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By Alameda County Environmental Health 10:13 am, Aug 09, 201

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August 8, 2017

Mr. Keith Nowell  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Geosyntec Report – Soil Gas Investigation**  
**76 (Former BP) Station No. 2611117**  
**7210 Bancroft Avenue**  
**Oakland, California**  
**Fuel Leak Case No. RO0000356**

Dear Mr. Nowell:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please contact Mr. Dennis Dettloff at (916) 503-1261.

Sincerely,

A handwritten signature in black ink that reads "Ed Ralston".

Edward C. Ralston  
Program Manager  
Remediation Management



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By Alameda County Environmental Health 10:12 am, Aug 09, 2017

August 8, 2017

Mr. Keith Nowell  
Alameda County Health Care Services Agency (ACHCSA)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

Subject: Geosyntec Report  
76 (former BP) Service Station No. 2611117  
7210 Bancroft Avenue  
Oakland, California USA  
Fuel Leak Case No. RO0000356

Dear Mr. Nowell:

Antea®Group is submitting for review the attached document entitled *Results from Additional Soil and Soil Gas Investigation* for the 76 (former BP) Service Station No. 2611117, located at 7210 Bancroft Avenue in Oakland, California (the Site). The field work was performed by Geosyntec Consultants under the supervision of an Antea Group field supervisor. The report summarizes the field activities/procedures along with the laboratory results from subsurface soil and soil gas samples collected during the field activities. Antea Group is submitting this document in response to the information request discussed in the July 6, 2016 meeting attended by representatives of the ACHCSA, property owners, and Antea Group.

Once the ACHCSA completes its review of the attached report, Antea Group requests a meeting to discuss the results and the path forward to site closure. If you have any questions regarding this report or need any additional information about this Site, please do not hesitate to contact Mr. Jeffrey Friedman at (626) 408-4534.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeffrey Friedman".

Jeffrey Friedman  
Senior Consultant  
Antea Group

Attachment: Geosyntec Report dated August 2, 2017



2 August 2017

Mr. Keith Nowell  
Alameda County Health Care Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Subject: Results of Additional Soil and Soil Gas Investigation  
76 (former BP) Station Number 11117  
7210 Bancroft Avenue  
Oakland, California  
ACDEH Case File #RO356**

Dear Mr. Nowell:

Geosyntec Consultants, Inc. (Geosyntec) has prepared this letter documenting the results of the additional investigation performed at the above-referenced property (the Site; **Figure 1**). The investigation was performed in accordance with Geosyntec's 21 December 2016 *Revised Work Plan for Soil Gas Sampling* (Work Plan), which was submitted to the Alameda County Department of Environmental Health (ACEH). ACEH conditionally approved the Work Plan in a letter dated 17 January 2017 and requested a report documenting field activities by 6 April 2017. However, given the amount of rain in early 2017 and after obtaining approval from ACEH, field activities were postponed from March to late May 2017. The purpose of the additional investigation was to obtain supplemental data to further characterize the distribution of petroleum-based volatile organic compounds (VOCs), including aromatics and oxygenates, in the subsurface, and if present, to evaluate if VOCs are present in sufficient concentrations to pose a health risk via the vapor intrusion pathway. This letter report presents the Site background and description, a summary of the field sampling program, the results of the investigation, a screening-level risk evaluation, and our conclusions and recommendations regarding Site conditions.

## **SITE BACKGROUND AND DESCRIPTION**

The Site is approximately one-half acre (19,500 square feet), located at the northwest intersection of Bancroft Avenue and 73rd Avenue, in Oakland, California. The Site is located in an area of mixed commercial and residential uses, with commercial space to the north, and residential areas to the south, east, and west. The Site was previously used as a 76-branded retail gasoline service

station and housed several underground storage tanks (USTs) and piping associated with storing petroleum products.

In 1984, the pre-existing USTs at the Site were removed, and three single-walled fiberglass USTs and one diesel UST were installed to the northeast of the previous tanks. Between 1991 and 1997, nine monitoring wells were installed at the Site, and one monitoring well was installed off-Site. In 1998, three gasoline USTs (6,000-gallon, 10,000-gallon, and 12,000-gallon), and one 10,000-gallon diesel UST, along with the associated piping and dispenser, were removed from the Site, and replaced with three 12,000-gallon gasoline and one 10,000-gallon diesel USTs. In 2000, two extraction wells were installed at the Site to conduct short-term groundwater extraction. Approximately 11,000 gallons of water was extracted at the Site. In 2009, soil vapor extraction (SVE) wells were installed at the Site, but never operated due to logistical power issues at the Site. A pilot study using Plume Stop™ was conducted in March 2012.<sup>1</sup> From June through August 2014, demolition activities were conducted at the Site, including the removal of all USTs.<sup>2</sup> In October 2015, a Corrective Action Plan (CAP) was submitted for the Site, which proposed several remedial options.<sup>3</sup> All existing monitoring wells and SVE wells have been destroyed at the Site. The Site has been a vacant lot since the razing of the Site in 2014. The historical layout of the Site, as well as locations of previous soil borings at the Site, are shown in **Figure 2**.

## FIELD SAMPLING PROGRAM

The following is a summary of field activities completed during this investigation. The field sampling program consisted of the collection and analysis of soil and soil gas samples from 25 borings. The borings were advanced in a grid of approximately 30-foot centers across the property (**Figure 3**) in accordance with Department of Toxic Substances Control (DTSC) guidance for evaluating sites with potential vapor intrusion concerns. At the request of ACEH, soil samples were collected from the bottom of each boring to provide a secondary line of evidence regarding Site conditions.

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<sup>1</sup> Antea Group (Antea), 2013. Pilot Test Evaluation and Additional Assessment Work Plan, 76 (Former BP) Station No. 2611117, 7210 Bancroft Avenue, Oakland, California. 3 May.

<sup>2</sup> Atlas Environmental, 2016. Addendum to Site Demolition and UST Removal Report, Former Eastmond 76 Station, Oakland, California. 11 February.

<sup>3</sup> Antea, 2015. Corrective Action Plan, 76 (Former BP) Station No. 2611117, 7210 Bancroft Avenue, Oakland, California. 22 October.

Prior to the field investigation, Geosyntec obtained appropriate drilling permits from the Alameda County Public Works Agency (**Attachment A**), prepared a Site-specific health and safety plan (HASP), contracted with a private utility locator (Subtronic Corporation of Martinez, California) to clear each boring location, and notified Underground Services Alert at least two business days in advance of the fieldwork.

Under the direction of a Geosyntec field geologist, PeneCore Drilling (PeneCore) of Woodland, California, a state-licensed contractor, advanced borings for the collection of soil and soil gas samples between 22 and 24 May 2017. Each boring was advanced using hand auger equipment to an approximate depth of 5.5 feet below ground surface (bgs) to ensure clearance of underground utilities.

### **Soil Sampling and Analytical Program**

Soil samples were collected from either the end of the hand auger, or with the use of a manually-operated slide hammer equipped with a 6-inch-long acetate sleeve from depths between 4.5 and 5.5 feet bgs. Prior to each soil sample collection, the hand auger and/or slide hammer were decontaminated with a three-bucket wash consisting of a non-phosphate cleaning solution, tap water, and a final rinse in distilled water.

Under the direction of a California Professional Engineer, the Geosyntec field geologist logged the recovered soil cores using the visual-manual procedures of American Society of Testing and Materials (ASTM) Standard D2488,<sup>4</sup> which is based on the Unified Soil Classification System (USCS), for guidance. Soil cores were screened for organic vapors using a MiniRae 2000 photoionization detector (PID), calibrated with 100 parts per million by volume (ppmv) isobutylene gas. The soils were placed in a plastic bag, the PID probe was inserted into the bag, and the reading was recorded. Soil characteristics, including visual grain-size distribution, color, moisture content, plasticity, density, USCS classification, PID readings, and any other pertinent characteristics, were documented by the field geologist and are presented in the soil boring logs (**Attachment B**).

Soil samples for chemical analysis were collected using pre-preserved 40-milliliter (mL) vials in accordance with United States Environmental Protection Agency (U.S. EPA) Method 5035

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<sup>4</sup> ASTM D2488-09a. Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).

procedures. Following collection, each sample was stored in zip-closure bags, placed in portable coolers maintained at 4 degrees Celsius, and transported via a courier to a California certified environmental laboratory on the same day of collection. The samples were recorded on a chain-of-custody record identifying the sample identification, date and time of collection, sample matrix and containers, preservative, requested analyses, sampler's name, couriers used, and responsible laboratory personnel.

The soil samples were shipped under Geosyntec chain-of-custody protocol to Eurofins Calscience, a state-certified analytical laboratory located in Garden Grove, California. Copies of the chain-of-custody records and laboratory reports are presented in **Attachment C**. Soil samples were analyzed for VOCs and gasoline range organics using (GRO) using U.S. EPA Method 8260B.

### **Soil Gas Sampling and Analytical Program**

Soil gas sampling was conducted in general accordance with applicable agency guidance documents, including the *Advisory—Active Soil Gas Investigations* (Advisory).<sup>5</sup> Significant rain events did not occur within five days of sampling.<sup>6</sup> Following the collection of soil samples, temporary soil gas probes were constructed within the completed boreholes. Approximately 6 inches of Monterey 30 mesh filter pack sand were placed at the bottom of each borehole. A new, disposable, 1/4-inch-outside-diameter Teflon™ tubing fitted with a marine diffuser filter at the bottom to prevent particulate infiltration was placed in the borehole. An additional 6 inches of filter pack sand were then placed above the filter so that the soil gas probe inlet filter was centered in the sand pack. The total volume of the sand placed in the borehole was measured prior to placing it in the borehole. A 6-inch lift of dry, granular bentonite was placed in the borehole above the sand pack. The borehole was then backfilled with hydrated bentonite lifts to the ground surface. Each soil gas probe was fitted with a closed three-way valve and protected with a zip-closure plastic bag during the equilibration period.

Soil gas probes were allowed to equilibrate for at least 48 hours before sampling. To obtain a sample, a pre-assembled sampling manifold was connected to Teflon™ well tubing to collect the

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<sup>5</sup> DTSC and Los Angeles Regional Water Quality Control Board, 2015. *Advisory – Active Soil Gas Investigations*. July.

<sup>6</sup> The nearest weather monitoring station is Millsmont – KCAOAKLA161, <https://www.wunderground.com/personal-weather-station/dashboard?ID=KCAOAKLA161#history>

vapor sample from each boring into 1-liter Summa canisters. The manifold consisted of a Luer Lock tee that connected the tubing from the boring to the designated canister and pressure gauge. New Teflon™ tubing was screened with the PID before use at each location. Field instruments (PID, helium detector, multi-gas meter) were calibrated prior to conducting sampling activities.

After the above-ground sampling equipment was assembled, a shut-in test was conducted to test for leaks in the sample apparatus. A vacuum of approximately 60 inches of water was applied to the sampling train and the vacuum was monitored for approximately one minute. If the vacuum dissipated during the shut-in test, the above ground fittings were tightened and the test was repeated until the vacuum was maintained for one minute, indicating a leak-free assembly. This protocol was repeated after the leak test and before sampling, to ensure the integrity of the sampling equipment seals had been preserved.

After each soil gas sampling location had passed a shut-in test, a leak test was conducted during vapor probe purging. Helium was used for the leak test to check for ambient air leakage through the annular seal between the probe and the ground surface. A shroud was installed at the ground surface around each probe and helium was added to the shroud. The concentrations of helium in the shroud and the purge samples were measured with a field helium detector. Samples were not qualified if the tracer concentration in the leak test was less than 5 percent of the minimum shroud concentration.

Air was then purged from each sample probe to remove stagnant or ambient air from the probe to collect samples that are representative of subsurface conditions. A minimum of three probe volumes were purged prior to sampling. Purge volumes were calculated based on the volume of the void space in the tubing, plus an estimate of the void space in the sand filter pack.

The probes were purged by drawing soil gas from the formation through the probe using a lung box to fill a 1-liter Tedlar™ bag. The purged soil gas was screened in the field using a PID, a helium detector, and a GEM™ 2000 multi-gas meter for measurements of methane, carbon dioxide, and oxygen. The purge volume for each sample location was recorded. Soil gas was purged from each location at an approximate flow rate of 200 milliliters per minute (mL/min). This flow rate is consistent with recommendations in the Advisory.

After the completion of preliminary activities, soil gas samples were collected through dedicated Teflon™ tubing attached to each probe with airtight fittings into 1.4-liter Summa canisters. Soil gas samples were collected until the vacuum on the Summa canister decreased from 30 inches of

mercury to approximately 5 inches of mercury. Duplicate samples were collected using a shroud modified to accommodate two Summa canisters and equipped with a “tee”-fitting that split the soil gas sample to both canisters. Summa canisters were submitted to Curtis & Tompkins Laboratory of Berkeley, California under standard chain-of-custody procedures for analysis of VOCs by U.S. EPA Method TO-15, total petroleum hydrocarbons as gasoline (TPHg) by U.S. EPA TO-3, and fixed gases by ASTM Method D1946.

A total of 11 soil gas samples and 2 duplicates were also collected for analysis of naphthalene by U.S. EPA Method TO-17. Following the collection of samples into canisters, 200 mL of soil gas was extracted through a TO-17 sorbent tube provided by Eurofins-AirToxics of Folsom, California (AirToxics). Samples were collected as follows:

- The 200-mL sample volume was extracted in four increments of 50 mL each using a 60-mL plastic syringe to pass the soil gas sample through the sorbent tube. A three-way valve allowed for the sorbent tube and probe assembly to be sealed-off between sample extractions; and
- Duplicate samples were collected by splitting the sample to two sorbent tubes with a tee-fitting and passing 50 mL of soil gas through each sorbent tube.

The sorbent tubes were packed on ice in a cooler and transferred to AirToxics under standard chain-of-custody procedures. Field logs documenting soil gas probe sampling are presented as **Attachment B**.

Two soil gas probes (VP-17 and VP-18) could not be sampled because of water entrainment in the probes.

All drilling and sampling equipment were steam-cleaned prior to use at each location. Equipment wash water and soil cuttings were stored in labeled 55-gallon drums at the property pending analytical results.

## **RESULTS**

### **Lithology**

Lithology information is recorded on boring logs included in **Attachment B**. The lithology observed is generally consistent with previous investigation results. Based on the soil cores



observed during drilling, native soil encountered consists primarily of fine-grained sediments with varying amounts of clays and silts to the maximum depths drilled.

### **Analytical Results**

Copies of the chain-of-custody records and analytical laboratory reports are presented in **Attachment C**.

### **Soil**

The analytical results are presented in **Table 1**. VOCs were not detected above the laboratory reporting limits in 14 borings (VP-1, -3, -4, -5, -7, -8, -10, -14, -15, -20, -21, -22, -24, and -25). Boring VP-11 contained the most detected compounds. A total of 12 constituents were detected in at least 1 of 25 soil samples as follows:

- 1,2,4-Trimethylbenzene was detected in 1 sample at a maximum concentration of 0.0042 milligrams per kilogram (mg/kg) in boring VP-5;
- 1,3,5-Trimethylbenzene was detected in 1 sample at a maximum concentration of 0.003 mg/kg in boring VP-19;
- Benzene was detected in 1 sample at a maximum concentration of 0.0014 mg/kg in boring VP-11;
- GRO was detected in 7 samples at a maximum concentration of 67 mg/kg in boring VP-11;
- Methyl-tert-butyl-ether (MTBE) was detected in 3 samples at a maximum concentration of 0.22 mg/kg in boring VP-18;
- Naphthalene was detected in 2 samples at a maximum concentration of 0.022 mg/kg in boring VP-11;
- n-Butylbenzene was detected in 2 samples at a maximum concentration of 0.15 mg/kg in boring VP-11;
- n-Propylbenzene was detected in 1 samples at a maximum concentration of 0.0051 mg/kg in boring VP-11;

- sec-Butylbenzene was detected in 2 samples at a maximum concentration of 0.041 mg/kg in boring VP-11;
- Styrene was detected in 1 sample at a maximum concentration of 0.0035 mg/kg in boring VP-9;
- tert-Butyl alcohol was detected in 2 samples at a maximum concentration of 0.19 mg/kg in boring VP-18; and
- tert-Butylbenzene was detected in 1 sample at a maximum concentration of 0.0076 mg/kg in boring VP-11.

### **Soil Gas**

A summary of the analytical results in soil gas is presented in **Table 2**. At least one VOC was detected in each soil gas probe. Naphthalene was not detected above the laboratory limits (VP-2, -4, -6, -8, -10, -12, -14, -16, -20, -22, -24). Boring VP-14 contained the most detected compounds. A total of 22 constituents were detected in at least 1 of the 26 soil gas samples as follows:

- Acetone was detected in 12 samples at a maximum concentration of 45 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) in boring VP-10;
- Benzene was detected in 3 samples at a maximum concentration of  $6.5 \mu\text{g}/\text{m}^3$  in boring VP-3;
- n-Heptane was detected in 10 samples at a maximum concentration of  $8,800 \mu\text{g}/\text{m}^3$  in boring VP-23;
- Carbon disulfide was detected in 8 samples at a maximum concentration of  $83 \mu\text{g}/\text{m}^3$  in boring VP-1;
- Chloroform was detected in 10 samples at a maximum concentration of  $29 \mu\text{g}/\text{m}^3$  in boring VP-3;
- Cyclohexane was detected in 3 samples at a maximum concentration of  $5,300 \mu\text{g}/\text{m}^3$  in boring VP-1;
- 1,3-Dichlorobenzene was detected in 6 samples at a maximum concentration of  $11 \mu\text{g}/\text{m}^3$  in boring VP-20;

- Ethylbenzene was detected in 3 samples at a maximum concentration of 26  $\mu\text{g}/\text{m}^3$  in boring VP-20;
- Trichlorofluoromethane (FC11) was detected in 9 samples at a maximum concentration of 310  $\mu\text{g}/\text{m}^3$  in boring VP-14;
- Hexane was detected in 11 samples at a maximum concentration of 100,000  $\mu\text{g}/\text{m}^3$  in boring VP-23;
- Isopropanol was detected in 3 samples at a maximum concentration of 24  $\mu\text{g}/\text{m}^3$  in boring VP-4;
- Methyl ethyl ketone was detected in 6 samples at a maximum concentration of 6.3  $\mu\text{g}/\text{m}^3$  in boring VP-3;
- 4-Methyl-2-pentanone (MIBK) was detected in 1 sample at a maximum concentration of 12  $\mu\text{g}/\text{m}^3$  in boring VP-3;
- Methyl-tert-butyl-ether was detected in 6 samples at a maximum concentration of 6,300  $\mu\text{g}/\text{m}^3$  in boring VP-11;
- o-Xylene was detected in 4 samples at a maximum concentration of 31  $\mu\text{g}/\text{m}^3$  in boring VP-20;
- p/m-Xylene was detected in 5 samples at a maximum concentration of 26  $\mu\text{g}/\text{m}^3$  in boring VP-20;
- Tetrachloroethene (PCE) was detected in 5 samples at a maximum concentration of 32  $\mu\text{g}/\text{m}^3$  in boring VP-20;
- Trichloroethene (TCE) was detected in 1 sample at a maximum concentration of 460  $\mu\text{g}/\text{m}^3$  in boring VP-6;
- 1,2,4-Trimethylbenzene was detected in 3 samples at a maximum concentration of 140  $\mu\text{g}/\text{m}^3$  in boring VP-6;
- 1,3,5-Trimethylbenzene was detected in 4 samples at a maximum concentration of 190  $\mu\text{g}/\text{m}^3$  in boring VP-19;
- Toluene was detected in 7 samples at a maximum concentration of 14  $\mu\text{g}/\text{m}^3$  in boring VP-8; and

- TPHg (C6-C12) was detected in 22 samples at a maximum concentration of 12,000,000  $\mu\text{g}/\text{m}^3$  in boring VP-12.

### **Fixed Gases**

Fixed gases concentrations analytical results are summarized in **Table 2**. Concentration percentages of fixed gases were detected as follows:

- Helium was detected in 2 samples at 1.5% in boring VP-24;
- Carbon dioxide was detected in 20 samples at levels ranging from 0.98 to 7.5% with the maximum reported in boring VP-1;
- Oxygen was detected in 26 samples at levels ranging from 1.1 to 18% with the maximum reported in boring VP-25; and
- Methane was detected in 8 samples at concentrations ranging from 0.65 to 16% with the maximum reported in boring VP-23.

### **Quality Assurance/Quality Control**

Geosyntec performed a quality assurance/quality control (QA/QC) review of the analytical data in accordance with the U.S. EPA National Functional Guidelines. Where data qualification was required, the appropriate data flag was included in the data tables and was marked on the original laboratory reports. The data were reviewed for completeness, accuracy, precision, sample contamination, conformance with holding times, and detection limits within acceptable ranges. Results of the review indicate the data are of acceptable quality:

- Completeness. Completeness is expressed as the percentage of valid useable data obtained to the amount that was expected. All data were considered valid.
- Accuracy. Accuracy is defined as the degree of agreement between a measured value and a true or known value. Accuracy is determined using spike samples. Each of the soil and soil gas samples was “spiked” with surrogate compounds prior to analysis. The recovery of all the surrogates was within acceptance limits.

- Precision. Precision is the degree of agreement between duplicate analyses of the same parameter in a given sample. Precision is calculated as the relative percent difference (RPD) in duplicate analytical results as follows:

$$RPD = \frac{Result1 - Result2}{AverageResult} \times 100$$

Duplicate soil gas samples were collected from locations VP-7, VP-11, and VP-24. Analytical results for the duplicate samples were below the project goals of 30% RPD for all parameters; the duplicate samples collected and analyzed were in close agreement.

- Sample Contamination. Method blank samples were analyzed to check for potential sample contamination. No compounds were detected in the laboratory blank samples.
- Holding Times. The analytical reports were reviewed to identify whether the analytical method holding times were met. The holding times were met for soil and soil gas samples.

Overall, the results of the data quality evaluation indicate that the analytical results are valid and usable. The qualified data can be used for decision-making purposes; however, the limitations identified by the data qualifiers should be considered when using the data.

## **SCREENING-LEVEL RISK ASSESSMENT**

A screening-level risk assessment (SLRA) was conducted to evaluate the potential risks associated with chemicals detected in soil and soil gas at the Site. The purpose of the SLRA is to provide an analysis of the potential for adverse human health effects because of exposure to chemicals detected in the subsurface if no further remedial action were to take place. The SLRA presented herein directly compares sample data to non-Site-specific risk-based screening levels (RBSLs). The RBSLs selected for this evaluation are the Regional Water Quality Control Board, San Francisco Bay Region (Regional Board) Environmental Screening Levels (ESLs).<sup>7</sup>

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<sup>7</sup> Regional Board, 2016, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Interim Final. February.

For chemicals that do not have a published ESL, the DTSC-recommended modified screening levels (DTSC SLs)<sup>8</sup> and U.S. EPA's Regional Screening Levels (RSLs)<sup>9</sup> were used.

For soil gas, ESLs based on the protection of vapor intrusion concerns for residents and commercial/industrial workers were selected. If published ESLs were not available for a specific chemical, the DTSC SLs and U.S. EPA's RSLs for indoor air and the Regional Board's soil gas to indoor air attenuation factors of 0.002 and 0.001 were used for residents and commercial/industrial workers, respectively.

These screening levels are conservative human health and ecological risk-based concentrations developed for use in screening analytical data. Concentrations of compounds detected below corresponding ESLs can be assumed to not pose a significant threat to human health and the environment. Conversely, exceedance of the corresponding ESL does not necessarily indicate that adverse health effects will occur or that the Site may pose an ecological risk, but suggests that additional evaluation of potential risks is warranted using Site-specific information.

**Tables 1 and 2** present a summary of the chemicals detected in soil and soil gas, respectively, and the appropriate residential and commercial/industrial DTSC SLs. The results of the SLRA indicate that the maximum concentrations of chemicals detected in soil are well below their respective residential and commercial/industrial SLs. In soil gas, MTBE, TCE, and TPHg were detected above their respective residential screening levels in at least one sample. With respect to commercial/industrial screening levels, only TPHg was detected above the screening level. The exceedances of MTBE in soil gas are limited to locations VP-11 and VP-12. TCE, detected in only one sample at a concentration of 460  $\mu\text{g}/\text{m}^3$ , exceeded the residential screening level of 240  $\mu\text{g}/\text{m}^3$  in location VP-6. TPHg was detected above the residential ESL of 300,000  $\mu\text{g}/\text{m}^3$  from 6 locations (VP-1, -11, -12, -13, -22, and -23). TPHg exceeded the commercial/industrial ESL of 2,500,000  $\mu\text{g}/\text{m}^3$  in 4 locations (VP-12, -13, -22, and -23). The chemical exceedances of TPHg are all associated with samples collected near the center of the property and towards the southeast to 73rd Avenue (**Figure 3**).

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<sup>8</sup> DTSC, 2017. Human Health Risk Assessment (HHRA) Note 3 – DTSC- Modified Screening Levels. June.

<sup>9</sup> U.S. EPA, 2017. Regional Screening Levels for Chemical Contaminants at Superfund Sites. June. <http://www.epa.gov/region9/superfund/prg/>

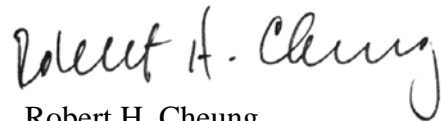
## SUMMARY AND CONCLUSIONS

Based on the results of this and previous investigations, Geosyntec has developed the following conclusions about Site conditions.

- Chemicals detected in soil are all below RBSLs. Potential exposures to chemicals in soil should not result in adverse health effects.
- MTBE, TCE, and TPHg were detected above screening levels in at least one soil gas sample. Although MTBE and TCE were detected above residential screening levels, these compounds were not detected above commercial/industrial screening levels.
- A limited area of elevated concentrations of TPHg in soil gas has been identified near the central portion of the Site.

If you have questions, please contact Mr. Robert Cheung at (510) 285.2792.

Sincerely,



Robert H. Cheung  
Senior Toxicologist/Risk Assessor



Syed Rehan, P.E., BCEE  
Principal

- Enclosure: Table 1 – Summary of Volatile Organic Compounds Detected in Soil  
Table 2 – Summary of Volatile Organic Compounds Detected in Soil Gas  
Figure 1 – Site Location Map  
Figure 2 – Site Map

Mr. Keith Nowell  
2 August 2017  
ACDEH Case File #RO356  
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Figure 3 – TPHg Soil Vapor Sample Results May 2017

Attachment A – Boring Permits

Attachment B – Boring Logs and Soil Gas Probe Measurements

Attachment C – Analytical Laboratory Reports

Copies to: Mr. Edward C. Ralston, Program Manager, Phillips 66 Remediation  
Management

Mr. Dacre Bush and Mr. Jeff Friedman, Antea Group



# TABLES

Table 1  
 Summary of Volatile Organic Compounds Detected in Soil<sup>1</sup>  
 Antea - No 1117  
 7210 Bancroft, Oakland, California

Sample ID	Sample Date	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Benzene	Gasoline Range Organics (C6-C12)	Methyl-tert-butyl ether (MTBE)	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butyl Alcohol (TBA)	tert-Butylbenzene
		milligrams per kilogram (mg/kg)											
<b>Residential Screening Level<sup>2</sup></b>		300	270	0.23	740	42	3	1,200	3,800	2,200	6,600	130,000	2,200
<b>Commercial/Industrial Screening Level<sup>2</sup></b>		1,800	1,500	1	3,900	180	14	6,400	24,000	12,000	40,000	1,500,000	12,000
VP-1-5	05/22/17	<0.0018	<0.0018	<0.00092	<0.046	<0.0018	<0.0092	<0.00092	<0.0018	<0.00092	<0.00092	<0.018	<0.00092
VP-2-5	05/22/17	<0.0019	<0.0019	<0.00095	<b>0.05</b>	<0.0019	<0.0095	<0.00095	<0.0019	<0.00095	<0.00095	<0.019	<0.00095
VP-3-5	05/22/17	<0.0017	<0.0017	<0.00087	<0.043	<0.0017	<0.0087	<0.00087	<0.0017	<0.00087	<0.00087	<0.017	<0.00087
VP-4-5	05/22/17	<0.0017	<0.0017	<0.00085	<0.043	<0.0017	<0.0085	<0.00085	<0.0017	<0.00085	<0.00085	<0.017	<0.00085
VP-5-5	05/22/17	<0.002	<0.002	<0.00098	<0.049	<0.002	<0.0098	<0.00098	<0.002	<0.00098	<0.00098	<0.02	<0.00098
VP-6-5	05/22/17	<b>0.0042</b>	<0.0017	<0.00087	<b>0.45</b>	<0.0017	<b>0.0097</b>	<b>0.0019</b>	<0.0017	<0.00087	<0.00087	<0.017	<0.00087
VP-7-5	05/22/17	<0.0016	<0.0016	<0.00081	<0.041	<0.0016	<0.0081	<0.00081	<0.0016	<0.00081	<0.00081	<0.016	<0.00081
VP-8-5	05/22/17	<0.0019	<0.0019	<0.00094	<0.047	<0.0019	<0.0094	<0.00094	<0.0019	<0.00094	<0.00094	<0.019	<0.00094
VP-9-5	05/22/17	<0.0024	<0.0024	<0.0012	<0.059	<0.0024	<0.012	<0.0012	<0.0024	<0.0012	<b>0.0035</b>	<0.024	<0.0012
VP-10-5	05/22/17	<0.0021	<0.0021	<0.001	<0.052	<0.0021	<0.01	<0.001	<0.0021	<0.001	<0.001	<0.021	<0.001
VP-11-5	05/22/17	<0.002	<0.002	<b>0.0014</b>	<b>67</b>	<b>0.021</b>	<b>0.022</b>	<b>0.15</b>	<b>0.0051</b>	<b>0.041</b>	<0.00098	<0.02	<b>0.0076</b>
VP-12-5	05/23/17	<0.0016	<0.0016	<0.00081	<b>0.19</b>	<0.0016	<0.0081	<0.00081	<0.0016	<0.00081	<0.00081	<0.016	<0.00081
VP-13-5	05/23/17	<0.0017	<0.0017	<0.00083	<b>0.042</b>	<0.0017	<0.0083	<0.00083	<0.0017	<0.00083	<0.00083	<0.017	<0.00083
VP-14-5	05/23/17	<0.0023	<0.0023	<0.0012	<0.058	<0.0023	<0.012	<0.0012	<0.0023	<0.0012	<0.0012	<0.023	<0.0012
VP-15-5	05/23/17	<0.0026	<0.0026	<0.0013	<0.064	<0.0026	<0.013	<0.0013	<0.0026	<0.0013	<0.0013	<0.026	<0.0013
VP-16-5	05/23/17	<0.0022	<0.0022	<0.0011	<0.055	<0.0022	<0.011	<0.0011	<0.0022	<0.0011	<0.0011	<b>0.024</b>	<0.0011
VP-17-5	05/23/17	<0.0014	<0.0014	<0.00071	<0.036	<b>0.02</b>	<0.0071	<0.00071	<0.0014	<0.00071	<0.00071	<0.014	<0.00071
VP-18-5	05/23/17	<0.0016	<0.0016	<0.00079	<0.039	<b>0.22</b>	<0.0079	<0.00079	<0.0016	<0.00079	<0.00079	<b>0.19</b>	<0.00079
VP-19-5	05/23/17	<0.0027	<b>0.003</b>	<0.0013	<b>0.12</b>	<0.0027	<0.013	<0.0013	<0.0027	<0.0013	<0.0013	<0.027	<0.0013
VP-20-5	05/23/17	<0.0025	<0.0025	<0.0012	<0.062	<0.0025	<0.012	<0.0012	<0.0025	<0.0012	<0.0012	<0.025	<0.0012
VP-21-5	05/23/17	<0.0019	<0.0019	<0.00094	<0.047	<0.0019	<0.0094	<0.00094	<0.0019	<0.00094	<0.00094	<0.019	<0.00094
VP-22-5	05/23/17	<0.002	<0.002	<0.001	<0.05	<0.002	<0.01	<0.001	<0.002	<0.001	<0.001	<0.02	<0.001
VP-23-5	05/24/17	<0.0018	<0.0018	<0.00088	<b>0.15</b>	<0.0018	<0.0088	<0.00088	<0.0018	<b>0.0011</b>	<0.00088	<0.018	<0.00088
VP-24-5	05/24/17	<0.0019	<0.0019	<0.00093	<0.047	<0.0019	<0.0093	<0.00093	<0.0019	<0.00093	<0.00093	<0.019	<0.00093
VP-25-5	05/24/17	<0.0018	<0.0018	<0.00092	<0.046	<0.0018	<0.0092	<0.00092	<0.0018	<0.00092	<0.00092	<0.018	<0.00092

**Notes and Abbreviations:**

<sup>1</sup> Soil samples collected by Geosyntec Consultants and analyzed by Eurofins Calscience for volatile organic compounds (VOCs) using U.S. EPA Method 8260B. Only compounds detected in at least one sample are presented. For a full list of compounds analyzed, please refer to the analytical laboratory reports.

<sup>2</sup> Hierarchy of screening levels: i) Environmental Screening Levels (ESLs), California Regional Water Quality Control Board, San Francisco Bay (RWQCB), February 2016; ii) Department of Toxic Substances Control (DTSC) Modified Screening Levels (MSLs), June 2017; and iii) U.S. Environmental Protection Agency (U.S. EPA), Regional Screening Levels (RSLs), June 2017.

"<" = compound not detected above detection limit shown

**Bolded** values indicate compound was detected.

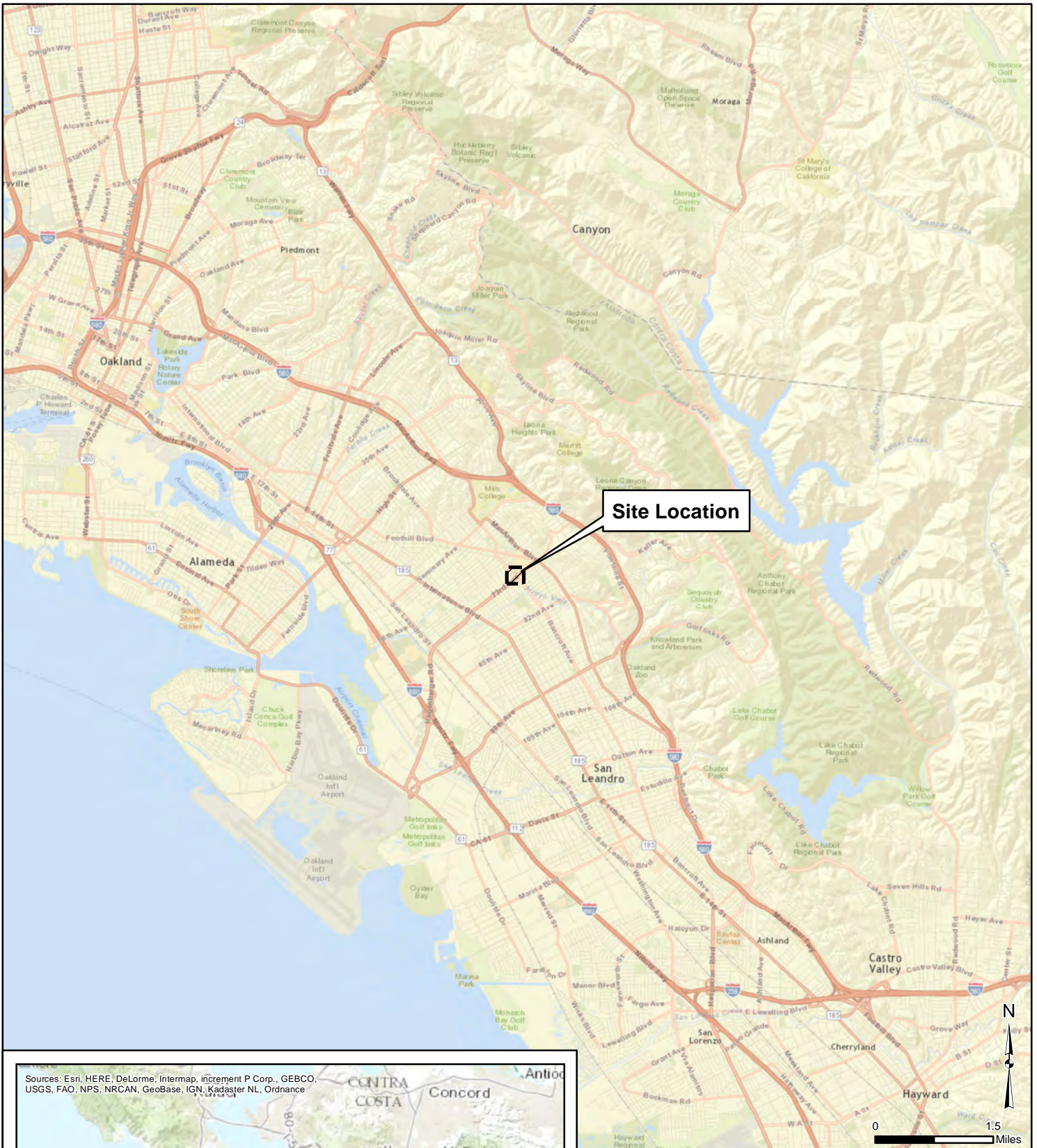
Screening Levels from RWQCB ESLs = Benzene, Gasoline Range Organics, Naphthalene, and Styrene

Screening Levels from DTSC MSLs = 1,3,5-Trimethylbenzene, n-Butylbenzene, sec-Butylbenzene and tert-Butylbenzene

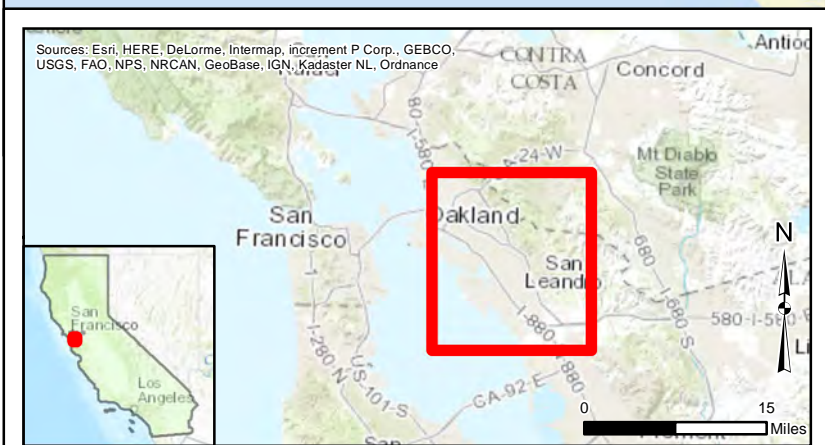
Screening Levels from U.S. EPA RSLs = 1,2,4-Trimethylbenzene, n-Propyl benzene and tert-butyl alcohol (as sec-butyl alcohol)



# FIGURES



**Site Location**



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance

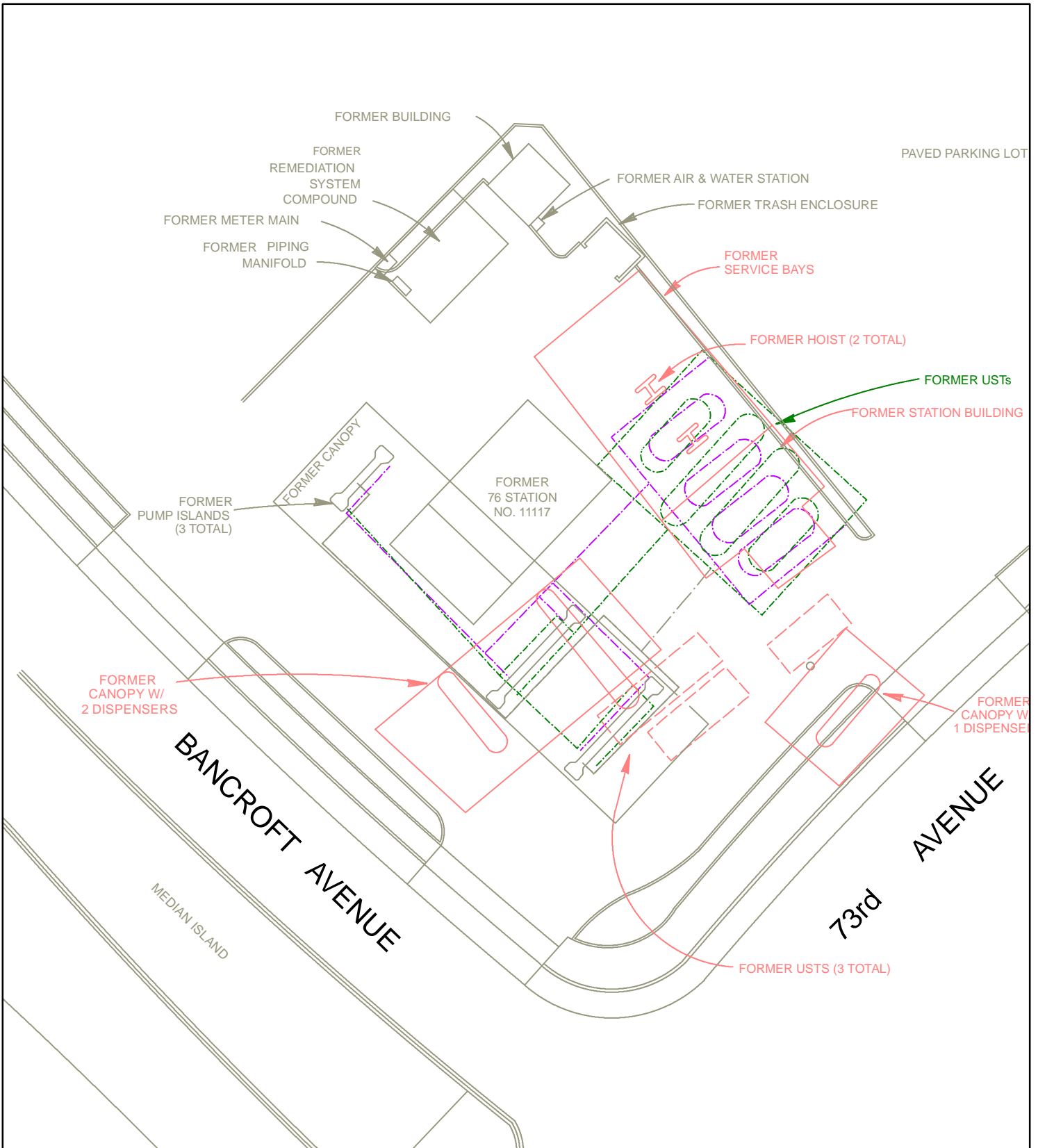
**Site Location Map**  
7210 Bancroft Avenue  
Oakland, California

**Geosyntec**  
consultants

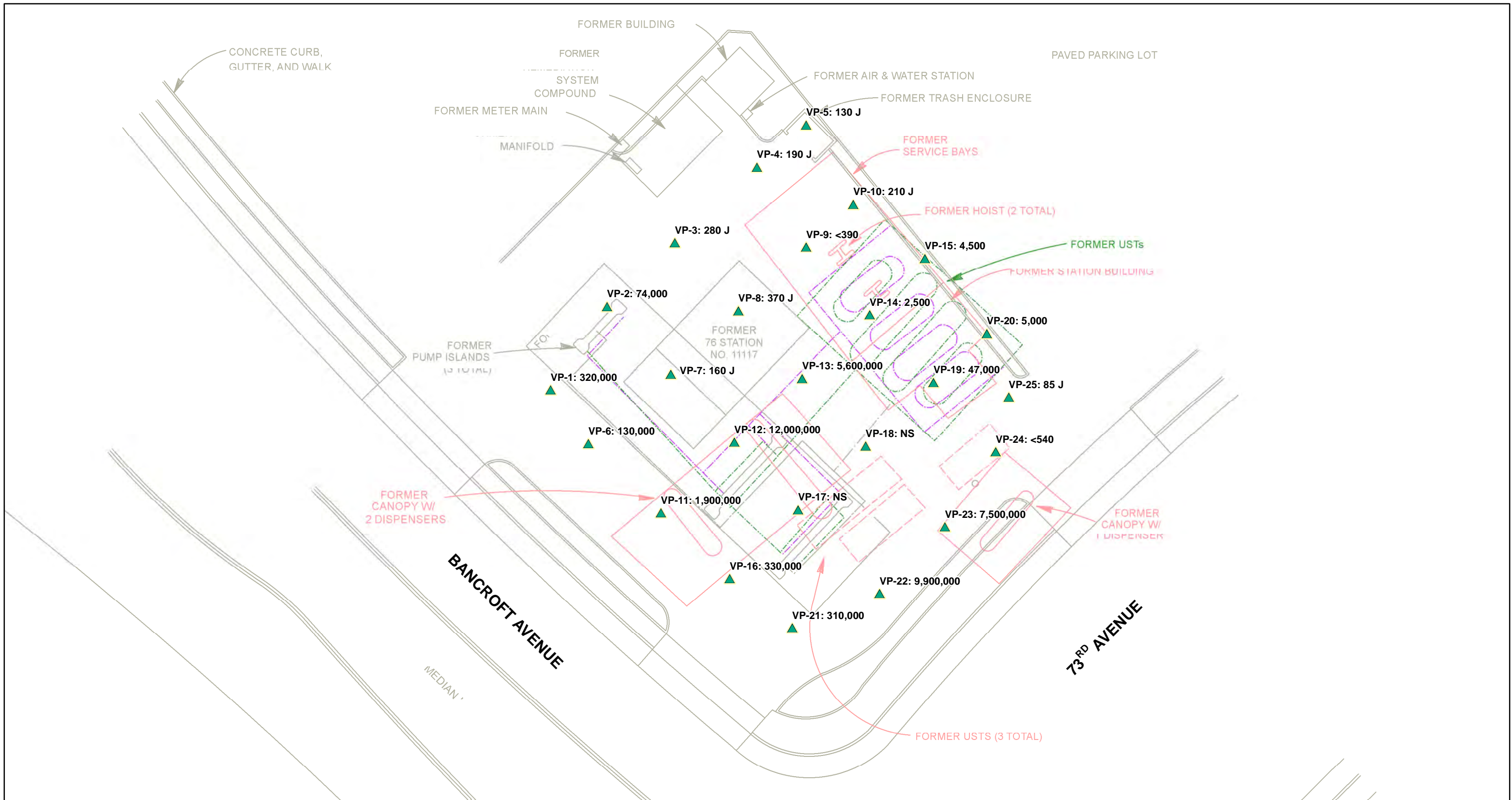
**Figure**  
**1**

WR1117

December 2016



	<b>Site Map</b> 7210 Bancroft Avenue Oakland, California		<b>Figure</b>  <b>2</b>
WR2229	August 2017		



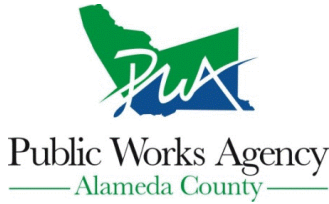
<b>Legend</b> Vapor Probe Location	<b>Notes:</b> NS = Not Sampled due to presence of water < = not detected above the laboratory reporting limit shown TPHg = total petroleum hydrocarbon as gasoline  Concentrations of TPHg presented in micrograms per cubic meter for samples collected from 5 feet below ground surface.	<b>TPHg Soil Vapor Sample Results</b> May 2017 7210 Bancroft Avenue Oakland, California		
		WR2229	August 2017	<b>Figure</b>  <b>3</b>

# ATTACHMENT 1

## Boring Permits



# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 02/23/2017 By jamesy**

**Permit Numbers: W2017-0134**  
**Permits Valid from 03/06/2017 to 03/31/2017**

**Application Id:** 1487111763048  
**Site Location:** 7210 Bancroft Avenue, Oakland, California  
**Project Start Date:** 03/06/2017  
**Assigned Inspector:** Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org

**City of Project Site:** Oakland

**Completion Date:** 03/31/2017

**Applicant:** Geosyntec Consultants, Inc - Jeremie Ruest  
1111 Broadway, 6th Floor, Oakland, CA 94607  
**Property Owner:** Eastmond Oakland Associates, LLC  
825 3rd Avenue, 36th Floor-C/O VI REIT, New York, NY 10022  
**Client:** ANTEA USA, INC.  
5910 Rice Creek Parkway, St. Paul, MN 55126  
**Contact:** Jeremie Ruest

**Phone:** 510-836-2678

**Phone:** --

**Phone:** --

**Phone:** 510-836-2678  
**Cell:** 510-836-2678

<b>Receipt Number: WR2017-0088</b>	<b>Total Due:</b>	\$265.00
<b>Payer Name : Oakland Card</b>	<b>Total Amount Paid:</b>	\$265.00
	Paid By: MC	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Borehole(s) for Investigation-Environmental/Monitoring Study - 25 Boreholes  
Driller: Penecore - Lic #: 906899 - Method: Hand

**Work Total: \$265.00**

**Specifications**

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2017-0134	02/23/2017	06/04/2017	25	3.25 in.	5.50 ft

**Specific Work Permit Conditions**

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

## Alameda County Public Works Agency - Water Resources Well Permit

6. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

### 7. NOTE:

Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

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## ATTACHMENT 2

### Boring Logs and Soil Gas Probe Measurements

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052217 0800</u>	Finish Date and Time: <u>052217 0855</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in): <u>3 1/4</u>
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weigh/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION	PID Reading (ppm)	Time (00:00)	COMMENTS
					SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)			
1					clayey SAND w/ gravel (SC) 10YR 3/6 dry fine to coarse gravel; fine to coarse sand, fines [30, 50, 20] gravel up to 60 mm	0 @ 1'		
2					@ 2' Sandy loam (CLAY) w/ gravel 10YR 3/3 moist, fine to coarse gravel; medium to coarse sand, clay [20, 20, 60] med plast gravel up to 10 cm	27 @ 2'		Bentonite Slurry
3					@ 3' lean CLAY (CL) 10YR 3/2 <sup>dry</sup> moist; coarse sand, fines [0, 10, 90] med to high plast	0 @ 3'		
4					@ 3.5' 10YR 5/6 <sup>dry</sup> medium sand 7.5YR 5/6	0 @ 4'		4.5 ft bgs Sand #3
5					@ 4.5 Silty Sand Sandy SILT (ML) 7.5YR 5/6; dry, med sand, fines [0, 40, 60] low plast	0 @ 5'		5.5 ft bgs Sample VP-1-5

<b>Location:</b> Oakland, CA		<b>Project Name:</b> 7210 Bancroft Ave		<b>Project Number:</b> WR2229	
Start Date and Time: <u>052217 0900</u>		Finish Date and Time: <u>052217 0945</u>		Total Depth Drilled (ft bgs): 5.5 ft bgs	
Drilling Method: Hand Auger		Drilling Contractor: Penecore Drilling		Total Depth Cored (ft bgs): N/A	
Drill Rig: N/A		Hammer Type: N/A		Boring Diameter (in): <u>3 1/4</u>	
Sampling Method: Hand Auger Cuttings and Slide-Hammer		Hammer Weight/Drop: N/A		Borehole Backfill: Temporary Soil Vapor Probes	
Depth to Water (ft bgs): N/A		Ground Surface Elevation (ft MSL): N/A		Coordinates (X,Y):	
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.				Logger: JR	Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 inches	Sample Recovery (%)	MATERIAL DESCRIPTION	PID Reading (ppm)	Time (00:00)	COMMENTS
					SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)			
1					Gravelly fill 1'			
1					Clayey SAND w/ gravel (SC) 10YR 3/6 dry fine to coarse gravel; fine to coarse sand, fines [30, 50, 20]	0@1		
2					@ 2' Sandy lean CLAY w/ gravel 10YR 3/3 dry; fine to coarse gravel med/coarse sand, clay	0@2		
3					@ 3' lean CLAY SR [20, 20, 60]	2@3		Bentonite Slurry
4					@ 3.5' Sandy SILT (ML): 7.5YR 5/6 dry med sand, fines [0, 40, 60] low plast	0@4		
5					@ 4.5' Silty SAND (SM) <sup>5YR 4/4</sup> 7.5YR 3/2 <sup>(7.5)</sup> dry fine to medium SAND, fines [0, 70, 30]	0@5'		4.5 ft bgs Sand #3 5.5 ft bgs
6					↓			Soil Sample VP-2-5

<b>Location:</b> Oakland, CA		<b>Project Name:</b> 7210 Bancroft Ave		<b>Project Number:</b> WR2229	
Start Date and Time: <u>052217 0935</u>		Finish Date and Time: <u>052217 1030</u>		Total Depth Drilled (ft bgs): 5.5 ft bgs	
Drilling Method: Hand Auger		Drilling Contractor: Penecore Drilling		Total Depth Cored (ft bgs): N/A	
Drill Rig: N/A		Hammer Type: N/A		Boring Diameter (in): <u>3 1/4</u>	
Sampling Method: Hand Auger Cuttings and Slide-Hammer		Hammer Weight/Drop: N/A		Borehole Backfill: Temporary Soil Vapor Probes	
Depth to Water (ft bgs): N/A		Ground Surface Elevation (ft MSL): N/A		Coordinates (X,Y):	
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.				Logger: JR	Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION		PID Reading (ppm)	Time (00:00)	COMMENTS	
					SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)					
									0 ft bgs	
1					Gravelly fill					
2					@1' lean CLAY w- sand (CL) 10YR 2/2 dry; small gravel, fine to coarse sand, fines [5, 20, 75]		0 @ 1'			
3					@ 2.5' 7.5 5/6		0 @ 2'			
4					@ 3' Silty SAND (SM) 5 (JR) 5YR 4/6, dry fine to coarse sand, fines [0, 70, 30]		0 @ 3'			
5					@ 4.5' [0, 80, 20]		0 @ 4'			
6					@ 5' SILT (ML) 5YR 4/4 dry; fine sand, fines [0, 5, 95] low p. last		0 @ 5'			
							Soil Sample VP-3-5			
									4.5 ft bgs	Bentonite Slurry
									5.5 ft bgs	Sand #3



<b>Location:</b> Oakland, CA		<b>Project Name:</b> 7210 Bancroft Ave		<b>Project Number:</b> WR2229	
<b>Start Date and Time:</b> 052217 1110		<b>Finish Date and Time:</b> 052217 1220		<b>Total Depth Drilled (ft bgs):</b> 5.5 ft bgs	
<b>Drilling Method:</b> Hand Auger		<b>Drilling Contractor:</b> Penecore Drilling		<b>Total Depth Cored (ft bgs):</b> N/A	
<b>Drill Rig:</b> N/A		<b>Hammer Type:</b> N/A		<b>Boring Diameter (in):</b> 3 1/4	
<b>Sampling Method:</b> Hand Auger Cuttings and Slide-Hammer		<b>Hammer Weigh/Drop:</b> N/A		<b>Borehole Backfill:</b> Temporary Soil Vapor Probes	
<b>Depth to Water (ft bgs):</b> N/A		<b>Ground Surface Elevation (ft MSL):</b> N/A		<b>Coordinates (X,Y):</b>	
<b>Comments:</b> Temporary Soil Vapor Probes constructed in accordance with the Work Plan.				<b>Logger:</b> JR	
<b>Reviewer:</b>					

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
								0 ft bgs
1					Gravelly fill	0 @ 1		<p>Bentonite Slurry</p> <p>4.5 ft bgs</p> <p>Sand #3</p> <p>5.5 ft bgs</p>
2						0 @ 2		
3						0 @ 3		
4					@ 3.5' lean CLAY (CL) 10YR 2/1 dry med sand / fines [0, 10, 90] med plast	0 @ 4		
5					@ 4' SILT (ML) 5YR 4/4 dry [0, 0, 100]	0 @ 5'		
6					@ 5' Sandy SILT (ML) 5YR 4/4; dry fine to med sand, fines [0, 35, 65]			Soil sample VP-4-5 @ 1205 per



<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
<b>Start Date and Time:</b> 052217 1025	<b>Finish Date and Time:</b> 052217 1125	<b>Total Depth Drilled (ft bgs):</b> 5.5 ft bgs
<b>Drilling Method:</b> Hand Auger	<b>Drilling Contractor:</b> Penecore Drilling	<b>Total Depth Cored (ft bgs):</b> N/A
<b>Drill Rig:</b> N/A	<b>Hammer Type:</b> N/A	<b>Boring Diameter (in):</b> 3 1/4
<b>Sampling Method:</b> Hand Auger Cuttings and Slide-Hammer	<b>Hammer Weight/Drop:</b> N/A	<b>Borehole Backfill:</b> Temporary Soil Vapor Probes
<b>Depth to Water (ft bgs):</b> N/A	<b>Ground Surface Elevation (ft MSL):</b> N/A	<b>Coordinates (X,Y):</b>
<b>Comments:</b> Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		<b>Logger:</b> JR <b>Reviewer:</b>

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
								0 ft bgs
1					Gravelly fill - gravel up to 10 cm - 90% gravel			
2						0 @ 1'		
3					@ 3' lean CLAY (CL) 10YR 2/1 med to high plast	0 @ 2'		
4					med sand, fines [0,10,90]	0 @ 3'		
5					@ 3.5 7.5 YR 4/6	0 @ 4'		
6					@ 4' SILT (ML) 5YR 4/4 dry; [0,0,100]	0 @ 5'		
7					@ 5' fine sand [0,10,90]			

0 ft bgs

Bentonite Slurry

4.5 ft bgs

Sand #3

5.5 ft bgs

Soil Sample VP-5-5

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052217 1110</u>	Finish Date and Time: <u>052217 1230</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in): <u>3 1/4</u>
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weight/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
					Gravelly fill - gravel up to 6 cm			0 ft bgs
1								<p>Bentonite Slurry</p> <p>4.5 ft bgs</p> <p>Sand #3</p> <p>5.5 ft bgs</p> <p>Soil Sample VP-6-5 @ 1200 ppm</p>
2					@ 2' lean CLAY (CL) 10YR 3/2; dry medium sand, fines [0, 10, 90] med plast	0 @ 2'		
3					@ 3' [0, 20, 80] small gravel, med/coarse sand	0 @ 3'		
4					@ 3.5' 7.5YR 4/6 [5, 15, 80] 7.5YR 4/6	0 @ 4'		
5					@ 4.5' Sandy lean CLAY (CL): 5YR 4/4 dry fine to med sand, fines [0, 40, 60] coarse			
6					@ 5' clayey SAND w gravel (SC) 10YR 3/3 dry; fine gravel, fine to coarse sand, fines [5, 75, 20]	18 @ 5'		



<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052217 1230</u>	Finish Date and Time: <u>052217 1420</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weigh/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
					Gravelly fill			0 ft bgs
1								
2					@ 2' Sandy lean CLAY w/ gravel 10R3/3 moist, fine to coarse gravel, fine to coarse sand fines [10, 10, 70]	0 @ 2'		Bentonite Slurry
3					@ 3' lean CLAY (CL) 7.5YR 4/6; dry trace med sand, fines [0 to 100] med plast	0 @ 3'		
4					@ 4' SILT (ML) 7.5YR 5/6 dry [0, 0, 100] med plast; soft	0 @ 4'		4.5 ft bgs
5					@ 5' SILT w/ sand (ML) 7.5YR 5/6 dry fine sand, silt [0, 20, 80] soft	0 @ 5'		Sand #3
								5.5 ft bgs
								Soil Sample VP-8-5

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052217 1400</u>	Finish Date and Time: <u>052217 1455</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weigh/UDrop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
0					Cravelly fill			0 ft bgs
2.5					@ 2.5' Sandy lean CLAY w gravel 10YR 3/3 moist fine to coarse gravel; fine to coarse sand, fines [10, 20, 70]	0 @ 3'		Bentonite Slurry
3.5					@ 3.5' moist to wet [15, 30, 55]			
4					<del>@ 4' [20, 25, 55] SR</del>			
4					@ 4' Clayey SAND w gravel (SC) 10YR 3/3 moist & fine gravel; med to coarse sand, fines [20, 50, 30]	0 @ 4'		4.5 ft bgs Sand #3
5					@ 5' well graded SAND (SW) 10YR 4/2 dry fine gravel, fine to coarse sand, fines [5, 90, 5]	0 @ 5'		5.5 ft bgs Soil Sample VP-9-5

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
<b>Start Date and Time:</b> 052217 1445	<b>Finish Date and Time:</b> 052217 1545	<b>Total Depth Drilled (ft bgs):</b> 5.5 ft bgs
<b>Drilling Method:</b> Hand Auger	<b>Drilling Contractor:</b> Penecore Drilling	<b>Total Depth Cored (ft bgs):</b> N/A
<b>Drill Rig:</b> N/A	<b>Hammer Type:</b> N/A	<b>Boring Diameter (in):</b>
<b>Sampling Method:</b> Hand Auger Cuttings and Slide-Hammer	<b>Hammer Weight/Drop:</b> N/A	<b>Borehole Backfill:</b> Temporary Soil Vapor Probes
<b>Depth to Water (ft bgs):</b> N/A	<b>Ground Surface Elevation (ft MSL):</b> N/A	<b>Coordinates (X,Y):</b>
<b>Comments:</b> Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		<b>Logger:</b> JR <b>Reviewer:</b>

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION	PID Reading (ppm)	Time (00:00)	COMMENTS
					SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)			
0					Gravelly fill			0 ft bgs
1								
2								
3					@3' lean CLAY (CL) 75YR 5/6 dry trace coarse sand fines [0, 5, 100] med plast	0@3'		
4					@4' SILT (ML) 5YR 4/4 dry [0, 0, 100] low plast soft	0@4'		
5					@4.5' fine sand [0, 10, 90]	0@5'		

<b>Location:</b> Oakland, CA		<b>Project Name:</b> 7210 Bancroft Ave		<b>Project Number:</b> WR2229	
Start Date and Time: 052217 1545		Finish Date and Time: 052217 1630		Total Depth Drilled (ft bgs): 5.5 ft bgs	
Drilling Method: Hand Auger		Drilling Contractor: Penecore Drilling		Total Depth Cored (ft bgs): N/A	
Drill Rig: N/A		Hammer Type: N/A		Boring Diameter (in):	
Sampling Method: Hand Auger Cuttings and Slide-Hammer		Hammer Weight/Drop: N/A		Borehole Backfill: Temporary Soil Vapor Probes	
Depth to Water (ft bgs): N/A		Ground Surface Elevation (ft MSL): N/A		Coordinates (X, Y):	
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.				Logger: JR	Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION	PID Reading (ppm)	Time (00:00)	COMMENTS
					SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)			
1					Gravelly fill			
2					@2' lean CLAY (CL) 10YR 3/2, dry medium sand, fines [0, 10, 90] med plast	0 @ 2'		Bentonite Slurry
3					@3' 7.5YR 4/6	0 @ 3'		
4					@4.5' 10YR 3/1 fine sand [0, 20, 80]	0 @ 4'		
5					@5' <del>Sandy lean CLAY</del> 10YR 4/3 dry clayey SAND fine to med sand, fines [0, 60, 40]	50 @ 5'		4.5 ft bgs Sand #3 5.5 ft bgs Soil Sample VP-11-5

<b>Location:</b> Oakland, CA <u>0750</u>	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
<b>Start Date and Time:</b> <u>052317 0800</u>	<b>Finish Date and Time:</b> <u>052317 0840</u>	<b>Total Depth Drilled (ft bgs):</b> 5.5 ft bgs
<b>Drilling Method:</b> Hand Auger	<b>Drilling Contractor:</b> Penecore Drilling	<b>Total Depth Cored (ft bgs):</b> N/A
<b>Drill Rig:</b> N/A	<b>Hammer Type:</b> N/A	<b>Boring Diameter (in):</b>
<b>Sampling Method:</b> Hand Auger Cuttings and Slide-Hammer	<b>Hammer Weight/Drop:</b> N/A	<b>Borehole Backfill:</b> Temporary Soil Vapor Probes
<b>Depth to Water (ft bgs):</b> N/A	<b>Ground Surface Elevation (ft MSL):</b> N/A	<b>Coordinates (X,Y):</b>
<b>Comments:</b> Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		<b>Logger:</b> JR <b>Reviewer:</b>

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION	PID Reading (ppm)	Time (00:00)	COMMENTS
					SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)			
					Gravelly fill			0 ft bgs
1					@1.5' black gravelly fill and sand	2.5	@ 2'	
2				@2.5' brown gravelly fill; more clay; 90% gravel	0	@ 2.5'		
3				@3.5' lean CLAY w/ sand (CL): 7.5YR 4/6 dry, fine to med sand, fines [0, 20, 80] med plast med stiff	0	@ 3.5'		
4				@5' Sandy lean CLAY (CL) 2.5Y 4/4 dry fine to med sand, fines [0, 40, 60] soft med plast	2	@ 5'		
5						80	@ 5.5'	



<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
<b>Start Date and Time:</b> 052317 0750	<b>Finish Date and Time:</b> 052317 0910	<b>Total Depth Drilled (ft bgs):</b> 5.5 ft bgs
<b>Drilling Method:</b> Hand Auger	<b>Drilling Contractor:</b> Penecore Drilling	<b>Total Depth Cored (ft bgs):</b> N/A
<b>Drill Rig:</b> N/A	<b>Hammer Type:</b> N/A	<b>Boring Diameter (in):</b>
<b>Sampling Method:</b> Hand Auger Cuttings and Slide-Hammer	<b>Hammer Weight/Drop:</b> N/A	<b>Borehole Backfill:</b> Temporary Soil Vapor Probes
<b>Depth to Water (ft bgs):</b> N/A	<b>Ground Surface Elevation (ft MSL):</b> N/A	<b>Coordinates (X,Y):</b>
<b>Comments:</b> Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		<b>Logger:</b> JR <b>Reviewer:</b>

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
0								0 ft bgs
1					Gravelly fill	0 @ 2'		
7					@ 3.5' lean CLAY w/ sand (CL) 7.5YR 4/6 dry, fine to med sand fines [0, 20, 80] med, best med stiff	0 @ 3.5'		Bentonite Slurry
4					@ 4.5' 10YR 4/4 to 2.5Y 4/4	0.8 @ 5'		4.5 ft bgs
5.5						1.5 @ 5.5'		Sand #3 5.5 ft bgs
								VP-13-5 0845 am

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
<b>Start Date and Time:</b> 052317 0840	<b>Finish Date and Time:</b> 052317 1010	<b>Total Depth Drilled (ft bgs):</b> 5.5 ft bgs
<b>Drilling Method:</b> Hand Auger	<b>Drilling Contractor:</b> Penecore Drilling	<b>Total Depth Cored (ft bgs):</b> N/A
<b>Drill Rig:</b> N/A	<b>Hammer Type:</b> N/A	<b>Boring Diameter (in):</b>
<b>Sampling Method:</b> Hand Auger Cuttings and Slide-Hammer	<b>Hammer Weight/Drop:</b> N/A	<b>Borehole Backfill:</b> Temporary Soil Vapor Probes
<b>Depth to Water (ft bgs):</b> N/A	<b>Ground Surface Elevation (ft MSL):</b> N/A	<b>Coordinates (X,Y):</b>
<b>Comments:</b> Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		<b>Logger:</b> JR <b>Reviewer:</b>

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION	PID Reading (ppm)	Time (00:00)	COMMENTS
					SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)			
1					Poely graded gravel w/ sand (GP) 10YR5/1 dry fine gravel; med to coarse sand [60, 490] (FILL)	0.5 @ 1'		0 ft bgs
2								Bentonite Slurry
3						0 @ 3'		
4						0 @ 4'		
5						0 @ 5'		4.5 ft bgs Sand #3
6								5.5 ft bgs Soil Sample VP-14-5 0950 am



<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
<b>Start Date and Time:</b> 052317 0925	<b>Finish Date and Time:</b> 052317 1100am	<b>Total Depth Drilled (ft bgs):</b> 5.5 ft bgs
<b>Drilling Method:</b> Hand Auger	<b>Drilling Contractor:</b> Penecore Drilling	<b>Total Depth Cored (ft bgs):</b> N/A
<b>Drill Rig:</b> N/A	<b>Hammer Type:</b> N/A	<b>Boring Diameter (in):</b>
<b>Sampling Method:</b> Hand Auger Cuttings and Slide-Hammer	<b>Hammer Weight/Drop:</b> N/A	<b>Borehole Backfill:</b> Temporary Soil Vapor Probes
<b>Depth to Water (ft bgs):</b> N/A	<b>Ground Surface Elevation (ft MSL):</b> N/A	<b>Coordinates (X,Y):</b>
<b>Comments:</b> Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		<b>Logger:</b> JR <b>Reviewer:</b>

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS	
								0 ft bgs	
					fill - clear yellow sand (fine to medium)	0 @ 0.5'			
					@ 1' lean CLAY (CL) 10YR 2/1 dry trace coarse sand, fines [0, 10, 100] med plast stiff	0 @ 1'			
					@ 2' 10YR 2/2	0 @ 2'			
					@ 2.5' 7.5YR 4/6	0 @ 2.5'			
					(JR) @ 3' [0, 5, 100] med to coarse sand				
					@ 3.5' lean CLAY w/ sand (CL) 7.5YR 4/6 dry, fine to med sand, fines [0, 25, 75] med plast, soft	0 @ 3'			
					@ 4.5' clayey sandy lean CLAY (CL) 2.5YR 4/4 dry; fine to med sand, fines [0, 40, 60] (JR)	0 @ 4'			
					@ 5' clayey SAND (SC) 2.5Y 4/4 dry fine to coarse sand, fines [0, 60, 40]	0 @ 5'			

0 ft bgs

4.5 ft bgs

Sand #3

5.5 ft bgs

VP-16-5

1040 am


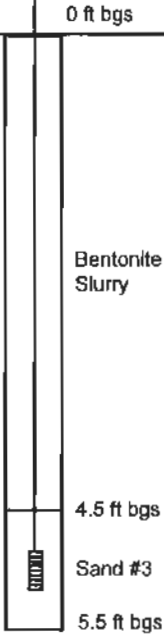
<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052317 1055</u>	Finish Date and Time: <u>052317 1215</u>	Total Depth Drilled (ft bgs): <del>5.5 ft bgs</del> <u>4.5'</u>
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weight/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes <u>JA</u>
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: <del>Temporary Soil Vapor Probes constructed in accordance with the Work Plan.</del> <u>JA</u>		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
1					Gravelly fill			
2					<sup>w/ sand</sup> @2' Gravelly lean CLAY (CL) 10YR4/6 dry fine gravels (same as fill); med to coarse sand, fines [20, 15, 65]	5.6 @2'		
3					@4' moist			
4					@4.5' wet - water in hole	0 @4'		
5								
6								
					<u>Note:</u> Soil sample at 5' bgs was under saturated conditions No probe installed			
								after 5 min water topped @ 4.3' bgs Soil Sample VP-17-5 1215 pm Soil Sample <u>SR</u>

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
<b>Start Date and Time:</b> 052317 1055	<b>Finish Date and Time:</b> 052317 1600	<b>Total Depth Drilled (ft bgs):</b> 5.5 ft bgs
<b>Drilling Method:</b> Hand Auger	<b>Drilling Contractor:</b> Penecore Drilling	<b>Total Depth Cored (ft bgs):</b> N/A
<b>Drill Rig:</b> N/A	<b>Hammer Type:</b> N/A	<b>Boring Diameter (in):</b>
<b>Sampling Method:</b> Hand Auger Cuttings and Slide-Hammer	<b>Hammer Weight/Drop:</b> N/A	<b>Borehole Backfill:</b> Temporary Soil Vapor Probes
<b>Depth to Water (ft bgs):</b> N/A	<b>Ground Surface Elevation (ft MSL):</b> N/A	<b>Coordinates (X,Y):</b>
<b>Comments:</b> Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		<b>Logger:</b> JR <b>Reviewer:</b>

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL); Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
								0 ft bgs
1					Gravelly fill	0 @ 1'		
2					@ 2' Sandy lean CLAY (CL) - 7.5YR 4/6 dry fine gravel; fine to med sand, fines [5, 15, 70]	1 @ 2' 2 @ 2'		Bentonite Slurry
3					<del>5YR</del> 10YR 4/4 to 2.5Y 4/4	3 @ 3'		
4					@ 3.5' <del>2.5Y 4/4</del>	2 @ 4'		4.5 ft bgs
5					@ 5' Clayey SAND (SC) 2.5Y 4/4 dry fine gravel; fine to coarse sand, fines [0, 60, 40]	1 @ 5.5'		Sand #3 5.5 ft bgs Soil Sample VP-18-5

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052317 1415</u>	Finish Date and Time: <u>052317 1630</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weigh/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
1					<i>Cravelly fill - same than VP-14</i> 	0@1		
2				0@2				
3				0@3'				
4				0@4'				
5				0@5.5'				
6								
								0 ft bgs  4.5 ft bgs Sand #3 5.5 ft bgs  <i>Soil Sample VP-19-5 1520 ppm</i>

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052317 1525</u>	Finish Date and Time: <u>052317 1620</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weight/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
								0 ft bgs
1					<p><i>Fill - Same than VP-14</i></p>	0@1'		<p>Bentonite Slurry</p> <p>4.5 ft bgs</p> <p>Sand #3</p> <p>5.5 ft bgs</p> <p>Soil Sample VP-20-5 1610 ppm</p>
2				0@2'				
3						0@3.5'		
4								
5						0@5'		
6								



<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052317 1305</u>	Finish Date and Time: <u>052317 1435</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weight/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USGS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
1					Gravelly fill			
1					@ 1' lean CLAY (CL) 10YR 2/1 dry trace coarse/med sand, fines [0, 6, 100] med plast; med stiff	0 @ 1'		
2					@ 1.5' 7.5YR 4/6			
3						0 @ 2'		
4					@ 4' lean CLAY w/ sand (CL) 7.5YR 4/6 dry fine to med sand fines [0, 30, 70]	0 @ 4'		
5					@ 10YR 4/4 [0, 10, 90]	0 @ 5'		
6					@ 5.5' [0, 40, 60]			

0 ft bgs

Bentonite Slurry

4.5 ft bgs

Sand #3

5.5 ft bgs

Soil Sample  
VP-21-5  
1400 ppm

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052317 1225</u>	Finish Date and Time: <u>052317 1330</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weight/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PIB Reading (ppm)	Time (00:00)	COMMENTS
0								0 ft bgs
1					Gravelly fill - > 10cm rocks			
2					<sup>w/ sand</sup> @2.5' lean CLAY (CL) 7.5YR 4/6 dry fine to med sand, fines [0, 25, 75]			Bentonite Slurry
3						0 @ 3'		
4					@4' Sandy lean CLAY (CL) 5YR dry fine to med sand fines [0, 40, 60]	1.5 @ 4'		
5					@5' <sup>OK</sup> clayey SAND (SC) <sup>5YR</sup> 2.5Y 4/4 dry fine to coarse sand fines [0, <del>40</del> 60] <sup>OK</sup> <sup>5YR</sup> <sup>TR</sup>	1 @ 5'		4.5 ft bgs
6					@5.25' 10YR 4/4 to 2.5Y 4/4 [0, 55, 45]	0.3 @ 5.5'		Sand #3
								5.5 ft bgs
								Soil sample VP-22-5 1315 pm

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052417 0805</u>	Finish Date and Time: <u>052417 0900</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weigh/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION	PID Reading (ppm)	Time (00:00)	COMMENTS
					SOIL NAME (USCS SYMBOL); Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)			
1								
2					<i>w/sand</i> @2' lean CLAY (CL): 7.5YR 4/6 dry fine to med sand, fines [0, 20, 80]	0 @ 2'		Bentonite Slurry
3					@3' 10YR 4/4	8.5 @ 3'		
4					@4.5' clayey SAND (SC) 2.5Y 4/4 dry fine to coarse sand fines [0, 60, 40]	4.5 @ 4'		4.5 ft bgs
5					@5' Sandy CLAY (CL) 2.5Y 4/4 dry fine to med sand fines [0, 30, 70]	15 @ 5'		Sand #3
6						10 @ 5'		5.5 ft bgs
								VP-23-5 0840

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052417 0835</u>	Finish Date and Time: <u>052417 0900</u> <u>0920</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weight/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION	PID Reading (ppm)	Time (00:00)	COMMENTS
					SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)			
1					<i>crevelly fill</i>			0 ft bgs
2					<i>@2' lean CLAY w/ sand (CL) 5YR4/4 fine to med sand fines [0, 20, 80]</i>	<i>0 @ 2'</i>		Bentonite Slurry
3					<i>@3.5 [0, 25, 75]</i>	<i>0 @ 3'</i>		
4						<i>0 @ 4'</i>		
5					<i>@5' Sandy CLAY (CL) 5YR4/4 dry fine to med sand fines [0, 40, 60]</i>	<i>0 @ 5'</i>		4.5 ft bgs Sand #3 5.5 ft bgs
6								<i>VP-24-5 0910am</i>

<b>Location:</b> Oakland, CA	<b>Project Name:</b> 7210 Bancroft Ave	<b>Project Number:</b> WR2229
Start Date and Time: <u>052417 0910</u>	Finish Date and Time: <u>052417 0955</u>	Total Depth Drilled (ft bgs): 5.5 ft bgs
Drilling Method: Hand Auger	Drilling Contractor: Penecore Drilling	Total Depth Cored (ft bgs): N/A
Drill Rig: N/A	Hammer Type: N/A	Boring Diameter (in):
Sampling Method: Hand Auger Cuttings and Slide-Hammer	Hammer Weigh/Drop: N/A	Borehole Backfill: Temporary Soil Vapor Probes
Depth to Water (ft bgs): N/A	Ground Surface Elevation (ft MSL): N/A	Coordinates (X,Y):
Comments: Temporary Soil Vapor Probes constructed in accordance with the Work Plan.		Logger: JR      Reviewer:

Depth (ft bgs)	Sample Interval	Sample ID and Type	Blow Per 6 Inches	Sample Recovery (%)	MATERIAL DESCRIPTION <small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>	PID Reading (ppm)	Time (00:00)	COMMENTS
1					Gravelly fill			0 ft bgs
2					@ 2' lean CLAY w/ sand 5YR 4/4 dry fine sand fines [0, 25, 75]	0@2'		Bentonite Slurry
3						0@3'		
4						0@4'		
5					@ 5' Sandy lean CLAY 5YR 4/4 dry fine to coarse sand [0, 30, 70]	0@5'		4.5 ft bgs Sand #3 5.5 ft bgs
6								VP-25-5 0945

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antez Oakland Probe No.: VP-1  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: WR2229 Mini Rae 2000 Serial No.: 3886 GEN2000+06 (30) No (11.7) Lamp: 10.6 / 11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No.: FA00950  
 Weather: Overcast. 50s MDG 2002 Helium detector Serial No.: A00139  
 Field Personnel: G. McGuire, B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: B. Linker

② Surface Type:  Asphalt  Concrete  Grass  Other Soil ③ Casing Volume  Sub-slab <0.1 L Soil gas probe: 334 (L)  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown (i.e., asphalt or concrete)

④ Initial Vacuum (prior to pumping) 2 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed, 70 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 0940

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	1
2	0.2	1.7
3	0.5	6

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		Sample (ppm <sub>v</sub> ) (circle one)	VOCs by PID (ppm <sub>v</sub> )
										Shroud (%)			
										Min	Max		
5/24/17	0945	0950	5	1	0.2	1	---	---	---	24.5	42	<del>10.1</del>	55
	0955	1000	5	1	0.2	2	---	---	---	30	43	<del>2</del>	109
	1003	1008	5	1	0.2	3	---	---	---	20	32	<del>2</del>	159

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1019	VP-1	70	A00314	A00282	-30	<del>2</del> -6
	1026						
		He MIN: 5	He MAX: 39				

Comments:

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antez Oakland Probe No.: VP-2  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA00956 Lamp: 0.6 / 11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM2000.07  
 Weather: Cloudy, 50s MDG 2002 Helium detector Serial No.: A00329/A00330  
 Field Personnel: G Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: \_\_\_\_\_

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 384 (L)

⑤ Shut in test prior to pneumatic test completed 60 in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: \_\_\_\_\_

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	1
1	0.2	1.3
1	0.5	3.9

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> ) (circle one)
										Min	Max		
5/24/17	1017	1020	2.5	0.5	0.2	0.5	NA	NA	NA	21	40	0.2	14.6
	1024	1026	2.5	0.5	0.2	1.0	0.0%	0.2%	20.8%	22	35	0.1	21.6
	1030	1033	2.5	0.5	0.2	1.5	0.0	0.2	20.6	18	30	0.3	25.0

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1037	VP-2	00081	A00268	#A00282	-30	-6 cm
	1043						
5/24/17	1104	Sorbent Tube - VP-2	G10139916	-	-	-	-

Comments: Background He is 0.2-0.3% - Shroud # 268

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antea Cirkland Probe No.: VP-3  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: WR2229 Mini Rae <sup>3000</sup> 2000 Serial No.: FA00950 Lamp: 10.6 / 11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM 2000 + .06 (GM 09024/06)  
 Weather: warm clear, -70°F MDG 2002 Helium detector Serial No.: A00177 (in shroud), A00139 (outside)  
 Field Personnel: B Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: B. Linker

② Surface Type:  Asphalt  Concrete  Grass  Other soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown (i.e., asphalt or concrete)  
 ③ Casing Volume  Sub-slab <0.1 L  
 Soil gas probe 0.354 (L)  
 ⑤ Shut in test prior to pneumatic test completed, 35 in. H<sub>2</sub>O held for 60 seconds.  
 ⑥ Start of Pneumatic Test: 1108

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.9
2	0.2	1.6
3	0.5	4.5

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O  
 ⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>  
 ⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> ) (circle one)
										Min	Max		
5/24/17	1117	1120	3	0.6	0.2	0.6	0.9	2	18.1	21	34	5.6	
↓	1127	1130	3	0.6	0.2	1.2	0.9	2.9	7.8	15	31	8.6	
↓	1134	1137	3	0.6	0.2	1.8	0.9	2.5	9.7	23	44	12.2	

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No **Note: 1% helium = 10,000 ppm<sub>v</sub>**  
 ⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1142	VP-3	<u>11824</u> 312	A00265	A00282	30	5
	1151						
		He MIN: 11.6 He MAX: 28					

Comments:

SC measurement - pneumatic testing



**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antec Oakland Probe No.: VP-4  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: W12229 Mini Rae 2000 Serial No.: FA01552 Lamp: 10.6 / 1.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM 09024/06  
 Weather: warm, clear, ~70 F MDG 2002 Helium detector Serial No.: A00175 A0031  
 Field Personnel: B. Linker Tracer Gas:  Helium  Other (shroud) (outside)  
 Recorded By: B Linker

② Surface Type:  Asphalt  Concrete  Grass  Other Soil ③ 1 Casing Volume  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  Sub-slab  
 (i.e., asphalt or concrete) Soil gas probe 0.384 (L)  <0.1 L

⑤ Shut in test prior to pneumatic test completed, 70 in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: 1229

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	1.6
2	0.2	2.6
3	0.5	7.0

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> ) (circle one)
										Min	Max		
5/24/17	1237	1240	3	0.6	0.2	0.6	0.7	0.8	17.2	25.6	35.4	15.5	
↓	1246	1249	3	0.6	0.2	1.2	0.7	1.3	18.0	36.0	42.8	13.1	
↓	1253	1256	3	0.6	0.2	1.8	0.7	1.3	17.6	30.0	36.0	12.0	

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1301	VP-4	00158	A00157	A00282	-30.	-2
	1329			(new he taken)			
		He Min: 13.2	He Max: 39.1				

Comments: Sorbent tube ID: 40143671

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antez Oakland Probe No.: VP-5  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: WR2219 Mini Roe 2000 Serial No.: FA00956 Lamp: (0.6) / 11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM2000.07  
 Weather: Cloudy 60S MDG 2002 Helium detector Serial No.: A00329/A00330  
 Field Personnel: G. McEwire, A Chen Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: G. McEwire

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 384 mL

⑤ Shut in test prior to pneumatic test completed, (0) in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0.5 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: 1136

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	1.3
2	0.2	2.2
1	0.5	5.0

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0.1 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)	Sample (ppm <sub>v</sub> , %) (circle one)		
											Min	Max	
5/24/17	1145	1147	2.5	0.5	0.2	0.5	NA	NA	NA	35	42	0.2	2.3
↓	1153	1156	2.5	0.5	0.2	1.0	0.0	0.0	20.7	24	26	0.2	1.7
↓	1157	1159	2.5	0.5	0.2	1.5	0.0	0.0	20.8	26	28	0.0	1.2

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/23/17							
5/24/17	1205-1211	VP-5	00413	A00150	A00262	-28	-8

Comments: Background He = 0.3% ; Shroud #150 ; He Conc 23%

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antez Oakland Probe No.: VP-6  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA00956 Lamp: (10.6) / 11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM2000.07  
 Weather: Cloudy, 60S MDG 2002 Helium detector Serial No.: A00330/A00329  
 Field Personnel: G. McEwire, B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: G. McEwire

② Surface Type:  Asphalt  Concrete  Grass  Other Soil ③ Casing Volume  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)  Sub-slab <0.1 L  
 Soil gas probe 384 mL

⑤ Shut in test prior to pneumatic test completed 60 in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: 1253

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	1.0
1	0.2	1.2
1	0.5	2.6

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> , %) (circle one)
										Min	Max		
5/24/17	1302	1305	2.5	0.5	0.2	0.5	NA	NA	NA	20	32	0.1	29.9
	1308	1310	2.5	0.5	0.2	1.0	0	0	21.8	20	25	0.3	61.4
	1317	1319	2.5	0.5	0.2	1.5	NA	NA	NA	22	24	0.2	54.8

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1322	VP-6	00166	<del>A00185</del> <sup>GM</sup>	A00282	-30	-8
	1328			A00185			
5/24/17	1338	VP-6 Smart Tube	60143488				

Comments: Shroud # 158 ; Back ground He = 0.3%

SOI measurements - pneumatic testing

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Anken Oakland Probe No.: VP-7  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA01552 Lomp 10.6 / 11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM 09024/06  
 Weather: warm, clear, ~70°F MDG 2002 Helium detector Serial No.: A00177 (shroud), A00139 (outside)  
 Field Personnel: B. Linke Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: B. Linke

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 0.384 (L)

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed, 10 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 1500

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.6
2	0.2	1.1
3	0.5	3.8

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm, %) (circle one)
										Min	Max		
5/24	1511	1514	3	0.6	0.2	0.6	0.5	1.5	18.2	22.0	40.4	5.5	
↓	1520	1523	3	0.6	0.2	1.2	0.5	1.4	18.5	20.9	32.0	3.0	
↓	1530	1533	3	0.6	0.2	1.8	0.5	1.3	18.8	21.2	46.7	5.3	

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1539	VP-7	333	A00132	A00282	-30	-5
	1602	DUP-1	83	A00132	A00282	-30	-5
		He min: 20.3 He Max: 46.3					

Comments:

S:\Measurements\17052417\1705241703\170524170303

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antez Oakland Probe No.: VP-8  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA 00956 Lamp: (10.6) 11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM 200007  
 Weather: Cloudy, 60s-70s MDG 2002 Helium detector Serial No.: A00329/A00330  
 Field Personnel: E. McEnire / B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: E. McEnire

② Surface Type:  Asphalt  Concrete  Grass  Other soil ③ Casing Volume  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  Sub-slab <0.1 L  
 (i.e., asphalt or concrete) Soil gas probe 384 (L)

④ Initial Vacuum (prior to pumping) 0.5 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0.3 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 1440

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	1.2
1	0.2	1.9
1	0.5	6.0

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> , %) (circle one)
										Min	Max		
5/24/17	1504	1506	2.5	0.5	0.2	0.5	0	0	21.4	74	42	0.3	7.6
	1511	1514	2.5	0.5	0.2	1.0	0	0	21.3	21.0	26.0	0.1	7.6
	1517	1520	2.5	0.5	0.2	1.5	0	0	21.7	22.7	25.6	0.4	6.1

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1526-1534	VP-8	00100	A00027 - A00282		-30	-7.5
5/24/17	1543	VP-8 - solvent tube	G0149975				

Comments: Shroud 0.27 / Valve A. Background He conc. = 0.37.

SOP measurements - pneumatic testing of

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antea Oakland  
 Date: 5/24/17 Project Number: WR229  
 Site Location: 7210 Bancroft, Oakland, CA  
 Weather: warm, clear, 70 F  
 Field Personnel: B. Linker  
 Recorded By: B. Linker

Probe No.: VP-9  Sub-slab probe  Soil gas probe  
 Mini Ra<sup>3</sup> Serial No.: FA01552 Lamp: 10.6 / 11.7 eV  
 Landtech GEM 2000 Landfill Gas Meter Serial No. M: Gm 09021/06  
 MDG 2002 Helium detector Serial No.: A00177 (shroud), A00139 (outside)  
 Tracer Gas:  Helium  Other \_\_\_\_\_

② Surface Type:  Asphalt  Concrete  Grass  Other soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 381 (L)

⑤ Shut in test prior to pneumatic test completed: FD in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: 1647

Eloped Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.6
2	0.2	1.0
3	0.5	3.3

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)	Sample (ppm <sub>v</sub> %) (circle one)		
											Min	Max	
5/24/17	1651	1654	3	0.6	0.2	0.6	0.3	0.3	18	15.4	38.2	<input checked="" type="checkbox"/>	4.4
↓	1701	1704	3	0.6	0.2	1.2	0.3	0.3	17.8	23.2	34.5	<input checked="" type="checkbox"/>	2.0
↓	1710	1713	3	0.6	0.2	1.8	0.2	0.3	17.8	19.2	36.1	<input checked="" type="checkbox"/>	5.2
											<u>40.2</u>		

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Conister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1720	VP-9	00275	A00261	A00282	-30	-3
	1730						
		He Min: 22.3	He Max: 45.9				

Comments:

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antez Oakland Probe No.: VP-10  Sub-slab probe  Soil gas probe  
 Date: 5/24/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA-00956 Lamp: 10.6 / 11.7 eV  
 Site Location: 7210 Bancroft Ave Londtech GEM 2000 Landfill Gas Meter Serial No. M: GEM2000.07  
 Weather: Cloudy/Partly sunny 70s MDG 2002 Helium detector Serial No.: A00329/A00330  
 Field Personnel: G. McQuire / B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: G. McQuire

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 384 mL

④ Initial Vacuum (prior to pumping) 0.5 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0.1 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 1640

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
-	0.1	
-	0.2	
<u>2</u>	0.5	<u>6.0</u>

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bog Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		Sample (ppm <sub>v</sub> ) (circle one)	VOCs by PID (ppm <sub>v</sub> )
										Shroud (%)	Min		
5/24/17	1706	1708	2.5	0.5	0.2	0.5	0	0	22.3	25	30	0.4	1.8
	1710	1712	2.5	0.5	0.2	1.0	0	0	22.3	20	25	0.3	1.6
	1715	1717	2.5	0.5	0.2	1.5	0	0	22.2	17	24	0.3	1.5

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/24/17	1719	VP-10	00320	A00149	282	30	-2.25
5/24/17	1728						
5/24/17	1740	VP-10 Sorbent tube	G10147267	-	-	-	-

Comments: Background He concentration = 0.21

Soil measurement - pneumatic testing of

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antec Oakland Probe No.: VP-11  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: WZ2229 Mini Rae <sup>355"</sup> 2000 Serial No.: FA00956 Lamp: 10.6 Y 11.7 eV  
 Site Location: 7210 Bancroft, Oakland, CA Londtech GEM 2000 Landfill Gas Meter Serial No. M: A00173 (shroud), A00139 (cut)  
 Weather: cloudy, cool MDG 2002 Helium detector Serial No.: GM 05419  
 Field Personnel: B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: B. Linker

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 0.334 (L)

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 0859

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.6
2	0.2	1.2
3	0.5	3.9

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)	Sample (ppm <sub>v</sub> , %) (circle one)		
										Min	Max		
5/25/17	0859	0902	3	0.6	0.2	0.6	0	0	20.1	20.5	27.7	<input checked="" type="checkbox"/>	326.1
	↓ (R) 0905	0913	3	0.6	0.2	1.2	1.1	2.4	14.6	21.4	31.3	<input checked="" type="checkbox"/>	261
	↓ 0918	0921	3	0.6	0.2	1.8	0.2	1.7	16.2	17.0	34.0	<input checked="" type="checkbox"/>	369.5

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	He min./max	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/25/17	0922/0942	VP-11	10.8/30.7	376	A00032	A00282	-29	-3
	↓ 0946/1002	DUP-2	20.4/29.6	319	A00037	A00282	-30	-3

Comments:

Geosyntec Consultants, Inc. 05/25/17



**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antea Oakland Probe No.: VP-12  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: WR2229 Mini Roe 2000 Serial No.: FAD1552 Lamp: 10.6 / 11.7 eV  
 Site Location: Oakland Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM 2000+.06  
 Weather: Overcast MDG 2002 Helium detector Serial No.: A00330  
 Field Personnel: A. Chan Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: A. Chan

② Surface Type:  Asphalt  Concrete  Grass  Other Soil ③ 1 Casing Volume  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  Sub-slab <0.1 L  
 (i.e., asphalt or concrete) Soil gas probe \_\_\_\_\_ (L)

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 0805 0817

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum (in. H <sub>2</sub> O)
	0.1	
	0.2	
<u>1</u>	0.5	<u>9</u>

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)	Sample (ppm <sub>v</sub> , %) (circle one)		
											Min	Max	
<u>5/25/17</u>	<u>0823</u>	<u>0826</u>	<u>2.5</u>	<u>0.5</u>	<u>0.2</u>	<u>0.5</u>	<u>23.5</u>	<u>2.6</u>	<u>3.5</u>	<u>22.6</u>	<u>24.3</u>	<u>0</u>	<u>318.4</u>
<u>5/25/17</u>	<u>0830</u>	<u>0833</u>	<u>2.5</u>	<u>0.5</u>	<u>0.2</u>	<u>1</u>	<u>12.3</u>	<u>1.2</u>	<u>8.7</u>	<u>20.7</u>	<u>22.0</u>	<u>0</u>	<u>355.6</u>
<u>5/25/17</u>	<u>0836</u>	<u>0839</u>	<u>2.5</u>	<u>0.5</u>	<u>0.2</u>	<u>1.5</u>	<u>8.4</u>	<u>1.3</u>	<u>10.9</u>	<u>22.1</u>	<u>24.8</u>	<u>0</u>	<u>342.0</u>

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
<u>5/25/17</u>	<u>0842</u>	<u>VP-12</u>	<u>400196</u>	<u>A00040</u>	<u>A00131</u>	<u>-30</u>	<u>-3</u>
	<u>end 0855</u>		<u>min He% 21.7</u>				
			<u>max He% 33.0</u>				

Comments:

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Ankon Oakland Probe No.: VP-13  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA01552 Lamp: 10.6 / 11.7 eV  
 Site Location: VP-13 @ Oakland, CA Londtech GEM 2000 Landfill Gas Meter Serial No. M: GEM2000+00  
 Weather: Overcast MDG 2002 Helium detector Serial No.: A00330  
 Field Personnel: A. Chan Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: A. Chan

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe \_\_\_\_\_ (L)

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed, 70 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 0938

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
	0.1	
<u>1</u>	0.2	<u>4.9</u>
<u>1</u>	0.5	<u>14.11</u>

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		Sample (ppm <sub>v</sub> ) (circle one)	VOCs by PID (ppm <sub>v</sub> )
										Min	Max		
5/25/17	0942	0945	2.5	0.5	0.2	0.5	1.5	0.7	14.9	21.7	24.3	0	403.8
5/25/17	0947	0950	2.5	0.5	0.2	1	8.6	2.1	6.3	22.1	35.8	0	440.8
5/25/17	0952	0955	2.5	0.5	0.2	1.5	12.0	<u>6.1</u>	6.1	24.3	26.9	0	443.7

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summo Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/25/17	1001	VP-13	00268	A00128	A00128	-30	-3.5
	end		min He%	2.1			
			max He%	30.5			

Comments:

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Anheco Oakland Probe No.: VP-14  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA01552 Lamp: 10.6 / 11.7 eV  
 Site Location: Oakland CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM2000t.06  
 Weather: Overcast MDG 2002 Helium detector Serial No.: A00350  
 Field Personnel: A. Chan Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: A. Chan

② Surface Type:  Asphalt  Concrete  Grass  Other SH1  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe \_\_\_\_\_ (L)

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 1023

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum (in. H <sub>2</sub> O)
	0.1	
<u>1</u>	0.2	<u>4.1</u>
<u>1</u>	0.5	<u>9</u>

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)	Sample (ppm <sub>v</sub> , %) (circle one)		
											Min	Max	
<u>5/25/17</u>	<u>1026</u>	<u>1029</u>	<u>2.5</u>	<u>0.5</u>	<u>0.2</u>	<u>0.5</u>	<u>0</u>	<u>0.1</u>	<u>18.3</u>	<u>20.5</u>	<u>23.0</u>	<u>0</u>	<u>67.7</u>
<u>5/25/17</u>	<u>1032</u>	<u>1035</u>	<u>2.5</u>	<u>0.5</u>	<u>0.2</u>	<u>1</u>	<u>0</u>	<u>0.1</u>	<u>18.0</u>	<u>22.2</u>	<u>24.7</u>	<u>0</u>	<u>52.3</u>
<u>5/25/17</u>	<u>1037</u>	<u>1040</u>	<u>2.5</u>	<u>0.5</u>	<u>0.2</u>	<u>1.5</u>	<u>0</u>	<u>0.1</u>	<u>17.8</u>	<u>19.9</u>	<u>23.4</u>	<u>0</u>	<u>23.6</u>

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
<u>5/25/17</u>	<u>1041</u>	<u>VP-14</u>	<u>00307</u>	<u>A00311</u>	<u>A00131</u>	<u>-30</u>	<u>-7</u>
<u>end</u>	<u>1052</u>		<u>min He% 20.1</u>				
			<u>max He% 31.6</u>				

Comments:

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: VP-15 Antea Oakland Probe No.: VP-15  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA00956 Lamp: 10.6 / 11.7 eV  
 Site Location: 7210 Bancroft, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: A00177 (shroud), A00139  
 Weather: cloudy, cool MDG 2002 Helium detector Serial No.: GM 05419  
 Field Personnel: B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: B. Linker

② Surface Type:  Asphalt  Concrete  Grass  Other soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 0.354 (L)

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test:

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.4
2	0.2	0.5
3	0.5	2.5

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		Sample (ppm <sub>v</sub> , %) (circle one)	VOCs by PID (ppm <sub>v</sub> )
										Shroud (%)	Min		
5/25/17	1038	1041	3	0.6	0.2	0.6	0	0	26.8	15.1	30.7	0	53.0
	1047	1050	3	0.6	0.2	1.2	0	0	19.2	20.9	49.3	0	15.4
	1055	1058	3	0.6	0.2	1.8	limited sample			20.6	32.0	0	27

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/25/17	1104	VP-15	119	A00002	A00282	-30	-3
	1118	He min: 17.8 He max: 37.1					

Comments: \_\_\_\_\_

SGP measurements - pneumatic testing

SOIL GAS PROBE MEASUREMENTS

① Project Name: WR 2229 / Antea Oakland Probe No.: VP-1b  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: \_\_\_\_\_ Mini Rae 2000 Serial No.: FAD152Z Lamp: 10.8 / 11.7 eV  
 Site Location: Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM2000+.04  
 Weather: overcast MDG 2002 Helium detector Serial No.: A00330  
 Field Personnel: A. Chan Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: A. Chan

② Surface Type:  Asphalt  Concrete  Grass  Other Soil ③ 1 Casing Volume  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  Sub-slab <0.1 L  
 (i.e., asphalt or concrete) Soil gas probe \_\_\_\_\_ (L)

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 1123

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
	0.1	
<u>1</u>	0.2	<u>3.2</u>
<u>1</u>	0.5	<u>4.5</u>

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> ) (circle one)
										Min	Max		
<u>5/25/17</u>	<u>1125</u>	<u>1128</u>	<u>3.5</u>	<u>0.5</u>	<u>0.2</u>	<u>0.5</u>	<u>1.0</u>	<u>4.3</u>	<u>4.1</u>	<u>42.3</u>	<u>45.2</u>	<u>0</u>	<u>57.2</u>
<u>5/25/17</u>	<u>1130</u>	<u>1133</u>	<u>2.5</u>	<u>0.5</u>	<u>0.2</u>	<u>1.0</u>	<u>0.5</u>	<u>2.2</u>	<u>11.9</u>	<u>27.9</u>	<u>36.9</u>	<u>0</u>	<u>50.4</u>
<u>5/25/17</u>	<u>1137</u>	<u>1140</u>	<u>2.5</u>	<u>0.5</u>	<u>0.2</u>	<u>1.5</u>	<u>0.6</u>	<u>2.7</u>	<u>10.1</u>	<u>25.5</u>	<u>29.9</u>	<u>0</u>	<u>56.1</u>

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
<u>5/25/17</u>	<u>1142</u>	<u>VP-1b</u>	<u>00394</u>	<u>A00317</u>	<u>A00151</u>	<u>-30</u>	<u>-9.5</u>
<u>and</u>	<u>1213</u>		<u>min He% 20.4</u>				
			<u>max He% 32.7</u>				

Comments:

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antea Oakland Probe No.: VP-19  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: WR2229 Mini Rae 2000 Serial No.: FA00956 Lamp: 10.6 / 11.7 eV  
 Site Location: 7210 Bancroft, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: \_\_\_\_\_  
 Weather: warm, clear MDG 2002 Helium detector Serial No.: A00177 (shroud), A00330  
 Field Personnel: B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: B. Linker

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 0.384 (L)

⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: 1640

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.7
2	0.2	1.3
3	0.5	4.1

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		Sample (ppm <sub>v</sub> ) (circle one)	VOCs by PID (ppm <sub>v</sub> )
										Shroud (%)			
										Min	Max		
5/25/17	1650	1653	3	0.6	0.2	0.6	0	0	19.3	27.5	32.0	0	35.0
↓	1654	1701	3	0.6	0.2	1.2	0	0	21.4	16.2	27.7	0	40.3
↓	1704	1707	3	0.6	0.2	1.8	0	0	18.7	14.5	27.3	0	24.0

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/25/17	1712	VP-19	00108	A60136	A00282	-30	-5
	1723						
		He min: 15.1	He max: 29.2				

Comments:

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antea Oakland Probe No.: VP-20  Sub-slab probe  Soil gas probe  
 Date: 5/20/17 Project Number: W22229 Mini Rae 2000 Serial No.: 592-910787 Lamp: 10.6 / 11.7 eV  
 Site Location: 720 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: SIRA-D3ATEX2-152X  
 Weather: Overcast, SDS MDG 2002 Helium detector Serial No.: Acc 330 / Acc 329  
 Field Personnel: G. McEwre Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: G. McEwre

② Surface Type:  Asphalt  Concrete  Grass  Other Spil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 384 (L)

⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: 0927

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
	0.1	0.9
1	0.2	1.4
1	0.5	5.0

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0.0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		Sample (ppm <sub>v</sub> , %) (circle one)	VOCs by PID (ppm <sub>v</sub> )
										Shroud (%)			
										Min	Max		
5/20/17	0938	0941	2.5	0.5	0.2	0.5	NA	NA	NA	23	27	0.3	5.6
	0945	0948	2.5	0.5	0.2	1.0	0	0.1	20.6	19	24	0.2	2.3
	0950	0953	2.5	0.5	0.2	1.5	0	0.1	20.5	27	29		

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/26/17	0955	-1001 VP-20	00155	A00247	A00131	-20	-17
5/26/17	1012	Solvent tubes: VP-20-N	G0E3814	Flow Controller	Pressure gauge		was broken
	1015	Dual-2-N	G0153648				

Comments: Background He concentration = 0.31; Background VOCs: 0.0 ppm; Shroud # 247

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antea Oakland Probe No.: VP-21  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: WR2229 Mini Rae <sup>3000</sup> Serial No.: FA01552 Lamp: 0.0 / 11.7 eV  
 Site Location: 7210 Bancroft, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: GEM 05419  
 Weather: clear, warm MDG 2002 Helium detector Serial No.: A00329 (shroud); A00139 (outside)  
 Field Personnel: B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: B. Linker

② Surface Type:  Asphalt  Concrete  Grass  Other soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  
 (i.e., asphalt or concrete)

③ 1 Casing Volume  
 Sub-slab <0.1 L  
 Soil gas probe 0.394 (L)

⑤ Shut in test prior to pneumatic test completed 60 in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: 1411

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.6
2	0.2	1.2
3	0.5	2.3

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> , %) (circle one)
											Min	Max	
5/25/17	1426	1429	3	0.6	0.2	0.6	0	0	17.2	23.7	30.7	0	85.0
	1433	1436	3	0.6	0.2	1.2	0.4	0.3	12.1	17.0	34.5	0	79.8
	1442	1445	3	0.6	0.2	1.8	0.5	3.0	5.9	15.0	40.1	0	66.5

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/25/17	1455	VP-21	138	A00126	A00282	-30	-3
	1514	He: Min: <u>0.6</u> Max: <u>26.2</u>					

Comments: 0 ran out of He ~ 3/4 thru sample time

SOG measurements - pneumatic testing of



## SOIL GAS PROBE MEASUREMENTS

① Project Name: Antea Oakland Probe No.: VP-22  Sub-slab probe  Soil gas probe  
 Date: 5/25/17 Project Number: WR2229 Mini Rae <sup>3000</sup> Serial No.: FA00956 Lamp: 10.6 / 11.7 eV  
 Site Location: 7210 Bancroft, Oakland, CA Londtech GEM 2000 Landfill Gas Meter Serial No. M: GM 05419  
 Weather: cloudy, cool MDG 2002 Helium detector Serial No.: A00177 (shroud), A00139 (outside)  
 Field Personnel: B. Linker Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: B. Linker

② Surface Type:  Asphalt  Concrete  Grass  Other soil ③ 1 Casing Volume  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  Sub-slab <0.1 L  
 (i.e., asphalt or concrete) Soil gas probe 0.384 (L)

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 1214

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.7
2	0.2	0.9
3	0.5	3.0

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> , %) (circle one)
										Min	Max		
5/25/17	1222	1225	3	0.6	0.2	0.6	27.7	4.3	8.2	25.1	35.8	83.0	
	1229	1232	3	0.6	0.2	1.2	18.0	3.0	12.0	19.3	27.6	154.5	
	1237	1240	3	0.6	0.2	1.8	36.7	4.7	8.1	15.6	28.4	0.4	

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No  N/A

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/25/17	1337	VP-22	<del>132</del> 132	<del>A00157</del> (M)	A00282	-30	-3
	1352		(B2)	A00160			
		He MIN: 22.6 MAX: 48.1					

Comments:

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antez Oakland Probe No.: VP-23  Sub-slab probe  Soil gas probe  
 Date: 5/26/17 Project Number: W22279 Mini Rae 2000 Serial No.: 592-912585 Lamp: 10.9 / 11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: SIRA-03ATEX2452X  
 Weather: Overcast, 50s MDG 2002 Helium detector Serial No.: A00330/A00329  
 Field Personnel: G. McEwire Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: G. McEwire

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown (i.e., asphalt or concrete)  
 ③ Casing Volume  Sub-slab <0.1 L  
 Soil gas probe 384 mdt

⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑥ Start of Pneumatic Test: 1109

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.9
1	0.2	1.1
1	0.5	4.1

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 1.4 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> , %) (circle one)
										Min	Max		
5/26/17	1115	1146	2.5	0.5	0.2	0.5	-	-	-	26	24	0.3	96.4
New Tech	1213	1215	2.5	0.5	0.2	1.0	0	0.1	20.3	17	23	1.7	113.8
Tightened	1225	1227	2.5	0.5	0.2	1.5	-	-	-	23	24	2.3	113.8
4x rings	1233	1235	2.5	0.5	0.2	2.0	-	-	-	25	28	1.8	116.2
	1238	1240	2.5	0.5	0.2	2.5	-	-	-	27	28	1.3	120.9

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/26/17	1242	1259 VP-23	00145	A00307	A00131	-30	-23.5

Comments: Background He concentration = 0.31

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antes Oakland Probe No.: VP-24  Sub-slab probe  Soil gas probe  
 Date: 5/28/17 Project Number: WR2229 Mini Rae 2000 Serial No.: 592-972585 Lamp: 06/11.7 eV  
 Site Location: 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: SIRA-03ATEX2452X  
 Weather: Dry/Cool, SDs MDG 2002 Helium detector Serial No.: A00330/A00329  
 Field Personnel: G. McEwine Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: G. McEwine

② Surface Type:  Asphalt  Concrete  Grass  Other Soil ③ 1 Casing Volume  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown  Sub-slab <0.1 L  
 (i.e. asphalt or concrete) Soil gas probe 384 mL

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 1.7 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑤ Shut in test prior to pneumatic test completed 60 in. H<sub>2</sub>O held for 60 seconds.

⑥ Start of Pneumatic Test: 1314

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	0.9
1	0.2	1.7
1	0.5	3.1

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		VOCs by PID (ppm <sub>v</sub> )	
										Shroud (%)			Sample (ppm <sub>v</sub> ) (circle one)
										Min	Max		
5/26/17	1318	1320	2.5	0.5	0.2	0.5	-	-	-	20	22	0.0	171.2
	1323	1325	2.5	0.5	0.2	1.0	-	-	-	27	27	0.0	129.8
	1327	1329	2.5	0.5	0.2	1.5	-	-	-	23	25	0.1	124.9

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/26/17	1331-	VP-24	00284	A00028	A00131	-30	-15
	1350	DVD-3	00118	A00028	A00131	-30	-15
	1358	VP-24-N	G0148388				

Comments: Background He Concentration = 0.2-0.3%.

**SOIL GAS PROBE MEASUREMENTS**

① Project Name: Antez Oakland Probe No.: VP-25  Sub-slab probe  Soil gas probe  
 Date: 5/26/17 Project Number: WP229 Mini Rae 2000 Serial No.: 592-912585 Lamp: 10.0 / 11.7 eV  
 Site Location: OVERCAST, SDs ; 7210 Bancroft Ave, Oakland, CA Landtech GEM 2000 Landfill Gas Meter Serial No. M: SIRA-03ATEX2452X  
 Weather: ← MDG 2002 Helium detector Serial No.: A00330/A00329  
 Field Personnel: G. McGwire Tracer Gas:  Helium  Other \_\_\_\_\_  
 Recorded By: G. McGwire

② Surface Type:  Asphalt  Concrete  Grass  Other Soil  
 Surface Thickness \_\_\_\_\_ inches/centimeters  Unknown (i.e., asphalt or concrete)  
 ③ Casing Volume  Sub-slab <0.1 L  
 Soil gas probe 384 mL  
 ⑤ Shut in test prior to pneumatic test completed, 60 in. H<sub>2</sub>O held for 60 seconds.

④ Initial Vacuum (prior to pumping) 0 in. H<sub>2</sub>O

⑦ Field tubing blank reading (ppm<sub>v</sub>) completed?  Yes  No PID Reading 0.1 ppm<sub>v</sub>

⑧ Shut in test prior to purging completed? Yes  No

⑥ Start of Pneumatic Test: MOS

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H <sub>2</sub> O
1	0.1	8.5
1	0.2	1.0
1	0.5	3.0

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH <sub>4</sub> (%)	CO <sub>2</sub> (%)	O <sub>2</sub> (%)	Tracer Gas		Sample (ppm <sub>v</sub> , %) (circle one)	VOCs by PID (ppm <sub>v</sub> )
										Shroud (%)	Min		
5/26/17	1410	1412	2.5	0.5	0.2	0.5	0	0.1	19.8	18	21	0.1	83.5
	1415	1417	2.5	0.5	0.2	1.0	0	0.1	19.8	18	27	0.3	60.3
	1419	1421	2.5	0.5	0.2	1.5	-	-	-	20	24	0.3	55.3

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud?  Yes  No  
 Note: 1% helium = 10,000 ppm<sub>v</sub>

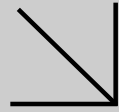
⑪ Shut in test prior to sample collection completed? Yes  No

⑫ Sample Collection

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
5/26/17	1423-1435	VP-25	00303	A00293	A00131	-30	-7

Comments: Background He concentration = 0.2%, background PID = 0.1 ppm

ATTACHMENT 3  
Analytical Laboratory Reports



**WORK ORDER NUMBER: 17-05-1764**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**

**Client:** Antea Group

**Client Project Name:** 76 (Former BP) Station No. 11117 /  
I42611117.0001

**Attention:** Jeff Friedman  
1155 N. First St.  
Suite 201  
San Jose, CA 95112-4927



Approved for release on 05/31/2017 by:  
Terri Chang  
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

# Contents

Client Project Name: 76 (Former BP) Station No. 11117 / I42611117.0001  
Work Order Number: 17-05-1764

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 05/23/17. They were assigned to Work Order 17-05-1764.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



## Sample Summary

---

Client: Antea Group	Work Order: 17-05-1764
1155 N. First St., Suite 201	Project Name: 76 (Former BP) Station No. 11117 / I42611117.0001
San Jose, CA 95112-4927	PO Number:
	Date/Time Received: 05/23/17 09:30
	Number of Containers: 35

Attn: Jeff Friedman

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
VP-1-5	17-05-1764-1	05/22/17 08:45	5	Solid
VP-2-5	17-05-1764-2	05/22/17 09:20	5	Solid
VP-3-5	17-05-1764-3	05/22/17 10:05	5	Solid
VP-4-5	17-05-1764-4	05/22/17 12:05	5	Solid
VP-5-5	17-05-1764-5	05/22/17 11:05	5	Solid
VP-6-5	17-05-1764-6	05/22/17 12:00	5	Solid
VP-7-5	17-05-1764-7	05/22/17 12:50	5	Solid

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-1-5	17-05-1764-1-D	05/22/17 08:45	Solid	GC/MS LL	05/22/17	05/25/17 13:42	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.046	1.00	
Benzene	ND	0.00092	1.00	
Bromobenzene	ND	0.00092	1.00	
Bromochloromethane	ND	0.0018	1.00	
Bromodichloromethane	ND	0.00092	1.00	
Bromoform	ND	0.0046	1.00	
Bromomethane	ND	0.018	1.00	
2-Butanone	ND	0.018	1.00	
n-Butylbenzene	ND	0.00092	1.00	
sec-Butylbenzene	ND	0.00092	1.00	
tert-Butylbenzene	ND	0.00092	1.00	
Carbon Disulfide	ND	0.0092	1.00	
Carbon Tetrachloride	ND	0.00092	1.00	
Chlorobenzene	ND	0.00092	1.00	
Chloroethane	ND	0.0018	1.00	
Chloroform	ND	0.00092	1.00	
Chloromethane	ND	0.018	1.00	
2-Chlorotoluene	ND	0.00092	1.00	
4-Chlorotoluene	ND	0.00092	1.00	
Dibromochloromethane	ND	0.0018	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0046	1.00	
1,2-Dibromoethane	ND	0.00092	1.00	
Dibromomethane	ND	0.00092	1.00	
1,2-Dichlorobenzene	ND	0.00092	1.00	
1,3-Dichlorobenzene	ND	0.00092	1.00	
1,4-Dichlorobenzene	ND	0.00092	1.00	
Dichlorodifluoromethane	ND	0.0018	1.00	
1,1-Dichloroethane	ND	0.00092	1.00	
1,2-Dichloroethane	ND	0.00092	1.00	
1,1-Dichloroethene	ND	0.00092	1.00	
c-1,2-Dichloroethene	ND	0.00092	1.00	
t-1,2-Dichloroethene	ND	0.00092	1.00	
1,2-Dichloropropane	ND	0.00092	1.00	
1,3-Dichloropropane	ND	0.00092	1.00	
2,2-Dichloropropane	ND	0.0046	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group	Date Received:	05/23/17
1155 N. First St., Suite 201	Work Order:	17-05-1764
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg
Project: 76 (Former BP) Station No. 11117 / I42611117.0001		Page 2 of 27

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0018	1.00	
c-1,3-Dichloropropene	ND	0.00092	1.00	
t-1,3-Dichloropropene	ND	0.0018	1.00	
Ethylbenzene	ND	0.00092	1.00	
2-Hexanone	ND	0.018	1.00	
Isopropylbenzene	ND	0.00092	1.00	
p-Isopropyltoluene	ND	0.00092	1.00	
Methylene Chloride	ND	0.0092	1.00	
4-Methyl-2-Pentanone	ND	0.018	1.00	
Naphthalene	ND	0.0092	1.00	
n-Propylbenzene	ND	0.0018	1.00	
Styrene	ND	0.00092	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00092	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0018	1.00	
Tetrachloroethene	ND	0.00092	1.00	
Toluene	ND	0.00092	1.00	
1,2,3-Trichlorobenzene	ND	0.0018	1.00	
1,2,4-Trichlorobenzene	ND	0.0018	1.00	
1,1,1-Trichloroethane	ND	0.00092	1.00	
1,1,2-Trichloroethane	ND	0.00092	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0092	1.00	
Trichloroethene	ND	0.0018	1.00	
Trichlorofluoromethane	ND	0.0092	1.00	
1,2,3-Trichloropropane	ND	0.0018	1.00	
1,2,4-Trimethylbenzene	ND	0.0018	1.00	
1,3,5-Trimethylbenzene	ND	0.0018	1.00	
Vinyl Acetate	ND	0.0092	1.00	
Vinyl Chloride	ND	0.00092	1.00	
p/m-Xylene	ND	0.0018	1.00	
o-Xylene	ND	0.00092	1.00	
Xylenes (total)	ND	0.00092	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0018	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.018	1.00	
Diisopropyl Ether (DIPE)	ND	0.00092	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00092	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00092	1.00	
Ethanol	ND	0.46	1.00	
Gasoline Range Organics (C6-C12)	ND	0.046	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-2-5	17-05-1764-2-D	05/22/17 09:20	Solid	GC/MS LL	05/22/17	05/25/17 14:10	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.047	1.00	
Benzene	ND	0.00095	1.00	
Bromobenzene	ND	0.00095	1.00	
Bromochloromethane	ND	0.0019	1.00	
Bromodichloromethane	ND	0.00095	1.00	
Bromoform	ND	0.0047	1.00	
Bromomethane	ND	0.019	1.00	
2-Butanone	ND	0.019	1.00	
n-Butylbenzene	ND	0.00095	1.00	
sec-Butylbenzene	ND	0.00095	1.00	
tert-Butylbenzene	ND	0.00095	1.00	
Carbon Disulfide	ND	0.0095	1.00	
Carbon Tetrachloride	ND	0.00095	1.00	
Chlorobenzene	ND	0.00095	1.00	
Chloroethane	ND	0.0019	1.00	
Chloroform	ND	0.00095	1.00	
Chloromethane	ND	0.019	1.00	
2-Chlorotoluene	ND	0.00095	1.00	
4-Chlorotoluene	ND	0.00095	1.00	
Dibromochloromethane	ND	0.0019	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0047	1.00	
1,2-Dibromoethane	ND	0.00095	1.00	
Dibromomethane	ND	0.00095	1.00	
1,2-Dichlorobenzene	ND	0.00095	1.00	
1,3-Dichlorobenzene	ND	0.00095	1.00	
1,4-Dichlorobenzene	ND	0.00095	1.00	
Dichlorodifluoromethane	ND	0.0019	1.00	
1,1-Dichloroethane	ND	0.00095	1.00	
1,2-Dichloroethane	ND	0.00095	1.00	
1,1-Dichloroethene	ND	0.00095	1.00	
c-1,2-Dichloroethene	ND	0.00095	1.00	
t-1,2-Dichloroethene	ND	0.00095	1.00	
1,2-Dichloropropane	ND	0.00095	1.00	
1,3-Dichloropropane	ND	0.00095	1.00	
2,2-Dichloropropane	ND	0.0047	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0019	1.00	
c-1,3-Dichloropropene	ND	0.00095	1.00	
t-1,3-Dichloropropene	ND	0.0019	1.00	
Ethylbenzene	ND	0.00095	1.00	
2-Hexanone	ND	0.019	1.00	
Isopropylbenzene	ND	0.00095	1.00	
p-Isopropyltoluene	ND	0.00095	1.00	
Methylene Chloride	ND	0.0095	1.00	
4-Methyl-2-Pentanone	ND	0.019	1.00	
Naphthalene	ND	0.0095	1.00	
n-Propylbenzene	ND	0.0019	1.00	
Styrene	ND	0.00095	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00095	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0019	1.00	
Tetrachloroethene	ND	0.00095	1.00	
Toluene	ND	0.00095	1.00	
1,2,3-Trichlorobenzene	ND	0.0019	1.00	
1,2,4-Trichlorobenzene	ND	0.0019	1.00	
1,1,1-Trichloroethane	ND	0.00095	1.00	
1,1,2-Trichloroethane	ND	0.00095	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0095	1.00	
Trichloroethene	ND	0.0019	1.00	
Trichlorofluoromethane	ND	0.0095	1.00	
1,2,3-Trichloropropane	ND	0.0019	1.00	
1,2,4-Trimethylbenzene	ND	0.0019	1.00	
1,3,5-Trimethylbenzene	ND	0.0019	1.00	
Vinyl Acetate	ND	0.0095	1.00	
Vinyl Chloride	ND	0.00095	1.00	
p/m-Xylene	ND	0.0019	1.00	
o-Xylene	ND	0.00095	1.00	
Xylenes (total)	ND	0.00095	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0019	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.019	1.00	
Diisopropyl Ether (DIPE)	ND	0.00095	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00095	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00095	1.00	
Ethanol	ND	0.47	1.00	
Gasoline Range Organics (C6-C12)	0.050	0.047	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group	Date Received:	05/23/17
1155 N. First St., Suite 201	Work Order:	17-05-1764
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg
Project: 76 (Former BP) Station No. 11117 / I42611117.0001		Page 6 of 27

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-5	17-05-1764-3-D	05/22/17 10:05	Solid	GC/MS LL	05/22/17	05/25/17 14:38	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.043	1.00	
Benzene	ND	0.00087	1.00	
Bromobenzene	ND	0.00087	1.00	
Bromochloromethane	ND	0.0017	1.00	
Bromodichloromethane	ND	0.00087	1.00	
Bromoform	ND	0.0043	1.00	
Bromomethane	ND	0.017	1.00	
2-Butanone	ND	0.017	1.00	
n-Butylbenzene	ND	0.00087	1.00	
sec-Butylbenzene	ND	0.00087	1.00	
tert-Butylbenzene	ND	0.00087	1.00	
Carbon Disulfide	ND	0.0087	1.00	
Carbon Tetrachloride	ND	0.00087	1.00	
Chlorobenzene	ND	0.00087	1.00	
Chloroethane	ND	0.0017	1.00	
Chloroform	ND	0.00087	1.00	
Chloromethane	ND	0.017	1.00	
2-Chlorotoluene	ND	0.00087	1.00	
4-Chlorotoluene	ND	0.00087	1.00	
Dibromochloromethane	ND	0.0017	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0043	1.00	
1,2-Dibromoethane	ND	0.00087	1.00	
Dibromomethane	ND	0.00087	1.00	
1,2-Dichlorobenzene	ND	0.00087	1.00	
1,3-Dichlorobenzene	ND	0.00087	1.00	
1,4-Dichlorobenzene	ND	0.00087	1.00	
Dichlorodifluoromethane	ND	0.0017	1.00	
1,1-Dichloroethane	ND	0.00087	1.00	
1,2-Dichloroethane	ND	0.00087	1.00	
1,1-Dichloroethene	ND	0.00087	1.00	
c-1,2-Dichloroethene	ND	0.00087	1.00	
t-1,2-Dichloroethene	ND	0.00087	1.00	
1,2-Dichloropropane	ND	0.00087	1.00	
1,3-Dichloropropane	ND	0.00087	1.00	
2,2-Dichloropropane	ND	0.0043	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0017	1.00	
c-1,3-Dichloropropene	ND	0.00087	1.00	
t-1,3-Dichloropropene	ND	0.0017	1.00	
Ethylbenzene	ND	0.00087	1.00	
2-Hexanone	ND	0.017	1.00	
Isopropylbenzene	ND	0.00087	1.00	
p-Isopropyltoluene	ND	0.00087	1.00	
Methylene Chloride	ND	0.0087	1.00	
4-Methyl-2-Pentanone	ND	0.017	1.00	
Naphthalene	ND	0.0087	1.00	
n-Propylbenzene	ND	0.0017	1.00	
Styrene	ND	0.00087	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00087	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0017	1.00	
Tetrachloroethene	ND	0.00087	1.00	
Toluene	ND	0.00087	1.00	
1,2,3-Trichlorobenzene	ND	0.0017	1.00	
1,2,4-Trichlorobenzene	ND	0.0017	1.00	
1,1,1-Trichloroethane	ND	0.00087	1.00	
1,1,2-Trichloroethane	ND	0.00087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0087	1.00	
Trichloroethene	ND	0.0017	1.00	
Trichlorofluoromethane	ND	0.0087	1.00	
1,2,3-Trichloropropane	ND	0.0017	1.00	
1,2,4-Trimethylbenzene	ND	0.0017	1.00	
1,3,5-Trimethylbenzene	ND	0.0017	1.00	
Vinyl Acetate	ND	0.0087	1.00	
Vinyl Chloride	ND	0.00087	1.00	
p/m-Xylene	ND	0.0017	1.00	
o-Xylene	ND	0.00087	1.00	
Xylenes (total)	ND	0.00087	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0017	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.017	1.00	
Diisopropyl Ether (DIPE)	ND	0.00087	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00087	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00087	1.00	
Ethanol	ND	0.43	1.00	
Gasoline Range Organics (C6-C12)	ND	0.043	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-4-5	17-05-1764-4-D	05/22/17 12:05	Solid	GC/MS LL	05/22/17	05/25/17 15:24	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.043	1.00	
Benzene	ND	0.00085	1.00	
Bromobenzene	ND	0.00085	1.00	
Bromochloromethane	ND	0.0017	1.00	
Bromodichloromethane	ND	0.00085	1.00	
Bromoform	ND	0.0043	1.00	
Bromomethane	ND	0.017	1.00	
2-Butanone	ND	0.017	1.00	
n-Butylbenzene	ND	0.00085	1.00	
sec-Butylbenzene	ND	0.00085	1.00	
tert-Butylbenzene	ND	0.00085	1.00	
Carbon Disulfide	ND	0.0085	1.00	
Carbon Tetrachloride	ND	0.00085	1.00	
Chlorobenzene	ND	0.00085	1.00	
Chloroethane	ND	0.0017	1.00	
Chloroform	ND	0.00085	1.00	
Chloromethane	ND	0.017	1.00	
2-Chlorotoluene	ND	0.00085	1.00	
4-Chlorotoluene	ND	0.00085	1.00	
Dibromochloromethane	ND	0.0017	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0043	1.00	
1,2-Dibromoethane	ND	0.00085	1.00	
Dibromomethane	ND	0.00085	1.00	
1,2-Dichlorobenzene	ND	0.00085	1.00	
1,3-Dichlorobenzene	ND	0.00085	1.00	
1,4-Dichlorobenzene	ND	0.00085	1.00	
Dichlorodifluoromethane	ND	0.0017	1.00	
1,1-Dichloroethane	ND	0.00085	1.00	
1,2-Dichloroethane	ND	0.00085	1.00	
1,1-Dichloroethene	ND	0.00085	1.00	
c-1,2-Dichloroethene	ND	0.00085	1.00	
t-1,2-Dichloroethene	ND	0.00085	1.00	
1,2-Dichloropropane	ND	0.00085	1.00	
1,3-Dichloropropane	ND	0.00085	1.00	
2,2-Dichloropropane	ND	0.0043	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0017	1.00	
c-1,3-Dichloropropene	ND	0.00085	1.00	
t-1,3-Dichloropropene	ND	0.0017	1.00	
Ethylbenzene	ND	0.00085	1.00	
2-Hexanone	ND	0.017	1.00	
Isopropylbenzene	ND	0.00085	1.00	
p-Isopropyltoluene	ND	0.00085	1.00	
Methylene Chloride	ND	0.0085	1.00	
4-Methyl-2-Pentanone	ND	0.017	1.00	
Naphthalene	ND	0.0085	1.00	
n-Propylbenzene	ND	0.0017	1.00	
Styrene	ND	0.00085	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00085	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0017	1.00	
Tetrachloroethene	ND	0.00085	1.00	
Toluene	ND	0.00085	1.00	
1,2,3-Trichlorobenzene	ND	0.0017	1.00	
1,2,4-Trichlorobenzene	ND	0.0017	1.00	
1,1,1-Trichloroethane	ND	0.00085	1.00	
1,1,2-Trichloroethane	ND	0.00085	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0085	1.00	
Trichloroethene	ND	0.0017	1.00	
Trichlorofluoromethane	ND	0.0085	1.00	
1,2,3-Trichloropropane	ND	0.0017	1.00	
1,2,4-Trimethylbenzene	ND	0.0017	1.00	
1,3,5-Trimethylbenzene	ND	0.0017	1.00	
Vinyl Acetate	ND	0.0085	1.00	
Vinyl Chloride	ND	0.00085	1.00	
p/m-Xylene	ND	0.0017	1.00	
o-Xylene	ND	0.00085	1.00	
Xylenes (total)	ND	0.00085	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0017	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.017	1.00	
Diisopropyl Ether (DIPE)	ND	0.00085	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00085	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00085	1.00	
Ethanol	ND	0.43	1.00	
Gasoline Range Organics (C6-C12)	ND	0.043	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	93	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-5-5	17-05-1764-5-D	05/22/17 11:05	Solid	GC/MS LL	05/22/17	05/25/17 15:52	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.049	1.00	
Benzene	ND	0.00098	1.00	
Bromobenzene	ND	0.00098	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.00098	1.00	
Bromoform	ND	0.0049	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	ND	0.00098	1.00	
sec-Butylbenzene	ND	0.00098	1.00	
tert-Butylbenzene	ND	0.00098	1.00	
Carbon Disulfide	ND	0.0098	1.00	
Carbon Tetrachloride	ND	0.00098	1.00	
Chlorobenzene	ND	0.00098	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.00098	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.00098	1.00	
4-Chlorotoluene	ND	0.00098	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0049	1.00	
1,2-Dibromoethane	ND	0.00098	1.00	
Dibromomethane	ND	0.00098	1.00	
1,2-Dichlorobenzene	ND	0.00098	1.00	
1,3-Dichlorobenzene	ND	0.00098	1.00	
1,4-Dichlorobenzene	ND	0.00098	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.00098	1.00	
1,2-Dichloroethane	ND	0.00098	1.00	
1,1-Dichloroethene	ND	0.00098	1.00	
c-1,2-Dichloroethene	ND	0.00098	1.00	
t-1,2-Dichloroethene	ND	0.00098	1.00	
1,2-Dichloropropane	ND	0.00098	1.00	
1,3-Dichloropropane	ND	0.00098	1.00	
2,2-Dichloropropane	ND	0.0049	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.00098	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.00098	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.00098	1.00	
p-Isopropyltoluene	ND	0.00098	1.00	
Methylene Chloride	ND	0.0098	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	ND	0.0098	1.00	
n-Propylbenzene	ND	0.0020	1.00	
Styrene	ND	0.00098	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00098	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.00098	1.00	
Toluene	ND	0.00098	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.00098	1.00	
1,1,2-Trichloroethane	ND	0.00098	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0098	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.0098	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.0098	1.00	
Vinyl Chloride	ND	0.00098	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.00098	1.00	
Xylenes (total)	ND	0.00098	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.00098	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00098	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00098	1.00	
Ethanol	ND	0.49	1.00	
Gasoline Range Organics (C6-C12)	ND	0.049	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	112	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	



## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-6-5	17-05-1764-6-D	05/22/17 12:00	Solid	GC/MS LL	05/22/17	05/25/17 16:21	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.043	1.00	
Benzene	ND	0.00087	1.00	
Bromobenzene	ND	0.00087	1.00	
Bromochloromethane	ND	0.0017	1.00	
Bromodichloromethane	ND	0.00087	1.00	
Bromoform	ND	0.0043	1.00	
Bromomethane	ND	0.017	1.00	
2-Butanone	ND	0.017	1.00	
n-Butylbenzene	0.0019	0.00087	1.00	
sec-Butylbenzene	ND	0.00087	1.00	
tert-Butylbenzene	ND	0.00087	1.00	
Carbon Disulfide	ND	0.0087	1.00	
Carbon Tetrachloride	ND	0.00087	1.00	
Chlorobenzene	ND	0.00087	1.00	
Chloroethane	ND	0.0017	1.00	
Chloroform	ND	0.00087	1.00	
Chloromethane	ND	0.017	1.00	
2-Chlorotoluene	ND	0.00087	1.00	
4-Chlorotoluene	ND	0.00087	1.00	
Dibromochloromethane	ND	0.0017	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0043	1.00	
1,2-Dibromoethane	ND	0.00087	1.00	
Dibromomethane	ND	0.00087	1.00	
1,2-Dichlorobenzene	ND	0.00087	1.00	
1,3-Dichlorobenzene	ND	0.00087	1.00	
1,4-Dichlorobenzene	ND	0.00087	1.00	
Dichlorodifluoromethane	ND	0.0017	1.00	
1,1-Dichloroethane	ND	0.00087	1.00	
1,2-Dichloroethane	ND	0.00087	1.00	
1,1-Dichloroethene	ND	0.00087	1.00	
c-1,2-Dichloroethene	ND	0.00087	1.00	
t-1,2-Dichloroethene	ND	0.00087	1.00	
1,2-Dichloropropane	ND	0.00087	1.00	
1,3-Dichloropropane	ND	0.00087	1.00	
2,2-Dichloropropane	ND	0.0043	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0017	1.00	
c-1,3-Dichloropropene	ND	0.00087	1.00	
t-1,3-Dichloropropene	ND	0.0017	1.00	
Ethylbenzene	ND	0.00087	1.00	
2-Hexanone	ND	0.017	1.00	
Isopropylbenzene	ND	0.00087	1.00	
p-Isopropyltoluene	ND	0.00087	1.00	
Methylene Chloride	ND	0.0087	1.00	
4-Methyl-2-Pentanone	ND	0.017	1.00	
Naphthalene	0.0097	0.0087	1.00	
n-Propylbenzene	ND	0.0017	1.00	
Styrene	ND	0.00087	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00087	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0017	1.00	
Tetrachloroethene	ND	0.00087	1.00	
Toluene	ND	0.00087	1.00	
1,2,3-Trichlorobenzene	ND	0.0017	1.00	
1,2,4-Trichlorobenzene	ND	0.0017	1.00	
1,1,1-Trichloroethane	ND	0.00087	1.00	
1,1,2-Trichloroethane	ND	0.00087	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0087	1.00	
Trichloroethene	ND	0.0017	1.00	
Trichlorofluoromethane	ND	0.0087	1.00	
1,2,3-Trichloropropane	ND	0.0017	1.00	
1,2,4-Trimethylbenzene	0.0042	0.0017	1.00	
1,3,5-Trimethylbenzene	ND	0.0017	1.00	
Vinyl Acetate	ND	0.0087	1.00	
Vinyl Chloride	ND	0.00087	1.00	
p/m-Xylene	ND	0.0017	1.00	
o-Xylene	ND	0.00087	1.00	
Xylenes (total)	ND	0.00087	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0017	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.017	1.00	
Diisopropyl Ether (DIPE)	ND	0.00087	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00087	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00087	1.00	
Ethanol	ND	0.43	1.00	
Gasoline Range Organics (C6-C12)	0.45	0.043	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-7-5	17-05-1764-7-E	05/22/17 12:50	Solid	GC/MS LL	05/22/17	05/26/17 16:37	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.041	1.00	
Benzene	ND	0.00081	1.00	
Bromobenzene	ND	0.00081	1.00	
Bromochloromethane	ND	0.0016	1.00	
Bromodichloromethane	ND	0.00081	1.00	
Bromoform	ND	0.0041	1.00	
Bromomethane	ND	0.016	1.00	
2-Butanone	ND	0.016	1.00	
n-Butylbenzene	ND	0.00081	1.00	
sec-Butylbenzene	ND	0.00081	1.00	
tert-Butylbenzene	ND	0.00081	1.00	
Carbon Disulfide	ND	0.0081	1.00	
Carbon Tetrachloride	ND	0.00081	1.00	
Chlorobenzene	ND	0.00081	1.00	
Chloroethane	ND	0.0016	1.00	
Chloroform	ND	0.00081	1.00	
Chloromethane	ND	0.016	1.00	
2-Chlorotoluene	ND	0.00081	1.00	
4-Chlorotoluene	ND	0.00081	1.00	
Dibromochloromethane	ND	0.0016	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0041	1.00	
1,2-Dibromoethane	ND	0.00081	1.00	
Dibromomethane	ND	0.00081	1.00	
1,2-Dichlorobenzene	ND	0.00081	1.00	
1,3-Dichlorobenzene	ND	0.00081	1.00	
1,4-Dichlorobenzene	ND	0.00081	1.00	
Dichlorodifluoromethane	ND	0.0016	1.00	
1,1-Dichloroethane	ND	0.00081	1.00	
1,2-Dichloroethane	ND	0.00081	1.00	
1,1-Dichloroethene	ND	0.00081	1.00	
c-1,2-Dichloroethene	ND	0.00081	1.00	
t-1,2-Dichloroethene	ND	0.00081	1.00	
1,2-Dichloropropane	ND	0.00081	1.00	
1,3-Dichloropropane	ND	0.00081	1.00	
2,2-Dichloropropane	ND	0.0041	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0016	1.00	
c-1,3-Dichloropropene	ND	0.00081	1.00	
t-1,3-Dichloropropene	ND	0.0016	1.00	
Ethylbenzene	ND	0.00081	1.00	
2-Hexanone	ND	0.016	1.00	
Isopropylbenzene	ND	0.00081	1.00	
p-Isopropyltoluene	ND	0.00081	1.00	
Methylene Chloride	ND	0.0081	1.00	
4-Methyl-2-Pentanone	ND	0.016	1.00	
Naphthalene	ND	0.0081	1.00	
n-Propylbenzene	ND	0.0016	1.00	
Styrene	ND	0.00081	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00081	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0016	1.00	
Tetrachloroethene	ND	0.00081	1.00	
Toluene	ND	0.00081	1.00	
1,2,3-Trichlorobenzene	ND	0.0016	1.00	
1,2,4-Trichlorobenzene	ND	0.0016	1.00	
1,1,1-Trichloroethane	ND	0.00081	1.00	
1,1,2-Trichloroethane	ND	0.00081	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0081	1.00	
Trichloroethene	ND	0.0016	1.00	
Trichlorofluoromethane	ND	0.0081	1.00	
1,2,3-Trichloropropane	ND	0.0016	1.00	
1,2,4-Trimethylbenzene	ND	0.0016	1.00	
1,3,5-Trimethylbenzene	ND	0.0016	1.00	
Vinyl Acetate	ND	0.0081	1.00	
Vinyl Chloride	ND	0.00081	1.00	
p/m-Xylene	ND	0.0016	1.00	
o-Xylene	ND	0.00081	1.00	
Xylenes (total)	ND	0.00081	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0016	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.016	1.00	
Diisopropyl Ether (DIPE)	ND	0.00081	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00081	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00081	1.00	
Ethanol	ND	0.41	1.00	
Gasoline Range Organics (C6-C12)	ND	0.041	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	109	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	97	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-1907	N/A	Solid	GC/MS LL	05/25/17	05/25/17 12:45	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.050	1.00	
Benzene	ND	0.0010	1.00	
Bromobenzene	ND	0.0010	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.0010	1.00	
Bromoform	ND	0.0050	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	ND	0.0010	1.00	
sec-Butylbenzene	ND	0.0010	1.00	
tert-Butylbenzene	ND	0.0010	1.00	
Carbon Disulfide	ND	0.010	1.00	
Carbon Tetrachloride	ND	0.0010	1.00	
Chlorobenzene	ND	0.0010	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.0010	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.0010	1.00	
4-Chlorotoluene	ND	0.0010	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1.00	
1,2-Dibromoethane	ND	0.0010	1.00	
Dibromomethane	ND	0.0010	1.00	
1,2-Dichlorobenzene	ND	0.0010	1.00	
1,3-Dichlorobenzene	ND	0.0010	1.00	
1,4-Dichlorobenzene	ND	0.0010	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.0010	1.00	
1,2-Dichloroethane	ND	0.0010	1.00	
1,1-Dichloroethene	ND	0.0010	1.00	
c-1,2-Dichloroethene	ND	0.0010	1.00	
t-1,2-Dichloroethene	ND	0.0010	1.00	
1,2-Dichloropropane	ND	0.0010	1.00	
1,3-Dichloropropane	ND	0.0010	1.00	
2,2-Dichloropropane	ND	0.0050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.0010	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.0010	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.0010	1.00	
p-Isopropyltoluene	ND	0.0010	1.00	
Methylene Chloride	ND	0.010	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	ND	0.010	1.00	
n-Propylbenzene	ND	0.0020	1.00	
Styrene	ND	0.0010	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.0010	1.00	
Toluene	ND	0.0010	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.010	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.010	1.00	
Vinyl Chloride	ND	0.0010	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.0010	1.00	
Xylenes (total)	ND	0.0010	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.0010	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0010	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0010	1.00	
Ethanol	ND	0.50	1.00	
Gasoline Range Organics (C6-C12)	ND	0.050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	100	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group	Date Received:	05/23/17
1155 N. First St., Suite 201	Work Order:	17-05-1764
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001 Page 25 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-779-1909</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS LL</b>	<b>05/26/17</b>	<b>05/26/17 14:01</b>	<b>170526L018</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	0.050	1.00	
Benzene	ND	0.0010	1.00	
Bromobenzene	ND	0.0010	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.0010	1.00	
Bromoform	ND	0.0050	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	ND	0.0010	1.00	
sec-Butylbenzene	ND	0.0010	1.00	
tert-Butylbenzene	ND	0.0010	1.00	
Carbon Disulfide	ND	0.010	1.00	
Carbon Tetrachloride	ND	0.0010	1.00	
Chlorobenzene	ND	0.0010	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.0010	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.0010	1.00	
4-Chlorotoluene	ND	0.0010	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1.00	
1,2-Dibromoethane	ND	0.0010	1.00	
Dibromomethane	ND	0.0010	1.00	
1,2-Dichlorobenzene	ND	0.0010	1.00	
1,3-Dichlorobenzene	ND	0.0010	1.00	
1,4-Dichlorobenzene	ND	0.0010	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.0010	1.00	
1,2-Dichloroethane	ND	0.0010	1.00	
1,1-Dichloroethene	ND	0.0010	1.00	
c-1,2-Dichloroethene	ND	0.0010	1.00	
t-1,2-Dichloroethene	ND	0.0010	1.00	
1,2-Dichloropropane	ND	0.0010	1.00	
1,3-Dichloropropane	ND	0.0010	1.00	
2,2-Dichloropropane	ND	0.0050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/23/17  
 Work Order: 17-05-1764  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.0010	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.0010	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.0010	1.00	
p-Isopropyltoluene	ND	0.0010	1.00	
Methylene Chloride	ND	0.010	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	ND	0.010	1.00	
n-Propylbenzene	ND	0.0020	1.00	
Styrene	ND	0.0010	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.0010	1.00	
Toluene	ND	0.0010	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.010	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.010	1.00	
Vinyl Chloride	ND	0.0010	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.0010	1.00	
Xylenes (total)	ND	0.0010	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.0010	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0010	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0010	1.00	
Ethanol	ND	0.50	1.00	
Gasoline Range Organics (C6-C12)	ND	0.050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	104	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	110	80-120	
Toluene-d8-TPPH	104	87-111	

## Quality Control - LCS/LCSD

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-1907	LCS	Solid	GC/MS LL	05/25/17	05/25/17 10:46	170525L003				
099-12-779-1907	LCSD	Solid	GC/MS LL	05/25/17	05/25/17 11:19	170525L003				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.05099	102	0.05258	105	80-120	73-127	3	0-20	
Carbon Tetrachloride	0.05000	0.05244	105	0.05487	110	65-137	53-149	5	0-20	
Chlorobenzene	0.05000	0.05390	108	0.05481	110	80-120	73-127	2	0-20	
1,2-Dibromoethane	0.05000	0.05609	112	0.05916	118	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	0.05000	0.05598	112	0.05638	113	80-120	73-127	1	0-20	
1,2-Dichloroethane	0.05000	0.05104	102	0.05360	107	80-120	73-127	5	0-20	
1,1-Dichloroethene	0.05000	0.05376	108	0.05480	110	68-128	58-138	2	0-20	
Ethylbenzene	0.05000	0.05499	110	0.05652	113	80-120	73-127	3	0-20	
Toluene	0.05000	0.05303	106	0.05415	108	80-120	73-127	2	0-20	
Trichloroethene	0.05000	0.05238	105	0.05500	110	80-120	73-127	5	0-20	
Vinyl Chloride	0.05000	0.05563	111	0.05523	110	67-127	57-137	1	0-20	
p/m-Xylene	0.1000	0.1116	112	0.1137	114	75-125	67-133	2	0-25	
o-Xylene	0.05000	0.05500	110	0.05634	113	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.05194	104	0.05437	109	70-124	61-133	5	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2705	108	0.2859	114	73-121	65-129	6	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.05191	104	0.05358	107	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.05456	109	0.05688	114	70-124	61-133	4	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.05248	105	0.05588	112	74-122	66-130	6	0-20	
Ethanol	0.5000	0.4279	86	0.4142	83	51-135	37-149	3	0-27	
Gasoline Range Organics (C6-C12)	1.000	0.9892	99	0.9787	98	65-130	54-141	1	0-30	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

## Quality Control - LCS/LCSD

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/23/17  
Work Order: 17-05-1764  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-1909	LCS	Solid	GC/MS LL	05/26/17	05/26/17 12:34	170526L018				
099-12-779-1909	LCSD	Solid	GC/MS LL	05/26/17	05/26/17 13:02	170526L018				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.04927	99	0.04986	100	80-120	73-127	1	0-20	
Carbon Tetrachloride	0.05000	0.05048	101	0.05038	101	65-137	53-149	0	0-20	
Chlorobenzene	0.05000	0.05174	103	0.05176	104	80-120	73-127	0	0-20	
1,2-Dibromoethane	0.05000	0.05523	110	0.05385	108	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	0.05000	0.05316	106	0.05323	106	80-120	73-127	0	0-20	
1,2-Dichloroethane	0.05000	0.05187	104	0.05149	103	80-120	73-127	1	0-20	
1,1-Dichloroethene	0.05000	0.05444	109	0.05372	107	68-128	58-138	1	0-20	
Ethylbenzene	0.05000	0.05380	108	0.05334	107	80-120	73-127	1	0-20	
Toluene	0.05000	0.05111	102	0.05122	102	80-120	73-127	0	0-20	
Trichloroethene	0.05000	0.05078	102	0.05163	103	80-120	73-127	2	0-20	
Vinyl Chloride	0.05000	0.05257	105	0.05147	103	67-127	57-137	2	0-20	
p/m-Xylene	0.1000	0.1084	108	0.1081	108	75-125	67-133	0	0-25	
o-Xylene	0.05000	0.05319	106	0.05297	106	75-125	67-133	0	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04680	94	0.04843	97	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2747	110	0.2791	112	73-121	65-129	2	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.05234	105	0.05219	104	69-129	59-139	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.04520	90	0.04595	92	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.04512	90	0.04621	92	74-122	66-130	2	0-20	
Ethanol	0.5000	0.4610	92	0.3544	71	51-135	37-149	26	0-27	
Gasoline Range Organics (C6-C12)	1.000	1.048	105	1.015	102	65-130	54-141	3	0-30	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

## Sample Analysis Summary Report

Work Order: 17-05-1764

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
GC/MS / EPA 8260B	EPA 5035	867	GC/MS LL	2

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.





Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494  
For courier service / sample drop off information, contact us26\_sales@eurofins.com or call us.

LABORATORY CLIENT:

Antea Group

ADDRESS: 1155 N. First Street, Suite 201

STATE: CA

ZIP: 95112

CITY: San Jose

E-MAIL:

714-864-8131 Jeff.Friedman@anteagroup.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY  24 HR  48 HR  72 HR  5 DAYS  STANDARD

EDD

COELT EDF  OTHER

SPECIAL INSTRUCTIONS:

Hold stainless steel sleeves for potential additional analysis

CHAIN-OF-CUSTODY RECORD

Date 052217

Page 1 of

WO NO. / LAB USE ONLY  
**17-05-1764**

CLIENT PROJECT NAME / NO.: 76 (Former BP) Station No. 1117  
PROJECT CONTACT: Jeff Friedman  
LOG CODE: 626-408-4534  
P.O. NO.: I4261117.0001  
LAB CONTACT OR QUOTE NO.:  
SAMPLER(S): (PRINT) Jeremy Rvest

REQUESTED ANALYSES  
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	TPH (g) * GRO	TPH (g) □ DR0	TPH □ C6-C36 □ C6-C44	TPH	BTEX / MTBE □ 8260	VOCs (8260)	Oxygenates (8260)	Prep (5035) □ En Core □ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs □ 8270 □ 8270 SIM	T22 Metals □ 6010/747X □ 6020/747X	Cr(VI) □ 7196 □ 7199 □ 218.6	
1	VP-1-5	05/22/17	0845	S	5	X	X	X	X					X									
2	VP-2-5	5/22/17	0920	S	5	X	X	X	X					X									
3	VP-3-5	5/22/17	1005	S	5	X	X	X	X					X									
4	VP-4-5	5/22/17	1205	S	5	X	X	X	X					X									
5	VP-5-5	5/22/17	1105	S	5	X	X	X	X					X									
6	VP-6-5	5/22/17	1200	S	5	X	X	X	X					X									
7	VP-7-5	5/22/17	1250	S	5	X	X	X	X					X									

Received by: (Signature/Affiliation) *Tom Ormally EC1* Date: 5/22/17 Time: 1345  
Received by: (Signature/Affiliation) *Antea Group* Date: 05/23/17 Time: 0930  
Received by: (Signature/Affiliation) *Antea Group* Date: Time:

Relinquished by: (Signature) *Antea Group*  
Relinquished by: (Signature) *Tom Ormally TO 650 5/22/17 1730*  
Relinquished by: (Signature)

2016-04-01-Revision



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1764  
NPS

**Ship From**

CAL SCIENCE- CONCORD  
ALAN KEMP  
5063 COMMERCIAL CIRCLE  
#H  
CONCORD, CA 94520

Tracking #: 536213113



**Ship To**

CEL  
SAMPLE RECEIVING  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841

**ORC**  
GARDEN GROVE

**A**

COD: \$0.00

Weight: 0 lb(s)

**Reference:**

CB & I, PHILLIPS 66, AIS, ANTEA GROUP, PORT COSTA

**Delivery Instructions:**

D92845A



67157599

**Signature Type:** REQUIRED

Print Date: 5/22/2017 3:21 PM

**LABEL INSTRUCTIONS:**

**Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Antea Group

DATE: 05 / 23 / 2017

**TEMPERATURE:** (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3 (CF: 0.0°C); Temperature (w/o CF): 2.3 °C (w/ CF): 2.3 °C;  Blank  Sample

Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature:  Air  Filter

Checked by: 300

**CUSTODY SEAL:**

Cooler  Present and Intact  Present but Not Intact  Not Present  N/A

Sample(s)  Present and Intact  Present but Not Intact  Not Present  N/A

Checked by: 300

Checked by: SR

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:** (Trip Blank Lot Number: \_\_\_\_\_)

Aqueous:  VOA  VOAh  VOAn<sub>2</sub>  100PJ  100PJna<sub>2</sub>  125AGB  125AGBh  125AGBp  125PB

125PBz<sub>anna</sub>  250AGB  250CGB  250CGBs  250PB  250PBn  500AGB  500AGJ  500AGJs

500PB  1AGB  1AGBna<sub>2</sub>  1AGBs  1PB  1PBna  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (S)  EnCores® (\_\_\_\_\_)  TerraCores® (3)  2ozPJ

Air:  Tedlar™  Canister  Sorbent Tube  PUF  \_\_\_\_\_ Other Matrix (\_\_\_\_\_)  \_\_\_\_\_

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO<sub>3</sub>, na = NaOH, na<sub>2</sub> = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, p = H<sub>3</sub>PO<sub>4</sub>, Labeled/Checked by: SR

s = H<sub>2</sub>SO<sub>4</sub>, u = ultra-pure, x = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>.H<sub>2</sub>O, z<sub>anna</sub> = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH Reviewed by: SR

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**WORK ORDER NUMBER: 17-05-1860**
*The difference is service*


AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**
**Client:** Antea Group

**Client Project Name:** 76 (Former BP) Station No. 11117 / 142611117.0001

**Attention:** Tony Banks  
 1155 N. First St.  
 Suite 201  
 San Jose, CA 95112-4927



 Approved for release on 06/02/2017 by:  
 Terri Chang  
 Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

# Contents

Client Project Name: 76 (Former BP) Station No. 11117 / I42611117.0001  
Work Order Number: 17-05-1860

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 05/24/17. They were assigned to Work Order 17-05-1860.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

## Sample Summary

Client: Antea Group	Work Order: 17-05-1860
1155 N. First St., Suite 201	Project Name: 76 (Former BP) Station No. 11117 / I42611117.0001
San Jose, CA 95112-4927	PO Number:
	Date/Time Received: 05/24/17 08:00
	Number of Containers: 54

Attn: Tony Banks

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
VP-8-5	17-05-1860-1	05/22/17 14:10	5	Solid
VP-9-5	17-05-1860-2	05/22/17 14:45	5	Solid
VP-10-5	17-05-1860-3	05/22/17 15:30	5	Solid
VP-11-5	17-05-1860-4	05/22/17 16:15	5	Solid
VP-12-5	17-05-1860-5	05/23/17 08:30	5	Solid
VP-13-5	17-05-1860-6	05/23/17 08:45	5	Solid
VP-14-5	17-05-1860-7	05/23/17 09:50	5	Solid
VP-15-5	17-05-1860-8	05/23/17 10:15	5	Solid
VP-16-5	17-05-1860-9	05/23/17 10:40	5	Solid
VP-17-5	17-05-1860-10	05/23/17 12:15	4	Solid
VP-22-5	17-05-1860-11	05/23/17 13:15	5	Solid

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-8-5	17-05-1860-1-D	05/22/17 14:10	Solid	GC/MS LL	05/22/17	05/25/17 17:18	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.047	1.00	
Benzene	ND	0.00094	1.00	
Bromobenzene	ND	0.00094	1.00	
Bromochloromethane	ND	0.0019	1.00	
Bromodichloromethane	ND	0.00094	1.00	
Bromoform	ND	0.0047	1.00	
Bromomethane	ND	0.019	1.00	
2-Butanone	ND	0.019	1.00	
n-Butylbenzene	ND	0.00094	1.00	
sec-Butylbenzene	ND	0.00094	1.00	
tert-Butylbenzene	ND	0.00094	1.00	
Carbon Disulfide	ND	0.0094	1.00	
Carbon Tetrachloride	ND	0.00094	1.00	
Chlorobenzene	ND	0.00094	1.00	
Chloroethane	ND	0.0019	1.00	
Chloroform	ND	0.00094	1.00	
Chloromethane	ND	0.019	1.00	
2-Chlorotoluene	ND	0.00094	1.00	
4-Chlorotoluene	ND	0.00094	1.00	
Dibromochloromethane	ND	0.0019	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0047	1.00	
1,2-Dibromoethane	ND	0.00094	1.00	
Dibromomethane	ND	0.00094	1.00	
1,2-Dichlorobenzene	ND	0.00094	1.00	
1,3-Dichlorobenzene	ND	0.00094	1.00	
1,4-Dichlorobenzene	ND	0.00094	1.00	
Dichlorodifluoromethane	ND	0.0019	1.00	
1,1-Dichloroethane	ND	0.00094	1.00	
1,2-Dichloroethane	ND	0.00094	1.00	
1,1-Dichloroethene	ND	0.00094	1.00	
c-1,2-Dichloroethene	ND	0.00094	1.00	
t-1,2-Dichloroethene	ND	0.00094	1.00	
1,2-Dichloropropane	ND	0.00094	1.00	
1,3-Dichloropropane	ND	0.00094	1.00	
2,2-Dichloropropane	ND	0.0047	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Antea Group	Date Received:	05/24/17
1155 N. First St., Suite 201	Work Order:	17-05-1860
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg
Project: 76 (Former BP) Station No. 11117 / I42611117.0001		Page 2 of 42

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0019	1.00	
c-1,3-Dichloropropene	ND	0.00094	1.00	
t-1,3-Dichloropropene	ND	0.0019	1.00	
Ethylbenzene	ND	0.00094	1.00	
2-Hexanone	ND	0.019	1.00	
Isopropylbenzene	ND	0.00094	1.00	
p-Isopropyltoluene	ND	0.00094	1.00	
Methylene Chloride	ND	0.0094	1.00	
4-Methyl-2-Pentanone	ND	0.019	1.00	
Naphthalene	ND	0.0094	1.00	
n-Propylbenzene	ND	0.0019	1.00	
Styrene	ND	0.00094	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00094	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0019	1.00	
Tetrachloroethene	ND	0.00094	1.00	
Toluene	ND	0.00094	1.00	
1,2,3-Trichlorobenzene	ND	0.0019	1.00	
1,2,4-Trichlorobenzene	ND	0.0019	1.00	
1,1,1-Trichloroethane	ND	0.00094	1.00	
1,1,2-Trichloroethane	ND	0.00094	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0094	1.00	
Trichloroethene	ND	0.0019	1.00	
Trichlorofluoromethane	ND	0.0094	1.00	
1,2,3-Trichloropropane	ND	0.0019	1.00	
1,2,4-Trimethylbenzene	ND	0.0019	1.00	
1,3,5-Trimethylbenzene	ND	0.0019	1.00	
Vinyl Acetate	ND	0.0094	1.00	
Vinyl Chloride	ND	0.00094	1.00	
p/m-Xylene	ND	0.0019	1.00	
o-Xylene	ND	0.00094	1.00	
Xylenes (total)	ND	0.00094	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0019	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.019	1.00	
Diisopropyl Ether (DIPE)	ND	0.00094	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00094	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00094	1.00	
Ethanol	ND	0.47	1.00	
Gasoline Range Organics (C6-C12)	ND	0.047	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	79-139	
1,2-Dichloroethane-d4	109	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-9-5	17-05-1860-2-D	05/22/17 14:45	Solid	GC/MS LL	05/22/17	05/25/17 17:46	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.059	1.00	
Benzene	ND	0.0012	1.00	
Bromobenzene	ND	0.0012	1.00	
Bromochloromethane	ND	0.0024	1.00	
Bromodichloromethane	ND	0.0012	1.00	
Bromoform	ND	0.0059	1.00	
Bromomethane	ND	0.024	1.00	
2-Butanone	ND	0.024	1.00	
n-Butylbenzene	ND	0.0012	1.00	
sec-Butylbenzene	ND	0.0012	1.00	
tert-Butylbenzene	ND	0.0012	1.00	
Carbon Disulfide	ND	0.012	1.00	
Carbon Tetrachloride	ND	0.0012	1.00	
Chlorobenzene	ND	0.0012	1.00	
Chloroethane	ND	0.0024	1.00	
Chloroform	ND	0.0012	1.00	
Chloromethane	ND	0.024	1.00	
2-Chlorotoluene	ND	0.0012	1.00	
4-Chlorotoluene	ND	0.0012	1.00	
Dibromochloromethane	ND	0.0024	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0059	1.00	
1,2-Dibromoethane	ND	0.0012	1.00	
Dibromomethane	ND	0.0012	1.00	
1,2-Dichlorobenzene	ND	0.0012	1.00	
1,3-Dichlorobenzene	ND	0.0012	1.00	
1,4-Dichlorobenzene	ND	0.0012	1.00	
Dichlorodifluoromethane	ND	0.0024	1.00	
1,1-Dichloroethane	ND	0.0012	1.00	
1,2-Dichloroethane	ND	0.0012	1.00	
1,1-Dichloroethene	ND	0.0012	1.00	
c-1,2-Dichloroethene	ND	0.0012	1.00	
t-1,2-Dichloroethene	ND	0.0012	1.00	
1,2-Dichloropropane	ND	0.0012	1.00	
1,3-Dichloropropane	ND	0.0012	1.00	
2,2-Dichloropropane	ND	0.0059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0024	1.00	
c-1,3-Dichloropropene	ND	0.0012	1.00	
t-1,3-Dichloropropene	ND	0.0024	1.00	
Ethylbenzene	ND	0.0012	1.00	
2-Hexanone	ND	0.024	1.00	
Isopropylbenzene	ND	0.0012	1.00	
p-Isopropyltoluene	ND	0.0012	1.00	
Methylene Chloride	ND	0.012	1.00	
4-Methyl-2-Pentanone	ND	0.024	1.00	
Naphthalene	ND	0.012	1.00	
n-Propylbenzene	ND	0.0024	1.00	
Styrene	0.0035	0.0012	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0012	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0024	1.00	
Tetrachloroethene	ND	0.0012	1.00	
Toluene	ND	0.0012	1.00	
1,2,3-Trichlorobenzene	ND	0.0024	1.00	
1,2,4-Trichlorobenzene	ND	0.0024	1.00	
1,1,1-Trichloroethane	ND	0.0012	1.00	
1,1,2-Trichloroethane	ND	0.0012	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.012	1.00	
Trichloroethene	ND	0.0024	1.00	
Trichlorofluoromethane	ND	0.012	1.00	
1,2,3-Trichloropropane	ND	0.0024	1.00	
1,2,4-Trimethylbenzene	ND	0.0024	1.00	
1,3,5-Trimethylbenzene	ND	0.0024	1.00	
Vinyl Acetate	ND	0.012	1.00	
Vinyl Chloride	ND	0.0012	1.00	
p/m-Xylene	ND	0.0024	1.00	
o-Xylene	ND	0.0012	1.00	
Xylenes (total)	ND	0.0012	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0024	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.024	1.00	
Diisopropyl Ether (DIPE)	ND	0.0012	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0012	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0012	1.00	
Ethanol	ND	0.59	1.00	
Gasoline Range Organics (C6-C12)	ND	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-10-5	17-05-1860-3-D	05/22/17 15:30	Solid	GC/MS LL	05/22/17	05/25/17 19:12	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.052	1.00	
Benzene	ND	0.0010	1.00	
Bromobenzene	ND	0.0010	1.00	
Bromochloromethane	ND	0.0021	1.00	
Bromodichloromethane	ND	0.0010	1.00	
Bromoform	ND	0.0052	1.00	
Bromomethane	ND	0.021	1.00	
2-Butanone	ND	0.021	1.00	
n-Butylbenzene	ND	0.0010	1.00	
sec-Butylbenzene	ND	0.0010	1.00	
tert-Butylbenzene	ND	0.0010	1.00	
Carbon Disulfide	ND	0.010	1.00	
Carbon Tetrachloride	ND	0.0010	1.00	
Chlorobenzene	ND	0.0010	1.00	
Chloroethane	ND	0.0021	1.00	
Chloroform	ND	0.0010	1.00	
Chloromethane	ND	0.021	1.00	
2-Chlorotoluene	ND	0.0010	1.00	
4-Chlorotoluene	ND	0.0010	1.00	
Dibromochloromethane	ND	0.0021	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0052	1.00	
1,2-Dibromoethane	ND	0.0010	1.00	
Dibromomethane	ND	0.0010	1.00	
1,2-Dichlorobenzene	ND	0.0010	1.00	
1,3-Dichlorobenzene	ND	0.0010	1.00	
1,4-Dichlorobenzene	ND	0.0010	1.00	
Dichlorodifluoromethane	ND	0.0021	1.00	
1,1-Dichloroethane	ND	0.0010	1.00	
1,2-Dichloroethane	ND	0.0010	1.00	
1,1-Dichloroethene	ND	0.0010	1.00	
c-1,2-Dichloroethene	ND	0.0010	1.00	
t-1,2-Dichloroethene	ND	0.0010	1.00	
1,2-Dichloropropane	ND	0.0010	1.00	
1,3-Dichloropropane	ND	0.0010	1.00	
2,2-Dichloropropane	ND	0.0052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0021	1.00	
c-1,3-Dichloropropene	ND	0.0010	1.00	
t-1,3-Dichloropropene	ND	0.0021	1.00	
Ethylbenzene	ND	0.0010	1.00	
2-Hexanone	ND	0.021	1.00	
Isopropylbenzene	ND	0.0010	1.00	
p-Isopropyltoluene	ND	0.0010	1.00	
Methylene Chloride	ND	0.010	1.00	
4-Methyl-2-Pentanone	ND	0.021	1.00	
Naphthalene	ND	0.010	1.00	
n-Propylbenzene	ND	0.0021	1.00	
Styrene	ND	0.0010	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0021	1.00	
Tetrachloroethene	ND	0.0010	1.00	
Toluene	ND	0.0010	1.00	
1,2,3-Trichlorobenzene	ND	0.0021	1.00	
1,2,4-Trichlorobenzene	ND	0.0021	1.00	
1,1,1-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.00	
Trichloroethene	ND	0.0021	1.00	
Trichlorofluoromethane	ND	0.010	1.00	
1,2,3-Trichloropropane	ND	0.0021	1.00	
1,2,4-Trimethylbenzene	ND	0.0021	1.00	
1,3,5-Trimethylbenzene	ND	0.0021	1.00	
Vinyl Acetate	ND	0.010	1.00	
Vinyl Chloride	ND	0.0010	1.00	
p/m-Xylene	ND	0.0021	1.00	
o-Xylene	ND	0.0010	1.00	
Xylenes (total)	ND	0.0010	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0021	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.021	1.00	
Diisopropyl Ether (DIPE)	ND	0.0010	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0010	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0010	1.00	
Ethanol	ND	0.52	1.00	
Gasoline Range Organics (C6-C12)	ND	0.052	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	95	87-111	



## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-11-5	17-05-1860-4-D	05/22/17 16:15	Solid	GC/MS LL	05/22/17	05/25/17 19:41	170525L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.049	1.00	
Benzene	0.0014	0.00098	1.00	
Bromobenzene	ND	0.00098	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.00098	1.00	
Bromoform	ND	0.0049	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	0.15	0.00098	1.00	
sec-Butylbenzene	0.041	0.00098	1.00	
tert-Butylbenzene	0.0076	0.00098	1.00	
Carbon Disulfide	ND	0.0098	1.00	
Carbon Tetrachloride	ND	0.00098	1.00	
Chlorobenzene	ND	0.00098	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.00098	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.00098	1.00	
4-Chlorotoluene	ND	0.00098	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0049	1.00	
1,2-Dibromoethane	ND	0.00098	1.00	
Dibromomethane	ND	0.00098	1.00	
1,2-Dichlorobenzene	ND	0.00098	1.00	
1,3-Dichlorobenzene	ND	0.00098	1.00	
1,4-Dichlorobenzene	ND	0.00098	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.00098	1.00	
1,2-Dichloroethane	ND	0.00098	1.00	
1,1-Dichloroethene	ND	0.00098	1.00	
c-1,2-Dichloroethene	ND	0.00098	1.00	
t-1,2-Dichloroethene	ND	0.00098	1.00	
1,2-Dichloropropane	ND	0.00098	1.00	
1,3-Dichloropropane	ND	0.00098	1.00	
2,2-Dichloropropane	ND	0.0049	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.00098	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.00098	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.00098	1.00	
p-Isopropyltoluene	ND	0.00098	1.00	
Methylene Chloride	ND	0.0098	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	0.022	0.0098	1.00	
n-Propylbenzene	0.0051	0.0020	1.00	
Styrene	ND	0.00098	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00098	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.00098	1.00	
Toluene	ND	0.00098	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.00098	1.00	
1,1,2-Trichloroethane	ND	0.00098	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0098	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.0098	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.0098	1.00	
Vinyl Chloride	ND	0.00098	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.00098	1.00	
Xylenes (total)	ND	0.00098	1.00	
Methyl-t-Butyl Ether (MTBE)	0.021	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.00098	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00098	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00098	1.00	
Ethanol	ND	0.49	1.00	


  
 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	87-111	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-11-5	17-05-1860-4-F	05/22/17 16:15	Solid	GC/MS LL	05/22/17	06/01/17 16:27	170601L012

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Gasoline Range Organics (C6-C12)	67	10	200	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	98	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	95	87-111	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-5	17-05-1860-5-E	05/23/17 08:30	Solid	GC/MS LL	05/23/17	06/01/17 14:33	170601L011

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.041	1.00	
Benzene	ND	0.00081	1.00	
Bromobenzene	ND	0.00081	1.00	
Bromochloromethane	ND	0.0016	1.00	
Bromodichloromethane	ND	0.00081	1.00	
Bromoform	ND	0.0041	1.00	
Bromomethane	ND	0.016	1.00	
2-Butanone	ND	0.016	1.00	
n-Butylbenzene	ND	0.00081	1.00	
sec-Butylbenzene	ND	0.00081	1.00	
tert-Butylbenzene	ND	0.00081	1.00	
Carbon Disulfide	ND	0.0081	1.00	
Carbon Tetrachloride	ND	0.00081	1.00	
Chlorobenzene	ND	0.00081	1.00	
Chloroethane	ND	0.0016	1.00	
Chloroform	ND	0.00081	1.00	
Chloromethane	ND	0.016	1.00	
2-Chlorotoluene	ND	0.00081	1.00	
4-Chlorotoluene	ND	0.00081	1.00	
Dibromochloromethane	ND	0.0016	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0041	1.00	
1,2-Dibromoethane	ND	0.00081	1.00	
Dibromomethane	ND	0.00081	1.00	
1,2-Dichlorobenzene	ND	0.00081	1.00	
1,3-Dichlorobenzene	ND	0.00081	1.00	
1,4-Dichlorobenzene	ND	0.00081	1.00	
Dichlorodifluoromethane	ND	0.0016	1.00	
1,1-Dichloroethane	ND	0.00081	1.00	
1,2-Dichloroethane	ND	0.00081	1.00	
1,1-Dichloroethene	ND	0.00081	1.00	
c-1,2-Dichloroethene	ND	0.00081	1.00	
t-1,2-Dichloroethene	ND	0.00081	1.00	
1,2-Dichloropropane	ND	0.00081	1.00	
1,3-Dichloropropane	ND	0.00081	1.00	
2,2-Dichloropropane	ND	0.0041	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0016	1.00	
c-1,3-Dichloropropene	ND	0.00081	1.00	
t-1,3-Dichloropropene	ND	0.0016	1.00	
Ethylbenzene	ND	0.00081	1.00	
2-Hexanone	ND	0.016	1.00	
Isopropylbenzene	ND	0.00081	1.00	
p-Isopropyltoluene	ND	0.00081	1.00	
Methylene Chloride	ND	0.0081	1.00	
4-Methyl-2-Pentanone	ND	0.016	1.00	
Naphthalene	ND	0.0081	1.00	
n-Propylbenzene	ND	0.0016	1.00	
Styrene	ND	0.00081	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00081	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0016	1.00	
Tetrachloroethene	ND	0.00081	1.00	
Toluene	ND	0.00081	1.00	
1,2,3-Trichlorobenzene	ND	0.0016	1.00	
1,2,4-Trichlorobenzene	ND	0.0016	1.00	
1,1,1-Trichloroethane	ND	0.00081	1.00	
1,1,2-Trichloroethane	ND	0.00081	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0081	1.00	
Trichloroethene	ND	0.0016	1.00	
Trichlorofluoromethane	ND	0.0081	1.00	
1,2,3-Trichloropropane	ND	0.0016	1.00	
1,2,4-Trimethylbenzene	ND	0.0016	1.00	
1,3,5-Trimethylbenzene	ND	0.0016	1.00	
Vinyl Acetate	ND	0.0081	1.00	
Vinyl Chloride	ND	0.00081	1.00	
p/m-Xylene	ND	0.0016	1.00	
o-Xylene	ND	0.00081	1.00	
Xylenes (total)	ND	0.00081	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0016	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.016	1.00	
Diisopropyl Ether (DIPE)	ND	0.00081	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00081	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00081	1.00	
Ethanol	ND	0.41	1.00	
Gasoline Range Organics (C6-C12)	0.19	0.041	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-5	17-05-1860-6-D	05/23/17 08:45	Solid	GC/MS LL	05/23/17	05/26/17 14:57	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.042	1.00	
Benzene	ND	0.00083	1.00	
Bromobenzene	ND	0.00083	1.00	
Bromochloromethane	ND	0.0017	1.00	
Bromodichloromethane	ND	0.00083	1.00	
Bromoform	ND	0.0042	1.00	
Bromomethane	ND	0.017	1.00	
2-Butanone	ND	0.017	1.00	
n-Butylbenzene	ND	0.00083	1.00	
sec-Butylbenzene	ND	0.00083	1.00	
tert-Butylbenzene	ND	0.00083	1.00	
Carbon Disulfide	ND	0.0083	1.00	
Carbon Tetrachloride	ND	0.00083	1.00	
Chlorobenzene	ND	0.00083	1.00	
Chloroethane	ND	0.0017	1.00	
Chloroform	ND	0.00083	1.00	
Chloromethane	ND	0.017	1.00	
2-Chlorotoluene	ND	0.00083	1.00	
4-Chlorotoluene	ND	0.00083	1.00	
Dibromochloromethane	ND	0.0017	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0042	1.00	
1,2-Dibromoethane	ND	0.00083	1.00	
Dibromomethane	ND	0.00083	1.00	
1,2-Dichlorobenzene	ND	0.00083	1.00	
1,3-Dichlorobenzene	ND	0.00083	1.00	
1,4-Dichlorobenzene	ND	0.00083	1.00	
Dichlorodifluoromethane	ND	0.0017	1.00	
1,1-Dichloroethane	ND	0.00083	1.00	
1,2-Dichloroethane	ND	0.00083	1.00	
1,1-Dichloroethene	ND	0.00083	1.00	
c-1,2-Dichloroethene	ND	0.00083	1.00	
t-1,2-Dichloroethene	ND	0.00083	1.00	
1,2-Dichloropropane	ND	0.00083	1.00	
1,3-Dichloropropane	ND	0.00083	1.00	
2,2-Dichloropropane	ND	0.0042	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group	Date Received:	05/24/17
1155 N. First St., Suite 201	Work Order:	17-05-1860
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg
Project: 76 (Former BP) Station No. 11117 / I42611117.0001		Page 17 of 42

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0017	1.00	
c-1,3-Dichloropropene	ND	0.00083	1.00	
t-1,3-Dichloropropene	ND	0.0017	1.00	
Ethylbenzene	ND	0.00083	1.00	
2-Hexanone	ND	0.017	1.00	
Isopropylbenzene	ND	0.00083	1.00	
p-Isopropyltoluene	ND	0.00083	1.00	
Methylene Chloride	ND	0.0083	1.00	
4-Methyl-2-Pentanone	ND	0.017	1.00	
Naphthalene	ND	0.0083	1.00	
n-Propylbenzene	ND	0.0017	1.00	
Styrene	ND	0.00083	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00083	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0017	1.00	
Tetrachloroethene	ND	0.00083	1.00	
Toluene	ND	0.00083	1.00	
1,2,3-Trichlorobenzene	ND	0.0017	1.00	
1,2,4-Trichlorobenzene	ND	0.0017	1.00	
1,1,1-Trichloroethane	ND	0.00083	1.00	
1,1,2-Trichloroethane	ND	0.00083	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0083	1.00	
Trichloroethene	ND	0.0017	1.00	
Trichlorofluoromethane	ND	0.0083	1.00	
1,2,3-Trichloropropane	ND	0.0017	1.00	
1,2,4-Trimethylbenzene	ND	0.0017	1.00	
1,3,5-Trimethylbenzene	ND	0.0017	1.00	
Vinyl Acetate	ND	0.0083	1.00	
Vinyl Chloride	ND	0.00083	1.00	
p/m-Xylene	ND	0.0017	1.00	
o-Xylene	ND	0.00083	1.00	
Xylenes (total)	ND	0.00083	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0017	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.017	1.00	
Diisopropyl Ether (DIPE)	ND	0.00083	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00083	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00083	1.00	
Ethanol	ND	0.42	1.00	
Gasoline Range Organics (C6-C12)	0.042	0.042	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	97	87-111	

## Analytical Report

Antea Group	Date Received:	05/24/17
1155 N. First St., Suite 201	Work Order:	17-05-1860
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001 Page 19 of 42

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-5	17-05-1860-7-D	05/23/17 09:50	Solid	GC/MS LL	05/23/17	05/26/17 15:40	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.058	1.00	
Benzene	ND	0.0012	1.00	
Bromobenzene	ND	0.0012	1.00	
Bromochloromethane	ND	0.0023	1.00	
Bromodichloromethane	ND	0.0012	1.00	
Bromoform	ND	0.0058	1.00	
Bromomethane	ND	0.023	1.00	
2-Butanone	ND	0.023	1.00	
n-Butylbenzene	ND	0.0012	1.00	
sec-Butylbenzene	ND	0.0012	1.00	
tert-Butylbenzene	ND	0.0012	1.00	
Carbon Disulfide	ND	0.012	1.00	
Carbon Tetrachloride	ND	0.0012	1.00	
Chlorobenzene	ND	0.0012	1.00	
Chloroethane	ND	0.0023	1.00	
Chloroform	ND	0.0012	1.00	
Chloromethane	ND	0.023	1.00	
2-Chlorotoluene	ND	0.0012	1.00	
4-Chlorotoluene	ND	0.0012	1.00	
Dibromochloromethane	ND	0.0023	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0058	1.00	
1,2-Dibromoethane	ND	0.0012	1.00	
Dibromomethane	ND	0.0012	1.00	
1,2-Dichlorobenzene	ND	0.0012	1.00	
1,3-Dichlorobenzene	ND	0.0012	1.00	
1,4-Dichlorobenzene	ND	0.0012	1.00	
Dichlorodifluoromethane	ND	0.0023	1.00	
1,1-Dichloroethane	ND	0.0012	1.00	
1,2-Dichloroethane	ND	0.0012	1.00	
1,1-Dichloroethene	ND	0.0012	1.00	
c-1,2-Dichloroethene	ND	0.0012	1.00	
t-1,2-Dichloroethene	ND	0.0012	1.00	
1,2-Dichloropropane	ND	0.0012	1.00	
1,3-Dichloropropane	ND	0.0012	1.00	
2,2-Dichloropropane	ND	0.0058	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0023	1.00	
c-1,3-Dichloropropene	ND	0.0012	1.00	
t-1,3-Dichloropropene	ND	0.0023	1.00	
Ethylbenzene	ND	0.0012	1.00	
2-Hexanone	ND	0.023	1.00	
Isopropylbenzene	ND	0.0012	1.00	
p-Isopropyltoluene	ND	0.0012	1.00	
Methylene Chloride	ND	0.012	1.00	
4-Methyl-2-Pentanone	ND	0.023	1.00	
Naphthalene	ND	0.012	1.00	
n-Propylbenzene	ND	0.0023	1.00	
Styrene	ND	0.0012	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0012	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0023	1.00	
Tetrachloroethene	ND	0.0012	1.00	
Toluene	ND	0.0012	1.00	
1,2,3-Trichlorobenzene	ND	0.0023	1.00	
1,2,4-Trichlorobenzene	ND	0.0023	1.00	
1,1,1-Trichloroethane	ND	0.0012	1.00	
1,1,2-Trichloroethane	ND	0.0012	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.012	1.00	
Trichloroethene	ND	0.0023	1.00	
Trichlorofluoromethane	ND	0.012	1.00	
1,2,3-Trichloropropane	ND	0.0023	1.00	
1,2,4-Trimethylbenzene	ND	0.0023	1.00	
1,3,5-Trimethylbenzene	ND	0.0023	1.00	
Vinyl Acetate	ND	0.012	1.00	
Vinyl Chloride	ND	0.0012	1.00	
p/m-Xylene	ND	0.0023	1.00	
o-Xylene	ND	0.0012	1.00	
Xylenes (total)	ND	0.0012	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0023	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.023	1.00	
Diisopropyl Ether (DIPE)	ND	0.0012	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0012	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0012	1.00	
Ethanol	ND	0.58	1.00	
Gasoline Range Organics (C6-C12)	ND	0.058	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-15-5	17-05-1860-8-D	05/23/17 10:15	Solid	GC/MS LL	05/23/17	05/26/17 17:05	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.064	1.00	
Benzene	ND	0.0013	1.00	
Bromobenzene	ND	0.0013	1.00	
Bromochloromethane	ND	0.0026	1.00	
Bromodichloromethane	ND	0.0013	1.00	
Bromoform	ND	0.0064	1.00	
Bromomethane	ND	0.026	1.00	
2-Butanone	ND	0.026	1.00	
n-Butylbenzene	ND	0.0013	1.00	
sec-Butylbenzene	ND	0.0013	1.00	
tert-Butylbenzene	ND	0.0013	1.00	
Carbon Disulfide	ND	0.013	1.00	
Carbon Tetrachloride	ND	0.0013	1.00	
Chlorobenzene	ND	0.0013	1.00	
Chloroethane	ND	0.0026	1.00	
Chloroform	ND	0.0013	1.00	
Chloromethane	ND	0.026	1.00	
2-Chlorotoluene	ND	0.0013	1.00	
4-Chlorotoluene	ND	0.0013	1.00	
Dibromochloromethane	ND	0.0026	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0064	1.00	
1,2-Dibromoethane	ND	0.0013	1.00	
Dibromomethane	ND	0.0013	1.00	
1,2-Dichlorobenzene	ND	0.0013	1.00	
1,3-Dichlorobenzene	ND	0.0013	1.00	
1,4-Dichlorobenzene	ND	0.0013	1.00	
Dichlorodifluoromethane	ND	0.0026	1.00	
1,1-Dichloroethane	ND	0.0013	1.00	
1,2-Dichloroethane	ND	0.0013	1.00	
1,1-Dichloroethene	ND	0.0013	1.00	
c-1,2-Dichloroethene	ND	0.0013	1.00	
t-1,2-Dichloroethene	ND	0.0013	1.00	
1,2-Dichloropropane	ND	0.0013	1.00	
1,3-Dichloropropane	ND	0.0013	1.00	
2,2-Dichloropropane	ND	0.0064	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0026	1.00	
c-1,3-Dichloropropene	ND	0.0013	1.00	
t-1,3-Dichloropropene	ND	0.0026	1.00	
Ethylbenzene	ND	0.0013	1.00	
2-Hexanone	ND	0.026	1.00	
Isopropylbenzene	ND	0.0013	1.00	
p-Isopropyltoluene	ND	0.0013	1.00	
Methylene Chloride	ND	0.013	1.00	
4-Methyl-2-Pentanone	ND	0.026	1.00	
Naphthalene	ND	0.013	1.00	
n-Propylbenzene	ND	0.0026	1.00	
Styrene	ND	0.0013	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0013	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0026	1.00	
Tetrachloroethene	ND	0.0013	1.00	
Toluene	ND	0.0013	1.00	
1,2,3-Trichlorobenzene	ND	0.0026	1.00	
1,2,4-Trichlorobenzene	ND	0.0026	1.00	
1,1,1-Trichloroethane	ND	0.0013	1.00	
1,1,2-Trichloroethane	ND	0.0013	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.013	1.00	
Trichloroethene	ND	0.0026	1.00	
Trichlorofluoromethane	ND	0.013	1.00	
1,2,3-Trichloropropane	ND	0.0026	1.00	
1,2,4-Trimethylbenzene	ND	0.0026	1.00	
1,3,5-Trimethylbenzene	ND	0.0026	1.00	
Vinyl Acetate	ND	0.013	1.00	
Vinyl Chloride	ND	0.0013	1.00	
p/m-Xylene	ND	0.0026	1.00	
o-Xylene	ND	0.0013	1.00	
Xylenes (total)	ND	0.0013	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0026	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.026	1.00	
Diisopropyl Ether (DIPE)	ND	0.0013	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0013	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0013	1.00	
Ethanol	ND	0.64	1.00	
Gasoline Range Organics (C6-C12)	ND	0.064	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	87-111	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-16-5	17-05-1860-9-D	05/23/17 10:40	Solid	GC/MS LL	05/23/17	05/26/17 17:34	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.055	1.00	
Benzene	ND	0.0011	1.00	
Bromobenzene	ND	0.0011	1.00	
Bromochloromethane	ND	0.0022	1.00	
Bromodichloromethane	ND	0.0011	1.00	
Bromoform	ND	0.0055	1.00	
Bromomethane	ND	0.022	1.00	
2-Butanone	ND	0.022	1.00	
n-Butylbenzene	ND	0.0011	1.00	
sec-Butylbenzene	ND	0.0011	1.00	
tert-Butylbenzene	ND	0.0011	1.00	
Carbon Disulfide	ND	0.011	1.00	
Carbon Tetrachloride	ND	0.0011	1.00	
Chlorobenzene	ND	0.0011	1.00	
Chloroethane	ND	0.0022	1.00	
Chloroform	ND	0.0011	1.00	
Chloromethane	ND	0.022	1.00	
2-Chlorotoluene	ND	0.0011	1.00	
4-Chlorotoluene	ND	0.0011	1.00	
Dibromochloromethane	ND	0.0022	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0055	1.00	
1,2-Dibromoethane	ND	0.0011	1.00	
Dibromomethane	ND	0.0011	1.00	
1,2-Dichlorobenzene	ND	0.0011	1.00	
1,3-Dichlorobenzene	ND	0.0011	1.00	
1,4-Dichlorobenzene	ND	0.0011	1.00	
Dichlorodifluoromethane	ND	0.0022	1.00	
1,1-Dichloroethane	ND	0.0011	1.00	
1,2-Dichloroethane	ND	0.0011	1.00	
1,1-Dichloroethene	ND	0.0011	1.00	
c-1,2-Dichloroethene	ND	0.0011	1.00	
t-1,2-Dichloroethene	ND	0.0011	1.00	
1,2-Dichloropropane	ND	0.0011	1.00	
1,3-Dichloropropane	ND	0.0011	1.00	
2,2-Dichloropropane	ND	0.0055	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0022	1.00	
c-1,3-Dichloropropene	ND	0.0011	1.00	
t-1,3-Dichloropropene	ND	0.0022	1.00	
Ethylbenzene	ND	0.0011	1.00	
2-Hexanone	ND	0.022	1.00	
Isopropylbenzene	ND	0.0011	1.00	
p-Isopropyltoluene	ND	0.0011	1.00	
Methylene Chloride	ND	0.011	1.00	
4-Methyl-2-Pentanone	ND	0.022	1.00	
Naphthalene	ND	0.011	1.00	
n-Propylbenzene	ND	0.0022	1.00	
Styrene	ND	0.0011	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0011	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0022	1.00	
Tetrachloroethene	ND	0.0011	1.00	
Toluene	ND	0.0011	1.00	
1,2,3-Trichlorobenzene	ND	0.0022	1.00	
1,2,4-Trichlorobenzene	ND	0.0022	1.00	
1,1,1-Trichloroethane	ND	0.0011	1.00	
1,1,2-Trichloroethane	ND	0.0011	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1.00	
Trichloroethene	ND	0.0022	1.00	
Trichlorofluoromethane	ND	0.011	1.00	
1,2,3-Trichloropropane	ND	0.0022	1.00	
1,2,4-Trimethylbenzene	ND	0.0022	1.00	
1,3,5-Trimethylbenzene	ND	0.0022	1.00	
Vinyl Acetate	ND	0.011	1.00	
Vinyl Chloride	ND	0.0011	1.00	
p/m-Xylene	ND	0.0022	1.00	
o-Xylene	ND	0.0011	1.00	
Xylenes (total)	ND	0.0011	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0022	1.00	
Tert-Butyl Alcohol (TBA)	0.024	0.022	1.00	
Diisopropyl Ether (DIPE)	ND	0.0011	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0011	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0011	1.00	
Ethanol	ND	0.55	1.00	
Gasoline Range Organics (C6-C12)	ND	0.055	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	112	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	96	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-17-5	17-05-1860-10-C	05/23/17 12:15	Solid	GC/MS LL	05/23/17	05/26/17 18:02	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.036	1.00	
Benzene	ND	0.00071	1.00	
Bromobenzene	ND	0.00071	1.00	
Bromochloromethane	ND	0.0014	1.00	
Bromodichloromethane	ND	0.00071	1.00	
Bromoform	ND	0.0036	1.00	
Bromomethane	ND	0.014	1.00	
2-Butanone	ND	0.014	1.00	
n-Butylbenzene	ND	0.00071	1.00	
sec-Butylbenzene	ND	0.00071	1.00	
tert-Butylbenzene	ND	0.00071	1.00	
Carbon Disulfide	ND	0.0071	1.00	
Carbon Tetrachloride	ND	0.00071	1.00	
Chlorobenzene	ND	0.00071	1.00	
Chloroethane	ND	0.0014	1.00	
Chloroform	ND	0.00071	1.00	
Chloromethane	ND	0.014	1.00	
2-Chlorotoluene	ND	0.00071	1.00	
4-Chlorotoluene	ND	0.00071	1.00	
Dibromochloromethane	ND	0.0014	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0036	1.00	
1,2-Dibromoethane	ND	0.00071	1.00	
Dibromomethane	ND	0.00071	1.00	
1,2-Dichlorobenzene	ND	0.00071	1.00	
1,3-Dichlorobenzene	ND	0.00071	1.00	
1,4-Dichlorobenzene	ND	0.00071	1.00	
Dichlorodifluoromethane	ND	0.0014	1.00	
1,1-Dichloroethane	ND	0.00071	1.00	
1,2-Dichloroethane	ND	0.00071	1.00	
1,1-Dichloroethene	ND	0.00071	1.00	
c-1,2-Dichloroethene	ND	0.00071	1.00	
t-1,2-Dichloroethene	ND	0.00071	1.00	
1,2-Dichloropropane	ND	0.00071	1.00	
1,3-Dichloropropane	ND	0.00071	1.00	
2,2-Dichloropropane	ND	0.0036	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0014	1.00	
c-1,3-Dichloropropene	ND	0.00071	1.00	
t-1,3-Dichloropropene	ND	0.0014	1.00	
Ethylbenzene	ND	0.00071	1.00	
2-Hexanone	ND	0.014	1.00	
Isopropylbenzene	ND	0.00071	1.00	
p-Isopropyltoluene	ND	0.00071	1.00	
Methylene Chloride	ND	0.0071	1.00	
4-Methyl-2-Pentanone	ND	0.014	1.00	
Naphthalene	ND	0.0071	1.00	
n-Propylbenzene	ND	0.0014	1.00	
Styrene	ND	0.00071	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00071	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0014	1.00	
Tetrachloroethene	ND	0.00071	1.00	
Toluene	ND	0.00071	1.00	
1,2,3-Trichlorobenzene	ND	0.0014	1.00	
1,2,4-Trichlorobenzene	ND	0.0014	1.00	
1,1,1-Trichloroethane	ND	0.00071	1.00	
1,1,2-Trichloroethane	ND	0.00071	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0071	1.00	
Trichloroethene	ND	0.0014	1.00	
Trichlorofluoromethane	ND	0.0071	1.00	
1,2,3-Trichloropropane	ND	0.0014	1.00	
1,2,4-Trimethylbenzene	ND	0.0014	1.00	
1,3,5-Trimethylbenzene	ND	0.0014	1.00	
Vinyl Acetate	ND	0.0071	1.00	
Vinyl Chloride	ND	0.00071	1.00	
p/m-Xylene	ND	0.0014	1.00	
o-Xylene	ND	0.00071	1.00	
Xylenes (total)	ND	0.00071	1.00	
Methyl-t-Butyl Ether (MTBE)	0.020	0.0014	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.014	1.00	
Diisopropyl Ether (DIPE)	ND	0.00071	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00071	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00071	1.00	
Ethanol	ND	0.36	1.00	
Gasoline Range Organics (C6-C12)	ND	0.036	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	109	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-22-5	17-05-1860-11-D	05/23/17 13:15	Solid	GC/MS LL	05/23/17	05/26/17 18:31	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.050	1.00	
Benzene	ND	0.0010	1.00	
Bromobenzene	ND	0.0010	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.0010	1.00	
Bromoform	ND	0.0050	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	ND	0.0010	1.00	
sec-Butylbenzene	ND	0.0010	1.00	
tert-Butylbenzene	ND	0.0010	1.00	
Carbon Disulfide	ND	0.010	1.00	
Carbon Tetrachloride	ND	0.0010	1.00	
Chlorobenzene	ND	0.0010	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.0010	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.0010	1.00	
4-Chlorotoluene	ND	0.0010	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1.00	
1,2-Dibromoethane	ND	0.0010	1.00	
Dibromomethane	ND	0.0010	1.00	
1,2-Dichlorobenzene	ND	0.0010	1.00	
1,3-Dichlorobenzene	ND	0.0010	1.00	
1,4-Dichlorobenzene	ND	0.0010	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.0010	1.00	
1,2-Dichloroethane	ND	0.0010	1.00	
1,1-Dichloroethene	ND	0.0010	1.00	
c-1,2-Dichloroethene	ND	0.0010	1.00	
t-1,2-Dichloroethene	ND	0.0010	1.00	
1,2-Dichloropropane	ND	0.0010	1.00	
1,3-Dichloropropane	ND	0.0010	1.00	
2,2-Dichloropropane	ND	0.0050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.0010	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.0010	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.0010	1.00	
p-Isopropyltoluene	ND	0.0010	1.00	
Methylene Chloride	ND	0.010	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	ND	0.010	1.00	
n-Propylbenzene	ND	0.0020	1.00	
Styrene	ND	0.0010	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.0010	1.00	
Toluene	ND	0.0010	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.010	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.010	1.00	
Vinyl Chloride	ND	0.0010	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.0010	1.00	
Xylenes (total)	ND	0.0010	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.0010	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0010	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0010	1.00	
Ethanol	ND	0.50	1.00	
Gasoline Range Organics (C6-C12)	ND	0.050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	



## Analytical Report

Antea Group	Date Received:	05/24/17
1155 N. First St., Suite 201	Work Order:	17-05-1860
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001 Page 34 of 42

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-779-1907</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS LL</b>	<b>05/25/17</b>	<b>05/25/17 12:45</b>	<b>170525L003</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	0.050	1.00	
Benzene	ND	0.0010	1.00	
Bromobenzene	ND	0.0010	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.0010	1.00	
Bromoform	ND	0.0050	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	ND	0.0010	1.00	
sec-Butylbenzene	ND	0.0010	1.00	
tert-Butylbenzene	ND	0.0010	1.00	
Carbon Disulfide	ND	0.010	1.00	
Carbon Tetrachloride	ND	0.0010	1.00	
Chlorobenzene	ND	0.0010	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.0010	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.0010	1.00	
4-Chlorotoluene	ND	0.0010	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1.00	
1,2-Dibromoethane	ND	0.0010	1.00	
Dibromomethane	ND	0.0010	1.00	
1,2-Dichlorobenzene	ND	0.0010	1.00	
1,3-Dichlorobenzene	ND	0.0010	1.00	
1,4-Dichlorobenzene	ND	0.0010	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.0010	1.00	
1,2-Dichloroethane	ND	0.0010	1.00	
1,1-Dichloroethene	ND	0.0010	1.00	
c-1,2-Dichloroethene	ND	0.0010	1.00	
t-1,2-Dichloroethene	ND	0.0010	1.00	
1,2-Dichloropropane	ND	0.0010	1.00	
1,3-Dichloropropane	ND	0.0010	1.00	
2,2-Dichloropropane	ND	0.0050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.0010	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.0010	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.0010	1.00	
p-Isopropyltoluene	ND	0.0010	1.00	
Methylene Chloride	ND	0.010	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	ND	0.010	1.00	
n-Propylbenzene	ND	0.0020	1.00	
Styrene	ND	0.0010	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.0010	1.00	
Toluene	ND	0.0010	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.010	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.010	1.00	
Vinyl Chloride	ND	0.0010	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.0010	1.00	
Xylenes (total)	ND	0.0010	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.0010	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0010	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0010	1.00	
Ethanol	ND	0.50	1.00	
Gasoline Range Organics (C6-C12)	ND	0.050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	100	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-1909	N/A	Solid	GC/MS LL	05/26/17	05/26/17 14:01	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.050	1.00	
Benzene	ND	0.0010	1.00	
Bromobenzene	ND	0.0010	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.0010	1.00	
Bromoform	ND	0.0050	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	ND	0.0010	1.00	
sec-Butylbenzene	ND	0.0010	1.00	
tert-Butylbenzene	ND	0.0010	1.00	
Carbon Disulfide	ND	0.010	1.00	
Carbon Tetrachloride	ND	0.0010	1.00	
Chlorobenzene	ND	0.0010	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.0010	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.0010	1.00	
4-Chlorotoluene	ND	0.0010	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1.00	
1,2-Dibromoethane	ND	0.0010	1.00	
Dibromomethane	ND	0.0010	1.00	
1,2-Dichlorobenzene	ND	0.0010	1.00	
1,3-Dichlorobenzene	ND	0.0010	1.00	
1,4-Dichlorobenzene	ND	0.0010	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.0010	1.00	
1,2-Dichloroethane	ND	0.0010	1.00	
1,1-Dichloroethene	ND	0.0010	1.00	
c-1,2-Dichloroethene	ND	0.0010	1.00	
t-1,2-Dichloroethene	ND	0.0010	1.00	
1,2-Dichloropropane	ND	0.0010	1.00	
1,3-Dichloropropane	ND	0.0010	1.00	
2,2-Dichloropropane	ND	0.0050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.0010	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.0010	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.0010	1.00	
p-Isopropyltoluene	ND	0.0010	1.00	
Methylene Chloride	ND	0.010	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	ND	0.010	1.00	
n-Propylbenzene	ND	0.0020	1.00	
Styrene	ND	0.0010	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.0010	1.00	
Toluene	ND	0.0010	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.010	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.010	1.00	
Vinyl Chloride	ND	0.0010	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.0010	1.00	
Xylenes (total)	ND	0.0010	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.0010	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0010	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0010	1.00	
Ethanol	ND	0.50	1.00	
Gasoline Range Organics (C6-C12)	ND	0.050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	104	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	110	80-120	
Toluene-d8-TPPH	104	87-111	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group	Date Received:	05/24/17
1155 N. First St., Suite 201	Work Order:	17-05-1860
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001 Page 40 of 42

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-779-1910</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS LL</b>	<b>06/01/17</b>	<b>06/01/17 13:36</b>	<b>170601L011</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	0.050	1.00	
Benzene	ND	0.0010	1.00	
Bromobenzene	ND	0.0010	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.0010	1.00	
Bromoform	ND	0.0050	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	ND	0.0010	1.00	
sec-Butylbenzene	ND	0.0010	1.00	
tert-Butylbenzene	ND	0.0010	1.00	
Carbon Disulfide	ND	0.010	1.00	
Carbon Tetrachloride	ND	0.0010	1.00	
Chlorobenzene	ND	0.0010	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.0010	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.0010	1.00	
4-Chlorotoluene	ND	0.0010	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1.00	
1,2-Dibromoethane	ND	0.0010	1.00	
Dibromomethane	ND	0.0010	1.00	
1,2-Dichlorobenzene	ND	0.0010	1.00	
1,3-Dichlorobenzene	ND	0.0010	1.00	
1,4-Dichlorobenzene	ND	0.0010	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.0010	1.00	
1,2-Dichloroethane	ND	0.0010	1.00	
1,1-Dichloroethene	ND	0.0010	1.00	
c-1,2-Dichloroethene	ND	0.0010	1.00	
t-1,2-Dichloroethene	ND	0.0010	1.00	
1,2-Dichloropropane	ND	0.0010	1.00	
1,3-Dichloropropane	ND	0.0010	1.00	
2,2-Dichloropropane	ND	0.0050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.0010	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.0010	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.0010	1.00	
p-Isopropyltoluene	ND	0.0010	1.00	
Methylene Chloride	ND	0.010	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	ND	0.010	1.00	
n-Propylbenzene	ND	0.0020	1.00	
Styrene	ND	0.0010	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.0010	1.00	
Toluene	ND	0.0010	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.010	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.010	1.00	
Vinyl Chloride	ND	0.0010	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.0010	1.00	
Xylenes (total)	ND	0.0010	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.0010	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0010	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0010	1.00	
Ethanol	ND	0.50	1.00	
Gasoline Range Organics (C6-C12)	ND	0.050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/24/17  
 Work Order: 17-05-1860  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	100	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	87-111	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-779-1911</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS LL</b>	<b>06/01/17</b>	<b>06/01/17 14:05</b>	<b>170601L012</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Gasoline Range Organics (C6-C12)	ND	5.0	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	95	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	87-111	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Quality Control - LCS/LCSD

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-1907	LCS	Solid	GC/MS LL	05/25/17	05/25/17 10:46	170525L003				
099-12-779-1907	LCSD	Solid	GC/MS LL	05/25/17	05/25/17 11:19	170525L003				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.05099	102	0.05258	105	80-120	73-127	3	0-20	
Carbon Tetrachloride	0.05000	0.05244	105	0.05487	110	65-137	53-149	5	0-20	
Chlorobenzene	0.05000	0.05390	108	0.05481	110	80-120	73-127	2	0-20	
1,2-Dibromoethane	0.05000	0.05609	112	0.05916	118	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	0.05000	0.05598	112	0.05638	113	80-120	73-127	1	0-20	
1,2-Dichloroethane	0.05000	0.05104	102	0.05360	107	80-120	73-127	5	0-20	
1,1-Dichloroethene	0.05000	0.05376	108	0.05480	110	68-128	58-138	2	0-20	
Ethylbenzene	0.05000	0.05499	110	0.05652	113	80-120	73-127	3	0-20	
Toluene	0.05000	0.05303	106	0.05415	108	80-120	73-127	2	0-20	
Trichloroethene	0.05000	0.05238	105	0.05500	110	80-120	73-127	5	0-20	
Vinyl Chloride	0.05000	0.05563	111	0.05523	110	67-127	57-137	1	0-20	
p/m-Xylene	0.1000	0.1116	112	0.1137	114	75-125	67-133	2	0-25	
o-Xylene	0.05000	0.05500	110	0.05634	113	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.05194	104	0.05437	109	70-124	61-133	5	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2705	108	0.2859	114	73-121	65-129	6	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.05191	104	0.05358	107	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.05456	109	0.05688	114	70-124	61-133	4	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.05248	105	0.05588	112	74-122	66-130	6	0-20	
Ethanol	0.5000	0.4279	86	0.4142	83	51-135	37-149	3	0-27	
Gasoline Range Organics (C6-C12)	1.000	0.9892	99	0.9787	98	65-130	54-141	1	0-30	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

## Quality Control - LCS/LCSD

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-1909	LCS	Solid	GC/MS LL	05/26/17	05/26/17 12:34	170526L018				
099-12-779-1909	LCSD	Solid	GC/MS LL	05/26/17	05/26/17 13:02	170526L018				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.04927	99	0.04986	100	80-120	73-127	1	0-20	
Carbon Tetrachloride	0.05000	0.05048	101	0.05038	101	65-137	53-149	0	0-20	
Chlorobenzene	0.05000	0.05174	103	0.05176	104	80-120	73-127	0	0-20	
1,2-Dibromoethane	0.05000	0.05523	110	0.05385	108	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	0.05000	0.05316	106	0.05323	106	80-120	73-127	0	0-20	
1,2-Dichloroethane	0.05000	0.05187	104	0.05149	103	80-120	73-127	1	0-20	
1,1-Dichloroethene	0.05000	0.05444	109	0.05372	107	68-128	58-138	1	0-20	
Ethylbenzene	0.05000	0.05380	108	0.05334	107	80-120	73-127	1	0-20	
Toluene	0.05000	0.05111	102	0.05122	102	80-120	73-127	0	0-20	
Trichloroethene	0.05000	0.05078	102	0.05163	103	80-120	73-127	2	0-20	
Vinyl Chloride	0.05000	0.05257	105	0.05147	103	67-127	57-137	2	0-20	
p/m-Xylene	0.1000	0.1084	108	0.1081	108	75-125	67-133	0	0-25	
o-Xylene	0.05000	0.05319	106	0.05297	106	75-125	67-133	0	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04680	94	0.04843	97	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2747	110	0.2791	112	73-121	65-129	2	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.05234	105	0.05219	104	69-129	59-139	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.04520	90	0.04595	92	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.04512	90	0.04621	92	74-122	66-130	2	0-20	
Ethanol	0.5000	0.4610	92	0.3544	71	51-135	37-149	26	0-27	
Gasoline Range Organics (C6-C12)	1.000	1.048	105	1.015	102	65-130	54-141	3	0-30	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

## Quality Control - LCS/LCSD

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-1910	LCS	Solid	GC/MS LL	06/01/17	06/01/17 12:11	170601L011				
099-12-779-1910	LCSD	Solid	GC/MS LL	06/01/17	06/01/17 12:39	170601L011				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.04147	83	0.04065	81	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	0.04568	91	0.04422	88	65-137	53-149	3	0-20	
Chlorobenzene	0.05000	0.04519	90	0.04570	91	80-120	73-127	1	0-20	
1,2-Dibromoethane	0.05000	0.04844	97	0.05063	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	0.05000	0.04930	99	0.04990	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	0.05000	0.04431	89	0.04401	88	80-120	73-127	1	0-20	
1,1-Dichloroethene	0.05000	0.04128	83	0.03938	79	68-128	58-138	5	0-20	
Ethylbenzene	0.05000	0.04466	89	0.04471	89	80-120	73-127	0	0-20	
Toluene	0.05000	0.04279	86	0.04226	85	80-120	73-127	1	0-20	
Trichloroethene	0.05000	0.04163	83	0.04026	81	80-120	73-127	3	0-20	
Vinyl Chloride	0.05000	0.06281	126	0.06257	125	67-127	57-137	0	0-20	
p/m-Xylene	0.1000	0.09004	90	0.08973	90	75-125	67-133	0	0-25	
o-Xylene	0.05000	0.04532	91	0.04605	92	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04677	94	0.04836	97	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2849	114	0.2854	114	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.04708	94	0.04761	95	69-129	59-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.04944	99	0.05015	100	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.04631	93	0.04722	94	74-122	66-130	2	0-20	
Ethanol	0.5000	0.4391	88	0.4171	83	51-135	37-149	5	0-27	
Gasoline Range Organics (C6-C12)	1.000	0.9605	96	0.9145	91	65-130	54-141	5	0-30	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

## Quality Control - LCS/LCSD

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/24/17  
Work Order: 17-05-1860  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-1911	LCS	Solid	GC/MS LL	06/01/17	06/01/17 12:11	170601L012				
099-12-779-1911	LCSD	Solid	GC/MS LL	06/01/17	06/01/17 12:39	170601L012				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.04147	83	0.04065	81	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	0.04568	91	0.04422	88	65-137	53-149	3	0-20	
Chlorobenzene	0.05000	0.04519	90	0.04570	91	80-120	73-127	1	0-20	
1,2-Dibromoethane	0.05000	0.04844	97	0.05063	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	0.05000	0.04930	99	0.04990	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	0.05000	0.04431	89	0.04401	88	80-120	73-127	1	0-20	
1,1-Dichloroethene	0.05000	0.04128	83	0.03938	79	68-128	58-138	5	0-20	
Ethylbenzene	0.05000	0.04466	89	0.04471	89	80-120	73-127	0	0-20	
Toluene	0.05000	0.04279	86	0.04226	85	80-120	73-127	1	0-20	
Trichloroethene	0.05000	0.04163	83	0.04026	81	80-120	73-127	3	0-20	
Vinyl Chloride	0.05000	0.06281	126	0.06257	125	67-127	57-137	0	0-20	
p/m-Xylene	0.1000	0.09004	90	0.08973	90	75-125	67-133	0	0-25	
o-Xylene	0.05000	0.04532	91	0.04605	92	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04677	94	0.04836	97	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2849	114	0.2854	114	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.04708	94	0.04761	95	69-129	59-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.04944	99	0.05015	100	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.04631	93	0.04722	94	74-122	66-130	2	0-20	
Ethanol	0.5000	0.4391	88	0.4171	83	51-135	37-149	5	0-27	
Gasoline Range Organics (C6-C12)	1.000	0.9605	96	0.9145	91	65-130	54-141	5	0-30	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

## Sample Analysis Summary Report

Work Order: 17-05-1860

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<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
GC/MS / EPA 8260B	EPA 5035	867	GC/MS LL	2

## Glossary of Terms and Qualifiers

Work Order: 17-05-1860

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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CHAIN-OF-CUSTODY RECORD

Date 5/23/17  
Page 1 of 2

WG NO. / LAB USE ONLY  
**17-05-1860**

LABORATORY CLIENT: Antea Group

ADDRESS: 1155 N. First Street, Suite 201 STATE: CA ZIP: 95112

CITY: San Jose

TEL: 714-864-8131 E-MAIL: Tony.Banks@AnteaGroup.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):  
 SAME DAY  24 HR  48 HR  72 HR  5 DAYS  STANDARD

EDD  COELT EDF  OTHER

CLIENT PROJECT NAME / NO.: 76 (Former BP) Station No 11117

PROJECT CONTACT: Tony Banks 714-864-8131

GLOBAL ID: Tony.Banks@AnteaGroup.com LOG CODE:

P.O. NO.: I4261117.0001

LAB CONTACT OR QUOTE NO.:

SAMPLER(S): (PRINT) Jeremy Ruest

**REQUESTED ANALYSES**  
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF OF CONT.	SPECIAL INSTRUCTIONS:			Field Filtered	Preserved	Unpreserved	TPH (g) & GRO (g260)	TPH (g) □ DRD	TPH □ C6-C36 □ C6-C44	TPH	BTEX / MTBE □ 8260 □	VOCs (8260)	Oxygenates (8260)	Prep (5035) □ En Core □ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs □ 8270 □ 8270 SIM	T22 Metals □ 6010/747X □ 6020/747X	Cr(VI) □ 7196 □ 7199 □ 218.6	
		DATE	TIME			Hold Stainless steel sleeves for potential additional analysis	Unpreserved	Preserved																		Field Filtered
1	VP-8-5	5/22/17	1410	S	5				X	X	X	X					X									
2	VP-9-5	5/22/17	1445	S	5				X	X	X	X					X									
3	VP-10-5	5/22/17	1530	S	5				X	X	X	X					X									
4	VP-11-5	5/22/17	1615	S	5				X	X	X	X					X									
5	VP-12-5	5/23/17	0830	S	5				X	X	X	X					X									
6	VP-13-5	5/23/17	0845	S	5				X	X	X	X					X									
7	VP-14-5	5/23/17	0950	S	5				X	X	X	X					X									
8	VP-15-5	5/23/17	1015	S	5				X	X	X	X					X									
9	VP-16-5	5/23/17	1040	S	5				X	X	X	X					X									
10	VP-17-5	5/23/17	1215	S	4				X	X	X	X					X									

Relinquished by: (Signature) Tony Banks

Relinquished by: (Signature) Tony Banks

Relinquished by: (Signature) Tony Banks

Received by: (Signature/Affiliation) For Officially ECI

Received by: (Signature/Affiliation) For Officially ECI

Received by: (Signature/Affiliation) For Officially ECI

Date: 5/23/17 Time: 1335

Date: 5/23/17 Time: 1335

Date: 5/24/17 Time: 0800







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LABORATORY CLIENT:

Antea Group  
ADDRESS: 1155 N. First Street, Suite 201  
CITY: San Jose STATE: CA ZIP: 95112  
E-MAIL: Tony.Banks@AnteaGroup.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):  
 SAME DAY  24 HR  48 HR  72 HR  5 DAYS  STANDARD  
EDD  
 COELT EDF  OTHER

SPECIAL INSTRUCTIONS: Hold Stainless steel sleeves for potential additional analysis

CHAIN-OF-CUSTODY RECORD

WO NO. / LAB USE ONLY  
**1360**  
Date 5/23/17  
Page 2 of 2

CLIENT PROJECT NAME / NO.: 76 (Former BP) Station No. 1117  
PROJECT CONTACT: Tony Banks  
GLOBAL ID:  
LOG CODE:  
P.O. NO.: I4261117.0001  
LAB CONTACT OR QUOTE NO.: JCB  
SAMPLER(S): (PRINT) Jeremy Ruest

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) <input checked="" type="checkbox"/> GRO	TPH <input type="checkbox"/> C6-C36 <input type="checkbox"/> C6-C44	TPH(d) <input type="checkbox"/> DRO	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	VOCs (8260)	Oxygenates (8260)	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747X	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	
11	VP-22-5	5/23/17	1315	S	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relinquished by: (Signature) *Anthony Banks* Date: 5/23/17 Time: 1335  
 Received by: (Signature/Affiliation) *T. O'Malley Esq*  
 Relinquished by: (Signature) *T. O'Malley* Date: 5/24/17 Time: 0800  
 Received by: (Signature/Affiliation) *[Signature]*  
 Relinquished by: (Signature) *T. O'Malley* Date: 5/24/17 Time: 0800  
 Received by: (Signature/Affiliation) *[Signature]*



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1860

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5063 COMMERCIAL CIRCLE  
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**NPS**



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CEL  
SAMPLE RECEIVING  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841

**ORC**  
**GARDEN GROVE**

**A**

**COD:** \$0.00  
**Weight:** 0 lb(s)  
**Reference:**  
ANTEA GROUP, PONDER  
**Delivery Instructions:**

**D92845A**



67225913

**Signature Type:** REQUIRED

Print Date: 5/23/2017 3:40 PM

**LABEL INSTRUCTIONS:**

**Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Antea

DATE: 05 / 24 / 2017

**TEMPERATURE:** (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)  
 Thermometer ID: SC3 (CF: 0.0°C); Temperature (w/o CF): 1.9 °C (w/ CF): 1.9 °C;  Blank  Sample  
 Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)  
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling  
 Sample(s) received at ambient temperature; placed on ice for transport by courier  
 Ambient Temperature:  Air  Filter Checked by: IS

**CUSTODY SEAL:**  
 Cooler  Present and Intact  Present but Not Intact  Not Present  N/A Checked by: IS  
 Sample(s)  Present and Intact  Present but Not Intact  Not Present  N/A Checked by: 1017

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:** (Trip Blank Lot Number: \_\_\_\_\_)  
**Aqueous:**  VOA  VOA<sub>h</sub>  VOA<sub>na<sub>2</sub></sub>  100PJ  100PJ<sub>na<sub>2</sub></sub>  125AGB  125AGB<sub>h</sub>  125AGB<sub>p</sub>  125PB  
 125PB<sub>z<sub>na</sub></sub>  250AGB  250CGB  250CGB<sub>s</sub>  250PB  250PB<sub>n</sub>  500AGB  500AGJ  500AGJ<sub>s</sub>  
 500PB  1AGB  1AGB<sub>na<sub>2</sub></sub>  1AGB<sub>s</sub>  1PB  1PB<sub>na</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_  
**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (S)  EnCores® (\_\_\_\_)  TerraCores® (3)  202 PJ  
**Air:**  Tedlar™  Canister  Sorbent Tube  PUF  \_\_\_\_\_ **Other Matrix** (\_\_\_\_):  \_\_\_\_\_  \_\_\_\_\_

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag  
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO<sub>3</sub>, na = NaOH, na<sub>2</sub> = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, p = H<sub>3</sub>PO<sub>4</sub>, Labeled/Checked by: 1017  
 s = H<sub>2</sub>SO<sub>4</sub>, u = ultra-pure, x = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>.H<sub>2</sub>O, z<sub>na</sub> = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH Reviewed by: 718

\* (40) 1-202 PJ + 3 Terracores




**WORK ORDER NUMBER: 17-05-1976**
*The difference is service*


AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**
**Client:** Antea Group

**Client Project Name:** 76 (Former BP) Station No. 11117 /  
 I42611117.0001

**Attention:** Tony Banks  
 1155 N. First St.  
 Suite 201  
 San Jose, CA 95112-4927



 Approved for release on 06/02/2017 by:  
 Terri Chang  
 Project Manager

ResultLink ▶

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Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Client Project Name: 76 (Former BP) Station No. 11117 / I42611117.0001  
Work Order Number: 17-05-1976

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 05/25/17. They were assigned to Work Order 17-05-1976.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

## Sample Summary

Client: Antea Group	Work Order:	17-05-1976
1155 N. First St., Suite 201	Project Name:	76 (Former BP) Station No. 11117 / I42611117.0001
San Jose, CA 95112-4927	PO Number:	
	Date/Time Received:	05/25/17 08:30
	Number of Containers:	33

Attn: Tony Banks

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
VP-18-5	17-05-1976-1	05/23/17 13:45	5	Solid
VP-19-5	17-05-1976-2	05/23/17 15:20	4	Solid
VP-20-5	17-05-1976-3	05/23/17 16:10	4	Solid
VP-21-5	17-05-1976-4	05/23/17 14:00	5	Solid
VP-23-5	17-05-1976-5	05/24/17 08:40	5	Solid
VP-24-5	17-05-1976-6	05/24/17 09:10	5	Solid
VP-25-5	17-05-1976-7	05/24/17 09:45	5	Solid

## Analytical Report

Antea Group	Date Received:	05/25/17
1155 N. First St., Suite 201	Work Order:	17-05-1976
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001 Page 1 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-18-5	17-05-1976-1-D	05/23/17 13:45	Solid	GC/MS LL	05/23/17	05/26/17 18:59	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.039	1.00	
Benzene	ND	0.00079	1.00	
Bromobenzene	ND	0.00079	1.00	
Bromochloromethane	ND	0.0016	1.00	
Bromodichloromethane	ND	0.00079	1.00	
Bromoform	ND	0.0039	1.00	
Bromomethane	ND	0.016	1.00	
2-Butanone	ND	0.016	1.00	
n-Butylbenzene	ND	0.00079	1.00	
sec-Butylbenzene	ND	0.00079	1.00	
tert-Butylbenzene	ND	0.00079	1.00	
Carbon Disulfide	ND	0.0079	1.00	
Carbon Tetrachloride	ND	0.00079	1.00	
Chlorobenzene	ND	0.00079	1.00	
Chloroethane	ND	0.0016	1.00	
Chloroform	ND	0.00079	1.00	
Chloromethane	ND	0.016	1.00	
2-Chlorotoluene	ND	0.00079	1.00	
4-Chlorotoluene	ND	0.00079	1.00	
Dibromochloromethane	ND	0.0016	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0039	1.00	
1,2-Dibromoethane	ND	0.00079	1.00	
Dibromomethane	ND	0.00079	1.00	
1,2-Dichlorobenzene	ND	0.00079	1.00	
1,3-Dichlorobenzene	ND	0.00079	1.00	
1,4-Dichlorobenzene	ND	0.00079	1.00	
Dichlorodifluoromethane	ND	0.0016	1.00	
1,1-Dichloroethane	ND	0.00079	1.00	
1,2-Dichloroethane	ND	0.00079	1.00	
1,1-Dichloroethene	ND	0.00079	1.00	
c-1,2-Dichloroethene	ND	0.00079	1.00	
t-1,2-Dichloroethene	ND	0.00079	1.00	
1,2-Dichloropropane	ND	0.00079	1.00	
1,3-Dichloropropane	ND	0.00079	1.00	
2,2-Dichloropropane	ND	0.0039	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0016	1.00	
c-1,3-Dichloropropene	ND	0.00079	1.00	
t-1,3-Dichloropropene	ND	0.0016	1.00	
Ethylbenzene	ND	0.00079	1.00	
2-Hexanone	ND	0.016	1.00	
Isopropylbenzene	ND	0.00079	1.00	
p-Isopropyltoluene	ND	0.00079	1.00	
Methylene Chloride	ND	0.0079	1.00	
4-Methyl-2-Pentanone	ND	0.016	1.00	
Naphthalene	ND	0.0079	1.00	
n-Propylbenzene	ND	0.0016	1.00	
Styrene	ND	0.00079	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00079	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0016	1.00	
Tetrachloroethene	ND	0.00079	1.00	
Toluene	ND	0.00079	1.00	
1,2,3-Trichlorobenzene	ND	0.0016	1.00	
1,2,4-Trichlorobenzene	ND	0.0016	1.00	
1,1,1-Trichloroethane	ND	0.00079	1.00	
1,1,2-Trichloroethane	ND	0.00079	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0079	1.00	
Trichloroethene	ND	0.0016	1.00	
Trichlorofluoromethane	ND	0.0079	1.00	
1,2,3-Trichloropropane	ND	0.0016	1.00	
1,2,4-Trimethylbenzene	ND	0.0016	1.00	
1,3,5-Trimethylbenzene	ND	0.0016	1.00	
Vinyl Acetate	ND	0.0079	1.00	
Vinyl Chloride	ND	0.00079	1.00	
p/m-Xylene	ND	0.0016	1.00	
o-Xylene	ND	0.00079	1.00	
Xylenes (total)	ND	0.00079	1.00	
Tert-Butyl Alcohol (TBA)	0.19	0.016	1.00	
Diisopropyl Ether (DIPE)	ND	0.00079	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00079	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00079	1.00	
Ethanol	ND	0.39	1.00	
Gasoline Range Organics (C6-C12)	ND	0.039	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	87-111	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>VP-18-5</b>	<b>17-05-1976-1-F</b>	<b>05/23/17 13:45</b>	<b>Solid</b>	<b>GC/MS LL</b>	<b>05/23/17</b>	<b>06/01/17 15:30</b>	<b>170601L012</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methyl-t-Butyl Ether (MTBE)	0.22	0.078	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	93	79-139	
1,2-Dichloroethane-d4	96	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	87-111	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group	Date Received:	05/25/17
1155 N. First St., Suite 201	Work Order:	17-05-1976
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001 Page 4 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-19-5	17-05-1976-2-C	05/23/17 15:20	Solid	GC/MS LL	05/23/17	05/26/17 19:28	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.067	1.00	
Benzene	ND	0.0013	1.00	
Bromobenzene	ND	0.0013	1.00	
Bromochloromethane	ND	0.0027	1.00	
Bromodichloromethane	ND	0.0013	1.00	
Bromoform	ND	0.0067	1.00	
Bromomethane	ND	0.027	1.00	
2-Butanone	ND	0.027	1.00	
n-Butylbenzene	ND	0.0013	1.00	
sec-Butylbenzene	ND	0.0013	1.00	
tert-Butylbenzene	ND	0.0013	1.00	
Carbon Disulfide	ND	0.013	1.00	
Carbon Tetrachloride	ND	0.0013	1.00	
Chlorobenzene	ND	0.0013	1.00	
Chloroethane	ND	0.0027	1.00	
Chloroform	ND	0.0013	1.00	
Chloromethane	ND	0.027	1.00	
2-Chlorotoluene	ND	0.0013	1.00	
4-Chlorotoluene	ND	0.0013	1.00	
Dibromochloromethane	ND	0.0027	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0067	1.00	
1,2-Dibromoethane	ND	0.0013	1.00	
Dibromomethane	ND	0.0013	1.00	
1,2-Dichlorobenzene	ND	0.0013	1.00	
1,3-Dichlorobenzene	ND	0.0013	1.00	
1,4-Dichlorobenzene	ND	0.0013	1.00	
Dichlorodifluoromethane	ND	0.0027	1.00	
1,1-Dichloroethane	ND	0.0013	1.00	
1,2-Dichloroethane	ND	0.0013	1.00	
1,1-Dichloroethene	ND	0.0013	1.00	
c-1,2-Dichloroethene	ND	0.0013	1.00	
t-1,2-Dichloroethene	ND	0.0013	1.00	
1,2-Dichloropropane	ND	0.0013	1.00	
1,3-Dichloropropane	ND	0.0013	1.00	
2,2-Dichloropropane	ND	0.0067	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0027	1.00	
c-1,3-Dichloropropene	ND	0.0013	1.00	
t-1,3-Dichloropropene	ND	0.0027	1.00	
Ethylbenzene	ND	0.0013	1.00	
2-Hexanone	ND	0.027	1.00	
Isopropylbenzene	ND	0.0013	1.00	
p-Isopropyltoluene	ND	0.0013	1.00	
Methylene Chloride	ND	0.013	1.00	
4-Methyl-2-Pentanone	ND	0.027	1.00	
Naphthalene	ND	0.013	1.00	
n-Propylbenzene	ND	0.0027	1.00	
Styrene	ND	0.0013	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0013	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0027	1.00	
Tetrachloroethene	ND	0.0013	1.00	
Toluene	ND	0.0013	1.00	
1,2,3-Trichlorobenzene	ND	0.0027	1.00	
1,2,4-Trichlorobenzene	ND	0.0027	1.00	
1,1,1-Trichloroethane	ND	0.0013	1.00	
1,1,2-Trichloroethane	ND	0.0013	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.013	1.00	
Trichloroethene	ND	0.0027	1.00	
Trichlorofluoromethane	ND	0.013	1.00	
1,2,3-Trichloropropane	ND	0.0027	1.00	
1,2,4-Trimethylbenzene	ND	0.0027	1.00	
1,3,5-Trimethylbenzene	0.0030	0.0027	1.00	
Vinyl Acetate	ND	0.013	1.00	
Vinyl Chloride	ND	0.0013	1.00	
p/m-Xylene	ND	0.0027	1.00	
o-Xylene	ND	0.0013	1.00	
Xylenes (total)	ND	0.0013	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0027	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.027	1.00	
Diisopropyl Ether (DIPE)	ND	0.0013	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0013	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0013	1.00	
Ethanol	ND	0.67	1.00	
Gasoline Range Organics (C6-C12)	0.12	0.067	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/25/17  
Work Order: 17-05-1976  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	114	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-20-5	17-05-1976-3-C	05/23/17 16:10	Solid	GC/MS LL	05/23/17	05/26/17 19:56	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.062	1.00	
Benzene	ND	0.0012	1.00	
Bromobenzene	ND	0.0012	1.00	
Bromochloromethane	ND	0.0025	1.00	
Bromodichloromethane	ND	0.0012	1.00	
Bromoform	ND	0.0062	1.00	
Bromomethane	ND	0.025	1.00	
2-Butanone	ND	0.025	1.00	
n-Butylbenzene	ND	0.0012	1.00	
sec-Butylbenzene	ND	0.0012	1.00	
tert-Butylbenzene	ND	0.0012	1.00	
Carbon Disulfide	ND	0.012	1.00	
Carbon Tetrachloride	ND	0.0012	1.00	
Chlorobenzene	ND	0.0012	1.00	
Chloroethane	ND	0.0025	1.00	
Chloroform	ND	0.0012	1.00	
Chloromethane	ND	0.025	1.00	
2-Chlorotoluene	ND	0.0012	1.00	
4-Chlorotoluene	ND	0.0012	1.00	
Dibromochloromethane	ND	0.0025	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0062	1.00	
1,2-Dibromoethane	ND	0.0012	1.00	
Dibromomethane	ND	0.0012	1.00	
1,2-Dichlorobenzene	ND	0.0012	1.00	
1,3-Dichlorobenzene	ND	0.0012	1.00	
1,4-Dichlorobenzene	ND	0.0012	1.00	
Dichlorodifluoromethane	ND	0.0025	1.00	
1,1-Dichloroethane	ND	0.0012	1.00	
1,2-Dichloroethane	ND	0.0012	1.00	
1,1-Dichloroethene	ND	0.0012	1.00	
c-1,2-Dichloroethene	ND	0.0012	1.00	
t-1,2-Dichloroethene	ND	0.0012	1.00	
1,2-Dichloropropane	ND	0.0012	1.00	
1,3-Dichloropropane	ND	0.0012	1.00	
2,2-Dichloropropane	ND	0.0062	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group	Date Received:	05/25/17
1155 N. First St., Suite 201	Work Order:	17-05-1976
San Jose, CA 95112-4927	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	mg/kg
Project: 76 (Former BP) Station No. 11117 / I42611117.0001		Page 8 of 24

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0025	1.00	
c-1,3-Dichloropropene	ND	0.0012	1.00	
t-1,3-Dichloropropene	ND	0.0025	1.00	
Ethylbenzene	ND	0.0012	1.00	
2-Hexanone	ND	0.025	1.00	
Isopropylbenzene	ND	0.0012	1.00	
p-Isopropyltoluene	ND	0.0012	1.00	
Methylene Chloride	ND	0.012	1.00	
4-Methyl-2-Pentanone	ND	0.025	1.00	
Naphthalene	ND	0.012	1.00	
n-Propylbenzene	ND	0.0025	1.00	
Styrene	ND	0.0012	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0012	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0025	1.00	
Tetrachloroethene	ND	0.0012	1.00	
Toluene	ND	0.0012	1.00	
1,2,3-Trichlorobenzene	ND	0.0025	1.00	
1,2,4-Trichlorobenzene	ND	0.0025	1.00	
1,1,1-Trichloroethane	ND	0.0012	1.00	
1,1,2-Trichloroethane	ND	0.0012	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.012	1.00	
Trichloroethene	ND	0.0025	1.00	
Trichlorofluoromethane	ND	0.012	1.00	
1,2,3-Trichloropropane	ND	0.0025	1.00	
1,2,4-Trimethylbenzene	ND	0.0025	1.00	
1,3,5-Trimethylbenzene	ND	0.0025	1.00	
Vinyl Acetate	ND	0.012	1.00	
Vinyl Chloride	ND	0.0012	1.00	
p/m-Xylene	ND	0.0025	1.00	
o-Xylene	ND	0.0012	1.00	
Xylenes (total)	ND	0.0012	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0025	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.025	1.00	
Diisopropyl Ether (DIPE)	ND	0.0012	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0012	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0012	1.00	
Ethanol	ND	0.62	1.00	
Gasoline Range Organics (C6-C12)	ND	0.062	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/25/17  
Work Order: 17-05-1976  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	



## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-21-5	17-05-1976-4-D	05/23/17 14:00	Solid	GC/MS LL	05/23/17	05/26/17 20:24	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.047	1.00	
Benzene	ND	0.00094	1.00	
Bromobenzene	ND	0.00094	1.00	
Bromochloromethane	ND	0.0019	1.00	
Bromodichloromethane	ND	0.00094	1.00	
Bromoform	ND	0.0047	1.00	
Bromomethane	ND	0.019	1.00	
2-Butanone	ND	0.019	1.00	
n-Butylbenzene	ND	0.00094	1.00	
sec-Butylbenzene	ND	0.00094	1.00	
tert-Butylbenzene	ND	0.00094	1.00	
Carbon Disulfide	ND	0.0094	1.00	
Carbon Tetrachloride	ND	0.00094	1.00	
Chlorobenzene	ND	0.00094	1.00	
Chloroethane	ND	0.0019	1.00	
Chloroform	ND	0.00094	1.00	
Chloromethane	ND	0.019	1.00	
2-Chlorotoluene	ND	0.00094	1.00	
4-Chlorotoluene	ND	0.00094	1.00	
Dibromochloromethane	ND	0.0019	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0047	1.00	
1,2-Dibromoethane	ND	0.00094	1.00	
Dibromomethane	ND	0.00094	1.00	
1,2-Dichlorobenzene	ND	0.00094	1.00	
1,3-Dichlorobenzene	ND	0.00094	1.00	
1,4-Dichlorobenzene	ND	0.00094	1.00	
Dichlorodifluoromethane	ND	0.0019	1.00	
1,1-Dichloroethane	ND	0.00094	1.00	
1,2-Dichloroethane	ND	0.00094	1.00	
1,1-Dichloroethene	ND	0.00094	1.00	
c-1,2-Dichloroethene	ND	0.00094	1.00	
t-1,2-Dichloroethene	ND	0.00094	1.00	
1,2-Dichloropropane	ND	0.00094	1.00	
1,3-Dichloropropane	ND	0.00094	1.00	
2,2-Dichloropropane	ND	0.0047	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0019	1.00	
c-1,3-Dichloropropene	ND	0.00094	1.00	
t-1,3-Dichloropropene	ND	0.0019	1.00	
Ethylbenzene	ND	0.00094	1.00	
2-Hexanone	ND	0.019	1.00	
Isopropylbenzene	ND	0.00094	1.00	
p-Isopropyltoluene	ND	0.00094	1.00	
Methylene Chloride	ND	0.0094	1.00	
4-Methyl-2-Pentanone	ND	0.019	1.00	
Naphthalene	ND	0.0094	1.00	
n-Propylbenzene	ND	0.0019	1.00	
Styrene	ND	0.00094	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00094	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0019	1.00	
Tetrachloroethene	ND	0.00094	1.00	
Toluene	ND	0.00094	1.00	
1,2,3-Trichlorobenzene	ND	0.0019	1.00	
1,2,4-Trichlorobenzene	ND	0.0019	1.00	
1,1,1-Trichloroethane	ND	0.00094	1.00	
1,1,2-Trichloroethane	ND	0.00094	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0094	1.00	
Trichloroethene	ND	0.0019	1.00	
Trichlorofluoromethane	ND	0.0094	1.00	
1,2,3-Trichloropropane	ND	0.0019	1.00	
1,2,4-Trimethylbenzene	ND	0.0019	1.00	
1,3,5-Trimethylbenzene	ND	0.0019	1.00	
Vinyl Acetate	ND	0.0094	1.00	
Vinyl Chloride	ND	0.00094	1.00	
p/m-Xylene	ND	0.0019	1.00	
o-Xylene	ND	0.00094	1.00	
Xylenes (total)	ND	0.00094	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0019	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.019	1.00	
Diisopropyl Ether (DIPE)	ND	0.00094	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00094	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00094	1.00	
Ethanol	ND	0.47	1.00	
Gasoline Range Organics (C6-C12)	ND	0.047	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-23-5	17-05-1976-5-D	05/24/17 08:40	Solid	GC/MS LL	05/24/17	05/26/17 20:53	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.044	1.00	
Benzene	ND	0.00088	1.00	
Bromobenzene	ND	0.00088	1.00	
Bromochloromethane	ND	0.0018	1.00	
Bromodichloromethane	ND	0.00088	1.00	
Bromoform	ND	0.0044	1.00	
Bromomethane	ND	0.018	1.00	
2-Butanone	ND	0.018	1.00	
n-Butylbenzene	ND	0.00088	1.00	
sec-Butylbenzene	0.0011	0.00088	1.00	
tert-Butylbenzene	ND	0.00088	1.00	
Carbon Disulfide	ND	0.0088	1.00	
Carbon Tetrachloride	ND	0.00088	1.00	
Chlorobenzene	ND	0.00088	1.00	
Chloroethane	ND	0.0018	1.00	
Chloroform	ND	0.00088	1.00	
Chloromethane	ND	0.018	1.00	
2-Chlorotoluene	ND	0.00088	1.00	
4-Chlorotoluene	ND	0.00088	1.00	
Dibromochloromethane	ND	0.0018	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0044	1.00	
1,2-Dibromoethane	ND	0.00088	1.00	
Dibromomethane	ND	0.00088	1.00	
1,2-Dichlorobenzene	ND	0.00088	1.00	
1,3-Dichlorobenzene	ND	0.00088	1.00	
1,4-Dichlorobenzene	ND	0.00088	1.00	
Dichlorodifluoromethane	ND	0.0018	1.00	
1,1-Dichloroethane	ND	0.00088	1.00	
1,2-Dichloroethane	ND	0.00088	1.00	
1,1-Dichloroethene	ND	0.00088	1.00	
c-1,2-Dichloroethene	ND	0.00088	1.00	
t-1,2-Dichloroethene	ND	0.00088	1.00	
1,2-Dichloropropane	ND	0.00088	1.00	
1,3-Dichloropropane	ND	0.00088	1.00	
2,2-Dichloropropane	ND	0.0044	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0018	1.00	
c-1,3-Dichloropropene	ND	0.00088	1.00	
t-1,3-Dichloropropene	ND	0.0018	1.00	
Ethylbenzene	ND	0.00088	1.00	
2-Hexanone	ND	0.018	1.00	
Isopropylbenzene	ND	0.00088	1.00	
p-Isopropyltoluene	ND	0.00088	1.00	
Methylene Chloride	ND	0.0088	1.00	
4-Methyl-2-Pentanone	ND	0.018	1.00	
Naphthalene	ND	0.0088	1.00	
n-Propylbenzene	ND	0.0018	1.00	
Styrene	ND	0.00088	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00088	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0018	1.00	
Tetrachloroethene	ND	0.00088	1.00	
Toluene	ND	0.00088	1.00	
1,2,3-Trichlorobenzene	ND	0.0018	1.00	
1,2,4-Trichlorobenzene	ND	0.0018	1.00	
1,1,1-Trichloroethane	ND	0.00088	1.00	
1,1,2-Trichloroethane	ND	0.00088	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0088	1.00	
Trichloroethene	ND	0.0018	1.00	
Trichlorofluoromethane	ND	0.0088	1.00	
1,2,3-Trichloropropane	ND	0.0018	1.00	
1,2,4-Trimethylbenzene	ND	0.0018	1.00	
1,3,5-Trimethylbenzene	ND	0.0018	1.00	
Vinyl Acetate	ND	0.0088	1.00	
Vinyl Chloride	ND	0.00088	1.00	
p/m-Xylene	ND	0.0018	1.00	
o-Xylene	ND	0.00088	1.00	
Xylenes (total)	ND	0.00088	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0018	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.018	1.00	
Diisopropyl Ether (DIPE)	ND	0.00088	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00088	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00088	1.00	
Ethanol	ND	0.44	1.00	
Gasoline Range Organics (C6-C12)	0.15	0.044	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/25/17  
Work Order: 17-05-1976  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	114	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	96	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-24-5	17-05-1976-6-D	05/24/17 09:10	Solid	GC/MS LL	05/24/17	05/26/17 21:21	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.047	1.00	
Benzene	ND	0.00093	1.00	
Bromobenzene	ND	0.00093	1.00	
Bromochloromethane	ND	0.0019	1.00	
Bromodichloromethane	ND	0.00093	1.00	
Bromoform	ND	0.0047	1.00	
Bromomethane	ND	0.019	1.00	
2-Butanone	ND	0.019	1.00	
n-Butylbenzene	ND	0.00093	1.00	
sec-Butylbenzene	ND	0.00093	1.00	
tert-Butylbenzene	ND	0.00093	1.00	
Carbon Disulfide	ND	0.0093	1.00	
Carbon Tetrachloride	ND	0.00093	1.00	
Chlorobenzene	ND	0.00093	1.00	
Chloroethane	ND	0.0019	1.00	
Chloroform	ND	0.00093	1.00	
Chloromethane	ND	0.019	1.00	
2-Chlorotoluene	ND	0.00093	1.00	
4-Chlorotoluene	ND	0.00093	1.00	
Dibromochloromethane	ND	0.0019	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0047	1.00	
1,2-Dibromoethane	ND	0.00093	1.00	
Dibromomethane	ND	0.00093	1.00	
1,2-Dichlorobenzene	ND	0.00093	1.00	
1,3-Dichlorobenzene	ND	0.00093	1.00	
1,4-Dichlorobenzene	ND	0.00093	1.00	
Dichlorodifluoromethane	ND	0.0019	1.00	
1,1-Dichloroethane	ND	0.00093	1.00	
1,2-Dichloroethane	ND	0.00093	1.00	
1,1-Dichloroethene	ND	0.00093	1.00	
c-1,2-Dichloroethene	ND	0.00093	1.00	
t-1,2-Dichloroethene	ND	0.00093	1.00	
1,2-Dichloropropane	ND	0.00093	1.00	
1,3-Dichloropropane	ND	0.00093	1.00	
2,2-Dichloropropane	ND	0.0047	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0019	1.00	
c-1,3-Dichloropropene	ND	0.00093	1.00	
t-1,3-Dichloropropene	ND	0.0019	1.00	
Ethylbenzene	ND	0.00093	1.00	
2-Hexanone	ND	0.019	1.00	
Isopropylbenzene	ND	0.00093	1.00	
p-Isopropyltoluene	ND	0.00093	1.00	
Methylene Chloride	ND	0.0093	1.00	
4-Methyl-2-Pentanone	ND	0.019	1.00	
Naphthalene	ND	0.0093	1.00	
n-Propylbenzene	ND	0.0019	1.00	
Styrene	ND	0.00093	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00093	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0019	1.00	
Tetrachloroethene	ND	0.00093	1.00	
Toluene	ND	0.00093	1.00	
1,2,3-Trichlorobenzene	ND	0.0019	1.00	
1,2,4-Trichlorobenzene	ND	0.0019	1.00	
1,1,1-Trichloroethane	ND	0.00093	1.00	
1,1,2-Trichloroethane	ND	0.00093	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0093	1.00	
Trichloroethene	ND	0.0019	1.00	
Trichlorofluoromethane	ND	0.0093	1.00	
1,2,3-Trichloropropane	ND	0.0019	1.00	
1,2,4-Trimethylbenzene	ND	0.0019	1.00	
1,3,5-Trimethylbenzene	ND	0.0019	1.00	
Vinyl Acetate	ND	0.0093	1.00	
Vinyl Chloride	ND	0.00093	1.00	
p/m-Xylene	ND	0.0019	1.00	
o-Xylene	ND	0.00093	1.00	
Xylenes (total)	ND	0.00093	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0019	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.019	1.00	
Diisopropyl Ether (DIPE)	ND	0.00093	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00093	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00093	1.00	
Ethanol	ND	0.47	1.00	
Gasoline Range Organics (C6-C12)	ND	0.047	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	109	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-25-5	17-05-1976-7-D	05/24/17 09:45	Solid	GC/MS LL	05/24/17	05/26/17 21:50	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.046	1.00	
Benzene	ND	0.00092	1.00	
Bromobenzene	ND	0.00092	1.00	
Bromochloromethane	ND	0.0018	1.00	
Bromodichloromethane	ND	0.00092	1.00	
Bromoform	ND	0.0046	1.00	
Bromomethane	ND	0.018	1.00	
2-Butanone	ND	0.018	1.00	
n-Butylbenzene	ND	0.00092	1.00	
sec-Butylbenzene	ND	0.00092	1.00	
tert-Butylbenzene	ND	0.00092	1.00	
Carbon Disulfide	ND	0.0092	1.00	
Carbon Tetrachloride	ND	0.00092	1.00	
Chlorobenzene	ND	0.00092	1.00	
Chloroethane	ND	0.0018	1.00	
Chloroform	ND	0.00092	1.00	
Chloromethane	ND	0.018	1.00	
2-Chlorotoluene	ND	0.00092	1.00	
4-Chlorotoluene	ND	0.00092	1.00	
Dibromochloromethane	ND	0.0018	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0046	1.00	
1,2-Dibromoethane	ND	0.00092	1.00	
Dibromomethane	ND	0.00092	1.00	
1,2-Dichlorobenzene	ND	0.00092	1.00	
1,3-Dichlorobenzene	ND	0.00092	1.00	
1,4-Dichlorobenzene	ND	0.00092	1.00	
Dichlorodifluoromethane	ND	0.0018	1.00	
1,1-Dichloroethane	ND	0.00092	1.00	
1,2-Dichloroethane	ND	0.00092	1.00	
1,1-Dichloroethene	ND	0.00092	1.00	
c-1,2-Dichloroethene	ND	0.00092	1.00	
t-1,2-Dichloroethene	ND	0.00092	1.00	
1,2-Dichloropropane	ND	0.00092	1.00	
1,3-Dichloropropane	ND	0.00092	1.00	
2,2-Dichloropropane	ND	0.0046	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0018	1.00	
c-1,3-Dichloropropene	ND	0.00092	1.00	
t-1,3-Dichloropropene	ND	0.0018	1.00	
Ethylbenzene	ND	0.00092	1.00	
2-Hexanone	ND	0.018	1.00	
Isopropylbenzene	ND	0.00092	1.00	
p-Isopropyltoluene	ND	0.00092	1.00	
Methylene Chloride	ND	0.0092	1.00	
4-Methyl-2-Pentanone	ND	0.018	1.00	
Naphthalene	ND	0.0092	1.00	
n-Propylbenzene	ND	0.0018	1.00	
Styrene	ND	0.00092	1.00	
1,1,1,2-Tetrachloroethane	ND	0.00092	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0018	1.00	
Tetrachloroethene	ND	0.00092	1.00	
Toluene	ND	0.00092	1.00	
1,2,3-Trichlorobenzene	ND	0.0018	1.00	
1,2,4-Trichlorobenzene	ND	0.0018	1.00	
1,1,1-Trichloroethane	ND	0.00092	1.00	
1,1,2-Trichloroethane	ND	0.00092	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.0092	1.00	
Trichloroethene	ND	0.0018	1.00	
Trichlorofluoromethane	ND	0.0092	1.00	
1,2,3-Trichloropropane	ND	0.0018	1.00	
1,2,4-Trimethylbenzene	ND	0.0018	1.00	
1,3,5-Trimethylbenzene	ND	0.0018	1.00	
Vinyl Acetate	ND	0.0092	1.00	
Vinyl Chloride	ND	0.00092	1.00	
p/m-Xylene	ND	0.0018	1.00	
o-Xylene	ND	0.00092	1.00	
Xylenes (total)	ND	0.00092	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0018	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.018	1.00	
Diisopropyl Ether (DIPE)	ND	0.00092	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.00092	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.00092	1.00	
Ethanol	ND	0.46	1.00	
Gasoline Range Organics (C6-C12)	ND	0.046	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/25/17  
Work Order: 17-05-1976  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B  
Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	112	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	87-111	

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-1909	N/A	Solid	GC/MS LL	05/26/17	05/26/17 14:01	170526L018

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	0.050	1.00	
Benzene	ND	0.0010	1.00	
Bromobenzene	ND	0.0010	1.00	
Bromochloromethane	ND	0.0020	1.00	
Bromodichloromethane	ND	0.0010	1.00	
Bromoform	ND	0.0050	1.00	
Bromomethane	ND	0.020	1.00	
2-Butanone	ND	0.020	1.00	
n-Butylbenzene	ND	0.0010	1.00	
sec-Butylbenzene	ND	0.0010	1.00	
tert-Butylbenzene	ND	0.0010	1.00	
Carbon Disulfide	ND	0.010	1.00	
Carbon Tetrachloride	ND	0.0010	1.00	
Chlorobenzene	ND	0.0010	1.00	
Chloroethane	ND	0.0020	1.00	
Chloroform	ND	0.0010	1.00	
Chloromethane	ND	0.020	1.00	
2-Chlorotoluene	ND	0.0010	1.00	
4-Chlorotoluene	ND	0.0010	1.00	
Dibromochloromethane	ND	0.0020	1.00	
1,2-Dibromo-3-Chloropropane	ND	0.0050	1.00	
1,2-Dibromoethane	ND	0.0010	1.00	
Dibromomethane	ND	0.0010	1.00	
1,2-Dichlorobenzene	ND	0.0010	1.00	
1,3-Dichlorobenzene	ND	0.0010	1.00	
1,4-Dichlorobenzene	ND	0.0010	1.00	
Dichlorodifluoromethane	ND	0.0020	1.00	
1,1-Dichloroethane	ND	0.0010	1.00	
1,2-Dichloroethane	ND	0.0010	1.00	
1,1-Dichloroethene	ND	0.0010	1.00	
c-1,2-Dichloroethene	ND	0.0010	1.00	
t-1,2-Dichloroethene	ND	0.0010	1.00	
1,2-Dichloropropane	ND	0.0010	1.00	
1,3-Dichloropropane	ND	0.0010	1.00	
2,2-Dichloropropane	ND	0.0050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	0.0020	1.00	
c-1,3-Dichloropropene	ND	0.0010	1.00	
t-1,3-Dichloropropene	ND	0.0020	1.00	
Ethylbenzene	ND	0.0010	1.00	
2-Hexanone	ND	0.020	1.00	
Isopropylbenzene	ND	0.0010	1.00	
p-Isopropyltoluene	ND	0.0010	1.00	
Methylene Chloride	ND	0.010	1.00	
4-Methyl-2-Pentanone	ND	0.020	1.00	
Naphthalene	ND	0.010	1.00	
n-Propylbenzene	ND	0.0020	1.00	
Styrene	ND	0.0010	1.00	
1,1,1,2-Tetrachloroethane	ND	0.0010	1.00	
1,1,2,2-Tetrachloroethane	ND	0.0020	1.00	
Tetrachloroethene	ND	0.0010	1.00	
Toluene	ND	0.0010	1.00	
1,2,3-Trichlorobenzene	ND	0.0020	1.00	
1,2,4-Trichlorobenzene	ND	0.0020	1.00	
1,1,1-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloroethane	ND	0.0010	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1.00	
Trichloroethene	ND	0.0020	1.00	
Trichlorofluoromethane	ND	0.010	1.00	
1,2,3-Trichloropropane	ND	0.0020	1.00	
1,2,4-Trimethylbenzene	ND	0.0020	1.00	
1,3,5-Trimethylbenzene	ND	0.0020	1.00	
Vinyl Acetate	ND	0.010	1.00	
Vinyl Chloride	ND	0.0010	1.00	
p/m-Xylene	ND	0.0020	1.00	
o-Xylene	ND	0.0010	1.00	
Xylenes (total)	ND	0.0010	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1.00	
Tert-Butyl Alcohol (TBA)	ND	0.020	1.00	
Diisopropyl Ether (DIPE)	ND	0.0010	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0010	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.0010	1.00	
Ethanol	ND	0.50	1.00	
Gasoline Range Organics (C6-C12)	ND	0.050	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Antea Group  
 1155 N. First St., Suite 201  
 San Jose, CA 95112-4927

Date Received: 05/25/17  
 Work Order: 17-05-1976  
 Preparation: EPA 5035  
 Method: GC/MS / EPA 8260B  
 Units: mg/kg

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	104	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	110	80-120	
Toluene-d8-TPPH	104	87-111	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-779-1911</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS LL</b>	<b>06/01/17</b>	<b>06/01/17 14:05</b>	<b>170601L012</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Methyl-t-Butyl Ether (MTBE)	ND	0.20	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	95	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	87-111	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Quality Control - LCS/LCSD

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/25/17  
Work Order: 17-05-1976  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-1909	LCS	Solid	GC/MS LL	05/26/17	05/26/17 12:34	170526L018				
099-12-779-1909	LCSD	Solid	GC/MS LL	05/26/17	05/26/17 13:02	170526L018				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.04927	99	0.04986	100	80-120	73-127	1	0-20	
Carbon Tetrachloride	0.05000	0.05048	101	0.05038	101	65-137	53-149	0	0-20	
Chlorobenzene	0.05000	0.05174	103	0.05176	104	80-120	73-127	0	0-20	
1,2-Dibromoethane	0.05000	0.05523	110	0.05385	108	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	0.05000	0.05316	106	0.05323	106	80-120	73-127	0	0-20	
1,2-Dichloroethane	0.05000	0.05187	104	0.05149	103	80-120	73-127	1	0-20	
1,1-Dichloroethene	0.05000	0.05444	109	0.05372	107	68-128	58-138	1	0-20	
Ethylbenzene	0.05000	0.05380	108	0.05334	107	80-120	73-127	1	0-20	
Toluene	0.05000	0.05111	102	0.05122	102	80-120	73-127	0	0-20	
Trichloroethene	0.05000	0.05078	102	0.05163	103	80-120	73-127	2	0-20	
Vinyl Chloride	0.05000	0.05257	105	0.05147	103	67-127	57-137	2	0-20	
p/m-Xylene	0.1000	0.1084	108	0.1081	108	75-125	67-133	0	0-25	
o-Xylene	0.05000	0.05319	106	0.05297	106	75-125	67-133	0	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04680	94	0.04843	97	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2747	110	0.2791	112	73-121	65-129	2	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.05234	105	0.05219	104	69-129	59-139	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.04520	90	0.04595	92	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.04512	90	0.04621	92	74-122	66-130	2	0-20	
Ethanol	0.5000	0.4610	92	0.3544	71	51-135	37-149	26	0-27	
Gasoline Range Organics (C6-C12)	1.000	1.048	105	1.015	102	65-130	54-141	3	0-30	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

Antea Group  
1155 N. First St., Suite 201  
San Jose, CA 95112-4927

Date Received: 05/25/17  
Work Order: 17-05-1976  
Preparation: EPA 5035  
Method: GC/MS / EPA 8260B

Project: 76 (Former BP) Station No. 11117 / I42611117.0001

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-1911	LCS	Solid	GC/MS LL	06/01/17	06/01/17 12:11	170601L012				
099-12-779-1911	LCSD	Solid	GC/MS LL	06/01/17	06/01/17 12:39	170601L012				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.05000	0.04147	83	0.04065	81	80-120	73-127	2	0-20	
Carbon Tetrachloride	0.05000	0.04568	91	0.04422	88	65-137	53-149	3	0-20	
Chlorobenzene	0.05000	0.04519	90	0.04570	91	80-120	73-127	1	0-20	
1,2-Dibromoethane	0.05000	0.04844	97	0.05063	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	0.05000	0.04930	99	0.04990	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	0.05000	0.04431	89	0.04401	88	80-120	73-127	1	0-20	
1,1-Dichloroethene	0.05000	0.04128	83	0.03938	79	68-128	58-138	5	0-20	
Ethylbenzene	0.05000	0.04466	89	0.04471	89	80-120	73-127	0	0-20	
Toluene	0.05000	0.04279	86	0.04226	85	80-120	73-127	1	0-20	
Trichloroethene	0.05000	0.04163	83	0.04026	81	80-120	73-127	3	0-20	
Vinyl Chloride	0.05000	0.06281	126	0.06257	125	67-127	57-137	0	0-20	
p/m-Xylene	0.1000	0.09004	90	0.08973	90	75-125	67-133	0	0-25	
o-Xylene	0.05000	0.04532	91	0.04605	92	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	0.05000	0.04677	94	0.04836	97	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	0.2500	0.2849	114	0.2854	114	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	0.05000	0.04708	94	0.04761	95	69-129	59-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	0.05000	0.04944	99	0.05015	100	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	0.05000	0.04631	93	0.04722	94	74-122	66-130	2	0-20	
Ethanol	0.5000	0.4391	88	0.4171	83	51-135	37-149	5	0-27	
Gasoline Range Organics (C6-C12)	1.000	0.9605	96	0.9145	91	65-130	54-141	5	0-30	

Total number of LCS compounds: 20

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

# Sample Analysis Summary Report

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Work Order: 17-05-1976

Page 1 of 1

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<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
GC/MS / EPA 8260B	EPA 5035	867	GC/MS LL	2

  
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## Glossary of Terms and Qualifiers

Work Order: 17-05-1976

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494  
For courier service / sample drop off information, contact us26\_sales@eurofins.com or call us.

LABORATORY CLIENT:

Antea Group  
ADDRESS: 1155 N First Street, Suite 201  
CITY: San Jose STATE: CA ZIP: 95112  
E-MAIL: Tony.Banks@AnteaGroup.com

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):  
 SAME DAY  24 HR  48 HR  72 HR  5 DAYS  STANDARD

EDD  
 COELT EDF  OTHER

SPECIAL INSTRUCTIONS: Hold stainless steel sleeves for potential additional analysis

CHAIN-OF-CUSTODY RECORD

WO NO. / LAB USE ONLY  
**17-05-1976**  
Date 5/24/17 Page 1 of 1

CLIENT PROJECT NAME / NO.: 76 (Former BP) Station No. 1117  
PROJECT CONTACT: Tony Banks 714-864-8131  
P.O. NO.: I4261117.0001  
LAB CONTACT OR QUOTE NO.:  
GLOBAL ID:  
LOG CODE:  
SAMPLER(S): (PRINT) Jeremy Ruest

REQUESTED ANALYSES  
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	RECEIVED			Field Filtered	TPH (g) GRO (3260)	TPH (d) DRO	TPH (g) C36 C8-C44	TPH	BTEX / MTBE (3260)	VOCs (8260)	Oxygenates (8260)	Prep (5035) En Core Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs (8270) 8270 SIM	T22 Metals (6010/747X) 6020/747X	Cr(VI) (7196) 7199 218.6	
		DATE	TIME			Unpreserved	Preserved																	
1	VP-18-5	5/23/17	1345	S	5	X	X	X	X	X														
2	VP-19-5	5/23/17	1520	S	5	X	X	X	X	X														
3	VP-20-5	5/23/17	1610	S	5	X	X	X	X	X														
4	VP-21-5	5/23/17	1400	S	5	X	X	X	X	X														
5	VP-23-5	5/24/17	0840	S	5	X	X	X	X	X														
6	VP-24-5	5/24/17	0910	S	5	X	X	X	X	X														
7	VP-25-5	5/24/17	0945	S	5	X	X	X	X	X														

Relinquished by: (Signature) Tony Banks  
Relinquished by: (Signature) Tony Banks  
Relinquished by: (Signature) Tony Banks  
Date: 5/24/17 Time: 1230  
Received by: (Signature/Affiliation) To-Or Valley ECI  
Received by: (Signature/Affiliation)  
Received by: (Signature/Affiliation)

Relinquished by: (Signature) Tony Banks  
Relinquished by: (Signature) Tony Banks  
Relinquished by: (Signature) Tony Banks  
Date: 5/25/17 Time: 0830





800-322-5555 www.gso.com

1976

NPS

**Ship From**

CAL SCIENCE- CONCORD  
ALAN KEMP  
5063 COMMERCIAL CIRCLE  
#H  
CONCORD, CA 94520

Tracking #: 536247010



**Ship To**

CEL  
SAMPLE RECEIVING  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841

**ORC**  
GARDEN GROVE

**A**

COD: \$0.00

Weight: 0 lb(s)

**Reference:**

CB & I, SCHNITZER STEEL, ANTEA GROUP

**Delivery Instructions:**

**Signature Type: REQUIRED**

**D92845A**



67280495

Print Date: 5/24/2017 2:09 PM

**LABEL INSTRUCTIONS:**

**Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Anteq

DATE: 05/25/2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3 (CF: 0.0°C); Temperature (w/o CF): 2.4 °C (w/ CF): 2.4 °C;  Blank  Sample

Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature:  Air  Filter

Checked by: IS

CUSTODY SEAL:

Cooler  Present and Intact  Present but Not Intact  Not Present  N/A

Checked by: IS

Sample(s)  Present and Intact  Present but Not Intact  Not Present  N/A

Checked by: 1017

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: \_\_\_\_\_)

Aqueous:  VOA  VOAh  VOAna<sub>2</sub>  100PJ  100PJna<sub>2</sub>  125AGB  125AGBh  125AGBp  125PB

125PBz<sub>na</sub>  250AGB  250CGB  250CGBs  250PB  250PBn  500AGB  500AGJ  500AGJs

500PB  1AGB  1AGBna<sub>2</sub>  1AGBs  1PB  1PBna  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (S)  EnCores® (\_\_\_\_)  TerraCores® (3)  202PJ

Air:  Tedlar™  Canister  Sorbent Tube  PUF  \_\_\_\_\_ Other Matrix (\_\_\_\_):  \_\_\_\_\_  \_\_\_\_\_

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO<sub>3</sub>, na = NaOH, na<sub>2</sub> = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, p = H<sub>3</sub>PO<sub>4</sub>,

Labeled/Checked by: 1017

s = H<sub>2</sub>SO<sub>4</sub>, u = ultra-pure, x = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>.H<sub>2</sub>O, z<sub>na</sub> = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 1053

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### SAMPLE ANOMALY REPORT

DATE: 05 / 25 / 2017

**SAMPLES, CONTAINERS, AND LABELS:**

- Sample(s) NOT RECEIVED but listed on COC
- Sample(s) received but NOT LISTED on COC
- Holding time expired (list client or ECI sample ID and analysis)
- Insufficient sample amount for requested analysis (list analysis)
- Improper container(s) used (list analysis)
- Improper preservative used (list analysis)
- No preservative noted on COC or label (list analysis and notify lab)
- Sample container(s) not labeled
- Client sample label(s) illegible (list container type and analysis)
- Client sample label(s) do not match COC (comment)
  - Project information
  - Client sample ID
  - Sampling date and/or time
  - Number of container(s)
  - Requested analysis
- Sample container(s) compromised (comment)
  - Broken
  - Water present in sample container
- Air sample container(s) compromised (comment)
  - Flat
  - Very low in volume
  - Leaking (not transferred; duplicate bag submitted)
  - Leaking (transferred into ECI Tedlar™ bags\*)
  - Leaking (transferred into client's Tedlar™ bags\*)

\* Transferred at client's request.

**Comments**

(-6) 202 Plastic jar received empty

**MISCELLANEOUS:** (Describe)

Empty

**Comments**

**HEADSPACE:**

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments: \_\_\_\_\_

Reported by: 1017

Reviewed by: 1053

\*\* Record the total number of containers (i.e., vials or bottles) for the affected sample.





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







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

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

Laboratory Job Number 289315  
ANALYTICAL REPORT

Geosyntec Consultants  
1111 Broadway  
Oakland, CA 94607

Project : WR2229  
Location : Antez Oakland  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
VP-1	289315-001
VP-2	289315-002
VP-3	289315-003
VP-4	289315-004
VP-5	289315-005
VP-6	289315-006
VP-7	289315-007
VP-8	289315-008
DUP-1	289315-009

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: 06/13/2017

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

### CASE NARRATIVE

Laboratory number: 289315  
Client: Geosyntec Consultants  
Project: WR2229  
Location: Antez Oakland  
Request Date: 05/25/17  
Samples Received: 05/25/17

This data package contains sample and QC results for nine air samples, requested for the above referenced project on 05/25/17. The samples were received cold and intact.

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

High responses were observed for naphthalene and bromoform in the CCV analyzed 06/09/17 08:46; affected data was qualified with "b". High response was observed for bromoform in the CCV analyzed 06/08/17 07:19; affected data was qualified with "b". High responses were observed for naphthalene and bromoform in the CCV analyzed 06/12/17 07:56; affected data was qualified with "b". High recoveries were observed for naphthalene and bromoform in the BS/BSD for batch 248575; the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated sample. High recoveries were observed for naphthalene and bromoform in the BS/BSD for batch 248609; the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated samples. High recoveries were observed for hexachlorobutadiene, naphthalene, and bromoform in the BS/BSD for batch 248660; the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated samples. VP-2 (lab # 289315-002) and VP-6 (lab # 289315-006) were diluted due to high hydrocarbons. VP-8 (lab # 289315-008) was diluted due to high non-target analytes. No other analytical problems were encountered.

#### Volatile Organics in Air GC (ASTM D1946-90 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

C&T LOGIN # 289315

Sampler: G. McGuire / B. Linker  
 Report To: Robert Cheung  
 Company: Geosyntec  
 Telephone: (510) 886-3034  
 Email: robcheung@geosyntec.com

Page 1 of 1  
 Chain of Custody #: \_\_\_\_\_  
 TESTING REQUESTED

Project No: WP2229  
 Project Name: Antez Oakland  
 EDD format: Rpt Level: II III IV  
 Turnaround Time:  RUSH  Standard

Lab No.	Sample ID	Date Collected	Firmo Collected	Canister ID (Bar Code #)	Flow Controller ID	Sample Volume (Gauge Reading)
1	VR-1	5/24/17	1019-1026	00096	A00314	-6
2	VR-2	↓	087-1013	00081	A00268	-6
3	VR-3		1142-1151	00312	A00265	-5
4	VR-4	1501-1521	00138	A00157	-7	
5	VR-5	1205-1211	00413	A00150	-8	
6	VR-6	1322-1328	00166	A00185	-8	
7	VR-7	1534-1602	00333	A00132	-5	
8	VR-8	1526-1534	00117	A00132	-5	
9	DUP-1			A00283	A00132	-5

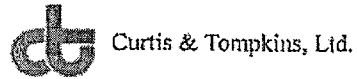
Lab No.	Sample ID	Date Collected	Firmo Collected	Canister ID (Bar Code #)	Flow Controller ID	Sample Volume (Gauge Reading)
10	TD-15 VOCs					
11	TD-3M (THg)					
12	KSM-D1946 (CH4, O2, CO2, He)					

Notes:

RELINQUISHED BY: [Signature] DATE/TIME: 5/24/17 16:33

RECEIVED BY: [Signature] DATE/TIME: 5/24/17 17:20

**COOLER RECEIPT CHECKLIST**



Login # 289315 Date Received 5/24/17 Number of coolers 0  
 Client Geosyntec Project WR2229 / Antez Oakland  
 Date Opened 5/29/17 By (print) EJA (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 289315

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

Client : Geosyntec Consultants  
 Project : WR2229  
 Location : Antez Oakland

Client Sample ID : VP-1                                  Laboratory Sample ID :                                  289315-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Carbon Disulfide	27		20		ppbv	As Recd	39.00	EPA TO-15	METHOD
MTBE	72		20		ppbv	As Recd	39.00	EPA TO-15	METHOD
n-Hexane	1,600		20		ppbv	As Recd	39.00	EPA TO-15	METHOD
Cyclohexane	1,500		20		ppbv	As Recd	39.00	EPA TO-15	METHOD
n-Heptane	1,100		20		ppbv	As Recd	39.00	EPA TO-15	METHOD
Carbon Dioxide	75,000		2,000		ppmv	As Recd	1.950	ASTM D1946-90	METHOD
Oxygen	17,000		2,000		ppmv	As Recd	1.950	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	78,000		2,000	290	ppbv	As Recd	39.00	EPA TO-3	METHOD

Client Sample ID : VP-2                                  Laboratory Sample ID :                                  289315-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
n-Heptane	45		13		ppbv	As Recd	26.04	EPA TO-15	METHOD
Carbon Dioxide	20,000		2,200		ppmv	As Recd	2.170	ASTM D1946-90	METHOD
Oxygen	110,000		2,200		ppmv	As Recd	2.170	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	18,000		110	16	ppbv	As Recd	2.170	EPA TO-3	METHOD

Client Sample ID : VP-3                                  Laboratory Sample ID :                                  289315-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Trichlorofluoromethane	1.3		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
Acetone	11		4.1		ppbv	As Recd	2.030	EPA TO-15	METHOD
Carbon Disulfide	2.8		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
Isopropanol	4.3		4.1		ppbv	As Recd	2.030	EPA TO-15	METHOD
n-Hexane	1.3		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
2-Butanone	2.1		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
Chloroform	6.0		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
Cyclohexane	2.3		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
Benzene	2.0		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
4-Methyl-2-Pentanone	3.0		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
Toluene	3.6		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
m,p-Xylenes	1.4		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	2.1		1.0		ppbv	As Recd	2.030	EPA TO-15	METHOD
Carbon Dioxide	26,000		2,000		ppmv	As Recd	2.030	ASTM D1946-90	METHOD
Oxygen	62,000		2,000		ppmv	As Recd	2.030	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	69	J	100	15	ppbv	As Recd	2.030	EPA TO-3	METHOD

Client Sample ID : VP-4

Laboratory Sample ID :

289315-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	8.1		4.0		ppbv	As Recd	1.980	EPA TO-15	METHOD
Carbon Disulfide	3.0		0.99		ppbv	As Recd	1.980	EPA TO-15	METHOD
2-Butanone	1.7		0.99		ppbv	As Recd	1.980	EPA TO-15	METHOD
Chloroform	2.7		0.99		ppbv	As Recd	1.980	EPA TO-15	METHOD
Cyclohexane	1.1		0.99		ppbv	As Recd	1.980	EPA TO-15	METHOD
Benzene	1.7		0.99		ppbv	As Recd	1.980	EPA TO-15	METHOD
Toluene	1.5		0.99		ppbv	As Recd	1.980	EPA TO-15	METHOD
Carbon Dioxide	9,800		2,000		ppmv	As Recd	1.980	ASTM D1946-90	METHOD
Oxygen	150,000		2,000		ppmv	As Recd	1.980	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	46	J	99	15	ppbv	As Recd	1.980	EPA TO-3	METHOD

Client Sample ID : VP-5

Laboratory Sample ID :

289315-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	9.3		4.5		ppbv	As Recd	2.240	EPA TO-15	METHOD
Carbon Disulfide	1.7		1.1		ppbv	As Recd	2.240	EPA TO-15	METHOD
Isopropanol	9.7		4.5		ppbv	As Recd	2.240	EPA TO-15	METHOD
MTBE	2.6		1.1		ppbv	As Recd	2.240	EPA TO-15	METHOD
2-Butanone	1.2		1.1		ppbv	As Recd	2.240	EPA TO-15	METHOD
Chloroform	1.7		1.1		ppbv	As Recd	2.240	EPA TO-15	METHOD
Toluene	1.4		1.1		ppbv	As Recd	2.240	EPA TO-15	METHOD
Carbon Dioxide	39,000		2,200		ppmv	As Recd	2.240	ASTM D1946-90	METHOD
Oxygen	46,000		2,200		ppmv	As Recd	2.240	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	32	J	110	17	ppbv	As Recd	2.240	EPA TO-3	METHOD

Client Sample ID : VP-6

Laboratory Sample ID :

289315-006

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Trichloroethene	85		22		ppbv	As Recd	44.60	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	28		22		ppbv	As Recd	44.60	EPA TO-15	METHOD
Carbon Dioxide	56,000		2,200		ppmv	As Recd	2.230	ASTM D1946-90	METHOD
Oxygen	12,000		2,200		ppmv	As Recd	2.230	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	32,000		2,200	330	ppbv	As Recd	44.60	EPA TO-3	METHOD

Client Sample ID : VP-7

Laboratory Sample ID :

289315-007

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	5.1		4.0		ppbv	As Recd	2.000	EPA TO-15	METHOD
Isopropanol	4.8		4.0		ppbv	As Recd	2.000	EPA TO-15	METHOD
Carbon Dioxide	16,000		2,000		ppmv	As Recd	2.000	ASTM D1946-90	METHOD
Oxygen	150,000		2,000		ppmv	As Recd	2.000	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	39	J	100	15	ppbv	As Recd	2.000	EPA TO-3	METHOD

Client Sample ID : VP-8

Laboratory Sample ID :

289315-008

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Chloroform	4.7		3.5		ppbv	As Recd	6.900	EPA TO-15	METHOD
Toluene	3.8		3.5		ppbv	As Recd	6.900	EPA TO-15	METHOD
Carbon Dioxide	16,000		2,300		ppmv	As Recd	2.300	ASTM D1946-90	METHOD
Oxygen	73,000		2,300		ppmv	As Recd	2.300	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	90	J	120	17	ppbv	As Recd	2.300	EPA TO-3	METHOD

Client Sample ID : DUP-1

Laboratory Sample ID :

289315-009

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acetone	4.3		4.0		ppbv	As Recd	2.020	EPA TO-15	METHOD
Chloroform	1.0		1.0		ppbv	As Recd	2.020	EPA TO-15	METHOD
Carbon Dioxide	16,000		2,000		ppmv	As Recd	2.020	ASTM D1946-90	METHOD
Oxygen	150,000		2,000		ppmv	As Recd	2.020	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	32	J	100	15	ppbv	As Recd	2.020	EPA TO-3	METHOD

### Volatile Organics in Air

Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-1	Diln Fac:	39.00
Lab ID:	289315-001	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	20	ND	96
Freon 114	ND	20	ND	140
Chloromethane	ND	20	ND	40
Vinyl Chloride	ND	20	ND	50
1,3-Butadiene	ND	20	ND	43
Bromomethane	ND	20	ND	76
Chloroethane	ND	20	ND	51
Trichlorofluoromethane	ND	20	ND	110
Acrolein	ND	78	ND	180
1,1-Dichloroethene	ND	20	ND	77
Freon 113	ND	20	ND	150
Acetone	ND	78	ND	190
Carbon Disulfide	27	20	83	61
Isopropanol	ND	78	ND	190
Methylene Chloride	ND	20	ND	68
trans-1,2-Dichloroethene	ND	20	ND	77
MTBE	72	20	260	70
n-Hexane	1,600	20	5,800	69
1,1-Dichloroethane	ND	20	ND	79
Vinyl Acetate	ND	20	ND	69
cis-1,2-Dichloroethene	ND	20	ND	77
2-Butanone	ND	20	ND	58
Ethyl Acetate	ND	20	ND	70
Tetrahydrofuran	ND	20	ND	58
Chloroform	ND	20	ND	95
1,1,1-Trichloroethane	ND	20	ND	110
Cyclohexane	1,500	20	5,300	67
Carbon Tetrachloride	ND	20	ND	120
Benzene	ND	20	ND	62
1,2-Dichloroethane	ND	20	ND	79
n-Heptane	1,100	20	4,700	80
Trichloroethene	ND	20	ND	100
1,2-Dichloropropane	ND	20	ND	90
Bromodichloromethane	ND	20	ND	130
cis-1,3-Dichloropropene	ND	20	ND	89

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units



### Volatile Organics in Air

Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-1	Diln Fac:	39.00
Lab ID:	289315-001	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	20	ND	80
Toluene	ND	20	ND	73
trans-1,3-Dichloropropene	ND	20	ND	89
1,1,2-Trichloroethane	ND	20	ND	110
Tetrachloroethene	ND	20	ND	130
2-Hexanone	ND	20	ND	80
Dibromochloromethane	ND	20	ND	170
1,2-Dibromoethane	ND	20	ND	150
Chlorobenzene	ND	20	ND	90
Ethylbenzene	ND	20	ND	85
m,p-Xylenes	ND	20	ND	85
o-Xylene	ND	20	ND	85
Styrene	ND	20	ND	83
Bromoform	ND	20	ND	200
1,1,2,2-Tetrachloroethane	ND	20	ND	130
4-Ethyltoluene	ND	20	ND	96
1,3,5-Trimethylbenzene	ND	20	ND	96
1,2,4-Trimethylbenzene	ND	20	ND	96
1,3-Dichlorobenzene	ND	20	ND	120
1,4-Dichlorobenzene	ND	20	ND	120
Benzyl chloride	ND	20	ND	100
1,2-Dichlorobenzene	ND	20	ND	120
1,2,4-Trichlorobenzene	ND	20	ND	140
Hexachlorobutadiene	ND	20	ND	210
Naphthalene	ND	78	ND	410

Surrogate	%REC	Limits
Bromofluorobenzene	120	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-2	Diln Fac:	26.04
Lab ID:	289315-002	Batch#:	248609
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	13	ND	64
Freon 114	ND	13	ND	91
Chloromethane	ND	13	ND	27
Vinyl Chloride	ND	13	ND	33
1,3-Butadiene	ND	13	ND	29
Bromomethane	ND	13	ND	51
Chloroethane	ND	13	ND	34
Trichlorofluoromethane	ND	13	ND	73
Acrolein	ND	52	ND	120
1,1-Dichloroethene	ND	13	ND	52
Freon 113	ND	13	ND	100
Acetone	ND	52	ND	120
Carbon Disulfide	ND	13	ND	41
Isopropanol	ND	52	ND	130
Methylene Chloride	ND	13	ND	45
trans-1,2-Dichloroethene	ND	13	ND	52
MTBE	ND	13	ND	47
n-Hexane	ND	13	ND	46
1,1-Dichloroethane	ND	13	ND	53
Vinyl Acetate	ND	13	ND	46
cis-1,2-Dichloroethene	ND	13	ND	52
2-Butanone	ND	13	ND	38
Ethyl Acetate	ND	13	ND	47
Tetrahydrofuran	ND	13	ND	38
Chloroform	ND	13	ND	64
1,1,1-Trichloroethane	ND	13	ND	71
Cyclohexane	ND	13	ND	45
Carbon Tetrachloride	ND	13	ND	82
Benzene	ND	13	ND	42
1,2-Dichloroethane	ND	13	ND	53
n-Heptane	45	13	180	53
Trichloroethene	ND	13	ND	70
1,2-Dichloropropane	ND	13	ND	60
Bromodichloromethane	ND	13	ND	87
cis-1,3-Dichloropropene	ND	13	ND	59

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-2	Diln Fac:	26.04
Lab ID:	289315-002	Batch#:	248609
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	13	ND	53
Toluene	ND	13	ND	49
trans-1,3-Dichloropropene	ND	13	ND	59
1,1,2-Trichloroethane	ND	13	ND	71
Tetrachloroethene	ND	13	ND	88
2-Hexanone	ND	13	ND	53
Dibromochloromethane	ND	13	ND	110
1,2-Dibromoethane	ND	13	ND	100
Chlorobenzene	ND	13	ND	60
Ethylbenzene	ND	13	ND	57
m,p-Xylenes	ND	13	ND	57
o-Xylene	ND	13	ND	57
Styrene	ND	13	ND	55
Bromoform	ND	13	ND	130
1,1,2,2-Tetrachloroethane	ND	13	ND	89
4-Ethyltoluene	ND	13	ND	64
1,3,5-Trimethylbenzene	ND	13	ND	64
1,2,4-Trimethylbenzene	ND	13	ND	64
1,3-Dichlorobenzene	ND	13	ND	78
1,4-Dichlorobenzene	ND	13	ND	78
Benzyl chloride	ND	13	ND	67
1,2-Dichlorobenzene	ND	13	ND	78
1,2,4-Trichlorobenzene	ND	13	ND	97
Hexachlorobutadiene	ND	13	ND	140
Naphthalene	ND	52	ND	270

Surrogate	%REC	Limits
Bromofluorobenzene	101	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-3	Diln Fac:	2.030
Lab ID:	289315-003	Batch#:	248575
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.0	ND	5.0
Freon 114	ND	1.0	ND	7.1
Chloromethane	ND	1.0	ND	2.1
Vinyl Chloride	ND	1.0	ND	2.6
1,3-Butadiene	ND	1.0	ND	2.2
Bromomethane	ND	1.0	ND	3.9
Chloroethane	ND	1.0	ND	2.7
Trichlorofluoromethane	1.3	1.0	7.1	5.7
Acrolein	ND	4.1	ND	9.3
1,1-Dichloroethene	ND	1.0	ND	4.0
Freon 113	ND	1.0	ND	7.8
Acetone	11	4.1	27	9.6
Carbon Disulfide	2.8	1.0	8.8	3.2
Isopropanol	4.3	4.1	11	10
Methylene Chloride	ND	1.0	ND	3.5
trans-1,2-Dichloroethene	ND	1.0	ND	4.0
MTBE	ND	1.0	ND	3.7
n-Hexane	1.3	1.0	4.6	3.6
1,1-Dichloroethane	ND	1.0	ND	4.1
Vinyl Acetate	ND	1.0	ND	3.6
cis-1,2-Dichloroethene	ND	1.0	ND	4.0
2-Butanone	2.1	1.0	6.3	3.0
Ethyl Acetate	ND	1.0	ND	3.7
Tetrahydrofuran	ND	1.0	ND	3.0
Chloroform	6.0	1.0	29	5.0
1,1,1-Trichloroethane	ND	1.0	ND	5.5
Cyclohexane	2.3	1.0	7.9	3.5
Carbon Tetrachloride	ND	1.0	ND	6.4
Benzene	2.0	1.0	6.5	3.2
1,2-Dichloroethane	ND	1.0	ND	4.1
n-Heptane	ND	1.0	ND	4.2
Trichloroethene	ND	1.0	ND	5.5
1,2-Dichloropropane	ND	1.0	ND	4.7
Bromodichloromethane	ND	1.0	ND	6.8
cis-1,3-Dichloropropene	ND	1.0	ND	4.6

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-3	Diln Fac:	2.030
Lab ID:	289315-003	Batch#:	248575
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	3.0	1.0	12	4.2
Toluene	3.6	1.0	14	3.8
trans-1,3-Dichloropropene	ND	1.0	ND	4.6
1,1,2-Trichloroethane	ND	1.0	ND	5.5
Tetrachloroethene	ND	1.0	ND	6.9
2-Hexanone	ND	1.0	ND	4.2
Dibromochloromethane	ND	1.0	ND	8.6
1,2-Dibromoethane	ND	1.0	ND	7.8
Chlorobenzene	ND	1.0	ND	4.7
Ethylbenzene	ND	1.0	ND	4.4
m,p-Xylenes	1.4	1.0	5.9	4.4
o-Xylene	ND	1.0	ND	4.4
Styrene	ND	1.0	ND	4.3
Bromoform	ND	1.0	ND	10
1,1,2,2-Tetrachloroethane	ND	1.0	ND	7.0
4-Ethyltoluene	ND	1.0	ND	5.0
1,3,5-Trimethylbenzene	ND	1.0	ND	5.0
1,2,4-Trimethylbenzene	2.1	1.0	10	5.0
1,3-Dichlorobenzene	ND	1.0	ND	6.1
1,4-Dichlorobenzene	ND	1.0	ND	6.1
Benzyl chloride	ND	1.0	ND	5.3
1,2-Dichlorobenzene	ND	1.0	ND	6.1
1,2,4-Trichlorobenzene	ND	1.0	ND	7.5
Hexachlorobutadiene	ND	1.0	ND	11
Naphthalene	ND	4.1	ND	21

Surrogate	%REC	Limits
Bromofluorobenzene	109	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-4	Diln Fac:	1.980
Lab ID:	289315-004	Batch#:	248609
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

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	5.6
Acrolein	ND	4.0	ND	9.1
1,1-Dichloroethene	ND	0.99	ND	3.9
Freon 113	ND	0.99	ND	7.6
Acetone	8.1	4.0	19	9.4
Carbon Disulfide	3.0	0.99	9.3	3.1
Isopropanol	ND	4.0	ND	9.7
Methylene Chloride	ND	0.99	ND	3.4
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	1.7	0.99	5.1	2.9
Ethyl Acetate	ND	0.99	ND	3.6
Tetrahydrofuran	ND	0.99	ND	2.9
Chloroform	2.7	0.99	13	4.8
1,1,1-Trichloroethane	ND	0.99	ND	5.4
Cyclohexane	1.1	0.99	3.6	3.4
Carbon Tetrachloride	ND	0.99	ND	6.2
Benzene	1.7	0.99	5.6	3.2
1,2-Dichloroethane	ND	0.99	ND	4.0
n-Heptane	ND	0.99	ND	4.1
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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-4	Diln Fac:	1.980
Lab ID:	289315-004	Batch#:	248609
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.99	ND	4.1
Toluene	1.5	0.99	5.8	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	4.1
Dibromochloromethane	ND	0.99	ND	8.4
1,2-Dibromoethane	ND	0.99	ND	7.6
Chlorobenzene	ND	0.99	ND	4.6
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	4.9
1,3,5-Trimethylbenzene	ND	0.99	ND	4.9
1,2,4-Trimethylbenzene	ND	0.99	ND	4.9
1,3-Dichlorobenzene	ND	0.99	ND	6.0
1,4-Dichlorobenzene	ND	0.99	ND	6.0
Benzyl chloride	ND	0.99	ND	5.1
1,2-Dichlorobenzene	ND	0.99	ND	6.0
1,2,4-Trichlorobenzene	ND	0.99	ND	7.3
Hexachlorobutadiene	ND	0.99	ND	11
Naphthalene	ND	4.0	ND	21

Surrogate	%REC	Limits
Bromofluorobenzene	111	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-5	Diln Fac:	2.240
Lab ID:	289315-005	Batch#:	248609
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.1	ND	5.5
Freon 114	ND	1.1	ND	7.8
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	4.3
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	4.4
Freon 113	ND	1.1	ND	8.6
Acetone	9.3	4.5	22	11
Carbon Disulfide	1.7	1.1	5.3	3.5
Isopropanol	9.7	4.5	24	11
Methylene Chloride	ND	1.1	ND	3.9
trans-1,2-Dichloroethene	ND	1.1	ND	4.4
MTBE	2.6	1.1	9.4	4.0
n-Hexane	ND	1.1	ND	3.9
1,1-Dichloroethane	ND	1.1	ND	4.5
Vinyl Acetate	ND	1.1	ND	3.9
cis-1,2-Dichloroethene	ND	1.1	ND	4.4
2-Butanone	1.2	1.1	3.4	3.3
Ethyl Acetate	ND	1.1	ND	4.0
Tetrahydrofuran	ND	1.1	ND	3.3
Chloroform	1.7	1.1	8.3	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	7.0
Benzene	ND	1.1	ND	3.6
1,2-Dichloroethane	ND	1.1	ND	4.5
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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-5	Diln Fac:	2.240
Lab ID:	289315-005	Batch#:	248609
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.1	ND	4.6
Toluene	1.4	1.1	5.1	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	9.5
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	ND	1.1	ND	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	6.7
1,4-Dichlorobenzene	ND	1.1	ND	6.7
Benzyl chloride	ND	1.1	ND	5.8
1,2-Dichlorobenzene	ND	1.1	ND	6.7
1,2,4-Trichlorobenzene	ND	1.1	ND	8.3
Hexachlorobutadiene	ND	1.1	ND	12
Naphthalene	ND	4.5	ND	23

Surrogate	%REC	Limits
Bromofluorobenzene	107	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-6	Diln Fac:	44.60
Lab ID:	289315-006	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	22	ND	110
Freon 114	ND	22	ND	160
Chloromethane	ND	22	ND	46
Vinyl Chloride	ND	22	ND	57
1,3-Butadiene	ND	22	ND	49
Bromomethane	ND	22	ND	87
Chloroethane	ND	22	ND	59
Trichlorofluoromethane	ND	22	ND	130
Acrolein	ND	89	ND	200
1,1-Dichloroethene	ND	22	ND	88
Freon 113	ND	22	ND	170
Acetone	ND	89	ND	210
Carbon Disulfide	ND	22	ND	69
Isopropanol	ND	89	ND	220
Methylene Chloride	ND	22	ND	77
trans-1,2-Dichloroethene	ND	22	ND	88
MTBE	ND	22	ND	80
n-Hexane	ND	22	ND	79
1,1-Dichloroethane	ND	22	ND	90
Vinyl Acetate	ND	22	ND	79
cis-1,2-Dichloroethene	ND	22	ND	88
2-Butanone	ND	22	ND	66
Ethyl Acetate	ND	22	ND	80
Tetrahydrofuran	ND	22	ND	66
Chloroform	ND	22	ND	110
1,1,1-Trichloroethane	ND	22	ND	120
Cyclohexane	ND	22	ND	77
Carbon Tetrachloride	ND	22	ND	140
Benzene	ND	22	ND	71
1,2-Dichloroethane	ND	22	ND	90
n-Heptane	ND	22	ND	91
Trichloroethene	85	22	460	120
1,2-Dichloropropane	ND	22	ND	100
Bromodichloromethane	ND	22	ND	150
cis-1,3-Dichloropropene	ND	22	ND	100

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-6	Diln Fac:	44.60
Lab ID:	289315-006	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	22	ND	91
Toluene	ND	22	ND	84
trans-1,3-Dichloropropene	ND	22	ND	100
1,1,2-Trichloroethane	ND	22	ND	120
Tetrachloroethene	ND	22	ND	150
2-Hexanone	ND	22	ND	91
Dibromochloromethane	ND	22	ND	190
1,2-Dibromoethane	ND	22	ND	170
Chlorobenzene	ND	22	ND	100
Ethylbenzene	ND	22	ND	97
m,p-Xylenes	ND	22	ND	97
o-Xylene	ND	22	ND	97
Styrene	ND	22	ND	95
Bromoform	ND	22	ND	230
1,1,2,2-Tetrachloroethane	ND	22	ND	150
4-Ethyltoluene	ND	22	ND	110
1,3,5-Trimethylbenzene	ND	22	ND	110
1,2,4-Trimethylbenzene	28	22	140	110
1,3-Dichlorobenzene	ND	22	ND	130
1,4-Dichlorobenzene	ND	22	ND	130
Benzyl chloride	ND	22	ND	120
1,2-Dichlorobenzene	ND	22	ND	130
1,2,4-Trichlorobenzene	ND	22	ND	170
Hexachlorobutadiene	ND	22	ND	240
Naphthalene	ND	89	ND	470

Surrogate	%REC	Limits
Bromofluorobenzene	112	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-7	Diln Fac:	2.000
Lab ID:	289315-007	Batch#:	248609
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.0	ND	4.9
Freon 114	ND	1.0	ND	7.0
Chloromethane	ND	1.0	ND	2.1
Vinyl Chloride	ND	1.0	ND	2.6
1,3-Butadiene	ND	1.0	ND	2.2
Bromomethane	ND	1.0	ND	3.9
Chloroethane	ND	1.0	ND	2.6
Trichlorofluoromethane	ND	1.0	ND	5.6
Acrolein	ND	4.0	ND	9.2
1,1-Dichloroethene	ND	1.0	ND	4.0
Freon 113	ND	1.0	ND	7.7
Acetone	5.1	4.0	12	9.5
Carbon Disulfide	ND	1.0	ND	3.1
Isopropanol	4.8	4.0	12	9.8
Methylene Chloride	ND	1.0	ND	3.5
trans-1,2-Dichloroethene	ND	1.0	ND	4.0
MTBE	ND	1.0	ND	3.6
n-Hexane	ND	1.0	ND	3.5
1,1-Dichloroethane	ND	1.0	ND	4.0
Vinyl Acetate	ND	1.0	ND	3.5
cis-1,2-Dichloroethene	ND	1.0	ND	4.0
2-Butanone	ND	1.0	ND	2.9
Ethyl Acetate	ND	1.0	ND	3.6
Tetrahydrofuran	ND	1.0	ND	2.9
Chloroform	ND	1.0	ND	4.9
1,1,1-Trichloroethane	ND	1.0	ND	5.5
Cyclohexane	ND	1.0	ND	3.4
Carbon Tetrachloride	ND	1.0	ND	6.3
Benzene	ND	1.0	ND	3.2
1,2-Dichloroethane	ND	1.0	ND	4.0
n-Heptane	ND	1.0	ND	4.1
Trichloroethene	ND	1.0	ND	5.4
1,2-Dichloropropane	ND	1.0	ND	4.6
Bromodichloromethane	ND	1.0	ND	6.7
cis-1,3-Dichloropropene	ND	1.0	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-7	Diln Fac:	2.000
Lab ID:	289315-007	Batch#:	248609
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/09/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.0	ND	4.1
Toluene	ND	1.0	ND	3.8
trans-1,3-Dichloropropene	ND	1.0	ND	4.5
1,1,2-Trichloroethane	ND	1.0	ND	5.5
Tetrachloroethene	ND	1.0	ND	6.8
2-Hexanone	ND	1.0	ND	4.1
Dibromochloromethane	ND	1.0	ND	8.5
1,2-Dibromoethane	ND	1.0	ND	7.7
Chlorobenzene	ND	1.0	ND	4.6
Ethylbenzene	ND	1.0	ND	4.3
m,p-Xylenes	ND	1.0	ND	4.3
o-Xylene	ND	1.0	ND	4.3
Styrene	ND	1.0	ND	4.3
Bromoform	ND	1.0	ND	10
1,1,2,2-Tetrachloroethane	ND	1.0	ND	6.9
4-Ethyltoluene	ND	1.0	ND	4.9
1,3,5-Trimethylbenzene	ND	1.0	ND	4.9
1,2,4-Trimethylbenzene	ND	1.0	ND	4.9
1,3-Dichlorobenzene	ND	1.0	ND	6.0
1,4-Dichlorobenzene	ND	1.0	ND	6.0
Benzyl chloride	ND	1.0	ND	5.2
1,2-Dichlorobenzene	ND	1.0	ND	6.0
1,2,4-Trichlorobenzene	ND	1.0	ND	7.4
Hexachlorobutadiene	ND	1.0	ND	11
Naphthalene	ND	4.0	ND	21

Surrogate	%REC	Limits
Bromofluorobenzene	110	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-8	Diln Fac:	6.900
Lab ID:	289315-008	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	3.5	ND	17
Freon 114	ND	3.5	ND	24
Chloromethane	ND	3.5	ND	7.1
Vinyl Chloride	ND	3.5	ND	8.8
1,3-Butadiene	ND	3.5	ND	7.6
Bromomethane	ND	3.5	ND	13
Chloroethane	ND	3.5	ND	9.1
Trichlorofluoromethane	ND	3.5	ND	19
Acrolein	ND	14	ND	32
1,1-Dichloroethene	ND	3.5	ND	14
Freon 113	ND	3.5	ND	26
Acetone	ND	14	ND	33
Carbon Disulfide	ND	3.5	ND	11
Isopropanol	ND	14	ND	34
Methylene Chloride	ND	3.5	ND	12
trans-1,2-Dichloroethene	ND	3.5	ND	14
MTBE	ND	3.5	ND	12
n-Hexane	ND	3.5	ND	12
1,1-Dichloroethane	ND	3.5	ND	14
Vinyl Acetate	ND	3.5	ND	12
cis-1,2-Dichloroethene	ND	3.5	ND	14
2-Butanone	ND	3.5	ND	10
Ethyl Acetate	ND	3.5	ND	12
Tetrahydrofuran	ND	3.5	ND	10
Chloroform	4.7	3.5	23	17
1,1,1-Trichloroethane	ND	3.5	ND	19
Cyclohexane	ND	3.5	ND	12
Carbon Tetrachloride	ND	3.5	ND	22
Benzene	ND	3.5	ND	11
1,2-Dichloroethane	ND	3.5	ND	14
n-Heptane	ND	3.5	ND	14
Trichloroethene	ND	3.5	ND	19
1,2-Dichloropropane	ND	3.5	ND	16
Bromodichloromethane	ND	3.5	ND	23
cis-1,3-Dichloropropene	ND	3.5	ND	16

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

### Volatile Organics in Air

Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-8	Diln Fac:	6.900
Lab ID:	289315-008	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	3.5	ND	14
Toluene	3.8	3.5	14	13
trans-1,3-Dichloropropene	ND	3.5	ND	16
1,1,2-Trichloroethane	ND	3.5	ND	19
Tetrachloroethene	ND	3.5	ND	23
2-Hexanone	ND	3.5	ND	14
Dibromochloromethane	ND	3.5	ND	29
1,2-Dibromoethane	ND	3.5	ND	27
Chlorobenzene	ND	3.5	ND	16
Ethylbenzene	ND	3.5	ND	15
m,p-Xylenes	ND	3.5	ND	15
o-Xylene	ND	3.5	ND	15
Styrene	ND	3.5	ND	15
Bromoform	ND	3.5	ND	36
1,1,2,2-Tetrachloroethane	ND	3.5	ND	24
4-Ethyltoluene	ND	3.5	ND	17
1,3,5-Trimethylbenzene	ND	3.5	ND	17
1,2,4-Trimethylbenzene	ND	3.5	ND	17
1,3-Dichlorobenzene	ND	3.5	ND	21
1,4-Dichlorobenzene	ND	3.5	ND	21
Benzyl chloride	ND	3.5	ND	18
1,2-Dichlorobenzene	ND	3.5	ND	21
1,2,4-Trichlorobenzene	ND	3.5	ND	26
Hexachlorobutadiene	ND	3.5	ND	37
Naphthalene	ND	14	ND	72

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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	DUP-1	Diln Fac:	2.020
Lab ID:	289315-009	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.0	ND	5.0
Freon 114	ND	1.0	ND	7.1
Chloromethane	ND	1.0	ND	2.1
Vinyl Chloride	ND	1.0	ND	2.6
1,3-Butadiene	ND	1.0	ND	2.2
Bromomethane	ND	1.0	ND	3.9
Chloroethane	ND	1.0	ND	2.7
Trichlorofluoromethane	ND	1.0	ND	5.7
Acrolein	ND	4.0	ND	9.3
1,1-Dichloroethene	ND	1.0	ND	4.0
Freon 113	ND	1.0	ND	7.7
Acetone	4.3	4.0	10	9.6
Carbon Disulfide	ND	1.0	ND	3.1
Isopropanol	ND	4.0	ND	9.9
Methylene Chloride	ND	1.0	ND	3.5
trans-1,2-Dichloroethene	ND	1.0	ND	4.0
MTBE	ND	1.0	ND	3.6
n-Hexane	ND	1.0	ND	3.6
1,1-Dichloroethane	ND	1.0	ND	4.1
Vinyl Acetate	ND	1.0	ND	3.6
cis-1,2-Dichloroethene	ND	1.0	ND	4.0
2-Butanone	ND	1.0	ND	3.0
Ethyl Acetate	ND	1.0	ND	3.6
Tetrahydrofuran	ND	1.0	ND	3.0
Chloroform	1.0	1.0	5.0	4.9
1,1,1-Trichloroethane	ND	1.0	ND	5.5
Cyclohexane	ND	1.0	ND	3.5
Carbon Tetrachloride	ND	1.0	ND	6.4
Benzene	ND	1.0	ND	3.2
1,2-Dichloroethane	ND	1.0	ND	4.1
n-Heptane	ND	1.0	ND	4.1
Trichloroethene	ND	1.0	ND	5.4
1,2-Dichloropropane	ND	1.0	ND	4.7
Bromodichloromethane	ND	1.0	ND	6.8
cis-1,3-Dichloropropene	ND	1.0	ND	4.6

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units



### Volatile Organics in Air

Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	DUP-1	Diln Fac:	2.020
Lab ID:	289315-009	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.0	ND	4.1
Toluene	ND	1.0	ND	3.8
trans-1,3-Dichloropropene	ND	1.0	ND	4.6
1,1,2-Trichloroethane	ND	1.0	ND	5.5
Tetrachloroethene	ND	1.0	ND	6.9
2-Hexanone	ND	1.0	ND	4.1
Dibromochloromethane	ND	1.0	ND	8.6
1,2-Dibromoethane	ND	1.0	ND	7.8
Chlorobenzene	ND	1.0	ND	4.6
Ethylbenzene	ND	1.0	ND	4.4
m,p-Xylenes	ND	1.0	ND	4.4
o-Xylene	ND	1.0	ND	4.4
Styrene	ND	1.0	ND	4.3
Bromoform	ND	1.0	ND	10
1,1,2,2-Tetrachloroethane	ND	1.0	ND	6.9
4-Ethyltoluene	ND	1.0	ND	5.0
1,3,5-Trimethylbenzene	ND	1.0	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0	ND	5.0
1,3-Dichlorobenzene	ND	1.0	ND	6.1
1,4-Dichlorobenzene	ND	1.0	ND	6.1
Benzyl chloride	ND	1.0	ND	5.2
1,2-Dichlorobenzene	ND	1.0	ND	6.1
1,2,4-Trichlorobenzene	ND	1.0	ND	7.5
Hexachlorobutadiene	ND	1.0	ND	11
Naphthalene	ND	4.0	ND	21

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



**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248575
Units (V):	ppbv	Analyzed:	06/08/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>
1,2-Dichloropropane	10.00	8.985	90	70-130
Bromodichloromethane	10.00	9.185	92	70-130
cis-1,3-Dichloropropene	10.00	10.26	103	70-130
4-Methyl-2-Pentanone	10.00	9.292	93	70-130
Toluene	10.00	8.668	87	70-130
trans-1,3-Dichloropropene	10.00	10.76	108	70-130
1,1,2-Trichloroethane	10.00	11.98	120	70-130
Tetrachloroethene	10.00	10.97	110	70-130
2-Hexanone	10.00	9.332	93	70-130
Dibromochloromethane	10.00	11.63	116	70-130
1,2-Dibromoethane	10.00	12.15	121	70-130
Chlorobenzene	10.00	9.191	92	70-130
Ethylbenzene	10.00	10.04	100	70-130
m,p-Xylenes	20.00	20.52	103	70-130
o-Xylene	10.00	10.33	103	70-130
Styrene	10.00	9.885	99	70-130
Bromoform	10.00	13.10 b	131 *	70-130
1,1,2,2-Tetrachloroethane	10.00	11.49	115	70-130
4-Ethyltoluene	10.00	10.90	109	70-130
1,3,5-Trimethylbenzene	10.00	11.02	110	70-130
1,2,4-Trimethylbenzene	10.00	11.14	111	70-130
1,3-Dichlorobenzene	10.00	10.35	104	70-130
1,4-Dichlorobenzene	10.00	10.29	103	70-130
Benzyl chloride	10.00	11.06	111	70-130
1,2-Dichlorobenzene	10.00	10.24	102	70-130
1,2,4-Trichlorobenzene	10.00	11.90	119	70-130
Hexachlorobutadiene	10.00	12.02	120	70-130
Naphthalene	10.00	12.94	129	70-130

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	97	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248575
Units (V):	ppbv	Analyzed:	06/08/17
Diln Fac:	1.000		

Type: BSD Lab ID: QC888881

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	8.399	84	70-130	6	25
Freon 114	10.00	9.553	96	70-130	5	25
Chloromethane	10.00	7.863	79	70-130	4	25
Vinyl Chloride	10.00	8.269	83	70-130	4	25
1,3-Butadiene	10.00	8.268	83	70-130	3	25
Bromomethane	10.00	7.961	80	70-130	5	25
Chloroethane	10.00	9.691	97	70-130	7	25
Trichlorofluoromethane	10.00	9.676	97	70-130	4	25
Acrolein	10.00	10.48	105	70-130	6	25
1,1-Dichloroethene	10.00	10.65	107	70-130	3	25
Freon 113	10.00	10.57	106	70-130	2	25
Acetone	10.00	8.659	87	70-130	3	25
Carbon Disulfide	10.00	9.593	96	70-130	5	25
Isopropanol	10.00	9.417	94	70-130	3	25
Methylene Chloride	10.00	9.669	97	70-130	4	25
trans-1,2-Dichloroethene	10.00	10.70	107	70-130	4	25
MTBE	10.00	12.17	122	70-130	1	25
n-Hexane	10.00	12.66	127	70-130	5	25
1,1-Dichloroethane	10.00	10.24	102	70-130	2	25
Vinyl Acetate	10.00	11.24	112	70-130	4	25
cis-1,2-Dichloroethene	10.00	11.20	112	70-130	6	25
2-Butanone	10.00	11.24	112	70-130	3	25
Ethyl Acetate	10.00	11.65	117	70-130	6	25
Tetrahydrofuran	10.00	8.947	89	70-130	0	25
Chloroform	10.00	10.46	105	70-130	5	25
1,1,1-Trichloroethane	10.00	8.647	86	70-130	0	25
Cyclohexane	10.00	8.047	80	70-130	1	25
Carbon Tetrachloride	10.00	8.136	81	70-130	0	25
Benzene	10.00	9.175	92	70-130	1	25
1,2-Dichloroethane	10.00	10.01	100	70-130	1	25
n-Heptane	10.00	7.232	72	70-130	0	25
Trichloroethene	10.00	9.326	93	70-130	0	25

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248575
Units (V):	ppbv	Analyzed:	06/08/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>	<b>RPD</b>	<b>Lim</b>
1,2-Dichloropropane	10.00	9.117	91	70-130	1	25
Bromodichloromethane	10.00	9.109	91	70-130	1	25
cis-1,3-Dichloropropene	10.00	10.50	105	70-130	2	25
4-Methyl-2-Pentanone	10.00	9.200	92	70-130	1	25
Toluene	10.00	8.867	89	70-130	2	25
trans-1,3-Dichloropropene	10.00	10.80	108	70-130	0	25
1,1,2-Trichloroethane	10.00	11.91	119	70-130	1	25
Tetrachloroethene	10.00	11.40	114	70-130	4	25
2-Hexanone	10.00	9.996	100	70-130	7	25
Dibromochloromethane	10.00	11.74	117	70-130	1	25
1,2-Dibromoethane	10.00	12.82	128	70-130	5	25
Chlorobenzene	10.00	9.334	93	70-130	2	25
Ethylbenzene	10.00	10.46	105	70-130	4	25
m,p-Xylenes	20.00	21.31	107	70-130	4	25
o-Xylene	10.00	10.52	105	70-130	2	25
Styrene	10.00	10.04	100	70-130	2	25
Bromoform	10.00	13.70 b	137 *	70-130	4	25
1,1,2,2-Tetrachloroethane	10.00	12.15	121	70-130	6	25
4-Ethyltoluene	10.00	11.32	113	70-130	4	25
1,3,5-Trimethylbenzene	10.00	11.19	112	70-130	1	25
1,2,4-Trimethylbenzene	10.00	11.21	112	70-130	1	25
1,3-Dichlorobenzene	10.00	10.72	107	70-130	4	25
1,4-Dichlorobenzene	10.00	10.63	106	70-130	3	25
Benzyl chloride	10.00	11.25	112	70-130	2	25
1,2-Dichlorobenzene	10.00	10.58	106	70-130	3	25
1,2,4-Trichlorobenzene	10.00	12.60	126	70-130	6	25
Hexachlorobutadiene	10.00	12.03	120	70-130	0	25
Naphthalene	10.00	13.64	136 *	70-130	5	25

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	99	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC888882	Diln Fac:	1.000
Matrix:	Air	Batch#:	248575
Units (V):	ppbv	Analyzed:	06/08/17

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	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**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC888882	Diln Fac:	1.000
Matrix:	Air	Batch#:	248575
Units (V):	ppbv	Analyzed:	06/08/17

<b>Analyte</b>	<b>Result (V)</b>	<b>RL</b>	<b>Result (M)</b>	<b>RL</b>
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	95	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248609
Units (V):	ppbv	Analyzed:	06/09/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
1,2-Dichloropropane	10.00	9.090	91	70-130
Bromodichloromethane	10.00	9.176	92	70-130
cis-1,3-Dichloropropene	10.00	10.12	101	70-130
4-Methyl-2-Pentanone	10.00	9.156	92	70-130
Toluene	10.00	8.674	87	70-130
trans-1,3-Dichloropropene	10.00	10.74	107	70-130
1,1,2-Trichloroethane	10.00	11.95	120	70-130
Tetrachloroethene	10.00	11.35	114	70-130
2-Hexanone	10.00	9.821	98	70-130
Dibromochloromethane	10.00	11.73	117	70-130
1,2-Dibromoethane	10.00	12.73	127	70-130
Chlorobenzene	10.00	9.200	92	70-130
Ethylbenzene	10.00	10.09	101	70-130
m,p-Xylenes	20.00	20.78	104	70-130
o-Xylene	10.00	10.32	103	70-130
Styrene	10.00	9.974	100	70-130
Bromoform	10.00	13.44 b	134 *	70-130
1,1,2,2-Tetrachloroethane	10.00	12.03	120	70-130
4-Ethyltoluene	10.00	11.03	110	70-130
1,3,5-Trimethylbenzene	10.00	11.18	112	70-130
1,2,4-Trimethylbenzene	10.00	10.93	109	70-130
1,3-Dichlorobenzene	10.00	10.60	106	70-130
1,4-Dichlorobenzene	10.00	10.52	105	70-130
Benzyl chloride	10.00	11.44	114	70-130
1,2-Dichlorobenzene	10.00	10.54	105	70-130
1,2,4-Trichlorobenzene	10.00	12.17	122	70-130
Hexachlorobutadiene	10.00	12.57	126	70-130
Naphthalene	10.00	13.40 b	134 *	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	98	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units



**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248609
Units (V):	ppbv	Analyzed:	06/09/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>	<b>RPD</b>	<b>Lim</b>
1,2-Dichloropropane	10.00	9.204	92	70-130	1	25
Bromodichloromethane	10.00	9.291	93	70-130	1	25
cis-1,3-Dichloropropene	10.00	10.48	105	70-130	4	25
4-Methyl-2-Pentanone	10.00	9.268	93	70-130	1	25
Toluene	10.00	8.784	88	70-130	1	25
trans-1,3-Dichloropropene	10.00	11.18	112	70-130	4	25
1,1,2-Trichloroethane	10.00	11.78	118	70-130	1	25
Tetrachloroethene	10.00	11.47	115	70-130	1	25
2-Hexanone	10.00	9.868	99	70-130	0	25
Dibromochloromethane	10.00	11.90	119	70-130	1	25
1,2-Dibromoethane	10.00	12.58	126	70-130	1	25
Chlorobenzene	10.00	9.197	92	70-130	0	25
Ethylbenzene	10.00	10.25	103	70-130	2	25
m,p-Xylenes	20.00	20.59	103	70-130	1	25
o-Xylene	10.00	10.41	104	70-130	1	25
Styrene	10.00	9.944	99	70-130	0	25
Bromoform	10.00	13.29 b	133 *	70-130	1	25
1,1,2,2-Tetrachloroethane	10.00	12.09	121	70-130	0	25
4-Ethyltoluene	10.00	11.02	110	70-130	0	25
1,3,5-Trimethylbenzene	10.00	11.15	112	70-130	0	25
1,2,4-Trimethylbenzene	10.00	10.80	108	70-130	1	25
1,3-Dichlorobenzene	10.00	10.48	105	70-130	1	25
1,4-Dichlorobenzene	10.00	10.55	106	70-130	0	25
Benzyl chloride	10.00	11.11	111	70-130	3	25
1,2-Dichlorobenzene	10.00	10.28	103	70-130	2	25
1,2,4-Trichlorobenzene	10.00	12.04	120	70-130	1	25
Hexachlorobutadiene	10.00	12.44	124	70-130	1	25
Naphthalene	10.00	13.39 b	134 *	70-130	0	25

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	98	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889020	Diln Fac:	1.000
Matrix:	Air	Batch#:	248609
Units (V):	ppbv	Analyzed:	06/09/17

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	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**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889020	Diln Fac:	1.000
Matrix:	Air	Batch#:	248609
Units (V):	ppbv	Analyzed:	06/09/17

<b>Analyte</b>	<b>Result (V)</b>	<b>RL</b>	<b>Result (M)</b>	<b>RL</b>
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	94	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units



**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>
1,2-Dichloropropane	10.00	9.424	94	70-130
Bromodichloromethane	10.00	9.298	93	70-130
cis-1,3-Dichloropropene	10.00	10.35	104	70-130
4-Methyl-2-Pentanone	10.00	9.513	95	70-130
Toluene	10.00	8.852	89	70-130
trans-1,3-Dichloropropene	10.00	10.71	107	70-130
1,1,2-Trichloroethane	10.00	11.97	120	70-130
Tetrachloroethene	10.00	11.69	117	70-130
2-Hexanone	10.00	9.859	99	70-130
Dibromochloromethane	10.00	12.04	120	70-130
1,2-Dibromoethane	10.00	12.53	125	70-130
Chlorobenzene	10.00	9.291	93	70-130
Ethylbenzene	10.00	10.48	105	70-130
m,p-Xylenes	20.00	21.52	108	70-130
o-Xylene	10.00	10.65	106	70-130
Styrene	10.00	10.27	103	70-130
Bromoform	10.00	13.50 b	135 *	70-130
1,1,2,2-Tetrachloroethane	10.00	12.13	121	70-130
4-Ethyltoluene	10.00	11.30	113	70-130
1,3,5-Trimethylbenzene	10.00	11.24	112	70-130
1,2,4-Trimethylbenzene	10.00	11.46	115	70-130
1,3-Dichlorobenzene	10.00	11.06	111	70-130
1,4-Dichlorobenzene	10.00	10.69	107	70-130
Benzyl chloride	10.00	11.49	115	70-130
1,2-Dichlorobenzene	10.00	10.73	107	70-130
1,2,4-Trichlorobenzene	10.00	12.88	129	70-130
Hexachlorobutadiene	10.00	12.90	129	70-130
Naphthalene	10.00	13.41 b	134 *	70-130

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	94	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17
Diln Fac:	1.000		

Type: BSD Lab ID: QC889202

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	7.969	80	70-130	0	25
Freon 114	10.00	9.248	92	70-130	1	25
Chloromethane	10.00	7.576	76	70-130	0	25
Vinyl Chloride	10.00	8.345	83	70-130	2	25
1,3-Butadiene	10.00	8.207	82	70-130	4	25
Bromomethane	10.00	7.632	76	70-130	2	25
Chloroethane	10.00	9.668	97	70-130	3	25
Trichlorofluoromethane	10.00	9.338	93	70-130	2	25
Acrolein	10.00	9.044	90	70-130	7	25
1,1-Dichloroethene	10.00	10.86	109	70-130	1	25
Freon 113	10.00	10.23	102	70-130	1	25
Acetone	10.00	8.973	90	70-130	3	25
Carbon Disulfide	10.00	9.405	94	70-130	0	25
Isopropanol	10.00	8.980	90	70-130	0	25
Methylene Chloride	10.00	9.415	94	70-130	1	25
trans-1,2-Dichloroethene	10.00	10.76	108	70-130	0	25
MTBE	10.00	11.49	115	70-130	4	25
n-Hexane	10.00	12.07	121	70-130	1	25
1,1-Dichloroethane	10.00	10.20	102	70-130	3	25
Vinyl Acetate	10.00	11.15	112	70-130	3	25
cis-1,2-Dichloroethene	10.00	11.05	111	70-130	2	25
2-Butanone	10.00	10.65	107	70-130	5	25
Ethyl Acetate	10.00	10.97	110	70-130	2	25
Tetrahydrofuran	10.00	8.769	88	70-130	3	25
Chloroform	10.00	9.847	98	70-130	4	25
1,1,1-Trichloroethane	10.00	8.556	86	70-130	1	25
Cyclohexane	10.00	8.224	82	70-130	2	25
Carbon Tetrachloride	10.00	7.934	79	70-130	0	25
Benzene	10.00	9.232	92	70-130	1	25
1,2-Dichloroethane	10.00	9.841	98	70-130	5	25
n-Heptane	10.00	7.232	72	70-130	1	25
Trichloroethene	10.00	9.035	90	70-130	4	25

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units



**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
1,2-Dichloropropane	10.00	9.089	91	70-130	4	25
Bromodichloromethane	10.00	9.051	91	70-130	3	25
cis-1,3-Dichloropropene	10.00	10.08	101	70-130	3	25
4-Methyl-2-Pentanone	10.00	9.268	93	70-130	3	25
Toluene	10.00	9.143	91	70-130	3	25
trans-1,3-Dichloropropene	10.00	10.56	106	70-130	1	25
1,1,2-Trichloroethane	10.00	12.06	121	70-130	1	25
Tetrachloroethene	10.00	12.16	122	70-130	4	25
2-Hexanone	10.00	10.14	101	70-130	3	25
Dibromochloromethane	10.00	12.17	122	70-130	1	25
1,2-Dibromoethane	10.00	12.96	130	70-130	3	25
Chlorobenzene	10.00	9.593	96	70-130	3	25
Ethylbenzene	10.00	10.58	106	70-130	1	25
m,p-Xylenes	20.00	22.20	111	70-130	3	25
o-Xylene	10.00	11.08	111	70-130	4	25
Styrene	10.00	10.27	103	70-130	0	25
Bromoform	10.00	13.66 b	137 *	70-130	1	25
1,1,2,2-Tetrachloroethane	10.00	12.42	124	70-130	2	25
4-Ethyltoluene	10.00	11.68	117	70-130	3	25
1,3,5-Trimethylbenzene	10.00	11.74	117	70-130	4	25
1,2,4-Trimethylbenzene	10.00	11.78	118	70-130	3	25
1,3-Dichlorobenzene	10.00	11.37	114	70-130	3	25
1,4-Dichlorobenzene	10.00	11.01	110	70-130	3	25
Benzyl chloride	10.00	11.75	118	70-130	2	25
1,2-Dichlorobenzene	10.00	10.91	109	70-130	2	25
1,2,4-Trichlorobenzene	10.00	13.05	130	70-130	1	25
Hexachlorobutadiene	10.00	13.46	135 *	70-130	4	25
Naphthalene	10.00	13.88 b	139 *	70-130	3	25

Surrogate	%REC	Limits
Bromofluorobenzene	95	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889203	Diln Fac:	1.000
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17

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	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**

<b>Volatile Organics in Air</b>			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889203	Diln Fac:	1.000
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17

<b>Analyte</b>	<b>Result (V)</b>	<b>RL</b>	<b>Result (M)</b>	<b>RL</b>
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	93	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units



Fixed Gas Analysis			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Sampled:	05/24/17
Units:	ppmv	Received:	05/25/17
Units (Mol %):	MOL %	Analyzed:	05/26/17
Batch#:	248248		

Field ID: VP-5                      Lab ID: 289315-005  
 Type: SAMPLE                      Diln Fac: 2.240

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,200	ND	0.22
Carbon Monoxide	ND	2,200	ND	0.22
Carbon Dioxide	39,000	2,200	3.9	0.22
Oxygen	46,000	2,200	4.6	0.22
Methane	ND	2,200	ND	0.22

Field ID: VP-6                      Lab ID: 289315-006  
 Type: SAMPLE                      Diln Fac: 2.230

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,200	ND	0.22
Carbon Monoxide	ND	2,200	ND	0.22
Carbon Dioxide	56,000	2,200	5.6	0.22
Oxygen	12,000	2,200	1.2	0.22
Methane	ND	2,200	ND	0.22

Field ID: VP-7                      Lab ID: 289315-007  
 Type: SAMPLE                      Diln Fac: 2.000

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,000	ND	0.20
Carbon Monoxide	ND	2,000	ND	0.20
Carbon Dioxide	16,000	2,000	1.6	0.20
Oxygen	150,000	2,000	15	0.20
Methane	ND	2,000	ND	0.20

Field ID: VP-8                      Lab ID: 289315-008  
 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	16,000	2,300	1.6	0.23
Oxygen	73,000	2,300	7.3	0.23
Methane	ND	2,300	ND	0.23

ND= Not Detected  
 RL= Reporting Limit

Result Mol %= Result in Mole Percent



**Aromatic / Petroleum Hydrocarbons in Air**

Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Units (M):	ug/m3
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln Fac	Batch#	Analyzed
VP-1	SAMPLE	289315-001	78,000	2,000	290	320,000	8,000	1,200	39.00	248298	05/30/17
VP-2	SAMPLE	289315-002	18,000	110	16	74,000	440	66	2.170	248298	05/30/17
VP-3	SAMPLE	289315-003	69 J	100	15	280 J	420	62	2.030	248263	05/26/17
VP-4	SAMPLE	289315-004	46 J	99	15	190 J	400	60	1.980	248263	05/26/17
VP-5	SAMPLE	289315-005	32 J	110	17	130 J	460	68	2.240	248263	05/26/17
VP-6	SAMPLE	289315-006	32,000	2,200	330	130,000	9,100	1,400	44.60	248298	05/30/17
VP-7	SAMPLE	289315-007	39 J	100	15	160 J	410	61	2.000	248263	05/26/17
VP-8	SAMPLE	289315-008	90 J	120	17	370 J	470	70	2.300	248263	05/26/17
DUP-1	SAMPLE	289315-009	32 J	100	15	130 J	410	61	2.020	248263	05/26/17
	BLANK	QC887691	ND	50	7.4	ND	200	30	1.000	248263	05/26/17
	BLANK	QC887829	ND	50	7.4	ND	200	30	1.000	248298	05/30/17

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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	248248
Units:	ppmv	Analyzed:	05/26/17
Diln Fac:	1.000		

Type: BS Lab ID: QC887626

Analyte	Spiked	Result	%REC	Limits
Helium	100,000	92,900	93	70-130
Carbon Monoxide		NA		
Carbon Dioxide		NA		
Oxygen		NA		
Methane		NA		

Type: BSD Lab ID: QC887627

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Helium	100,000	89,940	90	70-130	3	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC887629	Batch#:	248248
Matrix:	Air	Analyzed:	05/26/17
Units:	ppmv		

Analyte	Spiked	Result	%REC	Limits
Helium		NA		
Carbon Monoxide	2,000	1,801	90	70-130
Carbon Dioxide	2,000	1,838	92	70-130
Oxygen	2,000	1,771	89	70-130
Methane	2,000	1,866	93	70-130

NA= Not Analyzed

## Batch QC Report

Fixed Gas Analysis			
Lab #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Field ID:	VP-1	Units (Mol %):	MOL %
Type:	SDUP	Diln Fac:	1.950
MSS Lab ID:	289315-001	Batch#:	248248
Lab ID:	QC887660	Sampled:	05/24/17
Matrix:	Air	Received:	05/25/17
Units:	ppmv	Analyzed:	05/26/17

Analyte	MSS Result	Result	RL	Result (Mol %)	RL	RPD	Lim
Helium	<1,950	ND	1,950	ND	0.1950	NC	30
Carbon Monoxide	<1,950	ND	1,950	ND	0.1950	NC	30
Carbon Dioxide	74,610	74,460	1,950	7.446	0.1950	0	30
Oxygen	16,730	16,700	1,950	1.670	0.1950	0	30
Methane	<1,950	ND	1,950	ND	0.1950	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 #:	289315	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Units (V):	ppbv
Matrix:	Air	Diln Fac:	1.000

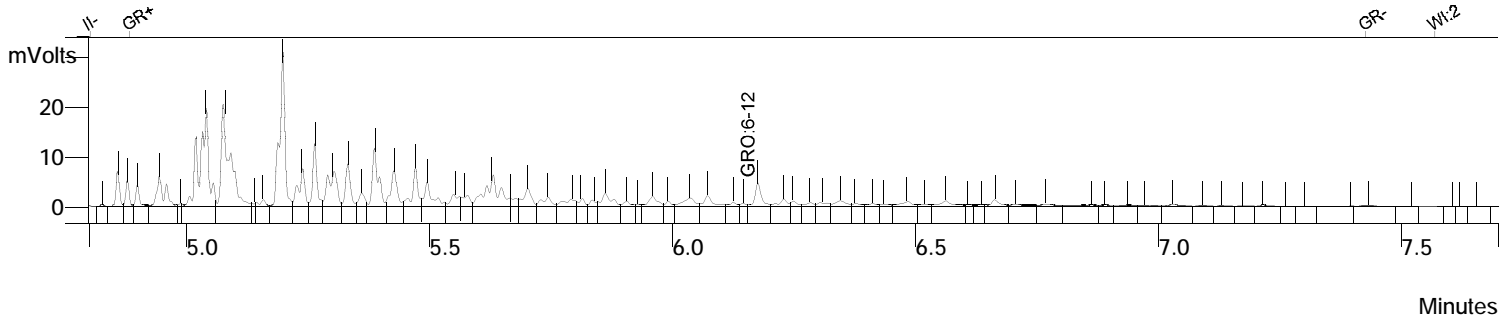
Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim	Batch#	Analyzed
BS	QC887689	210.0	199.5	95	70-130			248263	05/26/17
BSD	QC887690	210.0	189.5	90	70-130	5	25	248263	05/26/17
BS	QC887827	2,100	1,661	79	70-130			248298	05/30/17
BSD	QC887828	2,100	1,953	93	70-130	16	25	248298	05/30/17

RPD= Relative Percent Difference

Result V= Result in volume units

# GRO by TO-3

Sample ID: 289315-001,248298  
 Data File: c:\varianws\data\053017\150\_024.run  
 Sample List: c:\varianws\053017.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/30/2017 17:52:31  
 Calculation Date: 05/30/2017 18:02:27  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 39.0x,c00165=c00076/20  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	217134	2008.617
		<b>Totals</b>	<b>217134</b>	<b>2008.617</b>

**Integration Parameters**

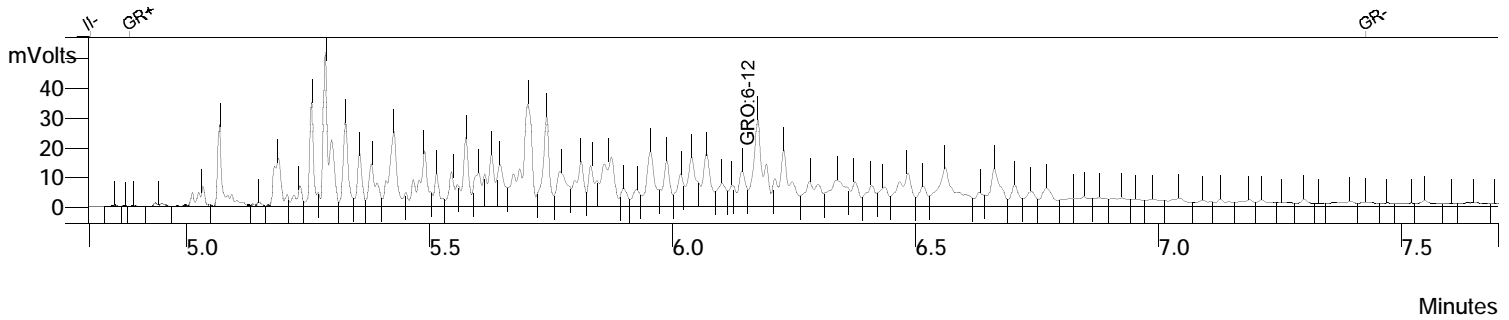
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289315-002,248298  
 Data File: c:\varianws\data\053017\150\_022.run  
 Sample List: c:\varianws\053017.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/30/2017 17:25:35  
 Calculation Date: 05/30/2017 17:35:30  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 2.17x,c00081  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	901797	8342.165
		<b>Totals</b>	<b>901797</b>	<b>8342.165</b>

**Integration Parameters**

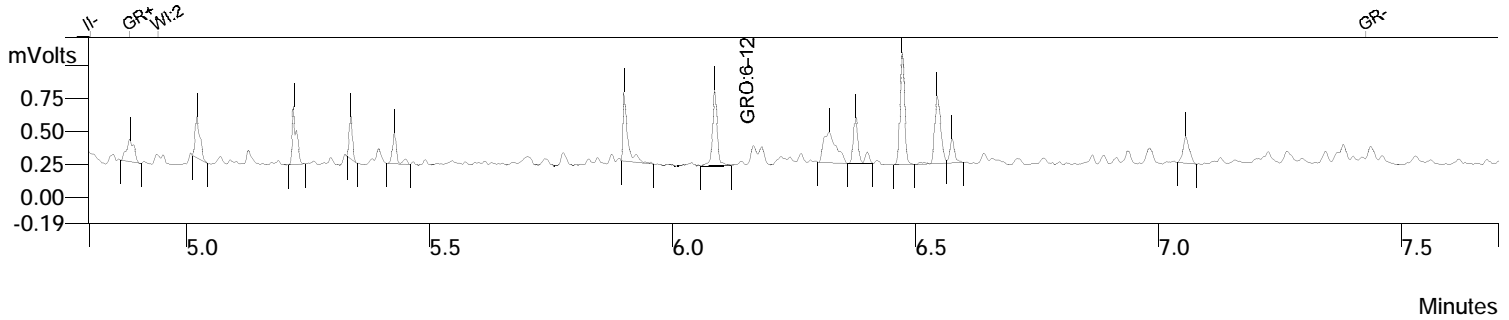
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289315-003,248263  
 Data File: c:\varianws\data\052617\146\_007.run  
 Sample List: c:\varianws\052617.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/26/2017 20:27:47  
 Calculation Date: 05/26/2017 20:37:42  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 2.03x,c00312 Divisor: 1.000  
 Multiplier: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	3700	34.229
		<b>Totals</b>	<b>3700</b>	<b>34.229</b>

**Integration Parameters**

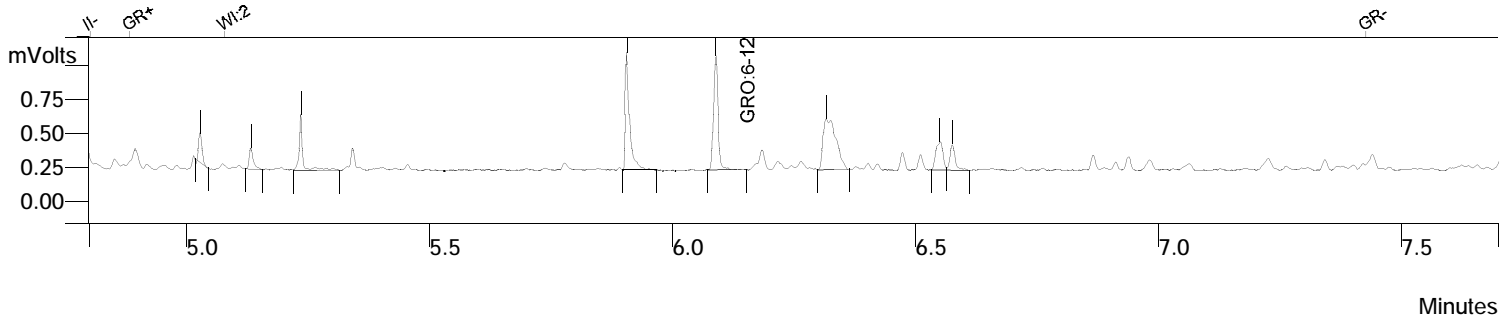
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289315-004,248263  
 Data File: c:\varianws\data\052617\146\_008.run  
 Sample List: c:\varianws\052617.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/26/2017 20:40:48  
 Calculation Date: 05/26/2017 20:50:42  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 1.98x,c00158  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	2535	23.446
		<b>Totals</b>	<b>2535</b>	<b>23.446</b>

**Integration Parameters**

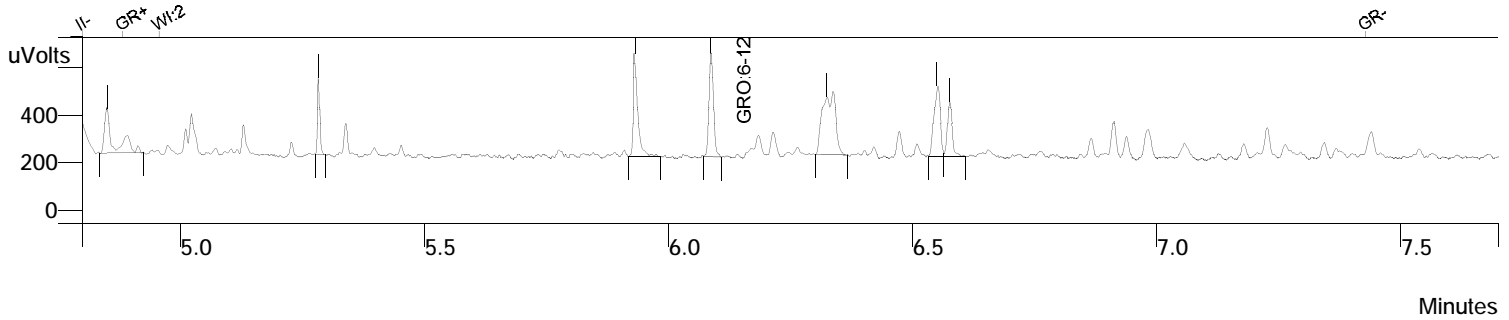
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289315-005,248263  
 Data File: c:\varianws\data\052617\146\_009.run  
 Sample List: c:\varianws\052617.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/26/2017 20:55:11  
 Calculation Date: 05/26/2017 21:05:05  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 2.24x,c00413  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	1559	14.421
<b>Totals</b>			<b>1559</b>	<b>14.421</b>

**Integration Parameters**

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

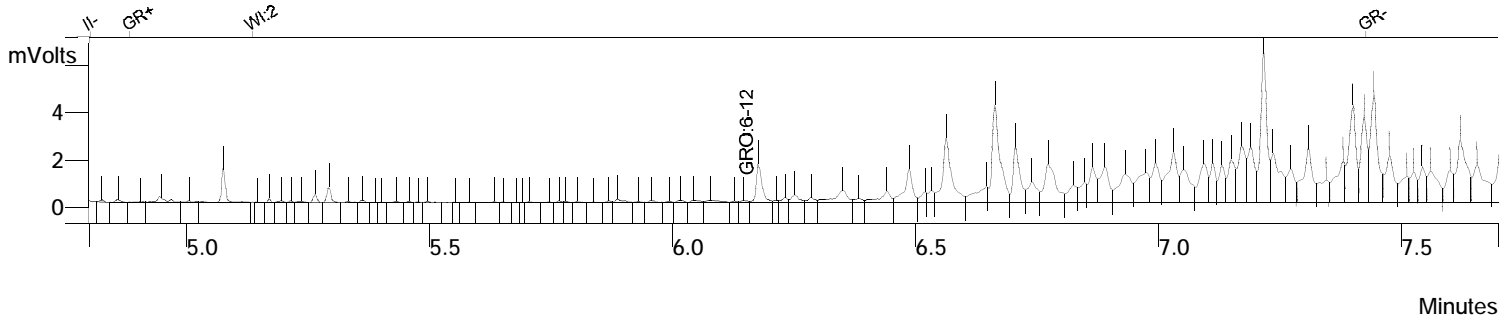
**Data Handling Time Events**

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



# GRO by TO-3

Sample ID: 289315-006,248298  
 Data File: c:\varianws\data\053017\150\_026.run  
 Sample List: c:\varianws\053017.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/30/2017 18:17:52  
 Calculation Date: 05/30/2017 18:27:46  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 44.6x,c00399=c00166/20  
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	78348	724.766
		<b>Totals</b>	<b>78348</b>	<b>724.766</b>

**Integration Parameters**

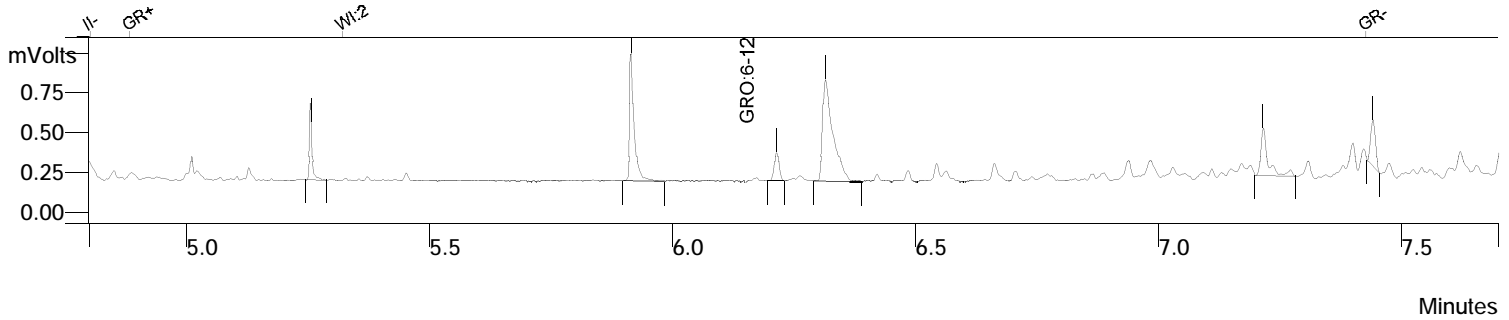
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289315-007,248263  
 Data File: c:\varianws\data\052617\146\_011.run  
 Sample List: c:\varianws\052617.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/26/2017 21:22:23  
 Calculation Date: 05/26/2017 21:32:17  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 1.99x,c00333 Divisor: 1.000  
 Multiplier: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	2128	19.684
		<b>Totals</b>	<b>2128</b>	<b>19.684</b>

**Integration Parameters**

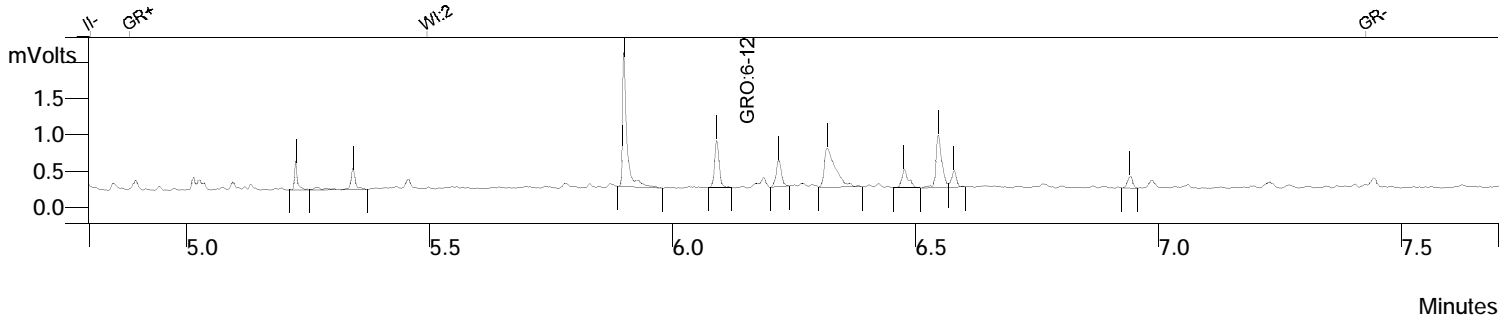
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

```

Sample ID:      289315-008,248263
Data File:     c:\varianws\data\052617\146_012.run
Sample List:   c:\varianws\052617.smp
Method:       c:\varianws\methods\to3_042617.mth
Acquisition Date: 05/26/2017 21:34:58
Calculation Date: 05/26/2017 21:44:53
Instrument ID: GC32
Operator:      TO-15
Injection Notes: 2.30x,c00300
Multiplier:   1.000
Divisor:       1.000
    
```



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	4209	38.935
		<b>Totals</b>	<b>4209</b>	<b>38.935</b>

**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**

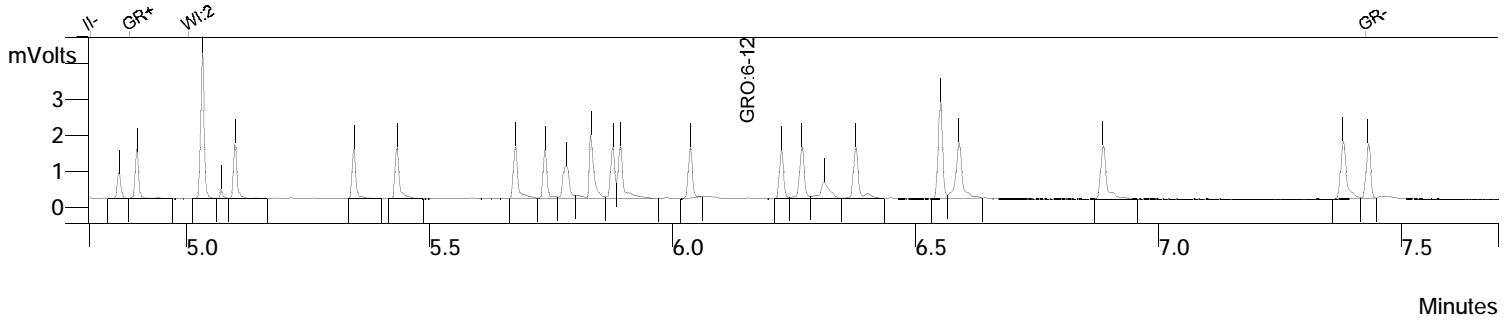
```

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



# GRO by TO-3

Sample ID: ccv/bs,qc887689  
 Data File: c:\varianws\data\052617\146\_002.run  
 Sample List: c:\varianws\052617.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/26/2017 19:22:55  
 Calculation Date: 05/26/2017 19:32:49  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 248263,S33087,1x  
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	21569	199.530
<b>Totals</b>			<b>21569</b>	<b>199.530</b>

**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



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





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

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

Laboratory Job Number 289345  
ANALYTICAL REPORT

Geosyntec Consultants  
1111 Broadway  
Oakland, CA 94607

Project : WR2229  
Location : Antez Oakland  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
VP-9	289345-001
VP-10	289345-002
VP-11	289345-003
DUP-2	289345-004
VP-12	289345-005
VP-13	289345-006
VP-14	289345-007
VP-15	289345-008
VP-16	289345-009
VP-22	289345-010
VP-21	289345-011

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.

Signature: \_\_\_\_\_

Date: 06/15/2017

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

### CASE NARRATIVE

Laboratory number: 289345  
Client: Geosyntec Consultants  
Project: WR2229  
Location: Antez Oakland  
Request Date: 05/26/17  
Samples Received: 05/25/17

This data package contains sample and QC results for eleven air samples, requested for the above referenced project on 05/26/17. The samples were received cold and intact.

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

High responses were observed for naphthalene and bromoform in the CCV analyzed 06/12/17 07:56; affected data was qualified with "b". High responses were observed for naphthalene and bromoform in the CCV analyzed 06/13/17 12:40; affected data was qualified with "b". High recoveries were observed for hexachlorobutadiene, naphthalene, and bromoform in the BS/BSD for batch 248660; the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated samples. High recoveries were observed for naphthalene and bromoform in the BS/BSD for batch 248707; the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated samples. High recovery was observed for naphthalene in the BSD for batch 248744; the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated sample. Many samples were diluted due to high non-target analytes. No other analytical problems were encountered.

#### Volatile Organics in Air GC (ASTM D1946-90 and EPA TO-3):

No analytical problems were encountered.



# AIR TESTING CHAIN OF CUSTODY & PURCHASE ORDER

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

C&T LOGIN# 289345  
 Sampler: B. Linker, A. Chan  
 Report To: Robert Cheong  
 Company: Geosyntec  
 Telephone: (510) 976-3074  
 Email: r.cheong@geosyntec.com

Page 1 of 1  
 Chain of Custody # : \_\_\_\_\_  
 TESTING REQUESTED

10-15 VOCs	ASTM-D1946 (CH <sub>4</sub> , O <sub>2</sub> , CO <sub>2</sub> , HC)	10-3M (TPHs)
X	X	X

Project No: WR2229  
 Project Name: Anke Oakland  
 EDD Format: Rpt Level: II III IV  
 Turnaround Time: CRUSH  Standard

Lab No.	Sample ID.	Sampling Information				Sample Volume (Gauge Reading)
		Date Collected	Fitsa Collected	Cartridge ID (Max Cap #)	Flow Controller ID	
1	VP-9	5/24/17	1730	00275	A00261	-3
2	VP-10	5/24/17	1738	00320	A00449	-2.5
3	VP-11	5/25/17	0943	00396	A00372	-3
4	DUP-2		1002	00319	A0032	-7
5	VP-12		085	00194	A0040	-7
6	VP-13		1010	00268	A0026	-7.5
7	VP-14		1052	00307	A00311	-7
8	VP-15		1117	00119	A0002	-3
9	VP-16		1213	00394	A00317	-9.5
10	VP-22		1352	00132	A00160	-3
11	VP-21		1574	00138	A00126	-7

Notes: \_\_\_\_\_

RELINQUISHED BY: [Signature] 5/25/17 DATE/TIME

RECEIVED BY: [Signature] 5/25/17 @ 1624 DATE/TIME

[Signature] 5/25/17 @ 1700 DATE/TIME

[Signature] 5/25/17 17:02 DATE/TIME

**COOLER RECEIPT CHECKLIST**



Curtis & Tompkins, Ltd.

Login # 289345 Date Received 5/25/17 Number of coolers 0  
 Client Greosyntec Project WR2229  
 Date Opened 5/26/17 By (print) EWA (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**

Sampler didn't label sample ID on canister label for can 320.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Client Sample ID : DUP-2

Laboratory Sample ID :

289345-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
MTBE	1,700		180		ppbv	As Recd	368.0	EPA TO-15	METHOD
n-Hexane	2,600		180		ppbv	As Recd	368.0	EPA TO-15	METHOD
n-Heptane	510		180		ppbv	As Recd	368.0	EPA TO-15	METHOD
Carbon Dioxide	58,000		1,800		ppmv	As Recd	1.840	ASTM D1946-90	METHOD
Oxygen	12,000		1,800		ppmv	As Recd	1.840	ASTM D1946-90	METHOD
Methane	11,000		1,800		ppmv	As Recd	1.840	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	470,000		9,200	1,400	ppbv	As Recd	184.0	EPA TO-3	METHOD

Client Sample ID : VP-12

Laboratory Sample ID :

289345-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
MTBE	1,600		530		ppbv	As Recd	1056	EPA TO-15	METHOD
n-Hexane	2,400		530		ppbv	As Recd	1056	EPA TO-15	METHOD
n-Heptane	540		530		ppbv	As Recd	1056	EPA TO-15	METHOD
Carbon Dioxide	29,000		1,800		ppmv	As Recd	1.760	ASTM D1946-90	METHOD
Oxygen	12,000		1,800		ppmv	As Recd	1.760	ASTM D1946-90	METHOD
Methane	38,000		1,800		ppmv	As Recd	1.760	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	2,900,000		8,800	1,300	ppbv	As Recd	176.0	EPA TO-3	METHOD

Client Sample ID : VP-13

Laboratory Sample ID :

289345-006

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Carbon Dioxide	31,000		1,900		ppmv	As Recd	1.860	ASTM D1946-90	METHOD
Oxygen	12,000		1,900		ppmv	As Recd	1.860	ASTM D1946-90	METHOD
Methane	25,000		1,900		ppmv	As Recd	1.860	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	1,400,000		9,300	1,400	ppbv	As Recd	186.0	EPA TO-3	METHOD

Client Sample ID : VP-14

Laboratory Sample ID :

289345-007

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Trichlorofluoromethane	54		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
Acetone	7.7		4.3		ppbv	As Recd	2.150	EPA TO-15	METHOD
Carbon Disulfide	1.8		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
n-Hexane	5.1		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
2-Butanone	2.1		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
Benzene	1.1		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
n-Heptane	2.7		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
Toluene	1.2		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
Tetrachloroethene	2.3		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
Ethylbenzene	2.8		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
m,p-Xylenes	4.7		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
o-Xylene	4.1		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
1,3,5-Trimethylbenzene	7.8		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
1,3-Dichlorobenzene	1.6		1.1		ppbv	As Recd	2.150	EPA TO-15	METHOD
Oxygen	140,000		2,200		ppmv	As Recd	2.150	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	610		110	16	ppbv	As Recd	2.150	EPA TO-3	METHOD

Client Sample ID : VP-15

Laboratory Sample ID :

289345-008

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Trichlorofluoromethane	39		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
Acetone	11		7.2		ppbv	As Recd	3.620	EPA TO-15	METHOD
n-Hexane	9.0		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
n-Heptane	3.4		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
Tetrachloroethene	3.5		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
Ethylbenzene	4.2		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
m,p-Xylenes	4.6		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
o-Xylene	5.6		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
1,3,5-Trimethylbenzene	25		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	1.9		1.8		ppbv	As Recd	3.620	EPA TO-15	METHOD
Oxygen	150,000		1,800		ppmv	As Recd	1.810	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	1,100		91	13	ppbv	As Recd	1.810	EPA TO-3	METHOD

Client Sample ID : VP-16

Laboratory Sample ID :

289345-009

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
MTBE	89		25		ppbv	As Recd	50.40	EPA TO-15	METHOD
Carbon Dioxide	47,000		2,500		ppmv	As Recd	2.520	ASTM D1946-90	METHOD
Oxygen	11,000		2,500		ppmv	As Recd	2.520	ASTM D1946-90	METHOD
Methane	8,300		2,500		ppmv	As Recd	2.520	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	82,000		2,500	370	ppbv	As Recd	50.40	EPA TO-3	METHOD

Client Sample ID : VP-22

Laboratory Sample ID :

289345-010

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
n-Hexane	1,600		290		ppbv	As Recd	588.0	EPA TO-15	METHOD
Carbon Dioxide	57,000		2,000		ppmv	As Recd	1.960	ASTM D1946-90	METHOD
Oxygen	13,000		2,000		ppmv	As Recd	1.960	ASTM D1946-90	METHOD
Methane	85,000		2,000		ppmv	As Recd	1.960	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	2,400,000		9,800	1,500	ppbv	As Recd	196.0	EPA TO-3	METHOD

Client Sample ID : VP-21

Laboratory Sample ID :

289345-011

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Carbon Dioxide	37,000		1,900		ppmv	As Recd	1.930	ASTM D1946-90	METHOD
Oxygen	12,000		1,900		ppmv	As Recd	1.930	ASTM D1946-90	METHOD
Methane	6,500		1,900		ppmv	As Recd	1.930	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	76,000		9,700	1,400	ppbv	As Recd	193.0	EPA TO-3	METHOD

### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-9	Diln Fac:	1.910
Lab ID:	289345-001	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.96	ND	4.7
Freon 114	ND	0.96	ND	6.7
Chloromethane	ND	0.96	ND	2.0
Vinyl Chloride	ND	0.96	ND	2.4
1,3-Butadiene	ND	0.96	ND	2.1
Bromomethane	ND	0.96	ND	3.7
Chloroethane	ND	0.96	ND	2.5
Trichlorofluoromethane	8.6	0.96	48	5.4
Acrolein	ND	3.8	ND	8.8
1,1-Dichloroethene	ND	0.96	ND	3.8
Freon 113	ND	0.96	ND	7.3
Acetone	6.1	3.8	14	9.1
Carbon Disulfide	ND	0.96	ND	3.0
Isopropanol	ND	3.8	ND	9.4
Methylene Chloride	ND	0.96	ND	3.3
trans-1,2-Dichloroethene	ND	0.96	ND	3.8
MTBE	ND	0.96	ND	3.4
n-Hexane	ND	0.96	ND	3.4
1,1-Dichloroethane	ND	0.96	ND	3.9
Vinyl Acetate	ND	0.96	ND	3.4
cis-1,2-Dichloroethene	ND	0.96	ND	3.8
2-Butanone	1.5	0.96	4.5	2.8
Ethyl Acetate	ND	0.96	ND	3.4
Tetrahydrofuran	ND	0.96	ND	2.8
Chloroform	0.96	0.96	4.7	4.7
1,1,1-Trichloroethane	ND	0.96	ND	5.2
Cyclohexane	ND	0.96	ND	3.3
Carbon Tetrachloride	ND	0.96	ND	6.0
Benzene	ND	0.96	ND	3.1
1,2-Dichloroethane	ND	0.96	ND	3.9
n-Heptane	ND	0.96	ND	3.9
Trichloroethene	ND	0.96	ND	5.1
1,2-Dichloropropane	ND	0.96	ND	4.4
Bromodichloromethane	ND	0.96	ND	6.4
cis-1,3-Dichloropropene	ND	0.96	ND	4.3

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-9	Diln Fac:	1.910
Lab ID:	289345-001	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.96	ND	3.9
Toluene	ND	0.96	ND	3.6
trans-1,3-Dichloropropene	ND	0.96	ND	4.3
1,1,2-Trichloroethane	ND	0.96	ND	5.2
Tetrachloroethene	ND	0.96	ND	6.5
2-Hexanone	ND	0.96	ND	3.9
Dibromochloromethane	ND	0.96	ND	8.1
1,2-Dibromoethane	ND	0.96	ND	7.3
Chlorobenzene	ND	0.96	ND	4.4
Ethylbenzene	ND	0.96	ND	4.1
m,p-Xylenes	2.1	0.96	9.1	4.1
o-Xylene	1.2	0.96	5.3	4.1
Styrene	ND	0.96	ND	4.1
Bromoform	ND	0.96	ND	9.9
1,1,2,2-Tetrachloroethane	ND	0.96	ND	6.6
4-Ethyltoluene	ND	0.96	ND	4.7
1,3,5-Trimethylbenzene	ND	0.96	ND	4.7
1,2,4-Trimethylbenzene	ND	0.96	ND	4.7
1,3-Dichlorobenzene	1.5	0.96	9.3	5.7
1,4-Dichlorobenzene	ND	0.96	ND	5.7
Benzyl chloride	ND	0.96	ND	4.9
1,2-Dichlorobenzene	ND	0.96	ND	5.7
1,2,4-Trichlorobenzene	ND	0.96	ND	7.1
Hexachlorobutadiene	ND	0.96	ND	10
Naphthalene	ND	3.8	ND	20

Surrogate	%REC	Limits
Bromofluorobenzene	108	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-10	Diln Fac:	1.910
Lab ID:	289345-002	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.96	ND	4.7
Freon 114	ND	0.96	ND	6.7
Chloromethane	ND	0.96	ND	2.0
Vinyl Chloride	ND	0.96	ND	2.4
1,3-Butadiene	ND	0.96	ND	2.1
Bromomethane	ND	0.96	ND	3.7
Chloroethane	ND	0.96	ND	2.5
Trichlorofluoromethane	11	0.96	61	5.4
Acrolein	ND	3.8	ND	8.8
1,1-Dichloroethene	ND	0.96	ND	3.8
Freon 113	ND	0.96	ND	7.3
Acetone	19	3.8	45	9.1
Carbon Disulfide	25	0.96	78	3.0
Isopropanol	ND	3.8	ND	9.4
Methylene Chloride	ND	0.96	ND	3.3
trans-1,2-Dichloroethene	ND	0.96	ND	3.8
MTBE	ND	0.96	ND	3.4
n-Hexane	ND	0.96	ND	3.4
1,1-Dichloroethane	ND	0.96	ND	3.9
Vinyl Acetate	ND	0.96	ND	3.4
cis-1,2-Dichloroethene	ND	0.96	ND	3.8
2-Butanone	1.9	0.96	5.5	2.8
Ethyl Acetate	ND	0.96	ND	3.4
Tetrahydrofuran	ND	0.96	ND	2.8
Chloroform	1.5	0.96	7.4	4.7
1,1,1-Trichloroethane	ND	0.96	ND	5.2
Cyclohexane	ND	0.96	ND	3.3
Carbon Tetrachloride	ND	0.96	ND	6.0
Benzene	ND	0.96	ND	3.1
1,2-Dichloroethane	ND	0.96	ND	3.9
n-Heptane	ND	0.96	ND	3.9
Trichloroethene	ND	0.96	ND	5.1
1,2-Dichloropropane	ND	0.96	ND	4.4
Bromodichloromethane	ND	0.96	ND	6.4
cis-1,3-Dichloropropene	ND	0.96	ND	4.3

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units



### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-10	Diln Fac:	1.910
Lab ID:	289345-002	Batch#:	248660
Matrix:	Air	Sampled:	05/24/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/12/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.96	ND	3.9
Toluene	1.2	0.96	4.6	3.6
trans-1,3-Dichloropropene	ND	0.96	ND	4.3
1,1,2-Trichloroethane	ND	0.96	ND	5.2
Tetrachloroethene	2.1	0.96	14	6.5
2-Hexanone	ND	0.96	ND	3.9
Dibromochloromethane	ND	0.96	ND	8.1
1,2-Dibromoethane	ND	0.96	ND	7.3
Chlorobenzene	ND	0.96	ND	4.4
Ethylbenzene	ND	0.96	ND	4.1
m,p-Xylenes	ND	0.96	ND	4.1
o-Xylene	ND	0.96	ND	4.1
Styrene	ND	0.96	ND	4.1
Bromoform	ND	0.96	ND	9.9
1,1,2,2-Tetrachloroethane	ND	0.96	ND	6.6
4-Ethyltoluene	ND	0.96	ND	4.7
1,3,5-Trimethylbenzene	ND	0.96	ND	4.7
1,2,4-Trimethylbenzene	ND	0.96	ND	4.7
1,3-Dichlorobenzene	ND	0.96	ND	5.7
1,4-Dichlorobenzene	ND	0.96	ND	5.7
Benzyl chloride	ND	0.96	ND	4.9
1,2-Dichlorobenzene	ND	0.96	ND	5.7
1,2,4-Trichlorobenzene	ND	0.96	ND	7.1
Hexachlorobutadiene	ND	0.96	ND	10
Naphthalene	ND	3.8	ND	20

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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-11	Diln Fac:	358.0
Lab ID:	289345-003	Batch#:	248660
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	180	ND	890
Freon 114	ND	180	ND	1,300
Chloromethane	ND	180	ND	370
Vinyl Chloride	ND	180	ND	460
1,3-Butadiene	ND	180	ND	400
Bromomethane	ND	180	ND	700
Chloroethane	ND	180	ND	470
Trichlorofluoromethane	ND	180	ND	1,000
Acrolein	ND	720	ND	1,600
1,1-Dichloroethene	ND	180	ND	710
Freon 113	ND	180	ND	1,400
Acetone	ND	720	ND	1,700
Carbon Disulfide	ND	180	ND	560
Isopropanol	ND	720	ND	1,800
Methylene Chloride	ND	180	ND	620
trans-1,2-Dichloroethene	ND	180	ND	710
MTBE	1,500	180	5,600	650
n-Hexane	2,200	180	7,900	630
1,1-Dichloroethane	ND	180	ND	720
Vinyl Acetate	ND	180	ND	630
cis-1,2-Dichloroethene	ND	180	ND	710
2-Butanone	ND	180	ND	530
Ethyl Acetate	ND	180	ND	650
Tetrahydrofuran	ND	180	ND	530
Chloroform	ND	180	ND	870
1,1,1-Trichloroethane	ND	180	ND	980
Cyclohexane	ND	180	ND	620
Carbon Tetrachloride	ND	180	ND	1,100
Benzene	ND	180	ND	570
1,2-Dichloroethane	ND	180	ND	720
n-Heptane	440	180	1,800	730
Trichloroethene	ND	180	ND	960
1,2-Dichloropropane	ND	180	ND	830
Bromodichloromethane	ND	180	ND	1,200
cis-1,3-Dichloropropene	ND	180	ND	810

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-11	Diln Fac:	358.0
Lab ID:	289345-003	Batch#:	248660
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	180	ND	730
Toluene	ND	180	ND	670
trans-1,3-Dichloropropene	ND	180	ND	810
1,1,2-Trichloroethane	ND	180	ND	980
Tetrachloroethene	ND	180	ND	1,200
2-Hexanone	ND	180	ND	730
Dibromochloromethane	ND	180	ND	1,500
1,2-Dibromoethane	ND	180	ND	1,400
Chlorobenzene	ND	180	ND	820
Ethylbenzene	ND	180	ND	780
m,p-Xylenes	ND	180	ND	780
o-Xylene	ND	180	ND	780
Styrene	ND	180	ND	760
Bromoform	ND	180	ND	1,900
1,1,2,2-Tetrachloroethane	ND	180	ND	1,200
4-Ethyltoluene	ND	180	ND	880
1,3,5-Trimethylbenzene	ND	180	ND	880
1,2,4-Trimethylbenzene	ND	180	ND	880
1,3-Dichlorobenzene	ND	180	ND	1,100
1,4-Dichlorobenzene	ND	180	ND	1,100
Benzyl chloride	ND	180	ND	930
1,2-Dichlorobenzene	ND	180	ND	1,100
1,2,4-Trichlorobenzene	ND	180	ND	1,300
Hexachlorobutadiene	ND	180	ND	1,900
Naphthalene	ND	720	ND	3,800

Surrogate	%REC	Limits
Bromofluorobenzene	101	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	DUP-2	Diln Fac:	368.0
Lab ID:	289345-004	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	180	ND	910
Freon 114	ND	180	ND	1,300
Chloromethane	ND	180	ND	380
Vinyl Chloride	ND	180	ND	470
1,3-Butadiene	ND	180	ND	410
Bromomethane	ND	180	ND	710
Chloroethane	ND	180	ND	490
Trichlorofluoromethane	ND	180	ND	1,000
Acrolein	ND	740	ND	1,700
1,1-Dichloroethene	ND	180	ND	730
Freon 113	ND	180	ND	1,400
Acetone	ND	740	ND	1,700
Carbon Disulfide	ND	180	ND	570
Isopropanol	ND	740	ND	1,800
Methylene Chloride	ND	180	ND	640
trans-1,2-Dichloroethene	ND	180	ND	730
MTBE	1,700	180	6,300	660
n-Hexane	2,600	180	9,000	650
1,1-Dichloroethane	ND	180	ND	740
Vinyl Acetate	ND	180	ND	650
cis-1,2-Dichloroethene	ND	180	ND	730
2-Butanone	ND	180	ND	540
Ethyl Acetate	ND	180	ND	660
Tetrahydrofuran	ND	180	ND	540
Chloroform	ND	180	ND	900
1,1,1-Trichloroethane	ND	180	ND	1,000
Cyclohexane	ND	180	ND	630
Carbon Tetrachloride	ND	180	ND	1,200
Benzene	ND	180	ND	590
1,2-Dichloroethane	ND	180	ND	740
n-Heptane	510	180	2,100	750
Trichloroethene	ND	180	ND	990
1,2-Dichloropropane	ND	180	ND	850
Bromodichloromethane	ND	180	ND	1,200
cis-1,3-Dichloropropene	ND	180	ND	840

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	DUP-2	Diln Fac:	368.0
Lab ID:	289345-004	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	180	ND	750
Toluene	ND	180	ND	690
trans-1,3-Dichloropropene	ND	180	ND	840
1,1,2-Trichloroethane	ND	180	ND	1,000
Tetrachloroethene	ND	180	ND	1,200
2-Hexanone	ND	180	ND	750
Dibromochloromethane	ND	180	ND	1,600
1,2-Dibromoethane	ND	180	ND	1,400
Chlorobenzene	ND	180	ND	850
Ethylbenzene	ND	180	ND	800
m,p-Xylenes	ND	180	ND	800
o-Xylene	ND	180	ND	800
Styrene	ND	180	ND	780
Bromoform	ND	180	ND	1,900
1,1,2,2-Tetrachloroethane	ND	180	ND	1,300
4-Ethyltoluene	ND	180	ND	900
1,3,5-Trimethylbenzene	ND	180	ND	900
1,2,4-Trimethylbenzene	ND	180	ND	900
1,3-Dichlorobenzene	ND	180	ND	1,100
1,4-Dichlorobenzene	ND	180	ND	1,100
Benzyl chloride	ND	180	ND	950
1,2-Dichlorobenzene	ND	180	ND	1,100
1,2,4-Trichlorobenzene	ND	180	ND	1,400
Hexachlorobutadiene	ND	180	ND	2,000
Naphthalene	ND	740	ND	3,900

Surrogate	%REC	Limits
Bromofluorobenzene	99	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-12	Diln Fac:	1,056
Lab ID:	289345-005	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/14/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	530	ND	2,600
Freon 114	ND	530	ND	3,700
Chloromethane	ND	530	ND	1,100
Vinyl Chloride	ND	530	ND	1,300
1,3-Butadiene	ND	530	ND	1,200
Bromomethane	ND	530	ND	2,100
Chloroethane	ND	530	ND	1,400
Trichlorofluoromethane	ND	530	ND	3,000
Acrolein	ND	2,100	ND	4,800
1,1-Dichloroethene	ND	530	ND	2,100
Freon 113	ND	530	ND	4,000
Acetone	ND	2,100	ND	5,000
Carbon Disulfide	ND	530	ND	1,600
Isopropanol	ND	2,100	ND	5,200
Methylene Chloride	ND	530	ND	1,800
trans-1,2-Dichloroethene	ND	530	ND	2,100
MTBE	1,600	530	5,800	1,900
n-Hexane	2,400	530	8,400	1,900
1,1-Dichloroethane	ND	530	ND	2,100
Vinyl Acetate	ND	530	ND	1,900
cis-1,2-Dichloroethene	ND	530	ND	2,100
2-Butanone	ND	530	ND	1,600
Ethyl Acetate	ND	530	ND	1,900
Tetrahydrofuran	ND	530	ND	1,600
Chloroform	ND	530	ND	2,600
1,1,1-Trichloroethane	ND	530	ND	2,900
Cyclohexane	ND	530	ND	1,800
Carbon Tetrachloride	ND	530	ND	3,300
Benzene	ND	530	ND	1,700
1,2-Dichloroethane	ND	530	ND	2,100
n-Heptane	540	530	2,200	2,200
Trichloroethene	ND	530	ND	2,800
1,2-Dichloropropane	ND	530	ND	2,400
Bromodichloromethane	ND	530	ND	3,500
cis-1,3-Dichloropropene	ND	530	ND	2,400

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-12	Diln Fac:	1,056
Lab ID:	289345-005	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/14/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	530	ND	2,200
Toluene	ND	530	ND	2,000
trans-1,3-Dichloropropene	ND	530	ND	2,400
1,1,2-Trichloroethane	ND	530	ND	2,900
Tetrachloroethene	ND	530	ND	3,600
2-Hexanone	ND	530	ND	2,200
Dibromochloromethane	ND	530	ND	4,500
1,2-Dibromoethane	ND	530	ND	4,100
Chlorobenzene	ND	530	ND	2,400
Ethylbenzene	ND	530	ND	2,300
m,p-Xylenes	ND	530	ND	2,300
o-Xylene	ND	530	ND	2,300
Styrene	ND	530	ND	2,200
Bromoform	ND	530	ND	5,500
1,1,2,2-Tetrachloroethane	ND	530	ND	3,600
4-Ethyltoluene	ND	530	ND	2,600
1,3,5-Trimethylbenzene	ND	530	ND	2,600
1,2,4-Trimethylbenzene	ND	530	ND	2,600
1,3-Dichlorobenzene	ND	530	ND	3,200
1,4-Dichlorobenzene	ND	530	ND	3,200
Benzyl chloride	ND	530	ND	2,700
1,2-Dichlorobenzene	ND	530	ND	3,200
1,2,4-Trichlorobenzene	ND	530	ND	3,900
Hexachlorobutadiene	ND	530	ND	5,600
Naphthalene	ND	2,100	ND	11,000

Surrogate	%REC	Limits
Bromofluorobenzene	100	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-13	Diln Fac:	186.0
Lab ID:	289345-006	Batch#:	248744
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/14/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	93	ND	460
Freon 114	ND	93	ND	650
Chloromethane	ND	93	ND	190
Vinyl Chloride	ND	93	ND	240
1,3-Butadiene	ND	93	ND	210
Bromomethane	ND	93	ND	360
Chloroethane	ND	93	ND	250
Trichlorofluoromethane	ND	93	ND	520
Acrolein	ND	370	ND	850
1,1-Dichloroethene	ND	93	ND	370
Freon 113	ND	93	ND	710
Acetone	ND	370	ND	880
Carbon Disulfide	ND	93	ND	290
Isopropanol	ND	370	ND	910
Methylene Chloride	ND	93	ND	320
trans-1,2-Dichloroethene	ND	93	ND	370
MTBE	ND	93	ND	340
n-Hexane	ND	93	ND	330
1,1-Dichloroethane	ND	93	ND	380
Vinyl Acetate	ND	93	ND	330
cis-1,2-Dichloroethene	ND	93	ND	370
2-Butanone	ND	93	ND	270
Ethyl Acetate	ND	93	ND	340
Tetrahydrofuran	ND	93	ND	270
Chloroform	ND	93	ND	450
1,1,1-Trichloroethane	ND	93	ND	510
Cyclohexane	ND	93	ND	320
Carbon Tetrachloride	ND	93	ND	590
Benzene	ND	93	ND	300
1,2-Dichloroethane	ND	93	ND	380
n-Heptane	ND	93	ND	380
Trichloroethene	ND	93	ND	500
1,2-Dichloropropane	ND	93	ND	430
Bromodichloromethane	ND	93	ND	620
cis-1,3-Dichloropropene	ND	93	ND	420

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units



### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-13	Diln Fac:	186.0
Lab ID:	289345-006	Batch#:	248744
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/14/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	93	ND	380
Toluene	ND	93	ND	350
trans-1,3-Dichloropropene	ND	93	ND	420
1,1,2-Trichloroethane	ND	93	ND	510
Tetrachloroethene	ND	93	ND	630
2-Hexanone	ND	93	ND	380
Dibromochloromethane	ND	93	ND	790
1,2-Dibromoethane	ND	93	ND	710
Chlorobenzene	ND	93	ND	430
Ethylbenzene	ND	93	ND	400
m,p-Xylenes	ND	93	ND	400
o-Xylene	ND	93	ND	400
Styrene	ND	93	ND	400
Bromoform	ND	93	ND	960
1,1,2,2-Tetrachloroethane	ND	93	ND	640
4-Ethyltoluene	ND	93	ND	460
1,3,5-Trimethylbenzene	ND	93	ND	460
1,2,4-Trimethylbenzene	ND	93	ND	460
1,3-Dichlorobenzene	ND	93	ND	560
1,4-Dichlorobenzene	ND	93	ND	560
Benzyl chloride	ND	93	ND	480
1,2-Dichlorobenzene	ND	93	ND	560
1,2,4-Trichlorobenzene	ND	93	ND	690
Hexachlorobutadiene	ND	93	ND	990
Naphthalene	ND	370	ND	2,000

Surrogate	%REC	Limits
Bromofluorobenzene	92	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-14	Diln Fac:	2.150
Lab ID:	289345-007	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

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	ND	1.1	ND	2.4
Bromomethane	ND	1.1	ND	4.2
Chloroethane	ND	1.1	ND	2.8
Trichlorofluoromethane	54	1.1	310	6.0
Acrolein	ND	4.3	ND	9.9
1,1-Dichloroethene	ND	1.1	ND	4.3
Freon 113	ND	1.1	ND	8.2
Acetone	7.7	4.3	18	10
Carbon Disulfide	1.8	1.1	5.5	3.3
Isopropanol	ND	4.3	ND	11
Methylene Chloride	ND	1.1	ND	3.7
trans-1,2-Dichloroethene	ND	1.1	ND	4.3
MTBE	ND	1.1	ND	3.9
n-Hexane	5.1	1.1	18	3.8
1,1-Dichloroethane	ND	1.1	ND	4.4
Vinyl Acetate	ND	1.1	ND	3.8
cis-1,2-Dichloroethene	ND	1.1	ND	4.3
2-Butanone	2.1	1.1	6.1	3.2
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	5.9
Cyclohexane	ND	1.1	ND	3.7
Carbon Tetrachloride	ND	1.1	ND	6.8
Benzene	1.1	1.1	3.5	3.4
1,2-Dichloroethane	ND	1.1	ND	4.4
n-Heptane	2.7	1.1	11	4.4
Trichloroethene	ND	1.1	ND	5.8
1,2-Dichloropropane	ND	1.1	ND	5.0
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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-14	Diln Fac:	2.150
Lab ID:	289345-007	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.1	ND	4.4
Toluene	1.2	1.1	4.5	4.1
trans-1,3-Dichloropropene	ND	1.1	ND	4.9
1,1,2-Trichloroethane	ND	1.1	ND	5.9
Tetrachloroethene	2.3	1.1	16	7.3
2-Hexanone	ND	1.1	ND	4.4
Dibromochloromethane	ND	1.1	ND	9.2
1,2-Dibromoethane	ND	1.1	ND	8.3
Chlorobenzene	ND	1.1	ND	4.9
Ethylbenzene	2.8	1.1	12	4.7
m,p-Xylenes	4.7	1.1	20	4.7
o-Xylene	4.1	1.1	18	4.7
Styrene	ND	1.1	ND	4.6
Bromoform	ND	1.1	ND	11
1,1,2,2-Tetrachloroethane	ND	1.1	ND	7.4
4-Ethyltoluene	ND	1.1	ND	5.3
1,3,5-Trimethylbenzene	7.8	1.1	38	5.3
1,2,4-Trimethylbenzene	ND	1.1	ND	5.3
1,3-Dichlorobenzene	1.6	1.1	9.9	6.5
1,4-Dichlorobenzene	ND	1.1	ND	6.5
Benzyl chloride	ND	1.1	ND	5.6
1,2-Dichlorobenzene	ND	1.1	ND	6.5
1,2,4-Trichlorobenzene	ND	1.1	ND	8.0
Hexachlorobutadiene	ND	1.1	ND	11
Naphthalene	ND	4.3	ND	23

Surrogate	%REC	Limits
Bromofluorobenzene	113	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-15	Diln Fac:	3.620
Lab ID:	289345-008	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.8	ND	9.0
Freon 114	ND	1.8	ND	13
Chloromethane	ND	1.8	ND	3.7
Vinyl Chloride	ND	1.8	ND	4.6
1,3-Butadiene	ND	1.8	ND	4.0
Bromomethane	ND	1.8	ND	7.0
Chloroethane	ND	1.8	ND	4.8
Trichlorofluoromethane	39	1.8	220	10
Acrolein	ND	7.2	ND	17
1,1-Dichloroethene	ND	1.8	ND	7.2
Freon 113	ND	1.8	ND	14
Acetone	11	7.2	27	17
Carbon Disulfide	ND	1.8	ND	5.6
Isopropanol	ND	7.2	ND	18
Methylene Chloride	ND	1.8	ND	6.3
trans-1,2-Dichloroethene	ND	1.8	ND	7.2
MTBE	ND	1.8	ND	6.5
n-Hexane	9.0	1.8	32	6.4
1,1-Dichloroethane	ND	1.8	ND	7.3
Vinyl Acetate	ND	1.8	ND	6.4
cis-1,2-Dichloroethene	ND	1.8	ND	7.2
2-Butanone	ND	1.8	ND	5.3
Ethyl Acetate	ND	1.8	ND	6.5
Tetrahydrofuran	ND	1.8	ND	5.3
Chloroform	ND	1.8	ND	8.8
1,1,1-Trichloroethane	ND	1.8	ND	9.9
Cyclohexane	ND	1.8	ND	6.2
Carbon Tetrachloride	ND	1.8	ND	11
Benzene	ND	1.8	ND	5.8
1,2-Dichloroethane	ND	1.8	ND	7.3
n-Heptane	3.4	1.8	14	7.4
Trichloroethene	ND	1.8	ND	9.7
1,2-Dichloropropane	ND	1.8	ND	8.4
Bromodichloromethane	ND	1.8	ND	12
cis-1,3-Dichloropropene	ND	1.8	ND	8.2

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-15	Diln Fac:	3.620
Lab ID:	289345-008	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.8	ND	7.4
Toluene	ND	1.8	ND	6.8
trans-1,3-Dichloropropene	ND	1.8	ND	8.2
1,1,2-Trichloroethane	ND	1.8	ND	9.9
Tetrachloroethene	3.5	1.8	24	12
2-Hexanone	ND	1.8	ND	7.4
Dibromochloromethane	ND	1.8	ND	15
1,2-Dibromoethane	ND	1.8	ND	14
Chlorobenzene	ND	1.8	ND	8.3
Ethylbenzene	4.2	1.8	18	7.9
m,p-Xylenes	4.6	1.8	20	7.9
o-Xylene	5.6	1.8	24	7.9
Styrene	ND	1.8	ND	7.7
Bromoform	ND	1.8	ND	19
1,1,2,2-Tetrachloroethane	ND	1.8	ND	12
4-Ethyltoluene	ND	1.8	ND	8.9
1,3,5-Trimethylbenzene	25	1.8	120	8.9
1,2,4-Trimethylbenzene	1.9	1.8	9.4	8.9
1,3-Dichlorobenzene	ND	1.8	ND	11
1,4-Dichlorobenzene	ND	1.8	ND	11
Benzyl chloride	ND	1.8	ND	9.4
1,2-Dichlorobenzene	ND	1.8	ND	11
1,2,4-Trichlorobenzene	ND	1.8	ND	13
Hexachlorobutadiene	ND	1.8	ND	19
Naphthalene	ND	7.2	ND	38

Surrogate	%REC	Limits
Bromofluorobenzene	113	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-16	Diln Fac:	50.40
Lab ID:	289345-009	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	25	ND	120
Freon 114	ND	25	ND	180
Chloromethane	ND	25	ND	52
Vinyl Chloride	ND	25	ND	64
1,3-Butadiene	ND	25	ND	56
Bromomethane	ND	25	ND	98
Chloroethane	ND	25	ND	66
Trichlorofluoromethane	ND	25	ND	140
Acrolein	ND	100	ND	230
1,1-Dichloroethene	ND	25	ND	100
Freon 113	ND	25	ND	190
Acetone	ND	100	ND	240
Carbon Disulfide	ND	25	ND	78
Isopropanol	ND	100	ND	250
Methylene Chloride	ND	25	ND	88
trans-1,2-Dichloroethene	ND	25	ND	100
MTBE	89	25	320	91
n-Hexane	ND	25	ND	89
1,1-Dichloroethane	ND	25	ND	100
Vinyl Acetate	ND	25	ND	89
cis-1,2-Dichloroethene	ND	25	ND	100
2-Butanone	ND	25	ND	74
Ethyl Acetate	ND	25	ND	91
Tetrahydrofuran	ND	25	ND	74
Chloroform	ND	25	ND	120
1,1,1-Trichloroethane	ND	25	ND	140
Cyclohexane	ND	25	ND	87
Carbon Tetrachloride	ND	25	ND	160
Benzene	ND	25	ND	81
1,2-Dichloroethane	ND	25	ND	100
n-Heptane	ND	25	ND	100
Trichloroethene	ND	25	ND	140
1,2-Dichloropropane	ND	25	ND	120
Bromodichloromethane	ND	25	ND	170
cis-1,3-Dichloropropene	ND	25	ND	110

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-16	Diln Fac:	50.40
Lab ID:	289345-009	Batch#:	248707
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	25	ND	100
Toluene	ND	25	ND	95
trans-1,3-Dichloropropene	ND	25	ND	110
1,1,2-Trichloroethane	ND	25	ND	140
Tetrachloroethene	ND	25	ND	170
2-Hexanone	ND	25	ND	100
Dibromochloromethane	ND	25	ND	210
1,2-Dibromoethane	ND	25	ND	190
Chlorobenzene	ND	25	ND	120
Ethylbenzene	ND	25	ND	110
m,p-Xylenes	ND	25	ND	110
o-Xylene	ND	25	ND	110
Styrene	ND	25	ND	110
Bromoform	ND	25	ND	260
1,1,2,2-Tetrachloroethane	ND	25	ND	170
4-Ethyltoluene	ND	25	ND	120
1,3,5-Trimethylbenzene	ND	25	ND	120
1,2,4-Trimethylbenzene	ND	25	ND	120
1,3-Dichlorobenzene	ND	25	ND	150
1,4-Dichlorobenzene	ND	25	ND	150
Benzyl chloride	ND	25	ND	130
1,2-Dichlorobenzene	ND	25	ND	150
1,2,4-Trichlorobenzene	ND	25	ND	190
Hexachlorobutadiene	ND	25	ND	270
Naphthalene	ND	100	ND	530

Surrogate	%REC	Limits
Bromofluorobenzene	97	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-22	Diln Fac:	588.0
Lab ID:	289345-010	Batch#:	248660
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	290	ND	1,500
Freon 114	ND	290	ND	2,100
Chloromethane	ND	290	ND	610
Vinyl Chloride	ND	290	ND	750
1,3-Butadiene	ND	290	ND	650
Bromomethane	ND	290	ND	1,100
Chloroethane	ND	290	ND	780
Trichlorofluoromethane	ND	290	ND	1,700
Acrolein	ND	1,200	ND	2,700
1,1-Dichloroethene	ND	290	ND	1,200
Freon 113	ND	290	ND	2,300
Acetone	ND	1,200	ND	2,800
Carbon Disulfide	ND	290	ND	920
Isopropanol	ND	1,200	ND	2,900
Methylene Chloride	ND	290	ND	1,000
trans-1,2-Dichloroethene	ND	290	ND	1,200
MTBE	ND	290	ND	1,100
n-Hexane	1,600	290	5,600	1,000
1,1-Dichloroethane	ND	290	ND	1,200
Vinyl Acetate	ND	290	ND	1,000
cis-1,2-Dichloroethene	ND	290	ND	1,200
2-Butanone	ND	290	ND	870
Ethyl Acetate	ND	290	ND	1,100
Tetrahydrofuran	ND	290	ND	870
Chloroform	ND	290	ND	1,400
1,1,1-Trichloroethane	ND	290	ND	1,600
Cyclohexane	ND	290	ND	1,000
Carbon Tetrachloride	ND	290	ND	1,800
Benzene	ND	290	ND	940
1,2-Dichloroethane	ND	290	ND	1,200
n-Heptane	ND	290	ND	1,200
Trichloroethene	ND	290	ND	1,600
1,2-Dichloropropane	ND	290	ND	1,400
Bromodichloromethane	ND	290	ND	2,000
cis-1,3-Dichloropropene	ND	290	ND	1,300

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units



### Volatile Organics in Air

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-22	Diln Fac:	588.0
Lab ID:	289345-010	Batch#:	248660
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	290	ND	1,200
Toluene	ND	290	ND	1,100
trans-1,3-Dichloropropene	ND	290	ND	1,300
1,1,2-Trichloroethane	ND	290	ND	1,600
Tetrachloroethene	ND	290	ND	2,000
2-Hexanone	ND	290	ND	1,200
Dibromochloromethane	ND	290	ND	2,500
1,2-Dibromoethane	ND	290	ND	2,300
Chlorobenzene	ND	290	ND	1,400
Ethylbenzene	ND	290	ND	1,300
m,p-Xylenes	ND	290	ND	1,300
o-Xylene	ND	290	ND	1,300
Styrene	ND	290	ND	1,300
Bromoform	ND	290	ND	3,000
1,1,2,2-Tetrachloroethane	ND	290	ND	2,000
4-Ethyltoluene	ND	290	ND	1,400
1,3,5-Trimethylbenzene	ND	290	ND	1,400
1,2,4-Trimethylbenzene	ND	290	ND	1,400
1,3-Dichlorobenzene	ND	290	ND	1,800
1,4-Dichlorobenzene	ND	290	ND	1,800
Benzyl chloride	ND	290	ND	1,500
1,2-Dichlorobenzene	ND	290	ND	1,800
1,2,4-Trichlorobenzene	ND	290	ND	2,200
Hexachlorobutadiene	ND	290	ND	3,100
Naphthalene	ND	1,200	ND	6,200

Surrogate	%REC	Limits
Bromofluorobenzene	84	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-21	Diln Fac:	386.0
Lab ID:	289345-011	Batch#:	248660
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	190	ND	950
Freon 114	ND	190	ND	1,300
Chloromethane	ND	190	ND	400
Vinyl Chloride	ND	190	ND	490
1,3-Butadiene	ND	190	ND	430
Bromomethane	ND	190	ND	750
Chloroethane	ND	190	ND	510
Trichlorofluoromethane	ND	190	ND	1,100
Acrolein	ND	770	ND	1,800
1,1-Dichloroethene	ND	190	ND	770
Freon 113	ND	190	ND	1,500
Acetone	ND	770	ND	1,800
Carbon Disulfide	ND	190	ND	600
Isopropanol	ND	770	ND	1,900
Methylene Chloride	ND	190	ND	670
trans-1,2-Dichloroethene	ND	190	ND	770
MTBE	ND	190	ND	700
n-Hexane	ND	190	ND	680
1,1-Dichloroethane	ND	190	ND	780
Vinyl Acetate	ND	190	ND	680
cis-1,2-Dichloroethene	ND	190	ND	770
2-Butanone	ND	190	ND	570
Ethyl Acetate	ND	190	ND	700
Tetrahydrofuran	ND	190	ND	570
Chloroform	ND	190	ND	940
1,1,1-Trichloroethane	ND	190	ND	1,100
Cyclohexane	ND	190	ND	660
Carbon Tetrachloride	ND	190	ND	1,200
Benzene	ND	190	ND	620
1,2-Dichloroethane	ND	190	ND	780
n-Heptane	ND	190	ND	790
Trichloroethene	ND	190	ND	1,000
1,2-Dichloropropane	ND	190	ND	890
Bromodichloromethane	ND	190	ND	1,300
cis-1,3-Dichloropropene	ND	190	ND	880

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-21	Diln Fac:	386.0
Lab ID:	289345-011	Batch#:	248660
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/25/17
Units (M):	ug/m3	Analyzed:	06/13/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	190	ND	790
Toluene	ND	190	ND	730
trans-1,3-Dichloropropene	ND	190	ND	880
1,1,2-Trichloroethane	ND	190	ND	1,100
Tetrachloroethene	ND	190	ND	1,300
2-Hexanone	ND	190	ND	790
Dibromochloromethane	ND	190	ND	1,600
1,2-Dibromoethane	ND	190	ND	1,500
Chlorobenzene	ND	190	ND	890
Ethylbenzene	ND	190	ND	840
m,p-Xylenes	ND	190	ND	840
o-Xylene	ND	190	ND	840
Styrene	ND	190	ND	820
Bromoform	ND	190	ND	2,000
1,1,2,2-Tetrachloroethane	ND	190	ND	1,300
4-Ethyltoluene	ND	190	ND	950
1,3,5-Trimethylbenzene	ND	190	ND	950
1,2,4-Trimethylbenzene	ND	190	ND	950
1,3-Dichlorobenzene	ND	190	ND	1,200
1,4-Dichlorobenzene	ND	190	ND	1,200
Benzyl chloride	ND	190	ND	1,000
1,2-Dichlorobenzene	ND	190	ND	1,200
1,2,4-Trichlorobenzene	ND	190	ND	1,400
Hexachlorobutadiene	ND	190	ND	2,100
Naphthalene	ND	770	ND	4,000

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



**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>
1,2-Dichloropropane	10.00	9.424	94	70-130
Bromodichloromethane	10.00	9.298	93	70-130
cis-1,3-Dichloropropene	10.00	10.35	104	70-130
4-Methyl-2-Pentanone	10.00	9.513	95	70-130
Toluene	10.00	8.852	89	70-130
trans-1,3-Dichloropropene	10.00	10.71	107	70-130
1,1,2-Trichloroethane	10.00	11.97	120	70-130
Tetrachloroethene	10.00	11.69	117	70-130
2-Hexanone	10.00	9.859	99	70-130
Dibromochloromethane	10.00	12.04	120	70-130
1,2-Dibromoethane	10.00	12.53	125	70-130
Chlorobenzene	10.00	9.291	93	70-130
Ethylbenzene	10.00	10.48	105	70-130
m,p-Xylenes	20.00	21.52	108	70-130
o-Xylene	10.00	10.65	106	70-130
Styrene	10.00	10.27	103	70-130
Bromoform	10.00	13.50 b	135 *	70-130
1,1,2,2-Tetrachloroethane	10.00	12.13	121	70-130
4-Ethyltoluene	10.00	11.30	113	70-130
1,3,5-Trimethylbenzene	10.00	11.24	112	70-130
1,2,4-Trimethylbenzene	10.00	11.46	115	70-130
1,3-Dichlorobenzene	10.00	11.06	111	70-130
1,4-Dichlorobenzene	10.00	10.69	107	70-130
Benzyl chloride	10.00	11.49	115	70-130
1,2-Dichlorobenzene	10.00	10.73	107	70-130
1,2,4-Trichlorobenzene	10.00	12.88	129	70-130
Hexachlorobutadiene	10.00	12.90	129	70-130
Naphthalene	10.00	13.41 b	134 *	70-130

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	94	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units



**Batch QC Report**

Volatile Organics in Air			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
1,2-Dichloropropane	10.00	9.089	91	70-130	4	25
Bromodichloromethane	10.00	9.051	91	70-130	3	25
cis-1,3-Dichloropropene	10.00	10.08	101	70-130	3	25
4-Methyl-2-Pentanone	10.00	9.268	93	70-130	3	25
Toluene	10.00	9.143	91	70-130	3	25
trans-1,3-Dichloropropene	10.00	10.56	106	70-130	1	25
1,1,2-Trichloroethane	10.00	12.06	121	70-130	1	25
Tetrachloroethene	10.00	12.16	122	70-130	4	25
2-Hexanone	10.00	10.14	101	70-130	3	25
Dibromochloromethane	10.00	12.17	122	70-130	1	25
1,2-Dibromoethane	10.00	12.96	130	70-130	3	25
Chlorobenzene	10.00	9.593	96	70-130	3	25
Ethylbenzene	10.00	10.58	106	70-130	1	25
m,p-Xylenes	20.00	22.20	111	70-130	3	25
o-Xylene	10.00	11.08	111	70-130	4	25
Styrene	10.00	10.27	103	70-130	0	25
Bromoform	10.00	13.66 b	137 *	70-130	1	25
1,1,2,2-Tetrachloroethane	10.00	12.42	124	70-130	2	25
4-Ethyltoluene	10.00	11.68	117	70-130	3	25
1,3,5-Trimethylbenzene	10.00	11.74	117	70-130	4	25
1,2,4-Trimethylbenzene	10.00	11.78	118	70-130	3	25
1,3-Dichlorobenzene	10.00	11.37	114	70-130	3	25
1,4-Dichlorobenzene	10.00	11.01	110	70-130	3	25
Benzyl chloride	10.00	11.75	118	70-130	2	25
1,2-Dichlorobenzene	10.00	10.91	109	70-130	2	25
1,2,4-Trichlorobenzene	10.00	13.05	130	70-130	1	25
Hexachlorobutadiene	10.00	13.46	135 *	70-130	4	25
Naphthalene	10.00	13.88 b	139 *	70-130	3	25

Surrogate	%REC	Limits
Bromofluorobenzene	95	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889203	Diln Fac:	1.000
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17

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	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**

<b>Volatile Organics in Air</b>			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889203	Diln Fac:	1.000
Matrix:	Air	Batch#:	248660
Units (V):	ppbv	Analyzed:	06/12/17

<b>Analyte</b>	<b>Result (V)</b>	<b>RL</b>	<b>Result (M)</b>	<b>RL</b>
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	93	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248707
Units (V):	ppbv	Analyzed:	06/13/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
1,2-Dichloropropane	10.00	9.198	92	70-130
Bromodichloromethane	10.00	9.113	91	70-130
cis-1,3-Dichloropropene	10.00	10.35	103	70-130
4-Methyl-2-Pentanone	10.00	9.272	93	70-130
Toluene	10.00	9.097	91	70-130
trans-1,3-Dichloropropene	10.00	10.47	105	70-130
1,1,2-Trichloroethane	10.00	12.06	121	70-130
Tetrachloroethene	10.00	11.94	119	70-130
2-Hexanone	10.00	9.816	98	70-130
Dibromochloromethane	10.00	12.16	122	70-130
1,2-Dibromoethane	10.00	12.55	125	70-130
Chlorobenzene	10.00	9.140	91	70-130
Ethylbenzene	10.00	10.86	109	70-130
m,p-Xylenes	20.00	22.46	112	70-130
o-Xylene	10.00	11.12	111	70-130
Styrene	10.00	10.39	104	70-130
Bromoform	10.00	13.39 b	134 *	70-130
1,1,2,2-Tetrachloroethane	10.00	12.20	122	70-130
4-Ethyltoluene	10.00	11.55	116	70-130
1,3,5-Trimethylbenzene	10.00	11.63	116	70-130
1,2,4-Trimethylbenzene	10.00	11.79	118	70-130
1,3-Dichlorobenzene	10.00	11.19	112	70-130
1,4-Dichlorobenzene	10.00	11.08	111	70-130
Benzyl chloride	10.00	11.70	117	70-130
1,2-Dichlorobenzene	10.00	11.19	112	70-130
1,2,4-Trichlorobenzene	10.00	12.78	128	70-130
Hexachlorobutadiene	10.00	12.97	130	70-130
Naphthalene	10.00	13.55 b	136 *	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	99	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

Batch QC Report

Volatile Organics in Air			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248707
Units (V):	ppbv	Analyzed:	06/13/17
Diln Fac:	1.000		

Type: BSD Lab ID: QC889370

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	7.664	77	70-130	9	25
Freon 114	10.00	9.121	91	70-130	3	25
Chloromethane	10.00	7.496	75	70-130	17	25
Vinyl Chloride	10.00	8.165	82	70-130	11	25
1,3-Butadiene	10.00	8.008	80	70-130	10	25
Bromomethane	10.00	7.690	77	70-130	10	25
Chloroethane	10.00	8.444	84	70-130	9	25
Trichlorofluoromethane	10.00	9.295	93	70-130	2	25
Acrolein	10.00	9.063	91	70-130	0	25
1,1-Dichloroethene	10.00	10.50	105	70-130	4	25
Freon 113	10.00	10.10	101	70-130	4	25
Acetone	10.00	8.589	86	70-130	3	25
Carbon Disulfide	10.00	9.478	95	70-130	3	25
Isopropanol	10.00	8.810	88	70-130	0	25
Methylene Chloride	10.00	9.445	94	70-130	2	25
trans-1,2-Dichloroethene	10.00	10.55	105	70-130	1	25
MTBE	10.00	11.39	114	70-130	0	25
n-Hexane	10.00	11.95	119	70-130	2	25
1,1-Dichloroethane	10.00	10.08	101	70-130	1	25
Vinyl Acetate	10.00	10.83	108	70-130	1	25
cis-1,2-Dichloroethene	10.00	10.82	108	70-130	2	25
2-Butanone	10.00	10.85	108	70-130	3	25
Ethyl Acetate	10.00	11.36	114	70-130	3	25
Tetrahydrofuran	10.00	8.776	88	70-130	2	25
Chloroform	10.00	10.04	100	70-130	0	25
1,1,1-Trichloroethane	10.00	8.532	85	70-130	1	25
Cyclohexane	10.00	8.167	82	70-130	2	25
Carbon Tetrachloride	10.00	7.714	77	70-130	1	25
Benzene	10.00	9.017	90	70-130	2	25
1,2-Dichloroethane	10.00	9.883	99	70-130	1	25
n-Heptane	10.00	6.975	70	70-130	3	25
Trichloroethene	10.00	9.022	90	70-130	1	25

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248707
Units (V):	ppbv	Analyzed:	06/13/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>	<b>RPD</b>	<b>Lim</b>
1,2-Dichloropropane	10.00	8.986	90	70-130	2	25
Bromodichloromethane	10.00	9.106	91	70-130	0	25
cis-1,3-Dichloropropene	10.00	10.23	102	70-130	1	25
4-Methyl-2-Pentanone	10.00	9.183	92	70-130	1	25
Toluene	10.00	8.788	88	70-130	3	25
trans-1,3-Dichloropropene	10.00	10.42	104	70-130	0	25
1,1,2-Trichloroethane	10.00	12.37	124	70-130	3	25
Tetrachloroethene	10.00	11.56	116	70-130	3	25
2-Hexanone	10.00	9.567	96	70-130	3	25
Dibromochloromethane	10.00	12.21	122	70-130	0	25
1,2-Dibromoethane	10.00	12.64	126	70-130	1	25
Chlorobenzene	10.00	9.009	90	70-130	1	25
Ethylbenzene	10.00	10.44	104	70-130	4	25
m,p-Xylenes	20.00	21.93	110	70-130	2	25
o-Xylene	10.00	10.99	110	70-130	1	25
Styrene	10.00	10.39	104	70-130	0	25
Bromoform	10.00	13.33 b	133 *	70-130	0	25
1,1,2,2-Tetrachloroethane	10.00	12.10	121	70-130	1	25
4-Ethyltoluene	10.00	11.50	115	70-130	0	25
1,3,5-Trimethylbenzene	10.00	11.51	115	70-130	1	25
1,2,4-Trimethylbenzene	10.00	11.71	117	70-130	1	25
1,3-Dichlorobenzene	10.00	11.00	110	70-130	2	25
1,4-Dichlorobenzene	10.00	10.89	109	70-130	2	25
Benzyl chloride	10.00	11.71	117	70-130	0	25
1,2-Dichlorobenzene	10.00	10.81	108	70-130	3	25
1,2,4-Trichlorobenzene	10.00	13.00	130	70-130	2	25
Hexachlorobutadiene	10.00	13.02	130	70-130	0	25
Naphthalene	10.00	14.04 b	140 *	70-130	3	25

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	104	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889371	Diln Fac:	1.000
Matrix:	Air	Batch#:	248707
Units (V):	ppbv	Analyzed:	06/13/17

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	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889371	Diln Fac:	1.000
Matrix:	Air	Batch#:	248707
Units (V):	ppbv	Analyzed:	06/13/17

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	88	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units





**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248744
Units (V):	ppbv	Analyzed:	06/14/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>
Bromodichloromethane	10.00	9.910	99	70-130
cis-1,3-Dichloropropene	10.00	10.37	104	70-130
4-Methyl-2-Pentanone	10.00	8.786	88	70-130
Toluene	10.00	7.956	80	70-130
trans-1,3-Dichloropropene	10.00	10.42	104	70-130
1,1,2-Trichloroethane	10.00	10.61	106	70-130
Tetrachloroethene	10.00	9.578	96	70-130
2-Hexanone	10.00	8.110	81	70-130
Dibromochloromethane	10.00	10.70	107	70-130
1,2-Dibromoethane	10.00	10.32	103	70-130
Chlorobenzene	10.00	8.372	84	70-130
Ethylbenzene	10.00	10.17	102	70-130
m,p-Xylenes	20.00	21.37	107	70-130
o-Xylene	10.00	10.67	107	70-130
Styrene	10.00	9.794	98	70-130
Bromoform	10.00	11.39	114	70-130
1,1,2,2-Tetrachloroethane	10.00	9.680	97	70-130
4-Ethyltoluene	10.00	11.09	111	70-130
1,3,5-Trimethylbenzene	10.00	10.99	110	70-130
1,2,4-Trimethylbenzene	10.00	11.28	113	70-130
1,3-Dichlorobenzene	10.00	10.53	105	70-130
1,4-Dichlorobenzene	10.00	10.35	103	70-130
Benzyl chloride	10.00	10.79	108	70-130
1,2-Dichlorobenzene	10.00	10.01	100	70-130
1,2,4-Trichlorobenzene	10.00	11.82	118	70-130
Hexachlorobutadiene	10.00	12.26	123	70-130
Naphthalene	10.00	13.03	130	70-130

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	106	70-130

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248744
Units (V):	ppbv	Analyzed:	06/14/17
Diln Fac:	1.000		

Type: BSD Lab ID: QC889501

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	8.193	82	70-130	3	25
Freon 114	10.00	9.200	92	70-130	3	25
Chloromethane	10.00	8.901	89	70-130	7	25
Vinyl Chloride	10.00	9.042	90	70-130	1	25
1,3-Butadiene	10.00	8.151	82	70-130	2	25
Bromomethane	10.00	8.829	88	70-130	7	25
Chloroethane	10.00	8.964	90	70-130	1	25
Trichlorofluoromethane	10.00	9.605	96	70-130	2	25
Acrolein	10.00	9.635	96	70-130	6	25
1,1-Dichloroethene	10.00	11.02	110	70-130	4	25
Freon 113	10.00	10.55	105	70-130	2	25
Acetone	10.00	8.886	89	70-130	2	25
Carbon Disulfide	10.00	10.41	104	70-130	7	25
Isopropanol	10.00	8.475	85	70-130	0	25
Methylene Chloride	10.00	10.08	101	70-130	4	25
trans-1,2-Dichloroethene	10.00	10.90	109	70-130	3	25
MTBE	10.00	10.58	106	70-130	1	25
n-Hexane	10.00	10.36	104	70-130	0	25
1,1-Dichloroethane	10.00	10.21	102	70-130	1	25
Vinyl Acetate	10.00	10.38	104	70-130	2	25
cis-1,2-Dichloroethene	10.00	10.71	107	70-130	1	25
2-Butanone	10.00	10.30	103	70-130	2	25
Ethyl Acetate	10.00	10.44	104	70-130	1	25
Tetrahydrofuran	10.00	9.768	98	70-130	2	25
Chloroform	10.00	9.834	98	70-130	1	25
1,1,1-Trichloroethane	10.00	9.889	99	70-130	1	25
Cyclohexane	10.00	9.130	91	70-130	3	25
Carbon Tetrachloride	10.00	8.796	88	70-130	1	25
Benzene	10.00	9.428	94	70-130	1	25
1,2-Dichloroethane	10.00	10.85	108	70-130	2	25
n-Heptane	10.00	7.980	80	70-130	2	25
Trichloroethene	10.00	9.229	92	70-130	4	25
1,2-Dichloropropane	10.00	9.253	93	70-130	5	25

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248744
Units (V):	ppbv	Analyzed:	06/14/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Bromodichloromethane	10.00	9.598	96	70-130	3	25
cis-1,3-Dichloropropene	10.00	9.821	98	70-130	5	25
4-Methyl-2-Pentanone	10.00	8.934	89	70-130	2	25
Toluene	10.00	8.192	82	70-130	3	25
trans-1,3-Dichloropropene	10.00	10.10	101	70-130	3	25
1,1,2-Trichloroethane	10.00	10.25	103	70-130	3	25
Tetrachloroethene	10.00	9.549	95	70-130	0	25
2-Hexanone	10.00	8.658	87	70-130	7	25
Dibromochloromethane	10.00	10.42	104	70-130	3	25
1,2-Dibromoethane	10.00	10.21	102	70-130	1	25
Chlorobenzene	10.00	8.454	85	70-130	1	25
Ethylbenzene	10.00	10.41	104	70-130	2	25
m,p-Xylenes	20.00	21.57	108	70-130	1	25
o-Xylene	10.00	10.78	108	70-130	1	25
Styrene	10.00	9.589	96	70-130	2	25
Bromoform	10.00	11.01	110	70-130	3	25
1,1,2,2-Tetrachloroethane	10.00	9.567	96	70-130	1	25
4-Ethyltoluene	10.00	11.08	111	70-130	0	25
1,3,5-Trimethylbenzene	10.00	11.29	113	70-130	3	25
1,2,4-Trimethylbenzene	10.00	11.29	113	70-130	0	25
1,3-Dichlorobenzene	10.00	10.50	105	70-130	0	25
1,4-Dichlorobenzene	10.00	10.22	102	70-130	1	25
Benzyl chloride	10.00	11.18	112	70-130	4	25
1,2-Dichlorobenzene	10.00	10.27	103	70-130	3	25
1,2,4-Trichlorobenzene	10.00	12.13	121	70-130	3	25
Hexachlorobutadiene	10.00	12.30	123	70-130	0	25
Naphthalene	10.00	13.11	131 *	70-130	1	25

Surrogate	%REC	Limits
Bromofluorobenzene	104	70-130

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889502	Diln Fac:	1.000
Matrix:	Air	Batch#:	248744
Units (V):	ppbv	Analyzed:	06/14/17

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	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**

<b>Volatile Organics in Air</b>			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889502	Diln Fac:	1.000
Matrix:	Air	Batch#:	248744
Units (V):	ppbv	Analyzed:	06/14/17

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	94	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Fixed Gas Analysis			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	248348
Units:	ppmv	Received:	05/25/17
Units (Mol %):	MOL %	Analyzed:	05/31/17

Field ID: VP-9 Diln Fac: 1.910  
 Type: SAMPLE Sampled: 05/24/17  
 Lab ID: 289345-001

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,900	ND	0.19
Carbon Dioxide	ND	1,900	ND	0.19
Oxygen	140,000	1,900	14	0.19
Methane	ND	1,900	ND	0.19

Field ID: VP-10 Diln Fac: 1.910  
 Type: SAMPLE Sampled: 05/24/17  
 Lab ID: 289345-002

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,900	ND	0.19
Carbon Dioxide	3,400	1,900	0.34	0.19
Oxygen	140,000	1,900	14	0.19
Methane	ND	1,900	ND	0.19

Field ID: VP-11 Diln Fac: 1.790  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-003

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,800	ND	0.18
Carbon Dioxide	54,000	1,800	5.4	0.18
Oxygen	24,000	1,800	2.4	0.18
Methane	10,000	1,800	1.0	0.18

Field ID: DUP-2 Diln Fac: 1.840  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-004

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,800	ND	0.18
Carbon Dioxide	58,000	1,800	5.8	0.18
Oxygen	12,000	1,800	1.2	0.18
Methane	11,000	1,800	1.1	0.18

ND= Not Detected  
 RL= Reporting Limit

Result Mol %= Result in Mole Percent

Fixed Gas Analysis			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	248348
Units:	ppmv	Received:	05/25/17
Units (Mol %):	MOL %	Analyzed:	05/31/17

Field ID: VP-12 Diln Fac: 1.760  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-005

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,800	ND	0.18
Carbon Dioxide	29,000	1,800	2.9	0.18
Oxygen	12,000	1,800	1.2	0.18
Methane	38,000	1,800	3.8	0.18

Field ID: VP-13 Diln Fac: 1.860  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-006

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,900	ND	0.19
Carbon Dioxide	31,000	1,900	3.1	0.19
Oxygen	12,000	1,900	1.2	0.19
Methane	25,000	1,900	2.5	0.19

Field ID: VP-14 Diln Fac: 2.150  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-007

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,200	ND	0.22
Carbon Dioxide	ND	2,200	ND	0.22
Oxygen	140,000	2,200	14	0.22
Methane	ND	2,200	ND	0.22

Field ID: VP-15 Diln Fac: 1.810  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-008

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,800	ND	0.18
Carbon Dioxide	ND	1,800	ND	0.18
Oxygen	150,000	1,800	15	0.18
Methane	ND	1,800	ND	0.18

ND= Not Detected  
 RL= Reporting Limit

Result Mol %= Result in Mole Percent

Fixed Gas Analysis			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	248348
Units:	ppmv	Received:	05/25/17
Units (Mol %):	MOL %	Analyzed:	05/31/17

Field ID: VP-16 Diln Fac: 2.520  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-009

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,500	ND	0.25
Carbon Dioxide	47,000	2,500	4.7	0.25
Oxygen	11,000	2,500	1.1	0.25
Methane	8,300	2,500	0.83	0.25

Field ID: VP-22 Diln Fac: 1.960  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-010

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,000	ND	0.20
Carbon Dioxide	57,000	2,000	5.7	0.20
Oxygen	13,000	2,000	1.3	0.20
Methane	85,000	2,000	8.5	0.20

Field ID: VP-21 Diln Fac: 1.930  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289345-011

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,900	ND	0.19
Carbon Dioxide	37,000	1,900	3.7	0.19
Oxygen	12,000	1,900	1.2	0.19
Methane	6,500	1,900	0.65	0.19

Type: BLANK Diln Fac: 1.000  
 Lab ID: QC888017

Analyte	Result	RL	Result (Mol %)	RL
Helium	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 #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Units (M):	ug/m3
Matrix:	Air	Received:	05/25/17
Units (V):	ppbv		

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln Fac	Batch#	Sampled	Analyzed
VP-9	SAMPLE	289345-001	ND	96	14	ND	390	58	1.910	248298	05/24/17	05/30/17
VP-10	SAMPLE	289345-002	52 J	96	14	210 J	390	58	1.910	248298	05/24/17	05/30/17
VP-11	SAMPLE	289345-003	390,000	9,000	1,300	1,600,000	37,000	5,400	179.0	248344	05/25/17	05/31/17
DUP-2	SAMPLE	289345-004	470,000	9,200	1,400	1,900,000	38,000	5,600	184.0	248344	05/25/17	05/31/17
VP-12	SAMPLE	289345-005	2,900,000	8,800	1,300	12,000,000	36,000	5,400	176.0	248344	05/25/17	05/31/17
VP-13	SAMPLE	289345-006	1,400,000	9,300	1,400	5,600,000	38,000	5,700	186.0	248344	05/25/17	05/31/17
VP-14	SAMPLE	289345-007	610	110	16	2,500	440	65	2.150	248344	05/25/17	05/31/17
VP-15	SAMPLE	289345-008	1,100	91	13	4,500	370	55	1.810	248298	05/25/17	05/30/17
VP-16	SAMPLE	289345-009	82,000	2,500	370	330,000	10,000	1,500	50.40	248388	05/25/17	06/01/17
VP-22	SAMPLE	289345-010	2,400,000	9,800	1,500	9,900,000	40,000	6,000	196.0	248388	05/25/17	06/01/17
VP-21	SAMPLE	289345-011	76,000	9,700	1,400	310,000	39,000	5,900	193.0	248388	05/25/17	06/01/17
	BLANK	QC887829	ND	50	7.4	ND	200	30	1.000	248298		05/30/17
	BLANK	QC888001	ND	50	7.4	ND	200	30	1.000	248344		05/31/17
	BLANK	QC888182	ND	50	7.4	ND	200	30	1.000	248388		06/01/17

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

**Aromatic / Petroleum Hydrocarbons in Air**

Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Units (V):	ppbv
Matrix:	Air	Diln Fac:	1.000

Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim	Batch#	Analyzed
BS	QC887827	2,100	1,661	79	70-130			248298	05/30/17
BSD	QC887828	2,100	1,953	93	70-130	16	25	248298	05/30/17
BS	QC887999	2,100	1,617	77	70-130			248344	05/31/17
BSD	QC888000	2,100	1,615	77	70-130	0	25	248344	05/31/17
BS	QC888180	2,100	1,899	90	70-130			248388	06/01/17
BSD	QC888181	2,100	1,890	90	70-130	0	25	248388	06/01/17

RPD= Relative Percent Difference

Result V= Result in volume units

## Batch QC Report

Fixed Gas Analysis			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	248348
Units:	ppmv	Analyzed:	05/31/17
Diln Fac:	1.000		

Type: BS Lab ID: QC888013

Analyte	Spiked	Result	%REC	Limits
Helium	100,000	86,320	86	70-130
Carbon Dioxide		NA		
Oxygen		NA		
Methane		NA		

Type: BSD Lab ID: QC888014

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Helium	100,000	86,100	86	70-130	0	20
Carbon Dioxide		NA				
Oxygen		NA				
Methane		NA				

NA= Not Analyzed

RPD= Relative Percent Difference

## Batch QC Report

Fixed Gas Analysis			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC888015	Batch#:	248348
Matrix:	Air	Analyzed:	05/31/17
Units:	ppmv		

Analyte	Spiked	Result	%REC	Limits
Helium		NA		
Carbon Dioxide	2,000	1,830	91	70-130
Oxygen	2,000	1,727	86	70-130
Methane	2,000	1,849	92	70-130

NA= Not Analyzed

## Batch QC Report

Fixed Gas Analysis			
Lab #:	289345	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Field ID:	VP-9	Units (Mol %):	MOL %
Type:	SDUP	Diln Fac:	1.910
MSS Lab ID:	289345-001	Batch#:	248348
Lab ID:	QC888016	Sampled:	05/24/17
Matrix:	Air	Received:	05/25/17
Units:	ppmv	Analyzed:	05/31/17

Analyte	MSS Result	Result	RL	Result (Mol %)	RL	RPD	Lim
Helium	<1,910	ND	1,910	ND	0.1910	NC	30
Carbon Dioxide	<1,910	ND	1,910	ND	0.1910	NC	30
Oxygen	144,800	144,700	1,910	14.47	0.1910	0	30
Methane	<1,910	ND	1,910	ND	0.1910	NC	30

NC= Not Calculated

ND= Not Detected

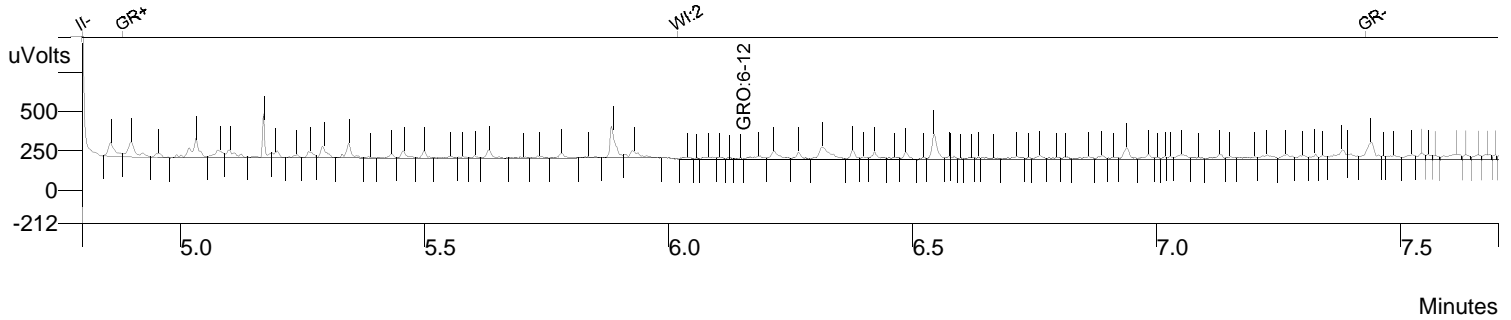
RL= Reporting Limit

RPD= Relative Percent Difference

Result Mol %= Result in Mole Percent

# GRO by TO-3

Sample ID: 289345-002,248298  
 Data File: c:\varianws\data\053017\150\_012.run  
 Sample List: c:\varianws\053017.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/30/2017 15:19:06  
 Calculation Date: 05/30/2017 15:29:00  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 1.91x,c00320  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	2967	27.450
		<b>Totals</b>	<b>2967</b>	<b>27.450</b>

**Integration Parameters**

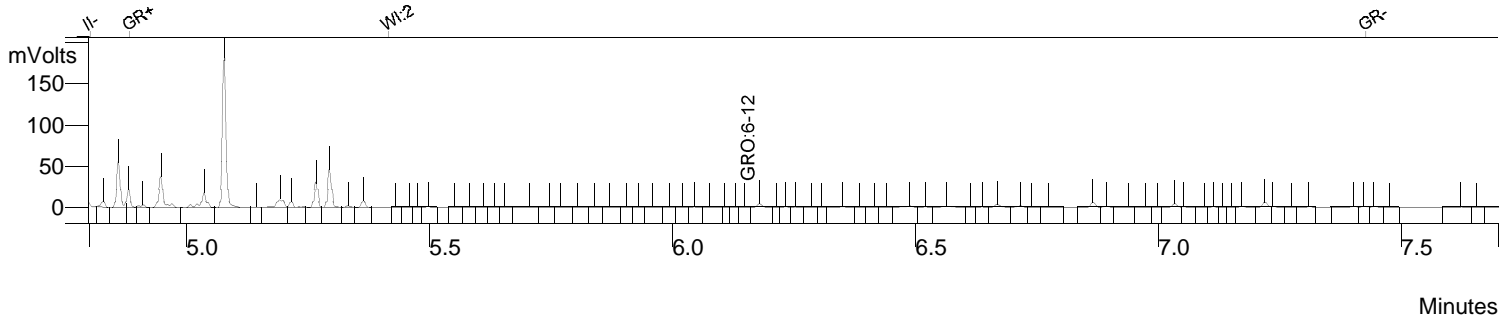
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289345-003,248344  
 Data File: c:\varianws\data\053117\151\_007.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 13:35:00  
 Calculation Date: 05/31/2017 13:44:54  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 179x,c00218=c00396/100  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	237190	2194.147
<b>Totals</b>			<b>237190</b>	<b>2194.147</b>

**Integration Parameters**

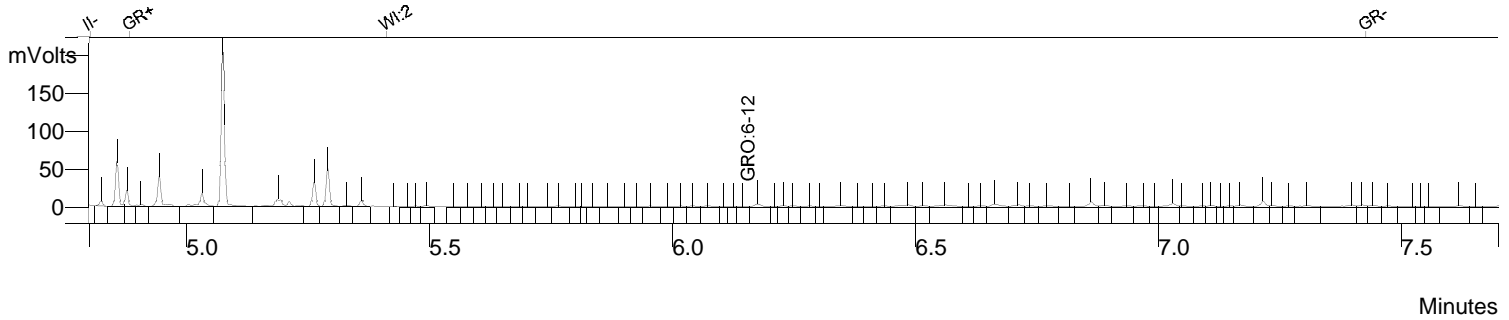
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289345-004,248344  
 Data File: c:\varianws\data\053117\151\_008.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 13:48:16  
 Calculation Date: 05/31/2017 13:58:10  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 184x,c00216=c00319/100  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	277038	2562.767
		<b>Totals</b>	<b>277038</b>	<b>2562.767</b>

**Integration Parameters**

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

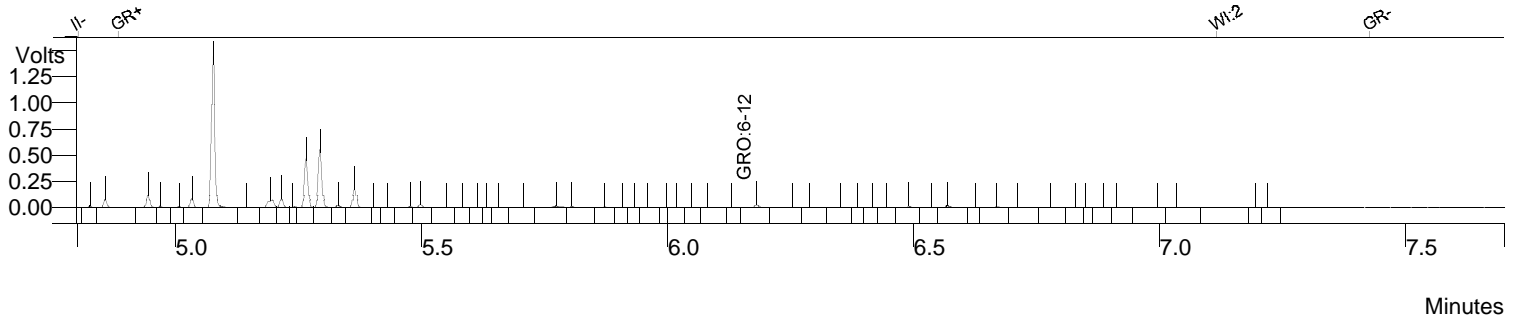
**Data Handling Time Events**

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



# GRO by TO-3

Sample ID: 289345-005,248344  
 Data File: c:\varianws\data\053117\151\_009.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 14:01:10  
 Calculation Date: 05/31/2017 14:11:05  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 176x,c00230=c00196/100  
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	1759917	16280.286
		<b>Totals</b>	<b>1759917</b>	<b>16280.286</b>

**Integration Parameters**

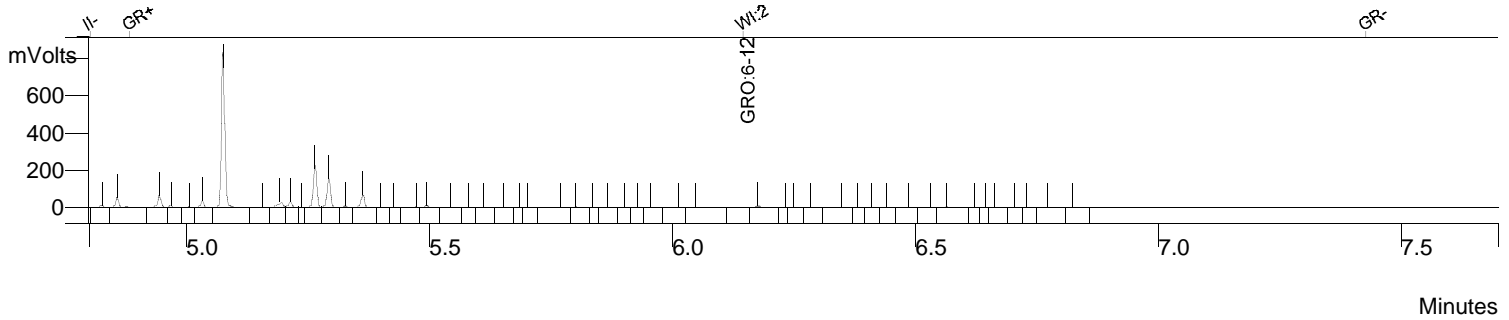
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289345-006,248344  
 Data File: c:\varianws\data\053117\151\_010.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 14:13:50  
 Calculation Date: 05/31/2017 14:23:44  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 186x,c00028=c00268/100  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	795106	7355.208
<b>Totals</b>			<b>795106</b>	<b>7355.208</b>

**Integration Parameters**

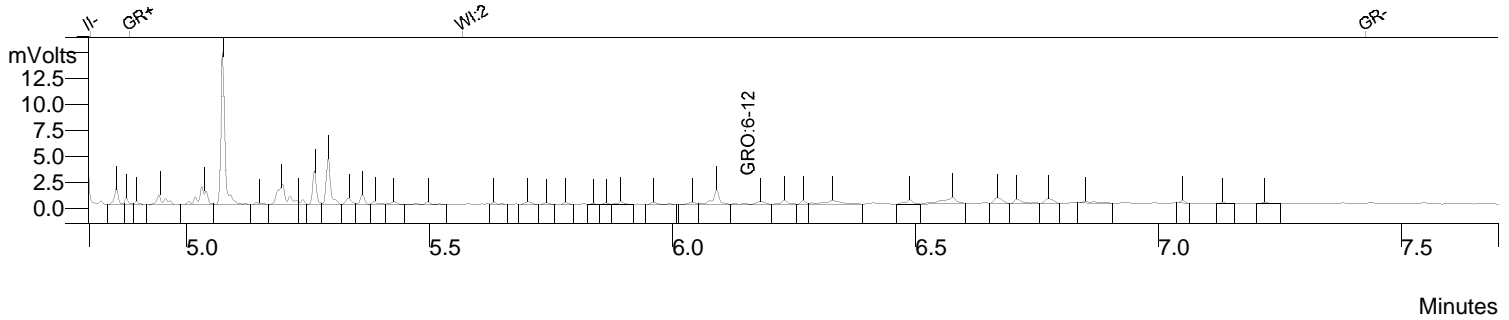
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289345-007,248344  
 Data File: c:\varianws\data\053117\151\_006.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 13:22:24  
 Calculation Date: 05/31/2017 13:32:18  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 2.15x,c00307  
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	30861	285.480
		<b>Totals</b>	<b>30861</b>	<b>285.480</b>

**Integration Parameters**

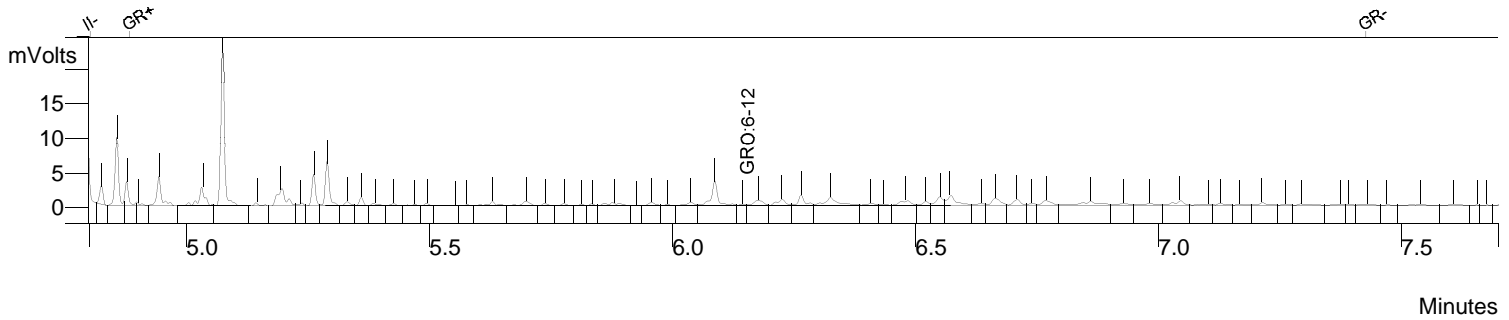
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289345-008,248298  
 Data File: c:\varianws\data\053017\150\_018.run  
 Sample List: c:\varianws\053017.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/30/2017 16:34:44  
 Calculation Date: 05/30/2017 16:44:38  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 1.81x,c00119  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	65263	603.723
		<b>Totals</b>	<b>65263</b>	<b>603.723</b>

**Integration Parameters**

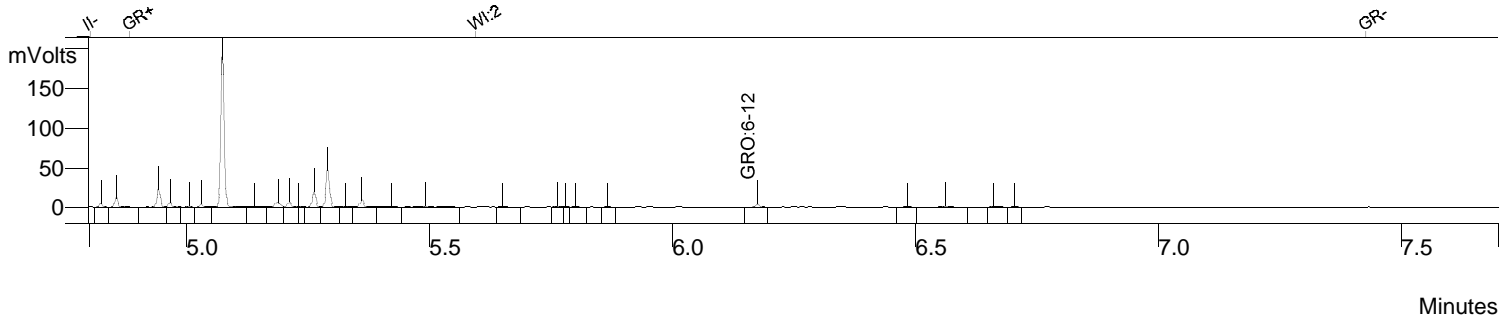
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289345-009,248388  
 Data File: c:\varianws\data\060117\152\_005.run  
 Sample List: c:\varianws\060117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 06/01/2017 16:14:50  
 Calculation Date: 06/01/2017 16:24:44  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 50.4x,c00242=c00394/20  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	175478	1623.273
<b>Totals</b>			<b>175478</b>	<b>1623.273</b>

**Integration Parameters**

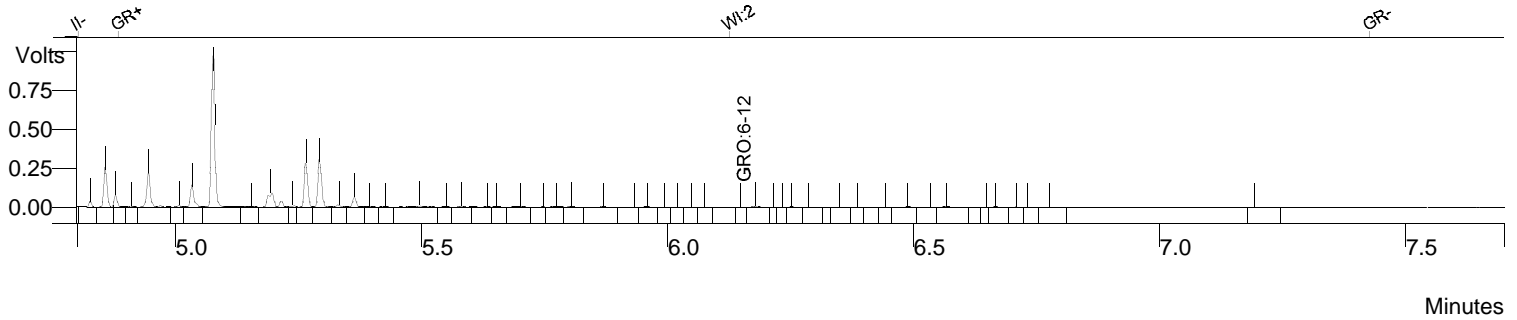
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289345-010,248388  
 Data File: c:\varianws\data\060117\152\_006.run  
 Sample List: c:\varianws\060117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 06/01/2017 16:29:46  
 Calculation Date: 06/01/2017 16:39:40  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 196x,c00014=c00132/100  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	1331265	12314.999
		<b>Totals</b>	<b>1331265</b>	<b>12314.999</b>

**Integration Parameters**

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

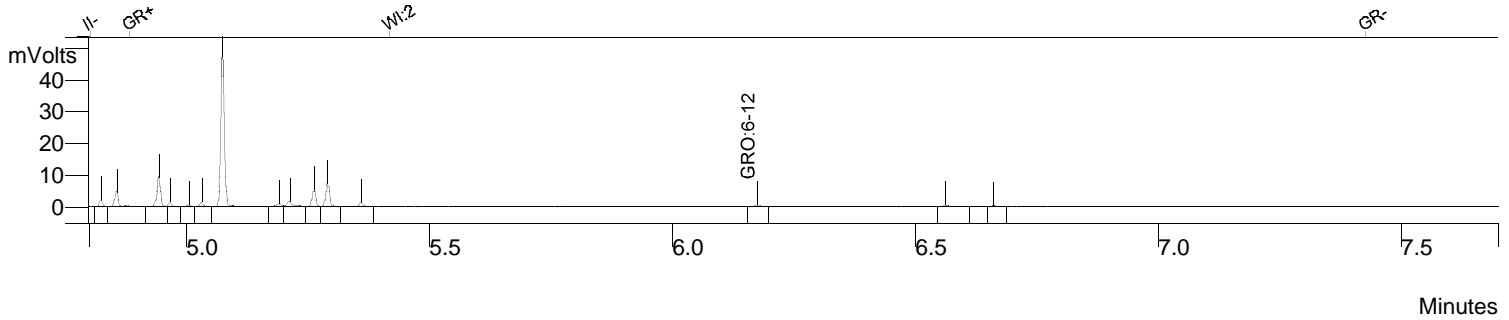
**Data Handling Time Events**

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

# GRO by TO-3

```

Sample ID:      289345-011,248388
Data File:     c:\varianws\data\060117\152_007.run
Sample List:   c:\varianws\060117.smp
Method:       c:\varianws\methods\to3_042617.mth
Acquisition Date: 06/01/2017 16:43:02
Calculation Date: 06/01/2017 16:52:56
Instrument ID:  GC32
Operator:      TO-15
Injection Notes: 193x,c00353=c00138/100
Multiplier:    1.000
Divisor:      1.000
    
```



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	42611	394.176
		<b>Totals</b>	<b>42611</b>	<b>394.176</b>

**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**

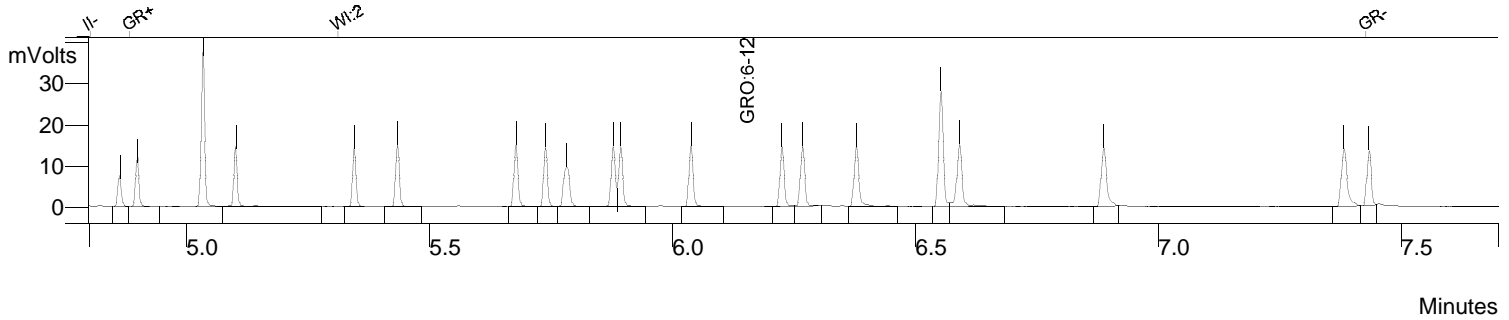
```

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

# GRO by TO-3

```

Sample ID:      ccv/bs,qc887827
Data File:     c:\varianws\data\053017\150_008.run
Sample List:   c:\varianws\053017.smp
Method:       c:\varianws\methods\to3_042617.mth
Acquisition Date: 05/30/2017 14:10:02
Calculation Date: 05/30/2017 14:19:55
Instrument ID:  GC32
Operator:      TO-15
Injection Notes: 248298,S33086,1x
Multiplier:    1.000
Divisor:       1.000
    
```



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	179597	1661.383
		<b>Totals</b>	<b>179597</b>	<b>1661.383</b>

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

**Laboratory Job Number 289415  
ANALYTICAL REPORT**

Geosyntec Consultants  
1111 Broadway  
Oakland, CA 94607

Project : WR2229  
Location : Antez Oakland  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
VP-19	289415-001
VP-20	289415-002
VP-23	289415-003
VP-24	289415-004
VP-25	289415-005
DUP-3	289415-006

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: \_\_\_\_\_

Mike Dahlquist  
Project Manager  
mike.dahlquist@ctberk.com  
(510) 204-2225 Ext 13101

Date: 06/20/2017

CA ELAP# 2896, NELAP# 4044-001

### CASE NARRATIVE

Laboratory number: 289415  
Client: Geosyntec Consultants  
Project: WR2229  
Location: Antez Oakland  
Request Date: 05/26/17  
Samples Received: 05/26/17

This data package contains sample and QC results for six air samples, requested for the above referenced project on 05/26/17. The samples were received cold and intact.

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

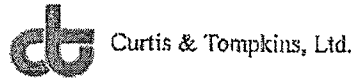
High response was observed for naphthalene in the CCV analyzed 06/16/17 14:13; affected data was qualified with "b". High recovery was observed for naphthalene in the BS for batch 248823; the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated samples. VP-19 (lab # 289415-001) and VP-23 (lab # 289415-003) were diluted due to high non-target analytes. No other analytical problems were encountered.

#### Volatile Organics in Air GC (ASTM D1946-90 and EPA TO-3):

No analytical problems were encountered.



COOLER RECEIPT CHECKLIST



Login # 289415 Date Received 5/26/17 Number of coolers 0
Client GEUSYNTEL Project WR2229 / Antzz Ciklani

Date Opened 5/26/17 By (print) EWA (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

[Blank lines for comments]



Client Sample ID : VP-24

Laboratory Sample ID :

289415-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Trichlorofluoromethane	2.8		1.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
Acetone	8.7		5.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
Chloroform	2.3		1.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
Tetrachloroethene	1.4		1.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
1,3-Dichlorobenzene	1.6		1.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
Helium	15,000		2,600		ppmv	As Recd	2.640	ASTM D1946-90	METHOD
Carbon Dioxide	31,000		2,600		ppmv	As Recd	2.640	ASTM D1946-90	METHOD
Oxygen	90,000		2,600		ppmv	As Recd	2.640	ASTM D1946-90	METHOD

Client Sample ID : VP-25

Laboratory Sample ID :

289415-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Carbon Disulfide	2.3		1.0		ppbv	As Recd	2.000	EPA TO-15	METHOD
Chloroform	1.5		1.0		ppbv	As Recd	2.000	EPA TO-15	METHOD
Toluene	1.3		1.0		ppbv	As Recd	2.000	EPA TO-15	METHOD
1,3-Dichlorobenzene	1.6		1.0		ppbv	As Recd	2.000	EPA TO-15	METHOD
Oxygen	180,000		2,000		ppmv	As Recd	2.000	ASTM D1946-90	METHOD
Gasoline Range Organics C6-C12	21	J	100	15	ppbv	As Recd	2.000	EPA TO-3	METHOD

Client Sample ID : DUP-3

Laboratory Sample ID :

289415-006

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Trichlorofluoromethane	2.8		1.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
Acetone	6.2		5.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
Chloroform	2.3		1.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
1,3-Dichlorobenzene	1.6		1.3		ppbv	As Recd	2.640	EPA TO-15	METHOD
Helium	15,000		2,600		ppmv	As Recd	2.640	ASTM D1946-90	METHOD
Carbon Dioxide	30,000		2,600		ppmv	As Recd	2.640	ASTM D1946-90	METHOD
Oxygen	92,000		2,600		ppmv	As Recd	2.640	ASTM D1946-90	METHOD

### Volatile Organics in Air

Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-19	Diln Fac:	41.60
Lab ID:	289415-001	Batch#:	248846
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/18/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	21	ND	100
Freon 114	ND	21	ND	150
Chloromethane	ND	21	ND	43
Vinyl Chloride	ND	21	ND	53
1,3-Butadiene	ND	21	ND	46
Bromomethane	ND	21	ND	81
Chloroethane	ND	21	ND	55
Trichlorofluoromethane	45	21	250	120
Acrolein	ND	83	ND	190
1,1-Dichloroethene	ND	69	ND	270
Freon 113	ND	21	ND	160
Acetone	ND	83	ND	200
Carbon Disulfide	ND	21	ND	65
Isopropanol	ND	83	ND	200
Methylene Chloride	ND	21	ND	72
trans-1,2-Dichloroethene	ND	21	ND	82
MTBE	ND	21	ND	75
n-Hexane	70	21	250	73
1,1-Dichloroethane	ND	21	ND	84
Vinyl Acetate	ND	21	ND	73
cis-1,2-Dichloroethene	ND	21	ND	82
2-Butanone	ND	69	ND	200
Ethyl Acetate	ND	21	ND	75
Tetrahydrofuran	ND	21	ND	61
Chloroform	ND	21	ND	100
1,1,1-Trichloroethane	ND	21	ND	110
Cyclohexane	ND	21	ND	72
Carbon Tetrachloride	ND	21	ND	130
Benzene	ND	21	ND	66
1,2-Dichloroethane	ND	21	ND	84
n-Heptane	36	21	150	85
Trichloroethene	ND	21	ND	110
1,2-Dichloropropane	ND	21	ND	96
Bromodichloromethane	ND	21	ND	140
cis-1,3-Dichloropropene	ND	21	ND	94

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units



Volatile Organics in Air			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-19	Diln Fac:	41.60
Lab ID:	289415-001	Batch#:	248846
Matrix:	Air	Sampled:	05/25/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/18/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	21	ND	85
Toluene	ND	21	ND	78
trans-1,3-Dichloropropene	ND	21	ND	94
1,1,2-Trichloroethane	ND	21	ND	110
Tetrachloroethene	ND	21	ND	140
2-Hexanone	ND	21	ND	85
Dibromochloromethane	ND	21	ND	180
1,2-Dibromoethane	ND	21	ND	160
Chlorobenzene	ND	21	ND	96
Ethylbenzene	ND	21	ND	90
m,p-Xylenes	ND	21	ND	90
o-Xylene	ND	21	ND	90
Styrene	ND	21	ND	89
Bromoform	ND	21	ND	220
1,1,2,2-Tetrachloroethane	ND	21	ND	140
4-Ethyltoluene	ND	21	ND	100
1,3,5-Trimethylbenzene	40	21	190	100
1,2,4-Trimethylbenzene	ND	21	ND	100
1,3-Dichlorobenzene	ND	21	ND	130
1,4-Dichlorobenzene	ND	21	ND	130
Benzyl chloride	ND	21	ND	110
1,2-Dichlorobenzene	ND	21	ND	130
1,2,4-Trichlorobenzene	ND	21	ND	150
Hexachlorobutadiene	ND	21	ND	220
Naphthalene	ND	83	ND	440

Surrogate	%REC	Limits
Bromofluorobenzene	101	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-20	Diln Fac:	3.450
Lab ID:	289415-002	Batch#:	248864
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/19/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.7	ND	8.5
Freon 114	ND	1.7	ND	12
Chloromethane	ND	1.7	ND	3.6
Vinyl Chloride	ND	1.7	ND	4.4
1,3-Butadiene	ND	1.7	ND	3.8
Bromomethane	ND	1.7	ND	6.7
Chloroethane	ND	1.7	ND	4.6
Trichlorofluoromethane	29	1.7	160	9.7
Acrolein	ND	6.9	ND	16
1,1-Dichloroethene	ND	5.8	ND	23
Freon 113	ND	1.7	ND	13
Acetone	11	6.9	26	16
Carbon Disulfide	2.4	1.7	7.5	5.4
Isopropanol	ND	6.9	ND	17
Methylene Chloride	ND	1.7	ND	6.0
trans-1,2-Dichloroethene	ND	1.7	ND	6.8
MTBE	ND	1.7	ND	6.2
n-Hexane	19	1.7	69	6.1
1,1-Dichloroethane	ND	1.7	ND	7.0
Vinyl Acetate	ND	1.7	ND	6.1
cis-1,2-Dichloroethene	ND	1.7	ND	6.8
2-Butanone	ND	5.8	ND	17
Ethyl Acetate	ND	1.7	ND	6.2
Tetrahydrofuran	ND	1.7	ND	5.1
Chloroform	ND	1.7	ND	8.4
1,1,1-Trichloroethane	ND	1.7	ND	9.4
Cyclohexane	ND	1.7	ND	5.9
Carbon Tetrachloride	ND	1.7	ND	11
Benzene	ND	1.7	ND	5.5
1,2-Dichloroethane	ND	1.7	ND	7.0
n-Heptane	12	1.7	51	7.1
Trichloroethene	ND	1.7	ND	9.3
1,2-Dichloropropane	ND	1.7	ND	8.0
Bromodichloromethane	ND	1.7	ND	12
cis-1,3-Dichloropropene	ND	1.7	ND	7.8

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-20	Diln Fac:	3.450
Lab ID:	289415-002	Batch#:	248864
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/19/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.7	ND	7.1
Toluene	ND	1.7	ND	6.5
trans-1,3-Dichloropropene	ND	1.7	ND	7.8
1,1,2-Trichloroethane	ND	1.7	ND	9.4
Tetrachloroethene	4.8	1.7	32	12
2-Hexanone	ND	1.7	ND	7.1
Dibromochloromethane	ND	1.7	ND	15
1,2-Dibromoethane	ND	1.7	ND	13
Chlorobenzene	ND	1.7	ND	7.9
Ethylbenzene	5.9	1.7	26	7.5
m,p-Xylenes	5.9	1.7	26	7.5
o-Xylene	7.2	1.7	31	7.5
Styrene	ND	1.7	ND	7.3
Bromoform	ND	1.7	ND	18
1,1,2,2-Tetrachloroethane	ND	1.7	ND	12
4-Ethyltoluene	ND	1.7	ND	8.5
1,3,5-Trimethylbenzene	36	1.7	170	8.5
1,2,4-Trimethylbenzene	ND	1.7	ND	8.5
1,3-Dichlorobenzene	1.8	1.7	11	10
1,4-Dichlorobenzene	ND	1.7	ND	10
Benzyl chloride	ND	1.7	ND	8.9
1,2-Dichlorobenzene	ND	1.7	ND	10
1,2,4-Trichlorobenzene	ND	1.7	ND	13
Hexachlorobutadiene	ND	1.7	ND	18
Naphthalene	ND	6.9	ND	36

Surrogate	%REC	Limits
Bromofluorobenzene	107	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-23	Diln Fac:	2,496
Lab ID:	289415-003	Batch#:	248864
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/20/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1,200	ND	6,200
Freon 114	ND	1,200	ND	8,700
Chloromethane	ND	1,200	ND	2,600
Vinyl Chloride	ND	1,200	ND	3,200
1,3-Butadiene	ND	1,200	ND	2,800
Bromomethane	ND	1,200	ND	4,800
Chloroethane	ND	1,200	ND	3,300
Trichlorofluoromethane	ND	1,200	ND	7,000
Acrolein	ND	5,000	ND	11,000
1,1-Dichloroethene	ND	4,200	ND	16,000
Freon 113	ND	1,200	ND	9,600
Acetone	ND	5,000	ND	12,000
Carbon Disulfide	ND	1,200	ND	3,900
Isopropanol	ND	5,000	ND	12,000
Methylene Chloride	ND	1,200	ND	4,300
trans-1,2-Dichloroethene	ND	1,200	ND	4,900
MTBE	ND	1,200	ND	4,500
n-Hexane	29,000	1,200	100,000	4,400
1,1-Dichloroethane	ND	1,200	ND	5,100
Vinyl Acetate	ND	1,200	ND	4,400
cis-1,2-Dichloroethene	ND	1,200	ND	4,900
2-Butanone	ND	4,200	ND	12,000
Ethyl Acetate	ND	1,200	ND	4,500
Tetrahydrofuran	ND	1,200	ND	3,700
Chloroform	ND	1,200	ND	6,100
1,1,1-Trichloroethane	ND	1,200	ND	6,800
Cyclohexane	ND	1,200	ND	4,300
Carbon Tetrachloride	ND	1,200	ND	7,900
Benzene	ND	1,200	ND	4,000
1,2-Dichloroethane	ND	1,200	ND	5,100
n-Heptane	2,200	1,200	8,800	5,100
Trichloroethene	ND	1,200	ND	6,700
1,2-Dichloropropane	ND	1,200	ND	5,800
Bromodichloromethane	ND	1,200	ND	8,400
cis-1,3-Dichloropropene	ND	1,200	ND	5,700

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

### Volatile Organics in Air

Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-23	Diln Fac:	2,496
Lab ID:	289415-003	Batch#:	248864
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/20/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1,200	ND	5,100
Toluene	ND	1,200	ND	4,700
trans-1,3-Dichloropropene	ND	1,200	ND	5,700
1,1,2-Trichloroethane	ND	1,200	ND	6,800
Tetrachloroethene	ND	1,200	ND	8,500
2-Hexanone	ND	1,200	ND	5,100
Dibromochloromethane	ND	1,200	ND	11,000
1,2-Dibromoethane	ND	1,200	ND	9,600
Chlorobenzene	ND	1,200	ND	5,700
Ethylbenzene	ND	1,200	ND	5,400
m,p-Xylenes	ND	1,200	ND	5,400
o-Xylene	ND	1,200	ND	5,400
Styrene	ND	1,200	ND	5,300
Bromoform	ND	1,200	ND	13,000
1,1,2,2-Tetrachloroethane	ND	1,200	ND	8,600
4-Ethyltoluene	ND	1,200	ND	6,100
1,3,5-Trimethylbenzene	ND	1,200	ND	6,100
1,2,4-Trimethylbenzene	ND	1,200	ND	6,100
1,3-Dichlorobenzene	ND	1,200	ND	7,500
1,4-Dichlorobenzene	ND	1,200	ND	7,500
Benzyl chloride	ND	1,200	ND	6,500
1,2-Dichlorobenzene	ND	1,200	ND	7,500
1,2,4-Trichlorobenzene	ND	1,200	ND	9,300
Hexachlorobutadiene	ND	1,200	ND	13,000
Naphthalene	ND	5,000	ND	26,000

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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-24	Diln Fac:	2.640
Lab ID:	289415-004	Batch#:	248823
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/17/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.3	ND	6.5
Freon 114	ND	1.3	ND	9.2
Chloromethane	ND	1.3	ND	2.7
Vinyl Chloride	ND	1.3	ND	3.4
1,3-Butadiene	ND	1.3	ND	2.9
Bromomethane	ND	1.3	ND	5.1
Chloroethane	ND	1.3	ND	3.5
Trichlorofluoromethane	2.8	1.3	16	7.4
Acrolein	ND	5.3	ND	12
1,1-Dichloroethene	ND	1.3	ND	5.2
Freon 113	ND	1.3	ND	10
Acetone	8.7	5.3	21	13
Carbon Disulfide	ND	1.3	ND	4.1
Isopropanol	ND	5.3	ND	13
Methylene Chloride	ND	1.3	ND	4.6
trans-1,2-Dichloroethene	ND	1.3	ND	5.2
MTBE	ND	1.3	ND	4.8
n-Hexane	ND	1.3	ND	4.7
1,1-Dichloroethane	ND	1.3	ND	5.3
Vinyl Acetate	ND	1.3	ND	4.6
cis-1,2-Dichloroethene	ND	1.3	ND	5.2
2-Butanone	ND	1.3	ND	3.9
Ethyl Acetate	ND	1.3	ND	4.8
Tetrahydrofuran	ND	1.3	ND	3.9
Chloroform	2.3	1.3	11	6.4
1,1,1-Trichloroethane	ND	1.3	ND	7.2
Cyclohexane	ND	1.3	ND	4.5
Carbon Tetrachloride	ND	1.3	ND	8.3
Benzene	ND	1.3	ND	4.2
1,2-Dichloroethane	ND	1.3	ND	5.3
n-Heptane	ND	1.3	ND	5.4
Trichloroethene	ND	1.3	ND	7.1
1,2-Dichloropropane	ND	1.3	ND	6.1
Bromodichloromethane	ND	1.3	ND	8.8
cis-1,3-Dichloropropene	ND	1.3	ND	6.0

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

### Volatile Organics in Air

Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-24	Diln Fac:	2.640
Lab ID:	289415-004	Batch#:	248823
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/17/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.3	ND	5.4
Toluene	ND	1.3	ND	5.0
trans-1,3-Dichloropropene	ND	1.3	ND	6.0
1,1,2-Trichloroethane	ND	1.3	ND	7.2
Tetrachloroethene	1.4	1.3	9.2	9.0
2-Hexanone	ND	1.3	ND	5.4
Dibromochloromethane	ND	1.3	ND	11
1,2-Dibromoethane	ND	1.3	ND	10
Chlorobenzene	ND	1.3	ND	6.1
Ethylbenzene	ND	1.3	ND	5.7
m,p-Xylenes	ND	1.3	ND	5.7
o-Xylene	ND	1.3	ND	5.7
Styrene	ND	1.3	ND	5.6
Bromoform	ND	1.3	ND	14
1,1,2,2-Tetrachloroethane	ND	1.3	ND	9.1
4-Ethyltoluene	ND	1.3	ND	6.5
1,3,5-Trimethylbenzene	ND	1.3	ND	6.5
1,2,4-Trimethylbenzene	ND	1.3	ND	6.5
1,3-Dichlorobenzene	1.6	1.3	9.4	7.9
1,4-Dichlorobenzene	ND	1.3	ND	7.9
Benzyl chloride	ND	1.3	ND	6.8
1,2-Dichlorobenzene	ND	1.3	ND	7.9
1,2,4-Trichlorobenzene	ND	1.3	ND	9.8
Hexachlorobutadiene	ND	1.3	ND	14
Naphthalene	ND	5.3	ND	28

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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-25	Diln Fac:	2.000
Lab ID:	289415-005	Batch#:	248823
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/17/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.0	ND	4.9
Freon 114	ND	1.0	ND	7.0
Chloromethane	ND	1.0	ND	2.1
Vinyl Chloride	ND	1.0	ND	2.6
1,3-Butadiene	ND	1.0	ND	2.2
Bromomethane	ND	1.0	ND	3.9
Chloroethane	ND	1.0	ND	2.6
Trichlorofluoromethane	ND	1.0	ND	5.6
Acrolein	ND	4.0	ND	9.2
1,1-Dichloroethene	ND	1.0	ND	4.0
Freon 113	ND	1.0	ND	7.7
Acetone	ND	4.0	ND	9.5
Carbon Disulfide	2.3	1.0	7.1	3.1
Isopropanol	ND	4.0	ND	9.8
Methylene Chloride	ND	1.0	ND	3.5
trans-1,2-Dichloroethene	ND	1.0	ND	4.0
MTBE	ND	1.0	ND	3.6
n-Hexane	ND	1.0	ND	3.5
1,1-Dichloroethane	ND	1.0	ND	4.0
Vinyl Acetate	ND	1.0	ND	3.5
cis-1,2-Dichloroethene	ND	1.0	ND	4.0
2-Butanone	ND	1.0	ND	2.9
Ethyl Acetate	ND	1.0	ND	3.6
Tetrahydrofuran	ND	1.0	ND	2.9
Chloroform	1.5	1.0	7.5	4.9
1,1,1-Trichloroethane	ND	1.0	ND	5.5
Cyclohexane	ND	1.0	ND	3.4
Carbon Tetrachloride	ND	1.0	ND	6.3
Benzene	ND	1.0	ND	3.2
1,2-Dichloroethane	ND	1.0	ND	4.0
n-Heptane	ND	1.0	ND	4.1
Trichloroethene	ND	1.0	ND	5.4
1,2-Dichloropropane	ND	1.0	ND	4.6
Bromodichloromethane	ND	1.0	ND	6.7
cis-1,3-Dichloropropene	ND	1.0	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	VP-25	Diln Fac:	2.000
Lab ID:	289415-005	Batch#:	248823
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/17/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.0	ND	4.1
Toluene	1.3	1.0	4.8	3.8
trans-1,3-Dichloropropene	ND	1.0	ND	4.5
1,1,2-Trichloroethane	ND	1.0	ND	5.5
Tetrachloroethene	ND	1.0	ND	6.8
2-Hexanone	ND	1.0	ND	4.1
Dibromochloromethane	ND	1.0	ND	8.5
1,2-Dibromoethane	ND	1.0	ND	7.7
Chlorobenzene	ND	1.0	ND	4.6
Ethylbenzene	ND	1.0	ND	4.3
m,p-Xylenes	ND	1.0	ND	4.3
o-Xylene	ND	1.0	ND	4.3
Styrene	ND	1.0	ND	4.3
Bromoform	ND	1.0	ND	10
1,1,2,2-Tetrachloroethane	ND	1.0	ND	6.9
4-Ethyltoluene	ND	1.0	ND	4.9
1,3,5-Trimethylbenzene	ND	1.0	ND	4.9
1,2,4-Trimethylbenzene	ND	1.0	ND	4.9
1,3-Dichlorobenzene	1.6	1.0	9.5	6.0
1,4-Dichlorobenzene	ND	1.0	ND	6.0
Benzyl chloride	ND	1.0	ND	5.2
1,2-Dichlorobenzene	ND	1.0	ND	6.0
1,2,4-Trichlorobenzene	ND	1.0	ND	7.4
Hexachlorobutadiene	ND	1.0	ND	11
Naphthalene	ND	4.0	ND	21

Surrogate	%REC	Limits
Bromofluorobenzene	104	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	DUP-3	Diln Fac:	2.640
Lab ID:	289415-006	Batch#:	248823
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/17/17

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.3	ND	6.5
Freon 114	ND	1.3	ND	9.2
Chloromethane	ND	1.3	ND	2.7
Vinyl Chloride	ND	1.3	ND	3.4
1,3-Butadiene	ND	1.3	ND	2.9
Bromomethane	ND	1.3	ND	5.1
Chloroethane	ND	1.3	ND	3.5
Trichlorofluoromethane	2.8	1.3	16	7.4
Acrolein	ND	5.3	ND	12
1,1-Dichloroethene	ND	1.3	ND	5.2
Freon 113	ND	1.3	ND	10
Acetone	6.2	5.3	15	13
Carbon Disulfide	ND	1.3	ND	4.1
Isopropanol	ND	5.3	ND	13
Methylene Chloride	ND	1.3	ND	4.6
trans-1,2-Dichloroethene	ND	1.3	ND	5.2
MTBE	ND	1.3	ND	4.8
n-Hexane	ND	1.3	ND	4.7
1,1-Dichloroethane	ND	1.3	ND	5.3
Vinyl Acetate	ND	1.3	ND	4.6
cis-1,2-Dichloroethene	ND	1.3	ND	5.2
2-Butanone	ND	1.3	ND	3.9
Ethyl Acetate	ND	1.3	ND	4.8
Tetrahydrofuran	ND	1.3	ND	3.9
Chloroform	2.3	1.3	11	6.4
1,1,1-Trichloroethane	ND	1.3	ND	7.2
Cyclohexane	ND	1.3	ND	4.5
Carbon Tetrachloride	ND	1.3	ND	8.3
Benzene	ND	1.3	ND	4.2
1,2-Dichloroethane	ND	1.3	ND	5.3
n-Heptane	ND	1.3	ND	5.4
Trichloroethene	ND	1.3	ND	7.1
1,2-Dichloropropane	ND	1.3	ND	6.1
Bromodichloromethane	ND	1.3	ND	8.8
cis-1,3-Dichloropropene	ND	1.3	ND	6.0

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

Volatile Organics in Air			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Field ID:	DUP-3	Diln Fac:	2.640
Lab ID:	289415-006	Batch#:	248823
Matrix:	Air	Sampled:	05/26/17
Units (V):	ppbv	Received:	05/26/17
Units (M):	ug/m3	Analyzed:	06/17/17

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	1.3	ND	5.4
Toluene	ND	1.3	ND	5.0
trans-1,3-Dichloropropene	ND	1.3	ND	6.0
1,1,2-Trichloroethane	ND	1.3	ND	7.2
Tetrachloroethene	ND	1.3	ND	9.0
2-Hexanone	ND	1.3	ND	5.4
Dibromochloromethane	ND	1.3	ND	11
1,2-Dibromoethane	ND	1.3	ND	10
Chlorobenzene	ND	1.3	ND	6.1
Ethylbenzene	ND	1.3	ND	5.7
m,p-Xylenes	ND	1.3	ND	5.7
o-Xylene	ND	1.3	ND	5.7
Styrene	ND	1.3	ND	5.6
Bromoform	ND	1.3	ND	14
1,1,2,2-Tetrachloroethane	ND	1.3	ND	9.1
4-Ethyltoluene	ND	1.3	ND	6.5
1,3,5-Trimethylbenzene	ND	1.3	ND	6.5
1,2,4-Trimethylbenzene	ND	1.3	ND	6.5
1,3-Dichlorobenzene	1.6	1.3	9.5	7.9
1,4-Dichlorobenzene	ND	1.3	ND	7.9
Benzyl chloride	ND	1.3	ND	6.8
1,2-Dichlorobenzene	ND	1.3	ND	7.9
1,2,4-Trichlorobenzene	ND	1.3	ND	9.8
Hexachlorobutadiene	ND	1.3	ND	14
Naphthalene	ND	5.3	ND	28

Surrogate	%REC	Limits
Bromofluorobenzene	101	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248823
Units (V):	ppbv	Analyzed:	06/16/17
Diln Fac:	1.000		

Type: BS Lab ID: QC889803

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	8.114	81	70-130
Freon 114	10.00	8.994	90	70-130
Chloromethane	10.00	8.633	86	70-130
Vinyl Chloride	10.00	9.190	92	70-130
1,3-Butadiene	10.00	8.319	83	70-130
Bromomethane	10.00	8.541	85	70-130
Chloroethane	10.00	8.718	87	70-130
Trichlorofluoromethane	10.00	9.427	94	70-130
Acrolein	10.00	9.469	95	70-130
1,1-Dichloroethene	10.00	10.81	108	70-130
Freon 113	10.00	10.14	101	70-130
Acetone	10.00	9.409	94	70-130
Carbon Disulfide	10.00	9.898	99	70-130
Isopropanol	10.00	8.568	86	70-130
Methylene Chloride	10.00	9.633	96	70-130
trans-1,2-Dichloroethene	10.00	10.77	108	70-130
MTBE	10.00	10.89	109	70-130
n-Hexane	10.00	10.60	106	70-130
1,1-Dichloroethane	10.00	10.08	101	70-130
Vinyl Acetate	10.00	10.18	102	70-130
cis-1,2-Dichloroethene	10.00	10.75	108	70-130
2-Butanone	10.00	10.15	102	70-130
Ethyl Acetate	10.00	10.39	104	70-130
Tetrahydrofuran	10.00	9.243	92	70-130
Chloroform	10.00	9.961	100	70-130
1,1,1-Trichloroethane	10.00	9.147	91	70-130
Cyclohexane	10.00	8.511	85	70-130
Carbon Tetrachloride	10.00	8.139	81	70-130
Benzene	10.00	8.641	86	70-130
1,2-Dichloroethane	10.00	10.45	104	70-130
n-Heptane	10.00	8.639	86	70-130
Trichloroethene	10.00	8.840	88	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248823
Units (V):	ppbv	Analyzed:	06/16/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>
1,2-Dichloropropane	10.00	9.158	92	70-130
Bromodichloromethane	10.00	9.228	92	70-130
cis-1,3-Dichloropropene	10.00	9.566	96	70-130
4-Methyl-2-Pentanone	10.00	9.718	97	70-130
Toluene	10.00	9.318	93	70-130
trans-1,3-Dichloropropene	10.00	9.879	99	70-130
1,1,2-Trichloroethane	10.00	10.50	105	70-130
Tetrachloroethene	10.00	11.32	113	70-130
2-Hexanone	10.00	9.990	100	70-130
Dibromochloromethane	10.00	10.59	106	70-130
1,2-Dibromoethane	10.00	10.42	104	70-130
Chlorobenzene	10.00	9.247	92	70-130
Ethylbenzene	10.00	9.777	98	70-130
m,p-Xylenes	20.00	20.31	102	70-130
o-Xylene	10.00	10.42	104	70-130
Styrene	10.00	9.733	97	70-130
Bromoform	10.00	11.95	120	70-130
1,1,2,2-Tetrachloroethane	10.00	11.50	115	70-130
4-Ethyltoluene	10.00	11.09	111	70-130
1,3,5-Trimethylbenzene	10.00	11.11	111	70-130
1,2,4-Trimethylbenzene	10.00	11.02	110	70-130
1,3-Dichlorobenzene	10.00	10.79	108	70-130
1,4-Dichlorobenzene	10.00	10.53	105	70-130
Benzyl chloride	10.00	10.94	109	70-130
1,2-Dichlorobenzene	10.00	10.21	102	70-130
1,2,4-Trichlorobenzene	10.00	12.24	122	70-130
Hexachlorobutadiene	10.00	11.77	118	70-130
Naphthalene	10.00	13.12 b	131 *	70-130

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	103	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units



**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248823
Units (V):	ppbv	Analyzed:	06/16/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>	<b>RPD</b>	<b>Lim</b>
1,2-Dichloropropane	10.00	8.276	83	70-130	10	25
Bromodichloromethane	10.00	8.771	88	70-130	5	25
cis-1,3-Dichloropropene	10.00	8.786	88	70-130	9	25
4-Methyl-2-Pentanone	10.00	9.141	91	70-130	6	25
Toluene	10.00	9.012	90	70-130	3	25
trans-1,3-Dichloropropene	10.00	9.179	92	70-130	7	25
1,1,2-Trichloroethane	10.00	9.889	99	70-130	6	25
Tetrachloroethene	10.00	10.57	106	70-130	7	25
2-Hexanone	10.00	9.662	97	70-130	3	25
Dibromochloromethane	10.00	9.785	98	70-130	8	25
1,2-Dibromoethane	10.00	9.442	94	70-130	10	25
Chlorobenzene	10.00	8.965	90	70-130	3	25
Ethylbenzene	10.00	9.572	96	70-130	2	25
m,p-Xylenes	20.00	20.16	101	70-130	1	25
o-Xylene	10.00	10.19	102	70-130	2	25
Styrene	10.00	9.461	95	70-130	3	25
Bromoform	10.00	10.81	108	70-130	10	25
1,1,2,2-Tetrachloroethane	10.00	11.05	110	70-130	4	25
4-Ethyltoluene	10.00	10.73	107	70-130	3	25
1,3,5-Trimethylbenzene	10.00	10.43	104	70-130	6	25
1,2,4-Trimethylbenzene	10.00	10.64	106	70-130	4	25
1,3-Dichlorobenzene	10.00	10.21	102	70-130	5	25
1,4-Dichlorobenzene	10.00	10.27	103	70-130	2	25
Benzyl chloride	10.00	10.84	108	70-130	1	25
1,2-Dichlorobenzene	10.00	9.933	99	70-130	3	25
1,2,4-Trichlorobenzene	10.00	11.99	120	70-130	2	25
Hexachlorobutadiene	10.00	11.87	119	70-130	1	25
Naphthalene	10.00	12.86 b	129	70-130	2	25

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	100	70-130

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889805	Diln Fac:	1.000
Matrix:	Air	Batch#:	248823
Units (V):	ppbv	Analyzed:	06/16/17

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	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889805	Diln Fac:	1.000
Matrix:	Air	Batch#:	248823
Units (V):	ppbv	Analyzed:	06/16/17

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	93	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248846
Units (V):	ppbv	Analyzed:	06/17/17
Diln Fac:	1.000		

Type: BS Lab ID: QC889887

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	5.000	5.160	103	70-130
Freon 114	5.000	5.321	106	70-130
Chloromethane	5.000	4.726	95	70-130
Vinyl Chloride	5.000	5.852	117	70-130
1,3-Butadiene	5.000	5.297	106	70-130
Bromomethane	5.000	4.862	97	70-130
Chloroethane	5.000	4.664	93	70-130
Trichlorofluoromethane	5.000	5.449	109	70-130
Acrolein	5.000	4.008	80	70-130
1,1-Dichloroethene	5.000	5.047	101	70-130
Freon 113	5.000	5.373	107	70-130
Acetone	5.000	4.974	99	70-130
Carbon Disulfide	5.000	5.265	105	70-130
Isopropanol	5.000	4.628	93	70-130
Methylene Chloride	5.000	4.483	90	70-130
trans-1,2-Dichloroethene	5.000	6.002	120	70-130
MTBE	5.000	5.453	109	70-130
n-Hexane	5.000	5.336	107	70-130
1,1-Dichloroethane	5.000	5.268	105	70-130
Vinyl Acetate	5.000	4.896	98	70-130
cis-1,2-Dichloroethene	5.000	6.283	126	70-130
2-Butanone	5.000	4.802	96	70-130
Ethyl Acetate	5.000	6.007	120	70-130
Tetrahydrofuran	5.000	6.008	120	70-130
Chloroform	5.000	5.340	107	70-130
1,1,1-Trichloroethane	5.000	5.421	108	70-130
Cyclohexane	5.000	5.540	111	70-130
Carbon Tetrachloride	5.000	5.410	108	70-130
Benzene	5.000	5.362	107	70-130
1,2-Dichloroethane	5.000	5.254	105	70-130
n-Heptane	5.000	6.152	123	70-130
Trichloroethene	5.000	5.490	110	70-130
1,2-Dichloropropane	5.000	5.991	120	70-130
Bromodichloromethane	5.000	5.298	106	70-130

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248846
Units (V):	ppbv	Analyzed:	06/17/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>
cis-1,3-Dichloropropene	5.000	5.430	109	70-130
4-Methyl-2-Pentanone	5.000	6.330	127	70-130
Toluene	5.000	5.622	112	70-130
trans-1,3-Dichloropropene	5.000	5.531	111	70-130
1,1,2-Trichloroethane	5.000	5.715	114	70-130
Tetrachloroethene	5.000	5.641	113	70-130
2-Hexanone	5.000	6.361	127	70-130
Dibromochloromethane	5.000	5.305	106	70-130
1,2-Dibromoethane	5.000	5.394	108	70-130
Chlorobenzene	5.000	5.431	109	70-130
Ethylbenzene	5.000	5.692	114	70-130
m,p-Xylenes	10.00	11.41	114	70-130
o-Xylene	5.000	5.542	111	70-130
Styrene	5.000	4.519	90	70-130
Bromoform	5.000	5.605	112	70-130
1,1,2,2-Tetrachloroethane	5.000	5.220	104	70-130
4-Ethyltoluene	5.000	5.580	112	70-130
1,3,5-Trimethylbenzene	5.000	5.437	109	70-130
1,2,4-Trimethylbenzene	5.000	5.683	114	70-130
1,3-Dichlorobenzene	5.000	5.428	109	70-130
1,4-Dichlorobenzene	5.000	5.254	105	70-130
Benzyl chloride	5.000	5.611	112	70-130
1,2-Dichlorobenzene	5.000	5.442	109	70-130
1,2,4-Trichlorobenzene	5.000	6.007	120	70-130
Hexachlorobutadiene	5.000	6.496	130	70-130
Naphthalene	5.000	5.572	111	70-130

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	100	70-130

RPD= Relative Percent Difference

Result V= Result in volume units



**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248846
Units (V):	ppbv	Analyzed:	06/17/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
cis-1,3-Dichloropropene	5.000	5.364	107	70-130	1	25
4-Methyl-2-Pentanone	5.000	6.244	125	70-130	1	25
Toluene	5.000	5.667	113	70-130	1	25
trans-1,3-Dichloropropene	5.000	5.509	110	70-130	0	25
1,1,2-Trichloroethane	5.000	5.641	113	70-130	1	25
Tetrachloroethene	5.000	5.667	113	70-130	0	25
2-Hexanone	5.000	6.359	127	70-130	0	25
Dibromochloromethane	5.000	5.276	106	70-130	1	25
1,2-Dibromoethane	5.000	5.334	107	70-130	1	25
Chlorobenzene	5.000	5.466	109	70-130	1	25
Ethylbenzene	5.000	5.627	113	70-130	1	25
m,p-Xylenes	10.000	11.40	114	70-130	0	25
o-Xylene	5.000	5.525	111	70-130	0	25
Styrene	5.000	4.491	90	70-130	1	25
Bromoform	5.000	5.569	111	70-130	1	25
1,1,2,2-Tetrachloroethane	5.000	5.292	106	70-130	1	25
4-Ethyltoluene	5.000	5.564	111	70-130	0	25
1,3,5-Trimethylbenzene	5.000	5.403	108	70-130	1	25
1,2,4-Trimethylbenzene	5.000	5.618	112	70-130	1	25
1,3-Dichlorobenzene	5.000	5.359	107	70-130	1	25
1,4-Dichlorobenzene	5.000	5.306	106	70-130	1	25
Benzyl chloride	5.000	5.483	110	70-130	2	25
1,2-Dichlorobenzene	5.000	5.353	107	70-130	2	25
1,2,4-Trichlorobenzene	5.000	6.015	120	70-130	0	25
Hexachlorobutadiene	5.000	6.435	129	70-130	1	25
Naphthalene	5.000	5.650	113	70-130	1	25

Surrogate	%REC	Limits
Bromofluorobenzene	100	70-130

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889889	Diln Fac:	1.000
Matrix:	Air	Batch#:	248846
Units (V):	ppbv	Analyzed:	06/17/17

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	1.7	ND	6.6
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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889889	Diln Fac:	1.000
Matrix:	Air	Batch#:	248846
Units (V):	ppbv	Analyzed:	06/17/17

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	101	70-130

ND= Not Detected

RL= Reporting Limit

Result M= Result in mass units

Result V= Result in volume units

**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248864
Units (V):	ppbv	Analyzed:	06/19/17
Diln Fac:	1.000		

Type: BS Lab ID: QC889947

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	5.000	5.120	102	70-130
Freon 114	5.000	5.289	106	70-130
Chloromethane	5.000	4.468	89	70-130
Vinyl Chloride	5.000	5.726	115	70-130
1,3-Butadiene	5.000	5.145	103	70-130
Bromomethane	5.000	4.714	94	70-130
Chloroethane	5.000	4.526	91	70-130
Trichlorofluoromethane	5.000	5.282	106	70-130
Acrolein	5.000	3.925	79	70-130
1,1-Dichloroethene	5.000	4.882	98	70-130
Freon 113	5.000	5.353	107	70-130
Acetone	5.000	4.976	100	70-130
Carbon Disulfide	5.000	5.119	102	70-130
Isopropanol	5.000	4.672	93	70-130
Methylene Chloride	5.000	4.346	87	70-130
trans-1,2-Dichloroethene	5.000	5.914	118	70-130
MTBE	5.000	5.374	107	70-130
n-Hexane	5.000	5.372	107	70-130
1,1-Dichloroethane	5.000	5.194	104	70-130
Vinyl Acetate	5.000	4.833	97	70-130
cis-1,2-Dichloroethene	5.000	6.033	121	70-130
2-Butanone	5.000	4.682	94	70-130
Ethyl Acetate	5.000	5.858	117	70-130
Tetrahydrofuran	5.000	5.908	118	70-130
Chloroform	5.000	5.275	106	70-130
1,1,1-Trichloroethane	5.000	5.402	108	70-130
Cyclohexane	5.000	5.444	109	70-130
Carbon Tetrachloride	5.000	5.434	109	70-130
Benzene	5.000	5.364	107	70-130
1,2-Dichloroethane	5.000	5.225	105	70-130
n-Heptane	5.000	6.126	123	70-130
Trichloroethene	5.000	5.564	111	70-130
1,2-Dichloropropane	5.000	5.936	119	70-130
Bromodichloromethane	5.000	5.315	106	70-130

RPD= Relative Percent Difference

Result V= Result in volume units



**Batch QC Report**

<b>Volatile Organics in Air</b>			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248864
Units (V):	ppbv	Analyzed:	06/19/17
Diln Fac:	1.000		

<b>Analyte</b>	<b>Spiked</b>	<b>Result (V)</b>	<b>%REC</b>	<b>Limits</b>
cis-1,3-Dichloropropene	5.000	5.495	110	70-130
4-Methyl-2-Pentanone	5.000	6.415	128	70-130
Toluene	5.000	5.587	112	70-130
trans-1,3-Dichloropropene	5.000	5.525	111	70-130
1,1,2-Trichloroethane	5.000	5.526	111	70-130
Tetrachloroethene	5.000	5.641	113	70-130
2-Hexanone	5.000	6.390	128	70-130
Dibromochloromethane	5.000	5.354	107	70-130
1,2-Dibromoethane	5.000	5.262	105	70-130
Chlorobenzene	5.000	5.348	107	70-130
Ethylbenzene	5.000	5.631	113	70-130
m,p-Xylenes	10.00	11.19	112	70-130
o-Xylene	5.000	5.420	108	70-130
Styrene	5.000	4.502	90	70-130
Bromoform	5.000	5.557	111	70-130
1,1,2,2-Tetrachloroethane	5.000	5.343	107	70-130
4-Ethyltoluene	5.000	5.568	111	70-130
1,3,5-Trimethylbenzene	5.000	5.369	107	70-130
1,2,4-Trimethylbenzene	5.000	5.704	114	70-130
1,3-Dichlorobenzene	5.000	5.347	107	70-130
1,4-Dichlorobenzene	5.000	5.344	107	70-130
Benzyl chloride	5.000	5.401	108	70-130
1,2-Dichlorobenzene	5.000	5.410	108	70-130
1,2,4-Trichlorobenzene	5.000	6.008	120	70-130
Hexachlorobutadiene	5.000	6.336	127	70-130
Naphthalene	5.000	5.457	109	70-130

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene	98	70-130

RPD= Relative Percent Difference

Result V= Result in volume units



**Batch QC Report**

Volatile Organics in Air			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	248864
Units (V):	ppbv	Analyzed:	06/19/17
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
cis-1,3-Dichloropropene	5.000	5.489	110	70-130	0	25
4-Methyl-2-Pentanone	5.000	6.355	127	70-130	1	25
Toluene	5.000	5.548	111	70-130	1	25
trans-1,3-Dichloropropene	5.000	5.440	109	70-130	2	25
1,1,2-Trichloroethane	5.000	5.503	110	70-130	0	25
Tetrachloroethene	5.000	5.631	113	70-130	0	25
2-Hexanone	5.000	6.304	126	70-130	1	25
Dibromochloromethane	5.000	5.233	105	70-130	2	25
1,2-Dibromoethane	5.000	5.244	105	70-130	0	25
Chlorobenzene	5.000	5.354	107	70-130	0	25
Ethylbenzene	5.000	5.566	111	70-130	1	25
m,p-Xylenes	10.000	11.41	114	70-130	2	25
o-Xylene	5.000	5.376	108	70-130	1	25
Styrene	5.000	4.447	89	70-130	1	25
Bromoform	5.000	5.676	114	70-130	2	25
1,1,2,2-Tetrachloroethane	5.000	5.124	102	70-130	4	25
4-Ethyltoluene	5.000	5.530	111	70-130	1	25
1,3,5-Trimethylbenzene	5.000	5.116	102	70-130	5	25
1,2,4-Trimethylbenzene	5.000	5.580	112	70-130	2	25
1,3-Dichlorobenzene	5.000	5.328	107	70-130	0	25
1,4-Dichlorobenzene	5.000	5.266	105	70-130	1	25
Benzyl chloride	5.000	5.444	109	70-130	1	25
1,2-Dichlorobenzene	5.000	5.183	104	70-130	4	25
1,2,4-Trichlorobenzene	5.000	5.985	120	70-130	0	25
Hexachlorobutadiene	5.000	6.384	128	70-130	1	25
Naphthalene	5.000	5.619	112	70-130	3	25

Surrogate	%REC	Limits
Bromofluorobenzene	101	70-130

RPD= Relative Percent Difference

Result V= Result in volume units

**Batch QC Report**

Volatile Organics in Air			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889949	Diln Fac:	1.000
Matrix:	Air	Batch#:	248864
Units (V):	ppbv	Analyzed:	06/19/17

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	1.7	ND	6.6
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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC889949	Diln Fac:	1.000
Matrix:	Air	Batch#:	248864
Units (V):	ppbv	Analyzed:	06/19/17

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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	248316
Units:	ppmv	Received:	05/26/17
Units (Mol %):	MOL %	Analyzed:	05/30/17

Field ID: VP-19 Diln Fac: 2.080  
 Type: SAMPLE Sampled: 05/25/17  
 Lab ID: 289415-001

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,100	ND	0.21
Carbon Dioxide	ND	2,100	ND	0.21
Oxygen	150,000	2,100	15	0.21
Methane	ND	2,100	ND	0.21

Field ID: VP-20 Diln Fac: 3.450  
 Type: SAMPLE Sampled: 05/26/17  
 Lab ID: 289415-002

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	3,500	ND	0.35
Carbon Dioxide	ND	3,500	ND	0.35
Oxygen	150,000	3,500	15	0.35
Methane	ND	3,500	ND	0.35

Field ID: VP-23 Diln Fac: 4.160  
 Type: SAMPLE Sampled: 05/26/17  
 Lab ID: 289415-003

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	4,200	ND	0.42
Carbon Dioxide	69,000	4,200	6.9	0.42
Oxygen	14,000	4,200	1.4	0.42
Methane	160,000	4,200	16	0.42

Field ID: VP-24 Diln Fac: 2.640  
 Type: SAMPLE Sampled: 05/26/17  
 Lab ID: 289415-004

Analyte	Result	RL	Result (Mol %)	RL
Helium	15,000	2,600	1.5	0.26
Carbon Dioxide	31,000	2,600	3.1	0.26
Oxygen	90,000	2,600	9.0	0.26
Methane	ND	2,600	ND	0.26

ND= Not Detected  
 RL= Reporting Limit

Result Mol %= Result in Mole Percent

Fixed Gas Analysis			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	248316
Units:	ppmv	Received:	05/26/17
Units (Mol %):	MOL %	Analyzed:	05/30/17

Field ID: VP-25 Diln Fac: 2.000  
 Type: SAMPLE Sampled: 05/26/17  
 Lab ID: 289415-005

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	2,000	ND	0.20
Carbon Dioxide	ND	2,000	ND	0.20
Oxygen	180,000	2,000	18	0.20
Methane	ND	2,000	ND	0.20

Field ID: DUP-3 Diln Fac: 2.640  
 Type: SAMPLE Sampled: 05/26/17  
 Lab ID: 289415-006

Analyte	Result	RL	Result (Mol %)	RL
Helium	15,000	2,600	1.5	0.26
Carbon Dioxide	30,000	2,600	3.0	0.26
Oxygen	92,000	2,600	9.2	0.26
Methane	ND	2,600	ND	0.26

Type: BLANK Diln Fac: 1.000  
 Lab ID: QC887901

Analyte	Result	RL	Result (Mol %)	RL
Helium	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Batch#:	248344
Matrix:	Air	Received:	05/26/17
Units (V):	ppbv	Analyzed:	05/31/17
Units (M):	ug/m3		

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln Fac	Sampled
VP-19	SAMPLE	289415-001	11,000	100	15	47,000	430	63	2.080	05/25/17
VP-20	SAMPLE	289415-002	1,200	170	26	5,000	710	100	3.450	05/26/17
VP-23	SAMPLE	289415-003	1,800,000	21,000	3,100	7,500,000	85,000	13,000	416.0	05/26/17
VP-24	SAMPLE	289415-004	ND	130	20	ND	540	80	2.640	05/26/17
VP-25	SAMPLE	289415-005	21 J	100	15	85 J	410	61	2.000	05/26/17
DUP-3	SAMPLE	289415-006	ND	130	20	ND	540	80	2.640	05/26/17
	BLANK	QC888001	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Matrix:	Air	Batch#:	248316
Units:	ppmv	Analyzed:	05/30/17
Diln Fac:	1.000		

Type: BS Lab ID: QC887898

Analyte	Spiked	Result	%REC	Limits
Helium	100,000	86,330	86	70-130
Carbon Dioxide		NA		
Oxygen		NA		
Methane		NA		

Type: BSD Lab ID: QC887899

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Helium	100,000	86,580	87	70-130	0	20
Carbon Dioxide		NA				
Oxygen		NA				
Methane		NA				

NA= Not Analyzed

RPD= Relative Percent Difference

## Batch QC Report

Fixed Gas Analysis			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC887900	Batch#:	248316
Matrix:	Air	Analyzed:	05/30/17
Units:	ppmv		

Analyte	Spiked	Result	%REC	Limits
Helium		NA		
Carbon Dioxide	2,000	1,827	91	70-130
Oxygen	2,000	1,724	86	70-130
Methane	2,000	1,852	93	70-130

NA= Not Analyzed

## Batch QC Report

Fixed Gas Analysis			
Lab #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	ASTM D1946-90
Field ID:	VP-19	Units (Mol %):	MOL %
Type:	SDUP	Diln Fac:	2.080
MSS Lab ID:	289415-001	Batch#:	248316
Lab ID:	QC887902	Sampled:	05/25/17
Matrix:	Air	Received:	05/26/17
Units:	ppmv	Analyzed:	05/30/17

Analyte	MSS Result	Result	RL	Result (Mol %)	RL	RPD	Lim
Helium	<2,080	ND	2,080	ND	0.2080	NC	30
Carbon Dioxide	<2,080	ND	2,080	ND	0.2080	NC	30
Oxygen	148,200	148,200	2,080	14.82	0.2080	0	30
Methane	<2,080	ND	2,080	ND	0.2080	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 #:	289415	Location:	Antez Oakland
Client:	Geosyntec Consultants	Prep:	METHOD
Project#:	WR2229	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Diln Fac:	1.000
Matrix:	Air	Batch#:	248344
Units (V):	ppbv	Analyzed:	05/31/17

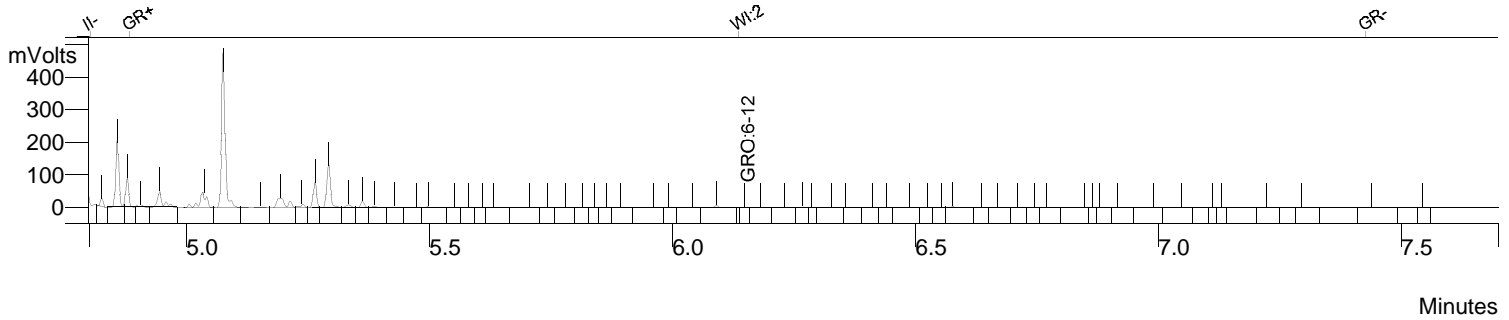
Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim
BS	QC887999	2,100	1,617	77	70-130		
BSD	QC888000	2,100	1,615	77	70-130	0	25

RPD= Relative Percent Difference

Result V= Result in volume units

# GRO by TO-3

Sample ID: 289415-001,248344  
 Data File: c:\varianws\data\053117\151\_011.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 14:26:44  
 Calculation Date: 05/31/2017 14:36:39  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 2.08x,c00108  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	593113	5486.652
		<b>Totals</b>	<b>593113</b>	<b>5486.652</b>

**Integration Parameters**

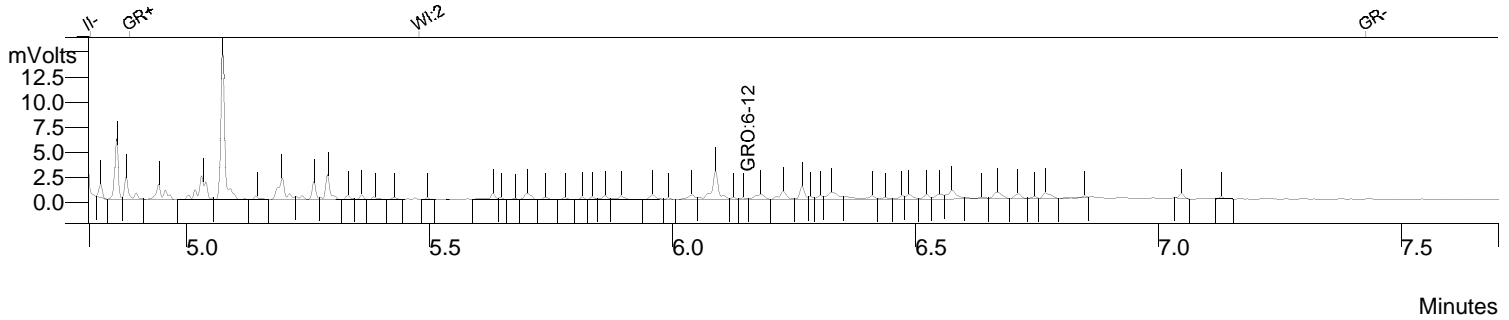
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289415-002,248344  
 Data File: c:\varianws\data\053117\151\_012.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 14:39:39  
 Calculation Date: 05/31/2017 14:49:33  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 3.45x,c00155  
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	38165	353.053
		<b>Totals</b>	<b>38165</b>	<b>353.053</b>

**Integration Parameters**

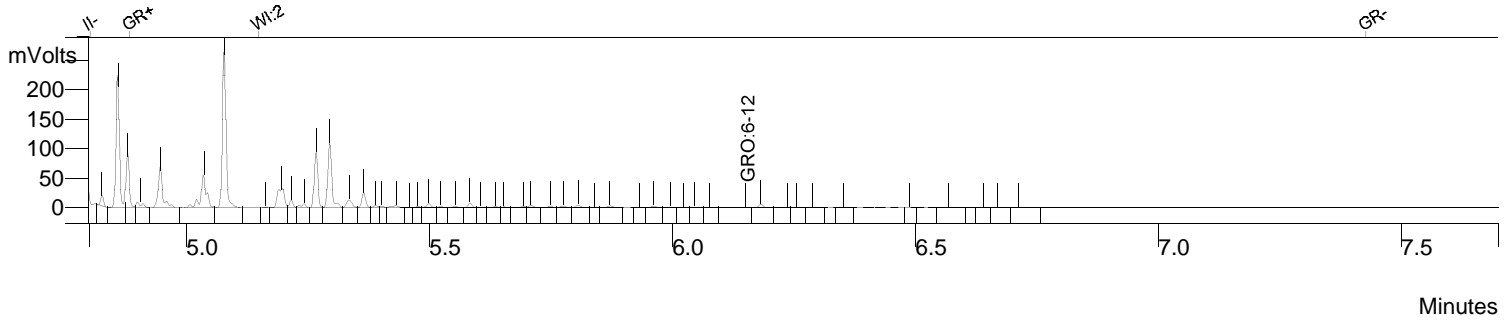
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**Data Handling Time Events**

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

# GRO by TO-3

Sample ID: 289415-003,248344  
 Data File: c:\varianws\data\053117\151\_024.run  
 Sample List: c:\varianws\053117b.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 17:59:36  
 Calculation Date: 05/31/2017 18:09:29  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 416x,c00211=c00145/20  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	476743	4410.163
<b>Totals</b>			<b>476743</b>	<b>4410.163</b>

**Integration Parameters**

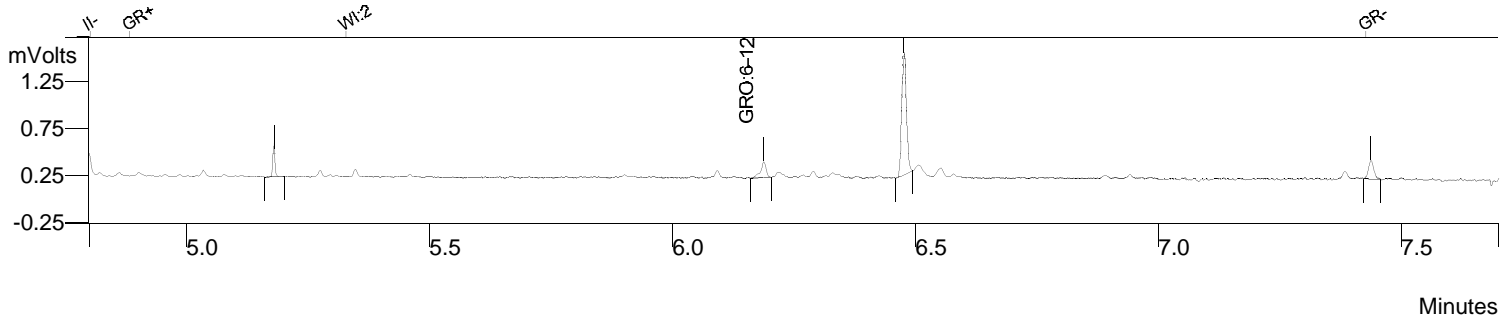
Initial Tangent %: 0  
 Initial Peak Width (sec): 4  
 Initial Peak Reject Value: 50.000  
 Initial S/N Ratio: 5

**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: 289415-005,248344  
 Data File: c:\varianws\data\053117\151\_017.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 15:43:33  
 Calculation Date: 05/31/2017 15:53:28  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 2.00x,c00303  
 Multiplier: 1.000 Divisor: 1.000



**Channel: Front = FID RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	1123	10.392
		<b>Totals</b>	<b>1123</b>	<b>10.392</b>

**Integration Parameters**

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

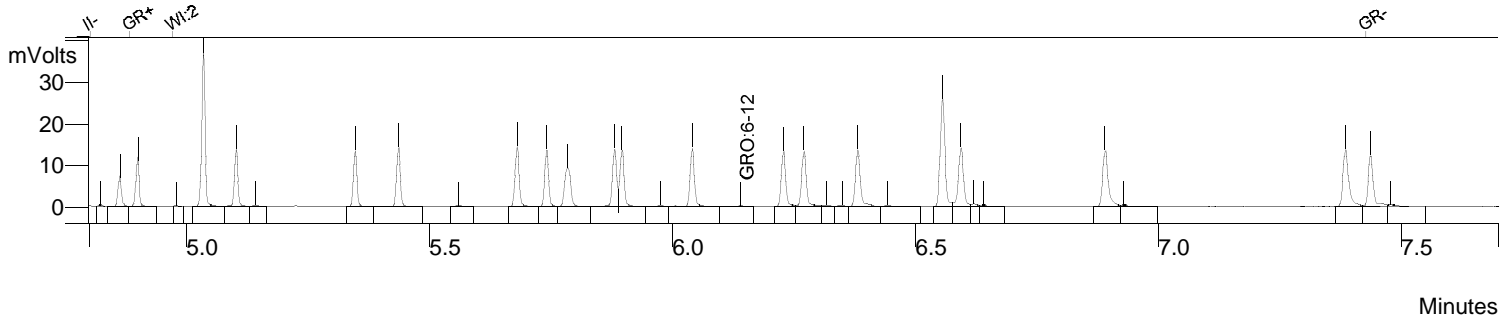
**Data Handling Time Events**

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



# GRO by TO-3

Sample ID: ccv/bs,qc887999  
 Data File: c:\varianws\data\053117\151\_002.run  
 Sample List: c:\varianws\053117.smp  
 Method: c:\varianws\methods\to3\_042617.mth  
 Acquisition Date: 05/31/2017 12:32:33  
 Calculation Date: 05/31/2017 12:42:27  
 Instrument ID: GC32 Operator: TO-15  
 Injection Notes: 248344,S33086,1x  
 Multiplier: 1.000 Divisor: 1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.155	GRO:6-12	174846	1617.429
		<b>Totals</b>	<b>174846</b>	<b>1617.429</b>

**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
4.972	WI 2.0 sec
7.426	GR off



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





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

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

Laboratory Job Number 289423  
ANALYTICAL REPORT

Geosyntec Consultants  
1111 Broadway  
Oakland, CA 94607

Project : WR2229  
Location : Antez Oakland  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
VP-2-N	289423-001
VP-4-N	289423-002
VP-6-N	289423-003
VP-8-N	289423-004
VP-10-N	289423-005
VP-12-N	289423-006
VP-14-N	289423-007
DUP-1-N	289423-008
VP-16-N	289423-009
VP-22-N	289423-010
VP-20-N	289423-011
VP-24-N	289423-012
DUP-2-N	289423-013

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: 06/12/2017

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

### CASE NARRATIVE

Laboratory number: 289423  
Client: Geosyntec Consultants  
Project: WR2229  
Location: Antez Oakland  
Request Date: 05/26/17  
Samples Received: 05/26/17

This data package contains sample and QC results for thirteen air samples, requested for the above referenced project on 05/26/17. The samples were received cold and intact.

**Semi-Volatile Organics in Air (EPA TO-17):**

Air Toxics in Folsom, CA performed the analysis (NELAP certified). Please see the Air Toxics case narrative.



eurofins

Air Toxics

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Eurofins assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

CHAIN-OF-CUSTODY RECORD

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

289423

Project Manager Robert Cheung  
 Collected by: (Print and Sign) Robert Cheung  
 Company Ciccoyake Consultants Email robert@ccoyake.com  
 Address 1111 Broadway City Oakland State CA Zip 94607  
 Phone (510) 836-3034 Fax \_\_\_\_\_  
 Project # \_\_\_\_\_  
 Project Name Antez Oakland

Lab I.D.	Field Sample I.D. (Location)	Engraved or Stamped Tube #	Date of Collection (mm/dd/yy)	Start Time (hr:min)	Date of Retrieval (mm/dd/yy)	End Time (hr:min)	Pre-Test Flow Rate	Post-Test Flow Rate	Volume	Reporting Units:					
										Indoor Air	Outdoor Air	Soil Vapor	Turn Around Time:	Normal	Rush
	VP-2-N	G0139916	05/24/17	1104	05/24/17	1104	200 mL/min	200 mL/min	60 mL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VP-4-N	G014367A	5/24/17	1345	5/24/17	1345	200 mL/min	200 mL/min	60 mL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VP-6-N	G0143488	5/24/17	1338	5/24/17	1338	200 mL/min	200 mL/min	60 mL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VP-8-N	G0149975	5/24/17	1543	5/24/17	1543	200 mL/min	200 mL/min	60 mL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VP-10-N	G0147267	5/24/17	1740	5/24/17	1740	200 mL/min	200 mL/min	60 mL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VP-12-N	G0149827	5/25/17	0919	5/25/17	0919	200 mL/min	200 mL/min	60 mL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VP-14-N	G0147222	5/25/17	1059	5/25/17	1059				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	DUP-1-N	G0149853	5/25/17	1100	5/25/17	1100				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VP-16-N	G0161804	5/25/17	1423	5/25/17	1423				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VP-22-N	G0144300	5/25/17	1428	5/25/17	1428				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relinquished by: (signature) [Signature] Date/Time 5/26/17-1610  
 Received by: (signature) [Signature] Date/Time 5/26/17 1610  
 Relinquished by: (signature) [Signature] Date/Time 5/26/17 1615  
 Received by: (signature) [Signature] Date/Time 5/26/17 @ 1645  
 Relinquished by: (signature) [Signature] Date/Time 5/30/17 @ 1334  
 Received by: (signature) [Signature] Date/Time \_\_\_\_\_

Notes: \_\_\_\_\_

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
					Yes No None	



COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 289423 Date Received 5/26/17 Number of coolers 1
Client Geosyntec Project WR2229/01

Date Opened 5/26 By (print) DTN (sign) [signature]
Date Logged in 5/30 By (print) [signature] (sign) [signature]
Date Labelled [arrow] By (print) [arrow] (sign) [arrow]

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) 5.6

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

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 289423

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

Client : Geosyntec Consultants  
Project : WR2229  
Location : Antez Oakland

Client Sample ID : VP-2-N                      Laboratory Sample ID :                      289423-001

No Detections

Client Sample ID : VP-4-N                      Laboratory Sample ID :                      289423-002

No Detections

Client Sample ID : VP-6-N                      Laboratory Sample ID :                      289423-003

No Detections

Client Sample ID : VP-8-N                      Laboratory Sample ID :                      289423-004

No Detections

Client Sample ID : VP-10-N                      Laboratory Sample ID :                      289423-005

No Detections

Client Sample ID : VP-12-N                      Laboratory Sample ID :                      289423-006

No Detections

Client Sample ID : VP-14-N                      Laboratory Sample ID :                      289423-007

No Detections

Client Sample ID : DUP-1-N                      Laboratory Sample ID :                      289423-008

No Detections

Client Sample ID : VP-16-N                      Laboratory Sample ID :                      289423-009

No Detections



Client Sample ID : VP-22-N	Laboratory Sample ID :	289423-010
No Detections		
Client Sample ID : VP-20-N	Laboratory Sample ID :	289423-011
No Detections		
Client Sample ID : VP-24-N	Laboratory Sample ID :	289423-012
No Detections		
Client Sample ID : DUP-2-N	Laboratory Sample ID :	289423-013
No Detections		

Laboratory Job Number 289423

Subcontracted Products

Air Toxics

6/12/2017  
Mr. Will Rice  
Curtis & Tompkins, Ltd.  
2323 Fifth Street

Berkeley CA 94710

Project Name: Antez Oakland  
Project #:  
Workorder #: 1705572

Dear Mr. Will Rice

The following report includes the data for the above referenced project for sample(s) received on 5/31/2017 at Air Toxics Ltd.

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

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

Regards,



Rachel Selenis  
Project Manager

**WORK ORDER #: 1705572**

Work Order Summary

<b>CLIENT:</b>	Mr. Will Rice Curtis & Tompkins, Ltd. 2323 Fifth Street Berkeley, CA 94710	<b>BILL TO:</b>	Accounts Payables Curtis & Tompkins, Ltd. 2323 Fifth Street Berkeley, CA 94710
<b>PHONE:</b>	510-486-0925	<b>P.O. #</b>	WR2229/01
<b>FAX:</b>	510-486-0532	<b>PROJECT #</b>	Antez Oakland
<b>DATE RECEIVED:</b>	05/31/2017	<b>CONTACT:</b>	Rachel Selenis
<b>DATE COMPLETED:</b>	06/12/2017		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	VP-2-N	Modified TO-17 VI
02A	VP-4-N	Modified TO-17 VI
03A	VP-6-N	Modified TO-17 VI
04A	VP-8-N	Modified TO-17 VI
05A	VP-10-N	Modified TO-17 VI
06A	VP-12-N	Modified TO-17 VI
07A	VP-14-N	Modified TO-17 VI
08A	DUP-1-N	Modified TO-17 VI
09A	VP-16-N	Modified TO-17 VI
10A	VP-22-N	Modified TO-17 VI
11A	VP-20-N	Modified TO-17 VI
12A	VP-24-N	Modified TO-17 VI
13A	DUP-2-N	Modified TO-17 VI
14A	Lab Blank	Modified TO-17 VI
15A	CCV	Modified TO-17 VI
16A	LCS	Modified TO-17 VI
16AA	LCSD	Modified TO-17 VI

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 06/12/17

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935  
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

**LABORATORY NARRATIVE**  
**Modified EPA Method TO-17 (VI Tubes)**  
**Curtis & Tompkins, Ltd.**  
**Workorder# 1705572**

Thirteen TO-17 VI Tube samples were received on May 31, 2017. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

A modification that may be applied to EPA Method TO-17 at the client's discretion is the requirement to transport sorbent tubes at 4 deg C. Laboratory studies demonstrate a high level of stability for VOCs on the TO-17 'VI' tube at room temperature for periods of up to 14 days. Tubes can be shipped to and from the field site at ambient conditions as long as the 14-day sample hold time is upheld. Trip blanks and field surrogate spikes are used as additional control measures to monitor recovery and background contribution during tube transport.

Since the TO-17 VI application significantly extends the scope of target compounds addressed in EPA Method TO-15 and TO-17, the laboratory has implemented several method modifications outlined in the table below. Specific project requirements may over-ride the laboratory modifications.

<i>Requirement</i>	<i>TO-17</i>	<i>ATL Modifications</i>
Distributed Volume Pairs	Collection of distributed volume pairs required for monitoring ambient air to insure high quality.	If site is well-characterized or performance previously verified, single tube sampling may be appropriate. Distributed pairs may be impractical for soil gas collection due to configuration and volume constraints.

**Receiving Notes**

The Chain of Custody (COC) was not received properly. A signature, date and time were not provided by the sample carrier.

The Chain of Custody (COC) information for samples VP-12-N, VP-14-N, DUP-1-N, VP-16-N and VP-22-N did not match the entries on the sample tags with regard to sample identification. Therefore the information on the COC was used to process and report the samples.

Sample identification for samples VP-2-N, VP-4-N, VP-6-N, VP-8-N, VP-10-N, VP-20-N, VP-24-N and DUP-2-N were not provided on the sample tags. Therefore the information on the Chain of Custody was used to process and report the samples.

**Analytical Notes**

A sampling volume of 0.06 L was used to convert ng to ug/m<sup>3</sup> for the associated Lab Blank.

**Definition of Data Qualifying Flags**

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

- B - Compound present in blank (subtraction not performed).
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

## Summary of Detected Compounds EPA METHOD TO-17

**Client Sample ID: VP-2-N**

**Lab ID#: 1705572-01A**

No Detections Were Found.

**Client Sample ID: VP-4-N**

**Lab ID#: 1705572-02A**

No Detections Were Found.

**Client Sample ID: VP-6-N**

**Lab ID#: 1705572-03A**

No Detections Were Found.

**Client Sample ID: VP-8-N**

**Lab ID#: 1705572-04A**

No Detections Were Found.

**Client Sample ID: VP-10-N**

**Lab ID#: 1705572-05A**

No Detections Were Found.

**Client Sample ID: VP-12-N**

**Lab ID#: 1705572-06A**

No Detections Were Found.

**Client Sample ID: VP-14-N**

**Lab ID#: 1705572-07A**

No Detections Were Found.

**Client Sample ID: DUP-1-N**

**Lab ID#: 1705572-08A**

No Detections Were Found.

**Client Sample ID: VP-16-N**

**Lab ID#: 1705572-09A**



Air Toxics

## Summary of Detected Compounds EPA METHOD TO-17

**Client Sample ID: VP-16-N**

**Lab ID#: 1705572-09A**

No Detections Were Found.

**Client Sample ID: VP-22-N**

**Lab ID#: 1705572-10A**

No Detections Were Found.

**Client Sample ID: VP-20-N**

**Lab ID#: 1705572-11A**

No Detections Were Found.

**Client Sample ID: VP-24-N**

**Lab ID#: 1705572-12A**

No Detections Were Found.

**Client Sample ID: DUP-2-N**

**Lab ID#: 1705572-13A**

No Detections Were Found.





Air Toxics

Client Sample ID: VP-2-N

Lab ID#: 1705572-01A

EPA METHOD TO-17

File Name:	6053106	Date of Extraction: NA	Date of Collection: 5/24/17 11:04:00 AM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 12:53 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	93	50-150



Air Toxics

Client Sample ID: VP-4-N

Lab ID#: 1705572-02A

EPA METHOD TO-17

File Name:	6053107	Date of Extraction: NA	Date of Collection: 5/24/17 1:45:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 01:33 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	106	50-150

Client Sample ID: VP-6-N

Lab ID#: 1705572-03A

EPA METHOD TO-17

File Name:	6053108	Date of Extraction: NA	Date of Collection: 5/24/17 1:38:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 02:13 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
 Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	110	50-150



Air Toxics

Client Sample ID: VP-8-N

Lab ID#: 1705572-04A

EPA METHOD TO-17

File Name:	6053109	Date of Extraction: NA	Date of Collection: 5/24/17 3:43:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 02:53 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	100	50-150



Air Toxics

Client Sample ID: VP-10-N

Lab ID#: 1705572-05A

EPA METHOD TO-17

File Name:	6053111	Date of Extraction: NA	Date of Collection: 5/24/17 5:40:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 04:22 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	112	50-150



Air Toxics

Client Sample ID: VP-12-N

Lab ID#: 1705572-06A

EPA METHOD TO-17

File Name:	6053112	Date of Extraction: NA	Date of Collection: 5/25/17 9:19:00 AM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 05:02 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	103	50-150



Air Toxics

Client Sample ID: VP-14-N

Lab ID#: 1705572-07A

EPA METHOD TO-17

File Name:	6053113	Date of Extraction: NA	Date of Collection: 5/25/17 10:59:00 AM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 05:41 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	80	50-150



Air Toxics

Client Sample ID: DUP-1-N

Lab ID#: 1705572-08A

EPA METHOD TO-17

File Name:	6053114	Date of Extraction: NA	Date of Collection: 5/25/17 11:00:00 AM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 06:21 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	100	50-150





Air Toxics

Client Sample ID: VP-16-N

Lab ID#: 1705572-09A

EPA METHOD TO-17

File Name:	6053115	Date of Extraction: NA	Date of Collection: 5/25/17 2:23:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 07:01 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

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



Air Toxics

Client Sample ID: VP-22-N

Lab ID#: 1705572-10A

EPA METHOD TO-17

File Name:	6053116	Date of Extraction: NA	Date of Collection: 5/25/17 2:28:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 07:41 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	104	50-150

Client Sample ID: VP-20-N

Lab ID#: 1705572-11A

EPA METHOD TO-17

File Name:	6053117	Date of Extraction: NA	Date of Collection: 5/26/17 10:12:00 AM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 08:21 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
 Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	110	50-150



Air Toxics

Client Sample ID: VP-24-N

Lab ID#: 1705572-12A

EPA METHOD TO-17

File Name:	6053118	Date of Extraction: NA	Date of Collection: 5/26/17 1:58:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 09:01 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	105	50-150



Air Toxics

Client Sample ID: DUP-2-N

Lab ID#: 1705572-13A

EPA METHOD TO-17

File Name:	6053119	Date of Extraction: NA	Date of Collection: 5/26/17 10:13:00 AM
Dil. Factor:	1.00	Date of Analysis: 5/31/17 09:41 PM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	95	50-150



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1705572-14A

EPA METHOD TO-17

File Name:	6053105	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/31/17 11:56 AM	

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600  
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	114	50-150



Air Toxics

Client Sample ID: CCV

Lab ID#: 1705572-15A

EPA METHOD TO-17

File Name:	6053102	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/31/17 09:55 AM	

Compound	%Recovery
Naphthalene	108

Air Sample Volume(L): 1.00  
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	107	50-150



Air Toxics

Client Sample ID: LCS

Lab ID#: 1705572-16A

EPA METHOD TO-17

File Name:	6053103	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/31/17 10:36 AM	

Compound	%Recovery	Method Limits
Naphthalene	121	70-130

Air Sample Volume(L): 1.00  
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	120	50-150





Air Toxics

Client Sample ID: LCSD

Lab ID#: 1705572-16AA

EPA METHOD TO-17

File Name:	6053104	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/31/17 11:16 AM	

Compound	%Recovery	Method Limits
Naphthalene	115	70-130

Air Sample Volume(L): 1.00  
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	115	50-150