"	Lab Sample ID:	1703026-021A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:30		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17	11:55:00AM
Prep Batch ID: 5502	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	19.8		mg/Kg	03/07/17	23:12	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	110		mg/Kg	03/07/17	23:12	PPATEL	422949

Prep Method: WET/3010B	Prep Batch Date/Time: 4/3/17	11:00:00AM
Prep Batch ID: 5946	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Lead (STLC)	SW6010B	1	0.050	0.20	4.57		mg/L	04/03/17	14:54	PPATEL	423384

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17	6:25:00PM
Prep Batch ID: 5480	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	3	0.38	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
gamma-BHC (Lindane)	SW8081A	3	0.48	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
beta-BHC	SW8081A	3	0.95	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
delta-BHC	SW8081A	3	0.47	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Heptachlor	SW8081A	3	0.32	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Aldrin	SW8081A	3	0.59	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Heptachlor Epoxide	SW8081A	3	0.23	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
gamma-Chlordane	SW8081A	3	0.49	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
alpha-Chlordane	SW8081A	3	0.52	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
4,4-DDE	SW8081A	3	0.58	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Endosulfan I	SW8081A	3	0.55	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Dieldrin	SW8081A	3	0.44	6.0	4.22	J	ug/Kg	03/08/17	22:04	LA	422942
Endrin	SW8081A	3	0.56	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
4,4-DDD	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Endosulfan II	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
4,4-DDT	SW8081A	3	0.39	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Endrin Aldehyde	SW8081A	3	0.45	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Methoxychlor	SW8081A	3	0.60	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Endosulfan Sulfate	SW8081A	3	0.35	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942
Endrin Ketone	SW8081A	3	0.28	6.0	ND		ug/Kg	03/08/17	22:04	LA	422942



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-11 @ 0-12"	Lab Sample ID:	1703026-021A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:30		
SDG:			

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

Chlordane	SW8081A	3	6.3	60	ND		ug/Kg	03/08/17	22:04	LA	422942
Toxaphene	SW8081A	3	26	150	ND		ug/Kg	03/08/17	22:04	LA	422942
			Acceptance Limits								
TCMX (S)	SW8081A		70 - 125		89.9		%	03/08/17	22:04	LA	422942
DCBP (S)	SW8081A		30 - 135		83.7		%	03/08/17	22:04	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-11 @ 12-24"	Lab Sample ID:	1703026-022A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 9:35		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17 2:50:00PM
Prep Batch ID: 5687	Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	11.1		mg/Kg	03/17/17	18:24	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	11.5		mg/Kg	03/17/17	18:24	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	4	0.51	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
gamma-BHC (Lindane)	SW8081A	4	0.64	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
beta-BHC	SW8081A	4	1.3	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
delta-BHC	SW8081A	4	0.62	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Heptachlor	SW8081A	4	0.42	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Aldrin	SW8081A	4	0.78	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Heptachlor Epoxide	SW8081A	4	0.31	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
gamma-Chlordane	SW8081A	4	0.65	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
alpha-Chlordane	SW8081A	4	0.69	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
4,4-DDE	SW8081A	4	0.78	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Endosulfan I	SW8081A	4	0.73	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Dieldrin	SW8081A	4	0.59	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Endrin	SW8081A	4	0.75	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
4,4-DDD	SW8081A	4	2.3	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Endosulfan II	SW8081A	4	2.3	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
4,4-DDT	SW8081A	4	0.52	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Endrin Aldehyde	SW8081A	4	0.60	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Methoxychlor	SW8081A	4	0.80	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Endosulfan Sulfate	SW8081A	4	0.47	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Endrin Ketone	SW8081A	4	0.38	8.0	ND		ug/Kg	03/17/17	17:13	LA	423152
Chlordane	SW8081A	4	8.4	80	ND		ug/Kg	03/17/17	17:13	LA	423152
Toxaphene	SW8081A	4	34	200	ND		ug/Kg	03/17/17	17:13	LA	423152

Acceptance Limits

TCMX (S)	SW8081A		70 - 125	87.0		%	03/17/17	17:13	LA	423152
DCBP (S)	SW8081A		30 - 135	95.3		%	03/17/17	17:13	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-13 @ 0-12"	Lab Sample ID:	1703026-023A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 11:15		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17	11:55:00AM
Prep Batch ID: 5502	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	8.58		mg/Kg	03/07/17	23:17	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	64.1		mg/Kg	03/07/17	23:17	PPATEL	422949

Prep Method: WET/3010B	Prep Batch Date/Time: 4/3/17	11:00:00AM
Prep Batch ID: 5946	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Lead (STLC)	SW6010B	1	0.050	0.20	1.55		mg/L	04/03/17	14:56	PPATEL	423384

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17	6:25:00PM
Prep Batch ID: 5480	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	3	0.38	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
gamma-BHC (Lindane)	SW8081A	3	0.48	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
beta-BHC	SW8081A	3	0.95	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
delta-BHC	SW8081A	3	0.47	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
Heptachlor	SW8081A	3	0.32	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
Aldrin	SW8081A	3	0.59	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
Heptachlor Epoxide	SW8081A	3	0.23	6.0	11.3		ug/Kg	03/08/17	22:17	LA	422942
gamma-Chlordane	SW8081A	3	0.49	6.0	58.3		ug/Kg	03/08/17	22:17	LA	422942
alpha-Chlordane	SW8081A	3	0.52	6.0	60.6		ug/Kg	03/08/17	22:17	LA	422942
4,4-DDE	SW8081A	3	0.58	6.0	9.08		ug/Kg	03/08/17	22:17	LA	422942
Endosulfan I	SW8081A	3	0.55	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
Dieldrin	SW8081A	3	0.44	6.0	32.4		ug/Kg	03/08/17	22:17	LA	422942
Endrin	SW8081A	3	0.56	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
4,4-DDD	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
Endosulfan II	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
4,4-DDT	SW8081A	3	0.39	6.0	26.7		ug/Kg	03/08/17	22:17	LA	422942
Endrin Aldehyde	SW8081A	3	0.45	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
Methoxychlor	SW8081A	3	0.60	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
Endosulfan Sulfate	SW8081A	3	0.35	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942
Endrin Ketone	SW8081A	3	0.28	6.0	ND		ug/Kg	03/08/17	22:17	LA	422942



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-13 @ 0-12"	Lab Sample ID:	1703026-023A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 11:15		
SDG:			

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17 6:25:00PM
Prep Batch ID: 5480	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

Chlordane	SW8081A	3	6.3	60	401		ug/Kg	03/08/17	22:17	LA	422942
Toxaphene	SW8081A	3	26	150	ND		ug/Kg	03/08/17	22:17	LA	422942
			Acceptance Limits								
TCMX (S)	SW8081A		70 - 125		79.1		%	03/08/17	22:17	LA	422942
DCBP (S)	SW8081A		30 - 135		65.5		%	03/08/17	22:17	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-13 @ 12-24"	Lab Sample ID:	1703026-024A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 11:20		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17	2:50:00PM
Prep Batch ID: 5687	Prep Analyst:	PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	8.18		mg/Kg	03/17/17	18:28	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	89.6		mg/Kg	03/17/17	18:28	PPATEL	423151

Prep Method: WET/3010B	Prep Batch Date/Time: 4/3/17	11:00:00AM
Prep Batch ID: 5946	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Lead (STLC)	SW6010B	1	0.050	0.20	2.21		mg/L	04/03/17	14:59	PPATEL	423384

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17	1:20:00PM
Prep Batch ID: 5712	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	10	1.3	20	ND		ug/Kg	03/17/17	17:27	LA	423152
gamma-BHC (Lindane)	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	17:27	LA	423152
beta-BHC	SW8081A	10	3.2	20	ND		ug/Kg	03/17/17	17:27	LA	423152
delta-BHC	SW8081A	10	1.6	20	ND		ug/Kg	03/17/17	17:27	LA	423152
Heptachlor	SW8081A	10	1.1	20	ND		ug/Kg	03/17/17	17:27	LA	423152
Aldrin	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	17:27	LA	423152
Heptachlor Epoxide	SW8081A	10	0.78	20	7.92	J	ug/Kg	03/17/17	17:27	LA	423152
gamma-Chlordane	SW8081A	10	1.6	20	32.1		ug/Kg	03/17/17	17:27	LA	423152
alpha-Chlordane	SW8081A	10	1.7	20	37.2		ug/Kg	03/17/17	17:27	LA	423152
4,4-DDE	SW8081A	10	1.9	20	55.5		ug/Kg	03/17/17	17:27	LA	423152
Endosulfan I	SW8081A	10	1.8	20	ND		ug/Kg	03/17/17	17:27	LA	423152
Dieldrin	SW8081A	10	1.5	20	36.1		ug/Kg	03/17/17	17:27	LA	423152
Endrin	SW8081A	10	1.9	20	ND		ug/Kg	03/17/17	17:27	LA	423152
4,4-DDD	SW8081A	10	5.7	20	ND		ug/Kg	03/17/17	17:27	LA	423152
Endosulfan II	SW8081A	10	5.8	20	ND		ug/Kg	03/17/17	17:27	LA	423152
4,4-DDT	SW8081A	10	1.3	20	47.3		ug/Kg	03/17/17	17:27	LA	423152
Endrin Aldehyde	SW8081A	10	1.5	20	ND		ug/Kg	03/17/17	17:27	LA	423152
Methoxychlor	SW8081A	10	2.0	20	ND		ug/Kg	03/17/17	17:27	LA	423152
Endosulfan Sulfate	SW8081A	10	1.2	20	ND		ug/Kg	03/17/17	17:27	LA	423152
Endrin Ketone	SW8081A	10	0.94	20	ND		ug/Kg	03/17/17	17:27	LA	423152



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	SS-13 @ 12-24"	Lab Sample ID:	1703026-024A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 11:20		
SDG:			

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17 1:20:00PM
Prep Batch ID: 5712	Prep Analyst: SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

Chlordane	SW8081A	10	21	200	170	J	ug/Kg	03/17/17	17:27	LA	423152
Toxaphene	SW8081A	10	85	500	ND		ug/Kg	03/17/17	17:27	LA	423152
			Acceptance Limits								
TCMX (S)	SW8081A		70 - 125		87.2		%	03/17/17	17:27	LA	423152
DCBP (S)	SW8081A		30 - 135		99.2		%	03/17/17	17:27	LA	423152

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	Dup-1 @ 0-12"	Lab Sample ID:	1703026-025A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 11:00		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/7/17	11:55:00AM
Prep Batch ID: 5502	Prep Analyst:	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	10.1		mg/Kg	03/07/17	23:39	PPATEL	422949
Lead	SW6010B	1	0.12	3.0	7.16		mg/Kg	03/07/17	23:39	PPATEL	422949

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/6/17	6:25:00PM
Prep Batch ID: 5480	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
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The results shown below are reported using their MDL.

alpha-BHC	SW8081A	3	0.38	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
gamma-BHC (Lindane)	SW8081A	3	0.48	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
beta-BHC	SW8081A	3	0.95	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
delta-BHC	SW8081A	3	0.47	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Heptachlor	SW8081A	3	0.32	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Aldrin	SW8081A	3	0.59	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Heptachlor Epoxide	SW8081A	3	0.23	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
gamma-Chlordane	SW8081A	3	0.49	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
alpha-Chlordane	SW8081A	3	0.52	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
4,4-DDE	SW8081A	3	0.58	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Endosulfan I	SW8081A	3	0.55	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Dieldrin	SW8081A	3	0.44	6.0	2.59	J	ug/Kg	03/08/17	22:31	LA	422942
Endrin	SW8081A	3	0.56	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
4,4-DDD	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Endosulfan II	SW8081A	3	1.7	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
4,4-DDT	SW8081A	3	0.39	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Endrin Aldehyde	SW8081A	3	0.45	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Methoxychlor	SW8081A	3	0.60	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Endosulfan Sulfate	SW8081A	3	0.35	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Endrin Ketone	SW8081A	3	0.28	6.0	ND		ug/Kg	03/08/17	22:31	LA	422942
Chlordane	SW8081A	3	6.3	60	ND		ug/Kg	03/08/17	22:31	LA	422942
Toxaphene	SW8081A	3	26	150	ND		ug/Kg	03/08/17	22:31	LA	422942
Acceptance Limits											
TCMX (S)	SW8081A		70 - 125		80.0		%	03/08/17	22:31	LA	422942
DCBP (S)	SW8081A		30 - 135		76.5		%	03/08/17	22:31	LA	422942

NOTE: Sample diluted due to nature of the matrix (dark, viscous extract)



SAMPLE RESULTS

Report prepared for: Divya Bhargava
Engeo (San Ramon)

Date/Time Received: 03/03/17, 2:56 pm
Date Reported: 03/20/17

Client Sample ID:	Dup-2 @ 12-24"	Lab Sample ID:	1703026-026A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/03/17 / 11:05		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/16/17	2:50:00PM
Prep Batch ID: 5687	Prep Analyst:	PHUFANO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	8.74		mg/Kg	03/17/17	18:32	PPATEL	423151
Lead	SW6010B	1	0.12	3.0	13.9		mg/Kg	03/17/17	18:32	PPATEL	423151

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17	1:20:00PM
Prep Batch ID: 5712	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
alpha-BHC	SW8081A	4	0.51	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
gamma-BHC (Lindane)	SW8081A	4	0.64	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
beta-BHC	SW8081A	4	1.3	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
delta-BHC	SW8081A	4	0.62	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Heptachlor	SW8081A	4	0.42	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Aldrin	SW8081A	4	0.78	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Heptachlor Epoxide	SW8081A	4	0.31	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
gamma-Chlordane	SW8081A	4	0.65	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
alpha-Chlordane	SW8081A	4	0.69	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
4,4-DDE	SW8081A	4	0.78	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Endosulfan I	SW8081A	4	0.73	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Dieldrin	SW8081A	4	0.59	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Endrin	SW8081A	4	0.75	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
4,4-DDD	SW8081A	4	2.3	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Endosulfan II	SW8081A	4	2.3	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
4,4-DDT	SW8081A	4	0.52	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Endrin Aldehyde	SW8081A	4	0.60	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Methoxychlor	SW8081A	4	0.80	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Endosulfan Sulfate	SW8081A	4	0.47	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Endrin Ketone	SW8081A	4	0.38	8.0	ND		ug/Kg	03/17/17	17:40	LA	423152
Chlordane	SW8081A	4	8.4	80	ND		ug/Kg	03/17/17	17:40	LA	423152
Toxaphene	SW8081A	4	34	200	ND		ug/Kg	03/17/17	17:40	LA	423152
Acceptance Limits											
TCMX (S)	SW8081A		70 - 125		86.4		%	03/17/17	17:40	LA	423152
DCBP (S)	SW8081A		30 - 135		90.0		%	03/17/17	17:40	LA	423152



MB Summary Report

Work Order:	1703026	Prep Method:	3546_OCP	Prep Date:	03/06/17	Prep Batch:	5480
Matrix:	Soil	Analytical Method:	SW8081A	Analyzed Date:	3/8/2017	Analytical Batch:	422942
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
alpha-BHC	0.13	2.0	ND	
gamma-BHC (Lindane)	0.16	2.0	ND	
beta-BHC	0.32	2.0	ND	
delta-BHC	0.16	2.0	ND	
Heptachlor	0.11	2.0	ND	
Aldrin	0.20	2.0	ND	
Heptachlor Epoxide	0.078	2.0	ND	
gamma-Chlordane	0.16	2.0	ND	
alpha-Chlordane	0.17	2.0	ND	
4,4-DDE	0.19	2.0	0.718	
Endosulfan I	0.18	2.0	ND	
Dieldrin	0.15	2.0	ND	
Endrin	0.19	2.0	ND	
4,4-DDD	0.57	2.0	ND	
Endosulfan II	0.58	2.0	ND	
4,4-DDT	0.13	2.0	ND	
Endrin Aldehyde	0.15	2.0	ND	
Methoxychlor	0.20	2.0	ND	
Endosulfan Sulfate	0.12	2.0	ND	
Endrin Ketone	0.094	2.0	ND	
Chlordane	2.1	20	ND	
Toxaphene	8.5	50	ND	
TCMX (S)			85.6	
DCBP (S)			88.4	

Work Order:	1703026	Prep Method:	3050B	Prep Date:	03/07/17	Prep Batch:	5502
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	3/7/2017	Analytical Batch:	422949
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Arsenic	0.15	1.30	ND	
Lead	0.10	1.30	ND	



MB Summary Report

Work Order:	1703026	Prep Method:	3050B	Prep Date:	03/16/17	Prep Batch:	5687
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	3/17/2017	Analytical Batch:	423151
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Arsenic	0.15	1.30	ND	
Lead	0.10	1.30	0.35	

Work Order:	1703026	Prep Method:	3546_OCP	Prep Date:	03/17/17	Prep Batch:	5712
Matrix:	Soil	Analytical Method:	SW8081A	Analyzed Date:	3/17/2017	Analytical Batch:	423152
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
alpha-BHC	0.13	2.0	ND	
gamma-BHC (Lindane)	0.16	2.0	ND	
beta-BHC	0.32	2.0	ND	
delta-BHC	0.16	2.0	ND	
Heptachlor	0.11	2.0	ND	
Aldrin	0.20	2.0	ND	
Heptachlor Epoxide	0.078	2.0	ND	
gamma-Chlordane	0.16	2.0	ND	
alpha-Chlordane	0.17	2.0	ND	
4,4-DDE	0.19	2.0	ND	
Endosulfan I	0.18	2.0	ND	
Dieldrin	0.15	2.0	ND	
Endrin	0.19	2.0	ND	
4,4-DDD	0.57	2.0	ND	
Endosulfan II	0.58	2.0	ND	
4,4-DDT	0.13	2.0	ND	
Endrin Aldehyde	0.15	2.0	ND	
Methoxychlor	0.20	2.0	ND	
Endosulfan Sulfate	0.12	2.0	ND	
Endrin Ketone	0.094	2.0	ND	
Chlordane	2.1	20	ND	
Toxaphene	8.5	50	ND	
TCMX (S)			84.6	
DCBP (S)			84.9	



MB Summary Report

Work Order:	1703026	Prep Method:	WET/3010B	Prep Date:	04/03/17	Prep Batch:	5946
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	4/3/2017	Analytical Batch:	423384
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Chromium (STLC)	0.010	0.20	0.039	
Lead (STLC)	0.050	0.20	ND	



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1703026	Prep Method:	3546_OCP	Prep Date:	03/06/17	Prep Batch:	5480
Matrix:	Soil	Analytical Method:	SW8081A	Analyzed Date:	3/8/2017	Analytical Batch:	422942
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
gamma-BHC (Lindane)	0.16	2.0	ND	40	102	104	1.22	25 - 135	30	
Heptachlor	0.11	2.0	ND	40	104	105	0.962	40 - 130	30	
Aldrin	0.20	2.0	ND	40	98.8	100	1.76	25 - 140	30	
Dieldrin	0.15	2.0	ND	40	93.7	97.0	3.41	60 - 130	30	
Endrin	0.19	2.0	ND	40	105	107	1.65	55 - 135	30	
4,4-DDT	0.13	2.0	ND	40	102	104	2.18	45 - 140	30	
TCMX (S)				100	91.4	90.7		70 - 125		
DCBP (S)				100	95.7	98.8		30 - 135		

Work Order:	1703026	Prep Method:	3050B	Prep Date:	03/07/17	Prep Batch:	5502
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	3/7/2017	Analytical Batch:	422949
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.15	1.30	ND	50	99.5	105	5.47	80 - 120	30	
Lead	0.10	3.00	ND	50	96.3	102	6.05	80 - 120	30	

Work Order:	1703026	Prep Method:	3050B	Prep Date:	03/16/17	Prep Batch:	5687
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	3/17/2017	Analytical Batch:	423151
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.15	1.30	ND	50	106	105	1.14	80 - 120	30	
Lead	0.10	3.00	0.35	50	102	101	0.987	80 - 120	30	



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1703026	Prep Method:	3546_OCP	Prep Date:	03/17/17	Prep Batch:	5712
Matrix:	Soil	Analytical Method:	SW8081A	Analyzed Date:	3/17/2017	Analytical Batch:	423152
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
gamma-BHC (Lindane)	0.16	2.0	ND	40	89.8	87.7	2.25	25 - 135	30	
Heptachlor	0.11	2.0	ND	40	93.4	90.8	2.99	40 - 130	30	
Aldrin	0.20	2.0	ND	40	87.7	85.9	2.01	25 - 140	30	
Dieldrin	0.15	2.0	ND	40	85.3	82.9	2.67	60 - 130	30	
Endrin	0.19	2.0	ND	40	87.3	85.4	2.03	55 - 135	30	
4,4-DDT	0.13	2.0	ND	40	93.5	90.9	2.71	45 - 140	30	
TCMX (S)				100	81.8	80.0		70 - 125		
DCBP (S)				100	88.1	84.6		30 - 135		

Work Order:	1703026	Prep Method:	WET/3010B	Prep Date:	04/03/17	Prep Batch:	5946
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	4/3/2017	Analytical Batch:	423384
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Chromium (STLC)	0.010	0.20	0.039	10	87.4	84.8	3.02	80 - 120	20	
Lead (STLC)	0.050	0.20	ND	10	81.5	81.7	0.245	80 - 120	20	



MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1703026	Prep Method:	3546_OCP	Prep Date:	03/06/17	Prep Batch:	5480
Matrix:	Soil	Analytical Method:	SW8081A	Analyzed Date:	3/8/2017	Analytical Batch:	422942
Spiked Sample:	1703026-005A						
Units:	ug/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
gamma-BHC (Lindane)	0.477	6.00	ND	40	85.7	85.8	0.000	25 - 135	30	
Heptachlor	0.315	6.00	ND	40	90.4	90.0	0.830	40 - 130	30	
Aldrin	0.585	6.00	ND	40	86.7	87.1	0.000	25 - 140	30	
Dieldrin	0.444	6.00	ND	40	85.6	84.3	1.74	60 - 130	30	
Endrin	0.564	6.00	ND	40	95.8	93.0	3.17	55 - 135	30	
4,4-DDT	0.387	6.00	ND	40	107	97.5	9.52	45 - 140	30	
TCMX (S)				100	78.2	76.7		70 - 125		
DCBP (S)				100	71.1	68.9		30 - 135		

Work Order:	1703026	Prep Method:	3050B	Prep Date:	03/07/17	Prep Batch:	5502
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	3/7/2017	Analytical Batch:	422949
Spiked Sample:	1703026-001A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.150	1.30	9.67	50	98.3	102	3.34	75 - 125	30	
Lead	0.120	3.00	22.4	50	88.9	90.2	0.893	75 - 125	30	

Work Order:	1703026	Prep Method:	3050B	Prep Date:	03/16/17	Prep Batch:	5687
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	3/17/2017	Analytical Batch:	423151
Spiked Sample:	1703026-002A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.150	1.30	5.14	50	97.4	100	2.56	75 - 125	30	
Lead	0.120	3.00	9.02	50	86.5	87.1	0.572	75 - 125	30	



MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1703026	Prep Method:	3546_OCP	Prep Date:	03/17/17	Prep Batch:	5712
Matrix:	Soil	Analytical Method:	SW8081A	Analyzed Date:	3/17/2017	Analytical Batch:	423152
Spiked Sample:	1703026-026A						
Units:	ug/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
gamma-BHC (Lindane)	0.636	8.00	ND	40	93.1	92.7	0.269	25 - 135	30	
Heptachlor	0.420	8.00	ND	40	126	90.8	5.04	40 - 130	30	
Aldrin	0.780	8.00	ND	40	86.1	82.8	4.14	25 - 140	30	
Dieldrin	0.592	8.00	ND	40	89.2	88.4	0.844	60 - 130	30	
Endrin	0.752	8.00	ND	40	96.1	96.1	0.260	55 - 135	30	
4,4-DDT	0.516	8.00	ND	40	123	75.0	10.5	45 - 140	30	
TCMX (S)				100	86.8	86.8		70 - 125		
DCBP (S)				100	93.7	98.3		30 - 135		



Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - mg/L and mg/Kg (equivalent to PPM - parts per million in liquid and solid), ug/L and ug/Kg (equivalent to PPB - parts per billion in liquid and solid), ug/m3 , mg/m3 , ppbv and ppmv (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), ug/Wipe (concentration found on the surface of a single Wipe usually taken over a 100cm ² surface)

LABORATORY QUALIFIERS:

<p>B - Indicates when the analyte is found in the associated method or preparation blank</p> <p>D - Surrogate is not recoverable due to the necessary dilution of the sample</p> <p>E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.</p> <p>H- Indicates that the recommended holding time for the analyte or compound has been exceeded</p> <p>J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative</p> <p>NA - Not Analyzed</p> <p>N/A - Not Applicable</p> <p>ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.</p> <p>NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added</p> <p>R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts</p> <p>S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative</p> <p>X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.</p>



Sample Receipt Checklist

Client Name: Engeo (San Ramon)

Date and Time Received: 3/3/2017 2:56:00PM

Project Name: Baker Road

Received By: Navin Ghodasara

Work Order No.: 1703026

Physically Logged By: Navin Ghodasara

Checklist Completed By:

Carrier Name: First Courier

Chain of Custody (COC) Information

Chain of custody present? Yes
Chain of custody signed when relinquished and received? Yes
Chain of custody agrees with sample labels? Yes
Custody seals intact on sample bottles? Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler? Not Present
Shipping Container/Cooler In Good Condition? Yes
Samples in proper container/bottle? Yes
Samples containers intact? Yes
Sufficient sample volume for indicated test? Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes
Container/Temp Blank temperature in compliance? Yes Temperature: 8.0 °C
Water-VOA vials have zero headspace? No VOA vials submitted
Water-pH acceptable upon receipt? N/A
pH Checked by: na pH Adjusted by: na

Comments:



Login Summary Report

Client ID: TL5123 Engeo (San Ramon)
Project Name: Baker Road
Project # : 13255.000.000
Report Due Date: 4/6/2017

QC Level: II
TAT Requested: 3 Day Std:3
Date Received: 3/3/2017
Time Received: 2:56 pm

Comments:

Work Order # : 1703026

<u>WO Sample ID</u>	<u>Client Sample ID</u>	<u>Collection Date/Time</u>	<u>Matrix</u>	<u>Scheduled Disposal</u>	<u>Sample On Hold</u>	<u>Test On Hold</u>	<u>Requested Tests</u>	<u>Subbed</u>
1703026-001A	SS-1 @ 0-12"	03/03/17 10:00	Soil	08/30/17			Homogenize Pest_S_8081OCP Met_S_AsPb	
1703026-002A	SS-1 @ 12-24"	03/03/17 10:05	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
Sample Note: Samples need to be homogenized prior to analysis								
1703026-003A	SS-2 @ 0-12"	03/03/17 9:48	Soil	08/30/17			Homogenize Met_S_AsPb Pest_S_8081OCP	
1703026-004A	SS-2 @ 12-24"	03/03/17 9:50	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-005A	SS-3 @ 0-12"	03/03/17 9:40	Soil	08/30/17			Homogenize Pest_S_8081OCP Met_S_AsPb	
1703026-006A	SS-3 @ 12-24"	03/03/17 9:45	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-007A	SS-4 @ 0-12"	03/03/17 10:10	Soil	08/30/17			Homogenize Met_S_AsPb Pest_S_8081OCP	
1703026-008A	SS-4 @ 12-24"	03/03/17 10:12	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-009A	SS-5 @ 0-12"	03/03/17 10:52	Soil	08/30/17			Homogenize Met_S_AsPb Pest_S_8081OCP	



Login Summary Report

Client ID: TL5123 Engeo (San Ramon)
Project Name: Baker Road
Project # : 13255.000.000
Report Due Date: 4/6/2017

QC Level: II
TAT Requested: 3 Day Std:3
Date Received: 3/3/2017
Time Received: 2:56 pm

Comments:

Work Order # : 1703026

<u>WO Sample ID</u>	<u>Client Sample ID</u>	<u>Collection Date/Time</u>	<u>Matrix</u>	<u>Scheduled Disposal</u>	<u>Sample On Hold</u>	<u>Test On Hold</u>	<u>Requested Tests</u>	<u>Subbed</u>
1703026-010A	SS-5 @ 12-24"	03/03/17 10:54	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-011A	SS-6 @ 0-12"	03/03/17 10:45	Soil	08/30/17			Homogenize Met_S_AsPb Pest_S_8081OCP	
1703026-012A	SS-6 @ 12-24"	03/03/17 10:50	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-013A	SS-7 @ 0-12"	03/03/17 9:15	Soil	08/30/17			Homogenize Met_S_CAM17STLC Met_S_AsPb Pest_S_8081OCP	
1703026-014A	SS-7 @ 12-24"	03/03/17 9:20	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-015A	SS-8 @ 0-12"	03/03/17 9:00	Soil	08/30/17			Homogenize Met_S_AsPb Pest_S_8081OCP	
1703026-016A	SS-8 @ 12-24"	03/03/17 9:05	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-017A	SS-9 @ 0-12"	03/03/17 10:15	Soil	08/30/17			Homogenize Met_S_AsPb Pest_S_8081OCP	
1703026-018A	SS-9 @ 12-24"	03/03/17 10:18	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-019A	SS-10 @ 0-12"	03/03/17 10:30	Soil	08/30/17				



Login Summary Report

Client ID: TL5123 Engeo (San Ramon)
Project Name: Baker Road
Project # : 13255.000.000
Report Due Date: 4/6/2017

QC Level: II
TAT Requested: 3 Day Std:3
Date Received: 3/3/2017
Time Received: 2:56 pm

Comments:

Work Order # : 1703026

<u>WO Sample ID</u>	<u>Client Sample ID</u>	<u>Collection Date/Time</u>	<u>Matrix</u>	<u>Scheduled Disposal</u>	<u>Sample On Hold</u>	<u>Test On Hold</u>	<u>Requested Tests</u>	<u>Subbed</u>
1703026-020A	SS-10 @ 12-24"	03/03/17 10:35	Soil	08/30/17			Homogenize Met_S_AsPb Pest_S_8081OCP	
1703026-021A	SS-11 @ 0-12"	03/03/17 9:30	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-022A	SS-11 @ 12-24"	03/03/17 9:35	Soil	08/30/17			Homogenize Met_S_CAM17STLC Met_S_AsPb Pest_S_8081OCP	
1703026-023A	SS-13 @ 0-12"	03/03/17 11:15	Soil	08/30/17			Hold Samples Homogenize Met_S_AsPb	
1703026-024A	SS-13 @ 12-24"	03/03/17 11:20	Soil	08/30/17			Homogenize Met_S_CAM17STLC Pest_S_8081OCP Met_S_AsPb	
1703026-025A	Dup-1 @ 0-12"	03/03/17 11:00	Soil	08/30/17			Hold Samples Met_S_CAM17STLC Homogenize Met_S_AsPb	
1703026-026A	Dup-2 @ 12-24"	03/03/17 11:05	Soil	08/30/17			Homogenize Pest_S_8081OCP Met_S_AsPb	
							Hold Samples Met_S_AsPb Homogenize Pest_S_8081OCP	



CHAIN OF CUSTODY RECORD

1703026

PROJECT NUMBER 13255.000.000		PROJECT NAME Baker Road					Pesticides (6081)	Lead (6010)	Arsenic (6010)	REMARKS REQUIRED DETECTION LIMITS
SAMPLED BY: (SIGNATURE/PRINT) Kelsey Gerhart										
PROJECT MANAGER: (SIGNATURE/PRINT) Divya Bhargava										
ROUTING: E-MAIL kgerhart@engeo.com HARD COPY										
SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE				
001A SS-100-12"		10:00	Soil	1	1/2 in x 1/2 in	ICE	X	X	X	
002A SS-1012-24"		10:05							HOLD	
003A SS-200-12"		9:48					X	X	X	
004A SS-2012-24"		9:50							HOLD	
005A SS-300-12"		9:40	Soil				X	X	Y	
006A SS-3012-24"		9:45							HOLD	
007A SS-400-12"		10:10					X	X	Y	
008A SS-4012-24"		10:12							HOLD	
009A SS-500-12"		10:52					X	X	Y	
010A SS-5012-24"		10:54							HOLD	
011A SS-600-12"		10:45					X	X	Y	
012A SS-6012-24"		10:50							HOLD	
013A SS-700-12"		9:45					X	X	X	
014A SS-7012-24"		9:20							HOLD	
015A SS-800-12"		9:00					X	X	Y	
016A SS-8012-24"		9:05							HOLD	
017A SS-900-12"		10:15					X	X	Y	
018A SS-9012-24"		10:18							HOLD	
RELINQUISHED BY: (SIGNATURE)		DATE/TIME	RECEIVED BY: (SIGNATURE)		DATE/TIME	RECEIVED BY: (SIGNATURE)				
Kelsey Gerhart		3/3/17 13:30	Ben Mendez		3/3/17 14:19					
RELINQUISHED BY: (SIGNATURE)		DATE/TIME	RECEIVED BY: (SIGNATURE)		DATE/TIME	RECEIVED BY: (SIGNATURE)				
[Signature]		03/3 1406	NAYIN G							
RELINQUISHED BY: (SIGNATURE)		DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)		REMARKS- Homogenize ; Analyze Shallow Samples and Hold Deeper Samples					

ENGEO
INCORPORATED

2010 CROW CANYON PLACE SUITE 250
SAN RAMON, CALIFORNIA 94583
(925) 866-9000 FAX (925) 866-0199
WWW.ENGEO.COM

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO PROJECT FIELD FILES

FCS



Change Order

Work Order: 1703026

Serial #: CO17-0103

Print Date: 3/15/2017

Project Name: Baker Road

Client: Engeo (San Ramon)

Requested By: Divya Bhargava

	<u>Requested Date</u>	<u>Requested Time</u>	<u>Extended Price</u>
Samples Off Hold--Analyze 002/4/6/8/10/12/14/16/18/20/22/24/26 for As/Pb & OCPs; STD 3 day TAT	3/15/2017	1:15:00PM	



Change Order

Work Order: 1703026

Serial #: CO17-0126

Print Date: 3/30/2017

Project Name: Baker Road

Client: Engeo (San Ramon)

Requested By: Divya Bhargava

	<u>Requested Date</u>	<u>Requested Time</u>	<u>Extended Price</u>
Additional Test-STLC Pb for sample 013/021/023/024; STD 3 day TAT	3/30/2017	11:55:00AM	



Engeo (San Ramon)
2010 Crow Canyon Place, #250
San Ramon, California 94583
Tel: (925) 866-9000
Fax: (925) 866-0199
RE: Baker Road

Work Order No.: 1703116 Rev: 1

Dear Stephen Fallon:

Torrent Laboratory, Inc. received 2 sample(s) on March 16, 2017 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

A handwritten signature in blue ink, appearing to read "Patti L. Sandroock", is written over a light blue horizontal line.

Patti L Sandroock
QA Officer

March 21, 2017

Date



Date: 3/21/2017

Client: Engeo (San Ramon)

Project: Baker Road

Work Order: 1703116

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

REVISIONS

Per client request, report revised to change sample IDs.

Rev. 1 (4/13/17)



Sample Result Summary

Report prepared for: Stephen Fallon
Engeo (San Ramon)

Date Received: 03/16/17

Date Reported: 03/21/17

SS-12 @ 0-12"

1703116-001

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	3.67	mg/Kg
Lead	SW6010B	1	0.12	3.0	8.54	mg/Kg

SS-12 @ 12-24"

1703116-002

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.15	1.3	6.17	mg/Kg
Lead	SW6010B	1	0.12	3.0	5.20	mg/Kg



SAMPLE RESULTS

Report prepared for: Stephen Fallon
Engeo (San Ramon)

Date/Time Received: 03/16/17, 12:49 pm
Date Reported: 03/21/17

Client Sample ID:	SS-12 @ 0-12"	Lab Sample ID:	1703116-001A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/15/17 / 14:00		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/20/17	5:00:00PM
Prep Batch ID: 5743	Prep Analyst:	PPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	3.67		mg/Kg	03/20/17	21:41	PPATEL	423180
Lead	SW6010B	1	0.12	3.0	8.54		mg/Kg	03/20/17	21:41	PPATEL	423180

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17	4:04:00PM
Prep Batch ID: 5716	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
alpha-BHC	SW8081A	1	0.13	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
gamma-BHC (Lindane)	SW8081A	1	0.16	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
beta-BHC	SW8081A	1	0.32	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
delta-BHC	SW8081A	1	0.16	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Heptachlor	SW8081A	1	0.11	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Aldrin	SW8081A	1	0.20	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Heptachlor Epoxide	SW8081A	1	0.078	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
gamma-Chlordane	SW8081A	1	0.16	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
alpha-Chlordane	SW8081A	1	0.17	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
4,4-DDE	SW8081A	1	0.19	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Endosulfan I	SW8081A	1	0.18	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Dieldrin	SW8081A	1	0.15	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Endrin	SW8081A	1	0.19	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
4,4-DDD	SW8081A	1	0.57	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Endosulfan II	SW8081A	1	0.58	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
4,4-DDT	SW8081A	1	0.13	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Endrin Aldehyde	SW8081A	1	0.15	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Methoxychlor	SW8081A	1	0.20	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Endosulfan Sulfate	SW8081A	1	0.12	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Endrin Ketone	SW8081A	1	0.094	2.0	ND		ug/Kg	03/20/17	22:06	LA	423192
Chlordane	SW8081A	1	2.1	20	ND		ug/Kg	03/20/17	22:06	LA	423192
Toxaphene	SW8081A	1	8.5	50	ND		ug/Kg	03/20/17	22:06	LA	423192
Acceptance Limits											
TCMX (S)	SW8081A		48 - 139		78.5		%	03/20/17	22:06	LA	423192
DCBP (S)	SW8081A		48 - 135		81.2		%	03/20/17	22:06	LA	423192



SAMPLE RESULTS

Report prepared for: Stephen Fallon
Engeo (San Ramon)

Date/Time Received: 03/16/17, 12:49 pm
Date Reported: 03/21/17

Client Sample ID:	SS-12 @ 12-24"	Lab Sample ID:	1703116-002A
Project Name/Location:	Baker Road	Sample Matrix:	Soil
Project Number:	13255.000.000		
Date/Time Sampled:	03/15/17 / 14:10		
SDG:			

Prep Method: 3050B	Prep Batch Date/Time: 3/20/17	5:00:00PM
Prep Batch ID: 5743	Prep Analyst:	PPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Arsenic	SW6010B	1	0.15	1.3	6.17		mg/Kg	03/20/17	21:49	PPATEL	423180
Lead	SW6010B	1	0.12	3.0	5.20		mg/Kg	03/20/17	21:49	PPATEL	423180

Prep Method: 3546_OCP	Prep Batch Date/Time: 3/17/17	4:04:00PM
Prep Batch ID: 5716	Prep Analyst:	SNARASIMHAN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
alpha-BHC	SW8081A	1	0.13	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
gamma-BHC (Lindane)	SW8081A	1	0.16	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
beta-BHC	SW8081A	1	0.32	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
delta-BHC	SW8081A	1	0.16	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Heptachlor	SW8081A	1	0.11	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Aldrin	SW8081A	1	0.20	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Heptachlor Epoxide	SW8081A	1	0.078	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
gamma-Chlordane	SW8081A	1	0.16	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
alpha-Chlordane	SW8081A	1	0.17	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
4,4-DDE	SW8081A	1	0.19	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Endosulfan I	SW8081A	1	0.18	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Dieldrin	SW8081A	1	0.15	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Endrin	SW8081A	1	0.19	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
4,4-DDD	SW8081A	1	0.57	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Endosulfan II	SW8081A	1	0.58	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
4,4-DDT	SW8081A	1	0.13	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Endrin Aldehyde	SW8081A	1	0.15	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Methoxychlor	SW8081A	1	0.20	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Endosulfan Sulfate	SW8081A	1	0.12	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Endrin Ketone	SW8081A	1	0.094	2.0	ND		ug/Kg	03/20/17	22:19	LA	423192
Chlordane	SW8081A	1	2.1	20	ND		ug/Kg	03/20/17	22:19	LA	423192
Toxaphene	SW8081A	1	8.5	50	ND		ug/Kg	03/20/17	22:19	LA	423192
Acceptance Limits											
TCMX (S)	SW8081A		48 - 139		73.1		%	03/20/17	22:19	LA	423192
DCBP (S)	SW8081A		48 - 135		78.8		%	03/20/17	22:19	LA	423192



MB Summary Report

Work Order:	1703116	Prep Method:	3546_OCP	Prep Date:	03/17/17	Prep Batch:	5716
Matrix:	Soil	Analytical Method:	SW8081A	Analyzed Date:	3/17/2017	Analytical Batch:	423156
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
alpha-BHC	0.13	2.0	ND		
gamma-BHC (Lindane)	0.16	2.0	ND		
beta-BHC	0.32	2.0	ND		
delta-BHC	0.16	2.0	ND		
Heptachlor	0.11	2.0	ND		
Aldrin	0.20	2.0	ND		
Heptachlor Epoxide	0.078	2.0	ND		
gamma-Chlordane	0.16	2.0	ND		
alpha-Chlordane	0.17	2.0	ND		
4,4-DDE	0.19	2.0	ND		
Endosulfan I	0.18	2.0	ND		
Dieldrin	0.15	2.0	ND		
Endrin	0.19	2.0	ND		
4,4-DDD	0.57	2.0	ND		
Endosulfan II	0.58	2.0	ND		
4,4-DDT	0.13	2.0	ND		
Endrin Aldehyde	0.15	2.0	ND		
Methoxychlor	0.20	2.0	ND		
Endosulfan Sulfate	0.12	2.0	ND		
Endrin Ketone	0.094	2.0	ND		
Chlordane	2.1	20	ND		
Toxaphene	8.5	50	ND		
TCMX (S)			91.6		
DCBP (S)			94.5		



MB Summary Report

Work Order:	1703116	Prep Method:	3050B	Prep Date:	03/20/17	Prep Batch:	5743
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	3/20/2017	Analytical Batch:	423180
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Antimony	0.050	5.00	ND	
Arsenic	0.15	1.30	ND	
Barium	0.055	5.00	0.065	
Beryllium	0.055	5.00	ND	
Cadmium	0.10	5.00	ND	
Chromium	0.075	5.00	ND	
Cobalt	0.070	5.00	ND	
Copper	0.20	5.00	0.45	
Lead	0.10	1.30	0.15	
Molybdenum	0.050	5.00	ND	
Nickel	0.50	5.00	ND	
Selenium	0.22	5.00	ND	
Silver	0.15	5.00	ND	
Thallium	0.20	5.00	1.0	
Vanadium	0.10	5.00	ND	
Zinc	0.30	5.00	ND	



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1703116	Prep Method:	3546_OCP	Prep Date:	03/17/17	Prep Batch:	5716
Matrix:	Soil	Analytical Method:	SW8081A	Analyzed Date:	3/17/2017	Analytical Batch:	423156
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
gamma-BHC (Lindane)	0.16	2.0	ND	40	100	96.9	3.80	25 - 135	30	
Heptachlor	0.11	2.0	ND	40	106	100	5.59	40 - 130	30	
Aldrin	0.20	2.0	ND	40	96.8	93.5	3.42	25 - 140	30	
Dieldrin	0.15	2.0	ND	40	93.1	90.0	3.55	60 - 130	30	
Endrin	0.19	2.0	ND	40	98.8	94.9	3.87	55 - 135	30	
4,4-DDT	0.13	2.0	ND	40	102	98.3	3.99	45 - 140	30	
TCMX (S)				100	91.5	86.7		48 - 125		
DCBP (S)				100	92.6	92.5		48 - 135		

Work Order:	1703116	Prep Method:	3050B	Prep Date:	03/20/17	Prep Batch:	5743
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	3/20/2017	Analytical Batch:	423180
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Antimony	0.050	5.00	ND	50	99.9	98.9	0.805	80 - 120	30	
Arsenic	0.15	1.30	ND	50	96.8	95.8	1.04	80 - 120	30	
Barium	0.055	5.00	0.065	50	100	100.	0.200	80 - 120	30	
Beryllium	0.055	5.00	ND	50	98.6	98.1	0.610	80 - 120	30	
Cadmium	0.10	5.00	ND	50	96.1	96.1	0.000	80 - 120	30	
Chromium	0.075	5.00	ND	50	98.5	98.3	0.203	80 - 120	30	
Cobalt	0.070	5.00	ND	50	98.2	98.5	0.203	80 - 120	30	
Copper	0.20	5.00	0.45	50	101	101	0.197	80 - 120	30	
Lead	0.10	3.00	0.15	50	98.5	97.5	0.816	80 - 120	30	
Molybdenum	0.050	5.00	ND	50	101	100	0.597	80 - 120	30	
Nickel	0.50	5.00	ND	50	97.2	97.6	0.411	80 - 120	30	
Selenium	0.22	5.00	ND	50	93.3	93.0	0.429	80 - 120	30	
Silver	0.15	5.00	ND	50	94.9	95.0	0.000	80 - 120	30	
Thallium	0.20	5.00	1.0	50	94.4	92.8	1.71	80 - 120	30	
Vanadium	0.10	5.00	ND	50	98.9	98.3	0.609	80 - 120	30	
Zinc	0.30	5.00	ND	50	94.1	94.1	0.000	80 - 120	30	



Duplicate QC Summary Report

Work Order: 1703116	Prep Method: 3050B	Prep Date: 3/20/2017	Prep Batch: 5743
Matrix:	Analytical Method: SW6010B	Analyzed Date: 03/20/17	Analytical Batch: 423180
Units:	Lab Sample ID: 1703116-001A-DUP-5743		

Parameters	<u>MDL</u>	<u>PQL</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>% RPD</u>
Arsenic	0.15	5.00	3.67	3.71	0.00
Lead	0.10	5.00	8.54	9.29	0.00



Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - mg/L and mg/Kg (equivalent to PPM - parts per million in liquid and solid), ug/L and ug/Kg (equivalent to PPB - parts per billion in liquid and solid), ug/m3 , mg/m3 , ppbv and ppmv (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), ug/Wipe (concentration found on the surface of a single Wipe usually taken over a 100cm ² surface)

LABORATORY QUALIFIERS:

<p>B - Indicates when the analyte is found in the associated method or preparation blank</p> <p>D - Surrogate is not recoverable due to the necessary dilution of the sample</p> <p>E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.</p> <p>H- Indicates that the recommended holding time for the analyte or compound has been exceeded</p> <p>J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative</p> <p>NA - Not Analyzed</p> <p>N/A - Not Applicable</p> <p>ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.</p> <p>NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added</p> <p>R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts</p> <p>S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative</p> <p>X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.</p>



Sample Receipt Checklist

Client Name: Engeo (San Ramon)

Date and Time Received: 3/16/2017 12:49:00PM

Project Name: Baker Road

Received By: ng

Work Order No.: 1703116

Physically Logged By: Lorna Imbat

Checklist Completed By:

Carrier Name: FedEx

Chain of Custody (COC) Information

Chain of custody present? Yes
Chain of custody signed when relinquished and received? Yes
Chain of custody agrees with sample labels? Yes
Custody seals intact on sample bottles? Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler? Not Present
Shipping Container/Cooler In Good Condition? Yes
Samples in proper container/bottle? Yes
Samples containers intact? Yes
Sufficient sample volume for indicated test? Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes
Container/Temp Blank temperature in compliance? Yes Temperature: 3.0 °C
Water-VOA vials have zero headspace? No VOA vials submitted
Water-pH acceptable upon receipt? N/A
pH Checked by: n/a pH Adjusted by: n/a

Comments:



Login Summary Report

Client ID: TL5123 Engeo (San Ramon)
Project Name: Baker Road
Project # : 13255.000.000
Report Due Date: 3/21/2017

QC Level: II
TAT Requested: 3 Day Std:3
Date Received: 3/16/2017
Time Received: 12:49 pm

Comments:

Work Order # : 1703116

<u>WO Sample ID</u>	<u>Client Sample ID</u>	<u>Collection Date/Time</u>	<u>Matrix</u>	<u>Scheduled Disposal</u>	<u>Sample On Hold</u>	<u>Test On Hold</u>	<u>Requested Tests</u>	<u>Subbed</u>
1703116-001A	SS-12 @ 0-12"	03/15/17 14:00	Soil	09/12/17			Met_S_AsPb Pest_S_8081OCP	
1703116-002A	SS-12 @ 12-24"	03/15/17 14:10	Soil	09/12/17			Pest_S_8081OCP Met_S_AsPb	



1703116

CHAIN OF CUSTODY RECORD

PROJECT NUMBER 13255.000.000		PROJECT NAME BAKER ROAD					8081 OCP's 6010 lead/arsenic											REMARKS REQUIRED DETECTION LIMITS
SAMPLED BY: (SIGNATURE/PRINT) <i>Stephen Fallon</i> / Stephen Fallon																		
PROJECT MANAGER: (SIGNATURE/PRINT)																		
ROUTING: E-MAIL <i>kgerhart@engeo.com</i> <i>sfallon@engeo.com</i> HARD COPY																		
SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE												
SS-4@0-12	3/15/17	14:00	SOIL	1	8oz	NONE	X	X										
SS-4@12-24	3/15/17	14:10	SOIL	1	8oz	NONE	X	X										
RELINQUISHED BY: (SIGNATURE) <i>Stephen Fallon</i>							DATE/TIME 3/16/17 12:08	RECEIVED BY: (SIGNATURE) <i>M. Nagza</i>				RELINQUISHED BY: <i>M. Nagza</i>	DATE/TIME 03/16/17 12:48	RECEIVED BY: (SIGNATURE) <i>NAVIN G. DEWANE</i>				
RELINQUISHED BY: (SIGNATURE)							DATE/TIME	RECEIVED BY: (SIGNATURE)				RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE) 3/16/17 12:49pm.				
RELINQUISHED BY: (SIGNATURE)							DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)				DATE/TIME	REMARKS STANDARD TAT Temp 3°C #1					

ENGEO
INCORPORATED

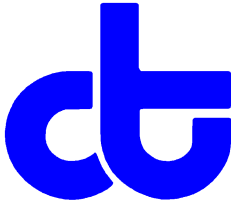
2010 CROW CANYON PLACE SUITE 250
SAN RAMON, CALIFORNIA 94583
(925) 866-9000 FAX (925) 866-0199
WWW.ENGEO.COM

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2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 286995
ANALYTICAL REPORT

Engeo Inc.
2010 Crow Canyon Place
San Ramon, CA 94583

Project : 13255.000.000
Location : Baker Road
Level : II

Table with 2 columns: Sample ID and Lab ID. Rows include SG-H through SG-C with corresponding Lab IDs from 286995-001 to 286995-011.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Handwritten signature of Will Rice

Signature: _____

Date: 04/14/2017

Will Rice
Project Manager
will.rice@ctberk.com
(510) 204-2221 Ext 13102

CASE NARRATIVE

Laboratory number: 286995
Client: Engeo Inc.
Project: 13255.000.000
Location: Bailer Road
Request Date: 03/15/17
Samples Received: 03/14/17

This data package contains sample and QC results for eleven air samples, requested for the above referenced project on 03/15/17. The samples were received intact.

Volatile Organics in Air by MS (EPA TO-15):

High response was observed for vinyl acetate in the ICV analyzed 02/23/17 12:17; affected data was qualified with "b". High response was observed for vinyl acetate in the ICV analyzed 03/11/17 11:05; affected data was qualified with "b". No other analytical problems were encountered.

Volatile Organics in Air GC (ASTM D1946 and EPA TO-3):

No analytical problems were encountered.

Curtis & Tompkins, Ltd.
 Analytical Laboratory Since 1878
 2323 Fifth Street
 Berkeley, CA 94710
 (510)486-0900 Phone
 (510)486-0532 Fax

**AIR TESTING CHAIN OF CUSTODY
 & PURCHASE ORDER**

Page 1 of 1
 Chain of Custody #:

TESTING REQUESTED

TO-15	TPH-g+VOCs	Fixed gases + Meliorant (ASTM D-1946)
-------	------------	---------------------------------------

C&T LOGIN # 286995
 Sampler: Dhanya Bhargava
 Report To: Dhanya Bhargava@engr.com
 Company: ENG-ED
 Telephone: 925-375-2572
 Email: Dhanya Bhargava

Project No: 13255-060-000
 Project Name: Battelle Road
 EDD Format: Rpt Level: II III IV
 Standard
 Turnaround Time: RUSH

Lab No.	Sample ID.	Sampling Information				Sample Volume (Gauge Reading)
		Date Collected	Time Collected	Canister ID (Bin Code #)	Flow Controller ID	
1	SG-H	3/14/17	8:52	06149	028	25 psf
2	SG-G	3/14/17	9:23	00336	150	25 psf
3	SG-M	3/14/17	9:47	00388	115	25 psf
4	SG-N	3/14/17	10:23	00087	185	23 psf
5	SG-D	3/14/17	11:03	00159	128	24 psf
6	SG-S	3/14/17	10:10	00076	308	23 psf
7	SG-DUP	3/14/17	11:35	00240	030	24 psf
8	SG-L	3/14/17	12:19	00420	158	24 psf
9	SG-T	3/14/17	14:11	02803	293	24 psf
10	SG-B	3/14/17	15:27	00882	242	22.5 psf
11	SG-C	3/14/17	14:55	00605	100	25.5 psf

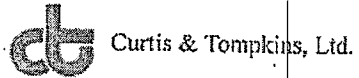
Notes:

RELINQUISHED BY: Kelsey Grant 3/14 16:00 DATE/TIME

RECEIVED BY: [Signature] 3/14 16:00 DATE/TIME

DATE/TIME: 3/14/17 18:00 DATE/TIME

COOLER RECEIPT CHECKLIST



Login # 286995 Date Received 3/14/17 Number of coolers 0
 Client ENGEO Project _____

Date Opened 3/15/17 By (print) CAR (sign) [Signature]
 Date Logged in ↓ By (print) ↓ (sign) _____
 Date Labeled ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
 Shipping info _____

2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? _____ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO

5. Is the project identifiable from custody papers? (if so fill out top of form) _____ YES NO

6. Indicate the packing in cooler: (if other, describe) _____
 Bubble Wrap Foam blocks Bags None
 Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C
 Type of ice used: Wet Blue/Gel None Temp(°C) _____

Temperature blank(s) included? Thermometer# _____ IR Gun# _____

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? _____ YES NO

10. Are there any missing / extra samples? _____ YES NO

11. Are samples in the appropriate containers for indicated tests? _____ YES NO

12. Are sample labels present, in good condition and complete? _____ YES NO

13. Do the sample labels agree with custody papers? _____ YES NO

14. Was sufficient amount of sample sent for tests requested? _____ YES NO

15. Are the samples appropriately preserved? _____ YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? (pH strip lot# _____) YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Detections Summary for 286995

Results for any subcontracted analyses are not included in this summary.

Client : Engeo Inc.
 Project : 13255.000.000
 Location : Baker Road

Client Sample ID : SG-H Laboratory Sample ID : 286995-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
1,3-Butadiene	3.0		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
Acetone	29		12		ppbv	As Recd	5.910	EPA TO-15	METHOD
Carbon Disulfide	57		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
n-Hexane	460		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
Cyclohexane	8.8		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
n-Heptane	5.4		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
Toluene	230		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
Ethylbenzene	5.0		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
m,p-Xylenes	23		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
o-Xylene	5.8		3.0		ppbv	As Recd	5.910	EPA TO-15	METHOD
Oxygen	150,000		2,000		ppmv	As Recd	1.970	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	1,200		99	15	ppbv	As Recd	1.970	EPA TO-3	METHOD

Client Sample ID : SG-G Laboratory Sample ID : 286995-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
1,3-Butadiene	2.4		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
Acetone	87		7.4		ppbv	As Recd	3.720	EPA TO-15	METHOD
Carbon Disulfide	13		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
n-Hexane	290		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
2-Butanone	2.6		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
Cyclohexane	6.4		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
Benzene	2.6		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
n-Heptane	3.6		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
Toluene	480		2.8		ppbv	As Recd	5.580	EPA TO-15	METHOD
Ethylbenzene	7.2		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
m,p-Xylenes	29		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
o-Xylene	7.5		1.9		ppbv	As Recd	3.720	EPA TO-15	METHOD
Carbon Dioxide	66,000		1,900		ppmv	As Recd	1.860	ASTM D1946-90	METHOD
Oxygen	57,000		1,900		ppmv	As Recd	1.860	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	1,100		93	14	ppbv	As Recd	1.860	EPA TO-3	METHOD

Client Sample ID : SG-M

Laboratory Sample ID :

286995-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	13		4.6		ppbv	As Recd	2.300	EPA TO-15	METHOD
Carbon Disulfide	13		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
Isopropanol	5.4		4.6		ppbv	As Recd	2.300	EPA TO-15	METHOD
n-Hexane	40		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
2-Butanone	2.2		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
Benzene	1.5		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
n-Heptane	1.5		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
Toluene	68		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
Ethylbenzene	2.2		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
m,p-Xylenes	9.3		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
o-Xylene	2.6		1.2		ppbv	As Recd	2.300	EPA TO-15	METHOD
Carbon Dioxide	89,000		2,300		ppmv	As Recd	2.300	ASTM D1946-90	METHOD
Oxygen	22,000		2,300		ppmv	As Recd	2.300	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	190		120	17	ppbv	As Recd	2.300	EPA TO-3	METHOD

Client Sample ID : SG-N

Laboratory Sample ID :

286995-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	30		4.7		ppbv	As Recd	2.350	EPA TO-15	METHOD
Carbon Disulfide	2.4		1.2		ppbv	As Recd	2.350	EPA TO-15	METHOD
n-Hexane	51		1.2		ppbv	As Recd	2.350	EPA TO-15	METHOD
2-Butanone	3.0		1.2		ppbv	As Recd	2.350	EPA TO-15	METHOD
Toluene	110		1.2		ppbv	As Recd	2.350	EPA TO-15	METHOD
Ethylbenzene	4.1		1.2		ppbv	As Recd	2.350	EPA TO-15	METHOD
m,p-Xylenes	20		1.2		ppbv	As Recd	2.350	EPA TO-15	METHOD
o-Xylene	6.6		1.2		ppbv	As Recd	2.350	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	1.4		1.2		ppbv	As Recd	2.350	EPA TO-15	METHOD
Carbon Dioxide	93,000		2,400		ppmv	As Recd	2.350	ASTM D1946-90	METHOD
Oxygen	18,000		2,400		ppmv	As Recd	2.350	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	350		120	17	ppbv	As Recd	2.350	EPA TO-3	METHOD

Client Sample ID : SG-D

Laboratory Sample ID :

286995-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Toluene	2.5		0.99		ppbv	As Recd	1.970	EPA TO-15	METHOD
Carbon Dioxide	22,000		2,000		ppmv	As Recd	1.970	ASTM D1946-90	METHOD
Oxygen	160,000		2,000		ppmv	As Recd	1.970	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	52	J	99	15	ppbv	As Recd	1.970	EPA TO-3	METHOD

Client Sample ID : SG-DUP

Laboratory Sample ID :

286995-006

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	30		4.7		ppbv	As Recd	2.340	EPA TO-15	METHOD
Carbon Disulfide	2.5		1.2		ppbv	As Recd	2.340	EPA TO-15	METHOD
n-Hexane	53		1.2		ppbv	As Recd	2.340	EPA TO-15	METHOD
2-Butanone	3.0		1.2		ppbv	As Recd	2.340	EPA TO-15	METHOD
Toluene	110		1.2		ppbv	As Recd	2.340	EPA TO-15	METHOD
Ethylbenzene	4.1		1.2		ppbv	As Recd	2.340	EPA TO-15	METHOD
m,p-Xylenes	21		1.2		ppbv	As Recd	2.340	EPA TO-15	METHOD
o-Xylene	6.4		1.2		ppbv	As Recd	2.340	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	1.4		1.2		ppbv	As Recd	2.340	EPA TO-15	METHOD
Carbon Dioxide	95,000		2,300		ppmv	As Recd	2.340	ASTM D1946-90	METHOD
Oxygen	15,000		2,300		ppmv	As Recd	2.340	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	310		120	17	ppbv	As Recd	2.340	EPA TO-3	METHOD

Client Sample ID : SG-J

Laboratory Sample ID :

286995-007

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Carbon Disulfide	9.8		1.1		ppbv	As Recd	2.100	EPA TO-15	METHOD
n-Hexane	4.2		1.1		ppbv	As Recd	2.100	EPA TO-15	METHOD
Toluene	6.5		1.1		ppbv	As Recd	2.100	EPA TO-15	METHOD
Carbon Dioxide	84,000		2,100		ppmv	As Recd	2.100	ASTM D1946-90	METHOD
Oxygen	82,000		2,100		ppmv	As Recd	2.100	ASTM D1946-90	METHOD

Client Sample ID : SG-L

Laboratory Sample ID :

286995-008

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	25		8.8		ppbv	As Recd	4.380	EPA TO-15	METHOD
Carbon Disulfide	59		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
n-Hexane	610		3.3		ppbv	As Recd	6.570	EPA TO-15	METHOD
2-Butanone	3.6		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
Cyclohexane	8.7		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
Benzene	3.3		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
n-Heptane	6.8		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
Toluene	400		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
Ethylbenzene	7.6		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
m,p-Xylenes	31		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
o-Xylene	7.7		2.2		ppbv	As Recd	4.380	EPA TO-15	METHOD
Carbon Dioxide	11,000		2,200		ppmv	As Recd	2.190	ASTM D1946-90	METHOD
Oxygen	96,000		2,200		ppmv	As Recd	2.190	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	1,600		110	16	ppbv	As Recd	2.190	EPA TO-3	METHOD

Client Sample ID : SG-I

Laboratory Sample ID :

286995-009

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	8.7		4.5		ppbv	As Recd	2.250	EPA TO-15	METHOD
Carbon Disulfide	1.8		1.1		ppbv	As Recd	2.250	EPA TO-15	METHOD
n-Hexane	4.2		1.1		ppbv	As Recd	2.250	EPA TO-15	METHOD
2-Butanone	1.2		1.1		ppbv	As Recd	2.250	EPA TO-15	METHOD
Toluene	21		1.1		ppbv	As Recd	2.250	EPA TO-15	METHOD
m,p-Xylenes	2.5		1.1		ppbv	As Recd	2.250	EPA TO-15	METHOD
Carbon Dioxide	24,000		2,300		ppmv	As Recd	2.250	ASTM D1946-90	METHOD
Oxygen	150,000		2,300		ppmv	As Recd	2.250	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	70	J	110	17	ppbv	As Recd	2.250	EPA TO-3	METHOD

Client Sample ID : SG-B

Laboratory Sample ID :

286995-010

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	18		9.6		ppbv	As Recd	4.820	EPA TO-15	METHOD
Carbon Disulfide	11		2.4		ppbv	As Recd	4.820	EPA TO-15	METHOD
n-Hexane	230		2.4		ppbv	As Recd	4.820	EPA TO-15	METHOD
Cyclohexane	4.0		2.4		ppbv	As Recd	4.820	EPA TO-15	METHOD
Benzene	2.6		2.4		ppbv	As Recd	4.820	EPA TO-15	METHOD
Toluene	200		2.4		ppbv	As Recd	4.820	EPA TO-15	METHOD
Ethylbenzene	4.2		2.4		ppbv	As Recd	4.820	EPA TO-15	METHOD
m,p-Xylenes	16		2.4		ppbv	As Recd	4.820	EPA TO-15	METHOD
o-Xylene	4.5		2.4		ppbv	As Recd	4.820	EPA TO-15	METHOD
Carbon Dioxide	58,000		2,400		ppmv	As Recd	2.410	ASTM D1946-90	METHOD
Oxygen	36,000		2,400		ppmv	As Recd	2.410	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	790		120	18	ppbv	As Recd	2.410	EPA TO-3	METHOD

Client Sample ID : SG-C

Laboratory Sample ID :

286995-011

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	15		8.6		ppbv	As Recd	4.280	EPA TO-15	METHOD
Carbon Disulfide	11		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
n-Hexane	210		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
2-Butanone	3.2		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
Cyclohexane	4.8		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
Benzene	3.3		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
n-Heptane	2.4		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
Toluene	74		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
Tetrachloroethene	2.9		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
m,p-Xylenes	4.9		2.1		ppbv	As Recd	4.280	EPA TO-15	METHOD
Carbon Dioxide	60,000		2,100		ppmv	As Recd	2.140	ASTM D1946-90	METHOD
Oxygen	37,000		2,100		ppmv	As Recd	2.140	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	840		110	16	ppbv	As Recd	2.140	EPA TO-3	METHOD

J = Estimated value

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-H	Diln Fac:	5.910
Lab ID:	286995-001	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	3.0	ND	15
Freon 114	ND	3.0	ND	21
Chloromethane	ND	3.0	ND	6.1
Vinyl Chloride	ND	3.0	ND	7.6
1,3-Butadiene	3.0	3.0	6.6	6.5
Bromomethane	ND	3.0	ND	11
Chloroethane	ND	3.0	ND	7.8
Trichlorofluoromethane	ND	3.0	ND	17
Acrolein	ND	12	ND	27
1,1-Dichloroethene	ND	3.0	ND	12
Freon 113	ND	3.0	ND	23
Acetone	29	12	69	28
Carbon Disulfide	57	3.0	180	9.2
Isopropanol	ND	12	ND	29
Methylene Chloride	ND	9.9	ND	34
trans-1,2-Dichloroethene	ND	3.0	ND	12
MTBE	ND	3.0	ND	11
n-Hexane	460	3.0	1,600	10
1,1-Dichloroethane	ND	3.0	ND	12
Vinyl Acetate	ND	3.0	ND	10
cis-1,2-Dichloroethene	ND	3.0	ND	12
2-Butanone	ND	3.0	ND	8.7
Ethyl Acetate	ND	3.0	ND	11
Tetrahydrofuran	ND	3.0	ND	8.7
Chloroform	ND	3.0	ND	14
1,1,1-Trichloroethane	ND	3.0	ND	16
Cyclohexane	8.8	3.0	30	10
Carbon Tetrachloride	ND	3.0	ND	19
Benzene	ND	3.0	ND	9.4
1,2-Dichloroethane	ND	3.0	ND	12
n-Heptane	5.4	3.0	22	12
Trichloroethene	ND	3.0	ND	16
1,2-Dichloropropane	ND	3.0	ND	14
Bromodichloromethane	ND	3.0	ND	20
cis-1,3-Dichloropropene	ND	3.0	ND	13

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-H	Diln Fac:	5.910
Lab ID:	286995-001	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	3.0	ND	12
Toluene	230	3.0	870	11
trans-1,3-Dichloropropene	ND	3.0	ND	13
1,1,2-Trichloroethane	ND	3.0	ND	16
Tetrachloroethene	ND	3.0	ND	20
2-Hexanone	ND	3.0	ND	12
Dibromochloromethane	ND	3.0	ND	25
1,2-Dibromoethane	ND	3.0	ND	23
Chlorobenzene	ND	3.0	ND	14
Ethylbenzene	5.0	3.0	22	13
m,p-Xylenes	23	3.0	98	13
o-Xylene	5.8	3.0	25	13
Styrene	ND	3.0	ND	13
Bromoform	ND	3.0	ND	31
1,1,2,2-Tetrachloroethane	ND	3.0	ND	20
4-Ethyltoluene	ND	3.0	ND	15
1,3,5-Trimethylbenzene	ND	3.0	ND	15
1,2,4-Trimethylbenzene	ND	3.0	ND	15
1,3-Dichlorobenzene	ND	3.0	ND	18
1,4-Dichlorobenzene	ND	3.0	ND	18
Benzyl chloride	ND	3.0	ND	15
1,2-Dichlorobenzene	ND	3.0	ND	18
1,2,4-Trichlorobenzene	ND	3.0	ND	22
Hexachlorobutadiene	ND	9.9	ND	110
Naphthalene	ND	12	ND	62

Surrogate	%REC	Limits
Bromofluorobenzene	91	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-G	Units (M):	ug/m3
Lab ID:	286995-002	Sampled:	03/14/17
Matrix:	Air	Received:	03/14/17
Units (V):	ppbv	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#
Freon 12	ND	1.9	ND	9.2	3.720	245510
Freon 114	ND	1.9	ND	13	3.720	245510
Chloromethane	ND	1.9	ND	3.8	3.720	245510
Vinyl Chloride	ND	1.9	ND	4.8	3.720	245510
1,3-Butadiene	2.4	1.9	5.2	4.1	3.720	245510
Bromomethane	ND	1.9	ND	7.2	3.720	245510
Chloroethane	ND	1.9	ND	4.9	3.720	245510
Trichlorofluoromethane	ND	1.9	ND	10	3.720	245510
Acrolein	ND	7.4	ND	17	3.720	245510
1,1-Dichloroethene	ND	1.9	ND	7.4	3.720	245510
Freon 113	ND	1.9	ND	14	3.720	245510
Acetone	87	7.4	210	18	3.720	245510
Carbon Disulfide	13	1.9	42	5.8	3.720	245510
Isopropanol	ND	7.4	ND	18	3.720	245510
Methylene Chloride	ND	6.2	ND	22	3.720	245510
trans-1,2-Dichloroethene	ND	1.9	ND	7.4	3.720	245510
MTBE	ND	1.9	ND	6.7	3.720	245510
n-Hexane	290	1.9	1,000	6.6	3.720	245510
1,1-Dichloroethane	ND	1.9	ND	7.5	3.720	245510
Vinyl Acetate	ND	1.9	ND	6.5	3.720	245510
cis-1,2-Dichloroethene	ND	1.9	ND	7.4	3.720	245510
2-Butanone	2.6	1.9	7.5	5.5	3.720	245510
Ethyl Acetate	ND	1.9	ND	6.7	3.720	245510
Tetrahydrofuran	ND	1.9	ND	5.5	3.720	245510
Chloroform	ND	1.9	ND	9.1	3.720	245510
1,1,1-Trichloroethane	ND	1.9	ND	10	3.720	245510
Cyclohexane	6.4	1.9	22	6.4	3.720	245510
Carbon Tetrachloride	ND	1.9	ND	12	3.720	245510
Benzene	2.6	1.9	8.5	5.9	3.720	245510
1,2-Dichloroethane	ND	1.9	ND	7.5	3.720	245510
n-Heptane	3.6	1.9	15	7.6	3.720	245510
Trichloroethene	ND	1.9	ND	10	3.720	245510
1,2-Dichloropropane	ND	1.9	ND	8.6	3.720	245510
Bromodichloromethane	ND	1.9	ND	12	3.720	245510
cis-1,3-Dichloropropene	ND	1.9	ND	8.4	3.720	245510
4-Methyl-2-Pentanone	ND	1.9	ND	7.6	3.720	245510

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-G	Units (M):	ug/m3
Lab ID:	286995-002	Sampled:	03/14/17
Matrix:	Air	Received:	03/14/17
Units (V):	ppbv	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#
Toluene	480	2.8	1,800	11	5.580	245562
trans-1,3-Dichloropropene	ND	1.9	ND	8.4	3.720	245510
1,1,2-Trichloroethane	ND	1.9	ND	10	3.720	245510
Tetrachloroethene	ND	1.9	ND	13	3.720	245510
2-Hexanone	ND	1.9	ND	7.6	3.720	245510
Dibromochloromethane	ND	1.9	ND	16	3.720	245510
1,2-Dibromoethane	ND	1.9	ND	14	3.720	245510
Chlorobenzene	ND	1.9	ND	8.6	3.720	245510
Ethylbenzene	7.2	1.9	31	8.1	3.720	245510
m,p-Xylenes	29	1.9	130	8.1	3.720	245510
o-Xylene	7.5	1.9	33	8.1	3.720	245510
Styrene	ND	1.9	ND	7.9	3.720	245510
Bromoform	ND	1.9	ND	19	3.720	245510
1,1,2,2-Tetrachloroethane	ND	1.9	ND	13	3.720	245510
4-Ethyltoluene	ND	1.9	ND	9.1	3.720	245510
1,3,5-Trimethylbenzene	ND	1.9	ND	9.1	3.720	245510
1,2,4-Trimethylbenzene	ND	1.9	ND	9.1	3.720	245510
1,3-Dichlorobenzene	ND	1.9	ND	11	3.720	245510
1,4-Dichlorobenzene	ND	1.9	ND	11	3.720	245510
Benzyl chloride	ND	1.9	ND	9.6	3.720	245510
1,2-Dichlorobenzene	ND	1.9	ND	11	3.720	245510
1,2,4-Trichlorobenzene	ND	1.9	ND	14	3.720	245510
Hexachlorobutadiene	ND	6.2	ND	66	3.720	245510
Naphthalene	ND	7.4	ND	39	3.720	245510

Surrogate	%REC	Limits	Diln Fac	Batch#
Bromofluorobenzene	93	80-120	3.720	245510

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-M	Diln Fac:	2.300
Lab ID:	286995-003	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.2	ND	5.7
Freon 114	ND	1.2	ND	8.0
Chloromethane	ND	1.2	ND	2.4
Vinyl Chloride	ND	1.2	ND	2.9
1,3-Butadiene	ND	1.2	ND	2.5
Bromomethane	ND	1.2	ND	4.5
Chloroethane	ND	1.2	ND	3.0
Trichlorofluoromethane	ND	1.2	ND	6.5
Acrolein	ND	4.6	ND	11
1,1-Dichloroethene	ND	1.2	ND	4.6
Freon 113	ND	1.2	ND	8.8
Acetone	13	4.6	31	11
Carbon Disulfide	13	1.2	40	3.6
Isopropanol	5.4	4.6	13	11
Methylene Chloride	ND	3.8	ND	13
trans-1,2-Dichloroethene	ND	1.2	ND	4.6
MTBE	ND	1.2	ND	4.1
n-Hexane	40	1.2	140	4.1
1,1-Dichloroethane	ND	1.2	ND	4.7
Vinyl Acetate	ND	1.2	ND	4.0
cis-1,2-Dichloroethene	ND	1.2	ND	4.6
2-Butanone	2.2	1.2	6.6	3.4
Ethyl Acetate	ND	1.2	ND	4.1
Tetrahydrofuran	ND	1.2	ND	3.4
Chloroform	ND	1.2	ND	5.6
1,1,1-Trichloroethane	ND	1.2	ND	6.3
Cyclohexane	ND	1.2	ND	4.0
Carbon Tetrachloride	ND	1.2	ND	7.2
Benzene	1.5	1.2	4.8	3.7
1,2-Dichloroethane	ND	1.2	ND	4.7
n-Heptane	1.5	1.2	6.2	4.7
Trichloroethene	ND	1.2	ND	6.2
1,2-Dichloropropane	ND	1.2	ND	5.3
Bromodichloromethane	ND	1.2	ND	7.7
cis-1,3-Dichloropropene	ND	1.2	ND	5.2

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-M	Diln Fac:	2.300
Lab ID:	286995-003	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.2	ND	4.7
Toluene	68	1.2	260	4.3
trans-1,3-Dichloropropene	ND	1.2	ND	5.2
1,1,2-Trichloroethane	ND	1.2	ND	6.3
Tetrachloroethene	ND	1.2	ND	7.8
2-Hexanone	ND	1.2	ND	4.7
Dibromochloromethane	ND	1.2	ND	9.8
1,2-Dibromoethane	ND	1.2	ND	8.8
Chlorobenzene	ND	1.2	ND	5.3
Ethylbenzene	2.2	1.2	9.4	5.0
m,p-Xylenes	9.3	1.2	40	5.0
o-Xylene	2.6	1.2	11	5.0
Styrene	ND	1.2	ND	4.9
Bromoform	ND	1.2	ND	12
1,1,2,2-Tetrachloroethane	ND	1.2	ND	7.9
4-Ethyltoluene	ND	1.2	ND	5.7
1,3,5-Trimethylbenzene	ND	1.2	ND	5.7
1,2,4-Trimethylbenzene	ND	1.2	ND	5.7
1,3-Dichlorobenzene	ND	1.2	ND	6.9
1,4-Dichlorobenzene	ND	1.2	ND	6.9
Benzyl chloride	ND	1.2	ND	6.0
1,2-Dichlorobenzene	ND	1.2	ND	6.9
1,2,4-Trichlorobenzene	ND	1.2	ND	8.5
Hexachlorobutadiene	ND	3.8	ND	41
Naphthalene	ND	4.6	ND	24

Surrogate	%REC	Limits
Bromofluorobenzene	96	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-N	Diln Fac:	2.350
Lab ID:	286995-004	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.2	ND	5.8
Freon 114	ND	1.2	ND	8.2
Chloromethane	ND	1.2	ND	2.4
Vinyl Chloride	ND	1.2	ND	3.0
1,3-Butadiene	ND	1.2	ND	2.6
Bromomethane	ND	1.2	ND	4.6
Chloroethane	ND	1.2	ND	3.1
Trichlorofluoromethane	ND	1.2	ND	6.6
Acrolein	ND	4.7	ND	11
1,1-Dichloroethene	ND	1.2	ND	4.7
Freon 113	ND	1.2	ND	9.0
Acetone	30	4.7	72	11
Carbon Disulfide	2.4	1.2	7.6	3.7
Isopropanol	ND	4.7	ND	12
Methylene Chloride	ND	3.9	ND	14
trans-1,2-Dichloroethene	ND	1.2	ND	4.7
MTBE	ND	1.2	ND	4.2
n-Hexane	51	1.2	180	4.1
1,1-Dichloroethane	ND	1.2	ND	4.8
Vinyl Acetate	ND	1.2	ND	4.1
cis-1,2-Dichloroethene	ND	1.2	ND	4.7
2-Butanone	3.0	1.2	8.7	3.5
Ethyl Acetate	ND	1.2	ND	4.2
Tetrahydrofuran	ND	1.2	ND	3.5
Chloroform	ND	1.2	ND	5.7
1,1,1-Trichloroethane	ND	1.2	ND	6.4
Cyclohexane	ND	1.2	ND	4.0
Carbon Tetrachloride	ND	1.2	ND	7.4
Benzene	ND	1.2	ND	3.8
1,2-Dichloroethane	ND	1.2	ND	4.8
n-Heptane	ND	1.2	ND	4.8
Trichloroethene	ND	1.2	ND	6.3
1,2-Dichloropropane	ND	1.2	ND	5.4
Bromodichloromethane	ND	1.2	ND	7.9
cis-1,3-Dichloropropene	ND	1.2	ND	5.3

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-N	Diln Fac:	2.350
Lab ID:	286995-004	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.2	ND	4.8
Toluene	110	1.2	400	4.4
trans-1,3-Dichloropropene	ND	1.2	ND	5.3
1,1,2-Trichloroethane	ND	1.2	ND	6.4
Tetrachloroethene	ND	1.2	ND	8.0
2-Hexanone	ND	1.2	ND	4.8
Dibromochloromethane	ND	1.2	ND	10
1,2-Dibromoethane	ND	1.2	ND	9.0
Chlorobenzene	ND	1.2	ND	5.4
Ethylbenzene	4.1	1.2	18	5.1
m,p-Xylenes	20	1.2	87	5.1
o-Xylene	6.6	1.2	29	5.1
Styrene	ND	1.2	ND	5.0
Bromoform	ND	1.2	ND	12
1,1,2,2-Tetrachloroethane	ND	1.2	ND	8.1
4-Ethyltoluene	ND	1.2	ND	5.8
1,3,5-Trimethylbenzene	ND	1.2	ND	5.8
1,2,4-Trimethylbenzene	1.4	1.2	6.9	5.8
1,3-Dichlorobenzene	ND	1.2	ND	7.1
1,4-Dichlorobenzene	ND	1.2	ND	7.1
Benzyl chloride	ND	1.2	ND	6.1
1,2-Dichlorobenzene	ND	1.2	ND	7.1
1,2,4-Trichlorobenzene	ND	1.2	ND	8.7
Hexachlorobutadiene	ND	3.9	ND	42
Naphthalene	ND	4.7	ND	25

Surrogate	%REC	Limits
Bromofluorobenzene	98	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-D	Diln Fac:	1.970
Lab ID:	286995-005	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.99	ND	4.9
Freon 114	ND	0.99	ND	6.9
Chloromethane	ND	0.99	ND	2.0
Vinyl Chloride	ND	0.99	ND	2.5
1,3-Butadiene	ND	0.99	ND	2.2
Bromomethane	ND	0.99	ND	3.8
Chloroethane	ND	0.99	ND	2.6
Trichlorofluoromethane	ND	0.99	ND	5.5
Acrolein	ND	3.9	ND	9.0
1,1-Dichloroethene	ND	0.99	ND	3.9
Freon 113	ND	0.99	ND	7.5
Acetone	ND	3.9	ND	9.4
Carbon Disulfide	ND	0.99	ND	3.1
Isopropanol	ND	3.9	ND	9.7
Methylene Chloride	ND	3.3	ND	11
trans-1,2-Dichloroethene	ND	0.99	ND	3.9
MTBE	ND	0.99	ND	3.6
n-Hexane	ND	0.99	ND	3.5
1,1-Dichloroethane	ND	0.99	ND	4.0
Vinyl Acetate	ND	0.99	ND	3.5
cis-1,2-Dichloroethene	ND	0.99	ND	3.9
2-Butanone	ND	0.99	ND	2.9
Ethyl Acetate	ND	0.99	ND	3.5
Tetrahydrofuran	ND	0.99	ND	2.9
Chloroform	ND	0.99	ND	4.8
1,1,1-Trichloroethane	ND	0.99	ND	5.4
Cyclohexane	ND	0.99	ND	3.4
Carbon Tetrachloride	ND	0.99	ND	6.2
Benzene	ND	0.99	ND	3.1
1,2-Dichloroethane	ND	0.99	ND	4.0
n-Heptane	ND	0.99	ND	4.0
Trichloroethene	ND	0.99	ND	5.3
1,2-Dichloropropane	ND	0.99	ND	4.6
Bromodichloromethane	ND	0.99	ND	6.6
cis-1,3-Dichloropropene	ND	0.99	ND	4.5

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-D	Diln Fac:	1.970
Lab ID:	286995-005	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.99	ND	4.0
Toluene	2.5	0.99	9.5	3.7
trans-1,3-Dichloropropene	ND	0.99	ND	4.5
1,1,2-Trichloroethane	ND	0.99	ND	5.4
Tetrachloroethene	ND	0.99	ND	6.7
2-Hexanone	ND	0.99	ND	4.0
Dibromochloromethane	ND	0.99	ND	8.4
1,2-Dibromoethane	ND	0.99	ND	7.6
Chlorobenzene	ND	0.99	ND	4.5
Ethylbenzene	ND	0.99	ND	4.3
m,p-Xylenes	ND	0.99	ND	4.3
o-Xylene	ND	0.99	ND	4.3
Styrene	ND	0.99	ND	4.2
Bromoform	ND	0.99	ND	10
1,1,2,2-Tetrachloroethane	ND	0.99	ND	6.8
4-Ethyltoluene	ND	0.99	ND	4.8
1,3,5-Trimethylbenzene	ND	0.99	ND	4.8
1,2,4-Trimethylbenzene	ND	0.99	ND	4.8
1,3-Dichlorobenzene	ND	0.99	ND	5.9
1,4-Dichlorobenzene	ND	0.99	ND	5.9
Benzyl chloride	ND	0.99	ND	5.1
1,2-Dichlorobenzene	ND	0.99	ND	5.9
1,2,4-Trichlorobenzene	ND	0.99	ND	7.3
Hexachlorobutadiene	ND	3.3	ND	35
Naphthalene	ND	3.9	ND	21

Surrogate	%REC	Limits
Bromofluorobenzene	93	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-DUP	Diln Fac:	2.340
Lab ID:	286995-006	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.2	ND	5.8
Freon 114	ND	1.2	ND	8.2
Chloromethane	ND	1.2	ND	2.4
Vinyl Chloride	ND	1.2	ND	3.0
1,3-Butadiene	ND	1.2	ND	2.6
Bromomethane	ND	1.2	ND	4.5
Chloroethane	ND	1.2	ND	3.1
Trichlorofluoromethane	ND	1.2	ND	6.6
Acrolein	ND	4.7	ND	11
1,1-Dichloroethene	ND	1.2	ND	4.6
Freon 113	ND	1.2	ND	9.0
Acetone	30	4.7	72	11
Carbon Disulfide	2.5	1.2	7.7	3.6
Isopropanol	ND	4.7	ND	12
Methylene Chloride	ND	3.9	ND	14
trans-1,2-Dichloroethene	ND	1.2	ND	4.6
MTBE	ND	1.2	ND	4.2
n-Hexane	53	1.2	190	4.1
1,1-Dichloroethane	ND	1.2	ND	4.7
Vinyl Acetate	ND	1.2	ND	4.1
cis-1,2-Dichloroethene	ND	1.2	ND	4.6
2-Butanone	3.0	1.2	9.0	3.5
Ethyl Acetate	ND	1.2	ND	4.2
Tetrahydrofuran	ND	1.2	ND	3.5
Chloroform	ND	1.2	ND	5.7
1,1,1-Trichloroethane	ND	1.2	ND	6.4
Cyclohexane	ND	1.2	ND	4.0
Carbon Tetrachloride	ND	1.2	ND	7.4
Benzene	ND	1.2	ND	3.7
1,2-Dichloroethane	ND	1.2	ND	4.7
n-Heptane	ND	1.2	ND	4.8
Trichloroethene	ND	1.2	ND	6.3
1,2-Dichloropropane	ND	1.2	ND	5.4
Bromodichloromethane	ND	1.2	ND	7.8
cis-1,3-Dichloropropene	ND	1.2	ND	5.3

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-DUP	Diln Fac:	2.340
Lab ID:	286995-006	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.2	ND	4.8
Toluene	110	1.2	410	4.4
trans-1,3-Dichloropropene	ND	1.2	ND	5.3
1,1,2-Trichloroethane	ND	1.2	ND	6.4
Tetrachloroethene	ND	1.2	ND	7.9
2-Hexanone	ND	1.2	ND	4.8
Dibromochloromethane	ND	1.2	ND	10
1,2-Dibromoethane	ND	1.2	ND	9.0
Chlorobenzene	ND	1.2	ND	5.4
Ethylbenzene	4.1	1.2	18	5.1
m,p-Xylenes	21	1.2	89	5.1
o-Xylene	6.4	1.2	28	5.1
Styrene	ND	1.2	ND	5.0
Bromoform	ND	1.2	ND	12
1,1,2,2-Tetrachloroethane	ND	1.2	ND	8.0
4-Ethyltoluene	ND	1.2	ND	5.8
1,3,5-Trimethylbenzene	ND	1.2	ND	5.8
1,2,4-Trimethylbenzene	1.4	1.2	6.8	5.8
1,3-Dichlorobenzene	ND	1.2	ND	7.0
1,4-Dichlorobenzene	ND	1.2	ND	7.0
Benzyl chloride	ND	1.2	ND	6.1
1,2-Dichlorobenzene	ND	1.2	ND	7.0
1,2,4-Trichlorobenzene	ND	1.2	ND	8.7
Hexachlorobutadiene	ND	3.9	ND	42
Naphthalene	ND	4.7	ND	25

Surrogate	%REC	Limits
Bromofluorobenzene	94	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-J	Diln Fac:	2.100
Lab ID:	286995-007	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.1	ND	5.2
Freon 114	ND	1.1	ND	7.3
Chloromethane	ND	1.1	ND	2.2
Vinyl Chloride	ND	1.1	ND	2.7
1,3-Butadiene	ND	1.1	ND	2.3
Bromomethane	ND	1.1	ND	4.1
Chloroethane	ND	1.1	ND	2.8
Trichlorofluoromethane	ND	1.1	ND	5.9
Acrolein	ND	4.2	ND	9.6
1,1-Dichloroethene	ND	1.1	ND	4.2
Freon 113	ND	1.1	ND	8.0
Acetone	ND	4.2	ND	10
Carbon Disulfide	9.8	1.1	31	3.3
Isopropanol	ND	4.2	ND	10
Methylene Chloride	ND	3.5	ND	12
trans-1,2-Dichloroethene	ND	1.1	ND	4.2
MTBE	ND	1.1	ND	3.8
n-Hexane	4.2	1.1	15	3.7
1,1-Dichloroethane	ND	1.1	ND	4.2
Vinyl Acetate	ND	1.1	ND	3.7
cis-1,2-Dichloroethene	ND	1.1	ND	4.2
2-Butanone	ND	1.1	ND	3.1
Ethyl Acetate	ND	1.1	ND	3.8
Tetrahydrofuran	ND	1.1	ND	3.1
Chloroform	ND	1.1	ND	5.1
1,1,1-Trichloroethane	ND	1.1	ND	5.7
Cyclohexane	ND	1.1	ND	3.6
Carbon Tetrachloride	ND	1.1	ND	6.6
Benzene	ND	1.1	ND	3.4
1,2-Dichloroethane	ND	1.1	ND	4.2
n-Heptane	ND	1.1	ND	4.3
Trichloroethene	ND	1.1	ND	5.6
1,2-Dichloropropane	ND	1.1	ND	4.9
Bromodichloromethane	ND	1.1	ND	7.0
cis-1,3-Dichloropropene	ND	1.1	ND	4.8

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-J	Diln Fac:	2.100
Lab ID:	286995-007	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.1	ND	4.3
Toluene	6.5	1.1	24	4.0
trans-1,3-Dichloropropene	ND	1.1	ND	4.8
1,1,2-Trichloroethane	ND	1.1	ND	5.7
Tetrachloroethene	ND	1.1	ND	7.1
2-Hexanone	ND	1.1	ND	4.3
Dibromochloromethane	ND	1.1	ND	8.9
1,2-Dibromoethane	ND	1.1	ND	8.1
Chlorobenzene	ND	1.1	ND	4.8
Ethylbenzene	ND	1.1	ND	4.6
m,p-Xylenes	ND	1.1	ND	4.6
o-Xylene	ND	1.1	ND	4.6
Styrene	ND	1.1	ND	4.5
Bromoform	ND	1.1	ND	11
1,1,2,2-Tetrachloroethane	ND	1.1	ND	7.2
4-Ethyltoluene	ND	1.1	ND	5.2
1,3,5-Trimethylbenzene	ND	1.1	ND	5.2
1,2,4-Trimethylbenzene	ND	1.1	ND	5.2
1,3-Dichlorobenzene	ND	1.1	ND	6.3
1,4-Dichlorobenzene	ND	1.1	ND	6.3
Benzyl chloride	ND	1.1	ND	5.4
1,2-Dichlorobenzene	ND	1.1	ND	6.3
1,2,4-Trichlorobenzene	ND	1.1	ND	7.8
Hexachlorobutadiene	ND	3.5	ND	37
Naphthalene	ND	4.2	ND	22

Surrogate	%REC	Limits
Bromofluorobenzene	96	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-L	Units (M):	ug/m3
Lab ID:	286995-008	Sampled:	03/14/17
Matrix:	Air	Received:	03/14/17
Units (V):	ppbv	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#
Freon 12	ND	2.2	ND	11	4.380	245510
Freon 114	ND	2.2	ND	15	4.380	245510
Chloromethane	ND	2.2	ND	4.5	4.380	245510
Vinyl Chloride	ND	2.2	ND	5.6	4.380	245510
1,3-Butadiene	ND	2.2	ND	4.8	4.380	245510
Bromomethane	ND	2.2	ND	8.5	4.380	245510
Chloroethane	ND	2.2	ND	5.8	4.380	245510
Trichlorofluoromethane	ND	2.2	ND	12	4.380	245510
Acrolein	ND	8.8	ND	20	4.380	245510
1,1-Dichloroethene	ND	2.2	ND	8.7	4.380	245510
Freon 113	ND	2.2	ND	17	4.380	245510
Acetone	25	8.8	61	21	4.380	245510
Carbon Disulfide	59	2.2	180	6.8	4.380	245510
Isopropanol	ND	8.8	ND	22	4.380	245510
Methylene Chloride	ND	7.3	ND	25	4.380	245510
trans-1,2-Dichloroethene	ND	2.2	ND	8.7	4.380	245510
MTBE	ND	2.2	ND	7.9	4.380	245510
n-Hexane	610	3.3	2,100	12	6.570	245562
1,1-Dichloroethane	ND	2.2	ND	8.9	4.380	245510
Vinyl Acetate	ND	2.2	ND	7.7	4.380	245510
cis-1,2-Dichloroethene	ND	2.2	ND	8.7	4.380	245510
2-Butanone	3.6	2.2	11	6.5	4.380	245510
Ethyl Acetate	ND	2.2	ND	7.9	4.380	245510
Tetrahydrofuran	ND	2.2	ND	6.5	4.380	245510
Chloroform	ND	2.2	ND	11	4.380	245510
1,1,1-Trichloroethane	ND	2.2	ND	12	4.380	245510
Cyclohexane	8.7	2.2	30	7.5	4.380	245510
Carbon Tetrachloride	ND	2.2	ND	14	4.380	245510
Benzene	3.3	2.2	11	7.0	4.380	245510
1,2-Dichloroethane	ND	2.2	ND	8.9	4.380	245510
n-Heptane	6.8	2.2	28	9.0	4.380	245510
Trichloroethene	ND	2.2	ND	12	4.380	245510
1,2-Dichloropropane	ND	2.2	ND	10	4.380	245510
Bromodichloromethane	ND	2.2	ND	15	4.380	245510
cis-1,3-Dichloropropene	ND	2.2	ND	9.9	4.380	245510
4-Methyl-2-Pentanone	ND	2.2	ND	9.0	4.380	245510

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-L	Units (M):	ug/m3
Lab ID:	286995-008	Sampled:	03/14/17
Matrix:	Air	Received:	03/14/17
Units (V):	ppbv	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#
Toluene	400	2.2	1,500	8.3	4.380	245510
trans-1,3-Dichloropropene	ND	2.2	ND	9.9	4.380	245510
1,1,2-Trichloroethane	ND	2.2	ND	12	4.380	245510
Tetrachloroethene	ND	2.2	ND	15	4.380	245510
2-Hexanone	ND	2.2	ND	9.0	4.380	245510
Dibromochloromethane	ND	2.2	ND	19	4.380	245510
1,2-Dibromoethane	ND	2.2	ND	17	4.380	245510
Chlorobenzene	ND	2.2	ND	10	4.380	245510
Ethylbenzene	7.6	2.2	33	9.5	4.380	245510
m,p-Xylenes	31	2.2	130	9.5	4.380	245510
o-Xylene	7.7	2.2	33	9.5	4.380	245510
Styrene	ND	2.2	ND	9.3	4.380	245510
Bromoform	ND	2.2	ND	23	4.380	245510
1,1,2,2-Tetrachloroethane	ND	2.2	ND	15	4.380	245510
4-Ethyltoluene	ND	2.2	ND	11	4.380	245510
1,3,5-Trimethylbenzene	ND	2.2	ND	11	4.380	245510
1,2,4-Trimethylbenzene	ND	2.2	ND	11	4.380	245510
1,3-Dichlorobenzene	ND	2.2	ND	13	4.380	245510
1,4-Dichlorobenzene	ND	2.2	ND	13	4.380	245510
Benzyl chloride	ND	2.2	ND	11	4.380	245510
1,2-Dichlorobenzene	ND	2.2	ND	13	4.380	245510
1,2,4-Trichlorobenzene	ND	2.2	ND	16	4.380	245510
Hexachlorobutadiene	ND	7.3	ND	78	4.380	245510
Naphthalene	ND	8.8	ND	46	4.380	245510

Surrogate	%REC	Limits	Diln Fac	Batch#
Bromofluorobenzene	91	80-120	4.380	245510

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-I	Diln Fac:	2.250
Lab ID:	286995-009	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.1	ND	5.6
Freon 114	ND	1.1	ND	7.9
Chloromethane	ND	1.1	ND	2.3
Vinyl Chloride	ND	1.1	ND	2.9
1,3-Butadiene	ND	1.1	ND	2.5
Bromomethane	ND	1.1	ND	4.4
Chloroethane	ND	1.1	ND	3.0
Trichlorofluoromethane	ND	1.1	ND	6.3
Acrolein	ND	4.5	ND	10
1,1-Dichloroethene	ND	1.1	ND	4.5
Freon 113	ND	1.1	ND	8.6
Acetone	8.7	4.5	21	11
Carbon Disulfide	1.8	1.1	5.6	3.5
Isopropanol	ND	4.5	ND	11
Methylene Chloride	ND	3.8	ND	13
trans-1,2-Dichloroethene	ND	1.1	ND	4.5
MTBE	ND	1.1	ND	4.1
n-Hexane	4.2	1.1	15	4.0
1,1-Dichloroethane	ND	1.1	ND	4.6
Vinyl Acetate	ND	1.1	ND	4.0
cis-1,2-Dichloroethene	ND	1.1	ND	4.5
2-Butanone	1.2	1.1	3.6	3.3
Ethyl Acetate	ND	1.1	ND	4.1
Tetrahydrofuran	ND	1.1	ND	3.3
Chloroform	ND	1.1	ND	5.5
1,1,1-Trichloroethane	ND	1.1	ND	6.1
Cyclohexane	ND	1.1	ND	3.9
Carbon Tetrachloride	ND	1.1	ND	7.1
Benzene	ND	1.1	ND	3.6
1,2-Dichloroethane	ND	1.1	ND	4.6
n-Heptane	ND	1.1	ND	4.6
Trichloroethene	ND	1.1	ND	6.0
1,2-Dichloropropane	ND	1.1	ND	5.2
Bromodichloromethane	ND	1.1	ND	7.5
cis-1,3-Dichloropropene	ND	1.1	ND	5.1

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-I	Diln Fac:	2.250
Lab ID:	286995-009	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.1	ND	4.6
Toluene	21	1.1	80	4.2
trans-1,3-Dichloropropene	ND	1.1	ND	5.1
1,1,2-Trichloroethane	ND	1.1	ND	6.1
Tetrachloroethene	ND	1.1	ND	7.6
2-Hexanone	ND	1.1	ND	4.6
Dibromochloromethane	ND	1.1	ND	9.6
1,2-Dibromoethane	ND	1.1	ND	8.6
Chlorobenzene	ND	1.1	ND	5.2
Ethylbenzene	ND	1.1	ND	4.9
m,p-Xylenes	2.5	1.1	11	4.9
o-Xylene	ND	1.1	ND	4.9
Styrene	ND	1.1	ND	4.8
Bromoform	ND	1.1	ND	12
1,1,2,2-Tetrachloroethane	ND	1.1	ND	7.7
4-Ethyltoluene	ND	1.1	ND	5.5
1,3,5-Trimethylbenzene	ND	1.1	ND	5.5
1,2,4-Trimethylbenzene	ND	1.1	ND	5.5
1,3-Dichlorobenzene	ND	1.1	ND	6.8
1,4-Dichlorobenzene	ND	1.1	ND	6.8
Benzyl chloride	ND	1.1	ND	5.8
1,2-Dichlorobenzene	ND	1.1	ND	6.8
1,2,4-Trichlorobenzene	ND	1.1	ND	8.3
Hexachlorobutadiene	ND	3.8	ND	40
Naphthalene	ND	4.5	ND	24

Surrogate	%REC	Limits
Bromofluorobenzene	96	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-B	Diln Fac:	4.820
Lab ID:	286995-010	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	2.4	ND	12
Freon 114	ND	2.4	ND	17
Chloromethane	ND	2.4	ND	5.0
Vinyl Chloride	ND	2.4	ND	6.2
1,3-Butadiene	ND	2.4	ND	5.3
Bromomethane	ND	2.4	ND	9.4
Chloroethane	ND	2.4	ND	6.4
Trichlorofluoromethane	ND	2.4	ND	14
Acrolein	ND	9.6	ND	22
1,1-Dichloroethene	ND	2.4	ND	9.6
Freon 113	ND	2.4	ND	18
Acetone	18	9.6	43	23
Carbon Disulfide	11	2.4	35	7.5
Isopropanol	ND	9.6	ND	24
Methylene Chloride	ND	8.0	ND	28
trans-1,2-Dichloroethene	ND	2.4	ND	9.6
MTBE	ND	2.4	ND	8.7
n-Hexane	230	2.4	820	8.5
1,1-Dichloroethane	ND	2.4	ND	9.8
Vinyl Acetate	ND	2.4	ND	8.5
cis-1,2-Dichloroethene	ND	2.4	ND	9.6
2-Butanone	ND	2.4	ND	7.1
Ethyl Acetate	ND	2.4	ND	8.7
Tetrahydrofuran	ND	2.4	ND	7.1
Chloroform	ND	2.4	ND	12
1,1,1-Trichloroethane	ND	2.4	ND	13
Cyclohexane	4.0	2.4	14	8.3
Carbon Tetrachloride	ND	2.4	ND	15
Benzene	2.6	2.4	8.2	7.7
1,2-Dichloroethane	ND	2.4	ND	9.8
n-Heptane	ND	2.4	ND	9.9
Trichloroethene	ND	2.4	ND	13
1,2-Dichloropropane	ND	2.4	ND	11
Bromodichloromethane	ND	2.4	ND	16
cis-1,3-Dichloropropene	ND	2.4	ND	11

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-B	Diln Fac:	4.820
Lab ID:	286995-010	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	2.4	ND	9.9
Toluene	200	2.4	740	9.1
trans-1,3-Dichloropropene	ND	2.4	ND	11
1,1,2-Trichloroethane	ND	2.4	ND	13
Tetrachloroethene	ND	2.4	ND	16
2-Hexanone	ND	2.4	ND	9.9
Dibromochloromethane	ND	2.4	ND	21
1,2-Dibromoethane	ND	2.4	ND	19
Chlorobenzene	ND	2.4	ND	11
Ethylbenzene	4.2	2.4	18	10
m,p-Xylenes	16	2.4	71	10
o-Xylene	4.5	2.4	20	10
Styrene	ND	2.4	ND	10
Bromoform	ND	2.4	ND	25
1,1,2,2-Tetrachloroethane	ND	2.4	ND	17
4-Ethyltoluene	ND	2.4	ND	12
1,3,5-Trimethylbenzene	ND	2.4	ND	12
1,2,4-Trimethylbenzene	ND	2.4	ND	12
1,3-Dichlorobenzene	ND	2.4	ND	14
1,4-Dichlorobenzene	ND	2.4	ND	14
Benzyl chloride	ND	2.4	ND	12
1,2-Dichlorobenzene	ND	2.4	ND	14
1,2,4-Trichlorobenzene	ND	2.4	ND	18
Hexachlorobutadiene	ND	8.0	ND	86
Naphthalene	ND	9.6	ND	51

Surrogate	%REC	Limits
Bromofluorobenzene	98	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-C	Diln Fac:	4.280
Lab ID:	286995-011	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	2.1	ND	11
Freon 114	ND	2.1	ND	15
Chloromethane	ND	2.1	ND	4.4
Vinyl Chloride	ND	2.1	ND	5.5
1,3-Butadiene	ND	2.1	ND	4.7
Bromomethane	ND	2.1	ND	8.3
Chloroethane	ND	2.1	ND	5.6
Trichlorofluoromethane	ND	2.1	ND	12
Acrolein	ND	8.6	ND	20
1,1-Dichloroethene	ND	2.1	ND	8.5
Freon 113	ND	2.1	ND	16
Acetone	15	8.6	35	20
Carbon Disulfide	11	2.1	35	6.7
Isopropanol	ND	8.6	ND	21
Methylene Chloride	ND	7.1	ND	25
trans-1,2-Dichloroethene	ND	2.1	ND	8.5
MTBE	ND	2.1	ND	7.7
n-Hexane	210	2.1	740	7.5
1,1-Dichloroethane	ND	2.1	ND	8.7
Vinyl Acetate	ND	2.1	ND	7.5
cis-1,2-Dichloroethene	ND	2.1	ND	8.5
2-Butanone	3.2	2.1	9.5	6.3
Ethyl Acetate	ND	2.1	ND	7.7
Tetrahydrofuran	ND	2.1	ND	6.3
Chloroform	ND	2.1	ND	10
1,1,1-Trichloroethane	ND	2.1	ND	12
Cyclohexane	4.8	2.1	17	7.4
Carbon Tetrachloride	ND	2.1	ND	13
Benzene	3.3	2.1	11	6.8
1,2-Dichloroethane	ND	2.1	ND	8.7
n-Heptane	2.4	2.1	9.9	8.8
Trichloroethene	ND	2.1	ND	11
1,2-Dichloropropane	ND	2.1	ND	9.9
Bromodichloromethane	ND	2.1	ND	14
cis-1,3-Dichloropropene	ND	2.1	ND	9.7

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-C	Diln Fac:	4.280
Lab ID:	286995-011	Batch#:	245510
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	2.1	ND	8.8
Toluene	74	2.1	280	8.1
trans-1,3-Dichloropropene	ND	2.1	ND	9.7
1,1,2-Trichloroethane	ND	2.1	ND	12
Tetrachloroethene	2.9	2.1	20	15
2-Hexanone	ND	2.1	ND	8.8
Dibromochloromethane	ND	2.1	ND	18
1,2-Dibromoethane	ND	2.1	ND	16
Chlorobenzene	ND	2.1	ND	9.9
Ethylbenzene	ND	2.1	ND	9.3
m,p-Xylenes	4.9	2.1	21	9.3
o-Xylene	ND	2.1	ND	9.3
Styrene	ND	2.1	ND	9.1
Bromoform	ND	2.1	ND	22
1,1,2,2-Tetrachloroethane	ND	2.1	ND	15
4-Ethyltoluene	ND	2.1	ND	11
1,3,5-Trimethylbenzene	ND	2.1	ND	11
1,2,4-Trimethylbenzene	ND	2.1	ND	11
1,3-Dichlorobenzene	ND	2.1	ND	13
1,4-Dichlorobenzene	ND	2.1	ND	13
Benzyl chloride	ND	2.1	ND	11
1,2-Dichlorobenzene	ND	2.1	ND	13
1,2,4-Trichlorobenzene	ND	2.1	ND	16
Hexachlorobutadiene	ND	7.1	ND	76
Naphthalene	ND	8.6	ND	45

Surrogate	%REC	Limits
Bromofluorobenzene	95	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245510
Units (V):	ppbv	Analyzed:	03/15/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
Bromodichloromethane	5.000	4.637	93	70-130
cis-1,3-Dichloropropene	5.000	4.872	97	70-130
4-Methyl-2-Pentanone	5.000	5.715	114	70-130
Toluene	5.000	5.054	101	70-130
trans-1,3-Dichloropropene	5.000	5.117	102	70-130
1,1,2-Trichloroethane	5.000	4.970	99	70-130
Tetrachloroethene	5.000	4.924	98	70-130
2-Hexanone	5.000	6.139	123	70-130
Dibromochloromethane	5.000	4.366	87	70-130
1,2-Dibromoethane	5.000	4.631	93	70-130
Chlorobenzene	5.000	4.943	99	70-130
Ethylbenzene	5.000	5.206	104	70-130
m,p-Xylenes	10.000	9.915	99	70-130
o-Xylene	5.000	4.965	99	70-130
Styrene	5.000	4.468	89	70-130
Bromoform	5.000	4.478	90	70-130
1,1,2,2-Tetrachloroethane	5.000	4.750	95	70-130
4-Ethyltoluene	5.000	4.431	89	70-130
1,3,5-Trimethylbenzene	5.000	4.264	85	70-130
1,2,4-Trimethylbenzene	5.000	4.431	89	70-130
1,3-Dichlorobenzene	5.000	4.310	86	70-130
1,4-Dichlorobenzene	5.000	4.307	86	70-130
Benzyl chloride	5.000	4.664	93	70-130
1,2-Dichlorobenzene	5.000	4.422	88	70-130
1,2,4-Trichlorobenzene	5.000	4.201	84	70-130
Hexachlorobutadiene	5.000	5.048	101	70-130
Naphthalene	5.000	5.178	104	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	96	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245510
Units (V):	ppbv	Analyzed:	03/15/17
Diln Fac:	1.000		

Type: BSD Lab ID: QC876856

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	5.000	4.253	85	70-130	0	25
Freon 114	5.000	4.304	86	70-130	1	25
Chloromethane	5.000	3.800	76	70-130	4	25
Vinyl Chloride	5.000	4.471	89	70-130	0	25
1,3-Butadiene	5.000	4.249	85	70-130	1	25
Bromomethane	5.000	4.544	91	70-130	0	25
Chloroethane	5.000	4.409	88	70-130	1	25
Trichlorofluoromethane	5.000	4.621	92	70-130	2	25
Acrolein	5.000	4.478	90	70-130	6	25
1,1-Dichloroethene	5.000	5.389	108	70-130	1	25
Freon 113	5.000	5.161	103	70-130	0	25
Acetone	5.000	4.797	96	70-130	2	25
Carbon Disulfide	5.000	5.014	100	70-130	2	25
Isopropanol	5.000	5.054	101	70-130	9	25
Methylene Chloride	5.000	3.907	78	70-130	4	25
trans-1,2-Dichloroethene	5.000	5.428	109	70-130	1	25
MTBE	5.000	4.958	99	70-130	1	25
n-Hexane	5.000	5.120	102	70-130	1	25
1,1-Dichloroethane	5.000	4.998	100	70-130	1	25
Vinyl Acetate	5.000	4.491 b	90	70-130	1	25
cis-1,2-Dichloroethene	5.000	4.992	100	70-130	0	25
2-Butanone	5.000	4.977	100	70-130	0	25
Ethyl Acetate	5.000	6.144	123	70-130	1	25
Tetrahydrofuran	5.000	5.170	103	70-130	1	25
Chloroform	5.000	4.547	91	70-130	0	25
1,1,1-Trichloroethane	5.000	5.012	100	70-130	0	25
Cyclohexane	5.000	5.123	102	70-130	2	25
Carbon Tetrachloride	5.000	3.811	76	70-130	3	25
Benzene	5.000	4.838	97	70-130	0	25
1,2-Dichloroethane	5.000	4.975	100	70-130	3	25
n-Heptane	5.000	5.305	106	70-130	1	25
Trichloroethene	5.000	4.745	95	70-130	2	25
1,2-Dichloropropane	5.000	4.855	97	70-130	3	25

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245510
Units (V):	ppbv	Analyzed:	03/15/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Bromodichloromethane	5.000	4.620	92	70-130	0	25
cis-1,3-Dichloropropene	5.000	4.965	99	70-130	2	25
4-Methyl-2-Pentanone	5.000	5.799	116	70-130	1	25
Toluene	5.000	5.140	103	70-130	2	25
trans-1,3-Dichloropropene	5.000	5.034	101	70-130	2	25
1,1,2-Trichloroethane	5.000	4.726	95	70-130	5	25
Tetrachloroethene	5.000	5.109	102	70-130	4	25
2-Hexanone	5.000	6.146	123	70-130	0	25
Dibromochloromethane	5.000	4.457	89	70-130	2	25
1,2-Dibromoethane	5.000	4.604	92	70-130	1	25
Chlorobenzene	5.000	5.052	101	70-130	2	25
Ethylbenzene	5.000	5.201	104	70-130	0	25
m,p-Xylenes	10.00	9.984	100	70-130	1	25
o-Xylene	5.000	5.158	103	70-130	4	25
Styrene	5.000	4.644	93	70-130	4	25
Bromoform	5.000	4.496	90	70-130	0	25
1,1,2,2-Tetrachloroethane	5.000	4.903	98	70-130	3	25
4-Ethyltoluene	5.000	4.689	94	70-130	6	25
1,3,5-Trimethylbenzene	5.000	4.395	88	70-130	3	25
1,2,4-Trimethylbenzene	5.000	4.383	88	70-130	1	25
1,3-Dichlorobenzene	5.000	4.314	86	70-130	0	25
1,4-Dichlorobenzene	5.000	4.636	93	70-130	7	25
Benzyl chloride	5.000	4.834	97	70-130	4	25
1,2-Dichlorobenzene	5.000	4.756	95	70-130	7	25
1,2,4-Trichlorobenzene	5.000	4.384	88	70-130	4	25
Hexachlorobutadiene	5.000	5.178	104	70-130	3	25
Naphthalene	5.000	5.279	106	70-130	2	25

Surrogate	%REC	Limits
Bromofluorobenzene	99	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC876857	Diln Fac:	1.000
Matrix:	Air	Batch#:	245510
Units (V):	ppbv	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Isopropanol	ND	2.0	ND	4.9
Methylene Chloride	ND	1.7	ND	5.8
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	0.50	ND	1.5
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC876857	Diln Fac:	1.000
Matrix:	Air	Batch#:	245510
Units (V):	ppbv	Analyzed:	03/15/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.50	ND	2.0
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	1.7	ND	18
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	97	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17
Diln Fac:	1.000		

Type: BS Lab ID: QC877074

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	8.386	84	70-130
Freon 114	10.00	9.653	97	70-130
Chloromethane	10.00	8.490	85	70-130
Vinyl Chloride	10.00	8.956	90	70-130
1,3-Butadiene	10.00	7.913	79	70-130
Bromomethane	10.00	8.554	86	70-130
Chloroethane	10.00	9.204	92	70-130
Trichlorofluoromethane	10.00	9.706	97	70-130
Acrolein	10.00	9.842	98	70-130
1,1-Dichloroethene	10.00	9.176	92	70-130
Freon 113	10.00	10.69	107	70-130
Acetone	10.00	8.193	82	70-130
Carbon Disulfide	10.00	9.215	92	70-130
Isopropanol	10.00	8.171	82	70-130
Methylene Chloride	10.00	9.751	98	70-130
trans-1,2-Dichloroethene	10.00	10.96	110	70-130
MTBE	10.00	11.44	114	70-130
n-Hexane	10.00	11.12	111	70-130
1,1-Dichloroethane	10.00	10.93	109	70-130
Vinyl Acetate	10.00	9.384 b	94	70-130
cis-1,2-Dichloroethene	10.00	10.67	107	70-130
2-Butanone	10.00	8.406	84	70-130
Ethyl Acetate	10.00	9.472	95	70-130
Tetrahydrofuran	10.00	10.67	107	70-130
Chloroform	10.00	10.53	105	70-130
1,1,1-Trichloroethane	10.00	10.97	110	70-130
Cyclohexane	10.00	10.79	108	70-130
Carbon Tetrachloride	10.00	10.53	105	70-130
Benzene	10.00	10.33	103	70-130
1,2-Dichloroethane	10.00	10.70	107	70-130
n-Heptane	10.00	11.13	111	70-130
Trichloroethene	10.00	11.30	113	70-130
1,2-Dichloropropane	10.00	11.03	110	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
Bromodichloromethane	10.00	10.86	109	70-130
cis-1,3-Dichloropropene	10.00	10.68	107	70-130
4-Methyl-2-Pentanone	10.00	11.53	115	70-130
Toluene	10.00	11.07	111	70-130
trans-1,3-Dichloropropene	10.00	11.36	114	70-130
1,1,2-Trichloroethane	10.00	11.39	114	70-130
Tetrachloroethene	10.00	11.76	118	70-130
2-Hexanone	10.00	11.80	118	70-130
Dibromochloromethane	10.00	11.04	110	70-130
1,2-Dibromoethane	10.00	11.38	114	70-130
Chlorobenzene	10.00	11.58	116	70-130
Ethylbenzene	10.00	11.13	111	70-130
m,p-Xylenes	20.00	22.96	115	70-130
o-Xylene	10.00	11.23	112	70-130
Styrene	10.00	11.18	112	70-130
Bromoform	10.00	11.05	111	70-130
1,1,2,2-Tetrachloroethane	10.00	11.42	114	70-130
4-Ethyltoluene	10.00	11.66	117	70-130
1,3,5-Trimethylbenzene	10.00	11.55	115	70-130
1,2,4-Trimethylbenzene	10.00	11.74	117	70-130
1,3-Dichlorobenzene	10.00	10.92	109	70-130
1,4-Dichlorobenzene	10.00	11.15	112	70-130
Benzyl chloride	10.00	12.09	121	70-130
1,2-Dichlorobenzene	10.00	11.39	114	70-130
1,2,4-Trichlorobenzene	10.00	11.63	116	70-130
Hexachlorobutadiene	10.00	11.88	119	70-130
Naphthalene	10.00	11.62	116	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	104	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17
Diln Fac:	1.000		

Type: BSD Lab ID: QC877075

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	8.398	84	70-130	0	25
Freon 114	10.00	9.706	97	70-130	1	25
Chloromethane	10.00	7.791	78	70-130	9	25
Vinyl Chloride	10.00	8.438	84	70-130	6	25
1,3-Butadiene	10.00	7.897	79	70-130	0	25
Bromomethane	10.00	8.178	82	70-130	4	25
Chloroethane	10.00	8.856	89	70-130	4	25
Trichlorofluoromethane	10.00	9.736	97	70-130	0	25
Acrolein	10.00	9.936	99	70-130	1	25
1,1-Dichloroethene	10.00	9.012	90	70-130	2	25
Freon 113	10.00	10.55	106	70-130	1	25
Acetone	10.00	8.127	81	70-130	1	25
Carbon Disulfide	10.00	9.213	92	70-130	0	25
Isopropanol	10.00	8.443	84	70-130	3	25
Methylene Chloride	10.00	9.482	95	70-130	3	25
trans-1,2-Dichloroethene	10.00	10.80	108	70-130	2	25
MTBE	10.00	11.28	113	70-130	1	25
n-Hexane	10.00	10.90	109	70-130	2	25
1,1-Dichloroethane	10.00	10.77	108	70-130	2	25
Vinyl Acetate	10.00	9.508 b	95	70-130	1	25
cis-1,2-Dichloroethene	10.00	10.46	105	70-130	2	25
2-Butanone	10.00	8.565	86	70-130	2	25
Ethyl Acetate	10.00	9.510	95	70-130	0	25
Tetrahydrofuran	10.00	10.99	110	70-130	3	25
Chloroform	10.00	10.41	104	70-130	1	25
1,1,1-Trichloroethane	10.00	11.46	115	70-130	4	25
Cyclohexane	10.00	11.24	112	70-130	4	25
Carbon Tetrachloride	10.00	10.78	108	70-130	2	25
Benzene	10.00	10.67	107	70-130	3	25
1,2-Dichloroethane	10.00	10.92	109	70-130	2	25
n-Heptane	10.00	11.37	114	70-130	2	25
Trichloroethene	10.00	11.27	113	70-130	0	25
1,2-Dichloropropane	10.00	11.14	111	70-130	1	25

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Bromodichloromethane	10.00	11.31	113	70-130	4	25
cis-1,3-Dichloropropene	10.00	10.70	107	70-130	0	25
4-Methyl-2-Pentanone	10.00	11.82	118	70-130	2	25
Toluene	10.00	10.96	110	70-130	1	25
trans-1,3-Dichloropropene	10.00	11.89	119	70-130	5	25
1,1,2-Trichloroethane	10.00	11.46	115	70-130	1	25
Tetrachloroethene	10.00	11.47	115	70-130	2	25
2-Hexanone	10.00	11.65	117	70-130	1	25
Dibromochloromethane	10.00	10.89	109	70-130	1	25
1,2-Dibromoethane	10.00	11.17	112	70-130	2	25
Chlorobenzene	10.00	11.54	115	70-130	0	25
Ethylbenzene	10.00	11.03	110	70-130	1	25
m,p-Xylenes	20.00	22.26	111	70-130	3	25
o-Xylene	10.00	11.12	111	70-130	1	25
Styrene	10.00	11.07	111	70-130	1	25
Bromoform	10.00	11.08	111	70-130	0	25
1,1,2,2-Tetrachloroethane	10.00	11.11	111	70-130	3	25
4-Ethyltoluene	10.00	11.49	115	70-130	1	25
1,3,5-Trimethylbenzene	10.00	11.57	116	70-130	0	25
1,2,4-Trimethylbenzene	10.00	11.74	117	70-130	0	25
1,3-Dichlorobenzene	10.00	10.90	109	70-130	0	25
1,4-Dichlorobenzene	10.00	11.05	110	70-130	1	25
Benzyl chloride	10.00	11.80	118	70-130	2	25
1,2-Dichlorobenzene	10.00	11.12	111	70-130	2	25
1,2,4-Trichlorobenzene	10.00	11.48	115	70-130	1	25
Hexachlorobutadiene	10.00	11.76	118	70-130	1	25
Naphthalene	10.00	11.40	114	70-130	2	25

Surrogate	%REC	Limits
Bromofluorobenzene	102	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC877076	Diln Fac:	1.000
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Isopropanol	ND	2.0	ND	4.9
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	1.7	ND	4.9
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC877076	Diln Fac:	1.000
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.50	ND	2.0
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	97	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Fixed Gas Analysis

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Matrix:	Air	Sampled:	03/14/17
Units:	ppmv	Received:	03/14/17
Units (Mol %):	MOL %	Analyzed:	03/15/17
Batch#:	245526		

Field ID:	SG-H	Lab ID:	286995-001
Type:	SAMPLE	Diln Fac:	1.970

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,000	ND	0.20
Carbon Monoxide	ND	2,000	ND	0.20
Carbon Dioxide	ND	2,000	ND	0.20
Oxygen	150,000	2,000	15	0.20
Methane	ND	2,000	ND	0.20

Field ID:	SG-G	Lab ID:	286995-002
Type:	SAMPLE	Diln Fac:	1.860

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,900	ND	0.19
Carbon Monoxide	ND	1,900	ND	0.19
Carbon Dioxide	66,000	1,900	6.6	0.19
Oxygen	57,000	1,900	5.7	0.19
Methane	ND	1,900	ND	0.19

Field ID:	SG-M	Lab ID:	286995-003
Type:	SAMPLE	Diln Fac:	2.300

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,300	ND	0.23
Carbon Monoxide	ND	2,300	ND	0.23
Carbon Dioxide	89,000	2,300	8.9	0.23
Oxygen	22,000	2,300	2.2	0.23
Methane	ND	2,300	ND	0.23

Field ID:	SG-N	Lab ID:	286995-004
Type:	SAMPLE	Diln Fac:	2.350

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,400	ND	0.24
Carbon Monoxide	ND	2,400	ND	0.24
Carbon Dioxide	93,000	2,400	9.3	0.24
Oxygen	18,000	2,400	1.8	0.24
Methane	ND	2,400	ND	0.24

ND= Not Detected
 RL= Reporting Limit

Result Mol %= Result in Mole Percent

Fixed Gas Analysis			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Matrix:	Air	Sampled:	03/14/17
Units:	ppmv	Received:	03/14/17
Units (Mol %):	MOL %	Analyzed:	03/15/17
Batch#:	245526		

Field ID: SG-D Lab ID: 286995-005
 Type: SAMPLE Diln Fac: 1.970

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,000	ND	0.20
Carbon Monoxide	ND	2,000	ND	0.20
Carbon Dioxide	22,000	2,000	2.2	0.20
Oxygen	160,000	2,000	16	0.20
Methane	ND	2,000	ND	0.20

Field ID: SG-DUP Lab ID: 286995-006
 Type: SAMPLE Diln Fac: 2.340

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,300	ND	0.23
Carbon Monoxide	ND	2,300	ND	0.23
Carbon Dioxide	95,000	2,300	9.5	0.23
Oxygen	15,000	2,300	1.5	0.23
Methane	ND	2,300	ND	0.23

Field ID: SG-J Lab ID: 286995-007
 Type: SAMPLE Diln Fac: 2.100

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,100	ND	0.21
Carbon Monoxide	ND	2,100	ND	0.21
Carbon Dioxide	84,000	2,100	8.4	0.21
Oxygen	82,000	2,100	8.2	0.21
Methane	ND	2,100	ND	0.21

Field ID: SG-L Lab ID: 286995-008
 Type: SAMPLE Diln Fac: 2.190

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,200	ND	0.22
Carbon Monoxide	ND	2,200	ND	0.22
Carbon Dioxide	11,000	2,200	1.1	0.22
Oxygen	96,000	2,200	9.6	0.22
Methane	ND	2,200	ND	0.22

ND= Not Detected
 RL= Reporting Limit

Result Mol %= Result in Mole Percent

Fixed Gas Analysis			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Matrix:	Air	Sampled:	03/14/17
Units:	ppmv	Received:	03/14/17
Units (Mol %):	MOL %	Analyzed:	03/15/17
Batch#:	245526		

Field ID: SG-I Lab ID: 286995-009
 Type: SAMPLE Diln Fac: 2.250

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,300	ND	0.23
Carbon Monoxide	ND	2,300	ND	0.23
Carbon Dioxide	24,000	2,300	2.4	0.23
Oxygen	150,000	2,300	15	0.23
Methane	ND	2,300	ND	0.23

Field ID: SG-B Lab ID: 286995-010
 Type: SAMPLE Diln Fac: 2.410

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,400	ND	0.24
Carbon Monoxide	ND	2,400	ND	0.24
Carbon Dioxide	58,000	2,400	5.8	0.24
Oxygen	36,000	2,400	3.6	0.24
Methane	ND	2,400	ND	0.24

Field ID: SG-C Lab ID: 286995-011
 Type: SAMPLE Diln Fac: 2.140

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,100	ND	0.21
Carbon Monoxide	ND	2,100	ND	0.21
Carbon Dioxide	60,000	2,100	6.0	0.21
Oxygen	37,000	2,100	3.7	0.21
Methane	ND	2,100	ND	0.21

Type: BLANK Diln Fac: 1.000
 Lab ID: QC876922

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,000	ND	0.10
Carbon Monoxide	ND	1,000	ND	0.10
Carbon Dioxide	ND	1,000	ND	0.10
Oxygen	ND	1,000	ND	0.10
Methane	ND	1,000	ND	0.10

ND= Not Detected
 RL= Reporting Limit

Result Mol %= Result in Mole Percent

Aromatic / Petroleum Hydrocarbons in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Batch#:	245534
Matrix:	Air	Sampled:	03/14/17
Units (V):	ppbv	Received:	03/14/17
Units (M):	ug/m3	Analyzed:	03/15/17

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln	Fac
SG-H	SAMPLE	286995-001	1,200	99	15	4,800	400	60	1.970	
SG-G	SAMPLE	286995-002	1,100	93	14	4,700	380	57	1.860	
SG-M	SAMPLE	286995-003	190	120	17	790	470	70	2.300	
SG-N	SAMPLE	286995-004	350	120	17	1,400	480	71	2.350	
SG-D	SAMPLE	286995-005	52 J	99	15	210 J	400	60	1.970	
SG-DUP	SAMPLE	286995-006	310	120	17	1,300	480	71	2.340	
SG-J	SAMPLE	286995-007	ND	110	16	ND	430	64	2.100	
SG-L	SAMPLE	286995-008	1,600	110	16	6,600	450	67	2.190	
SG-I	SAMPLE	286995-009	70 J	110	17	280 J	460	68	2.250	
SG-B	SAMPLE	286995-010	790	120	18	3,200	490	73	2.410	
SG-C	SAMPLE	286995-011	840	110	16	3,400	440	65	2.140	
	BLANK	QC876953	ND	50	7.4	ND	200	30	1.000	

J= Estimated value

ND= Not Detected

RL= Reporting Limit

MDL= Method Detection Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Fixed Gas Analysis			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	245526
Units:	ppmv	Analyzed:	03/15/17
Diln Fac:	1.000		

Type: BS Lab ID: QC876919

Analyte	Spiked	Result	%REC	Limits
Helium	100,000	75,890	76	70-130
Carbon Monoxide		NA		
Carbon Dioxide		NA		
Oxygen		NA		
Methane		NA		

Type: BSD Lab ID: QC876920

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Helium	100,000	75,230	75	70-130	1	20
Carbon Monoxide		NA				
Carbon Dioxide		NA				
Oxygen		NA				
Methane		NA				

NA= Not Analyzed

RPD= Relative Percent Difference

Batch QC Report

Fixed Gas Analysis			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC876921	Batch#:	245526
Matrix:	Air	Analyzed:	03/15/17
Units:	ppmv		

Analyte	Spiked	Result	%REC	Limits
Helium		NA		
Carbon Monoxide	2,000	1,804	90	70-130
Carbon Dioxide	2,000	1,836	92	70-130
Oxygen	2,000	1,757	88	70-130
Methane	2,000	1,863	93	70-130

NA= Not Analyzed

Batch QC Report

Fixed Gas Analysis			
Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Field ID:	SG-DUP	Units (Mol %):	MOL %
Type:	SDUP	Diln Fac:	2.340
MSS Lab ID:	286995-006	Batch#:	245526
Lab ID:	QC876923	Sampled:	03/14/17
Matrix:	Air	Received:	03/14/17
Units:	ppmv	Analyzed:	03/15/17

Analyte	MSS Result	Result	RL	Result (Mol %)	RL	RPD	Lim
Helium	<2,340	ND	2,340	ND	0.2340	NC	30
Carbon Monoxide	<2,340	ND	2,340	ND	0.2340	NC	30
Carbon Dioxide	94,990	94,910	2,340	9.491	0.2340	0	30
Oxygen	15,280	15,260	2,340	1.526	0.2340	0	30
Methane	<2,340	ND	2,340	ND	0.2340	NC	30

NC= Not Calculated

ND= Not Detected

RL= Reporting Limit

RPD= Relative Percent Difference

Result Mol %= Result in Mole Percent

Batch QC Report

Aromatic / Petroleum Hydrocarbons in Air

Lab #:	286995	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Diln Fac:	1.000
Matrix:	Air	Batch#:	245534
Units (V):	ppbv	Analyzed:	03/15/17

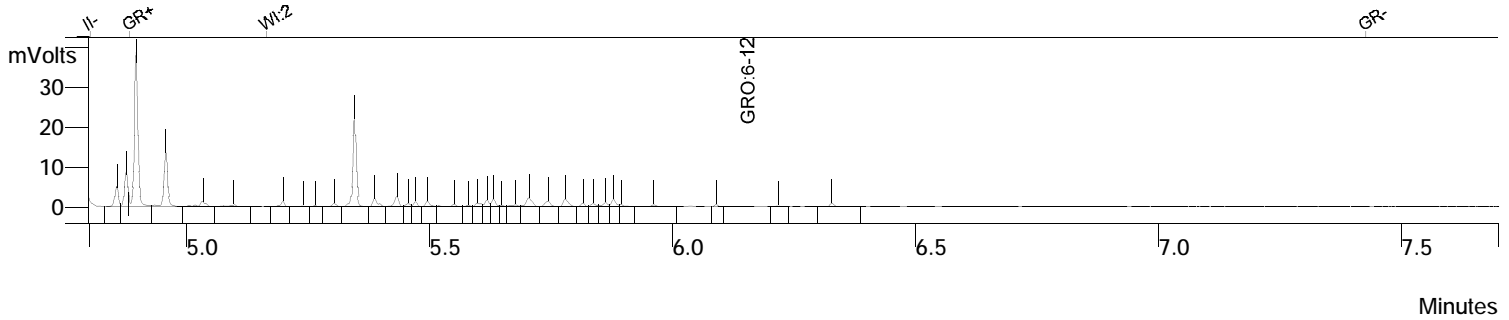
Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim
BS	QC876951	2,100	2,226	106	70-130		
BSD	QC876952	2,100	2,520	120	70-130	12	25

RPD= Relative Percent Difference

Result V= Result in volume units

GRO by TO-3

Sample ID: 286995-001,245534
 Data File: c:\varianws\data\031517\074_005.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 14:54:04
 Calculation Date: 03/15/2017 15:03:58
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 1.97x,c00149
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	63999	592.028
		Totals	63999	592.028

Integration Parameters

Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

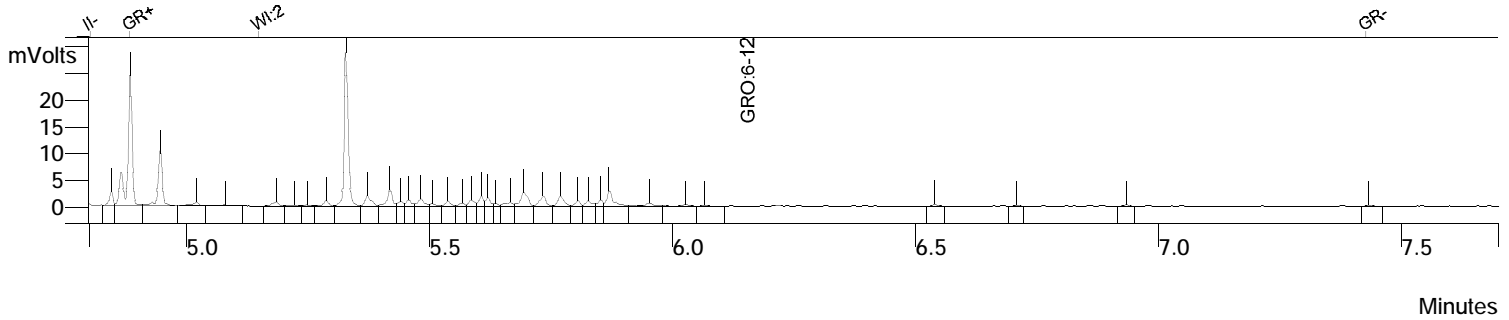
Data Handling Time Events

Time (min) Event

 0.012 II on
 4.802 II off
 4.883 GR on
 5.165 WI 2.0 sec
 7.426 GR off

GRO by TO-3

Sample ID: 286995-002,245534
 Data File: c:\varianws\data\031517\074_006.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 15:06:52
 Calculation Date: 03/15/2017 15:16:46
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 1.86x,c00336
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	66354	613.811
Totals			66354	613.811

Integration Parameters

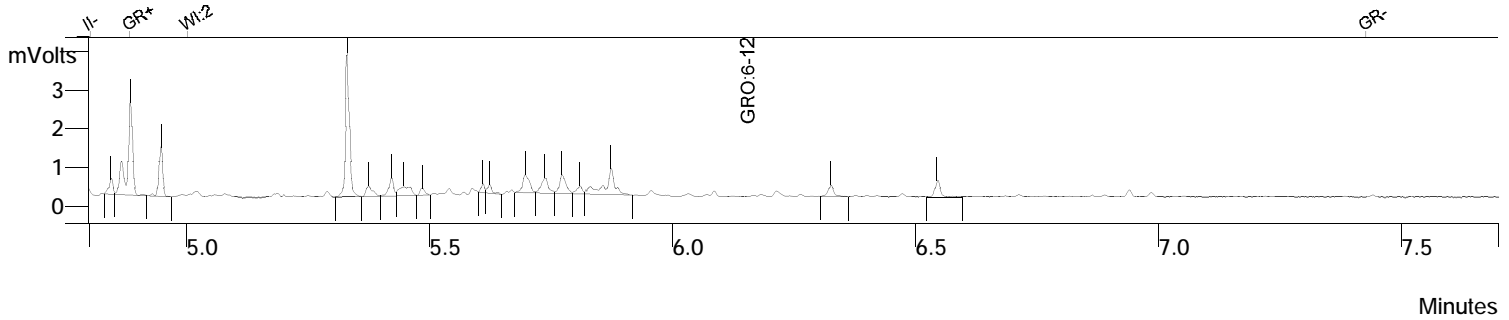
Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.148	WI 2.0 sec
7.426	GR off

GRO by TO-3

Sample ID: 286995-003,245534
 Data File: c:\varianws\data\031517\074_007.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 15:19:42
 Calculation Date: 03/15/2017 15:29:36
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 2.30x,c00388
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	9104	84.216
		Totals	9104	84.216

Integration Parameters

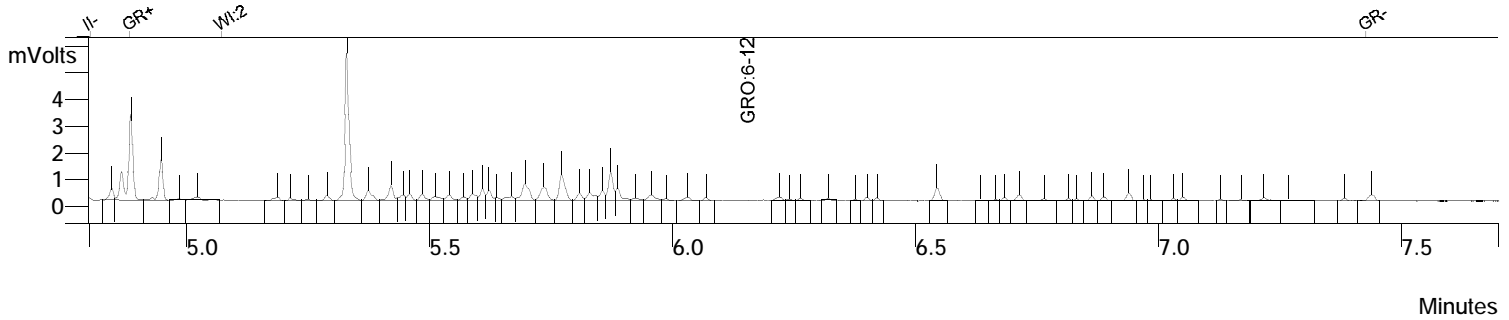
Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.002	WI 2.0 sec
7.426	GR off

GRO by TO-3

Sample ID: 286995-004,245534
 Data File: c:\varianws\data\031517\074_008.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 15:32:32
 Calculation Date: 03/15/2017 15:42:26
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 2.35x,c00087
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	15979	147.813
Totals			15979	147.813

Integration Parameters

Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

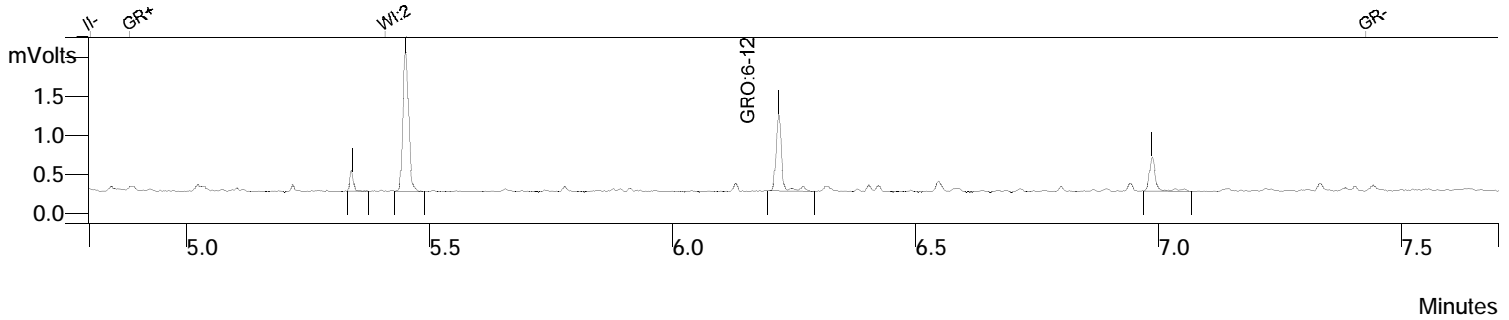
Data Handling Time Events

Time (min) Event

 0.012 II on
 4.802 II off
 4.883 GR on
 5.072 WI 2.0 sec
 7.426 GR off

```

Sample ID:      286995-005,245534
Data File:     c:\varianws\data\031517\074_009.run
Sample List:   c:\varianws\031517.smp
Method:       c:\varianws\methods\to3_030717.mth
Acquisition Date: 03/15/2017 15:45:24
Calculation Date: 03/15/2017 15:55:19
Instrument ID: GC32
Operator:      TO-15
Injection Notes: 1.97x,c00159
Multiplier:    1.000
Divisor:       1.000
    
```



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	2838	26.249
		Totals	2838	26.249

Integration Parameters

```

Initial Tangent %: 0
Initial Peak Width (sec): 4
Initial Peak Reject Value: 50.000
Initial S/N Ratio: 5
    
```

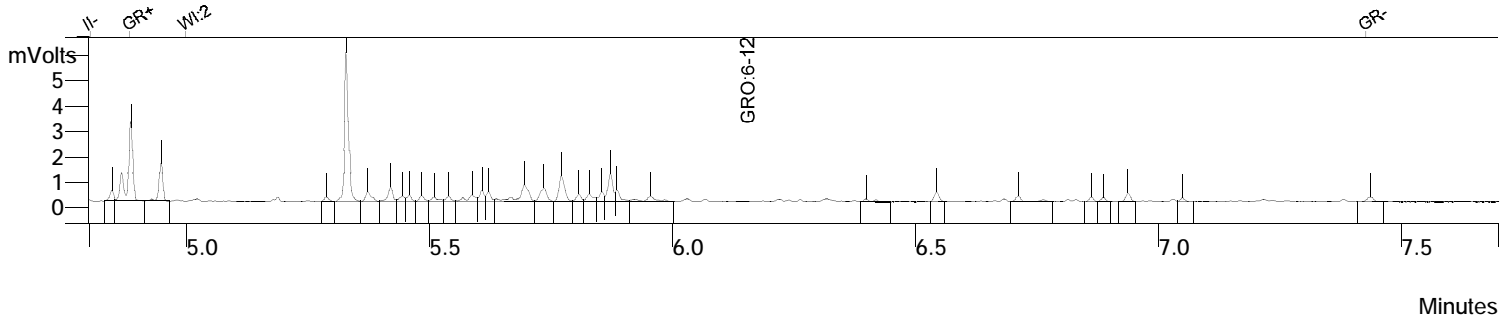
Data Handling Time Events

```

Time
(min)  Event
-----
0.012  II on
4.802  II off
4.883  GR on
5.408  WI 2.0 sec
7.426  GR off
    
```

GRO by TO-3

Sample ID: 286995-006,245534
 Data File: c:\varianws\data\031517\074_010.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 15:57:59
 Calculation Date: 03/15/2017 16:07:52
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 2.34x,c00076
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	14510	134.227
		Totals	14510	134.227

Integration Parameters

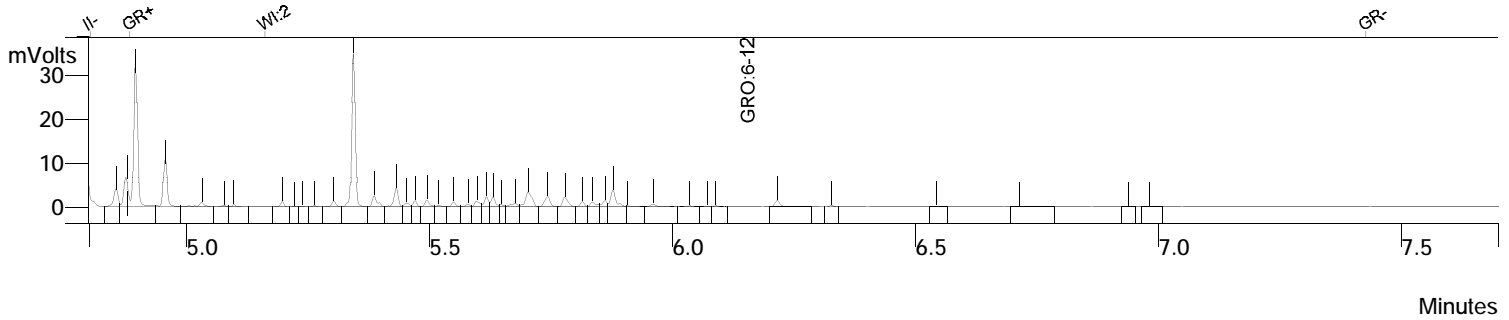
Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
4.998	WI 2.0 sec
7.426	GR off

GRO by TO-3

Sample ID: 286995-008,245534
 Data File: c:\varianws\data\031517\074_013.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 16:36:32
 Calculation Date: 03/15/2017 16:46:27
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 2.19x,c00420
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	79639	736.704
		Totals	79639	736.704

Integration Parameters

Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

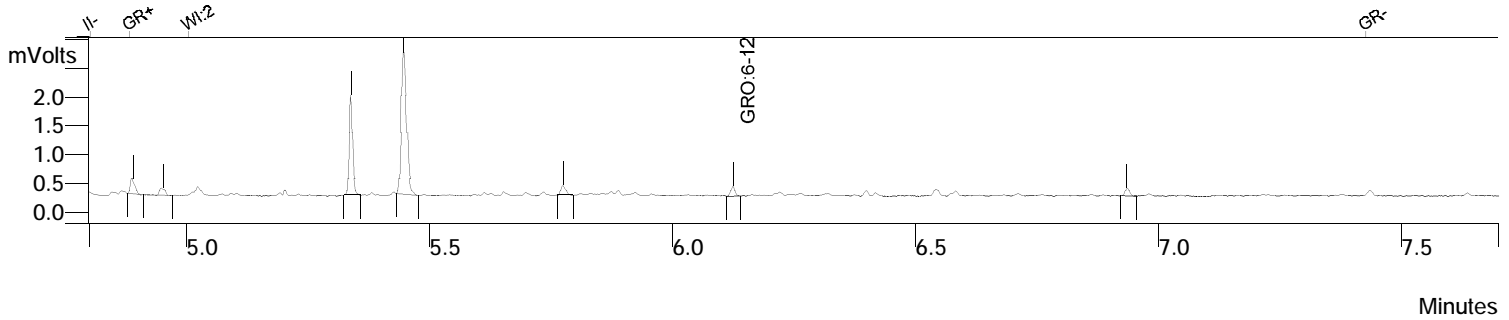
Data Handling Time Events

Time (min) Event

 0.012 II on
 4.802 II off
 4.883 GR on
 5.162 WI 2.0 sec
 7.426 GR off

GRO by TO-3

Sample ID: 286995-009,245534
 Data File: c:\varianws\data\031517\074_014.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 16:49:18
 Calculation Date: 03/15/2017 16:59:13
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 2.25x,c00303
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	3344	30.938
		Totals	3344	30.938

Integration Parameters

Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

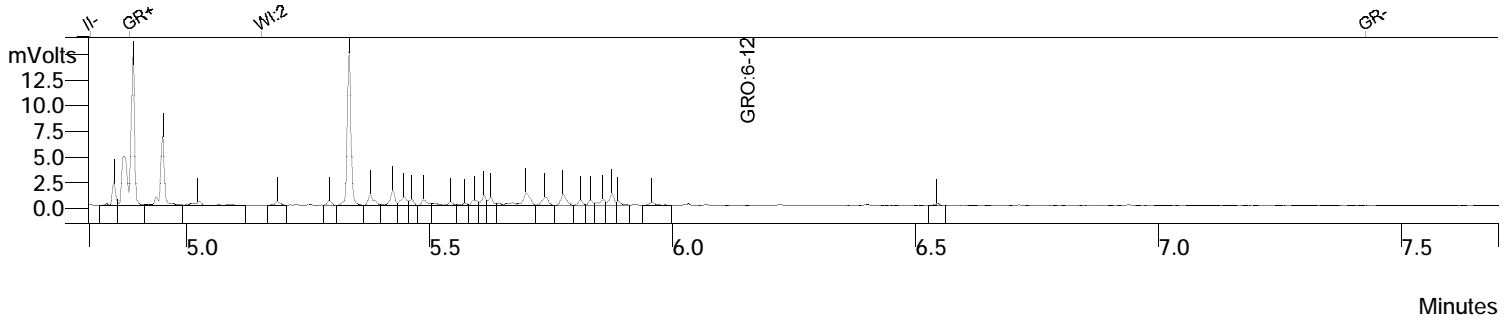
Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.005	WI 2.0 sec
7.426	GR off

GRO by TO-3

```

Sample ID:      286995-010,245534
Data File:     c:\varianws\data\031517\074_015.run
Sample List:   c:\varianws\031517.smp
Method:       c:\varianws\methods\to3_030717.mth
Acquisition Date: 03/15/2017 17:01:53
Calculation Date: 03/15/2017 17:11:48
Instrument ID:  GC32
Operator:      TO-15
Injection Notes: 2.41x,c00382
Multiplier:    1.000
Divisor:       1.000
    
```



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	35631	329.604
		Totals	35631	329.604

Integration Parameters

```

Initial Tangent %: 0
Initial Peak Width (sec): 4
Initial Peak Reject Value: 50.000
Initial S/N Ratio: 5
    
```

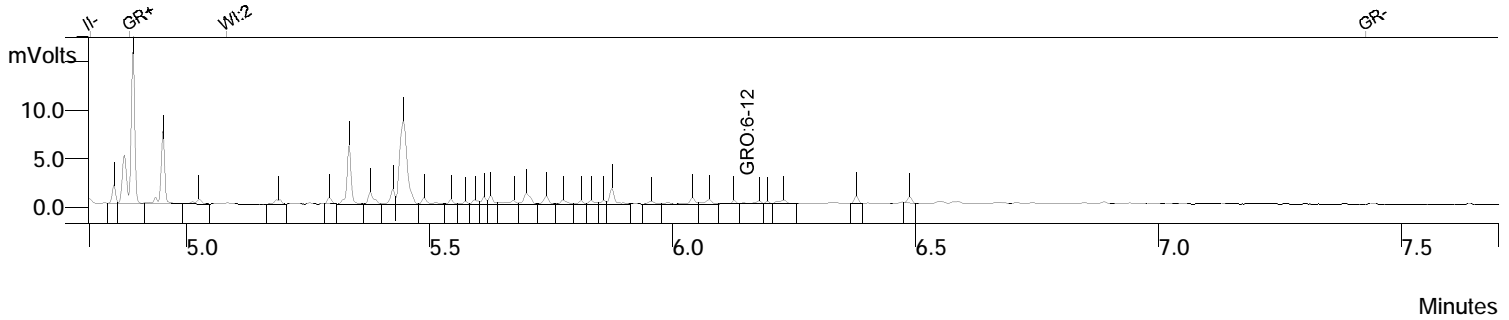
Data Handling Time Events

```

Time
(min)  Event
-----
0.012  II on
4.802  II off
4.883  GR on
5.155  WI 2.0 sec
7.426  GR off
    
```

GRO by TO-3

Sample ID: 286995-011,245534
 Data File: c:\varianws\data\031517\074_016.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 17:14:22
 Calculation Date: 03/15/2017 17:24:16
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 2.14x,c00065
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	42287	391.181
		Totals	42287	391.181

Integration Parameters

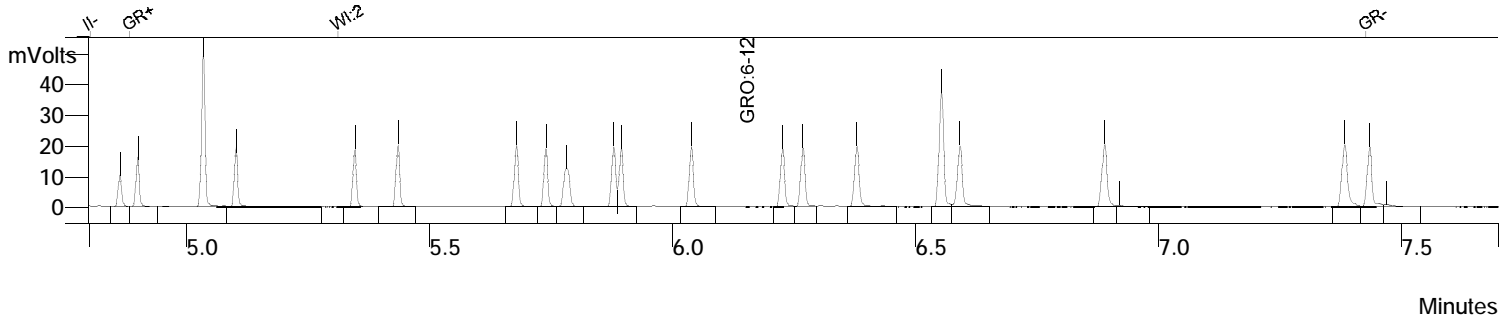
Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.082	WI 2.0 sec
7.426	GR off

GRO by TO-3

Sample ID: ccv/bs,qc876951
 Data File: c:\varianws\data\031517\074_002.run
 Sample List: c:\varianws\031517.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/15/2017 14:16:07
 Calculation Date: 03/15/2017 14:26:02
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 245534,S32423,1x
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	240665	2226.298
Totals			240665	2226.298

Integration Parameters

Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.312	WI 2.0 sec
7.426	GR off



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Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 287019
ANALYTICAL REPORT

Engeo Inc.
2010 Crow Canyon Place
San Ramon, CA 94583

Project : 13255.000.000
Location : Baker Road
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
SG-K	287019-001
SG-A	287019-002
SG-F	287019-003
SG-E	287019-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 04/14/2017

Will Rice
Project Manager
will.rice@ctberk.com
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 287019
Client: Engeo Inc.
Project: 13255.000.000
Location: Bailer Road
Request Date: 03/15/17
Samples Received: 03/15/17

This data package contains sample and QC results for four air samples, requested for the above referenced project on 03/15/17. The samples were received intact.

Volatile Organics in Air by MS (EPA TO-15):

High response was observed for vinyl acetate in the ICV analyzed 03/11/17 11:05; affected data was qualified with "b". No other analytical problems were encountered.

Volatile Organics in Air GC (ASTM D1946 and EPA TO-3):

No analytical problems were encountered.

Curtis & Tompkins, Ltd.
 Analytical Laboratory Since 1878
 2323 Fifth Street
 Berkeley, CA 94710
 (510)486-0900 Phone
 (510)486-0532 Fax

**AIR TESTING CHAIN OF CUSTODY
 & PURCHASE ORDER**

Chain of Custody #: _____
 Page 1 of 1
TESTING REQUESTED

C&T LOGIN # 287019

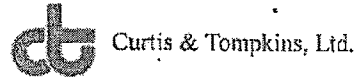
Project No: 13255-000-000
 Project Name: SAFER
 EDD Format: Rpt Level: II III IV
 Turnaround Time: CRUSH Standard

Sampler: SF
 Report To: Stephen Fallon
 Company: ENGEO
 Telephone: 925-483-6854
 Email: sfallon@engeo.com

Lab No.	Sample ID.	Sampling Information				Sample Volume Collected (Gauge Reading)	Flow Controller ID	Canister ID (6- Digit #)	Helium
		Date Collected	Time Collected	Flow Controller ID	Canister ID				
1	SG-K	3/15/17	13:52	002	151	6.0		X	
2	SG-A	3/15/17	14:16	243	377	6.0		X	
3	SG-F	3/15/17	14:18	309	381	18.5		X	
4	SG-E	3/15/17	14:30	250	1483	14.5		X	

RELINQUISHED BY: *[Signature]* 3/15/17 @ 10:50
 DATE/TIME
 RECEIVED BY: *[Signature]* 3/15/17 18:00
 DATE/TIME
[Signature] 3/15/17 18:00
 DATE/TIME
[Signature] 3/15/17 18:00
 DATE/TIME
[Signature] 3/15/17 18:00
 DATE/TIME

COOLER RECEIPT CHECKLIST



Login # 287019 Date Received 3/15/17 Number of coolers 0
 Client ENG-EO Project 13255.000.000

Date Opened 3/15/17 By (print) EVA (sign) [Signature]
 Date Logged in [Signature] By (print) [Signature] (sign) [Signature]
 Date Labeled [Signature] By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
 Shipping info _____

2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe) _____
 Bubble Wrap Foam blocks Bags None
 Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C
 Type of ice used: Wet Blue/Gel None Temp(°C) _____
 Temperature blank(s) included? Thermometer# _____ IR Gun# _____
 Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? (pH strip lot# _____) YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Detections Summary for 287019

Results for any subcontracted analyses are not included in this summary.

Client : Engeo Inc.
 Project : 13255.000.000
 Location : Baker Road

Client Sample ID : SG-K Laboratory Sample ID : 287019-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
1,3-Butadiene	8.8		1.2		ppbv	As Recd	2.310	EPA TO-15	METHOD
Acetone	22		4.6		ppbv	As Recd	2.310	EPA TO-15	METHOD
Carbon Disulfide	61		1.2		ppbv	As Recd	2.310	EPA TO-15	METHOD
n-Hexane	8.9		1.2		ppbv	As Recd	2.310	EPA TO-15	METHOD
2-Butanone	4.0		3.9		ppbv	As Recd	2.310	EPA TO-15	METHOD
Cyclohexane	3.3		1.2		ppbv	As Recd	2.310	EPA TO-15	METHOD
Benzene	3.3		1.2		ppbv	As Recd	2.310	EPA TO-15	METHOD
n-Heptane	1.2		1.2		ppbv	As Recd	2.310	EPA TO-15	METHOD
Toluene	21		1.2		ppbv	As Recd	2.310	EPA TO-15	METHOD
Carbon Dioxide	16,000		2,300		ppmv	As Recd	2.310	ASTM D1946-90	METHOD
Oxygen	120,000		2,300		ppmv	As Recd	2.310	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	350		120	17	ppbv	As Recd	2.310	EPA TO-3	METHOD

Client Sample ID : SG-A Laboratory Sample ID : 287019-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
1,3-Butadiene	17		1.1		ppbv	As Recd	2.140	EPA TO-15	METHOD
Acetone	12		4.3		ppbv	As Recd	2.140	EPA TO-15	METHOD
Carbon Disulfide	20		1.1		ppbv	As Recd	2.140	EPA TO-15	METHOD
n-Hexane	8.5		1.1		ppbv	As Recd	2.140	EPA TO-15	METHOD
Cyclohexane	6.0		1.1		ppbv	As Recd	2.140	EPA TO-15	METHOD
Benzene	5.9		1.1		ppbv	As Recd	2.140	EPA TO-15	METHOD
n-Heptane	1.8		1.1		ppbv	As Recd	2.140	EPA TO-15	METHOD
Toluene	4.1		1.1		ppbv	As Recd	2.140	EPA TO-15	METHOD
m,p-Xylenes	1.1		1.1		ppbv	As Recd	2.140	EPA TO-15	METHOD
Carbon Dioxide	31,000		2,100		ppmv	As Recd	2.140	ASTM D1946-90	METHOD
Oxygen	120,000		2,100		ppmv	As Recd	2.140	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	69	J	110	16	ppbv	As Recd	2.140	EPA TO-3	METHOD

Client Sample ID : SG-F

Laboratory Sample ID :

287019-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
1,3-Butadiene	3.6		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
Acetone	15		8.1		ppbv	As Recd	4.040	EPA TO-15	METHOD
Carbon Disulfide	66		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
n-Hexane	540		4.0		ppbv	As Recd	8.080	EPA TO-15	METHOD
2-Butanone	8.2		6.7		ppbv	As Recd	4.040	EPA TO-15	METHOD
Cyclohexane	7.7		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
Benzene	5.5		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
n-Heptane	3.1		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
Toluene	230		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
Ethylbenzene	5.0		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
m,p-Xylenes	23		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
o-Xylene	5.3		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	2.2		2.0		ppbv	As Recd	4.040	EPA TO-15	METHOD
Carbon Dioxide	8,000		4,000		ppmv	As Recd	4.040	ASTM D1946-90	METHOD
Oxygen	120,000		4,000		ppmv	As Recd	4.040	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	1,500		200	30	ppbv	As Recd	4.040	EPA TO-3	METHOD

Client Sample ID : SG-E

Laboratory Sample ID :

287019-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
1,3-Butadiene	9.6		5.2		ppbv	As Recd	10.47	EPA TO-15	METHOD
Acetone	24		21		ppbv	As Recd	10.47	EPA TO-15	METHOD
Carbon Disulfide	55		5.2		ppbv	As Recd	10.47	EPA TO-15	METHOD
n-Hexane	1,000		10		ppbv	As Recd	20.94	EPA TO-15	METHOD
Cyclohexane	14		5.2		ppbv	As Recd	10.47	EPA TO-15	METHOD
Benzene	8.0		5.2		ppbv	As Recd	10.47	EPA TO-15	METHOD
Toluene	630		5.2		ppbv	As Recd	10.47	EPA TO-15	METHOD
Ethylbenzene	12		5.2		ppbv	As Recd	10.47	EPA TO-15	METHOD
m,p-Xylenes	50		5.2		ppbv	As Recd	10.47	EPA TO-15	METHOD
o-Xylene	11		5.2		ppbv	As Recd	10.47	EPA TO-15	METHOD
Carbon Dioxide	13,000		3,500		ppmv	As Recd	3.490	ASTM D1946-90	METHOD
Oxygen	130,000		3,500		ppmv	As Recd	3.490	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	3,100		170	26	ppbv	As Recd	3.490	EPA TO-3	METHOD

Volatile Organics in Air

Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-K	Diln Fac:	2.310
Lab ID:	287019-001	Batch#:	245562
Matrix:	Air	Sampled:	03/15/17
Units (V):	ppbv	Received:	03/15/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.2	ND	5.7
Freon 114	ND	1.2	ND	8.1
Chloromethane	ND	1.2	ND	2.4
Vinyl Chloride	ND	1.2	ND	3.0
1,3-Butadiene	8.8	1.2	20	2.6
Bromomethane	ND	1.2	ND	4.5
Chloroethane	ND	1.2	ND	3.0
Trichlorofluoromethane	ND	1.2	ND	6.5
Acrolein	ND	4.6	ND	11
1,1-Dichloroethene	ND	1.2	ND	4.6
Freon 113	ND	1.2	ND	8.9
Acetone	22	4.6	52	11
Carbon Disulfide	61	1.2	190	3.6
Isopropanol	ND	4.6	ND	11
Methylene Chloride	ND	1.2	ND	4.0
trans-1,2-Dichloroethene	ND	1.2	ND	4.6
MTBE	ND	1.2	ND	4.2
n-Hexane	8.9	1.2	31	4.1
1,1-Dichloroethane	ND	1.2	ND	4.7
Vinyl Acetate	ND	1.2	ND	4.1
cis-1,2-Dichloroethene	ND	1.2	ND	4.6
2-Butanone	4.0	3.9	12	11
Ethyl Acetate	ND	1.2	ND	4.2
Tetrahydrofuran	ND	1.2	ND	3.4
Chloroform	ND	1.2	ND	5.6
1,1,1-Trichloroethane	ND	1.2	ND	6.3
Cyclohexane	3.3	1.2	11	4.0
Carbon Tetrachloride	ND	1.2	ND	7.3
Benzene	3.3	1.2	11	3.7
1,2-Dichloroethane	ND	1.2	ND	4.7
n-Heptane	1.2	1.2	5.0	4.7
Trichloroethene	ND	1.2	ND	6.2
1,2-Dichloropropane	ND	1.2	ND	5.3
Bromodichloromethane	ND	1.2	ND	7.7
cis-1,3-Dichloropropene	ND	1.2	ND	5.2

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-K	Diln Fac:	2.310
Lab ID:	287019-001	Batch#:	245562
Matrix:	Air	Sampled:	03/15/17
Units (V):	ppbv	Received:	03/15/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.2	ND	4.7
Toluene	21	1.2	78	4.4
trans-1,3-Dichloropropene	ND	1.2	ND	5.2
1,1,2-Trichloroethane	ND	1.2	ND	6.3
Tetrachloroethene	ND	1.2	ND	7.8
2-Hexanone	ND	1.2	ND	4.7
Dibromochloromethane	ND	1.2	ND	9.8
1,2-Dibromoethane	ND	1.2	ND	8.9
Chlorobenzene	ND	1.2	ND	5.3
Ethylbenzene	ND	1.2	ND	5.0
m,p-Xylenes	ND	1.2	ND	5.0
o-Xylene	ND	1.2	ND	5.0
Styrene	ND	1.2	ND	4.9
Bromoform	ND	1.2	ND	12
1,1,2,2-Tetrachloroethane	ND	1.2	ND	7.9
4-Ethyltoluene	ND	1.2	ND	5.7
1,3,5-Trimethylbenzene	ND	1.2	ND	5.7
1,2,4-Trimethylbenzene	ND	1.2	ND	5.7
1,3-Dichlorobenzene	ND	1.2	ND	6.9
1,4-Dichlorobenzene	ND	1.2	ND	6.9
Benzyl chloride	ND	1.2	ND	6.0
1,2-Dichlorobenzene	ND	1.2	ND	6.9
1,2,4-Trichlorobenzene	ND	1.2	ND	8.6
Hexachlorobutadiene	ND	1.2	ND	12
Naphthalene	ND	4.6	ND	24

Surrogate	%REC	Limits
Bromofluorobenzene	115	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-A	Diln Fac:	2.140
Lab ID:	287019-002	Batch#:	245562
Matrix:	Air	Sampled:	03/15/17
Units (V):	ppbv	Received:	03/15/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.1	ND	5.3
Freon 114	ND	1.1	ND	7.5
Chloromethane	ND	1.1	ND	2.2
Vinyl Chloride	ND	1.1	ND	2.7
1,3-Butadiene	17	1.1	37	2.4
Bromomethane	ND	1.1	ND	4.2
Chloroethane	ND	1.1	ND	2.8
Trichlorofluoromethane	ND	1.1	ND	6.0
Acrolein	ND	4.3	ND	9.8
1,1-Dichloroethene	ND	1.1	ND	4.2
Freon 113	ND	1.1	ND	8.2
Acetone	12	4.3	28	10
Carbon Disulfide	20	1.1	63	3.3
Isopropanol	ND	4.3	ND	11
Methylene Chloride	ND	1.1	ND	3.7
trans-1,2-Dichloroethene	ND	1.1	ND	4.2
MTBE	ND	1.1	ND	3.9
n-Hexane	8.5	1.1	30	3.8
1,1-Dichloroethane	ND	1.1	ND	4.3
Vinyl Acetate	ND	1.1	ND	3.8
cis-1,2-Dichloroethene	ND	1.1	ND	4.2
2-Butanone	ND	3.6	ND	11
Ethyl Acetate	ND	1.1	ND	3.9
Tetrahydrofuran	ND	1.1	ND	3.2
Chloroform	ND	1.1	ND	5.2
1,1,1-Trichloroethane	ND	1.1	ND	5.8
Cyclohexane	6.0	1.1	21	3.7
Carbon Tetrachloride	ND	1.1	ND	6.7
Benzene	5.9	1.1	19	3.4
1,2-Dichloroethane	ND	1.1	ND	4.3
n-Heptane	1.8	1.1	7.4	4.4
Trichloroethene	ND	1.1	ND	5.7
1,2-Dichloropropane	ND	1.1	ND	4.9
Bromodichloromethane	ND	1.1	ND	7.2
cis-1,3-Dichloropropene	ND	1.1	ND	4.9

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-A	Diln Fac:	2.140
Lab ID:	287019-002	Batch#:	245562
Matrix:	Air	Sampled:	03/15/17
Units (V):	ppbv	Received:	03/15/17
Units (M):	ug/m3	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.1	ND	4.4
Toluene	4.1	1.1	15	4.0
trans-1,3-Dichloropropene	ND	1.1	ND	4.9
1,1,2-Trichloroethane	ND	1.1	ND	5.8
Tetrachloroethene	ND	1.1	ND	7.3
2-Hexanone	ND	1.1	ND	4.4
Dibromochloromethane	ND	1.1	ND	9.1
1,2-Dibromoethane	ND	1.1	ND	8.2
Chlorobenzene	ND	1.1	ND	4.9
Ethylbenzene	ND	1.1	ND	4.6
m,p-Xylenes	1.1	1.1	4.8	4.6
o-Xylene	ND	1.1	ND	4.6
Styrene	ND	1.1	ND	4.6
Bromoform	ND	1.1	ND	11
1,1,2,2-Tetrachloroethane	ND	1.1	ND	7.3
4-Ethyltoluene	ND	1.1	ND	5.3
1,3,5-Trimethylbenzene	ND	1.1	ND	5.3
1,2,4-Trimethylbenzene	ND	1.1	ND	5.3
1,3-Dichlorobenzene	ND	1.1	ND	6.4
1,4-Dichlorobenzene	ND	1.1	ND	6.4
Benzyl chloride	ND	1.1	ND	5.5
1,2-Dichlorobenzene	ND	1.1	ND	6.4
1,2,4-Trichlorobenzene	ND	1.1	ND	7.9
Hexachlorobutadiene	ND	1.1	ND	11
Naphthalene	ND	4.3	ND	22

Surrogate	%REC	Limits
Bromofluorobenzene	103	80-120

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-F	Units (M):	ug/m3
Lab ID:	287019-003	Sampled:	03/15/17
Matrix:	Air	Received:	03/15/17
Units (V):	ppbv	Analyzed:	03/17/17

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#
Freon 12	ND	2.0	ND	10	4.040	245562
Freon 114	ND	2.0	ND	14	4.040	245562
Chloromethane	ND	2.0	ND	4.2	4.040	245562
Vinyl Chloride	ND	2.0	ND	5.2	4.040	245562
1,3-Butadiene	3.6	2.0	7.9	4.5	4.040	245562
Bromomethane	ND	2.0	ND	7.8	4.040	245562
Chloroethane	ND	2.0	ND	5.3	4.040	245562
Trichlorofluoromethane	ND	2.0	ND	11	4.040	245562
Acrolein	ND	8.1	ND	19	4.040	245562
1,1-Dichloroethene	ND	2.0	ND	8.0	4.040	245562
Freon 113	ND	2.0	ND	15	4.040	245562
Acetone	15	8.1	35	19	4.040	245562
Carbon Disulfide	66	2.0	200	6.3	4.040	245562
Isopropanol	ND	8.1	ND	20	4.040	245562
Methylene Chloride	ND	2.0	ND	7.0	4.040	245562
trans-1,2-Dichloroethene	ND	2.0	ND	8.0	4.040	245562
MTBE	ND	2.0	ND	7.3	4.040	245562
n-Hexane	540	4.0	1,900	14	8.080	245611
1,1-Dichloroethane	ND	2.0	ND	8.2	4.040	245562
Vinyl Acetate	ND	2.0	ND	7.1	4.040	245562
cis-1,2-Dichloroethene	ND	2.0	ND	8.0	4.040	245562
2-Butanone	8.2	6.7	24	20	4.040	245562
Ethyl Acetate	ND	2.0	ND	7.3	4.040	245562
Tetrahydrofuran	ND	2.0	ND	6.0	4.040	245562
Chloroform	ND	2.0	ND	9.9	4.040	245562
1,1,1-Trichloroethane	ND	2.0	ND	11	4.040	245562
Cyclohexane	7.7	2.0	27	7.0	4.040	245562
Carbon Tetrachloride	ND	2.0	ND	13	4.040	245562
Benzene	5.5	2.0	18	6.5	4.040	245562
1,2-Dichloroethane	ND	2.0	ND	8.2	4.040	245562
n-Heptane	3.1	2.0	13	8.3	4.040	245562
Trichloroethene	ND	2.0	ND	11	4.040	245562
1,2-Dichloropropane	ND	2.0	ND	9.3	4.040	245562
Bromodichloromethane	ND	2.0	ND	14	4.040	245562
cis-1,3-Dichloropropene	ND	2.0	ND	9.2	4.040	245562
4-Methyl-2-Pentanone	ND	2.0	ND	8.3	4.040	245562

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-F	Units (M):	ug/m3
Lab ID:	287019-003	Sampled:	03/15/17
Matrix:	Air	Received:	03/15/17
Units (V):	ppbv	Analyzed:	03/17/17

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#
Toluene	230	2.0	870	7.6	4.040	245562
trans-1,3-Dichloropropene	ND	2.0	ND	9.2	4.040	245562
1,1,2-Trichloroethane	ND	2.0	ND	11	4.040	245562
Tetrachloroethene	ND	2.0	ND	14	4.040	245562
2-Hexanone	ND	2.0	ND	8.3	4.040	245562
Dibromochloromethane	ND	2.0	ND	17	4.040	245562
1,2-Dibromoethane	ND	2.0	ND	16	4.040	245562
Chlorobenzene	ND	2.0	ND	9.3	4.040	245562
Ethylbenzene	5.0	2.0	22	8.8	4.040	245562
m,p-Xylenes	23	2.0	100	8.8	4.040	245562
o-Xylene	5.3	2.0	23	8.8	4.040	245562
Styrene	ND	2.0	ND	8.6	4.040	245562
Bromoform	ND	2.0	ND	21	4.040	245562
1,1,2,2-Tetrachloroethane	ND	2.0	ND	14	4.040	245562
4-Ethyltoluene	ND	2.0	ND	9.9	4.040	245562
1,3,5-Trimethylbenzene	ND	2.0	ND	9.9	4.040	245562
1,2,4-Trimethylbenzene	2.2	2.0	11	9.9	4.040	245562
1,3-Dichlorobenzene	ND	2.0	ND	12	4.040	245562
1,4-Dichlorobenzene	ND	2.0	ND	12	4.040	245562
Benzyl chloride	ND	2.0	ND	10	4.040	245562
1,2-Dichlorobenzene	ND	2.0	ND	12	4.040	245562
1,2,4-Trichlorobenzene	ND	2.0	ND	15	4.040	245562
Hexachlorobutadiene	ND	2.0	ND	22	4.040	245562
Naphthalene	ND	8.1	ND	42	4.040	245562

Surrogate	%REC	Limits	Diln Fac	Batch#
Bromofluorobenzene	100	80-120	4.040	245562

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-E	Units (M):	ug/m3
Lab ID:	287019-004	Sampled:	03/15/17
Matrix:	Air	Received:	03/15/17
Units (V):	ppbv		

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	5.2	ND	26	10.47	245562	03/16/17
Freon 114	ND	5.2	ND	37	10.47	245562	03/16/17
Chloromethane	ND	5.2	ND	11	10.47	245562	03/16/17
Vinyl Chloride	ND	5.2	ND	13	10.47	245562	03/16/17
1,3-Butadiene	9.6	5.2	21	12	10.47	245562	03/16/17
Bromomethane	ND	5.2	ND	20	10.47	245562	03/16/17
Chloroethane	ND	5.2	ND	14	10.47	245562	03/16/17
Trichlorofluoromethane	ND	5.2	ND	29	10.47	245562	03/16/17
Acrolein	ND	21	ND	48	10.47	245562	03/16/17
1,1-Dichloroethene	ND	5.2	ND	21	10.47	245562	03/16/17
Freon 113	ND	5.2	ND	40	10.47	245562	03/16/17
Acetone	24	21	58	50	10.47	245562	03/16/17
Carbon Disulfide	55	5.2	170	16	10.47	245562	03/16/17
Isopropanol	ND	21	ND	51	10.47	245562	03/16/17
Methylene Chloride	ND	5.2	ND	18	10.47	245562	03/16/17
trans-1,2-Dichloroethene	ND	5.2	ND	21	10.47	245562	03/16/17
MTBE	ND	5.2	ND	19	10.47	245562	03/16/17
n-Hexane	1,000	10	3,600	37	20.94	245611	03/17/17
1,1-Dichloroethane	ND	5.2	ND	21	10.47	245562	03/16/17
Vinyl Acetate	ND	5.2	ND	18	10.47	245562	03/16/17
cis-1,2-Dichloroethene	ND	5.2	ND	21	10.47	245562	03/16/17
2-Butanone	ND	17	ND	51	10.47	245562	03/16/17
Ethyl Acetate	ND	5.2	ND	19	10.47	245562	03/16/17
Tetrahydrofuran	ND	5.2	ND	15	10.47	245562	03/16/17
Chloroform	ND	5.2	ND	26	10.47	245562	03/16/17
1,1,1-Trichloroethane	ND	5.2	ND	29	10.47	245562	03/16/17
Cyclohexane	14	5.2	50	18	10.47	245562	03/16/17
Carbon Tetrachloride	ND	5.2	ND	33	10.47	245562	03/16/17
Benzene	8.0	5.2	26	17	10.47	245562	03/16/17
1,2-Dichloroethane	ND	5.2	ND	21	10.47	245562	03/16/17
n-Heptane	ND	5.2	ND	21	10.47	245562	03/16/17
Trichloroethene	ND	5.2	ND	28	10.47	245562	03/16/17
1,2-Dichloropropane	ND	5.2	ND	24	10.47	245562	03/16/17
Bromodichloromethane	ND	5.2	ND	35	10.47	245562	03/16/17
cis-1,3-Dichloropropene	ND	5.2	ND	24	10.47	245562	03/16/17
4-Methyl-2-Pentanone	ND	5.2	ND	21	10.47	245562	03/16/17

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air

Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Field ID:	SG-E	Units (M):	ug/m3
Lab ID:	287019-004	Sampled:	03/15/17
Matrix:	Air	Received:	03/15/17
Units (V):	ppbv		

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#	Analyzed
Toluene	630	5.2	2,400	20	10.47	245562	03/16/17
trans-1,3-Dichloropropene	ND	5.2	ND	24	10.47	245562	03/16/17
1,1,2-Trichloroethane	ND	5.2	ND	29	10.47	245562	03/16/17
Tetrachloroethene	ND	5.2	ND	36	10.47	245562	03/16/17
2-Hexanone	ND	5.2	ND	21	10.47	245562	03/16/17
Dibromochloromethane	ND	5.2	ND	45	10.47	245562	03/16/17
1,2-Dibromoethane	ND	5.2	ND	40	10.47	245562	03/16/17
Chlorobenzene	ND	5.2	ND	24	10.47	245562	03/16/17
Ethylbenzene	12	5.2	50	23	10.47	245562	03/16/17
m,p-Xylenes	50	5.2	220	23	10.47	245562	03/16/17
o-Xylene	11	5.2	46	23	10.47	245562	03/16/17
Styrene	ND	5.2	ND	22	10.47	245562	03/16/17
Bromoform	ND	5.2	ND	54	10.47	245562	03/16/17
1,1,2,2-Tetrachloroethane	ND	5.2	ND	36	10.47	245562	03/16/17
4-Ethyltoluene	ND	5.2	ND	26	10.47	245562	03/16/17
1,3,5-Trimethylbenzene	ND	5.2	ND	26	10.47	245562	03/16/17
1,2,4-Trimethylbenzene	ND	5.2	ND	26	10.47	245562	03/16/17
1,3-Dichlorobenzene	ND	5.2	ND	31	10.47	245562	03/16/17
1,4-Dichlorobenzene	ND	5.2	ND	31	10.47	245562	03/16/17
Benzyl chloride	ND	5.2	ND	27	10.47	245562	03/16/17
1,2-Dichlorobenzene	ND	5.2	ND	31	10.47	245562	03/16/17
1,2,4-Trichlorobenzene	ND	5.2	ND	39	10.47	245562	03/16/17
Hexachlorobutadiene	ND	5.2	ND	56	10.47	245562	03/16/17
Naphthalene	ND	21	ND	110	10.47	245562	03/16/17

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Bromofluorobenzene	101	80-120	10.47	245562	03/16/17

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17
Diln Fac:	1.000		

Type: BS Lab ID: QC877074

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	8.386	84	70-130
Freon 114	10.00	9.653	97	70-130
Chloromethane	10.00	8.490	85	70-130
Vinyl Chloride	10.00	8.956	90	70-130
1,3-Butadiene	10.00	7.913	79	70-130
Bromomethane	10.00	8.554	86	70-130
Chloroethane	10.00	9.204	92	70-130
Trichlorofluoromethane	10.00	9.706	97	70-130
Acrolein	10.00	9.842	98	70-130
1,1-Dichloroethene	10.00	9.176	92	70-130
Freon 113	10.00	10.69	107	70-130
Acetone	10.00	8.193	82	70-130
Carbon Disulfide	10.00	9.215	92	70-130
Isopropanol	10.00	8.171	82	70-130
Methylene Chloride	10.00	9.751	98	70-130
trans-1,2-Dichloroethene	10.00	10.96	110	70-130
MTBE	10.00	11.44	114	70-130
n-Hexane	10.00	11.12	111	70-130
1,1-Dichloroethane	10.00	10.93	109	70-130
Vinyl Acetate	10.00	9.384 b	94	70-130
cis-1,2-Dichloroethene	10.00	10.67	107	70-130
2-Butanone	10.00	8.406	84	70-130
Ethyl Acetate	10.00	9.472	95	70-130
Tetrahydrofuran	10.00	10.67	107	70-130
Chloroform	10.00	10.53	105	70-130
1,1,1-Trichloroethane	10.00	10.97	110	70-130
Cyclohexane	10.00	10.79	108	70-130
Carbon Tetrachloride	10.00	10.53	105	70-130
Benzene	10.00	10.33	103	70-130
1,2-Dichloroethane	10.00	10.70	107	70-130
n-Heptane	10.00	11.13	111	70-130
Trichloroethene	10.00	11.30	113	70-130
1,2-Dichloropropane	10.00	11.03	110	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
Bromodichloromethane	10.00	10.86	109	70-130
cis-1,3-Dichloropropene	10.00	10.68	107	70-130
4-Methyl-2-Pentanone	10.00	11.53	115	70-130
Toluene	10.00	11.07	111	70-130
trans-1,3-Dichloropropene	10.00	11.36	114	70-130
1,1,2-Trichloroethane	10.00	11.39	114	70-130
Tetrachloroethene	10.00	11.76	118	70-130
2-Hexanone	10.00	11.80	118	70-130
Dibromochloromethane	10.00	11.04	110	70-130
1,2-Dibromoethane	10.00	11.38	114	70-130
Chlorobenzene	10.00	11.58	116	70-130
Ethylbenzene	10.00	11.13	111	70-130
m,p-Xylenes	20.00	22.96	115	70-130
o-Xylene	10.00	11.23	112	70-130
Styrene	10.00	11.18	112	70-130
Bromoform	10.00	11.05	111	70-130
1,1,2,2-Tetrachloroethane	10.00	11.42	114	70-130
4-Ethyltoluene	10.00	11.66	117	70-130
1,3,5-Trimethylbenzene	10.00	11.55	115	70-130
1,2,4-Trimethylbenzene	10.00	11.74	117	70-130
1,3-Dichlorobenzene	10.00	10.92	109	70-130
1,4-Dichlorobenzene	10.00	11.15	112	70-130
Benzyl chloride	10.00	12.09	121	70-130
1,2-Dichlorobenzene	10.00	11.39	114	70-130
1,2,4-Trichlorobenzene	10.00	11.63	116	70-130
Hexachlorobutadiene	10.00	11.88	119	70-130
Naphthalene	10.00	11.62	116	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	104	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17
Diln Fac:	1.000		

Type: BSD Lab ID: QC877075

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	8.398	84	70-130	0	25
Freon 114	10.00	9.706	97	70-130	1	25
Chloromethane	10.00	7.791	78	70-130	9	25
Vinyl Chloride	10.00	8.438	84	70-130	6	25
1,3-Butadiene	10.00	7.897	79	70-130	0	25
Bromomethane	10.00	8.178	82	70-130	4	25
Chloroethane	10.00	8.856	89	70-130	4	25
Trichlorofluoromethane	10.00	9.736	97	70-130	0	25
Acrolein	10.00	9.936	99	70-130	1	25
1,1-Dichloroethene	10.00	9.012	90	70-130	2	25
Freon 113	10.00	10.55	106	70-130	1	25
Acetone	10.00	8.127	81	70-130	1	25
Carbon Disulfide	10.00	9.213	92	70-130	0	25
Isopropanol	10.00	8.443	84	70-130	3	25
Methylene Chloride	10.00	9.482	95	70-130	3	25
trans-1,2-Dichloroethene	10.00	10.80	108	70-130	2	25
MTBE	10.00	11.28	113	70-130	1	25
n-Hexane	10.00	10.90	109	70-130	2	25
1,1-Dichloroethane	10.00	10.77	108	70-130	2	25
Vinyl Acetate	10.00	9.508 b	95	70-130	1	25
cis-1,2-Dichloroethene	10.00	10.46	105	70-130	2	25
2-Butanone	10.00	8.565	86	70-130	2	25
Ethyl Acetate	10.00	9.510	95	70-130	0	25
Tetrahydrofuran	10.00	10.99	110	70-130	3	25
Chloroform	10.00	10.41	104	70-130	1	25
1,1,1-Trichloroethane	10.00	11.46	115	70-130	4	25
Cyclohexane	10.00	11.24	112	70-130	4	25
Carbon Tetrachloride	10.00	10.78	108	70-130	2	25
Benzene	10.00	10.67	107	70-130	3	25
1,2-Dichloroethane	10.00	10.92	109	70-130	2	25
n-Heptane	10.00	11.37	114	70-130	2	25
Trichloroethene	10.00	11.27	113	70-130	0	25
1,2-Dichloropropane	10.00	11.14	111	70-130	1	25

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Bromodichloromethane	10.00	11.31	113	70-130	4	25
cis-1,3-Dichloropropene	10.00	10.70	107	70-130	0	25
4-Methyl-2-Pentanone	10.00	11.82	118	70-130	2	25
Toluene	10.00	10.96	110	70-130	1	25
trans-1,3-Dichloropropene	10.00	11.89	119	70-130	5	25
1,1,2-Trichloroethane	10.00	11.46	115	70-130	1	25
Tetrachloroethene	10.00	11.47	115	70-130	2	25
2-Hexanone	10.00	11.65	117	70-130	1	25
Dibromochloromethane	10.00	10.89	109	70-130	1	25
1,2-Dibromoethane	10.00	11.17	112	70-130	2	25
Chlorobenzene	10.00	11.54	115	70-130	0	25
Ethylbenzene	10.00	11.03	110	70-130	1	25
m,p-Xylenes	20.00	22.26	111	70-130	3	25
o-Xylene	10.00	11.12	111	70-130	1	25
Styrene	10.00	11.07	111	70-130	1	25
Bromoform	10.00	11.08	111	70-130	0	25
1,1,2,2-Tetrachloroethane	10.00	11.11	111	70-130	3	25
4-Ethyltoluene	10.00	11.49	115	70-130	1	25
1,3,5-Trimethylbenzene	10.00	11.57	116	70-130	0	25
1,2,4-Trimethylbenzene	10.00	11.74	117	70-130	0	25
1,3-Dichlorobenzene	10.00	10.90	109	70-130	0	25
1,4-Dichlorobenzene	10.00	11.05	110	70-130	1	25
Benzyl chloride	10.00	11.80	118	70-130	2	25
1,2-Dichlorobenzene	10.00	11.12	111	70-130	2	25
1,2,4-Trichlorobenzene	10.00	11.48	115	70-130	1	25
Hexachlorobutadiene	10.00	11.76	118	70-130	1	25
Naphthalene	10.00	11.40	114	70-130	2	25

Surrogate	%REC	Limits
Bromofluorobenzene	102	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC877076	Diln Fac:	1.000
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Isopropanol	ND	2.0	ND	4.9
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	1.7	ND	4.9
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC877076	Diln Fac:	1.000
Matrix:	Air	Batch#:	245562
Units (V):	ppbv	Analyzed:	03/16/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.50	ND	2.0
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	97	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air	
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Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245611
Units (V):	ppbv	Analyzed:	03/17/17
Diln Fac:	1.000		

Type: BS Lab ID: QC877280

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	8.122	81	70-130
Freon 114	10.00	9.356	94	70-130
Chloromethane	10.00	7.175	72	70-130
Vinyl Chloride	10.00	8.018	80	70-130
1,3-Butadiene	10.00	7.596	76	70-130
Bromomethane	10.00	7.506	75	70-130
Chloroethane	10.00	8.936	89	70-130
Trichlorofluoromethane	10.00	9.589	96	70-130
Acrolein	10.00	10.09	101	70-130
1,1-Dichloroethene	10.00	8.744	87	70-130
Freon 113	10.00	10.16	102	70-130
Acetone	10.00	7.846	78	70-130
Carbon Disulfide	10.00	9.235	92	70-130
Isopropanol	10.00	8.837	88	70-130
Methylene Chloride	10.00	9.470	95	70-130
trans-1,2-Dichloroethene	10.00	10.86	109	70-130
MTBE	10.00	11.12	111	70-130
n-Hexane	10.00	10.81	108	70-130
1,1-Dichloroethane	10.00	10.57	106	70-130
Vinyl Acetate	10.00	9.133 b	91	70-130
cis-1,2-Dichloroethene	10.00	10.33	103	70-130
2-Butanone	10.00	8.059	81	70-130
Ethyl Acetate	10.00	9.422	94	70-130
Tetrahydrofuran	10.00	10.54	105	70-130
Chloroform	10.00	10.54	105	70-130
1,1,1-Trichloroethane	10.00	11.08	111	70-130
Cyclohexane	10.00	10.50	105	70-130
Carbon Tetrachloride	10.00	10.25	103	70-130
Benzene	10.00	10.05	100	70-130
1,2-Dichloroethane	10.00	10.52	105	70-130
n-Heptane	10.00	10.75	108	70-130
Trichloroethene	10.00	10.67	107	70-130
1,2-Dichloropropane	10.00	10.83	108	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245611
Units (V):	ppbv	Analyzed:	03/17/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
Bromodichloromethane	10.00	10.89	109	70-130
cis-1,3-Dichloropropene	10.00	10.63	106	70-130
4-Methyl-2-Pentanone	10.00	11.30	113	70-130
Toluene	10.00	10.84	108	70-130
trans-1,3-Dichloropropene	10.00	11.31	113	70-130
1,1,2-Trichloroethane	10.00	11.49	115	70-130
Tetrachloroethene	10.00	11.51	115	70-130
2-Hexanone	10.00	11.24	112	70-130
Dibromochloromethane	10.00	10.41	104	70-130
1,2-Dibromoethane	10.00	11.17	112	70-130
Chlorobenzene	10.00	11.31	113	70-130
Ethylbenzene	10.00	10.98	110	70-130
m,p-Xylenes	20.00	22.26	111	70-130
o-Xylene	10.00	10.97	110	70-130
Styrene	10.00	10.92	109	70-130
Bromoform	10.00	10.68	107	70-130
1,1,2,2-Tetrachloroethane	10.00	10.74	107	70-130
4-Ethyltoluene	10.00	11.28	113	70-130
1,3,5-Trimethylbenzene	10.00	11.10	111	70-130
1,2,4-Trimethylbenzene	10.00	11.29	113	70-130
1,3-Dichlorobenzene	10.00	10.64	106	70-130
1,4-Dichlorobenzene	10.00	10.72	107	70-130
Benzyl chloride	10.00	11.55	115	70-130
1,2-Dichlorobenzene	10.00	10.72	107	70-130
1,2,4-Trichlorobenzene	10.00	10.80	108	70-130
Hexachlorobutadiene	10.00	10.88	109	70-130
Naphthalene	10.00	11.48	115	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	105	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245611
Units (V):	ppbv	Analyzed:	03/17/17
Diln Fac:	1.000		

Type: BSD Lab ID: QC877281

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	8.788	88	70-130	8	25
Freon 114	10.00	9.818	98	70-130	5	25
Chloromethane	10.00	8.925	89	70-130	22	25
Vinyl Chloride	10.00	9.340	93	70-130	15	25
1,3-Butadiene	10.00	8.305	83	70-130	9	25
Bromomethane	10.00	8.844	88	70-130	16	25
Chloroethane	10.00	9.460	95	70-130	6	25
Trichlorofluoromethane	10.00	10.15	101	70-130	6	25
Acrolein	10.00	10.25	103	70-130	2	25
1,1-Dichloroethene	10.00	9.177	92	70-130	5	25
Freon 113	10.00	10.68	107	70-130	5	25
Acetone	10.00	8.193	82	70-130	4	25
Carbon Disulfide	10.00	10.16	102	70-130	10	25
Isopropanol	10.00	8.965	90	70-130	1	25
Methylene Chloride	10.00	10.03	100	70-130	6	25
trans-1,2-Dichloroethene	10.00	11.45	114	70-130	5	25
MTBE	10.00	11.43	114	70-130	3	25
n-Hexane	10.00	11.02	110	70-130	2	25
1,1-Dichloroethane	10.00	10.95	110	70-130	4	25
Vinyl Acetate	10.00	9.268 b	93	70-130	1	25
cis-1,2-Dichloroethene	10.00	10.62	106	70-130	3	25
2-Butanone	10.00	8.242	82	70-130	2	25
Ethyl Acetate	10.00	9.544	95	70-130	1	25
Tetrahydrofuran	10.00	10.52	105	70-130	0	25
Chloroform	10.00	10.66	107	70-130	1	25
1,1,1-Trichloroethane	10.00	11.10	111	70-130	0	25
Cyclohexane	10.00	10.68	107	70-130	2	25
Carbon Tetrachloride	10.00	10.26	103	70-130	0	25
Benzene	10.00	10.29	103	70-130	2	25
1,2-Dichloroethane	10.00	11.03	110	70-130	5	25
n-Heptane	10.00	10.69	107	70-130	1	25
Trichloroethene	10.00	10.68	107	70-130	0	25
1,2-Dichloropropane	10.00	10.82	108	70-130	0	25

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	245611
Units (V):	ppbv	Analyzed:	03/17/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Bromodichloromethane	10.00	10.86	109	70-130	0	25
cis-1,3-Dichloropropene	10.00	10.79	108	70-130	2	25
4-Methyl-2-Pentanone	10.00	11.27	113	70-130	0	25
Toluene	10.00	11.10	111	70-130	2	25
trans-1,3-Dichloropropene	10.00	11.60	116	70-130	2	25
1,1,2-Trichloroethane	10.00	11.63	116	70-130	1	25
Tetrachloroethene	10.00	11.37	114	70-130	1	25
2-Hexanone	10.00	11.80	118	70-130	5	25
Dibromochloromethane	10.00	11.13	111	70-130	7	25
1,2-Dibromoethane	10.00	11.09	111	70-130	1	25
Chlorobenzene	10.00	11.85	119	70-130	5	25
Ethylbenzene	10.00	11.07	111	70-130	1	25
m,p-Xylenes	20.00	22.43	112	70-130	1	25
o-Xylene	10.00	11.09	111	70-130	1	25
Styrene	10.00	11.19	112	70-130	2	25
Bromoform	10.00	10.94	109	70-130	2	25
1,1,2,2-Tetrachloroethane	10.00	11.02	110	70-130	3	25
4-Ethyltoluene	10.00	11.32	113	70-130	0	25
1,3,5-Trimethylbenzene	10.00	11.48	115	70-130	3	25
1,2,4-Trimethylbenzene	10.00	11.64	116	70-130	3	25
1,3-Dichlorobenzene	10.00	10.99	110	70-130	3	25
1,4-Dichlorobenzene	10.00	11.01	110	70-130	3	25
Benzyl chloride	10.00	11.60	116	70-130	0	25
1,2-Dichlorobenzene	10.00	11.17	112	70-130	4	25
1,2,4-Trichlorobenzene	10.00	11.29	113	70-130	4	25
Hexachlorobutadiene	10.00	10.91	109	70-130	0	25
Naphthalene	10.00	11.59	116	70-130	1	25

Surrogate	%REC	Limits
Bromofluorobenzene	105	70-130

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC877282	Diln Fac:	1.000
Matrix:	Air	Batch#:	245611
Units (V):	ppbv	Analyzed:	03/17/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Isopropanol	ND	2.0	ND	4.9
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	1.7	ND	4.9
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC877282	Diln Fac:	1.000
Matrix:	Air	Batch#:	245611
Units (V):	ppbv	Analyzed:	03/17/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.50	ND	2.0
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	100	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Fixed Gas Analysis			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Matrix:	Air	Sampled:	03/15/17
Units:	ppmv	Received:	03/15/17
Units (Mol %):	MOL %	Analyzed:	03/16/17
Batch#:	245569		

Field ID: SG-K Lab ID: 287019-001
 Type: SAMPLE Diln Fac: 2.310

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,300	ND	0.23
Carbon Monoxide	ND	2,300	ND	0.23
Carbon Dioxide	16,000	2,300	1.6	0.23
Oxygen	120,000	2,300	12	0.23
Methane	ND	2,300	ND	0.23

Field ID: SG-A Lab ID: 287019-002
 Type: SAMPLE Diln Fac: 2.140

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,100	ND	0.21
Carbon Monoxide	ND	2,100	ND	0.21
Carbon Dioxide	31,000	2,100	3.1	0.21
Oxygen	120,000	2,100	12	0.21
Methane	ND	2,100	ND	0.21

Field ID: SG-F Lab ID: 287019-003
 Type: SAMPLE Diln Fac: 4.040

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	4,000	ND	0.40
Carbon Monoxide	ND	4,000	ND	0.40
Carbon Dioxide	8,000	4,000	0.80	0.40
Oxygen	120,000	4,000	12	0.40
Methane	ND	4,000	ND	0.40

ND= Not Detected

RL= Reporting Limit

Result Mol %= Result in Mole Percent

Fixed Gas Analysis			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Matrix:	Air	Sampled:	03/15/17
Units:	ppmv	Received:	03/15/17
Units (Mol %):	MOL %	Analyzed:	03/16/17
Batch#:	245569		

Field ID: SG-E Lab ID: 287019-004
 Type: SAMPLE Diln Fac: 3.490

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	3,500	ND	0.35
Carbon Monoxide	ND	3,500	ND	0.35
Carbon Dioxide	13,000	3,500	1.3	0.35
Oxygen	130,000	3,500	13	0.35
Methane	ND	3,500	ND	0.35

Type: BLANK Diln Fac: 1.000
 Lab ID: QC877103

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,000	ND	0.10
Carbon Monoxide	ND	1,000	ND	0.10
Carbon Dioxide	ND	1,000	ND	0.10
Oxygen	ND	1,000	ND	0.10
Methane	ND	1,000	ND	0.10

ND= Not Detected

RL= Reporting Limit

Result Mol %= Result in Mole Percent

Aromatic / Petroleum Hydrocarbons in Air

Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Batch#:	245577
Matrix:	Air	Sampled:	03/15/17
Units (V):	ppbv	Received:	03/15/17
Units (M):	ug/m3	Analyzed:	03/16/17

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln	Fac
SG-K	SAMPLE	287019-001	350	120	17	1,400	470	70	2.310	
SG-A	SAMPLE	287019-002	69 J	110	16	280 J	440	65	2.140	
SG-F	SAMPLE	287019-003	1,500	200	30	6,000	830	120	4.040	
SG-E	SAMPLE	287019-004	3,100	170	26	13,000	710	110	3.490	
	BLANK	QC877143	ND	50	7.4	ND	200	30	1.000	

J= Estimated value

ND= Not Detected

RL= Reporting Limit

MDL= Method Detection Limit

Result M= Result in mass units

Result V= Result in volume units

Batch QC Report

Fixed Gas Analysis			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	245569
Units:	ppmv	Analyzed:	03/16/17
Diln Fac:	1.000		

Type: BS Lab ID: QC877100

Analyte	Spiked	Result	%REC	Limits
Helium	100,000	75,680	76	70-130
Carbon Monoxide		NA		
Carbon Dioxide		NA		
Oxygen		NA		
Methane		NA		

Type: BSD Lab ID: QC877101

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Helium	100,000	75,390	75	70-130	0	20
Carbon Monoxide		NA				
Carbon Dioxide		NA				
Oxygen		NA				
Methane		NA				

NA= Not Analyzed

RPD= Relative Percent Difference

Batch QC Report

Fixed Gas Analysis			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC877102	Batch#:	245569
Matrix:	Air	Analyzed:	03/16/17
Units:	ppmv		

Analyte	Spiked	Result	%REC	Limits
Helium		NA		
Carbon Monoxide	2,000	1,810	90	70-130
Carbon Dioxide	2,000	1,837	92	70-130
Oxygen	2,000	1,759	88	70-130
Methane	2,000	1,864	93	70-130

NA= Not Analyzed

Batch QC Report

Fixed Gas Analysis			
Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	ASTM D1946-90
Field ID:	SG-K	Units (Mol %):	MOL %
Type:	SDUP	Diln Fac:	2.310
MSS Lab ID:	287019-001	Batch#:	245569
Lab ID:	QC877104	Sampled:	03/15/17
Matrix:	Air	Received:	03/15/17
Units:	ppmv	Analyzed:	03/16/17

Analyte	MSS Result	Result	RL	Result (Mol %)	RL	RPD	Lim
Helium	<2,310	ND	2,310	ND	0.2310	NC	30
Carbon Monoxide	<2,310	ND	2,310	ND	0.2310	NC	30
Carbon Dioxide	15,560	15,550	2,310	1.555	0.2310	0	30
Oxygen	122,800	122,800	2,310	12.28	0.2310	0	30
Methane	<2,310	ND	2,310	ND	0.2310	NC	30

NC= Not Calculated

ND= Not Detected

RL= Reporting Limit

RPD= Relative Percent Difference

Result Mol %= Result in Mole Percent

Batch QC Report

Aromatic / Petroleum Hydrocarbons in Air

Lab #:	287019	Location:	Baker Road
Client:	Engeo Inc.	Prep:	METHOD
Project#:	13255.000.000	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Diln Fac:	1.000
Matrix:	Air	Batch#:	245577
Units (V):	ppbv	Analyzed:	03/16/17

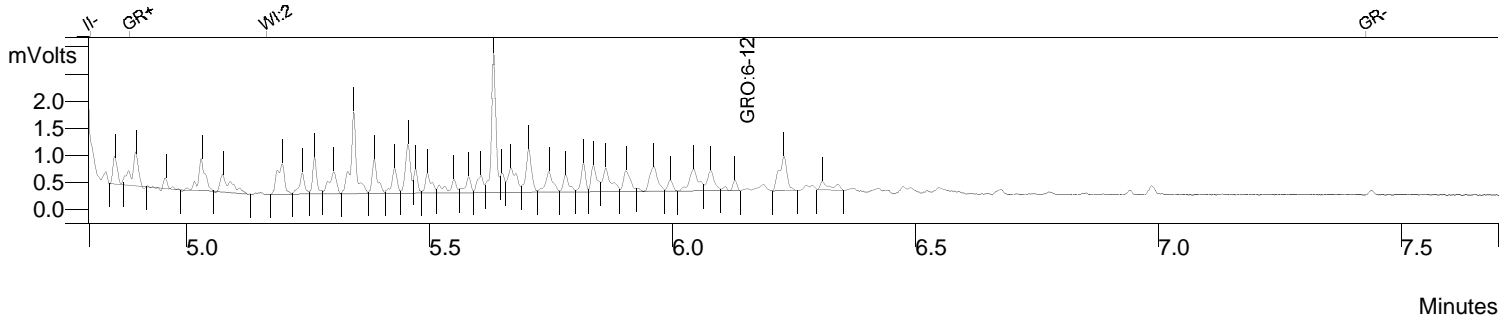
Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim
BS	QC877141	2,100	2,229	106	70-130		
BSD	QC877142	2,100	2,215	105	70-130	1	25

RPD= Relative Percent Difference

Result V= Result in volume units

GRO by TO-3

Sample ID: 287019-001,245577
 Data File: c:\varianws\data\031617\075_005.run
 Sample List: c:\varianws\031617.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/16/2017 13:31:50
 Calculation Date: 03/16/2017 13:41:44
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 2.31x,c00151 Divisor: 1.000
 Multiplier: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	16215	149.998
		Totals	16215	149.998

Integration Parameters

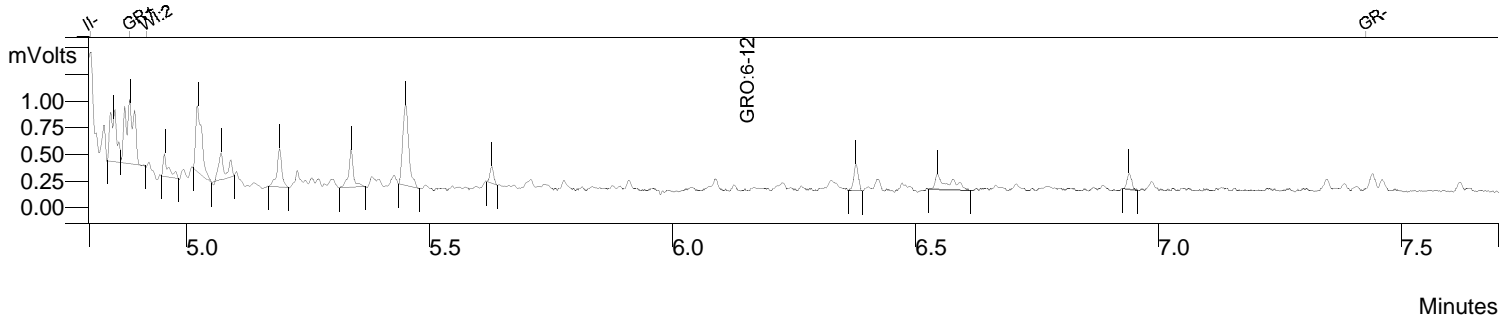
Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.165	WI 2.0 sec
7.426	GR off

GRO by TO-3

Sample ID: 287019-002,245577
 Data File: c:\varianws\data\031617\075_006.run
 Sample List: c:\varianws\031617.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/16/2017 13:45:00
 Calculation Date: 03/16/2017 13:54:54
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 2.14x,c00377
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	3469	32.091
		Totals	3469	32.091

Integration Parameters

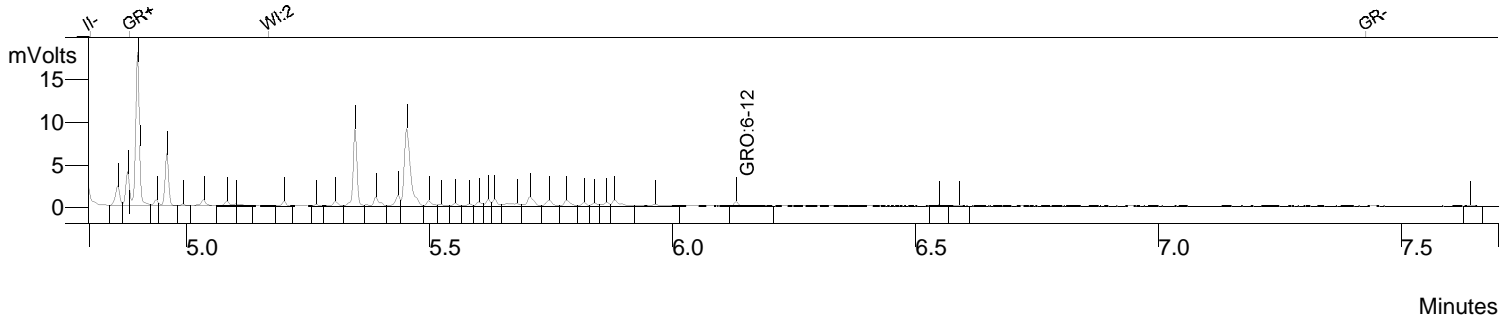
Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
4.918	WI 2.0 sec
7.426	GR off

GRO by TO-3

Sample ID: 287019-003,245577
 Data File: c:\varianws\data\031617\075_007.run
 Sample List: c:\varianws\031617.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/16/2017 14:00:09
 Calculation Date: 03/16/2017 14:10:02
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 4.04x,c00381
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	39172	362.365
		Totals	39172	362.365

Integration Parameters

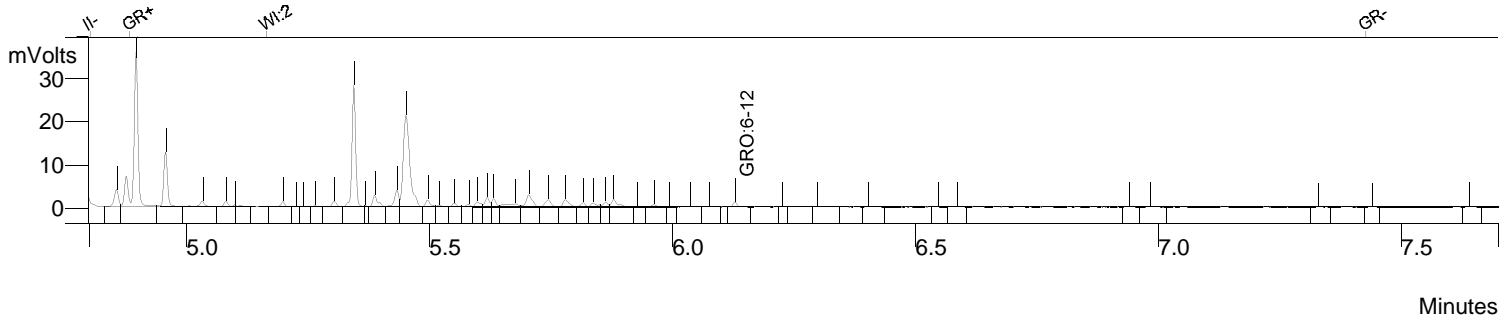
Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.168	WI 2.0 sec
7.426	GR off

GRO by TO-3

Sample ID: 287019-004,245577
 Data File: c:\varianws\data\031617\075_008.run
 Sample List: c:\varianws\031617.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/16/2017 14:13:06
 Calculation Date: 03/16/2017 14:23:01
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 3.49x,c00143
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	96055	888.566
Totals			96055	888.566

Integration Parameters

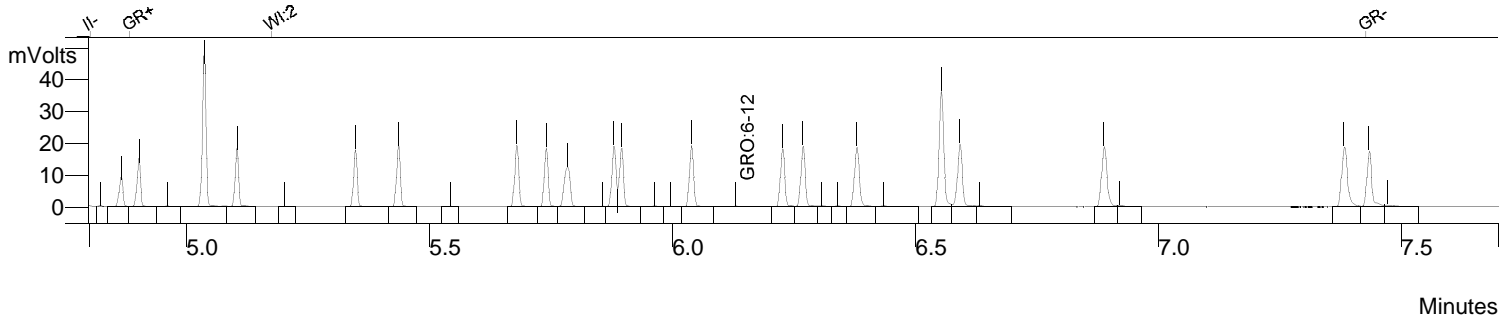
Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.165	WI 2.0 sec
7.426	GR off

GRO by TO-3

Sample ID: ccv/bs,qc877141
 Data File: c:\varianws\data\031617\075_002.run
 Sample List: c:\varianws\031617.smp
 Method: c:\varianws\methods\to3_030717.mth
 Acquisition Date: 03/16/2017 12:54:28
 Calculation Date: 03/16/2017 13:04:22
 Instrument ID: GC32 Operator: TO-15
 Injection Notes: 245577,S32423,1x
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

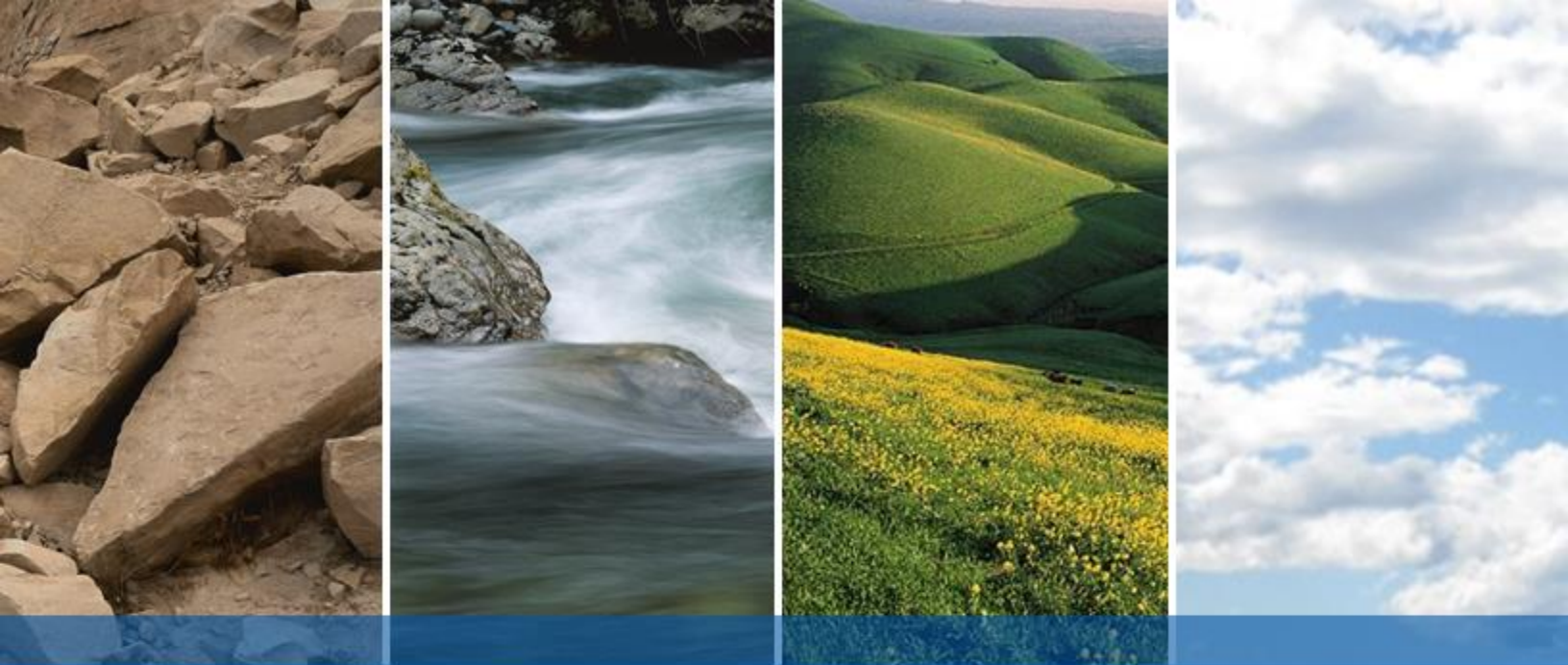
#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	240912	2228.579
Totals			240912	2228.579

Integration Parameters

Initial Tangent %: 0
 Initial Peak Width (sec): 4
 Initial Peak Reject Value: 50.000
 Initial S/N Ratio: 5

Data Handling Time Events

Time (min)	Event
0.012	II on
4.802	II off
4.883	GR on
5.175	WI 2.0 sec
7.426	GR off



DRAFT

APPENDIX B

**Environmental Boring Logs – ENGEO logs and AEI
Consultants Logs**



LOG OF BORING SG-A

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-B

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-C

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-D

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
	1		2 feet of recovery in a 4-foot liner					
5			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					

LOG - ENVIRONMENTAL + PROBE BAKER ROAD_BORING LOGS_2017-04-11.GPJ ENGE O INC.GDT 4/14/17



LOG OF BORING SG-E

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-F

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-G

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-H

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
1			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
5			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-I

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-J

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-K

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-L

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-M

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0 1 5			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					



LOG OF BORING SG-N

Environmental Assessment
 Baker Road
 Castro Valley, CA
 13255.000.000

DATE DRILLED: 3/13/2017
 HOLE DEPTH: 6 ft.
 HOLE DIAMETER: 2.0 in.
 SURF ELEV (:): Approx. 158 ft.

LOGGED / REVIEWED BY: K. Gerhart /
 DRILLING CONTRACTOR: Gregg Drilling & Testing
 DRILLING METHOD: Direct Push
 HAMMER TYPE: Direct Push

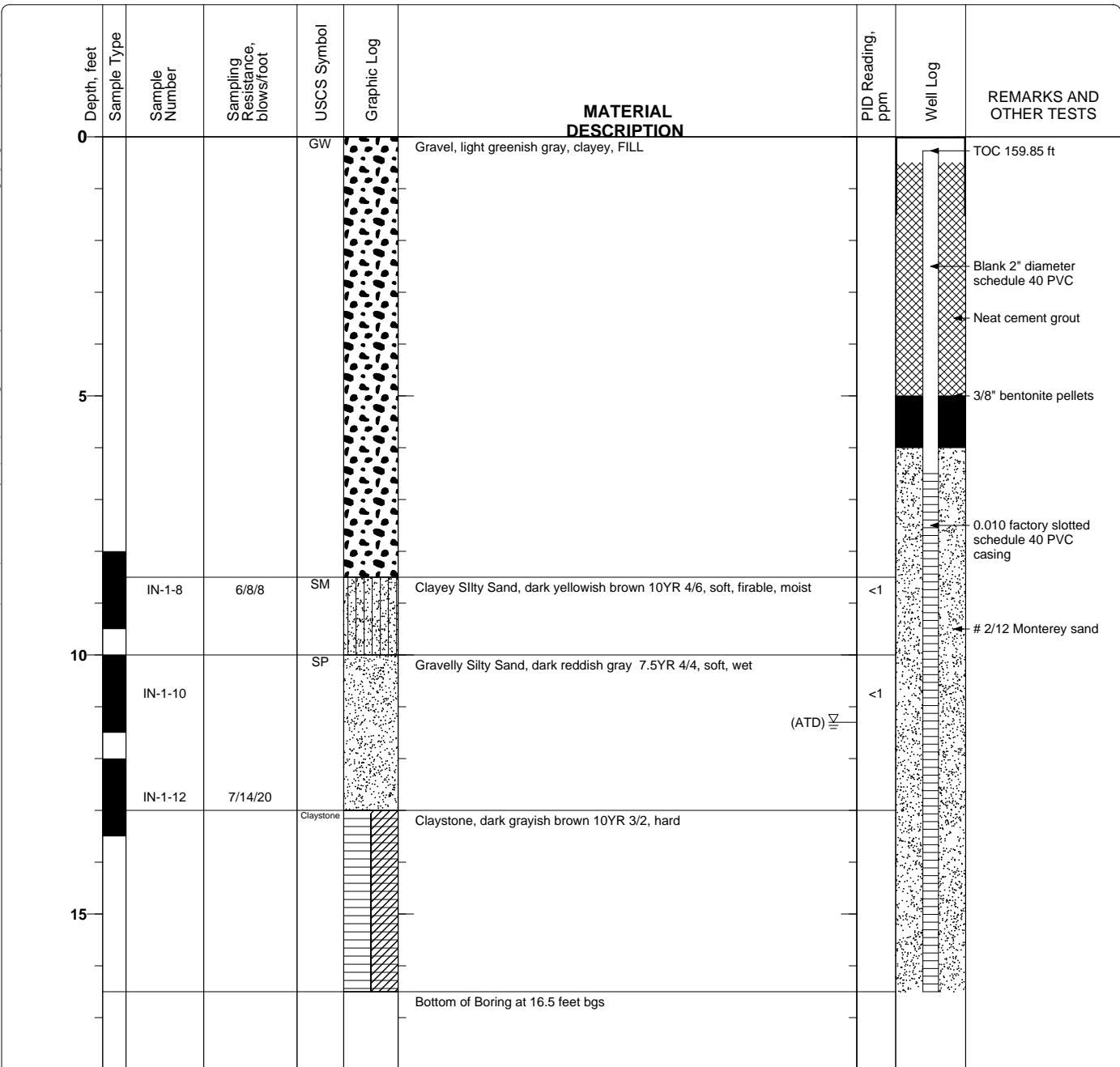
Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Recovery (in) / Run (in)	PID (ppm)	REMARKS
0			GRAVELLY SILT WITH SAND (GM), light reddish brown, dry, no odor, no staining				0	
1			FAT CLAY WITH SAND (CH), dark brownish black, moist, no odor, no staining					
5			SANDY LEAN CLAY (CL), light reddish brown with light reddish orange, moist, no odor, no staining					
			End of boring at approximately 6 feet below ground surface. Groundwater was not encountered.					

Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 273928

Log of Boring IN-1
 Sheet 1 of 1

Date(s) Drilled October 12, 2007	Logged By Leah Levine-Goldberg	Checked By Robert F. Flory, P.G
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 8 1/4 inch	Total Depth of Borehole 16.5 feet bgs
Drill Rig Type CME-75	Drilling Contractor HEW Drilling	Surface Elevation 160.12 feet MSL
Groundwater Level and Date Measured 11.3 feet ATD	Sampling Method(s) ModCal	Permit # W2007-0968
Borehole Backfill Well Completion	Location	

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Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 273928

Log of Boring MW-1
 Sheet 1 of 1

Date(s) Drilled October 12, 2007	Logged By Leah Levine-Goldberg	Checked By Robert F. Flory, PG
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 8 1/4 inch	Total Depth of Borehole 16.5 feet bgs
Drill Rig Type CME-75	Drilling Contractor HEW Drilling	Surface Elevation 159.84 feet MSL
Groundwater Level and Date Measured 14.75 feet ATD	Sampling Method(s) ModCal	Permit # W2007-0964
Borehole Backfill Well Completion	Location	

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				Asphalt		Asphalt 2", base rock 4"			TOC 159.62 ft
				CL		Clay, black 10YR 2/1, firm, stiff, moist			MW-1 is a twin to boring 5 (SB-5)
				CL		Silty Clay, dark yellowish brown 10YR3/4 with very dark brown mottling 10YR 2/2			Blank 2" diameter schedule 40 PVC
5	MW-1-5	5/7/7		CL					Neat cement grout
				SM-ML		Clayey Silt - Silty Sand, dark yellowish brown 10YR3/4 with some 10YR 4/6 mottling, firm, slightly moist	<1		3/8" bentonite pellets
	MW-1-8	4/6/7		SM		Sand, yellowish brown 10YR 4/6, very fine grained, clayey, firm - moderately firm, friable, very moist	<1		
10	MW-1-10	5/7/10		SP		Sand, yellowish brown 10YR 4/6, very fine grained - coarse grained, firm, wet ?	<1		
	MW-1-12	5/10/13		CL		Gravelly Clay - Silty Clay, olive - olive brown 5y 4/4 - 2.5 4/4, firm - hard, slightly moist - (saprolite)	<1		
15				Claystone		Silty Claystone, light olive brown 2.5Y 4/4, firm - hard, indurated (ATD) ∇			

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Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 273928

Log of Boring MW-2
 Sheet 1 of 1

Date(s) Drilled October 12, 2007	Logged By Leah Levine-Goldberg	Checked By Robert F. Flory, PG
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 8 1/4 inch	Total Depth of Borehole 18 feet bgs
Drill Rig Type CME-75	Drilling Contractor HEW DRILLING	Surface Elevation 160.3 feet
Groundwater Level and Date Measured 13.7 feet ATD	Sampling Method(s) ModCal	Permit # W2007-0965
Borehole Backfill Well Completion	Location	

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Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				GC		Clayey Gravel, black - dark yellow brown 10YR 2/1 - 3/4, firm, dry (FILL?)			TOC 160 ft
				CL		Silty Clay, black 10YR 2/1, firm, moist			
				ML		Clayey Silt, light olive brown 2.5Y 5/6, moderately firm, moist			
5		MW-2-5	3/3/5			becoming sandy downward	<1		Well twin to boring SB-2
		MW-2-8	7/14/17				<1		
10		MW-2-11.5	5/6/7	SM		Silty Sand, light olive brown 2.5Y 5/6, clayey, moderately firm, moist,			# 2/12 Monterey sand
		MW-2-12	6/7/10	SP		Silty Sand, dark greenish gray 10GY 4/1, moderately firm, very moist, becoming wet downward.	2.5		
						(ATD) ∇			
15		MW-2-15	9/14/25	CL		Sandy Gravelly Clay, olive brown - dark grayish brown 2.5Y 4/4 - 4/2, firm, slightly moist (saprolite)	<1		
				Claystone		Sandy Gravelly Claystone, light olive brown 2.5Y 4/4, firm - hard, indurated			



Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 273928

Log of Boring MW-3
 Sheet 1 of 1

Date(s) Drilled October 12, 2007	Logged By Leah Levine-Goldberg	Checked By Robert F. Flory, PG
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 8 1/4 inch	Total Depth of Borehole 16.5 feet bgs
Drill Rig Type CME-75	Drilling Contractor HEW Drilling	Surface Elevation 160.04 feet MSL
Groundwater Level and Date Measured 13.3 feet ATD	Sampling Method(s) ModCal	Permit # W2007-0966
Borehole Backfill Well Completion	Location	

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				Asphalt GC		Asphalt			TOC 159.79 ft
						Clayey Gravel, gray, FILL			
				CL		Clay, black 10YR 2/1, soft, moist			Blank 2" diameter schedule 40 PVC
				CL		Silty Clay, dark yellowish brown 10YR3/4 with very dark brown mottling 10YR 2/2			Neat cement grout
5		MW-3-5	3/5/5	CL-ML		Sandy Silty Clay - Clayey Silt, dark yellowish brown 10YR3/4 with some 10YR 4/6 mottling, firm, moist	<1		3/8" bentonite pellets
				SM		Silty Sand, dark brown 10YR 5/8, very fine grained, slightly clayey, firm - moderately firm, friable, moist			
10		MW-3-8	3/7/11			Sandy Gravel, yellowish brown 10YR 5/4, well graded, moderately firm, moist	<1		
		MW-3-10	6/7/8	SP		Gravelly Sand, yellowish brown 10YR 5/4, well graded, moderately firm, wet.	<1		
		MW-3-12	7/11/14	SW		Gravelly Sand, yellowish brown 10YR 5/4, well graded, moderately firm, wet.	<1		
15				GC-CL		Clayey Gravel - Gravelly Clay, olive gray - olive 4/2 - 5/3, firm, wet, (saprolite)	(ATD) ∇		
						Bottom of Boring at 16.5 feet bgs			

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Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 273928

Log of Boring MW-4
 Sheet 1 of 1

Date(s) Drilled October 12, 2007	Logged By Leah Levine-Goldberg	Checked By Robert F. Flory, P.G
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 8 1/4 inch	Total Depth of Borehole 16.5 feet bgs
Drill Rig Type CME-75	Drilling Contractor HEW Drilling	Surface Elevation 159.95 feet MSL
Groundwater Level and Date Measured 15.4 feet ATD	Sampling Method(s) ModCal	Permit # W2007-0967
Borehole Backfill Well Completion	Location	

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/root	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				Asphalt					
				GC		Clayey Gravel, gray, FILL			TOC 159.69 ft
				CL		Clay, Black 10YR 2/1			Blank 2" diameter schedule 40 PVC Neat cement grout
5		MW-4-6	5/8/9	CL		Sandy Silty Clay, dark brown, 10YR 3/6, moist, firm	<1		
		MW-4-8	5/7/10	SC		Clayey Silty Sand, dark olive brown - light olive brown 2.5Y 3/3 - 5/6, moderately firm, moist	<1		
10		MW-4-11	3/8/11	CL		Gravelly Clay, light brownish gray, weathered claystone with green siltstone clasts, firm, moist	<1		
		MW-4-12	6/8/12				<1		
15		MW-4-16	5/7/10	Claystone		Silty Claystone, grayish brown 2.5Y 5/2, saprolitic with purplish black clasts, firm, moist	<1		(ATD) ∇
						Bottom of Boring at 16.5 feet bgs			

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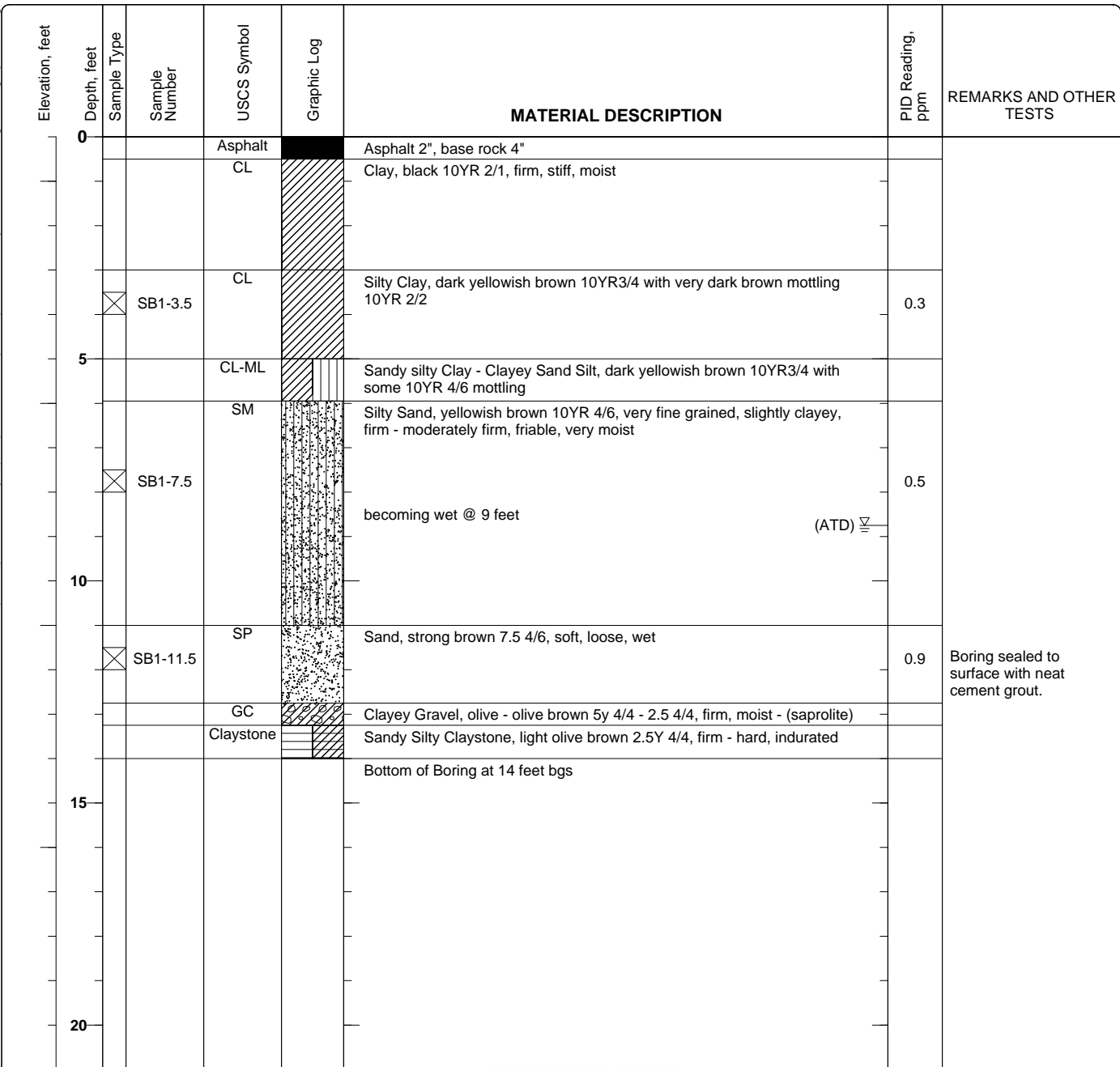


Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 10509

Log of Boring SB-1
 Sheet 1 of 1

Date(s) Drilled May 18, 2005	Logged By Robert F. Flory	Checked By Adrian Angel
Drilling Method Geoprobe	Drill Bit Size/Type	Total Depth of Borehole 14 feet bgs
Drill Rig Type Geoprobe 5410	Drilling Contractor EnProb	Approximate Surface Elevation
Groundwater Level and Date Measured 8.75 feet ATD	Sampling Method(s) Tube	Permit #
Borehole Backfill Cement Slurry	Location	

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Figure

Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 10509

Log of Boring SB-2
 Sheet 1 of 1

Date(s) Drilled May 18, 2005	Logged By Robert F. Flory	Checked By Adrian Angel
Drilling Method Geoprobe	Drill Bit Size/Type 2 inch	Total Depth of Borehole 18 feet bgs
Drill Rig Type Geoprobe 5410	Drilling Contractor EnProb	Approximate Surface Elevation
Groundwater Level and Date Measured 9.2 feet ATD	Sampling Method(s) Tube	Permit #
Borehole Backfill Cement Slurry	Location	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\CHARACTERIZATION\273928 WI (Piazza) Castro Valley - (RFF)\10509 PH II (Piazza) Castro Valley\ Prelim Inv\ Borings 1-8.bgs [DP Boring 20.rpl]

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0				GC		Clayey Gravel, black - dark yellow brown 10YR 2/1 - 3/4, firm, dry (FILL?)		
						No recovery		
		SB2-3.5		ML		Clayey Silt, olive gray 5Y 5/2, moderately firm, moist becoming sandy downward	0.1	
		SB2-7.5					0.3	
				SM		Silty Sand, olive gray 5Y 5/2, clayey, moderately firm, moist wet @ (ATD)		
		SB2-11.5		SP		Silty Sand, dark gray green 10GY 3/1, clayey, moderately firm,	175	
		SB2-13		SW		Gravelly Sand, dark greenish gray 10GY 4/1, firm, wet	85	Boring sealed to surface with neat cement grout
				CL		Sandy Gravelly Clay, olive brown - dark grayish brown 2.5Y 4/4 - 4/2, firm, slightly moist (saprolite)		
				Claystone		Sandy Gravelly Claystone, light olive brown 2.5Y 4/4, firm - hard, indurated		
						Bottom of Boring at 18 feet bgs		
20								






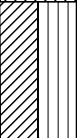



Figure

Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 10509

Log of Boring SB-3
 Sheet 1 of 1

Date(s) Drilled May 18, 2005	Logged By Robert F. Flory	Checked By Adrian Angel
Drilling Method Geoprobe	Drill Bit Size/Type 2 inch	Total Depth of Borehole 16 feet bgs
Drill Rig Type Geoprobe 5410	Drilling Contractor EnProb	Approximate Surface Elevation
Groundwater Level and Date Measured 8.56 feet ATD	Sampling Method(s) Tube	Permit #
Borehole Backfill Cement Slurry	Location	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\CHARACTERIZATION\273928 WI (Piazza) Castro Valley - (RFY)\10509 PH II (Piazza) Castro Valley\1-8.bgs [DP Boring 20.rpl]

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0				Asphalt		Asphalt 2", base rock 4"		
				CL		Clay, black 10YR 2/1, firm, stiff, moist		
	3.5	SB3-3.5		CL		Silty Clay, dark yellowish brown 10YR3/4 with some very dark brown 10YR 2/2 mottling, firm, slightly moist	0.5	
	7.5	SB3-7.5		CL-ML		Clayey Silt - Silt, dark yellowish brown 10YR3/4 with some 10YR 4/6 mottling	1.0	
	11.5	SB3-11.5		SM		Silty Sand, strong brown 7.5 YR 5/6, firm, moist becoming wet @ 10.0 (ATD) ∇	1.2	
				SP		Clayey Sand, yellowish brown 10YR 4/6, moderately firm - moderately soft, wet		
				Claystone		Sandy Silty Claystone, light olive brown 2.5Y 4/4, firm - hard, indurated, slightly moist		Borings sealed to surface with neat cement grout
						No recovery		
						Bottom of Boring at 16 feet bgs		






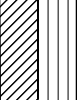
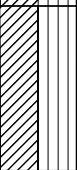



Figure

Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 10509

Log of Boring SB-4
 Sheet 1 of 1

Date(s) Drilled May 18, 2005	Logged By Robert F. Flory	Checked By Adrian Angel
Drilling Method Geoprobe	Drill Bit Size/Type 2 inch	Total Depth of Borehole 13.5 feet bgs
Drill Rig Type Geoprobe 5410	Drilling Contractor EnProb	Approximate Surface Elevation
Groundwater Level and Date Measured 9.6 feet ATD	Sampling Method(s) Tube	Permit #
Borehole Backfill Cement Slurry	Location	

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Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0				Asphalt		Asphalt 2", base rock 4"		
				CL		Clay, black 10YR 2/1, firm, stiff, moist		
	3.5	SB4-3.5					1.0	
				CL		Silty Clay, dark yellowish brown 10YR3/4 with very dark brown mottling 10YR 2/2		
				CL-ML		Sandy Silty Clay - Clayey Sandy Silt, dark yellowish brown 10YR 3/4 - 4/6 mottled,		
	7.5	SB4-7.5		CL-ML		Silty Clay - Clayey Silt, yellowish brown 10YR 4/6, moderately firm, moist	0.3	
						becoming wet @ 9.6 feet		
						(ATD) ∇		
10				CL		Sandy Clay grading downward to Clayey Sand, dark yellowish brown - 10YR 6/6, firm, moist		
				SC		Clayey Sand, brownish yellow - light yellowish brown 10YR 6/6 - 6/4, firm - moderately firm, very moist	0.5	
	11.5	SB4-11.5					0.5	
				SC		Clayey Sand, light olive brown 2.5Y 5/6 - strong brown 7.5 YR 5/8 mottling, moderately firm, wet		
						Refusal at 13.5 feet		
15								
20								

Boring sealed to surface with neat cement grout





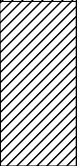
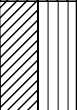





Figure

Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 10509

Log of Boring SB-5
 Sheet 1 of 1

Date(s) Drilled May 18, 2005	Logged By Robert F. Flory	Checked By Adrian Angel
Drilling Method Geoprobe	Drill Bit Size/Type 2 inch	Total Depth of Borehole 18 feet bgs
Drill Rig Type Geoprobe 5410	Drilling Contractor EnProb	Approximate Surface Elevation
Groundwater Level and Date Measured Dry feet ATD, 11.1 feet after 2.5 hrs	Sampling Method(s) Tube	Permit #
Borehole Backfill Cement Slurry	Location	

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Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0				Asphalt		Asphalt 2", base rock 4"		
				CL		Clay, black 10YR 2/1, firm, stiff, moist		
	4.5	⊗	SB5-3.5	CL		Silty Clay, dark yellowish brown 10YR3/4 with very dark brown mottling 10YR 2/2	0.1	
	7.5	⊗	SB5-7.5	CL-ML		Clayey Silt, dark yellowish brown 10YR3/4 with some 10YR 4/6 mottling, firm, slightly moist	0.1	
	9.5			SM		Sand, yellowish brown 10YR 4/6, very fine grained, clayey, firm - moderately firm, friable, very moist		
	11.5	⊗	SB5-11.5	SP		Sand, yellowish brown 10YR 4/6, very fine grained - coarse grained, firm, wet ? (after 2.5 hrs) ▾	0.3	
	13.5			CL		Gravelly Clay - Silty Clay, olive - olive brown 5y 4/4 - 2.5 4/4, firm - hard, slightly moist - (saprolite)		
	15.0	⊗	SB5-14	Claystone		Silty Claystone, light olive brown 2.5Y 4/4, firm - hard, indurated	1.0	Boring sealed to surface with neat cement grout
	18.0					Bottom of Boring at 18 feet bgs		



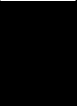







Figure

Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 10509

Log of Boring SB-6
 Sheet 1 of 1

Date(s) Drilled May 18, 2005	Logged By Robert F. Flory	Checked By Adrian Angel
Drilling Method Geoprobe	Drill Bit Size/Type 2 inch	Total Depth of Borehole 14 feet bgs
Drill Rig Type Geoprobe 5410	Drilling Contractor EnProb	Approximate Surface Elevation
Groundwater Level and Date Measured 8.62 feet ATD	Sampling Method(s) Tube	Permit #
Borehole Backfill Cement Slurry	Location	

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Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0				Asphalt		Asphalt 2", clayey gravelly FILL		
				CL		Clay, black 10YR 2/1, soft, moist		
		⊗	SB6-3.5	CL		Silty Clay, dark yellowish brown 10YR3/4 with very dark brown mottling 10YR 2/2	1.0	
5				CL-ML		Sandy Silty Clay - Clayey Silt, dark yellowish brown 10YR3/4 with some 10YR 4/6 mottling, firm, moist		
		⊗	SB6-7.5	SM		Silty Sand, yellowish brown 10YR 4/6, very fine grained, slightly clayey, firm - moderately firm, friable, very moist - wet becoming wet @ 9 feet	0.8	(ATD) 
10		⊗	SB6-10.5	SP		Sand, strong brown 7.5 YR 5/8 with yellowish brown 10YR 5/4, moderately soft - soft, wet	1.1	
		⊗	SB6-10.5				0.9	Boring sealed to surface with neat cement grout
				GC-CL		Clayey Gravel - Gravelly Clay, olive gray - olive 4/2 - 5/3, firm, moist, (saprolite)		
15						Bottom of Boring at 14 feet bgs		
20								



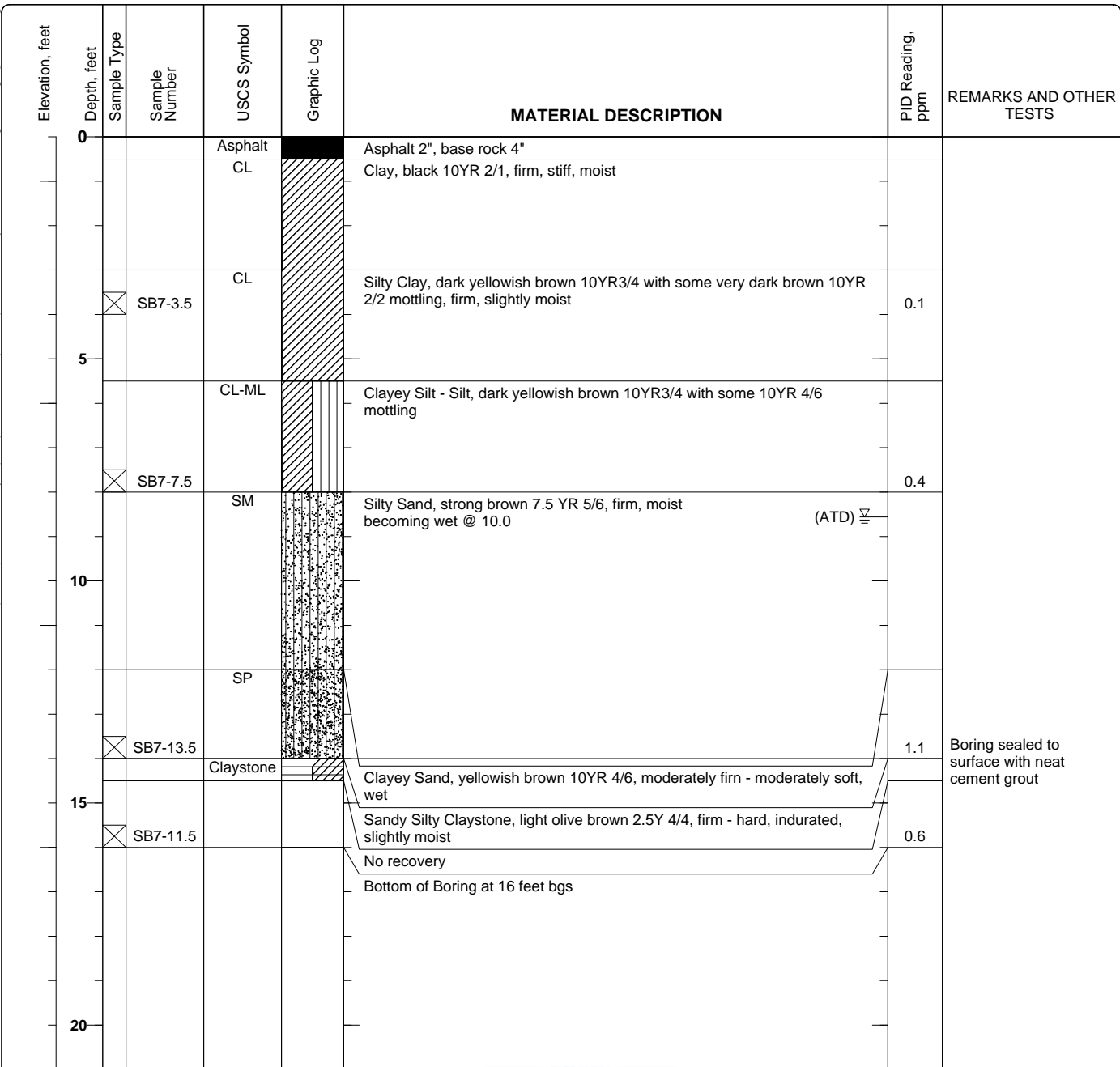
Figure

Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 10509

Log of Boring SB-7
 Sheet 1 of 1

Date(s) Drilled May 18, 2005	Logged By Robert F. Flory	Checked By Adrian Angel
Drilling Method Geoprobe	Drill Bit Size/Type 2 inch	Total Depth of Borehole 16 feet bgs
Drill Rig Type Geoprobe 5410	Drilling Contractor EnProb	Approximate Surface Elevation
Groundwater Level and Date Measured 8.56 feet ATD	Sampling Method(s) Tube	Permit #
Borehole Backfill Cement Slurry	Location	

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Figure

Project: Piazza
Project Location: 20957 Baker Road, Castro Valley, CA
Project Number: 10509

Log of Boring SB-8
 Sheet 1 of 1

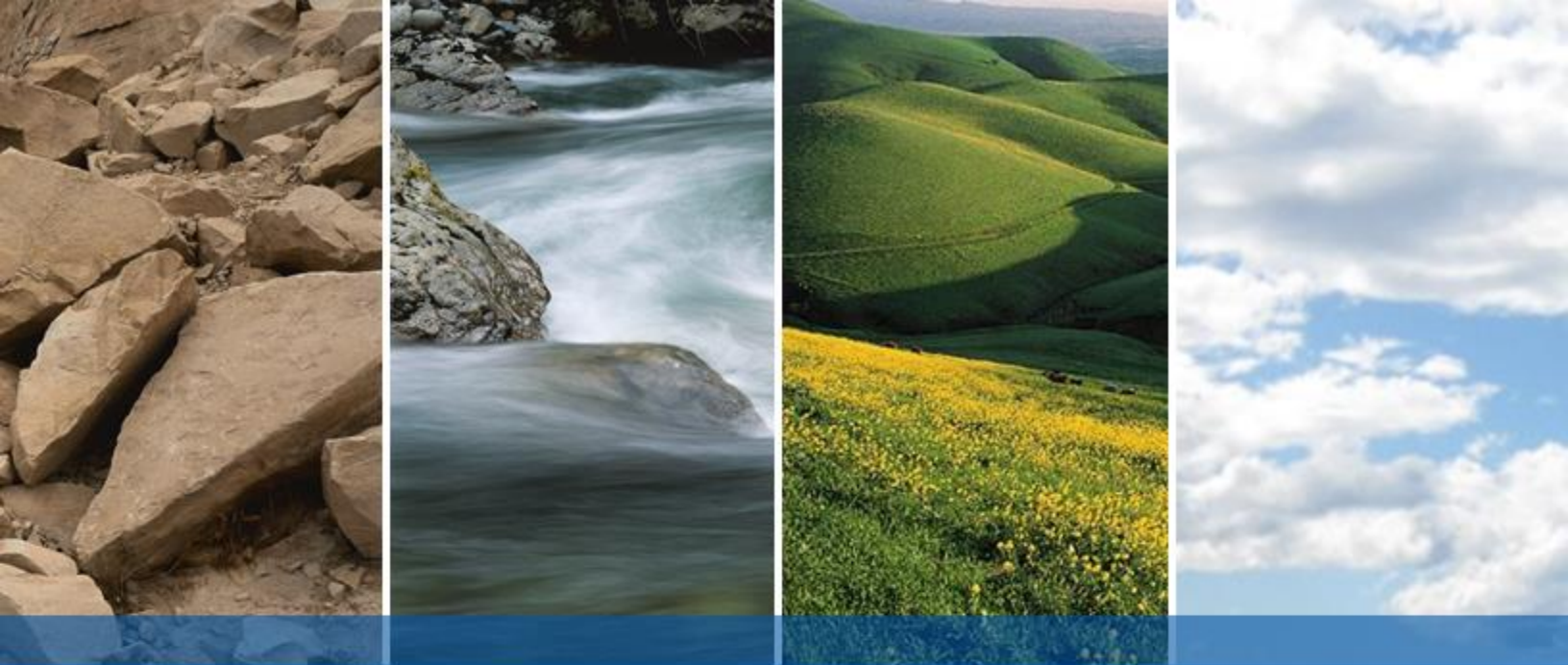
Date(s) Drilled May 18, 2005	Logged By Robert F. Flory	Checked By Adrian Angel
Drilling Method Geoprobe	Drill Bit Size/Type 2 inch	Total Depth of Borehole 15 feet bgs
Drill Rig Type Geoprobe 5410	Drilling Contractor EnProb	Approximate Surface Elevation
Groundwater Level and Date Measured 8.7 feet ATD	Sampling Method(s) Tube	Permit #
Borehole Backfill Cement Slurry	Location	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\CHARACTERIZATION\273928 WI (Piazza) Castro Valley - (REF)\10509 PH II (Piazza) Castro Valley\ Prelim Inv\ Borings 1-8.bgs [DP Boring 20.rpt]

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0				GC		Base rock		
				CL		Sandy Silty Clay, reddish brown 5YR 5/4 - yellowish brown 10YR 5/6, mottled, firm slightly moist		
				CL		Clay, black 10YR 2/1, firm, moderately firm, moist		
			SB8-3.5	CL		Silty Clay, dark yellowish brown 10YR3/4 with very dark brown mottling 10YR 2/2	0.2	
5				CL-ML		Sandy silty Clay - Clayey Sand Silt, dark yellowish brown 10YR3/4 with some 10YR 4/6 mottling		
			SB8-7.5	Sandstone		Silty Sand, yellowish brown 10YR 4/6, very fine grained, slightly clayey, firm - moderately firm, friable, very moist Moisture content increasing downward becoming wet @ 9 feet	1.1	(ATD) ∇
10			SB8-11.5	SP		Sand, strong brown 7.5 4/6, soft - moderately soft, wet	0.1	
			SB8-13	SP		Sand, strong brown 7.5 4/6 - yellowish brown 10YR 5/6 mottled, locally clayey, moderately soft - moderately firm, wet	2.3	Boring sealed with neat cement grout
				Claystone		Sandy Silty Claystone, light olive brown 2.5Y 4/4, firm - hard, indurated		
15						Bottom of Boring at 15 feet bgs		
20								



Figure



DRAFT

APPENDIX C

UCL Calculation Worksheet for Lead
Q-Q Plot for Arsenic

A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets										
2	UCL Calculation Worksheet for Lead										
3	User Selected Options										
4	Date/Time of Computation		3/30/2017 3:28:58 PM								
5	From File		WorkSheet_a.xls								
6	Full Precision		OFF								
7	Confidence Coefficient		95%								
8	Number of Bootstrap Operations		2000								
9											
10											
11	Lead										
12											
13	General Statistics										
14	Total Number of Observations			36		Number of Distinct Observations			36		
15						Number of Missing Observations			0		
16	Minimum			3.46		Mean			23.01		
17	Maximum			110		Median			10.45		
18	SD			26.46		Std. Error of Mean			4.41		
19	Coefficient of Variation			1.15		Skewness			1.973		
20											
21	Normal GOF Test										
22	Shapiro Wilk Test Statistic			0.693		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value			0.935		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic			0.312		Lilliefors GOF Test					
25	5% Lilliefors Critical Value			0.148		Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level										
27											
28	Assuming Normal Distribution										
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL			30.46		95% Adjusted-CLT UCL (Chen-1995)			31.81		
31						95% Modified-t UCL (Johnson-1978)			30.7		
32											
33	Gamma GOF Test										
34	A-D Test Statistic			2.377		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value			0.772		Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic			0.241		Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value			0.15		Data Not Gamma Distributed at 5% Significance Level					
38	Data Not Gamma Distributed at 5% Significance Level										
39											
40	Gamma Statistics										
41	k hat (MLE)			1.208		k star (bias corrected MLE)			1.126		
42	Theta hat (MLE)			19.04		Theta star (bias corrected MLE)			20.43		
43	nu hat (MLE)			86.98		nu star (bias corrected)			81.07		
44	MLE Mean (bias corrected)			23.01		MLE Sd (bias corrected)			21.68		
45						Approximate Chi Square Value (0.05)			61.32		
46	Adjusted Level of Significance			0.0428		Adjusted Chi Square Value			60.54		
47											
48	Assuming Gamma Distribution										
49	95% Approximate Gamma UCL (use when n>=50))			30.41		95% Adjusted Gamma UCL (use when n<50)			30.81		
50											
51	Lognormal GOF Test										
52	Shapiro Wilk Test Statistic			0.902		Shapiro Wilk Lognormal GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L	
53	5% Shapiro Wilk Critical Value				0.935	Data Not Lognormal at 5% Significance Level							
54	Lilliefors Test Statistic				0.181	Lilliefors Lognormal GOF Test							
55	5% Lilliefors Critical Value				0.148	Data Not Lognormal at 5% Significance Level							
56	Data Not Lognormal at 5% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data				1.241	Mean of logged Data				2.668			
60	Maximum of Logged Data				4.7	SD of logged Data				0.915			
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL				31.2	90% Chebyshev (MVUE) UCL				32.77			
64	95% Chebyshev (MVUE) UCL				37.85	97.5% Chebyshev (MVUE) UCL				44.91			
65	99% Chebyshev (MVUE) UCL				58.76								
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data do not follow a Discernible Distribution (0.05)												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL				30.26	95% Jackknife UCL				30.46			
72	95% Standard Bootstrap UCL				30.14	95% Bootstrap-t UCL				32.49			
73	95% Hall's Bootstrap UCL				31.6	95% Percentile Bootstrap UCL				30.96			
74	95% BCA Bootstrap UCL				31.64								
75	90% Chebyshev(Mean, Sd) UCL				36.24	95% Chebyshev(Mean, Sd) UCL				42.23			
76	97.5% Chebyshev(Mean, Sd) UCL				50.54	99% Chebyshev(Mean, Sd) UCL				66.88			
77													
78	Suggested UCL to Use												
79	95% Chebyshev (Mean, Sd) UCL				42.23								
80													
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.												
84	For additional insight the user may want to consult a statistician.												
85													

Q-Q Plot for arsenic

