

August 9, 2017

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Mr. Mark Detterman  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

I, Michael Beritzhoff, hereby authorize ERAS Environmental, Inc. to submit the Limited Phase II Subsurface Investigation for 2449 Santa Clara Ave., Alameda, California, dated August 8, 2017 to the Alameda County Health Care Services Agency.

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

Signature: Michael Beritzhoff, TRUSTEE

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**LIMITED PHASE II SUBSURFACE INVESTIGATION**

AT

**2449-2451 Santa Clara Street  
Alameda, California**

**ERAS PROJECT NUMBER: 16-002-02  
Alameda County Fuel Leak Case No. RO3225**

Prepared for

Mr. Michael Beritzhoff, Trustee  
A.S. Macdonald Trust  
1273 Laurel Lane  
Lafayette, CA 94549

August 8, 2017

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## CERTIFICATION

This **Limited Phase II Subsurface Investigation** at 2449-2451 Santa Clara Street in Alameda, California, has been prepared by ERAS Environmental, Inc. (ERAS) under the professional supervision of the Registered Professional Geologist whose signature appears hereon.

This report was prepared in general accordance with the accepted standard of practice that exists in Northern California at the time the investigation was performed. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies.

Our firm has prepared this report for the Client's exclusive use for this particular project and in accordance with generally accepted professional practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.

This report may be used only by the client and only for the purposes stated within a reasonable time from its issuance. Land use, site conditions (both on-site and off-site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify ERAS of such intended use. Based on the intended use of report, ERAS may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release ERAS from any liability resulting from the use of this report by any unauthorized party.

Sincerely,  
ERAS Environmental, Inc.



Andrew Savage  
Project Geologist



Curtis Payton  
California Registered Professional Geologist 5608



August 8, 2017

## 1.0 INTRODUCTION

The following is a report summarizing the results of the collection and analysis of soil and groundwater samples at a site located at 2449-2451 Santa Clara Street in Alameda, California (the "Property").

Previous subsurface investigations conducted by ODIC Environmental (ODIC) and AEI on the Property identified contamination including concentrations of petroleum hydrocarbons quantified as oil range organics (TPH-oro<sup>1</sup>), diesel range organics (TPH-dro), gasoline range organics (TPH-gro), along with volatile organic compounds (VOCs) including 1,2,4-trimethylbenzene, sec-butyl benzene, para-isopropyl toluene, n-butyl benzene, and naphthalene.

This investigation was conducted to 1) further characterize the extent of the detected contaminants of concern (COCs) and 2) investigate other locations of the Property to assess the presence and extent of COCs. The ultimate goal of this project is to obtain an environmental site case closure from the Alameda County Environmental Health Department (ACEHD).

The ACHCSA requested the investigation summarized in this report in a letter approving the scope of work dated May 23, 2017. The scope of work was presented in a work plan prepared by ERAS dated August 24, 2016 along with addendums to the work plan dated March 2, 2017 and April 12, 2017.

The Property is located on the northern corner of Santa Clara Street and Everett Street in the eastern portion of the City of Alameda. The Property consists of an approximately 0.1-acre rectangular shaped parcel of land that is improved with a single commercial building and associated paved areas. The Property is currently used for an art supply business and a pre-school facility. The location of the Property is shown on **Figure 1**. The layout of the Property is shown on **Figure 2**.

## 1.1 BACKGROUND

Based on information presented in the ODIC Phase 1 Environmental Site Assessment (ESA) report for the Property dated January 6, 2016, a gasoline service station operated on the Property prior to the construction of the current commercial building. The report indicated that permits were present to install a gasoline station in 1925 and to demolish a gasoline station in 1966. There was no information presented to indicate the location of the former underground storage tanks (UST) or whether they had been removed. ODIC recommended a Phase 2

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<sup>1</sup> TPH-gro, TPH-dro, and TPH-oro are methods that compare analytical results to standards for gasoline, diesel and motor oil, respectively. Therefore, analytical results are estimates of quantities based on what would be expected for the range of hydrocarbon results for the standard. Gasoline range organics (gro) are those hydrocarbon compounds that are in the range of C6 to C10, diesel range organics (dro) are those hydrocarbon compounds that are in the range of C10 to C23, and oil range organics (oro) are those hydrocarbon compounds that are in the range of C18 to C36. There can be overlap in reporting methods as well as identification of compounds that fall within the standard that may not necessarily be derived from gasoline, diesel, or oil.

subsurface investigation to assess subsurface conditions at the Property.

ODIC conducted a geophysical survey that indicated a possible UST located near the center of the Property (a 350-gallon waste oil UST was later found in this vicinity and removed on May 23, 2016). A total of 8 soil borings were drilled in mostly random locations on the southwestern approximately 2/3 of the Property on February 12, 2016. Concentrations of TPH-gro, TPH-dro, TPH-oro, VOCs and metals were identified above the Regional Water Quality Control Board (RWQCB) Environmental Screening Limits (ESL) for a commercial site where groundwater is considered a potential source of drinking water.

These COCs were found in soil and groundwater samples analyzed near the former degreasing and motor oil storage areas along the northeast side (Boring SB-4) and along the northwest side (Boring SB-6) of the parking lot. ODIC indicated that additional investigation should be conducted to delineate the vertical and horizontal extent of petroleum hydrocarbons and VOCs in soil and groundwater beneath the Property.

ERAS requested information from the ACEHD regarding the Property and was informed that no records were on file. City of Alameda records pertaining to the Property were reviewed and a letter dated April 21, 1947 was on file requesting permission to install four 1,000-gallon USTs. The letter indicated that two 550-gallon USTs and a 300-gallon UST were to be removed and one of the tanks was to be re-used for waste oil. A job card with this record indicated there were no records of the original UST installation. No information was found indicating the locations of the former USTs or the new USTs. It is suspected the 300-gallon UST was the 350-gallon UST removed in 2016.

ERAS requested historical aerial photographs that include the Property from Quantum Spatial. Photographs reviewed were dated in 1950, 1957, 1960 and 1968 which includes at least three dates when it is known the gasoline station was operating. The purpose of the aerial photograph review was to attempt to determine the location of the former USTs.

Gasoline stations that were constructed in the 1920's, as the original station was, typically were constructed with the fuel USTs beneath the pump islands or under the sidewalk near the pump islands. Later USTs were installed on-site when the building was set at the rear of the site. The 1950 photograph showed a concrete pad in the location where the former waste oil UST was located. The pad does not appear to be large enough to have accommodated four 1,000-gallon fuel USTs. Another possible concrete pad was located behind the building that was located near the corner of Santa Clara and Everett. ERAS concluded the most likely locations for the former fuel USTs were behind the former station building or in the sidewalk on either the Santa Clara Avenue or Everett Street sides of the Property.

## **1.2 PREVIOUS SUBSURFACE INVESTIGATIONS**

### AEI, 1996

AEI performed subsurface investigation and the results were summarized in a report dated October 22, 1996. AEI advanced six borings in the vicinity of the Property which included four

borings on the Property (BH-1 through BH-4) and two on an adjacent parcel (BH-5 and BH-6 for the collection of soil and groundwater samples. The samples were in a straight line across the center of the Property with no specific justification for targets noted and were designated BH-1 through BH-6.

All borings were advanced to a depth of approximately 15 feet below ground surface (bgs). Groundwater was indicated to have been encountered at a depth of approximately 8 feet bgs. Soil samples were collected from each boring from depths of 5, 10, and 15 feet bgs. Only the samples collected from 10 feet bgs in boring BH-1 and 5 feet bgs in borings BH-2, BH-3, BH-4, BH-5, and BH-6 were analyzed for the contaminants of concern.

The soil samples and a grab groundwater sample from each boring were analyzed for TPH-gro, TPH-dro, benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE).

The results of the soil and groundwater samples collected on the Property are displayed on the attached **Tables 1** and **3**. No concentrations of TPH-gro, TPH-dro, BTEX, or MTBE were detected above the laboratory detection limits in the soil samples collected.

Groundwater was found to contain concentrations of TPH-dro ranging from 210 micrograms per liter ( $\mu\text{g/L}$ ) in BH-2 to 2,800  $\mu\text{g/L}$  in BH-4. A concentration of TPH-gro was also found to be present in the sample collected from boring BH-1 at a concentration of 170  $\mu\text{g/L}$ . It does not appear that silica gel cleanup was utilized during analysis and the elevated results may be partly due to measurements of total organics rather than total petroleum hydrocarbons. No concentrations of BTEX were detected above laboratory detection limits.

#### ODIC, 2016

ODIC performed subsurface investigation and the results were summarized in a report dated March 10, 2016. ODIC advanced eight borings on the Property. All borings were in random areas throughout the Property. Borings SB-7 and SB-8, however, were located in a close vicinity to what ODIC indicated was a possible UST.

All borings were advanced to a depth of approximately 10 feet bgs. Groundwater was indicated to have been encountered at a depth of approximately 8-9 feet bgs. Soil samples were collected from the borings at various depths for analysis for the contaminants of concern. A groundwater sample was also collected from each boring.

The soil and groundwater sample from each boring were analyzed for TPH-gro, TPH-dro, total petroleum hydrocarbons quantified as oil range organics (TPH-oro), VOC's, and metals (groundwater only).

The results of the soil and groundwater samples collected on the Property are displayed on the attached **Tables 1, 2** and **3**.

The only soil sample collected during this investigation that was found to contain the contaminants of concern above the ESL was collected from a depth of 6 feet in boring SB-6.

This boring contained a concentration of TPH-oro of 10,000 milligrams per kilogram (mg/Kg), TPH-dro of 4,200 mg/Kg, and naphthalene of 2.1 mg/Kg. The sample collected at a depth of 10 feet bgs in this boring did not contain any of these contaminants above their respective ESLs.

The groundwater samples collected from borings SB-4 and SB-6 were found to contain concentrations of TPH-oro ranging from 95,000-500,000 µg/L and TPH-dro ranging from 54,000-220,000 µg/L. None of the samples from the remaining borings were found to contain concentrations of TPH-oro or TPH-dro above their respective laboratory detection limit. Naphthalene was also detected at a concentration of 9.7 µg/L which was above the ESL of 0.12 µg/L. No concentrations of BTEX were detected above the laboratory detection limits.

The groundwater samples analyzed for CAM 17 metals included samples collected from borings SB-1, SB-2, and SB-4. Almost every metal was detected above their respective ESL. The samples appear not have been properly filtered prior to adding nitric acid (HNO<sub>3</sub>) for sample preservation.

#### ERS, 2016

ERS removed a 350-gallon waste oil UST from the Property on May 23, 2016. A soil sample was collected from near the bottom of the UST and a groundwater sample was collected from a depth of approximately 6 feet. The soil sample was found to contain detectable concentrations of metals that appeared to be at concentrations that are naturally occurring. No other contaminants analyzed for VOCs, semi volatile organic compounds (SVOCs), or polychlorinated biphenyls (PCBs) were detected.

The groundwater sample contained concentrations of TPH-oro and TPH-dro of 773 and 391 µg/L, which is above the ESLs of 100 µg/L. Acetone and methyl ethyl ketone were detected at concentrations below the ESLs for drinking water.



## 2.0 REGIONAL GEOLOGY/HYDROLOGY

The Property is in the southeastern part of the City of Alameda, in the eastern part of the San Francisco Bay Area. The San Francisco Bay Area occupies the central part of the Santa Clara Valley, a broad alluvial valley that slopes gently northward toward San Francisco Bay and is flanked by alluvial fans deposited at the foot of the Diablo Range to the east and the Santa Cruz Mountains to the west (Goldman, 1967). The upland surfaces rising abruptly approximately 2.5 miles to the northeast of the Property are known as the East Bay Hills.

Surface topography in the vicinity of the Property slopes gently to the northeast. The Property is at an elevation of approximately 15-20 feet above Mean Sea Level according to the United States Geological Survey (USGS) Oakland East Quadrangle California 7.5 Minute Series topographic map. Regionally, topography in the area of the Property slopes down to the east toward the Tidal Canal between the San Leandro Bay and Oakland Inner Harbor portion of the San Francisco Bay.

The sediments in the vicinity of the Property are fine-grained alluvial sediments that represent distal deposits of alluvial fans that were deposited by rivers draining upland surfaces to the east of the Property. These sediments were deposited in a low energy environment on the margins of San Francisco Bay (Helley, et al, 1974). At shallow depths beneath these sediments are a series of Recent-age (<10,000 years) blue clay layers that become increasingly thicker toward San Francisco Bay. These clay layers are known as the Bay Mud and were deposited in San Francisco Bay during higher stands of sea level. In the vicinity of the Property it is likely that these sediments overlie bedrock of the Jurassic-aged Franciscan Assemblage.

The subject site is located on the San Francisco Bay Plain in the northernmost part of the Santa Clara Valley Groundwater Basin, (RWQCB, 1986), the surface of which slopes gently down toward San Francisco Bay. The regional groundwater flow follows the topography, moving from areas of higher elevation to areas of lower elevation. In this area the groundwater flow direction is inferred to be to the northeast toward the tidal channel. Based on subsurface investigations at the Property, groundwater was encountered at depths ranging from approximately 5 to 9 feet bgs.

### **3.0 WORK PERFORMED**

#### **3.1 SCOPE OF INVESTIGATION**

Scope of work conducted by ERAS for this investigation was as follows.

- Requested a drilling permit from the Alameda County Department of Public Works (ACDPW).
- Prepared a health and safety plan and mark drilling area for utility locating by Underground Service Alert (USA).
- Subcontracted an underground utility locator to clear the boreholes for the presence of underground utility lines.
- Subcontracted a concrete removal contractor to core the concrete in the selected boring locations.
- Contracted a state licensed drilling contractor to drill borings to a maximum depth of approximately 12 feet and collected soil and groundwater samples for laboratory analysis.
- Soil was screened in the field using a photo-ionization detector (PID). Soil samples were collected from the 0-5-foot depth interval and submitted for laboratory analysis. The 5-10 foot soil sample proposed requested by the ACEHCSA was not collected due to the presence of groundwater at a depth of 5 feet bgs.
- A groundwater sample was collected from each boring.
- All soil samples were submitted under chain-of-custody procedures to a state certified analytical laboratory and were analyzed for the presence of TPH-gro and BTEX by EPA Method 8015/8021.
- The groundwater samples were submitted under chain-of custody procedures to a state certified analytical laboratory and were analyzed for the presence of TPH-dro and TPH-oro by EPA Method 8015 with and without silica gel cleanup and VOCs by EPA Method 8260.
- The groundwater samples collected in the vicinity of the likely UST locations were also analyzed for TPH-gro by EPA Method 8260.
- Requested a search for groundwater wells in the vicinity of the Property from the ACDPW and the State of California Department of Water Resources.
- Performed a well survey.

### 3.2 BORING LOCATION AND SAMPLING

A drilling permit was obtained from the ACPWD. A copy of the permit is included in **Appendix A**. The locations of the borings are shown on **Figure 2**. The Standard Operating Procedures for direct-push sampling is included in **Appendix B**.

Nine borings were advanced in the following locations:

B-1 and B-6	-Suspected former UST locations
B-2, B-3, and B-4	-Former garage area
B-3	-Adjacent to previous boring SB-4 which contained elevated concentrations of the contaminants of concern
B-4	-Adjacent to previous boring SB-6 which contained elevated concentrations of the contaminants of concern and a former concrete pad
B-5	-Small buried metal anomaly
B-7 and B-8	-Vicinity of the former pump island
B-9	-Entry to pump island

A tenth boring was proposed, off site near an area of disturbed soil which was suspected to be a possible degreasing area, in the work plan addendum dated April 12, 2017. Access to this off site area was not available at the time of the sampling.

The borings were advanced using a direct push sample rig by Environmental Control Associates (ECA), of Aptos, California, on July 6<sup>th</sup> and 7<sup>th</sup>, 2017.

The borings were continuously logged for lithology and copies of the lithologic logs are included in **Appendix C**. The subsurface vadose zone lithology encountered consisted of silty sand to the base of the borings (11.5 to 12 feet bgs). Groundwater was encountered at a depth of 5 feet bgs in all borings. The subsurface environmental conditions in the vicinity of B-4 appeared to have been fill based on content of lumber debris, rock, and silty clay clumps mixed in with the native silty sand. Borings B-4 and B-8 exhibited discoloration and degraded petroleum hydrocarbon odor. No elevated PID readings were observed. No evidence of contamination including odor or elevated PID readings were observed in the remaining borings.

Soil and groundwater samples were collected from each boring. Soil samples were collected from 3.5-4 feet bgs. The 5-10 foot soil sample proposed requested by the ACEHCSA was not collected due to the presence of groundwater at a depth of 5 feet bgs. The soil and groundwater samples collected were kept chilled pending transport under chain-of-custody procedures to a California certified environmental analytical laboratory.

All soil samples were submitted under chain-of-custody procedures to a state certified analytical laboratory and were analyzed for the presence of TPH-gro and BTEX by EPA Method 8015/8021.

The groundwater samples were submitted under chain-of custody procedures to a state

certified analytical laboratory and were analyzed for the presence of TPH-dro and TPH-oro by EPA Method 8015 with and without silica gel cleanup and VOCs by EPA Method 8260.

The groundwater samples collected in the vicinity of the likely UST locations were also analyzed for TPH-gro by EPA Method 8260.

### 3.3 ANALYTICAL RESULTS

#### 3.3.1 Results in Groundwater

The laboratory report and chain of custody form are included as **Appendix E**. Select results of the analyses are included on **Tables 1** and **2**.

TPH-oro when analyzed with silica gel cleanup was only detected above the method detection limit (MDL) in the groundwater sample collected from boring B-4 at a concentration of 520 µg/L. TPH-oro when analyzed without silica gel cleanup was detected at concentrations above the MDL in borings B-1, B-4, B-6, B-7, and B-9 at concentrations ranging from 100 µg/L (B-1) to 1,100 µg/L (B-4). The ESL for TPH-oro is 100 µg/L.

TPH-dro when analyzed with silica gel cleanup was only detected above the MDL in the groundwater samples collected from borings B-4 and B-8 at concentrations of 360 µg/L and 130 µg/L respectively. TPH-dro when analyzed without silica gel cleanup was detected at concentrations above the MDL in borings B-1, B-4, B-6, B-7, B-8, and B-9 at concentrations ranging from 79 µg/L (B-9) to 810 µg/L (B-4). The ESL for TPH-dro is 100 µg/L.

The samples collected from B-1 and B-6 were analyzed for TPH-gro since this area was the suspected former location of the USTs. No concentrations of TPH-gro were detected above the MDL.

Numerous VOCs were detected in the groundwater samples collected including benzene, carbon disulfide, toluene, acetone, chloroform, n-butyl-benzene, sec-butyl-benzene, ethylbenzene, isopropyl benzene, 4-isopropyl toluene, 4-methyl-2-pentanone, n-propyl benzene, 1,2,3-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene, and xylenes.

The only VOC detected which exceeded the ESL was naphthalene. Naphthalene was detected in the sample collected from boring B-8 at a concentration of 2.7 µg/L which exceeded the ESL of 0.17 µg/L. The ESL of 0.17 µg/L is for direct exposure. The concentration detected is below the vapor intrusion risk of 20 µg/L for residential and 170 µg/L for a commercial Property.

#### 3.3.2 Results in Soil

The laboratory report and chain of custody form are included as **Appendix E**. The results of the analyses are included on **Table 3**.

TPH-gro was detected at concentrations ranging from 0.26 mg/Kg to 0.46 mg/Kg which were all below the ESL of 230 mg/Kg.

No concentrations of BTEX were detected above the MDLs or ESLs.

### 3.4 WELL SURVEY

ERAS requested all well data for a 2,000 foot radius from the Alameda County Public Works Agency (ACPWA) and the California Department of Water Resources (DWR). The DWR records were not available at the time of this investigation. According to the ACPWA records only one site was identified which contained wells for commercial or residential water supply. This site 2307 Clement Avenue in Alameda. This site was located 2,000 feet to the north of the Property in an area with low topography. Contamination in this setting is unlikely to migrate a great distance from the source area. Based on the distance contamination associated with the Property is unlikely to impact these wells.

A table of identified wells within the 2,000 foot radius and a map displaying the location of 2307 Clement Avenue in relation to the Property is included in **Appendix F**.

## 4.0 UPDATED SITE CONCEPTUAL MODEL

An updated Site Conceptual Model Table and Data Gap Summary are included as **Appendix D**.

### 4.1 GEOLOGIC AND HYDROGEOLOGIC SETTING

Based on soil borings drilled on the Property, the shallow sediments consist of silty sand and sandy silt to depths of approximately 12 feet. During drilling petroleum odors were noted in Borings SB-4, SB-6, B-4, and B-8.

Shallow groundwater has been observed between approximately 5-9 feet bgs. The shallow water-bearing zone appears to be located in silty sand and sand. The base of the shallow water bearing zone has not been determined.

### 4.2 EXTENT OF CONTAMINATION

#### 4.2.1 Results in Soil

Sampling previously conducted by AEI (1996) and ODIC (2016) only detected the presence of contamination exceeding the ESLs in boring SB-6 at a depth of 6 feet bgs in the vicinity of the former degreasing and motor oil storage area. Concentrations of TPH-oro was detected at 10,000 mg/Kg, TPH-dro at 4,200 mg/Kg, and naphthalene at 2.1 mg/Kg. The sample collected at a depth of 10 feet bgs in this boring did not contain any of these contaminants above their respective ESLs. Based on the large decrease in concentrations in the small distance between SB-6 and B-4 the extent of the impact is likely limited.

During the latest sampling conducted by ERAS (2017) no concentrations of TPH-gro or BTEX were detected above their respective ESLs. The extent of contamination in soil is limited based on the available analytical results.

#### 4.2.2 Results in Groundwater

Sampling previously conducted by AEI (1996) and ODIC (2016) detected concentrations of petroleum hydrocarbons TPH-dro and TPH-oro above their respective ESLs in borings BH-1, BH-2, BH-3, BH-4, SB-4, and SB-6. All of these borings were in the parking area located to the northeast of the building located on the Property in the vicinity of the former degreasing and motor oil storage area.

ERAS collected groundwater samples from nine borings on the Property (2017) including borings (B-3 and B-4) adjacent to the previously highest detected concentrations of TPH-dro and TPH-oro (SB-4 and SB-6). Boring B-3 was not found to contain concentrations of TPH-dro or TPH-oro above their respective MDLs. Boring B-4 was found to contain concentrations of TPH-dro at 360 µg/L when analyzed with silica gel cleanup and 810 µg/L when analyzed without silica gel cleanup. Concentrations of TPH-oro were detected at 520 µg/L with silica gel cleanup utilized and 1,100 µg/L without.

TPH-dro and oro were found to exceed the ESL when analyzed without silica gel cleanup in the samples collected from borings B-1, B-6, and B-7. TPH-dro was above the ESL when analyzed

without silica gel cleanup in B-8 and TPH-oro was above the ESL when analyzed without silica gel cleanup in B-9. With silica gel cleanup the samples from these borings were below their MDL and or the ESLs.

When silica gel cleanup is utilized the areas impacted by TPH-dro and or TPH-oro above the ESLs appear to be limited in extent and limited to the area of B-4/SB-6 (former degreasing and motor oil storage area) and B-8 (former pump island area).

The only VOC detected in groundwater samples collected from the borings on the Property above their respective ESLs was naphthalene which was detected at concentrations of 7.9 µg/L in boring SB-6 and 2.7µg/L in boring B-8. The ESL for naphthalene is 0.12 µg/L.

The extent of VOC contamination exceeding the ESLs is limited in extent and is limited to the area of SB-6 and B-8 in the vicinity of the former degreasing and motor oil storage area.

The groundwater samples analyzed for CAM 17 metals included samples collected from borings SB-1, SB-2, and SB-4. Almost every metal was detected above their respective ESL. The samples appear not have been properly filtered prior to adding HNO<sup>3</sup> for sample preservation.

The extent of contamination in groundwater is limited based on the available analytical results. The groundwater flow direction in the area of the Property is estimated to be to the northeast. The down-gradient most borings appear to define the lateral extent of the contaminants of concern.

## 5.0 LOW THREAT CASE CLOSURE EVALUATION

The following criteria should be met for a site to qualify for closure per RWQCB's *Interim Guidance on Required Cleanup at Low-Risk Sites*.

- The leak has been stopped and ongoing sources including free product, have been removed or remediated;
- The site has been adequately characterized;
- The dissolved plume is not migrating;
- No groundwater impact currently exists, no contaminants are found at levels above the established MCLs or other water quality objectives;
- No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted; and
- The site presents no significant risk to human health or the environment.

### Leak Has Been Stopped and Ongoing Sources Have Been Removed

No remaining source of contamination has been identified to be present on the Property. A

350-gallon waste oil tank was removed from the Property in May of 2016. During the investigation conducted by ERAS in July of 2017 the Property was scanned using ground penetrating radar (GPR) and a magnetometer. No remaining tanks were identified to be present on the Property.

*Site is Adequately Characterized*

The site has been adequately characterized. The extent of the contaminants of concern have been identified. Residual concentrations remain in soil at a depth of approximately 6 feet bgs in the vicinity of SB-6. The deeper sample from SB-6 did not yield concentrations of the contaminants of concern exceeding the ESLs. Residual contamination in groundwater exceeding the ESL remains in place in the vicinity B-4 and B-8. The down-gradient most borings (B-2 and B-5) were found to contain concentrations of the contaminants of concern below their respective ESLs.

*Dissolved Plume is Not Migrating*

The dissolved plume of contamination has been defined by the down-gradient most borings B-2 and B-5. Based on the known distribution of the contaminants of concern the only areas of groundwater contamination exceeding the ESL are in the vicinity of borings B-4 and B-8.

*No Water Wells or Other Sensitive Receptors Are Threatened*

A well survey has been conducted for the Property. No threats were identified.

*Site Presents No Significant Risk*

The analytical data for soil and groundwater have not identified any risk to human health safety and the environment for a commercial site.



## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

ERAS concludes that the site has been adequately characterized. The extent of the contaminants of concern have been identified. Residual concentrations remain in soil at a depth of approximately 6 feet bgs in the vicinity of SB-6 (former degreasing and motor oil storage area). The deeper sample from SB-6 did not yield concentrations of the contaminants of concern exceeding the ESLs. Residual contamination in groundwater exceeding the ESL remains in place in the vicinity B-4 (former degreasing and motor oil storage area) and B-8 (former pump island area). The down-gradient most borings (B-2 and B-5) were found to contain concentrations of the contaminants of concern below their respective ESLs.

Based on the results of this investigation ERAS recommends that this site be considered for case closure.

## **7.0 REFERENCES**

AEI, Soil and Groundwater Investigation, 2477 Santa Clara Avenue, Alameda, California, October 22, 1996.

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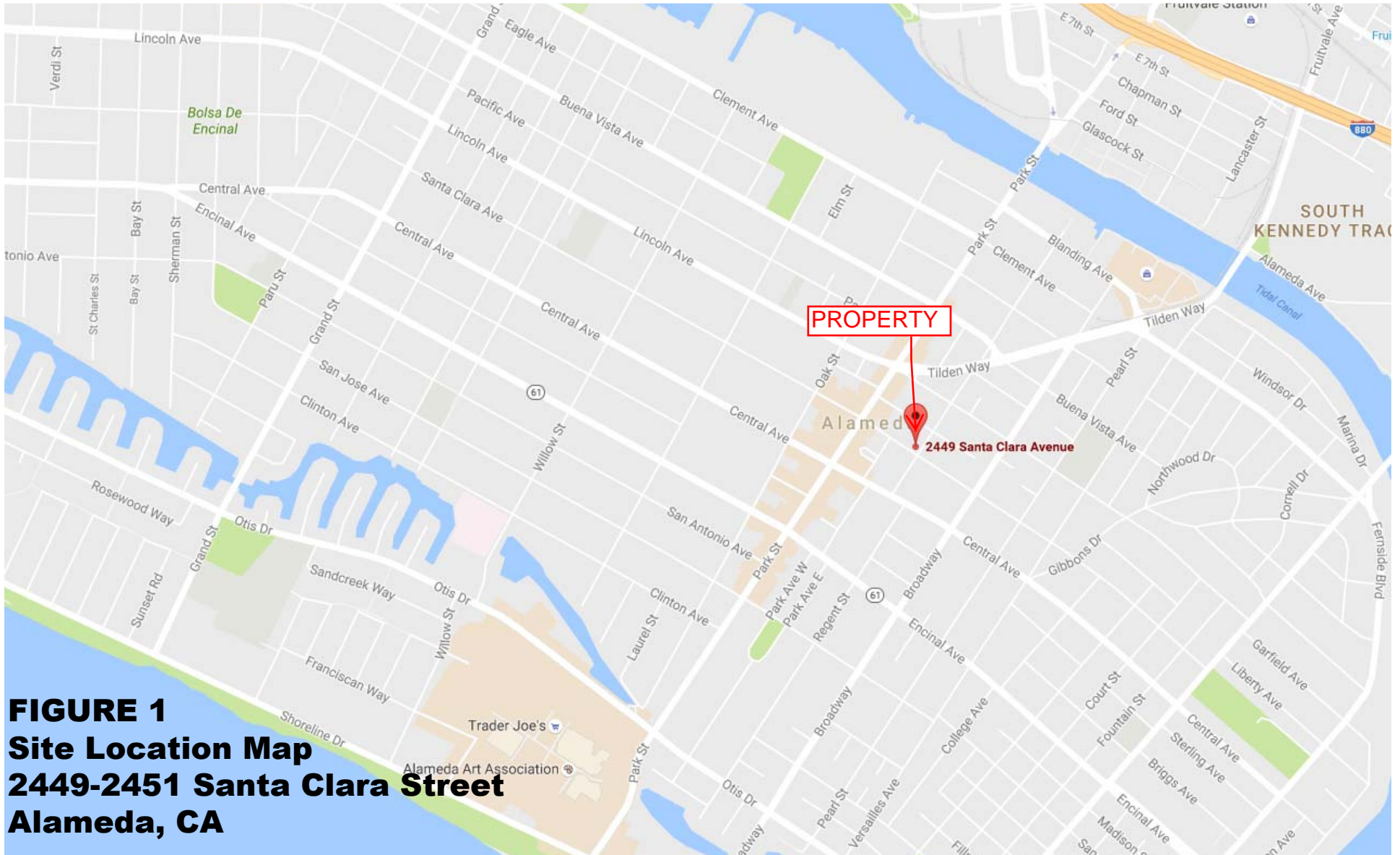
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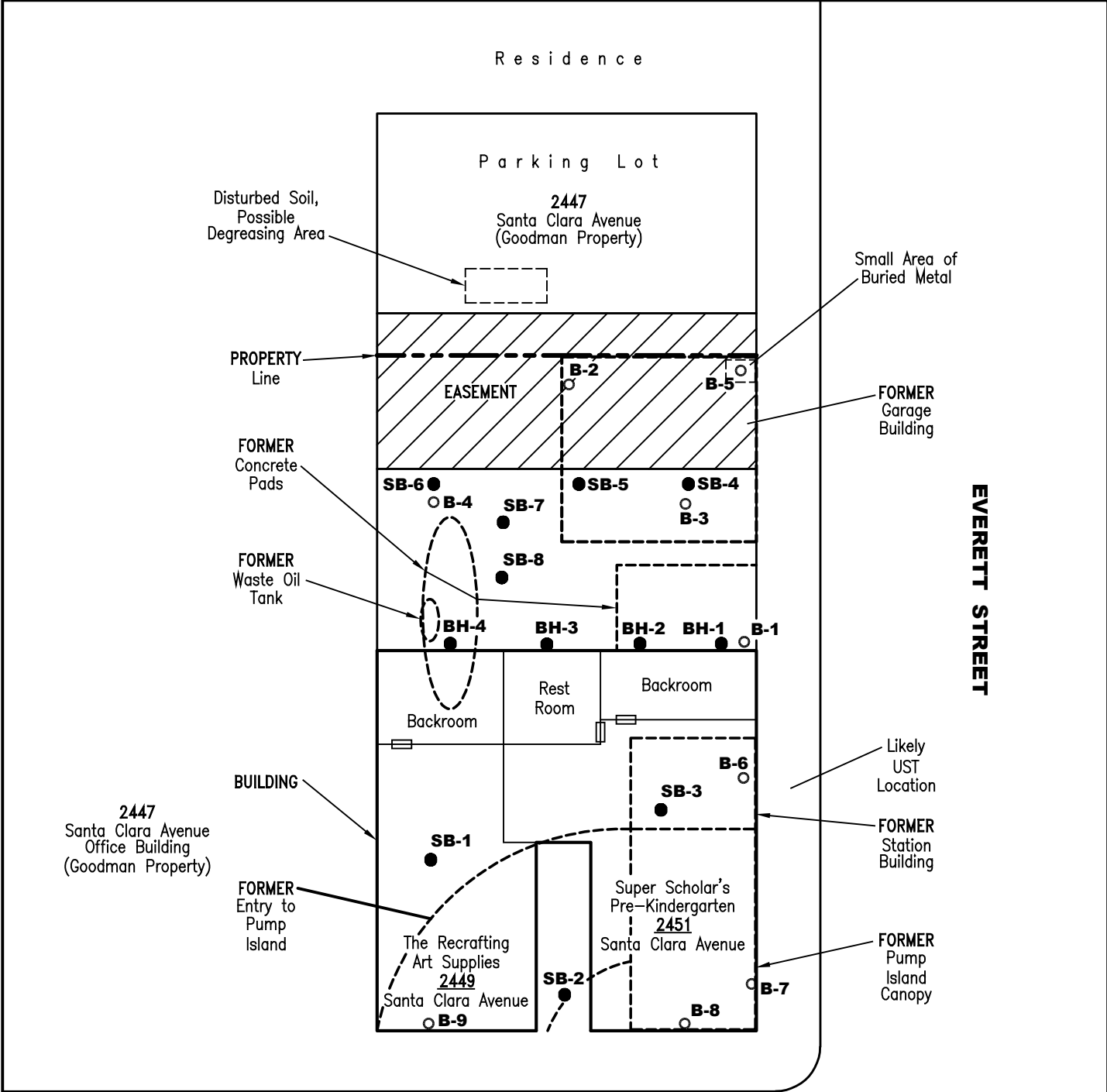
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ODIC Environmental Inc., Phase I Environmental Site Assessment, 2449-2451 Santa Clara Avenue, Alameda, California, January 6, 2016.

## FIGURES

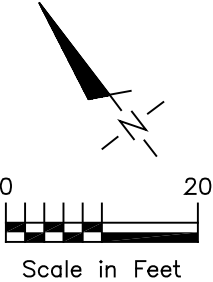


**FIGURE 1**  
**Site Location Map**  
**2449-2451 Santa Clara Street**  
**Alameda, CA**



**EXPLANATION**

- Soil borings, ODIC (2016)/AEI (1996)
- Soil borings ERAS (2017)



**SITE PLAN w/SOIL BORINGS LOCATIONS**

DATE 07/2017	-	JOB NUMBER 16-002
REVIEWED BY AS/DS	2449-2451 Santa Clara Avenue Alameda, California	FIGURE 2

**ERAS Environmental Inc.**

## **TABLES**

**TABLE 1 - HISTORIC GROUNDWATER ANALYTICAL RESULTS**

2449 Santa Clara Street, Alameda

Boring	Date	TPH-oro (with SG)	TPH-oro (w/o SG)	TPH-dro (with SG)	TPH-dro (w/o SG)	TPH-gro	Benzene	Toluene	Ethylbenz	Xylene	MTBE	Other VOC's
µg/L												
<i>AEI</i>												
BH-1	9-Oct-96	NA	NA	NA	<b>240</b>	<b>170</b>	<0.5	0.64	<0.5	<0.5	<5.0	NA
BH-2	9-Oct-96	NA	NA	NA	<b>210</b>	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA
BH-3	9-Oct-96	NA	NA	NA	<b>660</b>	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA
BH-4	9-Oct-96	NA	NA	NA	<b>2,800</b>	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA
<i>ODIC</i>												
SB-1	12-Feb-16	NA	<280	NA	<47	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
SB-2	12-Feb-16	NA	<280	NA	<47	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
SB-3	12-Feb-16	NA	NS	NA	NS	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
SB-4	12-Feb-16	NA	<b>95,000</b>	NA	<b>54,000</b>	140	<0.5	<0.5	<0.5	<0.5	<0.5	ND
SB-5	12-Feb-16	NA	<280	NA	48	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
SB-6	12-Feb-16	NA	<b>500,000</b>	NA	<b>220,000</b>	880	<0.5	<0.5	<0.5	<0.5	<0.5	<b>Napth</b>
SB-7	12-Feb-16	NA	NS	NA	NS	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
SB-8	12-Feb-16	NA	<280	NA	<47	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
<i>ERS</i>												
TNK-GW	23-May-16	NA	773	NA	391	<25	<0.2	0.25	<0.2	0.84	<0.2	BESL
<i>ERAS</i>												
B-1	6-Jul-17	<100	<b>100</b>	53	<b>100</b>	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
B-2	6-Jul-17	<180	<180	<84	<84	NA	0.053 J	0.067 J	<0.5	<0.5	<0.5	BESL
B-3	6-Jul-17	<170	<170	<82	<82	NA	<0.5	<0.5	<0.5	<0.5	<0.5	BESL
B-4	6-Jul-17	<b>520</b>	<b>1,100</b>	<b>360</b>	<b>810</b>	NA	<0.5	<0.5	<0.5	<0.5	<0.5	BESL
B-5	6-Jul-17	<180	<180	<83	<83	NA	<0.5	<0.5	<0.5	<0.5	<0.5	BESL
B-6	7-Jul-17	<91	<b>150</b>	49	<b>140</b>	<50	<0.5	0.061 J	<0.5	<0.5	<0.5	BESL
B-7	7-Jul-17	78	<b>190</b>	73	<b>110</b>	NA	0.13 J	0.27 J	0.054 J	2.2 J	<0.5	BESL
B-8	7-Jul-17	<92	<92	<b>130</b>	<b>170</b>	NA	<0.5	0.088 J	6.9	4.0	<0.5	<b>Napth</b>
B-9	7-Jul-17	<94	<b>110</b>	<44	79	NA	<0.5	0.051 J	<0.5	<0.5	<0.5	BESL
ESL-DW		100	100	100	100	100	1	40	13	20	5	

## TABLE 1 - HISTORIC GROUNDWATER ANALYTICAL RESULTS

2449 Santa Clara Street, Alameda

### Notes:

ESL – environmental screening limits set forth by the California Regional Water Quality Control Board as of February 2016 for commercial/industrial.

DW – drinking water

BESL - Below the environmental screening limits set forth by the California Regional Water Quality Control Board as of February for commercial/industrial.

w/o SG - Analyzed without silica gel clean-up

with SG - Analyzed with silica gel clean-up

Ethylbenz - Ethylbenzene

Naph - a concentration of 9.7 µg/L was detected in SB-6 and 2.7 µg/L in B-8 which exceeds the ESL of 0.17 µg/L

J - Result is less than the reporting limit but greater than the method detection limit. The reported concentration is an estimated value

NS - No Sample

NA - Not Analyzed

Bold = Above the ESL



**TABLE 2 - HISTORIC METALS IN GROUNDWATER ANALYTICAL RESULTS**

2449 Santa Clara Street, Alameda

Boring	Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		µg/L																
SB-1	12-Feb-2016	<b>210</b>	<b>96</b>	<b>7,500</b>	<b>26</b>	<b>57</b>	<b>3,800</b>	<b>650</b>	<b>680</b>	<b>280</b>	<b>0.73</b>	<25	<b>4,400</b>	<b>&lt;50</b>	<b>&lt;25</b>	<b>&lt;50</b>	<b>2,300</b>	<b>2,600</b>
SB-2	12-Feb-2016	<b>140</b>	<b>160</b>	<b>5,400</b>	<b>17</b>	<b>&lt;25</b>	<b>2,800</b>	<b>490</b>	<b>550</b>	<b>360</b>	<b>1.1</b>	<25	<b>3,100</b>	<b>&lt;50</b>	<b>&lt;25</b>	<b>&lt;50</b>	<b>1,700</b>	<b>1,800</b>
SB-4	12-Feb-2016	<b>95</b>	<b>88</b>	<b>3,400</b>	<b>&lt;10</b>	<b>&lt;25</b>	<b>1,900</b>	<b>310</b>	<b>410</b>	<b>130</b>	<b>0.51</b>	70	<b>2,000</b>	<b>&lt;50</b>	<b>&lt;25</b>	<b>&lt;50</b>	<b>1,200</b>	<b>1,200</b>
ESL-DW		6.0	10	1,000	2.7	0.25	50	3.0	3.1	2.5	0.051	100	8.2	5	0.19	2	19	81

Notes:  
 ESL – environmental screening limits set forth by the California Regional Water Quality Control Board as of February 2016 for commercial/industrial.  
 DW – drinking water

**TABLE 3 - HISTORIC SOIL ANALYTICAL RESULTS**

2449 Santa Clara Street, Alameda

Boring	Date	TPH-oro (with SG)	TPH-oro (w/o SG)	TPH-dro (with SG)	TPH-dro (w/o SG)	TPH-gro	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Other VOC's
mg/Kg												
<i>AEI</i>												
BH-1@10'	9-Oct-96	NA	NA	NA	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	NA
BH-2@5'	9-Oct-96	NA	NA	NA	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	NA
BH-3@5'	9-Oct-96	NA	NA	NA	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	NA
BH-4@5'	9-Oct-96	NA	NA	NA	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	NA
<i>ODIC</i>												
SB-1@9'	12-Feb-16	NA	<5.0	NA	<1.0	<0.97	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	ND
SB-2@9'	12-Feb-16	NA	<5.0	NA	<1.0	<0.97	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	ND
SB-3@9'	12-Feb-16	NA	<5.0	NA	<1.0	<1.0	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	ND
SB-4@10'	12-Feb-16	NA	<5.0	NA	2.8	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	ND
SB-5@10'	12-Feb-16	NA	<5.0	NA	<0.99	<1.0	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	ND
SB-6@6'	12-Feb-16	NA	<b>10,000</b>	NA	<b>4,200</b>	660	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<b>Naph</b>
SB-6@10'	12-Feb-16	NA	16	NA	6.7	<0.97	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	ND
SB-7@5'	12-Feb-16	NA	<5.0	NA	1.1	<0.97	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	ND
SB-7@10'	12-Feb-16	NA	<5.0	NA	<1.0	<1.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	ND
SB-8@5'	12-Feb-16	NA	<5.0	NA	1.5	<1.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	ND
SB-8@10'	12-Feb-16	NA	<5.0	NA	1.6	<0.98	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	ND
<i>ERAS</i>												
B-1,3.5-4	6-Jul-17	NA	NA	NA	NA	0.26 J	<0.005	<0.005	<0.005	<0.015	NA	NA
B-2,3.5-4	6-Jul-17	NA	NA	NA	NA	0.36 J	<0.005	<0.005	<0.005	<0.015	NA	NA
B-3,3.5-4	6-Jul-17	NA	NA	NA	NA	0.26 J	<0.005	<0.005	<0.005	<0.015	NA	NA
B-4,3.5-4	6-Jul-17	NA	NA	NA	NA	0.33 J	<0.005	<0.005	<0.005	<0.015	NA	NA
B-5,3.5-4	6-Jul-17	NA	NA	NA	NA	0.28 J	<0.005	<0.005	<0.005	<0.015	NA	NA
B-6,3.5-4	7-Jul-17	NA	NA	NA	NA	0.27 J	<0.005	<0.005	<0.005	<0.015	NA	NA
B-7,3.5-4	7-Jul-17	NA	NA	NA	NA	0.46 J	<0.005	<0.005	<0.005	<0.015	NA	NA
B-8,3.5-4	7-Jul-17	NA	NA	NA	NA	0.35 J	<0.005	<0.005	<0.005	<0.015	NA	NA
B-9,3.5-4	7-Jul-17	NA	NA	NA	NA	0.44 J	<0.005	<0.005	<0.005	<0.015	NA	NA
ESL-DW		5,100	5,100	230	230	100	0.044	2.9	1.4	2.3	0.023	-

### TABLE 3 - HISTORIC SOIL ANALYTICAL RESULTS

2449 Santa Clara Street, Alameda

- Notes:
- ESL – environmental screening limits set forth by the California Regional Water Quality Control Board as of February 2016 for commercial/industrial.
  - DW – drinking water
  - w/o SG - Analyzed without silica gel clean-up
  - with SG - Analyzed with silica gel clean-up
  - Naph - a concentration of 2.1 mg/Kg was detected which exceeded the ESL of 0.023 mg/Kg
  - J - Result is less than the reporting limit but greater than the method detection limit. The reported concentration is an estimated value
  - ND - Below Laboratory Detection Limits
  - NA - Not Analyzed

**APPENDIX A**  
**PERMIT**

# Alameda County Public Works Agency - Water Resources Well Permit



Public Works Agency  
—Alameda County—

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

Application Approved on: 06/12/2017 By jamesy

Permit Numbers: W2017-0490  
Permits Valid from 07/06/2017 to 07/07/2017

**Application Id:** 1496870570984  
**Site Location:** 2449 Santa Clara Avenue in Alameda. Ten borings. All borings will be advanced to a depth of 16 feet for the collection of soil and groundwater samples  
**Project Start Date:** 07/06/2017  
**Assigned Inspector:** Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org  
**Applicant:** ERAS Environmental, Inc. - Andrew Savage  
**Property Owner:** Michael Beritzhoff  
**Client:** Michael Beritzhoff  
**Contact:** Andrew Savage

**City of Project Site:** Alameda  
**Completion Date:** 07/07/2017

**Phone:** 510-247-9885 x302  
**Phone:** --  
**Phone:** --  
**Phone:** 510-247-9885 x302  
**Cell:** 925-330-8926

**Receipt Number:** WR2017-0269  
**Payer Name :** Andrew Savage

**Total Due:** \$265.00  
**Total Amount Paid:** \$265.00  
**PAID IN FULL**

**Paid By:** MC

## Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 10 Boreholes  
Driller: Environmental Control Associates (ECA) - Lic #: 695970 - Method: DP

**Work Total: \$265.00**

### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2017-0490	06/12/2017	10/04/2017	10	2.75 in.	16.00 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. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the

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

permits and requirements have been approved or obtained.

5. 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.

6. 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.

7. 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.

8. 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.

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.

---

**APPENDIX B**  
**STANDARD OPERATING**  
**PROCEDURES**

## **STANDARD OPERATING PROCEDURE – DIRECT PUSH BORINGS**

### **SOIL CORING AND SAMPLING PROCEDURES**

Prior to drilling, all boreholes will be hand dug to a depth of 4-5 feet below ground surface (bgs) to check for underground utilities.

Soil and groundwater samples are collected for lithologic and chemical analyses using a direct driven soil coring system. A hydraulic hammer drives sampling rods into the ground to collect continuous soil cores. As the rods are advanced, soil is driven into an approximately 2.5-inch-diameter sample barrel that is attached to the end of the rods. Soil samples are collected in sleeves inside the sample barrel as the rods are advanced. After being driven 4 to 5 feet into the ground, the rods are removed from the borehole. The sleeve containing the soil core is removed from the sample barrel, and can then be preserved for chemical analyses, or used for lithologic description. This process is repeated until the desired depth or instrument refusal is reached.

A soil core interval selected for analyses is cut from the sleeve using a pre-cleaned hacksaw. The ends of the tube are covered with aluminum foil or Teflon liner and sealed with plastic caps. The soil-filled liner is labeled with the bore number, sample depth, site location, date, and time. The samples are placed in bags and stored in a cooler containing ice. Soil from the core adjacent to the interval selected for analyses is placed in a plastic zip-top bag. The soil is allowed to volatilize for a period of time, depending on the ambient temperature. The soil is scanned with a flame-ionization detector (FID) or photo-ionization detector (PID).

All sample barrels, rods, and tools (e.g. hacksaw) are cleaned with Alconox or equivalent detergent and de-ionized water. All rinsate from the cleaning is contained in 55-gallon drums at the project site.

### **GROUNDWATER SAMPLING FROM DIRECT PUSH BORINGS**

After the targeted water-bearing zone has been penetrated, the soil-sample barrel is removed from the borehole. Small-diameter well casing with 0.010-inch slotted well screen may be installed in the borehole to facilitate the collection of groundwater samples. Threaded sections of PVC are lowered into the borehole. Groundwater samples may then be collected with a bailer, peristaltic pump, submersible or other appropriate pump until adequate sample volume is obtained. Peristaltic pumps are not used in applications requiring a lift of greater than 1 foot of net head.

Groundwater samples are preserved, stored in an ice-filled cooler, and are delivered, under chain-of-custody, to a laboratory certified by the California Department of Health Services (DHS) for hazardous materials analysis.

### **BOREHOLE GROUTING FOR DIRECT PUSH BORINGS**

Upon completion of soil and water sampling, boreholes will be abandoned with neat cement grout to the surface. If the borehole was advanced into groundwater, the grout is pumped through a grouting tube positioned at the bottom of the borehole.



**APPENDIX C**  
**LITHOLOGIC LOGS**

PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: corner by Gas Meter

DATE STARTED: 07-06-2017

First Water (ft. bgs.): 5 DATE: 07-06-2017

DATE FINISHED: 07-06-2017


TOTAL DEPTH: 12 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Concrete + 3/4 inch base rock
4' 0.2							Silty Sand (SM), dark yellowish brown (10YR-3/4), damp, medium dense, 40% fines, 60% fine to medium grain poorly graded sand, no hydrocarbon (HC) odor
5						 wet at 5 feet	
8' 0.2							
10							
12' 0							Bottom of boring 12 feet bgs 07-06-2017
15							
20							

PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: Middle of Easement

DATE STARTED: 07-06-2017

First Water (ft. bgs.): 5 DATE: 07-06-2017

DATE FINISHED: 07-06-2017

TOTAL DEPTH: 12 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Concrete + 3/4 inch base rock
4' 0.1							Silty Sand (SM), dark yellowish brown (10YR-3/4), damp, medium dense, 40% fines, 60% fine to medium grain poorly graded sand, no HC odor
5						wet at 5 feet	
8' 0.1							
10							
12' 0.2							Bottom of boring 12 feet bgs 07-06-2017
15							
20							

PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: near SB-4

DATE STARTED: 07-06-2017

First Water (ft. bgs.): 5

DATE: 07-06-2017

DATE FINISHED: 07-06-2017

TOTAL DEPTH: 12 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Concrete + 3/4 inch base rock
4' 0.1							Silty Sand (SM), dark yellowish brown (10YR-3/4), damp, medium dense, 40% fines, 60% fine to medium grain poorly graded sand, no HC odor
5						wet at 5 feet	
8' 0.2							
10							
12' 0.1							Bottom of boring 12 feet bgs 07-06-2017
15							
20							

PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: near SB-6

DATE STARTED: 07-06-2017

First Water (ft. bgs.): 5

DATE: 07-06-2017

DATE FINISHED: 07-06-2017

TOTAL DEPTH: 12 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Concrete + 3/4 inch base rock
							Wood debris + gravel
4' 0.1							Silty Sand (SM) with chunks of clay, dark yellowish brown (10YR-3/4), damp, medium dense, 30% fines, 10% chunks of clay, 60% fine to medium grain poorly graded sand, no HC odor
5						▽	wet at 5 feet
8' 0.2							from 5.5 feet to 7 feet diesel or degraded HC odor Color change to dark gray (10YR-4/1), 30% fines, 15% 1/2 inch rock, 55% fine to medium grain poorly graded sand
10							
12' 0.1							Bottom of boring 12 feet bgs 07-06-2017
15							
20							

PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: middle of driveway

DATE STARTED: 07-06-2017

First Water (ft. bgs.): 5      DATE: 07-06-2017

DATE FINISHED: 07-06-2017

TOTAL DEPTH: 12 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Concrete + 3/4 inch base rock
4' 0							Silty Sand (SM), dark yellowish brown (10YR-3/4), damp, medium dense, 40% fines, 60% fine to medium grain poorly graded sand, no HC odor
5						wet at 5 feet	
8' 0.1							
10							
12' 0.1							Bottom of boring 12 feet bgs 07-06-2017
15							
20							

PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: East planter nearest parking lot

DATE STARTED: 07-07-2017

First Water (ft. bgs.): 5 DATE: 07-07-2017

DATE FINISHED: 07-07-2017

TOTAL DEPTH: 11.5 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Top soil + organics
4' 0.1							Silty Sand (SM), dark yellowish brown (10YR-3/4), damp, medium dense, 40% fines, 60% fine to medium grain poorly graded sand, no HC odor
5						▽ wet at 5 feet	
7' 0				NR			
				NR			at 9 feet color change to dark gray (10YR-4/1), no HC odor
10							
11.5' 0.2							Bottom of boring 11.5 feet bgs 07-07-2017
15							
20							

PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: East planter near corner

DATE STARTED: 07-07-2017

First Water (ft. bgs.): 5 DATE: 07-07-2017

DATE FINISHED: 07-07-2017

TOTAL DEPTH: 11.5 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Top soil + organics
4'	0.1						Silty Sand (SM), dark yellowish brown (10YR-3/4), damp, medium dense, 40% fines, 60% fine to medium grain poorly graded sand, no HC odor
5						▽ wet at 5 feet	
8'	0.1						
10							
11.5'	0.1						Bottom of boring 11.5 feet bgs 07-07-2017
15							
20							



PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: West planter near corner

DATE STARTED: 07-07-2017

First Water (ft. bgs.): 5 DATE: 07-07-2017

DATE FINISHED: 07-07-2017

TOTAL DEPTH: 11.5 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Top soil + organics
4' 0.2							Silty Sand (SM), dark yellowish brown (10YR-3/4), damp, medium dense, 40% fines, 60% fine to medium grain poorly graded sand, no HC odor
5						▽ wet at 5 feet	
8' 2.6							from 7 feet to the base of the boring strong diesel or degraded hydrocarbon odor color change to dark gray (10YR-4/1)
10							
11.5' 0.7							Bottom of boring 11.5 feet bgs 07-07-2017
15							
20							

PROJECT: 16-002

ADDRESS: 2449-2451 Santa Clara Street

JOB NUMBER: 16-002

LOCATION: West corner planter

DATE STARTED: 07-07-2017

First Water (ft. bgs.): 5 DATE: 07-07-2017

DATE FINISHED: 07-07-2017

TOTAL DEPTH: 11.5 feet

DRILLING METHOD: Hydraulic Push

GEOLOGIST: Andrew Savage

DRILLING COMPANY: ECA

Reviewed By: ---

DEPTH ft.	PID (ppm)	BLOWS/ 1/2'	SAMPLE NO.	RECOVERY	GRAPHIC LOG	WATER LEVEL	GEOLOGIC DESCRIPTION
							Top soil + organics
4' 0.1							Silty Sand (SM), dark yellowish brown (10YR-3/4), damp, medium dense, 40% fines, 60% fine to medium grain poorly graded sand, no HC odor
5						wet at 5 feet	
8' 0.1							
10							
11.5' 0.1							Bottom of boring 11.5 feet bgs 07-07-2017
15							
20							

**APPENDIX D**

**SITE CONCEPTUAL MODEL AND DATA GAP**

**SUMMARY**

**SITE CONCEPTUAL MODEL**  
**2449-2451 Santa Clara Street, Alameda**

CSM Element	CSM Sub-Element	Description	Potential Data Gap(s)
Geology and Hydrogeology	Regional	<p>The Property is in the southeastern part of the City of Alameda, in the eastern part of the San Francisco Bay Area. The San Francisco Bay Area occupies the central part of the Santa Clara Valley, a broad alluvial valley that slopes gently northward toward San Francisco Bay and is flanked by alluvial fans deposited at the foot of the Diablo Range to the east and the Santa Cruz Mountains to the west (Goldman, 1967). The upland surfaces rising abruptly approximately 2.5 miles to the northeast of the Property are known as the East Bay Hills.</p> <p>Surface topography in the vicinity of the Property slopes gently to the northeast. The Property is at an elevation of approximately 15-20 feet above Mean Sea Level according to the United States Geological Survey (USGS) Oakland East Quadrangle California 7.5 Minute Series topographic map. Regionally, topography in the area of the Property slopes down to the east toward the Tidal Canal between the San Leandro Bay and Oakland Inner Harbor portion of the San Francisco Bay.</p> <p>The sediments in the vicinity of the Property are fine-grained alluvial sediments that represent distal deposits of alluvial fans that were deposited by rivers draining upland surfaces to the east of the Property. These sediments were deposited in a low energy environment on the margins of San Francisco Bay (Helley, et al, 1974). At shallow depths beneath these sediments are a series of Recent-age (&lt;10,000 years) blue clay layers that become increasingly thicker toward San Francisco Bay. These clay layers are known as the Bay Mud and were deposited in San Francisco Bay during higher stands of sea level. In the vicinity of the Property it is likely that these sediments overlie bedrock of the Jurassic-aged Franciscan Assemblage.</p> <p>The subject site is located on the San Francisco Bay Plain in the northernmost part of the Santa Clara Valley Groundwater Basin, (RWQCB, 1986), the surface of which slopes gently down toward San Francisco Bay. The regional groundwater flow follows the topography, moving from areas of higher elevation to areas of lower elevation. In this area the groundwater flow direction is inferred to be to the northeast toward the tidal channel. Based on subsurface investigations at the Property, groundwater was encountered at depths ranging from approximately 5 to 9 feet bgs.</p>	None
	Site	<b>Geology:</b> Based on lithologic logs prepared from borings on the Property the subsurface lithology consists of silty clay underlain by the water bearing zone which consisted of silty sand and sand.	None
		<b>Hydrogeology:</b> Groundwater at the Property is found in silty sand at depths of approximately 5-9 feet bgs.	None
Surface Water Bodies	--	The closest surface water body is the Oakland Inner Harbor, a portion of San Francisco Bay which was located approximately 1/2 of a mile to the northeast of the Property.	None
Nearby Wells	--	A well survey has been conducted.	Yes
CSM Element	CSM Sub-Element	Description	Potential Data Gap(s)
Constituents of Concern	--	Constituents of concern have been identified by comparing analytical results to ESLs for commercial land use and for groundwater that is considered a current or potential drinking water source. Constituents of concern that have been identified include petroleum hydrocarbons quantified as diesel and oil range organics (TPH-dro, and TPH-oro) and naphthalene. The results of investigations completed indicate elevated concentrations of petroleum hydrocarbons in groundwater in the area of the former degreasing and motor oil storage area, and former pump island area.	None
Potential Sources	On-site	The Property formerly contained four USTs for gasoline and one UST for waste oil. No remaining source of contamination has been identified to be present on the Property. A 350 gallon waste oil tank was removed from the Property in May of 2016. During the investigation conducted by ERAS in July of 2017 the Property was scanned using ground penetrating radar (GPR) and a magnetometer. No remaining tanks were identified to be present on the Property.	None
		There is no record of the removal of the fuel USTs. The waste oil UST was removed on May 23, 2016	None
CSM Element	CSM Sub-Element	Description	Potential Data Gap(s)
Nature and Extent of Environmental Impacts	Extent in Soil, TPH-dro	Concentrations of TPH-dro above the commercial ESL for areas where groundwater is considered a potential source of drinking water was detected in the soil samples collected from boring SB-6 and from under the waste oil tank. Detected concentrations ranged from 2.5 to 4,200 mg/Kg.	None
	Extent in Soil, TOG/TRPH	Concentrations of TPH-oro above the commercial ESL for areas where groundwater is considered a potential source of drinking water was detected in the soil samples collected from boring SB-6 and from under the waste oil tank. Detected concentrations ranged from 3.4 to 10,000 mg/Kg.	None

**SITE CONCEPTUAL MODEL**  
**2449-2451 Santa Clara Street, Alameda**

Nature and Extent of Environmental Impacts	Extent in Soil, VOCs	The only VOC detected in soil were naphthalene in SB-6 at a concentration of 2.1 mg/Kg. Based on analysis the area of impact appears to be limited	None
	Extent in Soil, SVOCs	No SVOCs were detected in soil under the waste oil tank.	None
	Extent in Soil, Metals	Metals detected to be present on the Property have included cadmium, chromium, lead, nickel, and zinc. None of the concentrations detected were found to be above the ESL for commercial areas where groundwater is considered a potential source of drinking water	None
	Extent in Groundwater, TPH-dro	When silica gel cleanup is utilized the areas impacted by TPH-dro above the ESLs appear to be limited in extent and limited to the area of B-4/SB-6 (former degreasing and motor oil storage area) (360 µg/L) and B-8 (former pump island area) (130 µg/L).	None
	Extent in Groundwater, TOG/TRPH	When silica gel cleanup is utilized the areas impacted by TPH-dro above the ESLs appear to be limited in extent and limited to the area of B-4/SB-6 (former degreasing and motor oil storage area) (520 µg/L).	None
	Extent in Groundwater, VOCs	The only VOC detected in groundwater samples collected from the borings on the Property above their respective ESLs was naphthalene which was detected at concentrations of 7.9 µg/L in boring SB-6 and 2.7µg/L in boring B-8. The ESL for naphthalene is 0.12 µg/L. The extent of VOC contamination exceeding the ESLs is limited in extent and is limited to the area of SB-6 and B-8 in the vicinity of the former degreasing and motor oil storage area.	None
	Extent in Groundwater, SVOCs	No SVOCs were detected in groundwater under the waste oil tank	None
Nature and Extent of Environmental Impacts		The site has been adequately characterized. The extent of the contaminants of concern have been identified. Residual concentrations remain in soil at a depth of approximately 6 feet bgs in the vicinity of SB-6. The deeper sample from SB-6 did not yield concentrations of the contaminants of concern exceeding the ESLs. Residual contamination in groundwater exceeding the ESL remains in place in the vicinity B-4 and B-8. The down-gradient most borings (B-2 and B-5) were found to contain concentrations of the contaminants of concern below their respective ESLs.	None
Migration Pathways	Potential Conduits	Water and sanitary sewer lines enter the Property near the eastern corner y in the vicinity of boring B-1. Electrical and telephone service enters the Property from overhead	None
Potential Receptors/Risk	On-site	Potable water at the site currently is provided via municipal supply and will continue to be in the foreseeable future. As such, direct contact to groundwater is not contemplated.	None
Potential Receptors/Risk	Off-site	A well survey has been conducted. According to the records reviewed only one site was identified which contained wells for commercial or residential water supply. This site 2307 Clement Avenue in Alameda. This site was located 2,000 feet to the north of the Property in an area with low topography. Contamination in this setting is unlikely to migrate a great distance from the source area. Based on the distance contamination associated with the Property is unlikely to impact these wells.	None

Notes

AEI, Soil and Groundwater Investigation, 2477 Santa Clara Avenue, Alameda, California, October 22, 1996.  
ODIC Environmental Inc., Phase II Environmental Site Assessment, 2449-2451 Santa Clara Avenue, Alameda, California, March 10, 2016.  
Environmental Restoration Services, Underground Tank Technical Closure Report, 2449 Santa Clara Street, Alameda, California, May 23, 2016  
ERAS Environmental, Inc., Phase II Subsurface Investigations, 2449-2451 Santa Clara Avenue, Alameda, California, July, 2017

Abbreviations

bgs = below ground surface  
VOCs = volatile organic compounds  
SVOCs = semi volatile organic compounds  
TPH-dro = total petroleum hydrocarbons quantified as diesel range organics  
TPH-oro = total petroleum hydrocarbons quantified as oil range organics  
TOG = total oil and grease  
TRPH = total residual petroleum hydrocarbons  
µg/L = micrograms per liter

**DATA GAPS AND PROPOSED INVESTIGATION**

**2449-2451 Santa Clara Street, Alameda**

Item	Data Gap	Proposed Investigation	Rational	Analysis
1	None Identified			

Abbreviations  
bgs = below ground surface  
TPH-dro = total petroleum hydrocarbons quantified as diesel range organics  
TPH-oro = total petroleum hydrocarbons quantified as oil range organics  
SVOCs = semi-volatile organic compounds

**APPENDIX E**  
**ANALYTICAL RESULTS**



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1707284

**Report Created for:** ERAS Environmental, Inc.

1533 B Street  
Hayward, CA 94541

**Project Contact:** Andrew Savage

**Project P.O.:**

**Project Name:** 16-002; 2449-2451 Santa Clara Ave

**Project Received:** 07/10/2017

Analytical Report reviewed & approved for release on 07/17/2017 by:

Angela Rydelius,  
Laboratory Manager

*The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.*







## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.  
**Project:** 16-002; 2449-2451 Santa Clara Ave  
**WorkOrder:** 1707284

### Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



## Glossary of Terms & Qualifier Definitions

**Client:** ERAS Environmental, Inc.  
**Project:** 16-002; 2449-2451 Santa Clara Ave  
**WorkOrder:** 1707284

### Analytical Qualifiers

J Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.  
S Surrogate spike recovery outside accepted recovery limits  
b1 Aqueous sample that contains greater than ~1 vol. % sediment  
c2 Surrogate recovery outside of the control limits due to matrix interference.  
e2 Diesel range compounds are significant; no recognizable pattern  
e4 Gasoline range compounds are significant.  
e7 Oil range compounds are significant  
e11/e4 Pattern resembles stoddard solvent/mineral spirit; and/or Gasoline range compounds are significant.

### Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.



# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	1707284-001C	Water	07/06/2017 08:24	GC10	141944
Analytes	Result	MDL	RL	DF	Date Analyzed
Acetone	ND	1.70	10	1	07/14/2017 04:43
tert-Amyl methyl ether (TAME)	ND	0.220	0.50	1	07/14/2017 04:43
Benzene	ND	0.0510	0.50	1	07/14/2017 04:43
Bromobenzene	ND	0.0600	0.50	1	07/14/2017 04:43
Bromochloromethane	ND	0.0900	0.50	1	07/14/2017 04:43
Bromodichloromethane	ND	0.200	0.50	1	07/14/2017 04:43
Bromoform	ND	0.0660	0.50	1	07/14/2017 04:43
Bromomethane	ND	0.160	0.50	1	07/14/2017 04:43
2-Butanone (MEK)	ND	0.490	2.0	1	07/14/2017 04:43
t-Butyl alcohol (TBA)	ND	0.940	2.0	1	07/14/2017 04:43
n-Butyl benzene	ND	0.0840	0.50	1	07/14/2017 04:43
sec-Butyl benzene	ND	0.0600	0.50	1	07/14/2017 04:43
tert-Butyl benzene	ND	0.0500	0.50	1	07/14/2017 04:43
Carbon Disulfide	ND	0.0660	0.50	1	07/14/2017 04:43
Carbon Tetrachloride	ND	0.0690	0.50	1	07/14/2017 04:43
Chlorobenzene	ND	0.0500	0.50	1	07/14/2017 04:43
Chloroethane	ND	0.310	0.50	1	07/14/2017 04:43
Chloroform	ND	0.0640	0.50	1	07/14/2017 04:43
Chloromethane	ND	0.130	0.50	1	07/14/2017 04:43
2-Chlorotoluene	ND	0.0700	0.50	1	07/14/2017 04:43
4-Chlorotoluene	ND	0.0700	0.50	1	07/14/2017 04:43
Dibromochloromethane	ND	0.0800	0.50	1	07/14/2017 04:43
1,2-Dibromo-3-chloropropane	ND	0.120	0.20	1	07/14/2017 04:43
1,2-Dibromoethane (EDB)	ND	0.120	0.50	1	07/14/2017 04:43
Dibromomethane	ND	0.0800	0.50	1	07/14/2017 04:43
1,2-Dichlorobenzene	ND	0.0800	0.50	1	07/14/2017 04:43
1,3-Dichlorobenzene	ND	0.0710	0.50	1	07/14/2017 04:43
1,4-Dichlorobenzene	ND	0.0720	0.50	1	07/14/2017 04:43
Dichlorodifluoromethane	ND	0.0630	0.50	1	07/14/2017 04:43
1,1-Dichloroethane	ND	0.0600	0.50	1	07/14/2017 04:43
1,2-Dichloroethane (1,2-DCA)	ND	0.0900	0.50	1	07/14/2017 04:43
1,1-Dichloroethene	ND	0.0860	0.50	1	07/14/2017 04:43
cis-1,2-Dichloroethene	ND	0.0500	0.50	1	07/14/2017 04:43
trans-1,2-Dichloroethene	ND	0.0600	0.50	1	07/14/2017 04:43
1,2-Dichloropropane	ND	0.0550	0.50	1	07/14/2017 04:43
1,3-Dichloropropane	ND	0.100	0.50	1	07/14/2017 04:43
2,2-Dichloropropane	ND	0.100	0.50	1	07/14/2017 04:43

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	1707284-001C	Water	07/06/2017 08:24	GC10	141944

Analytes	Result	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0600	0.50	1	07/14/2017 04:43
cis-1,3-Dichloropropene	ND	0.0900	0.50	1	07/14/2017 04:43
trans-1,3-Dichloropropene	ND	0.0700	0.50	1	07/14/2017 04:43
Diisopropyl ether (DIPE)	ND	0.0700	0.50	1	07/14/2017 04:43
Ethylbenzene	ND	0.0500	0.50	1	07/14/2017 04:43
Ethyl tert-butyl ether (ETBE)	ND	0.0700	0.50	1	07/14/2017 04:43
Freon 113	ND	0.0660	0.50	1	07/14/2017 04:43
Hexachlorobutadiene	ND	0.0850	0.50	1	07/14/2017 04:43
Hexachloroethane	ND	0.0600	0.50	1	07/14/2017 04:43
2-Hexanone	ND	0.440	0.50	1	07/14/2017 04:43
Isopropylbenzene	ND	0.0700	0.50	1	07/14/2017 04:43
4-Isopropyl toluene	ND	0.0500	0.50	1	07/14/2017 04:43
Methyl-t-butyl ether (MTBE)	ND	0.100	0.50	1	07/14/2017 04:43
Methylene chloride	ND	0.0520	0.50	1	07/14/2017 04:43
4-Methyl-2-pentanone (MIBK)	ND	0.240	0.50	1	07/14/2017 04:43
Naphthalene	ND	0.160	0.50	1	07/14/2017 04:43
n-Propyl benzene	ND	0.0600	0.50	1	07/14/2017 04:43
Styrene	ND	0.0600	0.50	1	07/14/2017 04:43
1,1,1,2-Tetrachloroethane	ND	0.0700	0.50	1	07/14/2017 04:43
1,1,2,2-Tetrachloroethane	ND	0.110	0.50	1	07/14/2017 04:43
Tetrachloroethene	ND	0.0820	0.50	1	07/14/2017 04:43
Toluene	ND	0.0400	0.50	1	07/14/2017 04:43
1,2,3-Trichlorobenzene	ND	0.110	0.50	1	07/14/2017 04:43
1,2,4-Trichlorobenzene	ND	0.0860	0.50	1	07/14/2017 04:43
1,1,1-Trichloroethane	ND	0.0500	0.50	1	07/14/2017 04:43
1,1,2-Trichloroethane	ND	0.0800	0.50	1	07/14/2017 04:43
Trichloroethene	ND	0.0600	0.50	1	07/14/2017 04:43
Trichlorofluoromethane	ND	0.0470	0.50	1	07/14/2017 04:43
1,2,3-Trichloropropane	ND	0.140	0.50	1	07/14/2017 04:43
1,2,4-Trimethylbenzene	ND	0.0650	0.50	1	07/14/2017 04:43
1,3,5-Trimethylbenzene	ND	0.0700	0.50	1	07/14/2017 04:43
Vinyl Chloride	ND	0.0700	0.50	1	07/14/2017 04:43
Xylenes, Total	ND	0.250	0.50	1	07/14/2017 04:43

(Cont.)



# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	1707284-001C	Water	07/06/2017 08:24	GC10	141944

Analytes	Result	MDL	RL	DF	Date Analyzed
Surrogates	REC (%)			Limits	
Dibromofluoromethane	112		70-130		07/14/2017 04:43
Toluene-d8	114		70-130		07/14/2017 04:43
4-BFB	97		70-130		07/14/2017 04:43

**Analyst(s):** KF      **Analytical Comments:** b1



# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2	1707284-002C	Water	07/06/2017 09:09	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	ND		1.70	10	1	07/15/2017 00:37
tert-Amyl methyl ether (TAME)	ND		0.220	0.50	1	07/15/2017 00:37
Benzene	<b>0.053</b>	J	0.0510	0.50	1	07/15/2017 00:37
Bromobenzene	ND		0.0600	0.50	1	07/15/2017 00:37
Bromochloromethane	ND		0.0900	0.50	1	07/15/2017 00:37
Bromodichloromethane	ND		0.200	0.50	1	07/15/2017 00:37
Bromoform	ND		0.0660	0.50	1	07/15/2017 00:37
Bromomethane	ND		0.160	0.50	1	07/15/2017 00:37
2-Butanone (MEK)	ND		0.490	2.0	1	07/15/2017 00:37
t-Butyl alcohol (TBA)	ND		0.940	2.0	1	07/15/2017 00:37
n-Butyl benzene	ND		0.0840	0.50	1	07/15/2017 00:37
sec-Butyl benzene	ND		0.0600	0.50	1	07/15/2017 00:37
tert-Butyl benzene	ND		0.0500	0.50	1	07/15/2017 00:37
Carbon Disulfide	<b>0.15</b>	J	0.0660	0.50	1	07/15/2017 00:37
Carbon Tetrachloride	ND		0.0690	0.50	1	07/15/2017 00:37
Chlorobenzene	ND		0.0500	0.50	1	07/15/2017 00:37
Chloroethane	ND		0.310	0.50	1	07/15/2017 00:37
Chloroform	ND		0.0640	0.50	1	07/15/2017 00:37
Chloromethane	ND		0.130	0.50	1	07/15/2017 00:37
2-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 00:37
4-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 00:37
Dibromochloromethane	ND		0.0800	0.50	1	07/15/2017 00:37
1,2-Dibromo-3-chloropropane	ND		0.120	0.20	1	07/15/2017 00:37
1,2-Dibromoethane (EDB)	ND		0.120	0.50	1	07/15/2017 00:37
Dibromomethane	ND		0.0800	0.50	1	07/15/2017 00:37
1,2-Dichlorobenzene	ND		0.0800	0.50	1	07/15/2017 00:37
1,3-Dichlorobenzene	ND		0.0710	0.50	1	07/15/2017 00:37
1,4-Dichlorobenzene	ND		0.0720	0.50	1	07/15/2017 00:37
Dichlorodifluoromethane	ND		0.0630	0.50	1	07/15/2017 00:37
1,1-Dichloroethane	ND		0.0600	0.50	1	07/15/2017 00:37
1,2-Dichloroethane (1,2-DCA)	ND		0.0900	0.50	1	07/15/2017 00:37
1,1-Dichloroethene	ND		0.0860	0.50	1	07/15/2017 00:37
cis-1,2-Dichloroethene	ND		0.0500	0.50	1	07/15/2017 00:37
trans-1,2-Dichloroethene	ND		0.0600	0.50	1	07/15/2017 00:37
1,2-Dichloropropane	ND		0.0550	0.50	1	07/15/2017 00:37
1,3-Dichloropropane	ND		0.100	0.50	1	07/15/2017 00:37
2,2-Dichloropropane	ND		0.100	0.50	1	07/15/2017 00:37

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# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2	1707284-002C	Water	07/06/2017 09:09	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND		0.0600	0.50	1	07/15/2017 00:37
cis-1,3-Dichloropropene	ND		0.0900	0.50	1	07/15/2017 00:37
trans-1,3-Dichloropropene	ND		0.0700	0.50	1	07/15/2017 00:37
Diisopropyl ether (DIPE)	ND		0.0700	0.50	1	07/15/2017 00:37
Ethylbenzene	ND		0.0500	0.50	1	07/15/2017 00:37
Ethyl tert-butyl ether (ETBE)	ND		0.0700	0.50	1	07/15/2017 00:37
Freon 113	ND		0.0660	0.50	1	07/15/2017 00:37
Hexachlorobutadiene	ND		0.0850	0.50	1	07/15/2017 00:37
Hexachloroethane	ND		0.0600	0.50	1	07/15/2017 00:37
2-Hexanone	ND		0.440	0.50	1	07/15/2017 00:37
Isopropylbenzene	ND		0.0700	0.50	1	07/15/2017 00:37
4-Isopropyl toluene	ND		0.0500	0.50	1	07/15/2017 00:37
Methyl-t-butyl ether (MTBE)	ND		0.100	0.50	1	07/15/2017 00:37
Methylene chloride	ND		0.0520	0.50	1	07/15/2017 00:37
4-Methyl-2-pentanone (MIBK)	ND		0.240	0.50	1	07/15/2017 00:37
Naphthalene	ND		0.160	0.50	1	07/15/2017 00:37
n-Propyl benzene	ND		0.0600	0.50	1	07/15/2017 00:37
Styrene	ND		0.0600	0.50	1	07/15/2017 00:37
1,1,1,2-Tetrachloroethane	ND		0.0700	0.50	1	07/15/2017 00:37
1,1,2,2-Tetrachloroethane	ND		0.110	0.50	1	07/15/2017 00:37
Tetrachloroethene	ND		0.0820	0.50	1	07/15/2017 00:37
Toluene	<b>0.067</b>	J	0.0400	0.50	1	07/15/2017 00:37
1,2,3-Trichlorobenzene	ND		0.110	0.50	1	07/15/2017 00:37
1,2,4-Trichlorobenzene	ND		0.0860	0.50	1	07/15/2017 00:37
1,1,1-Trichloroethane	ND		0.0500	0.50	1	07/15/2017 00:37
1,1,2-Trichloroethane	ND		0.0800	0.50	1	07/15/2017 00:37
Trichloroethene	ND		0.0600	0.50	1	07/15/2017 00:37
Trichlorofluoromethane	ND		0.0470	0.50	1	07/15/2017 00:37
1,2,3-Trichloropropane	ND		0.140	0.50	1	07/15/2017 00:37
1,2,4-Trimethylbenzene	ND		0.0650	0.50	1	07/15/2017 00:37
1,3,5-Trimethylbenzene	ND		0.0700	0.50	1	07/15/2017 00:37
Vinyl Chloride	ND		0.0700	0.50	1	07/15/2017 00:37
Xylenes, Total	ND		0.250	0.50	1	07/15/2017 00:37

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# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2	1707284-002C	Water	07/06/2017 09:09	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>		
Dibromofluoromethane	97			70-130		07/15/2017 00:37
Toluene-d8	93			70-130		07/15/2017 00:37
4-BFB	85			70-130		07/15/2017 00:37

**Analyst(s):** KF **Analytical Comments:** b1





# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-3	1707284-003C	Water	07/06/2017 09:55	GC18	142057	
Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	ND		1.70	10	1	07/15/2017 01:17
tert-Amyl methyl ether (TAME)	ND		0.220	0.50	1	07/15/2017 01:17
Benzene	ND		0.0510	0.50	1	07/15/2017 01:17
Bromobenzene	ND		0.0600	0.50	1	07/15/2017 01:17
Bromochloromethane	ND		0.0900	0.50	1	07/15/2017 01:17
Bromodichloromethane	ND		0.200	0.50	1	07/15/2017 01:17
Bromoform	ND		0.0660	0.50	1	07/15/2017 01:17
Bromomethane	ND		0.160	0.50	1	07/15/2017 01:17
2-Butanone (MEK)	ND		0.490	2.0	1	07/15/2017 01:17
t-Butyl alcohol (TBA)	ND		0.940	2.0	1	07/15/2017 01:17
n-Butyl benzene	ND		0.0840	0.50	1	07/15/2017 01:17
sec-Butyl benzene	ND		0.0600	0.50	1	07/15/2017 01:17
tert-Butyl benzene	ND		0.0500	0.50	1	07/15/2017 01:17
Carbon Disulfide	<b>0.082</b>	J	0.0660	0.50	1	07/15/2017 01:17
Carbon Tetrachloride	ND		0.0690	0.50	1	07/15/2017 01:17
Chlorobenzene	ND		0.0500	0.50	1	07/15/2017 01:17
Chloroethane	ND		0.310	0.50	1	07/15/2017 01:17
Chloroform	ND		0.0640	0.50	1	07/15/2017 01:17
Chloromethane	ND		0.130	0.50	1	07/15/2017 01:17
2-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 01:17
4-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 01:17
Dibromochloromethane	ND		0.0800	0.50	1	07/15/2017 01:17
1,2-Dibromo-3-chloropropane	ND		0.120	0.20	1	07/15/2017 01:17
1,2-Dibromoethane (EDB)	ND		0.120	0.50	1	07/15/2017 01:17
Dibromomethane	ND		0.0800	0.50	1	07/15/2017 01:17
1,2-Dichlorobenzene	ND		0.0800	0.50	1	07/15/2017 01:17
1,3-Dichlorobenzene	ND		0.0710	0.50	1	07/15/2017 01:17
1,4-Dichlorobenzene	ND		0.0720	0.50	1	07/15/2017 01:17
Dichlorodifluoromethane	ND		0.0630	0.50	1	07/15/2017 01:17
1,1-Dichloroethane	ND		0.0600	0.50	1	07/15/2017 01:17
1,2-Dichloroethane (1,2-DCA)	ND		0.0900	0.50	1	07/15/2017 01:17
1,1-Dichloroethene	ND		0.0860	0.50	1	07/15/2017 01:17
cis-1,2-Dichloroethene	ND		0.0500	0.50	1	07/15/2017 01:17
trans-1,2-Dichloroethene	ND		0.0600	0.50	1	07/15/2017 01:17
1,2-Dichloropropane	ND		0.0550	0.50	1	07/15/2017 01:17
1,3-Dichloropropane	ND		0.100	0.50	1	07/15/2017 01:17
2,2-Dichloropropane	ND		0.100	0.50	1	07/15/2017 01:17

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## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3	1707284-003C	Water	07/06/2017 09:55	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND		0.0600	0.50	1	07/15/2017 01:17
cis-1,3-Dichloropropene	ND		0.0900	0.50	1	07/15/2017 01:17
trans-1,3-Dichloropropene	ND		0.0700	0.50	1	07/15/2017 01:17
Diisopropyl ether (DIPE)	ND		0.0700	0.50	1	07/15/2017 01:17
Ethylbenzene	ND		0.0500	0.50	1	07/15/2017 01:17
Ethyl tert-butyl ether (ETBE)	ND		0.0700	0.50	1	07/15/2017 01:17
Freon 113	ND		0.0660	0.50	1	07/15/2017 01:17
Hexachlorobutadiene	ND		0.0850	0.50	1	07/15/2017 01:17
Hexachloroethane	ND		0.0600	0.50	1	07/15/2017 01:17
2-Hexanone	ND		0.440	0.50	1	07/15/2017 01:17
Isopropylbenzene	ND		0.0700	0.50	1	07/15/2017 01:17
4-Isopropyl toluene	ND		0.0500	0.50	1	07/15/2017 01:17
Methyl-t-butyl ether (MTBE)	ND		0.100	0.50	1	07/15/2017 01:17
Methylene chloride	ND		0.0520	0.50	1	07/15/2017 01:17
4-Methyl-2-pentanone (MIBK)	ND		0.240	0.50	1	07/15/2017 01:17
Naphthalene	ND		0.160	0.50	1	07/15/2017 01:17
n-Propyl benzene	ND		0.0600	0.50	1	07/15/2017 01:17
Styrene	ND		0.0600	0.50	1	07/15/2017 01:17
1,1,1,2-Tetrachloroethane	ND		0.0700	0.50	1	07/15/2017 01:17
1,1,2,2-Tetrachloroethane	ND		0.110	0.50	1	07/15/2017 01:17
Tetrachloroethene	ND		0.0820	0.50	1	07/15/2017 01:17
Toluene	ND		0.0400	0.50	1	07/15/2017 01:17
1,2,3-Trichlorobenzene	ND		0.110	0.50	1	07/15/2017 01:17
1,2,4-Trichlorobenzene	ND		0.0860	0.50	1	07/15/2017 01:17
1,1,1-Trichloroethane	ND		0.0500	0.50	1	07/15/2017 01:17
1,1,2-Trichloroethane	ND		0.0800	0.50	1	07/15/2017 01:17
Trichloroethene	ND		0.0600	0.50	1	07/15/2017 01:17
Trichlorofluoromethane	ND		0.0470	0.50	1	07/15/2017 01:17
1,2,3-Trichloropropane	ND		0.140	0.50	1	07/15/2017 01:17
1,2,4-Trimethylbenzene	ND		0.0650	0.50	1	07/15/2017 01:17
1,3,5-Trimethylbenzene	ND		0.0700	0.50	1	07/15/2017 01:17
Vinyl Chloride	ND		0.0700	0.50	1	07/15/2017 01:17
Xylenes, Total	ND		0.250	0.50	1	07/15/2017 01:17

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## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3	1707284-003C	Water	07/06/2017 09:55	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>		
Dibromofluoromethane	97			70-130		07/15/2017 01:17
Toluene-d8	93			70-130		07/15/2017 01:17
4-BFB	85			70-130		07/15/2017 01:17

**Analyst(s):** KF **Analytical Comments:** b1



# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-4	1707284-004C	Water	07/06/2017 10:48	GC18	142057	
Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	4.7	J	1.70	10	1	07/15/2017 01:57
tert-Amyl methyl ether (TAME)	ND		0.220	0.50	1	07/15/2017 01:57
Benzene	ND		0.0510	0.50	1	07/15/2017 01:57
Bromobenzene	ND		0.0600	0.50	1	07/15/2017 01:57
Bromochloromethane	ND		0.0900	0.50	1	07/15/2017 01:57
Bromodichloromethane	ND		0.200	0.50	1	07/15/2017 01:57
Bromoform	ND		0.0660	0.50	1	07/15/2017 01:57
Bromomethane	ND		0.160	0.50	1	07/15/2017 01:57
2-Butanone (MEK)	ND		0.490	2.0	1	07/15/2017 01:57
t-Butyl alcohol (TBA)	ND		0.940	2.0	1	07/15/2017 01:57
n-Butyl benzene	ND		0.0840	0.50	1	07/15/2017 01:57
sec-Butyl benzene	ND		0.0600	0.50	1	07/15/2017 01:57
tert-Butyl benzene	ND		0.0500	0.50	1	07/15/2017 01:57
Carbon Disulfide	0.13	J	0.0660	0.50	1	07/15/2017 01:57
Carbon Tetrachloride	ND		0.0690	0.50	1	07/15/2017 01:57
Chlorobenzene	ND		0.0500	0.50	1	07/15/2017 01:57
Chloroethane	ND		0.310	0.50	1	07/15/2017 01:57
Chloroform	ND		0.0640	0.50	1	07/15/2017 01:57
Chloromethane	ND		0.130	0.50	1	07/15/2017 01:57
2-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 01:57
4-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 01:57
Dibromochloromethane	ND		0.0800	0.50	1	07/15/2017 01:57
1,2-Dibromo-3-chloropropane	ND		0.120	0.20	1	07/15/2017 01:57
1,2-Dibromoethane (EDB)	ND		0.120	0.50	1	07/15/2017 01:57
Dibromomethane	ND		0.0800	0.50	1	07/15/2017 01:57
1,2-Dichlorobenzene	ND		0.0800	0.50	1	07/15/2017 01:57
1,3-Dichlorobenzene	ND		0.0710	0.50	1	07/15/2017 01:57
1,4-Dichlorobenzene	ND		0.0720	0.50	1	07/15/2017 01:57
Dichlorodifluoromethane	ND		0.0630	0.50	1	07/15/2017 01:57
1,1-Dichloroethane	ND		0.0600	0.50	1	07/15/2017 01:57
1,2-Dichloroethane (1,2-DCA)	ND		0.0900	0.50	1	07/15/2017 01:57
1,1-Dichloroethene	ND		0.0860	0.50	1	07/15/2017 01:57
cis-1,2-Dichloroethene	ND		0.0500	0.50	1	07/15/2017 01:57
trans-1,2-Dichloroethene	ND		0.0600	0.50	1	07/15/2017 01:57
1,2-Dichloropropane	ND		0.0550	0.50	1	07/15/2017 01:57
1,3-Dichloropropane	ND		0.100	0.50	1	07/15/2017 01:57
2,2-Dichloropropane	ND		0.100	0.50	1	07/15/2017 01:57

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4	1707284-004C	Water	07/06/2017 10:48	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND		0.0600	0.50	1	07/15/2017 01:57
cis-1,3-Dichloropropene	ND		0.0900	0.50	1	07/15/2017 01:57
trans-1,3-Dichloropropene	ND		0.0700	0.50	1	07/15/2017 01:57
Diisopropyl ether (DIPE)	ND		0.0700	0.50	1	07/15/2017 01:57
Ethylbenzene	ND		0.0500	0.50	1	07/15/2017 01:57
Ethyl tert-butyl ether (ETBE)	ND		0.0700	0.50	1	07/15/2017 01:57
Freon 113	ND		0.0660	0.50	1	07/15/2017 01:57
Hexachlorobutadiene	ND		0.0850	0.50	1	07/15/2017 01:57
Hexachloroethane	ND		0.0600	0.50	1	07/15/2017 01:57
2-Hexanone	ND		0.440	0.50	1	07/15/2017 01:57
Isopropylbenzene	ND		0.0700	0.50	1	07/15/2017 01:57
4-Isopropyl toluene	ND		0.0500	0.50	1	07/15/2017 01:57
Methyl-t-butyl ether (MTBE)	ND		0.100	0.50	1	07/15/2017 01:57
Methylene chloride	ND		0.0520	0.50	1	07/15/2017 01:57
4-Methyl-2-pentanone (MIBK)	ND		0.240	0.50	1	07/15/2017 01:57
Naphthalene	ND		0.160	0.50	1	07/15/2017 01:57
n-Propyl benzene	ND		0.0600	0.50	1	07/15/2017 01:57
Styrene	ND		0.0600	0.50	1	07/15/2017 01:57
1,1,1,2-Tetrachloroethane	ND		0.0700	0.50	1	07/15/2017 01:57
1,1,2,2-Tetrachloroethane	ND		0.110	0.50	1	07/15/2017 01:57
Tetrachloroethene	ND		0.0820	0.50	1	07/15/2017 01:57
Toluene	ND		0.0400	0.50	1	07/15/2017 01:57
1,2,3-Trichlorobenzene	ND		0.110	0.50	1	07/15/2017 01:57
1,2,4-Trichlorobenzene	ND		0.0860	0.50	1	07/15/2017 01:57
1,1,1-Trichloroethane	ND		0.0500	0.50	1	07/15/2017 01:57
1,1,2-Trichloroethane	ND		0.0800	0.50	1	07/15/2017 01:57
Trichloroethene	ND		0.0600	0.50	1	07/15/2017 01:57
Trichlorofluoromethane	ND		0.0470	0.50	1	07/15/2017 01:57
1,2,3-Trichloropropane	ND		0.140	0.50	1	07/15/2017 01:57
1,2,4-Trimethylbenzene	ND		0.0650	0.50	1	07/15/2017 01:57
1,3,5-Trimethylbenzene	ND		0.0700	0.50	1	07/15/2017 01:57
Vinyl Chloride	ND		0.0700	0.50	1	07/15/2017 01:57
Xylenes, Total	ND		0.250	0.50	1	07/15/2017 01:57

(Cont.)



# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4	1707284-004C	Water	07/06/2017 10:48	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Surrogates	REC (%)			Limits		
Dibromofluoromethane	97			70-130		07/15/2017 01:57
Toluene-d8	94			70-130		07/15/2017 01:57
4-BFB	83			70-130		07/15/2017 01:57

**Analyst(s):** KF **Analytical Comments:** b1



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-5	1707284-005C	Water	07/06/2017 11:45	GC18	142057	
Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	2.4	J	1.70	10	1	07/15/2017 02:36
tert-Amyl methyl ether (TAME)	ND		0.220	0.50	1	07/15/2017 02:36
Benzene	ND		0.0510	0.50	1	07/15/2017 02:36
Bromobenzene	ND		0.0600	0.50	1	07/15/2017 02:36
Bromochloromethane	ND		0.0900	0.50	1	07/15/2017 02:36
Bromodichloromethane	ND		0.200	0.50	1	07/15/2017 02:36
Bromoform	ND		0.0660	0.50	1	07/15/2017 02:36
Bromomethane	ND		0.160	0.50	1	07/15/2017 02:36
2-Butanone (MEK)	ND		0.490	2.0	1	07/15/2017 02:36
t-Butyl alcohol (TBA)	ND		0.940	2.0	1	07/15/2017 02:36
n-Butyl benzene	ND		0.0840	0.50	1	07/15/2017 02:36
sec-Butyl benzene	ND		0.0600	0.50	1	07/15/2017 02:36
tert-Butyl benzene	ND		0.0500	0.50	1	07/15/2017 02:36
Carbon Disulfide	ND		0.0660	0.50	1	07/15/2017 02:36
Carbon Tetrachloride	ND		0.0690	0.50	1	07/15/2017 02:36
Chlorobenzene	ND		0.0500	0.50	1	07/15/2017 02:36
Chloroethane	ND		0.310	0.50	1	07/15/2017 02:36
Chloroform	ND		0.0640	0.50	1	07/15/2017 02:36
Chloromethane	ND		0.130	0.50	1	07/15/2017 02:36
2-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 02:36
4-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 02:36
Dibromochloromethane	ND		0.0800	0.50	1	07/15/2017 02:36
1,2-Dibromo-3-chloropropane	ND		0.120	0.20	1	07/15/2017 02:36
1,2-Dibromoethane (EDB)	ND		0.120	0.50	1	07/15/2017 02:36
Dibromomethane	ND		0.0800	0.50	1	07/15/2017 02:36
1,2-Dichlorobenzene	ND		0.0800	0.50	1	07/15/2017 02:36
1,3-Dichlorobenzene	ND		0.0710	0.50	1	07/15/2017 02:36
1,4-Dichlorobenzene	ND		0.0720	0.50	1	07/15/2017 02:36
Dichlorodifluoromethane	ND		0.0630	0.50	1	07/15/2017 02:36
1,1-Dichloroethane	ND		0.0600	0.50	1	07/15/2017 02:36
1,2-Dichloroethane (1,2-DCA)	ND		0.0900	0.50	1	07/15/2017 02:36
1,1-Dichloroethene	ND		0.0860	0.50	1	07/15/2017 02:36
cis-1,2-Dichloroethene	ND		0.0500	0.50	1	07/15/2017 02:36
trans-1,2-Dichloroethene	ND		0.0600	0.50	1	07/15/2017 02:36
1,2-Dichloropropane	ND		0.0550	0.50	1	07/15/2017 02:36
1,3-Dichloropropane	ND		0.100	0.50	1	07/15/2017 02:36
2,2-Dichloropropane	ND		0.100	0.50	1	07/15/2017 02:36

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## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5	1707284-005C	Water	07/06/2017 11:45	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND		0.0600	0.50	1	07/15/2017 02:36
cis-1,3-Dichloropropene	ND		0.0900	0.50	1	07/15/2017 02:36
trans-1,3-Dichloropropene	ND		0.0700	0.50	1	07/15/2017 02:36
Diisopropyl ether (DIPE)	ND		0.0700	0.50	1	07/15/2017 02:36
Ethylbenzene	ND		0.0500	0.50	1	07/15/2017 02:36
Ethyl tert-butyl ether (ETBE)	ND		0.0700	0.50	1	07/15/2017 02:36
Freon 113	ND		0.0660	0.50	1	07/15/2017 02:36
Hexachlorobutadiene	ND		0.0850	0.50	1	07/15/2017 02:36
Hexachloroethane	ND		0.0600	0.50	1	07/15/2017 02:36
2-Hexanone	ND		0.440	0.50	1	07/15/2017 02:36
Isopropylbenzene	ND		0.0700	0.50	1	07/15/2017 02:36
4-Isopropyl toluene	ND		0.0500	0.50	1	07/15/2017 02:36
Methyl-t-butyl ether (MTBE)	ND		0.100	0.50	1	07/15/2017 02:36
Methylene chloride	ND		0.0520	0.50	1	07/15/2017 02:36
4-Methyl-2-pentanone (MIBK)	ND		0.240	0.50	1	07/15/2017 02:36
Naphthalene	ND		0.160	0.50	1	07/15/2017 02:36
n-Propyl benzene	ND		0.0600	0.50	1	07/15/2017 02:36
Styrene	ND		0.0600	0.50	1	07/15/2017 02:36
1,1,1,2-Tetrachloroethane	ND		0.0700	0.50	1	07/15/2017 02:36
1,1,2,2-Tetrachloroethane	ND		0.110	0.50	1	07/15/2017 02:36
Tetrachloroethene	ND		0.0820	0.50	1	07/15/2017 02:36
Toluene	ND		0.0400	0.50	1	07/15/2017 02:36
1,2,3-Trichlorobenzene	ND		0.110	0.50	1	07/15/2017 02:36
1,2,4-Trichlorobenzene	ND		0.0860	0.50	1	07/15/2017 02:36
1,1,1-Trichloroethane	ND		0.0500	0.50	1	07/15/2017 02:36
1,1,2-Trichloroethane	ND		0.0800	0.50	1	07/15/2017 02:36
Trichloroethene	ND		0.0600	0.50	1	07/15/2017 02:36
Trichlorofluoromethane	ND		0.0470	0.50	1	07/15/2017 02:36
1,2,3-Trichloropropane	ND		0.140	0.50	1	07/15/2017 02:36
1,2,4-Trimethylbenzene	ND		0.0650	0.50	1	07/15/2017 02:36
1,3,5-Trimethylbenzene	ND		0.0700	0.50	1	07/15/2017 02:36
Vinyl Chloride	ND		0.0700	0.50	1	07/15/2017 02:36
Xylenes, Total	ND		0.250	0.50	1	07/15/2017 02:36

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# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5	1707284-005C	Water	07/06/2017 11:45	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>		
Dibromofluoromethane	97			70-130		07/15/2017 02:36
Toluene-d8	94			70-130		07/15/2017 02:36
4-BFB	83			70-130		07/15/2017 02:36

**Analyst(s):** KF      **Analytical Comments:** b1



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-6	1707284-006C	Water	07/07/2017 10:18	GC10	141944	
Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	ND		1.70	10	1	07/14/2017 05:22
tert-Amyl methyl ether (TAME)	ND		0.220	0.50	1	07/14/2017 05:22
Benzene	ND		0.0510	0.50	1	07/14/2017 05:22
Bromobenzene	ND		0.0600	0.50	1	07/14/2017 05:22
Bromochloromethane	ND		0.0900	0.50	1	07/14/2017 05:22
Bromodichloromethane	ND		0.200	0.50	1	07/14/2017 05:22
Bromoform	ND		0.0660	0.50	1	07/14/2017 05:22
Bromomethane	ND		0.160	0.50	1	07/14/2017 05:22
2-Butanone (MEK)	ND		0.490	2.0	1	07/14/2017 05:22
t-Butyl alcohol (TBA)	ND		0.940	2.0	1	07/14/2017 05:22
n-Butyl benzene	ND		0.0840	0.50	1	07/14/2017 05:22
sec-Butyl benzene	ND		0.0600	0.50	1	07/14/2017 05:22
tert-Butyl benzene	ND		0.0500	0.50	1	07/14/2017 05:22
Carbon Disulfide	ND		0.0660	0.50	1	07/14/2017 05:22
Carbon Tetrachloride	ND		0.0690	0.50	1	07/14/2017 05:22
Chlorobenzene	ND		0.0500	0.50	1	07/14/2017 05:22
Chloroethane	ND		0.310	0.50	1	07/14/2017 05:22
Chloroform	<b>0.67</b>		0.0640	0.50	1	07/14/2017 05:22
Chloromethane	ND		0.130	0.50	1	07/14/2017 05:22
2-Chlorotoluene	ND		0.0700	0.50	1	07/14/2017 05:22
4-Chlorotoluene	ND		0.0700	0.50	1	07/14/2017 05:22
Dibromochloromethane	ND		0.0800	0.50	1	07/14/2017 05:22
1,2-Dibromo-3-chloropropane	ND		0.120	0.20	1	07/14/2017 05:22
1,2-Dibromoethane (EDB)	ND		0.120	0.50	1	07/14/2017 05:22
Dibromomethane	ND		0.0800	0.50	1	07/14/2017 05:22
1,2-Dichlorobenzene	ND		0.0800	0.50	1	07/14/2017 05:22
1,3-Dichlorobenzene	ND		0.0710	0.50	1	07/14/2017 05:22
1,4-Dichlorobenzene	ND		0.0720	0.50	1	07/14/2017 05:22
Dichlorodifluoromethane	ND		0.0630	0.50	1	07/14/2017 05:22
1,1-Dichloroethane	ND		0.0600	0.50	1	07/14/2017 05:22
1,2-Dichloroethane (1,2-DCA)	ND		0.0900	0.50	1	07/14/2017 05:22
1,1-Dichloroethene	ND		0.0860	0.50	1	07/14/2017 05:22
cis-1,2-Dichloroethene	ND		0.0500	0.50	1	07/14/2017 05:22
trans-1,2-Dichloroethene	ND		0.0600	0.50	1	07/14/2017 05:22
1,2-Dichloropropane	ND		0.0550	0.50	1	07/14/2017 05:22
1,3-Dichloropropane	ND		0.100	0.50	1	07/14/2017 05:22
2,2-Dichloropropane	ND		0.100	0.50	1	07/14/2017 05:22

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-6	1707284-006C	Water	07/07/2017 10:18	GC10	141944

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND		0.0600	0.50	1	07/14/2017 05:22
cis-1,3-Dichloropropene	ND		0.0900	0.50	1	07/14/2017 05:22
trans-1,3-Dichloropropene	ND		0.0700	0.50	1	07/14/2017 05:22
Diisopropyl ether (DIPE)	ND		0.0700	0.50	1	07/14/2017 05:22
Ethylbenzene	ND		0.0500	0.50	1	07/14/2017 05:22
Ethyl tert-butyl ether (ETBE)	ND		0.0700	0.50	1	07/14/2017 05:22
Freon 113	ND		0.0660	0.50	1	07/14/2017 05:22
Hexachlorobutadiene	ND		0.0850	0.50	1	07/14/2017 05:22
Hexachloroethane	ND		0.0600	0.50	1	07/14/2017 05:22
2-Hexanone	ND		0.440	0.50	1	07/14/2017 05:22
Isopropylbenzene	ND		0.0700	0.50	1	07/14/2017 05:22
4-Isopropyl toluene	ND		0.0500	0.50	1	07/14/2017 05:22
Methyl-t-butyl ether (MTBE)	ND		0.100	0.50	1	07/14/2017 05:22
Methylene chloride	ND		0.0520	0.50	1	07/14/2017 05:22
4-Methyl-2-pentanone (MIBK)	ND		0.240	0.50	1	07/14/2017 05:22
Naphthalene	ND		0.160	0.50	1	07/14/2017 05:22
n-Propyl benzene	ND		0.0600	0.50	1	07/14/2017 05:22
Styrene	ND		0.0600	0.50	1	07/14/2017 05:22
1,1,1,2-Tetrachloroethane	ND		0.0700	0.50	1	07/14/2017 05:22
1,1,2,2-Tetrachloroethane	ND		0.110	0.50	1	07/14/2017 05:22
Tetrachloroethene	ND		0.0820	0.50	1	07/14/2017 05:22
Toluene	0.061	J	0.0400	0.50	1	07/14/2017 05:22
1,2,3-Trichlorobenzene	ND		0.110	0.50	1	07/14/2017 05:22
1,2,4-Trichlorobenzene	ND		0.0860	0.50	1	07/14/2017 05:22
1,1,1-Trichloroethane	ND		0.0500	0.50	1	07/14/2017 05:22
1,1,2-Trichloroethane	ND		0.0800	0.50	1	07/14/2017 05:22
Trichloroethene	ND		0.0600	0.50	1	07/14/2017 05:22
Trichlorofluoromethane	ND		0.0470	0.50	1	07/14/2017 05:22
1,2,3-Trichloropropane	ND		0.140	0.50	1	07/14/2017 05:22
1,2,4-Trimethylbenzene	ND		0.0650	0.50	1	07/14/2017 05:22
1,3,5-Trimethylbenzene	ND		0.0700	0.50	1	07/14/2017 05:22
Vinyl Chloride	ND		0.0700	0.50	1	07/14/2017 05:22
Xylenes, Total	ND		0.250	0.50	1	07/14/2017 05:22

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-6	1707284-006C	Water	07/07/2017 10:18	GC10	141944

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>		
Dibromofluoromethane	111			70-130		07/14/2017 05:22
Toluene-d8	115			70-130		07/14/2017 05:22
4-BFB	99			70-130		07/14/2017 05:22

**Analyst(s):** KF **Analytical Comments:** b1



# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-7	1707284-007C	Water	07/07/2017 10:50	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	ND		1.70	10	1	07/15/2017 03:16
tert-Amyl methyl ether (TAME)	ND		0.220	0.50	1	07/15/2017 03:16
Benzene	<b>0.13</b>	J	0.0510	0.50	1	07/15/2017 03:16
Bromobenzene	ND		0.0600	0.50	1	07/15/2017 03:16
Bromochloromethane	ND		0.0900	0.50	1	07/15/2017 03:16
Bromodichloromethane	ND		0.200	0.50	1	07/15/2017 03:16
Bromoform	ND		0.0660	0.50	1	07/15/2017 03:16
Bromomethane	ND		0.160	0.50	1	07/15/2017 03:16
2-Butanone (MEK)	ND		0.490	2.0	1	07/15/2017 03:16
t-Butyl alcohol (TBA)	ND		0.940	2.0	1	07/15/2017 03:16
n-Butyl benzene	<b>0.46</b>	J	0.0840	0.50	1	07/15/2017 03:16
sec-Butyl benzene	<b>1.1</b>		0.0600	0.50	1	07/15/2017 03:16
tert-Butyl benzene	ND		0.0500	0.50	1	07/15/2017 03:16
Carbon Disulfide	ND		0.0660	0.50	1	07/15/2017 03:16
Carbon Tetrachloride	ND		0.0690	0.50	1	07/15/2017 03:16
Chlorobenzene	ND		0.0500	0.50	1	07/15/2017 03:16
Chloroethane	ND		0.310	0.50	1	07/15/2017 03:16
Chloroform	<b>0.11</b>	J	0.0640	0.50	1	07/15/2017 03:16
Chloromethane	ND		0.130	0.50	1	07/15/2017 03:16
2-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 03:16
4-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 03:16
Dibromochloromethane	ND		0.0800	0.50	1	07/15/2017 03:16
1,2-Dibromo-3-chloropropane	ND		0.120	0.20	1	07/15/2017 03:16
1,2-Dibromoethane (EDB)	ND		0.120	0.50	1	07/15/2017 03:16
Dibromomethane	ND		0.0800	0.50	1	07/15/2017 03:16
1,2-Dichlorobenzene	ND		0.0800	0.50	1	07/15/2017 03:16
1,3-Dichlorobenzene	ND		0.0710	0.50	1	07/15/2017 03:16
1,4-Dichlorobenzene	ND		0.0720	0.50	1	07/15/2017 03:16
Dichlorodifluoromethane	ND		0.0630	0.50	1	07/15/2017 03:16
1,1-Dichloroethane	ND		0.0600	0.50	1	07/15/2017 03:16
1,2-Dichloroethane (1,2-DCA)	ND		0.0900	0.50	1	07/15/2017 03:16
1,1-Dichloroethene	ND		0.0860	0.50	1	07/15/2017 03:16
cis-1,2-Dichloroethene	ND		0.0500	0.50	1	07/15/2017 03:16
trans-1,2-Dichloroethene	ND		0.0600	0.50	1	07/15/2017 03:16
1,2-Dichloropropane	ND		0.0550	0.50	1	07/15/2017 03:16
1,3-Dichloropropane	ND		0.100	0.50	1	07/15/2017 03:16
2,2-Dichloropropane	ND		0.100	0.50	1	07/15/2017 03:16

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-7	1707284-007C	Water	07/07/2017 10:50	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND		0.0600	0.50	1	07/15/2017 03:16
cis-1,3-Dichloropropene	ND		0.0900	0.50	1	07/15/2017 03:16
trans-1,3-Dichloropropene	ND		0.0700	0.50	1	07/15/2017 03:16
Diisopropyl ether (DIPE)	ND		0.0700	0.50	1	07/15/2017 03:16
Ethylbenzene	<b>0.054</b>	J	0.0500	0.50	1	07/15/2017 03:16
Ethyl tert-butyl ether (ETBE)	ND		0.0700	0.50	1	07/15/2017 03:16
Freon 113	ND		0.0660	0.50	1	07/15/2017 03:16
Hexachlorobutadiene	ND		0.0850	0.50	1	07/15/2017 03:16
Hexachloroethane	ND		0.0600	0.50	1	07/15/2017 03:16
2-Hexanone	ND		0.440	0.50	1	07/15/2017 03:16
Isopropylbenzene	<b>4.1</b>		0.0700	0.50	1	07/15/2017 03:16
4-Isopropyl toluene	<b>0.49</b>	J	0.0500	0.50	1	07/15/2017 03:16
Methyl-t-butyl ether (MTBE)	ND		0.100	0.50	1	07/15/2017 03:16
Methylene chloride	ND		0.0520	0.50	1	07/15/2017 03:16
4-Methyl-2-pentanone (MIBK)	<b>0.45</b>	J	0.240	0.50	1	07/15/2017 03:16
Naphthalene	ND		0.160	0.50	1	07/15/2017 03:16
n-Propyl benzene	<b>0.32</b>	J	0.0600	0.50	1	07/15/2017 03:16
Styrene	ND		0.0600	0.50	1	07/15/2017 03:16
1,1,1,2-Tetrachloroethane	ND		0.0700	0.50	1	07/15/2017 03:16
1,1,2,2-Tetrachloroethane	ND		0.110	0.50	1	07/15/2017 03:16
Tetrachloroethene	ND		0.0820	0.50	1	07/15/2017 03:16
Toluene	<b>0.27</b>	J	0.0400	0.50	1	07/15/2017 03:16
1,2,3-Trichlorobenzene	ND		0.110	0.50	1	07/15/2017 03:16
1,2,4-Trichlorobenzene	ND		0.0860	0.50	1	07/15/2017 03:16
1,1,1-Trichloroethane	ND		0.0500	0.50	1	07/15/2017 03:16
1,1,2-Trichloroethane	ND		0.0800	0.50	1	07/15/2017 03:16
Trichloroethene	ND		0.0600	0.50	1	07/15/2017 03:16
Trichlorofluoromethane	ND		0.0470	0.50	1	07/15/2017 03:16
1,2,3-Trichloropropane	ND		0.140	0.50	1	07/15/2017 03:16
1,2,4-Trimethylbenzene	<b>0.95</b>		0.0650	0.50	1	07/15/2017 03:16
1,3,5-Trimethylbenzene	<b>1.4</b>		0.0700	0.50	1	07/15/2017 03:16
Vinyl Chloride	ND		0.0700	0.50	1	07/15/2017 03:16
Xylenes, Total	<b>2.2</b>		0.250	0.50	1	07/15/2017 03:16

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-7	1707284-007C	Water	07/07/2017 10:50	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>		
Dibromofluoromethane	97			70-130		07/15/2017 03:16
Toluene-d8	94			70-130		07/15/2017 03:16
4-BFB	80			70-130		07/15/2017 03:16

Analyst(s): KF



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-8	1707284-008C	Water	07/07/2017 11:29	GC18	142057	
Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	ND		1.70	10	1	07/15/2017 03:55
tert-Amyl methyl ether (TAME)	ND		0.220	0.50	1	07/15/2017 03:55
Benzene	ND		0.0510	0.50	1	07/15/2017 03:55
Bromobenzene	ND		0.0600	0.50	1	07/15/2017 03:55
Bromochloromethane	ND		0.0900	0.50	1	07/15/2017 03:55
Bromodichloromethane	ND		0.200	0.50	1	07/15/2017 03:55
Bromoform	ND		0.0660	0.50	1	07/15/2017 03:55
Bromomethane	ND		0.160	0.50	1	07/15/2017 03:55
2-Butanone (MEK)	ND		0.490	2.0	1	07/15/2017 03:55
t-Butyl alcohol (TBA)	ND		0.940	2.0	1	07/15/2017 03:55
n-Butyl benzene	1.6		0.0840	0.50	1	07/15/2017 03:55
sec-Butyl benzene	2.1		0.0600	0.50	1	07/15/2017 03:55
tert-Butyl benzene	ND		0.0500	0.50	1	07/15/2017 03:55
Carbon Disulfide	ND		0.0660	0.50	1	07/15/2017 03:55
Carbon Tetrachloride	ND		0.0690	0.50	1	07/15/2017 03:55
Chlorobenzene	ND		0.0500	0.50	1	07/15/2017 03:55
Chloroethane	ND		0.310	0.50	1	07/15/2017 03:55
Chloroform	0.28	J	0.0640	0.50	1	07/15/2017 03:55
Chloromethane	ND		0.130	0.50	1	07/15/2017 03:55
2-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 03:55
4-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 03:55
Dibromochloromethane	ND		0.0800	0.50	1	07/15/2017 03:55
1,2-Dibromo-3-chloropropane	ND		0.120	0.20	1	07/15/2017 03:55
1,2-Dibromoethane (EDB)	ND		0.120	0.50	1	07/15/2017 03:55
Dibromomethane	ND		0.0800	0.50	1	07/15/2017 03:55
1,2-Dichlorobenzene	ND		0.0800	0.50	1	07/15/2017 03:55
1,3-Dichlorobenzene	ND		0.0710	0.50	1	07/15/2017 03:55
1,4-Dichlorobenzene	ND		0.0720	0.50	1	07/15/2017 03:55
Dichlorodifluoromethane	ND		0.0630	0.50	1	07/15/2017 03:55
1,1-Dichloroethane	ND		0.0600	0.50	1	07/15/2017 03:55
1,2-Dichloroethane (1,2-DCA)	ND		0.0900	0.50	1	07/15/2017 03:55
1,1-Dichloroethene	ND		0.0860	0.50	1	07/15/2017 03:55
cis-1,2-Dichloroethene	ND		0.0500	0.50	1	07/15/2017 03:55
trans-1,2-Dichloroethene	ND		0.0600	0.50	1	07/15/2017 03:55
1,2-Dichloropropane	ND		0.0550	0.50	1	07/15/2017 03:55
1,3-Dichloropropane	ND		0.100	0.50	1	07/15/2017 03:55
2,2-Dichloropropane	ND		0.100	0.50	1	07/15/2017 03:55

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# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-8	1707284-008C	Water	07/07/2017 11:29	GC18	142057	
Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND		0.0600	0.50	1	07/15/2017 03:55
cis-1,3-Dichloropropene	ND		0.0900	0.50	1	07/15/2017 03:55
trans-1,3-Dichloropropene	ND		0.0700	0.50	1	07/15/2017 03:55
Diisopropyl ether (DIPE)	ND		0.0700	0.50	1	07/15/2017 03:55
Ethylbenzene	6.9		0.0500	0.50	1	07/15/2017 03:55
Ethyl tert-butyl ether (ETBE)	ND		0.0700	0.50	1	07/15/2017 03:55
Freon 113	ND		0.0660	0.50	1	07/15/2017 03:55
Hexachlorobutadiene	ND		0.0850	0.50	1	07/15/2017 03:55
Hexachloroethane	ND		0.0600	0.50	1	07/15/2017 03:55
2-Hexanone	ND		0.440	0.50	1	07/15/2017 03:55
Isopropylbenzene	3.1		0.0700	0.50	1	07/15/2017 03:55
4-Isopropyl toluene	0.71		0.0500	0.50	1	07/15/2017 03:55
Methyl-t-butyl ether (MTBE)	ND		0.100	0.50	1	07/15/2017 03:55
Methylene chloride	ND		0.0520	0.50	1	07/15/2017 03:55
4-Methyl-2-pentanone (MIBK)	ND		0.240	0.50	1	07/15/2017 03:55
Naphthalene	2.7		0.160	0.50	1	07/15/2017 03:55
n-Propyl benzene	3.3		0.0600	0.50	1	07/15/2017 03:55
Styrene	ND		0.0600	0.50	1	07/15/2017 03:55
1,1,1,2-Tetrachloroethane	ND		0.0700	0.50	1	07/15/2017 03:55
1,1,2,2-Tetrachloroethane	ND		0.110	0.50	1	07/15/2017 03:55
Tetrachloroethene	ND		0.0820	0.50	1	07/15/2017 03:55
Toluene	0.088	J	0.0400	0.50	1	07/15/2017 03:55
1,2,3-Trichlorobenzene	ND		0.110	0.50	1	07/15/2017 03:55
1,2,4-Trichlorobenzene	ND		0.0860	0.50	1	07/15/2017 03:55
1,1,1-Trichloroethane	ND		0.0500	0.50	1	07/15/2017 03:55
1,1,2-Trichloroethane	ND		0.0800	0.50	1	07/15/2017 03:55
Trichloroethene	ND		0.0600	0.50	1	07/15/2017 03:55
Trichlorofluoromethane	ND		0.0470	0.50	1	07/15/2017 03:55
1,2,3-Trichloropropane	ND		0.140	0.50	1	07/15/2017 03:55
1,2,4-Trimethylbenzene	11		0.0650	0.50	1	07/15/2017 03:55
1,3,5-Trimethylbenzene	6.3		0.0700	0.50	1	07/15/2017 03:55
Vinyl Chloride	ND		0.0700	0.50	1	07/15/2017 03:55
Xylenes, Total	4.0		0.250	0.50	1	07/15/2017 03:55

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# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-8	1707284-008C	Water	07/07/2017 11:29	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>		
Dibromofluoromethane	108			70-130		07/15/2017 03:55
Toluene-d8	91			70-130		07/15/2017 03:55
4-BFB	80			70-130		07/15/2017 03:55

**Analyst(s):** KF      **Analytical Comments:** b1



# Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-9	1707284-009C	Water	07/07/2017 12:35	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acetone	ND		1.70	10	1	07/15/2017 04:34
tert-Amyl methyl ether (TAME)	ND		0.220	0.50	1	07/15/2017 04:34
Benzene	ND		0.0510	0.50	1	07/15/2017 04:34
Bromobenzene	ND		0.0600	0.50	1	07/15/2017 04:34
Bromochloromethane	ND		0.0900	0.50	1	07/15/2017 04:34
Bromodichloromethane	ND		0.200	0.50	1	07/15/2017 04:34
Bromoform	ND		0.0660	0.50	1	07/15/2017 04:34
Bromomethane	ND		0.160	0.50	1	07/15/2017 04:34
2-Butanone (MEK)	ND		0.490	2.0	1	07/15/2017 04:34
t-Butyl alcohol (TBA)	ND		0.940	2.0	1	07/15/2017 04:34
n-Butyl benzene	ND		0.0840	0.50	1	07/15/2017 04:34
sec-Butyl benzene	ND		0.0600	0.50	1	07/15/2017 04:34
tert-Butyl benzene	ND		0.0500	0.50	1	07/15/2017 04:34
Carbon Disulfide	ND		0.0660	0.50	1	07/15/2017 04:34
Carbon Tetrachloride	ND		0.0690	0.50	1	07/15/2017 04:34
Chlorobenzene	ND		0.0500	0.50	1	07/15/2017 04:34
Chloroethane	ND		0.310	0.50	1	07/15/2017 04:34
Chloroform	<b>0.16</b>	J	0.0640	0.50	1	07/15/2017 04:34
Chloromethane	ND		0.130	0.50	1	07/15/2017 04:34
2-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 04:34
4-Chlorotoluene	ND		0.0700	0.50	1	07/15/2017 04:34
Dibromochloromethane	ND		0.0800	0.50	1	07/15/2017 04:34
1,2-Dibromo-3-chloropropane	ND		0.120	0.20	1	07/15/2017 04:34
1,2-Dibromoethane (EDB)	ND		0.120	0.50	1	07/15/2017 04:34
Dibromomethane	ND		0.0800	0.50	1	07/15/2017 04:34
1,2-Dichlorobenzene	ND		0.0800	0.50	1	07/15/2017 04:34
1,3-Dichlorobenzene	ND		0.0710	0.50	1	07/15/2017 04:34
1,4-Dichlorobenzene	ND		0.0720	0.50	1	07/15/2017 04:34
Dichlorodifluoromethane	ND		0.0630	0.50	1	07/15/2017 04:34
1,1-Dichloroethane	ND		0.0600	0.50	1	07/15/2017 04:34
1,2-Dichloroethane (1,2-DCA)	ND		0.0900	0.50	1	07/15/2017 04:34
1,1-Dichloroethene	ND		0.0860	0.50	1	07/15/2017 04:34
cis-1,2-Dichloroethene	ND		0.0500	0.50	1	07/15/2017 04:34
trans-1,2-Dichloroethene	ND		0.0600	0.50	1	07/15/2017 04:34
1,2-Dichloropropane	ND		0.0550	0.50	1	07/15/2017 04:34
1,3-Dichloropropane	ND		0.100	0.50	1	07/15/2017 04:34
2,2-Dichloropropane	ND		0.100	0.50	1	07/15/2017 04:34

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-9	1707284-009C	Water	07/07/2017 12:35	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
1,1-Dichloropropene	ND		0.0600	0.50	1	07/15/2017 04:34
cis-1,3-Dichloropropene	ND		0.0900	0.50	1	07/15/2017 04:34
trans-1,3-Dichloropropene	ND		0.0700	0.50	1	07/15/2017 04:34
Diisopropyl ether (DIPE)	ND		0.0700	0.50	1	07/15/2017 04:34
Ethylbenzene	ND		0.0500	0.50	1	07/15/2017 04:34
Ethyl tert-butyl ether (ETBE)	ND		0.0700	0.50	1	07/15/2017 04:34
Freon 113	ND		0.0660	0.50	1	07/15/2017 04:34
Hexachlorobutadiene	ND		0.0850	0.50	1	07/15/2017 04:34
Hexachloroethane	ND		0.0600	0.50	1	07/15/2017 04:34
2-Hexanone	ND		0.440	0.50	1	07/15/2017 04:34
Isopropylbenzene	ND		0.0700	0.50	1	07/15/2017 04:34
4-Isopropyl toluene	ND		0.0500	0.50	1	07/15/2017 04:34
Methyl-t-butyl ether (MTBE)	ND		0.100	0.50	1	07/15/2017 04:34
Methylene chloride	ND		0.0520	0.50	1	07/15/2017 04:34
4-Methyl-2-pentanone (MIBK)	ND		0.240	0.50	1	07/15/2017 04:34
Naphthalene	ND		0.160	0.50	1	07/15/2017 04:34
n-Propyl benzene	ND		0.0600	0.50	1	07/15/2017 04:34
Styrene	ND		0.0600	0.50	1	07/15/2017 04:34
1,1,1,2-Tetrachloroethane	ND		0.0700	0.50	1	07/15/2017 04:34
1,1,2,2-Tetrachloroethane	ND		0.110	0.50	1	07/15/2017 04:34
Tetrachloroethene	ND		0.0820	0.50	1	07/15/2017 04:34
Toluene	0.051	J	0.0400	0.50	1	07/15/2017 04:34
1,2,3-Trichlorobenzene	ND		0.110	0.50	1	07/15/2017 04:34
1,2,4-Trichlorobenzene	ND		0.0860	0.50	1	07/15/2017 04:34
1,1,1-Trichloroethane	ND		0.0500	0.50	1	07/15/2017 04:34
1,1,2-Trichloroethane	ND		0.0800	0.50	1	07/15/2017 04:34
Trichloroethene	ND		0.0600	0.50	1	07/15/2017 04:34
Trichlorofluoromethane	ND		0.0470	0.50	1	07/15/2017 04:34
1,2,3-Trichloropropane	ND		0.140	0.50	1	07/15/2017 04:34
1,2,4-Trimethylbenzene	ND		0.0650	0.50	1	07/15/2017 04:34
1,3,5-Trimethylbenzene	ND		0.0700	0.50	1	07/15/2017 04:34
Vinyl Chloride	ND		0.0700	0.50	1	07/15/2017 04:34
Xylenes, Total	ND		0.250	0.50	1	07/15/2017 04:34

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17-7/15/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-9	1707284-009C	Water	07/07/2017 12:35	GC18	142057

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>		
Dibromofluoromethane	97			70-130		07/15/2017 04:34
Toluene-d8	93			70-130		07/15/2017 04:34
4-BFB	84			70-130		07/15/2017 04:34

**Analyst(s):** KF **Analytical Comments:** b1



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/14/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	1707284-001C	Water	07/06/2017 08:24	GC10	141944

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	11	50	1	07/14/2017 04:43

Surrogates	REC (%)	Limits
Dibromofluoromethane	121	70-130

**Analyst(s):** KF **Analytical Comments:** b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-6	1707284-006C	Water	07/07/2017 10:18	GC10	141944

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	11	50	1	07/14/2017 05:22

Surrogates	REC (%)	Limits
Dibromofluoromethane	119	70-130

**Analyst(s):** KF **Analytical Comments:** b1



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/11/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1,3,5-4	1707284-010A	Soil	07/06/2017 07:55	GC7	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.26	J	0.090	1.0	1	07/11/2017 22:14
MTBE	---		0.0023	0.050	1	07/11/2017 22:14
Benzene	ND		0.0010	0.0050	1	07/11/2017 22:14
Toluene	ND		0.0012	0.0050	1	07/11/2017 22:14
Ethylbenzene	ND		0.0020	0.0050	1	07/11/2017 22:14
Xylenes	ND		0.0025	0.015	1	07/11/2017 22:14

Surrogates	REC (%)	Limits
2-Fluorotoluene	81	62-126

Analyst(s): HD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2,3,5-4	1707284-011A	Soil	07/06/2017 08:33	GC19	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.36	J	0.090	1.0	1	07/11/2017 19:31
MTBE	---		0.0023	0.050	1	07/11/2017 19:31
Benzene	ND		0.0010	0.0050	1	07/11/2017 19:31
Toluene	ND		0.0012	0.0050	1	07/11/2017 19:31
Ethylbenzene	ND		0.0020	0.0050	1	07/11/2017 19:31
Xylenes	ND		0.0025	0.015	1	07/11/2017 19:31

Surrogates	REC (%)	Limits
2-Fluorotoluene	88	62-126

Analyst(s): HD



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/11/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3,3.5-4	1707284-012A	Soil	07/06/2017 09:19	GC19	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.26	J	0.090	1.0	1	07/11/2017 21:05
MTBE	---		0.0023	0.050	1	07/11/2017 21:05
Benzene	ND		0.0010	0.0050	1	07/11/2017 21:05
Toluene	ND		0.0012	0.0050	1	07/11/2017 21:05
Ethylbenzene	ND		0.0020	0.0050	1	07/11/2017 21:05
Xylenes	ND	J	0.0025	0.015	1	07/11/2017 21:05

Surrogates	REC (%)	Limits
2-Fluorotoluene	84	62-126

Analyst(s): HD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4,3.5-4	1707284-013A	Soil	07/06/2017 10:12	GC19	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.33	J	0.090	1.0	1	07/11/2017 21:36
MTBE	---		0.0023	0.050	1	07/11/2017 21:36
Benzene	ND		0.0010	0.0050	1	07/11/2017 21:36
Toluene	ND		0.0012	0.0050	1	07/11/2017 21:36
Ethylbenzene	ND		0.0020	0.0050	1	07/11/2017 21:36
Xylenes	ND		0.0025	0.015	1	07/11/2017 21:36

Surrogates	REC (%)	Limits
2-Fluorotoluene	85	62-126

Analyst(s): HD





## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/11/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5,3.5-4	1707284-014A	Soil	07/06/2017 11:07	GC19	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.28	J	0.090	1.0	1	07/11/2017 22:07
MTBE	---		0.0023	0.050	1	07/11/2017 22:07
Benzene	ND		0.0010	0.0050	1	07/11/2017 22:07
Toluene	ND		0.0012	0.0050	1	07/11/2017 22:07
Ethylbenzene	ND		0.0020	0.0050	1	07/11/2017 22:07
Xylenes	ND		0.0025	0.015	1	07/11/2017 22:07

Surrogates	REC (%)	Limits
2-Fluorotoluene	88	62-126

Analyst(s): HD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-6,3.5-4	1707284-015A	Soil	07/07/2017 08:18	GC19	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.27	J	0.090	1.0	1	07/11/2017 22:38
MTBE	---		0.0023	0.050	1	07/11/2017 22:38
Benzene	ND		0.0010	0.0050	1	07/11/2017 22:38
Toluene	ND		0.0012	0.0050	1	07/11/2017 22:38
Ethylbenzene	ND		0.0020	0.0050	1	07/11/2017 22:38
Xylenes	ND		0.0025	0.015	1	07/11/2017 22:38

Surrogates	REC (%)	Limits
2-Fluorotoluene	92	62-126

Analyst(s): HD



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/11/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-7,3.5-4	1707284-016A	Soil	07/07/2017 08:41	GC19	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.46	J	0.090	1.0	1	07/11/2017 23:40
MTBE	---		0.0023	0.050	1	07/11/2017 23:40
Benzene	ND		0.0010	0.0050	1	07/11/2017 23:40
Toluene	ND		0.0012	0.0050	1	07/11/2017 23:40
Ethylbenzene	ND		0.0020	0.0050	1	07/11/2017 23:40
Xylenes	ND		0.0025	0.015	1	07/11/2017 23:40

Surrogates	REC (%)	Limits
2-Fluorotoluene	91	62-126

Analyst(s): HD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-8,3.5-4	1707284-017A	Soil	07/07/2017 09:04	GC19	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.35	J	0.090	1.0	1	07/12/2017 00:11
MTBE	---		0.0023	0.050	1	07/12/2017 00:11
Benzene	ND		0.0010	0.0050	1	07/12/2017 00:11
Toluene	ND		0.0012	0.0050	1	07/12/2017 00:11
Ethylbenzene	ND		0.0020	0.0050	1	07/12/2017 00:11
Xylenes	ND		0.0025	0.015	1	07/12/2017 00:11

Surrogates	REC (%)	Limits
2-Fluorotoluene	90	62-126

Analyst(s): HD



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/11/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-9,3.5-4	1707284-018A	Soil	07/07/2017 09:28	GC19	141784

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
TPH(g) (C6-C12)	0.44	J	0.090	1.0	1	07/12/2017 00:41
MTBE	---		0.0023	0.050	1	07/12/2017 00:41
Benzene	ND		0.0010	0.0050	1	07/12/2017 00:41
Toluene	ND		0.0012	0.0050	1	07/12/2017 00:41
Ethylbenzene	ND		0.0020	0.0050	1	07/12/2017 00:41
Xylenes	ND		0.0025	0.015	1	07/12/2017 00:41

Surrogates	REC (%)	Limits
2-Fluorotoluene	88	62-126

Analyst(s): HD



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/12/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	1707284-001A	Water	07/06/2017 08:24	GC11A	141873

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	53	47	47	1	07/12/2017 21:44
TPH-Motor Oil (C18-C36)	ND	100	100	1	07/12/2017 21:44

Surrogates	REC (%)	Limits
C26	71	71-134

**Analyst(s):** TK **Analytical Comments:** e2,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2	1707284-002A	Water	07/06/2017 09:09	GC11A	141873

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	84	84	1	07/12/2017 23:03
TPH-Motor Oil (C18-C36)	ND	180	180	1	07/12/2017 23:03

Surrogates	REC (%)	Limits
C26	76	71-134

**Analyst(s):** TK **Analytical Comments:** b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3	1707284-003A	Water	07/06/2017 09:55	GC11A	141873

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	82	82	1	07/13/2017 00:21
TPH-Motor Oil (C18-C36)	ND	170	170	1	07/13/2017 00:21

Surrogates	REC (%)	Limits
C26	72	71-134

**Analyst(s):** TK **Analytical Comments:** b1



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/12/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-4	1707284-004A	Water	07/06/2017 10:48	GC11A	141873	
<u>Analytes</u>		<u>Result</u>	<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		360	39	39	1	07/13/2017 01:39
TPH-Motor Oil (C18-C36)		520	83	83	1	07/13/2017 01:39
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>			
C26		74	71-134			07/13/2017 01:39
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2,b1			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-5	1707284-005A	Water	07/06/2017 11:45	GC11A	141873	
<u>Analytes</u>		<u>Result</u>	<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		ND	83	83	1	07/13/2017 02:57
TPH-Motor Oil (C18-C36)		ND	180	180	1	07/13/2017 02:57
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>			
C26		73	71-134			07/13/2017 02:57
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> b1			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
B-6	1707284-006A	Water	07/07/2017 10:18	GC11A	141873	
<u>Analytes</u>		<u>Result</u>	<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)		49	43	43	1	07/13/2017 05:32
TPH-Motor Oil (C18-C36)		ND	91	91	1	07/13/2017 05:32
<u>Surrogates</u>		<u>REC (%)</u>	<u>Limits</u>			
C26		71	71-134			07/13/2017 05:32
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e2,b1			

(Cont.)



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/12/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW3510C/3630C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-7	1707284-007A	Water	07/07/2017 10:50	GC11A	141873

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	73	36	36	1	07/13/2017 18:31
TPH-Motor Oil (C18-C36)	78	76	76	1	07/13/2017 18:31

Surrogates	REC (%)	Qualifiers	Limits	
C26	70	S	71-134	07/13/2017 18:31

**Analyst(s):** TK **Analytical Comments:** e7,e2,e4,c2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-8	1707284-008A	Water	07/07/2017 11:29	GC11A	141873

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	130	43	43	1	07/13/2017 19:52
TPH-Motor Oil (C18-C36)	ND	92	92	1	07/13/2017 19:52

Surrogates	REC (%)	Limits	
C26	83	71-134	07/13/2017 19:52

**Analyst(s):** TK **Analytical Comments:** e4,e2,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-9	1707284-009A	Water	07/07/2017 12:35	GC11A	141873

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	44	44	1	07/13/2017 21:13
TPH-Motor Oil (C18-C36)	ND	94	94	1	07/13/2017 21:13

Surrogates	REC (%)	Limits	
C26	80	71-134	07/13/2017 21:13

**Analyst(s):** TK **Analytical Comments:** b1



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/12/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-1	1707284-001B	Water	07/06/2017 08:24	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	100	47	47	1	07/13/2017 06:50
TPH-Motor Oil (C18-C36)	100	100	100	1	07/13/2017 06:50

Surrogates	REC (%)	Limits
C26	71	70-130

**Analyst(s):** TK **Analytical Comments:** e2,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2	1707284-002B	Water	07/06/2017 09:09	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	84	84	1	07/13/2017 08:09
TPH-Motor Oil (C18-C36)	ND	180	180	1	07/13/2017 08:09

Surrogates	REC (%)	Qualifiers	Limits
C26	65	S	70-130

**Analyst(s):** TK **Analytical Comments:** c2,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3	1707284-003B	Water	07/06/2017 09:55	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	82	82	1	07/13/2017 09:27
TPH-Motor Oil (C18-C36)	ND	170	170	1	07/13/2017 09:27

Surrogates	REC (%)	Qualifiers	Limits
C26	65	S	70-130

**Analyst(s):** TK **Analytical Comments:** c2,b1

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/12/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4	1707284-004B	Water	07/06/2017 10:48	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	810	39	39	1	07/13/2017 10:47
TPH-Motor Oil (C18-C36)	1100	83	83	1	07/13/2017 10:47

Surrogates	REC (%)	Limits
C26	93	70-130

**Analyst(s):** TK **Analytical Comments:** e7,e2,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5	1707284-005B	Water	07/06/2017 11:45	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	83	83	1	07/13/2017 17:10
TPH-Motor Oil (C18-C36)	ND	180	180	1	07/13/2017 17:10

Surrogates	REC (%)	Limits
C26	91	70-130

**Analyst(s):** TK **Analytical Comments:** b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-6	1707284-006B	Water	07/07/2017 10:18	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	140	43	43	1	07/13/2017 17:51
TPH-Motor Oil (C18-C36)	150	91	91	1	07/13/2017 17:51

Surrogates	REC (%)	Qualifiers	Limits
C26	60	S	70-130

**Analyst(s):** TK **Analytical Comments:** e7,e2,c2,b1

(Cont.)





## Analytical Report

**Client:** ERAS Environmental, Inc.  
**Date Received:** 7/10/17 15:58  
**Date Prepared:** 7/12/17  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-7	1707284-007B	Water	07/07/2017 10:50	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	110	36	36	1	07/13/2017 22:33
TPH-Motor Oil (C18-C36)	190	76	76	1	07/13/2017 22:33

Surrogates	REC (%)	Limits
C26	84	70-130

**Analyst(s):** TK **Analytical Comments:** e7,e2,e11/e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-8	1707284-008B	Water	07/07/2017 11:29	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	170	43	43	1	07/13/2017 23:53
TPH-Motor Oil (C18-C36)	ND	92	92	1	07/13/2017 23:53

Surrogates	REC (%)	Limits
C26	82	70-130

**Analyst(s):** TK **Analytical Comments:** e4,e2,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-9	1707284-009B	Water	07/07/2017 12:35	GC11A	141871

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	79	44	44	1	07/14/2017 01:11
TPH-Motor Oil (C18-C36)	110	94	94	1	07/14/2017 01:11

Surrogates	REC (%)	Limits
C26	82	70-130

**Analyst(s):** TK **Analytical Comments:** e7,e2,b1



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 7/13/17  
**Date Analyzed:** 7/13/17  
**Instrument:** GC10  
**Matrix:** Water  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**BatchID:** 141944  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-141944

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	150	1.7	10	200	-	75	46-155
tert-Amyl methyl ether (TAME)	ND	8.04	0.22	0.50	10	-	80	54-140
Benzene	ND	9.78	0.051	0.50	10	-	98	47-158
Bromobenzene	ND	9.01	0.060	0.50	10	-	90	50-155
Bromochloromethane	ND	8.99	0.090	0.50	10	-	90	48-160
Bromodichloromethane	ND	9.00	0.20	0.50	10	-	90	60-156
Bromoform	ND	7.56	0.066	0.50	10	-	76	43-149
Bromomethane	ND	11.8	0.16	0.50	10	-	119	61-159
2-Butanone (MEK)	ND	27.5	0.49	2.0	40	-	69	61-124
t-Butyl alcohol (TBA)	ND	24.7	0.94	2.0	40	-	62	42-140
n-Butyl benzene	ND	10.0	0.084	0.50	10	-	101	74-138
sec-Butyl benzene	ND	10.5	0.060	0.50	10	-	105	72-142
tert-Butyl benzene	ND	9.47	0.050	0.50	10	-	95	74-140
Carbon Disulfide	ND	9.70	0.066	0.50	10	-	97	64-127
Carbon Tetrachloride	ND	10.4	0.069	0.50	10	-	104	61-158
Chlorobenzene	ND	9.33	0.050	0.50	10	-	93	43-157
Chloroethane	ND	11.0	0.31	0.50	10	-	110	50-127
Chloroform	ND	9.82	0.064	0.50	10	-	98	56-154
Chloromethane	ND	11.0	0.13	0.50	10	-	110	41-132
2-Chlorotoluene	ND	9.65	0.070	0.50	10	-	96	50-155
4-Chlorotoluene	ND	9.31	0.070	0.50	10	-	93	53-153
Dibromochloromethane	ND	8.39	0.080	0.50	10	-	84	49-156
1,2-Dibromo-3-chloropropane	ND	2.73	0.12	0.20	4	-	68	46-149
1,2-Dibromoethane (EDB)	ND	8.11	0.12	0.50	10	-	81	44-155
Dibromomethane	ND	8.48	0.080	0.50	10	-	85	50-157
1,2-Dichlorobenzene	ND	9.12	0.080	0.50	10	-	91	48-156
1,3-Dichlorobenzene	ND	9.06	0.071	0.50	10	-	91	49-159
1,4-Dichlorobenzene	ND	8.69	0.072	0.50	10	-	87	51-151
Dichlorodifluoromethane	ND	9.97	0.063	0.50	10	-	100	61-117
1,1-Dichloroethane	ND	10.1	0.060	0.50	10	-	101	53-153
1,2-Dichloroethane (1,2-DCA)	ND	9.52	0.090	0.50	10	-	95	66-125
1,1-Dichloroethene	ND	9.68	0.086	0.50	10	-	97	47-149
cis-1,2-Dichloroethene	ND	9.60	0.050	0.50	10	-	96	54-155
trans-1,2-Dichloroethene	ND	9.96	0.060	0.50	10	-	100	46-151
1,2-Dichloropropane	ND	9.59	0.055	0.50	10	-	96	54-153
1,3-Dichloropropane	ND	8.64	0.10	0.50	10	-	86	49-150
2,2-Dichloropropane	ND	10.0	0.10	0.50	10	-	100	74-147

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 7/13/17  
**Date Analyzed:** 7/13/17  
**Instrument:** GC10  
**Matrix:** Water  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**BatchID:** 141944  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-141944

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	10.2	0.060	0.50	10	-	102	54-150
cis-1,3-Dichloropropene	ND	9.00	0.090	0.50	10	-	90	55-159
trans-1,3-Dichloropropene	ND	8.76	0.070	0.50	10	-	88	74-131
Diisopropyl ether (DIPE)	ND	8.94	0.070	0.50	10	-	89	57-136
Ethylbenzene	ND	10.6	0.050	0.50	10	-	106	60-152
Ethyl tert-butyl ether (ETBE)	ND	8.73	0.070	0.50	10	-	87	55-137
Freon 113	ND	10.3	0.066	0.50	10	-	103	47-138
Hexachlorobutadiene	ND	9.83	0.085	0.50	10	-	98	66-160
Hexachloroethane	ND	9.39	0.060	0.50	10	-	94	75-130
2-Hexanone	ND	6.46	0.44	0.50	10	-	65, F2	70-115
Isopropylbenzene	ND	11.1	0.070	0.50	10	-	111	59-156
4-Isopropyl toluene	ND	9.18	0.050	0.50	10	-	92	75-138
Methyl-t-butyl ether (MTBE)	ND	8.26	0.10	0.50	10	-	83	53-139
Methylene chloride	0.2803,J	10.1	0.052	0.50	10	-	101	66-127
4-Methyl-2-pentanone (MIBK)	ND	6.69	0.24	0.50	10	-	67	42-153
Naphthalene	ND	6.82	0.16	0.50	10	-	68	66-127
n-Propyl benzene	ND	9.74	0.060	0.50	10	-	97	54-155
Styrene	ND	9.30	0.060	0.50	10	-	93	51-152
1,1,1,2-Tetrachloroethane	ND	9.13	0.070	0.50	10	-	91	58-159
1,1,2,2-Tetrachloroethane	ND	7.04	0.11	0.50	10	-	70	51-150
Tetrachloroethene	ND	9.89	0.082	0.50	10	-	99	55-145
Toluene	ND	9.30	0.040	0.50	10	-	93	52-137
1,2,3-Trichlorobenzene	ND	7.72	0.11	0.50	10	-	77	70-136
1,2,4-Trichlorobenzene	ND	7.91	0.086	0.50	10	-	79	74-137
1,1,1-Trichloroethane	ND	10.3	0.050	0.50	10	-	103	57-156
1,1,2-Trichloroethane	ND	8.11	0.080	0.50	10	-	81	51-150
Trichloroethene	ND	9.74	0.060	0.50	10	-	97	43-157
Trichlorofluoromethane	ND	10.5	0.047	0.50	10	-	105	50-147
1,2,3-Trichloropropane	ND	7.46	0.14	0.50	10	-	75	41-152
1,2,4-Trimethylbenzene	ND	8.88	0.065	0.50	10	-	89	57-157
1,3,5-Trimethylbenzene	ND	10.2	0.070	0.50	10	-	102	56-159
Vinyl Chloride	ND	11.4	0.070	0.50	10	-	114	42-137
Xylenes, Total	ND	30.4	0.25	0.50	30	-	101	70-130

(Cont.)



## Quality Control Report

<b>Client:</b> ERAS Environmental, Inc.	<b>WorkOrder:</b> 1707284
<b>Date Prepared:</b> 7/13/17	<b>BatchID:</b> 141944
<b>Date Analyzed:</b> 7/13/17	<b>Extraction Method:</b> SW5030B
<b>Instrument:</b> GC10	<b>Analytical Method:</b> SW8260B
<b>Matrix:</b> Water	<b>Unit:</b> µg/L
<b>Project:</b> 16-002; 2449-2451 Santa Clara Ave	<b>Sample ID:</b> MB/LCS-141944

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
<b>Surrogate Recovery</b>								
Dibromofluoromethane	27.07	27.1			25	108	108	70-130
Toluene-d8	29.25	29.7			25	117	119	70-130
4-BFB	2.642	2.71			2.5	106	108	70-130



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 7/14/17  
**Date Analyzed:** 7/14/17  
**Instrument:** GC18  
**Matrix:** Water  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**BatchID:** 142057  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-142057

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	184	1.7	10	200	-	92	46-155
tert-Amyl methyl ether (TAME)	ND	9.20	0.22	0.50	10	-	92	54-140
Benzene	ND	8.65	0.051	0.50	10	-	86	47-158
Bromobenzene	ND	8.42	0.060	0.50	10	-	84	50-155
Bromochloromethane	ND	9.05	0.090	0.50	10	-	91	48-160
Bromodichloromethane	ND	9.02	0.20	0.50	10	-	90	60-156
Bromoform	ND	9.52	0.066	0.50	10	-	95	43-149
Bromomethane	ND	9.58	0.16	0.50	10	-	96	61-159
2-Butanone (MEK)	ND	37.6	0.49	2.0	40	-	94	61-124
t-Butyl alcohol (TBA)	ND	45.7	0.94	2.0	40	-	114	42-140
n-Butyl benzene	ND	8.55	0.084	0.50	10	-	85	74-138
sec-Butyl benzene	ND	8.88	0.060	0.50	10	-	89	72-142
tert-Butyl benzene	ND	8.34	0.050	0.50	10	-	83	74-140
Carbon Disulfide	ND	8.53	0.066	0.50	10	-	85	64-127
Carbon Tetrachloride	ND	8.93	0.069	0.50	10	-	89	61-158
Chlorobenzene	ND	8.54	0.050	0.50	10	-	85	43-157
Chloroethane	ND	9.30	0.31	0.50	10	-	93	50-127
Chloroform	ND	8.45	0.064	0.50	10	-	84	56-154
Chloromethane	ND	9.67	0.13	0.50	10	-	97	41-132
2-Chlorotoluene	ND	8.95	0.070	0.50	10	-	90	50-155
4-Chlorotoluene	ND	8.23	0.070	0.50	10	-	82	53-153
Dibromochloromethane	ND	8.38	0.080	0.50	10	-	84	49-156
1,2-Dibromo-3-chloropropane	ND	3.75	0.12	0.20	4	-	94	46-149
1,2-Dibromoethane (EDB)	ND	9.04	0.12	0.50	10	-	90	44-155
Dibromomethane	ND	9.17	0.080	0.50	10	-	92	50-157
1,2-Dichlorobenzene	ND	8.54	0.080	0.50	10	-	85	48-156
1,3-Dichlorobenzene	ND	9.30	0.071	0.50	10	-	93	49-159
1,4-Dichlorobenzene	ND	8.58	0.072	0.50	10	-	86	51-151
Dichlorodifluoromethane	ND	9.24	0.063	0.50	10	-	92	61-117
1,1-Dichloroethane	ND	8.80	0.060	0.50	10	-	88	53-153
1,2-Dichloroethane (1,2-DCA)	ND	9.05	0.090	0.50	10	-	91	66-125
1,1-Dichloroethene	ND	8.32	0.086	0.50	10	-	83	47-149
cis-1,2-Dichloroethene	ND	8.83	0.050	0.50	10	-	88	54-155
trans-1,2-Dichloroethene	ND	8.60	0.060	0.50	10	-	86	46-151
1,2-Dichloropropane	ND	8.82	0.055	0.50	10	-	88	54-153
1,3-Dichloropropane	ND	8.86	0.10	0.50	10	-	89	49-150
2,2-Dichloropropane	ND	8.88	0.10	0.50	10	-	89	74-147

(Cont.)



## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 7/14/17  
**Date Analyzed:** 7/14/17  
**Instrument:** GC18  
**Matrix:** Water  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**BatchID:** 142057  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-142057

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	8.64	0.060	0.50	10	-	86	54-150
cis-1,3-Dichloropropene	ND	8.67	0.090	0.50	10	-	87	55-159
trans-1,3-Dichloropropene	ND	9.10	0.070	0.50	10	-	91	74-131
Diisopropyl ether (DIPE)	ND	8.84	0.070	0.50	10	-	88	57-136
Ethylbenzene	ND	8.54	0.050	0.50	10	-	85	60-152
Ethyl tert-butyl ether (ETBE)	ND	9.28	0.070	0.50	10	-	93	55-137
Freon 113	ND	8.46	0.066	0.50	10	-	85	47-138
Hexachlorobutadiene	ND	8.34	0.085	0.50	10	-	83	66-160
Hexachloroethane	ND	7.62	0.060	0.50	10	-	76	75-130
2-Hexanone	ND	9.42	0.44	0.50	10	-	94	70-115
Isopropylbenzene	ND	8.47	0.070	0.50	10	-	85	59-156
4-Isopropyl toluene	ND	8.44	0.050	0.50	10	-	84	75-138
Methyl-t-butyl ether (MTBE)	ND	9.27	0.10	0.50	10	-	93	53-139
Methylene chloride	ND	7.99	0.052	0.50	10	-	80	66-127
4-Methyl-2-pentanone (MIBK)	ND	9.26	0.24	0.50	10	-	93	42-153
Naphthalene	ND	9.07	0.16	0.50	10	-	91	66-127
n-Propyl benzene	ND	8.83	0.060	0.50	10	-	88	54-155
Styrene	ND	8.77	0.060	0.50	10	-	88	51-152
1,1,1,2-Tetrachloroethane	ND	8.82	0.070	0.50	10	-	88	58-159
1,1,2,2-Tetrachloroethane	ND	9.19	0.11	0.50	10	-	92	51-150
Tetrachloroethene	ND	8.22	0.082	0.50	10	-	82	55-145
Toluene	ND	8.42	0.040	0.50	10	-	84	52-137
1,2,3-Trichlorobenzene	ND	8.57	0.11	0.50	10	-	86	70-136
1,2,4-Trichlorobenzene	ND	8.55	0.086	0.50	10	-	85	74-137
1,1,1-Trichloroethane	ND	8.73	0.050	0.50	10	-	87	57-156
1,1,2-Trichloroethane	ND	8.87	0.080	0.50	10	-	89	51-150
Trichloroethene	ND	8.58	0.060	0.50	10	-	86	43-157
Trichlorofluoromethane	ND	8.46	0.047	0.50	10	-	85	50-147
1,2,3-Trichloropropane	ND	9.36	0.14	0.50	10	-	94	41-152
1,2,4-Trimethylbenzene	ND	8.59	0.065	0.50	10	-	86	57-157
1,3,5-Trimethylbenzene	ND	8.44	0.070	0.50	10	-	84	56-159
Vinyl Chloride	ND	10.0	0.070	0.50	10	-	100	42-137
Xylenes, Total	ND	25.8	0.25	0.50	30	-	86	70-130

(Cont.)



## Quality Control Report

<b>Client:</b> ERAS Environmental, Inc.	<b>WorkOrder:</b> 1707284
<b>Date Prepared:</b> 7/14/17	<b>BatchID:</b> 142057
<b>Date Analyzed:</b> 7/14/17	<b>Extraction Method:</b> SW5030B
<b>Instrument:</b> GC18	<b>Analytical Method:</b> SW8260B
<b>Matrix:</b> Water	<b>Unit:</b> µg/L
<b>Project:</b> 16-002; 2449-2451 Santa Clara Ave	<b>Sample ID:</b> MB/LCS-142057

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
<b>Surrogate Recovery</b>								
Dibromofluoromethane	23.94	24.2			25	96	97	70-130
Toluene-d8	23.16	23.1			25	93	92	70-130
4-BFB	2.091	2.16			2.5	84	86	70-130



## Quality Control Report

<b>Client:</b> ERAS Environmental, Inc.	<b>WorkOrder:</b> 1707284
<b>Date Prepared:</b> 7/13/17	<b>BatchID:</b> 141944
<b>Date Analyzed:</b> 7/13/17	<b>Extraction Method:</b> SW5030B
<b>Instrument:</b> GC10	<b>Analytical Method:</b> SW8260B
<b>Matrix:</b> Water	<b>Unit:</b> µg/L
<b>Project:</b> 16-002; 2449-2451 Santa Clara Ave	<b>Sample ID:</b> MB/LCS/LCSD-141944

### QC Summary Report for SW8260B

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	11	50	-	-	-
<b>Surrogate Recovery</b>						
Dibromofluoromethane	29.19			25	117	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(g) (C6-C12)	202	198	200	101	99	70-130	1.99	20
<b>Surrogate Recovery</b>								
Dibromofluoromethane	28.7	29.1	25	115	116	70-130	1.41	20





## Quality Control Report

**Client:** ERAS Environmental, Inc.  
**Date Prepared:** 7/10/17  
**Date Analyzed:** 7/11/17 - 7/12/17  
**Instrument:** GC19, GC7  
**Matrix:** Soil  
**Project:** 16-002; 2449-2451 Santa Clara Ave

**WorkOrder:** 1707284  
**BatchID:** 141784  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-141784  
 1707265-001AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.582	0.40	0.40	0.60	-	97	82-118
MTBE	ND	0.0984	0.0023	0.050	0.10	-	98	61-119
Benzene	ND	0.102	0.0010	0.0050	0.10	-	101	77-128
Toluene	ND	0.105	0.0012	0.0050	0.10	-	105	74-132
Ethylbenzene	ND	0.105	0.0020	0.0050	0.10	-	105	84-127
Xylenes	ND	0.308	0.0025	0.015	0.30	-	103	86-129
<b>Surrogate Recovery</b>								
2-Fluorotoluene	0.09764	0.0988			0.10	98	99	75-134

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.532	0.567	0.60	ND	89	94	58-129	6.38	20
MTBE	0.0775	0.0815	0.10	ND	74	78	47-118	5.04	20
Benzene	0.0933	0.0955	0.10	ND	92	94	55-129	2.29	20
Toluene	0.0979	0.0995	0.10	ND	97	98	56-130	1.65	20
Ethylbenzene	0.103	0.106	0.10	ND	103	106	63-129	2.90	20
Xylenes	0.318	0.331	0.30	ND	106	110	64-131	3.94	20
<b>Surrogate Recovery</b>									
2-Fluorotoluene	0.0876	0.0909	0.10		88	91	62-126	3.66	20



## Quality Control Report

<b>Client:</b> ERAS Environmental, Inc.	<b>WorkOrder:</b> 1707284
<b>Date Prepared:</b> 7/12/17	<b>BatchID:</b> 141873
<b>Date Analyzed:</b> 7/12/17 - 7/14/17	<b>Extraction Method:</b> SW3510C/3630C
<b>Instrument:</b> GC11A, GC6A	<b>Analytical Method:</b> SW8015B
<b>Matrix:</b> Water	<b>Unit:</b> µg/L
<b>Project:</b> 16-002; 2449-2451 Santa Clara Ave	<b>Sample ID:</b> MB/LCS/LCSD-141873

### QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	35	35	-	-	-
TPH-Motor Oil (C18-C36)	ND	75	75	-	-	-
<b>Surrogate Recovery</b>						
C26	94.53			125	76	71-134

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	181	142	200	91	71	70-130	24.4	30
<b>Surrogate Recovery</b>								
C26	117	103	125	94	83	71-134	12.5	30



## Quality Control Report

<b>Client:</b> ERAS Environmental, Inc.	<b>WorkOrder:</b> 1707284
<b>Date Prepared:</b> 7/12/17	<b>BatchID:</b> 141871
<b>Date Analyzed:</b> 7/12/17 - 7/14/17	<b>Extraction Method:</b> SW3510C
<b>Instrument:</b> GC11A, GC9a	<b>Analytical Method:</b> SW8015B
<b>Matrix:</b> Water	<b>Unit:</b> µg/L
<b>Project:</b> 16-002; 2449-2451 Santa Clara Ave	<b>Sample ID:</b> MB/LCS/LCSD-141871

### QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	35	35	-	-	-
TPH-Motor Oil (C18-C36)	ND	75	75	-	-	-
<b>Surrogate Recovery</b>						
C26	90.72			125	73	70-112

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	177	176	200	89	88	60-142	0.469	30
<b>Surrogate Recovery</b>								
C26	122	124	125	98	99	70-112	1.87	30

1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1707284

ClientCode: ERAS

WaterTrax     WriteOn     EDF     Excel     EQUIS     Email     HardCopy     ThirdParty     J-flag

**Report to:**

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: 16-002; 2449-2451 Santa Clara Ave

**Bill to:**

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

**Requested TAT: 5 days;**

*Date Received: 07/10/2017*  
*Date Logged: 07/11/2017*

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1707284-001	B-1	Water	7/6/2017 08:24	<input type="checkbox"/>	C	C		A	B	A							
1707284-002	B-2	Water	7/6/2017 09:09	<input type="checkbox"/>	C				B	A							
1707284-003	B-3	Water	7/6/2017 09:55	<input type="checkbox"/>	C				B	A							
1707284-004	B-4	Water	7/6/2017 10:48	<input type="checkbox"/>	C				B	A							
1707284-005	B-5	Water	7/6/2017 11:45	<input type="checkbox"/>	C				B	A							
1707284-006	B-6	Water	7/7/2017 10:18	<input type="checkbox"/>	C	C			B	A							
1707284-007	B-7	Water	7/7/2017 10:50	<input type="checkbox"/>	C				B	A							
1707284-008	B-8	Water	7/7/2017 11:29	<input type="checkbox"/>	C				B	A							
1707284-009	B-9	Water	7/7/2017 12:35	<input type="checkbox"/>	C				B	A							
1707284-010	B-1,3,5-4	Soil	7/6/2017 07:55	<input type="checkbox"/>			A										
1707284-011	B-2,3,5-4	Soil	7/6/2017 08:33	<input type="checkbox"/>			A										
1707284-012	B-3,3,5-4	Soil	7/6/2017 09:19	<input type="checkbox"/>			A										
1707284-013	B-4,3,5-4	Soil	7/6/2017 10:12	<input type="checkbox"/>			A										
1707284-014	B-5,3,5-4	Soil	7/6/2017 11:07	<input type="checkbox"/>			A										
1707284-015	B-6,3,5-4	Soil	7/7/2017 08:18	<input type="checkbox"/>			A										

**Test Legend:**

1	8260B_W	2	8260GAS_W	3	G-MBTEX_S	4	PREDF REPORT
5	TPH(DMO)LV_W	6	TPH(DMO)LVWSG_W	7		8	
9		10		11		12	

**Prepared by: Jena Alfaro**

The following SamplIDs: 001C, 006C contain testgroup Gas8260\_W.

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1707284

ClientCode: ERAS

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  EQuIS   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

**Report to:**

Andrew Savage  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541  
(510) 247-9885    FAX: (510) 886-5399

Email: info@eras.biz; andrew@eras.biz  
cc/3rd Party:  
PO:  
ProjectNo: 16-002; 2449-2451 Santa Clara Ave

**Bill to:**

Kasey Cordoza  
ERAS Environmental, Inc.  
1533 B Street  
Hayward, CA 94541

**Requested TAT: 5 days;**

*Date Received:* 07/10/2017  
*Date Logged:* 07/11/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1707284-016	B-7,3.5-4	Soil	7/7/2017 08:41	<input type="checkbox"/>			A									
1707284-017	B-8,3.5-4	Soil	7/7/2017 09:04	<input type="checkbox"/>			A									
1707284-018	B-9,3.5-4	Soil	7/7/2017 09:28	<input type="checkbox"/>			A									

**Test Legend:**

1	8260B_W	2	8260GAS_W	3	G-MBTX_S	4	PREFD REPORT
5	TPH(DMO)LV_W	6	TPH(DMO)LVWSG_W	7		8	
9		10		11		12	

**Prepared by: Jena Alfaro**

The following SampIDs: 001C, 006C contain testgroup Gas8260\_W.

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



### WORK ORDER SUMMARY

**Client Name:** ERAS ENVIRONMENTAL, INC.

**Project:** 16-002

**Work Order:** 1707284

**Client Contact:** Andrew Savage

**QC Level:** LEVEL 2

**Contact's Email:** info@eras.biz; andrew@eras.biz

**Comments:**

**Date Logged:** 7/11/2017

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1707284-001A	B-1	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/6/2017 8:24	5 days	25%+	<input type="checkbox"/>	
1707284-001B	B-1	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/6/2017 8:24	5 days	25%+	<input type="checkbox"/>	
1707284-001C	B-1	Water	TPH(g) & 8260 by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	7/6/2017 8:24	5 days	25%+	<input type="checkbox"/>	
1707284-002A	B-2	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/6/2017 9:09	5 days	50%+	<input type="checkbox"/>	
1707284-002B	B-2	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/6/2017 9:09	5 days	50%+	<input type="checkbox"/>	
1707284-002C	B-2	Water	SW8260B (VOCs)	6	VOA w/ HCl	<input type="checkbox"/>	7/6/2017 9:09	5 days	50%+	<input type="checkbox"/>	
1707284-003A	B-3	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/6/2017 9:55	5 days	60%+	<input type="checkbox"/>	
1707284-003B	B-3	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/6/2017 9:55	5 days	60%+	<input type="checkbox"/>	
1707284-003C	B-3	Water	SW8260B (VOCs)	6	VOA w/ HCl	<input type="checkbox"/>	7/6/2017 9:55	5 days	60%+	<input type="checkbox"/>	
1707284-004A	B-4	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/6/2017 10:48	5 days	15%+	<input type="checkbox"/>	
1707284-004B	B-4	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/6/2017 10:48	5 days	15%+	<input type="checkbox"/>	
1707284-004C	B-4	Water	SW8260B (VOCs)	6	VOA w/ HCl	<input type="checkbox"/>	7/6/2017 10:48	5 days	15%+	<input type="checkbox"/>	
1707284-005A	B-5	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/6/2017 11:45	5 days	60%+	<input type="checkbox"/>	
1707284-005B	B-5	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/6/2017 11:45	5 days	60%+	<input type="checkbox"/>	
1707284-005C	B-5	Water	SW8260B (VOCs)	6	VOA w/ HCl	<input type="checkbox"/>	7/6/2017 11:45	5 days	60%+	<input type="checkbox"/>	
1707284-006A	B-6	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/7/2017 10:18	5 days	10%+	<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



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**Project:** 16-002

**Work Order:** 1707284

**Client Contact:** Andrew Savage

**QC Level:** LEVEL 2

**Contact's Email:** info@eras.biz; andrew@eras.biz

**Comments:**

**Date Logged:** 7/11/2017

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1707284-006B	B-6	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/7/2017 10:18	5 days	10%+	<input type="checkbox"/>	
1707284-006C	B-6	Water	TPH(g) & 8260 by P&T GCMS	6	VOA w/ HCl	<input type="checkbox"/>	7/7/2017 10:18	5 days	10%+	<input type="checkbox"/>	
1707284-007A	B-7	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/7/2017 10:50	5 days	Present	<input type="checkbox"/>	
1707284-007B	B-7	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/7/2017 10:50	5 days	Present	<input type="checkbox"/>	
1707284-007C	B-7	Water	SW8260B (VOCs)	6	VOA w/ HCl	<input type="checkbox"/>	7/7/2017 10:50	5 days	Present	<input type="checkbox"/>	
1707284-008A	B-8	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/7/2017 11:29	5 days	10%+	<input type="checkbox"/>	
1707284-008B	B-8	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/7/2017 11:29	5 days	10%+	<input type="checkbox"/>	
1707284-008C	B-8	Water	SW8260B (VOCs)	6	VOA w/ HCl	<input type="checkbox"/>	7/7/2017 11:29	5 days	10%+	<input type="checkbox"/>	
1707284-009A	B-9	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	1LA	<input type="checkbox"/>	7/7/2017 12:35	5 days	10%+	<input type="checkbox"/>	
1707284-009B	B-9	Water	SW8015B (TPH-d,mo)	1	1LA	<input type="checkbox"/>	7/7/2017 12:35	5 days	10%+	<input type="checkbox"/>	
1707284-009C	B-9	Water	SW8260B (VOCs)	6	VOA w/ HCl	<input type="checkbox"/>	7/7/2017 12:35	5 days	10%+	<input type="checkbox"/>	
1707284-010A	B-1,3,5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/6/2017 7:55	5 days		<input type="checkbox"/>	
1707284-011A	B-2,3,5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/6/2017 8:33	5 days		<input type="checkbox"/>	
1707284-012A	B-3,3,5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/6/2017 9:19	5 days		<input type="checkbox"/>	
1707284-013A	B-4,3,5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/6/2017 10:12	5 days		<input type="checkbox"/>	
1707284-014A	B-5,3,5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/6/2017 11:07	5 days		<input type="checkbox"/>	

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### WORK ORDER SUMMARY

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**Project:** 16-002

**Work Order:** 1707284

**Client Contact:** Andrew Savage

**QC Level:** LEVEL 2

**Contact's Email:** info@eras.biz; andrew@eras.biz

**Comments:**

**Date Logged:** 7/11/2017

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1707284-015A	B-6,3.5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/7/2017 8:18	5 days		<input type="checkbox"/>	
1707284-016A	B-7,3.5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/7/2017 8:41	5 days		<input type="checkbox"/>	
1707284-017A	B-8,3.5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/7/2017 9:04	5 days		<input type="checkbox"/>	
1707284-018A	B-9,3.5-4	Soil	SW8021B/8015Bm (G/MBTEX)	1	Acetate Liner	<input type="checkbox"/>	7/7/2017 9:28	5 days		<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.













### Sample Receipt Checklist

Client Name: **ERAS Environmental, Inc.**  
 Project Name: **16-002**

Date and Time Received: **7/10/2017 15:58**  
 Date Logged: **7/11/2017**  
 Received by: **Jena Alfaro**  
 Logged by: **Jena Alfaro**

WorkOrder No: **1707284** Matrix: Soil/Water  
 Carrier: Bernie Cummins (MAI Courier)

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No  NA   
 Sample/Temp Blank temperature Temp: 2.8°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes  No  NA   
 Samples Received on Ice? Yes  No   
 (Ice Type: WET ICE )

**UCMR Samples:**

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes  No  NA   
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes  No  NA

Comments:

**APPENDIX F**  
**WELL SURVEY**

WELL SURVEY -ALAMEDA COUNTY PUBLIC WORKS AGENCY - 2000 FOOT RADIUS

2449-2451 Santa Clara Avenue, Alameda

Tr	Section	Address	Longcity	Owner	Xcoord	Ycoord	Tsraq	Use
2S/3W	7L	2421 Blanding Avenue	Alameda	Allied Land Company, 2421 Blanding Avenue, Alameda, CA, 94501, MW-5A			2S/3W 7L	MON
2S/3W	7L	2421 Blanding Avenue	Alameda	Allied Land Company, 2421 Blanding Avenue, Alameda, CA, 94501, MW-5B			2S/3W 7L	MON
2S/3W	7L	2421 Blanding Avenue	Alameda	Allied Land Company, 2421 Blanding Avenue, Alameda, CA, 94501, MW-6A			2S/3W 7L	MON
2S/3W	7L	2421 Blanding Avenue	Alameda	Allied Land Company, 2421 Blanding Avenue, Alameda, CA, 94501, MW-4A			2S/3W 7L	MON
2S/3W	7L	2421 Blanding Avenue	Alameda	Allied Land Company, 2421 Blanding Avenue, Alameda, CA, 94501, MW-4B			2S/3W 7L	MON
2S/3W	7L	2421 Blanding Avenue	Alameda	Allied Land Company, 2421 Blanding Avenue, Alameda, CA, 94501, MW-6B			2S/3W 7L	MON
2S/3W	7L01	1915 EVERETT ST	Alameda	R.S. SCHMIT	122235203	37768986	2S/3W 7L	ABN
2S/3W	7L02	1819 EVERETT ST	Alameda	A.T. GHILLIER	122235889	37768104	2S/3W 7L	IRR
2S/3W	7L03	1801 PARK ST & EAGLE	Alameda	CHEVRON SERVICE STATION	122237673	37768796	2S/3W 7L	MON
2S/3W	7L04	1801 PARK ST & EAGLE	Alameda	CHEVRON SERVICE STATION	122237673	37768796	2S/3W 7L	MON
2S/3W	7L05	1801 PARK ST & EAGLE	Alameda	CHEVRON SERVICE STATION	122237673	37768796	2S/3W 7L	MON
2S/3W	7L06	1801 PARK ST & EAGLE	Alameda	CHEVRON SERVICE STATION	122237673	37768796	2S/3W 7L	MON
2S/3W	7L07	1801 PARK ST & EAGLE	Alameda	CHEVRON SERVICE STATION	122237673	37768796	2S/3W 7L	MON
2S/3W	7L08	1725 PARK ST	ALAMEDA	EXXON RS 7-0104	122238251	37768121	2S/3W 7L	MON
2S/3W	7L09	1725 PARK ST	ALAMEDA	EXXON RS 7-0104	122238251	37768121	2S/3W 7L	MON
2S/3W	7L10	1725 PARK ST	ALAMEDA	EXXON RS 7-0104	122238251	37768121	2S/3W 7L	MON
2S/3W	7L11	1725 PARK ST.	Alameda	EXXON	122238251	37768121	2S/3W 7L	MON
2S/3W	7L11				0	0	2S/3W 7L	MON
2S/3W	7L12	1725 PARK ST.	Alameda	EXXON	122238251	37768121	2S/3W 7L	MON
2S/3W	7L12				0	0	2S/3W 7L	MON
2S/3W	7L13	1725 PARK ST.	Alameda	EXXON	122238251	37768121	2S/3W 7L	MON
2S/3W	7L13				0	0	2S/3W 7L	MON
2S/3W	7L13				0	0	2S/3W 7L	MON
2S/3W	7L14	1725 Park Street	Alameda	Exxon Corporation	122238251	37768121	2S/3W 7L	MON
2S/3W	7L15	1725 Park Street	Alameda	Exxon USA EW-1	122238251	37768121	2S/3W 7L	EXT
2S/3W	7L16	1725 Park Street	Alameda	Exxon USA EW-2	122238251	37768121	2S/3W 7L	EXT
2S/3W	7L17	1725 Park Street	Alameda	Exxon USA EW-3	122238251	37768121	2S/3W 7L	EXT
2S/3W	7L18	1725 Park Street	Alameda	Exxon USA EW-4	122238251	37768121	2S/3W 7L	EXT
2S/3W	7L19	1725 Park Street	Alameda	Exxon USA EW-5	122238251	37768121	2S/3W 7L	EXT
2S/3W	7L20	1911 Park St.	Alameda	Alameda Collision Rep.MW1	122236891	37769645	2S/3W 7L	MON
2S/3W	7L21	1725 PARK ST	Alameda	EXXON RS 7-0104 SW-1	122238234	37768121	2S/3W 7L	MON
2S/3W	7L22	1725 PARK ST	Alameda	EXXON RS 7-0104 VW-1	122238234	37768121	2S/3W 7L	MON
2S/3W	7L23	1725 PARK ST	Alameda	EXXON RS 7-0104 SM-1	122238234	37768121	2S/3W 7L	MON
2S/3W	7L24	1725 PARK ST	Alameda	EXXON RS 7-0104 SM-1	122238234	37768121	2S/3W 7L	MON
2S/3W	7M 1	2307 CLEMENT AVE	Oakland	BOB TENNANT	122240624	37770023	2S/3W 7M	IND
2S/3W	7M 2	2307 CLEMENT AVE	Oakland	BOB TENNANT	122240624	37770023	2S/3W 7M	IND
2S/3W	7M 3	1849 OAK STREET	Alameda	LINCOLN PROPERTY CO	122239886	37769152	2S/3W 7M	MON
2S/3W	7M 3				0	0	2S/3W 7M	MON
2S/3W	7M 4	1849 OAK STREET	Alameda	LINCOLN PROPERTY COMPANY	122239886	37769152	2S/3W 7M	MON
2S/3W	7M 5	1849 OAK STREET	Alameda	LINCOLN PROPERTY COMPANY	122239886	37769152	2S/3W 7M	MON
2S/3W	7M 6	1825 Park St.	Alameda	Goode Toyota MW-4	122237495	37769105	2S/3W 7M	MON
2S/3W	7M 7	1800 Park St	Alameda	Exxon Company USA	122237500	37768674	2S/3W 7M	MON
2S/3W	7M	1630 PARK ST	Alameda	FOLEY STREET INVESTMENTS, LLC., 2533 CLEMENT AVE, ALAMEDA, 94501, MW-4			2S/3W 7N	DES
2S/3W	7M	1630 PARK ST	Alameda	FOLEY STREET INVESTMENTS, LLC., 2533 CLEMENT AVE, ALAMEDA, 94501, MW-5			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-MW-1			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-MW-2			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-MW-3			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-DPE-4			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-DPE-5			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-DPE-6			2S/3W 7N	DES

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2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-DPE-8			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-DPE-9			2S/3W 7N	DES
2S/3W	7N	1630 Park St	Alameda	Foley Street Investments, LLC-DPE-10			2S/3W 7N	DES
2S/3W	7N 00	Oak at Lincoln Street	Alameda	Alameda Free Library	122241300	37766900	2S/3W 7N	BOR
2S/3W	7N 00	2235 Clement Ave	Alameda	Clement Ave Assoc B-1	122240179	37770694	2S/3W 7N	BOR*
2S/3W	7N 01	2235 LINCOLN AVE	Oakland	ALAMEDA STEAM LAUNDRY	122240624	37766529	2S/3W 7N	IRR
2S/3W	7N 02	1555 OAK STREET	Alameda	CITY OF ALAMEDA (POLICE)	122241614	37766667	2S/3W 7N	MON
2S/3W	7N 03	2263 SANTA CLARA AVE	Alameda	CITY OF ALAMEDA (C. HALL)	122243349	37766324	2S/3W 7N	MON
2S/3W	7N 04	2263 SANTA CLARA AVE	Alameda	CITY OF ALAMEDA (C. HALL)	122243349	37766324	2S/3W 7N	MON
2S/3W	7N 05	1541 PARK ST	Alameda	MOBIL SERVICE STATION-MW-1	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 5	1541 Park St	Alameda	Raymond Yeung			2S/3W 7N	DES
2S/3W	7N 05	1701 Park St	Alameda	Xtra Oil Company	122238353	37767985	2S/3W 7N	MON
2S/3W	7N 06	1726 Park St	Alameda	Estate of John B Henry	122238077	37768026	2S/3W 7N	MON
2S/3W	7N 06	1541 PARK ST	Alameda	MOBIL SERVICE STATION-MW-2	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 6	1541 Park St	Alameda	Raymond Yeung			2S/3W 7N	DES
2S/3W	7N 07	1541 PARK ST	Alameda	MOBIL SERVICE STATION-MW-3	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 7	1541 Park St	Alameda	Raymond Yeung			2S/3W 7N	DES
2S/3W	7N 08	1541 PARK STREET	Alameda	MOBIL OIL CORPORATION-MW-4	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 8	1541 Park St	Alameda	Raymond Yeung			2S/3W 7N	DES
2S/3W	7N 09	1541 PARK STREET	Alameda	SHELL OIL CORPORATION-MW-5	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 9	1541 Park St	Alameda	Raymond Yeung			2S/3W 7N	DES
2S/3W	7N 10	1541 PARK STREET	Alameda	SHELL OIL CORPORATION-MW-6	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 11	1541 PARK ST	Alameda	MOBIL OIL CORP.-MW-7	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 12	1541 PARK ST	Alameda	MOBIL OIL CORP.-MW-8	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 13	1541 PARK ST	Alameda	MOBIL OIL CORP.-MW-9	122240136	37765932	2S/3W 7N	MON
2S/3W	7N 14	1700 Park Street	Alameda	Mr.Dave Cavanaugh	122238220	37767855	2S/3W 7N	MON
2S/3W	7N 15	1700 Park Street	Alameda	Mr.Dave Cavanaugh	122238220	37767855	2S/3W 7N	MON
2S/3W	7N 16	1700 Park Street	Alameda	Mr.Dave Cavanaugh	122238220	37767855	2S/3W 7N	MON
2S/3W	7N 17	1700 Park Street	Alameda	Mr.Dave Cavanaugh	122238220	37767855	2S/3W 7N	MON
2S/3W	7N 18	Oak St. and Lincoln St.	Alameda	Alameda Free Library	122241300	37766900	2S/3W 7N	DES
2S/3W	7N 19	2244 Santa Clara	Alameda	Fowler-Anderson Mortuary	122243806	37766311	2S/3W 7N	DES
2S/3W	7N 20	2244 Santa Clara	Alameda	Fowler-Anderson Mortuary	122243806	37766311	2S/3W 7N	DES
2S/3W	7N 21	2244 Santa Clara	Alameda	Fowler-Anderson Mortuary	122243806	37766311	2S/3W 7N	MON
2S/3W	7N 23	1726 Park St	Alameda	John B. Henry Estate	122237565	37768108	2S/3W 7N	MON
2S/3W	7N 24	1700 Park St	Alameda	Cavanaugh Motors MW5	122238220	37767855	2S/3W 7N	MON
2S/3W	7N 25	1700 Park St	Alameda	Cavanaugh Motors MW6	122238220	37767855	2S/3W 7N	MON
2S/3W	7N 26	2235 Clement Ave	Alameda	Clement Ave Assoc MW-1	122240179	37770694	2S/3W 7N	MON
2S/3W	7N 27	2301 Santa Clara Ave.	Alameda	Chun's Service Center MW1	122241946	37765684	2S/3W 7N	MON
2S/3W	7N 28	2301 Santa Clara Ave.	Alameda	Chun's Service Center MW2	122241946	37765684	2S/3W 7N	MON
2S/3W	7N 29	2301 Santa Clara Ave.	Alameda	Chun's Service Center MW3	122241946	37765684	2S/3W 7N	MON
2S/3W	7N 30	1541 PARK STREET	Alameda	BP Oil Company-RW-1	122240132	37765936	2S/3W 7N	REC
2S/3W	7N 31	2301 Santa Clara Ave.	Alameda	Chun's Service Center MW4	122241929	37765657	2S/3W 7N	MON
2S/3W	7N 31	2235 Clement Ave.	Alameda	Clement Ave. Assoc. B-19	122240259	37770757	2S/3W07N3	BOR
2S/3W	7N 32	2301 Santa Clara Ave.	Alameda	Chun's Service Center MW5	122241929	37765657	2S/3W 7N	MON
2S/3W	7N 32	2235 Clement Ave.	Alameda	Clement Ave. Assoc. B-20	122240259	37770757	2S/3W07N3	BOR
2S/3W	7N 33	2301 Santa Clara Ave.	Alameda	Chun's Service Center MW6	122241929	37765657	2S/3W 7N	MON
2S/3W	7N 33	2235 Clement Ave.	Alameda	Clement Ave. Assoc. B-22	122240259	37770757	2S/3W7N33	BOR
2S/3W	7N 34	2301 Santa Clara Ave.	Alameda	Chun's Service Center MW7	122241929	37765657	2S/3W 7N	MON
2S/3W	7N 35	1726 Park St	Alameda	Estate of John B Henry	122238077	37768026	2S/3W 7N	MON
2S/3W	7N 37	1726 Park St	Alameda	Estate of John B Henry	122238077	37768026	2S/3W 7N	MON
2S/3W	7N 38	1726 Park St	Alameda	Estate of John B Henry	122238077	37768026	2S/3W 7N	MON
2S/3W	7N 39	1726 Park St	Alameda	Estate of John B Henry	122238077	37768026	2S/3W 7N	MON

## WELL SURVEY -ALAMEDA COUNTY PUBLIC WORKS AGENCY - 2000 FOOT RADIUS

2449-2451 Santa Clara Avenue, Alameda

Tr	Section	Address	Longcity	Owner	Xcoord	Ycoord	Tsraq	Use
2S/3W	7N 40	1726 Park St	Alameda	Estate of John B Henry	122238077	37768026	2S/3W 7N	MON
2S/3W	7N 41	1630 Park St	Alameda	Good Chevrolet	122238887	37767156	2S/3W 7N	MON
2S/3W	7N 42	1630 Park St	Alameda	Good Chevrolet	122238887	37767156	2S/3W 7N	MON
2S/3W	7N 43	1701 Park St	Alameda	Xtra Oil Company	122238353	37767985	2S/3W 7N	MON
2S/3W	7N 44	1701 Park St	Alameda	Xtra Oil Company	122238353	37767985	2S/3W 7N	MON
2S/3W	7N 46	1726 Park St	Alameda	Exxon USA	122238077	37767999	2S/3W 7N	MON
2S/3W	7N 47	1725 Park St	Alameda	Exxon Company USA	122238234	37768121	2S/3W 7N	MON
2S/3W	7N 48	1700 Park St	Alameda	Cavanaugh Motors	122238203	37767855	2S/3W 7N	MON
2S/3W	7N 49	1701 Park St	Alameda	Xtra Oil Company	122238355	37767987	2S/3W 7N	MON
2S/3W	7N 50	2301 Santa Clara Av	Alameda	Wayne Chun	122241932	37765653	2S/3W 7N	MON
2S/3W	7N 51	2301 Santa Clara Av	Alameda	Wayne Chun	122241932	37765653	2S/3W 7N	MON
2S/3W	7N 52	2301 Santa Clara Av	Alameda	Wayne Chun	122241932	37765653	2S/3W 7N	MON
2S/3W	7N 53	2301 Santa Clara Av	Alameda	Wayne Chun	122241932	37765653	2S/3W 7N	MON
2S/3W	7N 54	1726 Park St	Alameda	Estate of John B. Henry	122238077	37767997	2S/3W 7N	MON
2S/3W	7N 55	1725 Park St	Alameda	Exxon Company USA	122238236	37768123	2S/3W 7N	MON
2S/3W	7N 56	1725 Park St	Alameda	Exxon Company USA	122238236	37768123	2S/3W 7N	MON
2S/3W	7N 57	1726 Park St	Alameda	Estate of John B. Henry	122238077	37767997	2S/3W 7N	MON
2S/3W	7N 58	1726 Park St	Alameda	Estate of John B. Henry	122238077	37767997	2S/3W 7N	MON
2S/3W	7N 59	1726 Park St	Alameda	Estate of John B. Henry	122238077	37767997	2S/3W 7N	MON
2S/3W	7N 60	1726 Park St	Alameda	Estate of John B. Henry	122238077	37767997	2S/3W 7N	MON
2S/3W	7N 61	1726 Park St	Alameda	Estate of John B. Henry	122238077	37767997	2S/3W 7N	MON
2S/3W	7N 62	1726 Park St	Alameda	Estate of John B. Henry	122238077	37767997	2S/3W 7N	MON
2S/3W	7P 1	2623 EAGLE AVE.	Alameda	PG&E	122233360	37766441	2S/3W 7P	CAT
2S/3W	7P 2	1701 Broadway	Alameda	Elsie Smitten			2S/3W 7P	DES
2S/3W	7P 80	2538 LINCOLN AVE	Alameda	JACK ZAWITKOSKI				DES
2S/3W	7Q 01	1819 VERSAILLES AV	Oakland	LESTER CABRAL	122230615	37766542	2S/3W 7Q	IRR
2S/3W	7Q 02	2001A VERSAILLES AV	Alameda	KING PETROLEUM	122230280	37767460	2S/3W 7Q	MON
2S/3W	7Q 03	2001A VERSAILLES AV	Alameda	KING PETROLEUM	122230280	37767460	2S/3W 7Q	MON
2S/3W	7Q 04	2001A VERSAILLES AV	Alameda	KING PETROLEUM	122230280	37767460	2S/3W 7Q	MON
2S/3W	7Q 05	2001A VERSAILLES AV	Alameda	KING PETROLEUM	122230280	37767460	2S/3W 7Q	MON
2S/3W	7Q 06	2001A VERSAILLES AV	Alameda	KING PETROLEUM	122230280	37767460	2S/3W 7Q	MON
2S/3W	7Q 07	2100A VERSAILLES AVE	Alameda	KING PETROLEUM	122230615	37766542	2S/3W 7Q	MON
2S/3W	7Q 08	1708 VERSAILLES AVE	Alameda	MARK RATTO	122232546	37764634	2S/3W 7Q	IRR
2S/3W	7Q 09	2001 Versailles Av	Alameda	Mapes	122230263	37767460	2S/3W 7Q	MON
2S/3W	7Q 10	2001 Versailles Av	Alameda	Mapes	122230263	37767460	2S/3W 7Q	MON
2S/3W	7Q 11	2001 Versailles Av	Alameda	Mapes	122230263	37767460	2S/3W 7Q	MON
2S/3W	7Q 12	2001 Versailles Av	Alameda	Mapes	122230263	37767460	2S/3W 7Q	MON
2S/3W	7Q 13	2001 Versailles Av	Alameda	Mapes	122230263	37767460	2S/3W 7Q	MON
2S/3W	7Q 14	2001 Versailles Av	Alameda	Mapes	122230263	37767460	2S/3W 7Q	MON
2S/3W	7Q 80	1823 Pearl St	Alameda	Alvin Carpenter			2S/3W 7Q	
2S/3W	18B 1	2978 NORTHWOOD DR	Alameda	DAVID SOUZA	122229596	37763822	2S/3W 18B	IRR
2S/3W	18B 3	2936 GIBBONS DR	Alameda	R.B. LYONS	122230874	37762917	2S/3W 18B	IRR
2S/3W	18B 4	3001 GIBBONS DRIVE	Alameda	ROBERT DOUMITT	122228810	37763400	2S/3W 18B	?
2S/3W	18B 5	3010 Thompson Av	Alameda	Robert Sellers	122229290	37761538	2S/3W 18B	MON
2S/3W	18B80	2975 Johnson Dr	Alameda	Ronald E. Walker			2S/3W 18B	DES
2S/3W	18D	2425 Encinal	Alameda	Steve Chrissanthos	122242367	37761867	2S/3W 18D	BOR
2S/3W	18D 01	2518 CHESTER ST	Alameda	A.E. SLIGH	122240166	37761222	2S/3W 18D	IRR
2S/3W	18D 02	EVERETT & ALAMEDA	Alameda	PG&E	122239450	37763600	2S/3W 18D	CAT
2S/3W	18D 03	1300 PARK ST	Alameda	CITY OF ALAMEDA (F/H #1)	122242952	37762218	2S/3W 18D	MON
2S/3W	18D 04	1260 Park St	Alameda	ARCO PRODUCTS	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 05	1260 Park St	Alameda	ARCO PRODUCTS	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 06	1260 Park St	Alameda	ARCO PRODUCTS	122243474	37761800	2S/3W 18D	MON



## WELL SURVEY -ALAMEDA COUNTY PUBLIC WORKS AGENCY - 2000 FOOT RADIUS

2449-2451 Santa Clara Avenue, Alameda

Tr	Section	Address	Longcity	Owner	Xcoord	Ycoord	Tsraq	Use
2S/3W	18D 07	1260 Park St	Alameda	ARCO PRODUCTS	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 08	1260 Park St	Alameda	ARCO PRODUCTS	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 09	1260 Park St	Alameda	ARCO PRODUCTS	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 10	1260 Park St	Alameda	ARCO PRODUCTS	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 11	1260 Park St	Alameda	ARCO PRODUCTS	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 12	1260 Park St	Alameda	ARCO Prod Co AV-7	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 13	1260 Park St	Alameda	ARCO Prod Co AV-4	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 14	1260 Park St	Alameda	ARCO Prod Co AV-5	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 15	1260 Park St	Alameda	ARCO Prod Co AV-6	122243474	37761800	2S/3W 18D	MON
2S/3W	18D 16	1260 Park St.	Alameda	Arco Products Co.	122243449	37761753	2S/3W 18D	MON
2S/3W	18D 17	1260 Park St.	Alameda	Arco Products Co.	122243449	37761753	2S/3W 18D	MON
2S/3W	18D 18	2501 Santa Clara Ave.	Alameda	Goodman Property MW2	122238664	37764037	2S/3W 18D	MON
2S/3W	18D 19	2425 Encinal	Alameda	Steve Chrissanthos MW-1	122242367	37761867	2S/3W 18D	MON
2S/3W	18D 20	2425 Encinal	Alameda	Steve Chrissanthos MW-2	122242367	37761867	2S/3W 18D	MON
2S/3W	18D 21	2425 Encinal	Alameda	Steve Chrissanthos MW-3	122242367	37761867	2S/3W 18D	MON
2S/3W	18D 22	2425 Encinal	Alameda	Steve Chrissanthos MW-2a	122242367	37761867	2S/3W 18D	MON
2S/3W	18D 23	2501 Santa Clara Ave.	Alameda	Goodman Property MW1	122238664	37764038	2S/3W 18D	MON
2S/3W	18D 24	2501 Santa Clara Ave.	Alameda	Goodman Property MW2	122238664	37764038	2S/3W 18D	MON
2S/3W	18D 25	2501 Santa Clara Ave.	Alameda	Goodman Property MW3	122238664	37764038	2S/3W 18D	MON
2S/3W	18D 26	2428 Central Av	Alameda	Chevron USA	122240542	37763241	2S/3W 18D	MON
2S/3W	18D 27	2428 Central Av	Alameda	Chevron USA	122240542	37763241	2S/3W 18D	MON
2S/3W	18D 28	2428 Central Av	Alameda	Chevron USA	122240542	37763241	2S/3W 18D	MON
2S/3W	18D 29	2425 Encinal Av	Alameda	Alameda Cellars	122242350	37761859	2S/3W 18D	MON
2S/3W	18D 30	2425 Encinal Av	Alameda	Alameda Cellars	122242350	37761859	2S/3W 18D	MON
2S/3W	18D 31	2425 Encinal Av	Alameda	Alameda Cellars	122242350	37761859	2S/3W 18D	MON
2S/3W	18D 32	2428 Central Av	Alameda	Chevron Products Company	122240540	37763248	2S/3W 18D	MON
2S/3W	18D 33	2428 Central Av	Alameda	Chevron Products Company	122240540	37763248	2S/3W 18D	MON
2S/3W	18D 34	2428 Central Av	Alameda	Chevron Products Company	122240540	37763248	2S/3W 18D	MON
2S/3W	18D 35	2425 Encinal Av	Alameda	Steve Chrissanthos/Alamed	122242354	37761856	2S/3W 18D	MON
2S/3W	18D 36	2425 Encinal Av	Alameda	Steve Chrissanthos/Alamed	122242354	37761856	2S/3W 18D	MON
2S/3W	18D 37	2425 Encinal Av	Alameda	Steve Chrissanthos/Alamed	122242354	37761856	2S/3W 18D	MON
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AV-1			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AV-2			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AV-3			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AV-4			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AV-5			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AV-6			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AV-7			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, A-1			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, A-2			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, A-3			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, A-4			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, A-5			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AR-1			2S/3W 18D	DES
2S/3W	18D	1260 Park St.	Alameda	Atlantic Richfield Company, 4 Centerpointe Dr., La Palma, 90623, AR-2			2S/3W 18D	DES
2S/3W	18N	MOUND & OTIS	Alameda	EBMUD			2S/3W 18N	CAT
2S/3W	18N 1	OTIS DR	Alameda	EBMUD	122237150	37751050	2S/3W 18N	CAT
2S/3W	18N 2	MOUND & OTIS	Alameda	PROGRESSIVE ELEC.	122240200	37753100	2S/3W 18N	CAT
2S/3W	18N 3	2812 OTIS DR	Alameda	VERNER ANDERSON	122241184	37753713	2S/3W 18N	DES
2S/3W	18P	Post St nr Bridgeview Isle	Alameda	EBMUD			2S/3W 18P	CATH
2S/3W	18P 1	1033 POST ST	Alameda	MARTIN STOHR	122235526	37752514	2S/3W 18P	IRR
2S/3W	18P 2	OTIS DR	Alameda	EBMUD	122237150	37751050	2S/3W 18P	CAT

## **Well Legend**

DOM=Domestic well

IRR=Irrigation well

MUN= Municipal well

IND=Industrial well

CAT=Cathodic well

DES=well destroyed (through permit)

ABN=Abandoned and not being used (but has not been destroyed through permit process)

TES=Test well

BOR= Geotechnical investigation

MON= Monitoring well

EXT/SVE=Extraction/ Vapor wells

PIE=Piezometers

REC=Recovery well (extraction/ vapor)

? = Unknown or no information found or given

# Google Maps 2307 Clement Ave

