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November 21, 2017

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

Subject: Site Address: 2200 Telegraph Avenue, Oakland, California
Case No. RO0003258

Dear Mr. Detterman:

SOMA's "Well Installation, Groundwater Monitoring, and Multi-Phase Extraction Pilot Test Report" for the subject property has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 734-6400, if you have questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Mansour Sepehr", is written over a light-colored rectangular background.

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist



cc: Mr. Mo Mashhoon
Mr. William Mast, PES Environmental, Inc.

Well Installation, Groundwater Monitoring, and Multi-Phase Extraction Pilot Test Report

**2200 Telegraph Avenue
Oakland, California**

November 21, 2017

Project 6462

Prepared for:

**Mr. Mo Mashhoon
Mash Petroleum
428 13th Street, 10th Floor
Oakland, California 94612**




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ACKNOWLEDGEMENT STATEMENT

Site Location: 2200 Telegraph Avenue, Oakland, California

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.



Mr. Mo Mashhoon
Mash Petroleum
428 13th Street, 10th Floor
Oakland, California 94612

CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mo Mashnoon of Mash Petroleum for the site located at 2200 Telegraph Avenue, Oakland, California. The report was prepared in accordance with SOMA's Workplan to Conduct Multiphase Extraction Pilot Test, dated August 15, 2017, and in compliance with Alameda County Department of Environmental Health's correspondence dated August 23, 2017, granting approval of the work.



Mansour Sepehr, PhD, PE
Principal Hydrogeologist



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1. INTRODUCTION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mo Mashhoon of Mash Petroleum, Inc. for the site located at 2200 Telegraph Avenue, Oakland, California. The report was prepared in accordance with SOMA's Workplan to Conduct Multiphase Extraction Pilot Test, dated August 15, 2017, and in compliance with Alameda County Department of Environmental Health's correspondence dated August 23, 2017, granting approval of the work.

This report documents well installation related activities and laboratory analysis results for soil and groundwater samples collected during this event. This report also includes details of the multi-phase extraction pilot test conducted at the site in September/October 2017.

A separate report will shortly be submitted to include the site conceptual model, residual mass calculation of petroleum hydrocarbon in soil and groundwater, along with a corrective action plan.

1.1 Site Location and Description

The subject property is located at 2200 Telegraph Avenue, Oakland, California. Figure 1 shows the location of the site and vicinity. The site is located at the southeast corner of the intersection of Grand Avenue and Telegraph Avenue in a commercial/residential area (Figure 2).

Based on the results of a subsurface investigation conducted by Conestoga-Rover & Associates (CRA), subsurface soils at the site generally consists of poorly graded sand and clayey sands to approximately 7 feet below ground surface (bgs), underlain by silt and clay to a depth of approximately 20 feet bgs. Groundwater was encountered at approximately 11 feet bgs. Groundwater flow at the site and vicinity has been observed to be to the southeast (CRA, 2012).

In addition, an underground Bay Area Rapid Transit (BART) railway is present beneath the subject property. The BART railway is comprised of three separate and parallel tunnels that run beneath the northwestern to southeastern portions of the site. See Figure 2. The tunnels are about 12 feet deep.

The property has been operated as a vehicle fuel service station since the mid 1940s. The site previously operated as a Chevron Station #9-3600 and is currently an active independent gasoline service station under "A&A Gas and Mart". Currently, there are three 10,000-gallon underground storage tanks (USTs) at the site.

Environmental evaluation of the site began in 1986 when new USTs replaced the older USTs and petroleum contamination was discovered. In 1994 the product lines also were replaced by a new piping system. Between 1986 and 2012, numerous soil and groundwater investigations were conducted at the subject site. Elevated concentrations of total petroleum hydrocarbon as gasoline (TPH-g), benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MtBE) were identified in groundwater plume migrating to the southeast.

The subsurface analytical data collected at the site was evaluated with respect to the State Water Resources Control Board (SWRCB) Low-Threat Closure Policy (LTCP). Based on the results of the sampling and monitoring activities and conditions set forth by the LTCP criteria, in a letter dated January 27, 2015 the site received no further action (NFA) status by the RWQCB and Alameda County Department of Environmental Health (ACDEH).

ACDEH conditioned the closure of the site by stating that if a change in land use occurs during site redevelopment, ACDEH must be notified that the case will be re-evaluated upon receipt of approved development plans. In addition the case closure documentation states that excavation or reconstruction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures. Lastly, the closure documentation states that the former Chevron facility was to be included in the City of Oakland Permit Tracking System due to the residual contamination that remained at the property.

During a Chevron site investigation in 2012, TPH-g and MtBE were detected at the neighboring 2201 Valley Street property. Based on prior investigations indicating groundwater flow to the southeast, the 2201 Valley Street property is located hydraulically downgradient of the Site. All monitoring wells associated with the site were destroyed in November 2014 as part of the case closure process.

Based on the information provided by PES, an underground Bay Area Rapid Transit (BART) railway, comprised of three parallel tunnels lies beneath the central portion of the site and southwestern portion of 2201 Valley Street property. The top of the BART tunnel is present at a depth of approximately 12 feet below ground surface (bgs).

1.2 Phase II Investigation Conducted by PES

A Phase II investigation was conducted by PES in March 2017 in order to

1. Collect soil and groundwater data to confirm that current environmental conditions are not materially different from those during sampling performed during previous investigation
2. Investigate potential petroleum residuals in soil surrounding the USTs
3. Investigate along product piping to assess for releases since piping replacement in 1994

4. Confirm the extent of dissolved TPH-g in groundwater plume downgradient of the subject property
5. Provide spatial coverage across the site to eliminate data gaps
6. And collect soil/vapor data to evaluate for the presence of benzene and/or other fuel related VOCs in vadose zone soil in the vicinity of the identified groundwater plume in anticipation of ACDEH requirements related to a change in property use through redevelopment.

Eleven soil borings (SB-1 through SB-11) were advanced outside of BART right-of-way to depths ranging from 18 to 23 feet bgs using a direct push rig. Additionally, twelve soil borings (HA-1 through HA-12) were advanced using hand auger within the BART right-of-way to depths ranging between 2 and 5 feet bgs. Also, a total of sixteen soil vapor probes (SVP-1 through SVP-16) were advanced to depths of 5 feet bgs.

Results of the investigation indicated that TPH-g and detectable VOC concentrations in all soil samples were below their respective ESLs, except one soil sample, which exhibited significant concentration of 610 mg/kg (greater than ESL of 100 mg/Kg for commercial and residential land use type). Fourteen metals were detected in soil samples, of which Lead was higher than the ESL (80 mg/Kg) in three samples (SB9-6, HA3-2, and HA7-4).

In groundwater samples, TPH-g was higher than the odor nuisance ESL in 3 samples, (SB-3@9.5, SB-5@11.5, and SB-5@20). Benzene was detected in groundwater samples SB-3@9.5, SB-5@11.5, and SB-5@20, at concentrations exceeding the residential vapor intrusion ESL of 1.1 µg/L. Ethylbenzene was detected in groundwater samples SB-3@9.5, SB-5@11.5, and SB-5@20, SB-8@9.4 at concentrations exceeding the residential vapor intrusion ESL of 13 µg/L. Xylenes were detected in groundwater samples SB-5@11.5 and SB-5@20 at concentrations exceeding the residential vapor intrusion ESL of 1,300 µg/L. Naphthalene was detected in groundwater samples SB-3 at 9.5 µg/L µg/L, SB-5 at 11.5 µg/L and SB-5 at 20 µg/L at concentrations exceeding the residential vapor intrusion ESL of 20 µg/L. The ESL value for naphthalene direct exposure is 0.17 µg/L.

Based on the high contaminant concentrations detected during the investigation conducted by PES, SOMA prepared a workplan to conduct a Multi-Phase Extraction (MPE) pilot test in order to determine the feasibility of utilizing high vacuum MPE, as an interim remedial action to minimize impact of on-site contamination on current and future on site workers, occupants, and residents.

For conducting the pilot test, SOMA proposed to install three MPE pilot test wells (EX-1 thru EX-3) along with five observation wells (OB-1 thru OB-5).

2. WELL INSTALLATION

Prior to conducting a multi-phase extraction (MPE) pilot test at the site, SOMA installed three MPE wells and three observation wells according to the following scope of work.

2.1 Scope of Work

Details of the tasks listed below are discussed in the following sections of this report.

- Task 1: Permit acquisition, Health and Safety Plan preparation, and subsurface utility clearance
- Task 2: Installation of extraction and observation wells
- Task 3: Well survey
- Task 4: Well development
- Task 5: Waste disposal
- Task 6: Laboratory analysis of soil samples
- Task 7: Conducting a groundwater monitoring event prior to MPE pilot test and another after the test
- Task 8: Conducting Multi-Phase Extraction Pilot Test

2.2 Permit Acquisition, Health and Safety Plan Preparation, and Subsurface Utility Clearance

In advance of drilling, SOMA obtained drilling permits (W2017-0637, W2017-0638) from Alameda County Public Works Agency (ACPWA) for installation of eight observation/extraction wells (Appendix A). On August 23 and 25, 2017, SOMA also provided the required notices to ACPWA in advance of drilling in order to schedule grouting inspection.

During field implementation activities, SOMA followed standard Health and Safety Plan (HASP) procedures. The HASP is a requirement of the Occupational Safety and Health Administration (OSHA), "Hazardous Waste Operation and Emergency Response" guidelines (29 CFR 1910.120) and the California Occupational Safety and Health Administration (Cal/OSHA) "Hazardous Waste Operation and Emergency Response" guidelines (CCR Title 8, section 5192). The HASP is designed to address safety provisions during field activities and protect the field crew from physical and chemical hazards resulting from drilling and sampling. It establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards,

decontamination procedures, and emergency action plans. Field staff and contractors reviewed and signed the HASP prior to beginning field operations.

On August 16, 2017, prior to well installation activities, SOMA's field crew visited the site and marked proposed well locations using chalk-based white paint. Underground Service Alert (USA) clearance verifying that drilling areas were clear of underground utilities was obtained. A private utility locator (OHJ) surveyed proposed drilling areas to locate any additional subsurface conduits.

2.3 Installation of Observation/Extraction Wells

On August 28 and 29, 2017, under SOMA's oversight, Cascade Drilling installed, three 4-inch diameter extraction wells (EX-1, EX-2, and EX-3), and three 2-inch observation wells (OB-2, OB-4, OB-5) utilizing hollow stem auger (HSA) drilling methodology. On August 30, 2017 SOMA crew was on-site with Cascade, attempting to install two of the proposed observation wells (OB-1 and OB-3). However, these wells could not be installed due to the presence of pea gravel and because of the proposed locations being too close to the underground utilities. Required amount of clearance between the unground power lines and water lines was not available in order to install those observation wells. EX-1, EX-2, EX-3, and OB-4 were advanced to 25 feet bgs and OB-2 and OB-5 were advanced to 15 feet bgs.

EX-1 and EX-2 were installed on site immediately south of the UST cavity. EX-3, OB-2, OB-4, and OB-5 were installed on the neighboring property at 2201 Valley Street, to the east of the site. Well locations are shown in Figure 2.

To clear all underground utilities, well boreholes were hand augured to 5 feet below ground surface (bgs). A hollow stem auger (HSA) was used for drilling and construction of these wells. Soil samples were collected for chemical analysis in the areas of elevated PID readings, odor, or visual observations indicative of contaminated area, in the absence of above indicators, a minimum of one sample was collected from each well borings. During well advancement, SOMA's field geologist logged the continuous soil cores and characterized content of each soil-filled tube using the Visual-Manual method of the Unified Soil Classification System (USCS).

2.3.1 Field Observations during Well Advancement

During boring advancement, all locations were continuously cored and logged from ground surface on. Cored soil was retrieved from boreholes, checked for attributes characteristic of smear zone including hydrocarbon odors, visual staining, liquid phase hydrocarbons (free product), and screened based on photo-ionizing detector (PID) readings. PID readings, first encountered water and well screened intervals were noted on boring logs attached in Appendix B.

In borehole EX-1, EX-2, and EX-3, elevated PID readings were observed between the depths of 5 and 10 feet bgs, and ranged from 320 to 460 parts per million (ppm). In borehole EX-3, higher PID reading was also observed at 20 feet bgs at 280 ppm.

Observed geology at these well locations is detailed below. EX-1 comprised predominantly of clay, clayey sand, silty clay, and sandy gravelly clay. EX-2 comprised of silty sand, clayey sand, and sandy gravel. EX-3 comprised of fine sand, silt and clay, fine sand and clay, sandy silt, and sand, gravel, and silt. The observation wells (OB-2, OB-4, and OB-5) comprised of sand and silt, clay, and sand clay mixture. Field observations are noted in boring logs cataloged in Appendix B.

SOMA utilized a 0.02-inch-wide by 1.5-inch-long factory-slotted screen; the upper portion of each well consisted of blank PVC; no glues or other materials containing volatile organic compounds (VOCs) were used during well assembly. During well installation, a Monterey # 3 sand pack was emplaced around the screens and surged to consolidate the filter packs and eliminate voids. The filter packs were emplaced to a height of 1 foot above the top of the screens and sealed with a 1-foot-thick hydrated bentonite plug followed by an annular grout seal of neat cement. PVC caps were fitted to the bottom casings, without adhesives or tape, to protect the monitoring wells from accidental damage or tampering; traffic rated utility boxes with internal steel protective covers and locking caps were installed over the monitoring wellheads, and set in concrete, flush with the existing grade. Boring logs are included in Appendix B.

Installed Wells	Total Well Depth (feet toc)	Screen Interval (feet bgs)	Depth to Groundwater September 7, 2017 (feet toc)
EX-1	25	5-25	10.97
EX-2	25	5-25	11.78
EX-3	25	5-25	10.57
OB-2	15	5-15	10.40
OB-4	25	5-25	10.45
OB-5	15	5-15	10.42

2.4 Soil Sample Collection and Analysis

During drilling activity, SOMA collected soil samples for analysis at depths where PID readings or visual observations indicated presence of soil contamination.

During soil samples collection, SOMA's field geologist selected sediments of 6-inch-long sampling tubes and capped both ends of each sample with a Teflon liner and polyethylene end caps. Each soil sample was labeled with a unique identifier and immediately placed in a chilled ice chest for transport to a California state-certified environmental laboratory for analysis.

Samples collected during well installation activities were submitted to a California state-certified environmental laboratory for analysis as follows:

- TPH-g by Method 8015
- BTEX (benzene, toluene, ethylbenzene and xylenes), MtBE and full list volatile organic compounds (VOCs) by Method 8260.

2.5 Soil Analytical Results

Soil analytical results are summarized in Table 1. Complete laboratory analytical reports are included in Appendix F.

All contaminants of concern were either below laboratory reporting limits or detected significantly below the environmental screening levels (ESLs) set forth by San Francisco Bay Regional Water Quality Control Board (direct exposure for construction worker).

2.6 Well Development and Survey

On September 5 and 6, 2017, under SOMA's oversight, Cascade, developed all newly installed wells. Wells were developed a minimum of 72 hours following installation. The wells were developed by bailing out sediment-rich groundwater followed by pumping and surging the wells. This process continued until purged groundwater clarified substantially and groundwater quality parameters were stabilized.

The water-bearing intervals were developed by surging and bailing using a suitably sized surge block. Groundwater stabilization parameters were maintained during the development process and records of this data are included in Appendix D.

On August 31, 2017, Edgis Land Surveying and Mapping, a certified licensed land surveyor (License 6772), surveyed the newly installed wells. Latitude and longitude coordinates were surveyed to Zone III NAD 83 datum, and the elevation to NAVD 88 datum from GPS observations. Survey data are included in Appendix E, and were uploaded to the State Water Resources Control Board Geotracker database.

3. GROUNDWATER MONITORING- PRE MPE

A groundwater monitoring event was conducted at the site on September 7, 2017 prior to the start of the MPE event.

3.1 Field Activities

During this event, all newly installed wells were measured for depth to groundwater. Additional field measurements and groundwater samples were collected from all six wells. Properties measured in the field were pH, temperature, and electrical conductivity (EC).

Purged groundwater was temporarily stored and secured on-site in 55-gallon drums pending transport to an appropriate disposal facility.

3.2 Laboratory Analysis

Groundwater samples were submitted to a California state-certified laboratory Enthelpy Analytical, for the following analysis:

- TPH-g (gasoline by EPA Method 8260),
- BTEX (benzene, toluene, ethylbenzene, and total xylenes), MtBE, Naphthalene, and other VOCs (by EPA Method 8260).

3.3 Results

Results of field measurements and laboratory analyses for the groundwater monitoring event conducted on September 7, 2017 follow below.

3.3.1 Field Measurements

Monitoring wells EX-1, EX-2, EX-3, OB-2, OB-4, and OB-5 were measured for depth to groundwater (Table 2). Depths to groundwater ranged from 10.25 feet in OB-2 to 13.17 feet in EX-1. Groundwater elevations ranged from 8.60 feet in EX-1 to 9.93 feet in OB-4.

Figure 3 displays the groundwater elevation map. The groundwater flows southeasterly at a gradient of 0.014 ft/ft. Groundwater gradient calculations are included in Appendix G.

3.3.2 Laboratory Analysis

Groundwater analytical data for this monitoring event is shown in Table 2. Appendix g includes the laboratory report and chain of custody form.

TPH-g was detected in concentrations ranging from 92 µg/L in EX-2 to 940 µg/L in EX-1. Figure 5 displays the contour map of TPH-g concentrations in groundwater. The TPH-g plume appears to be centered immediately south of the UST cavity around EX-1.

The following BTEX concentrations were observed:

- All BTEX analytes were below laboratory reporting limits in EX-1, EX-2, OB-2, and OB-4.
- In EX-3, ethylbenzene was detected at 3.2 µg/L and other BTEX analytes were below laboratory-reporting limits.
- In OB-5, ethylbenzene and total xylenes were detected at 6.30 µg/L and 4.60 µg/L, respectively; benzene and toluene were below laboratory-reporting limits.

MtBE was below the laboratory-reporting limit in OB-2 and OB-4 and was detected in concentrations ranging from 0.9 µg/L in EX-3 to 180 µg/L in EX-1. Figure 6 displays the contour map of MtBE concentrations in groundwater.

Naphthalene was detected in OB-5 at 2.70 µg/L and was below the laboratory-reporting limit in remaining groundwater samples.

Other VOCs were detected at low levels, ranging from 0.5 µg/L of n-Butylbenzene in OB-5 to 26 µg/L of chloromethane in OB-4. All detectable VOC concentrations are listed in Table 2.

Appendix G includes the laboratory report and chain of custody form for this monitoring event.

4. WASTE DISPOSAL

Upon completion of well installation activities, soil cuttings, grout, development/rinsate water and purged groundwater from monitoring event were stored on-site in several 55-gallon drums. Based on a request received from the disposal facility, a composite soil sample was collected from the stored drums on August 31, 2017 and sent to the analytical laboratory. Laboratory analytical report is included in Appendix F. The waste was profiled and then transported to an appropriate disposal facility on September 13, 2017 for disposal. Waste manifest is included in Appendix C.

5. MULTI-PHASE EXTRACTION PILOT TESTING

To evaluate the effectiveness of the multi-phase extraction system in removing the residual petroleum hydrocarbons from soil and groundwater SOMA performed a multi-phase extraction (MPE) Pilot test at the site. The result of the pilot test will be utilized in preparation of corrective action plan (CAP) upon completing the site conceptual model.

5.1 Pilot Test Summary

SOMA performed MPE pilot testing between September 14, 2017 to October 13, 2017, utilizing newly installed wells EX-1, EX-2, and EX-3 as extraction wells and OB-2, OB-4, and OB-5 as observation wells. Well locations are shown in Figure 2.

The pilot test was performed using a self-contained mobile treatment system (MTS), equipped with electrical generator, propane tank, liquid ring vacuum pump rated at 25-horsepower and 428-cubic feet per minute (cfm), air/water separator vessel, discharge hoses and traffic-rated hose ramps, downhole stingers, and a thermal oxidizer for vapor abatement (Figure 10). During the pilot test both soil vapor and hydrocarbon-impacted groundwater were extracted from the subsurface.

Physical and chemical parameters including applied vacuum, soil vapor extraction flow rates, oxidizer temperature, volume of groundwater extracted, volatile organic compound (VOC) concentrations, groundwater levels, and induced vacuum were monitored and recorded. Induced vacuum in the observation wells was measured using magnehellic vacuum gauges fitted to airtight well caps and drawdown was measured utilizing standard water level meters. VOC concentrations in the extracted soil vapor stream were continuously monitored using a photo ionization detector (PID) calibrated to hexane.

MPE pilot test operational data is presented in Tables 3 and 4 and field data sheets are attached in Appendix I. Extracted soil vapor samples were collected for laboratory analysis from influent and effluent gas streams during pilot testing (Figure 10 shows MTS sampling points).

5.2 Pilot test Objectives

The overall objective of pilot testing was to evaluate whether MPE is sufficiently effective to justify full-scale implementation, and to evaluate its capability to remove contaminant mass in the most efficient and timely manner.

The first step in conducting the test was to dewater the extraction wells and cause a sizeable cone of depression in nearby observation wells in order to

increase the thickness or volume of unsaturated zone through which petroleum hydrocarbon vapor could flow and can be captured through vacuum hoses which are called stinger pipes. This process could also enhance the volatilization of petroleum constituents and helps in removing them from the subsurface.

The second step in this process is to remove soil vapor and groundwater from the impacted zone for treatment. The soil vapor could be treated by thermal or catalytic oxidizer depending upon the concentration of petroleum hydrocarbons in vapor stream. Usually if the concentration of the hydrocarbons falls below 3,000 ppmv, the catalytic oxidizer becomes more cost effective, otherwise the thermal oxidizer is more effective in treating the soil vapor.

The third step is to evaluate effectiveness of the proposed technology and assess site conditions with regard to potential full-scale implementation.

MPE systems have two primary configurations: dual-phase extraction (DPE) and two-phase extraction (TPE). DPE utilizes separate mechanical systems for pumping groundwater and extracting soil vapor from the groundwater and smear zone. The soil vapor is primarily released from the vadose zone and smear zone which used to be within the saturated zone prior to pumping groundwater and dewatering the area above the saturated zone. TPE utilizes a single vacuum pump to extract both groundwater and soil vapor through one-inch diameter tube (stinger) inserted in the well. The most cost-effective MPE configuration is determined by aquifer permeability and the corresponding yield of both air and water. DPE is appropriate for sites exhibiting higher permeability and larger well yields, at groundwater extraction rates greater than 2 gallons per minute (gpm). When aquifer yield is lower than 2 gpm, TPE is typically more cost-effective. In case of DPE operation dedicated pumps are inserted into the extraction wells to dewater the entire extraction well borehole so the stingers can only remove soil vapor more effectively. The down-hole pumps are programmed to pump water if the well is producing enough water. In case of complete dryness the pumps stop pumping to save energy and prevent pumps from over-heating and possible burn-out.

Pilot test results were utilized to determine the following:

1. Mass Removal: Pilot testing results determine whether MPE can accomplish removal of contaminant mass at satisfactory rates. Mass removal rates will be evaluated using data obtained during pilot testing.
2. Zone of Influence Evaluation: pilot test results provide vadose and saturated zone response to the application of vacuum and extracting groundwater from the subsurface.
3. Subsurface Soil Properties/Parameters Evaluation: pilot test results provide information about the nature and variability of site-specific subsurface parameters and contaminant distribution.

4. Discharge Concentrations/Design Parameters: pilot test results establish initial levels of contaminants as well as the final contaminant levels in the extracted gas and liquid at the conclusion of the pilot test. This data will be used for future treatment system design and discharge permitting.
5. Cost Evaluation: pilot test results can aid in evaluating cost of full-scale system implementation and operation, as well as assessment of duration of soil and groundwater remediation.

5.3 Pre-Pilot Test Activities

In accordance with conditions of the various-locations Bay Area Air Quality Management District (BAAQMD) permit for the MTS, SOMA notified BAAQMD of the location, date, and duration of the pilot test, and the vapor treatment to be utilized.

Prior to MPE operation, a Wastewater Special Discharge Permit was obtained from the East Bay Municipal Utility District (EBMUD) to allow discharge to the site sewer during MPE activities (copy of discharge permit is attached in Appendix H). In preparation for discharge activities, on August 29, 2017, SOMA collected an effluent groundwater sample (after groundwater had passed through granular activated carbon drums). Samples were analyzed according to the EBMUD discharge requirements. Based on acceptable laboratory analytical results, EBMUD issued the discharge permit (No. 97215975), effective from September 7, 2017 through September 30, 2018. Certified laboratory analytical reports and chain of custody documentation are included in Appendix J. Periodic compliance reports will be completed in accordance with permit conditions for the duration of permit validity.

5.4 Field Work and Procedures

The MTS system was operated continuously throughout the pilot test, if any interruptions occurred they were noted in pertinent field notes; MTS operational data collected during the pilot test included the following (no data was collected overnight):

- Oxidizer temperature
- Pump/air temperature
- Total flow
- Dilution flow
- Total liquids removed by vacuum
- PID readings

Oxidizer temperature and pump/air temperature are displayed on the MTS control panel and total flow was calculated using the pump vacuum observation. Dilution flow was read directly from the gas flow gauge at the air dilution flow control valve before the liquid ring pump; flow is reported in standard cubic feet per minute. Total liquids removed were read from a totalizing flow meter ahead of the GAC drums. Appendix I includes field data sheets (MTS Operational Data Sheets and MTS Monitoring Point Data Sheets) for recording data. Measurements were recorded periodically during daytime operating hours only.

All equipment was calibrated in the field in accordance with manufacturer recommendations. All extraction wells and observation wells were placed under pressure and observed for any evidence of air leakage around the cement/bentonite grout seal of the well. Shaving foam was used to detect leaks and no air leakage was observed at any of the wells. Groundwater elevations were measured at observation wells using a standard electrical water level meter graduated in tenths of inches. Stingers were connected to the MTS and extended into the extraction wells to within a few inches from the bottom of the well, removing groundwater from the well casing/screen by vacuum. Prior to insertion of the stinger, depth to groundwater was measured. The extraction hoses were placed under traffic rated hose ramps where necessary.

Groundwater levels as well as vacuum gauges were measured at all wells prior to commencement of the pilot test. Induced vacuum was measured using a magnehelic vacuum gauge (Dwyer), attached to a barbed fitting that was attached to an air tight well cap. Groundwater elevation was measured by removing the well cap and inserting a standard groundwater level probe. MPE wells (4-inch diameter) were fitted with compression caps that enable both vacuum and groundwater levels to be measured simultaneously. These compression caps remain air tight allowing a magnahelic gauge to be attached to the cap of each observation well. Vacuum gauges read a minimum range of 0.01 inches of water to 30 inches of mercury. Groundwater level probes read at graduations of 0.1 inches.

Extracted soil vapor concentrations were measured with a PID calibrated to hexane. Vapor samples were collected in Tedlar bags twice during the pilot test. Influent soil vapor samples were collected through a sampling port located on the vacuum pump discharge manifold and thermal oxidizer stack vapor samples were collected through a sampling port located at the top of the stack.

5.5 Pilot Test Implementation

Pilot testing began on September 14, 2017 and was terminated on October 13, 2017. Total test time was 15,275 minutes or 255 hours. Table 3 shows operational data during this period. Casing vacuum ranged from 17.6 to 27 inches of mercury and vapor extraction flow rate ranged from 38 to 187 scfm. VOC concentrations in the extracted soil vapor stream measured using a PID

Well Installation, Groundwater Monitoring, and Multi-Phase Extraction Pilot Test Report

ranged from 9 ppmv as hexane to 2,220 ppmv (Table 3). Thermal oxidizer temperatures ranged from 1,350 °F to 1,680 °F.

As the test was started using TPE process, a little drawdown was recorded at observation wells and the extraction wells were not dewatered. In addition, the vapor concentration using PID stayed below 100 ppmv. It was found that due to high groundwater yield (above 2 gpm) rather than TPE system DPE system needs to be employed by placing dedicated pumps inside each extraction well and dewatering these wells for effective operation. Therefore, after a few days of operation, SOMA switched to DPE system and as a result the extraction wells were dewatered and concentration of the vapor stream jumped to more than 2000 ppmv. Meanwhile the drawdown in the observation wells increased to more than 1.5 feet which increased air flow rate as wells as the contaminant removal rate.

The Initial PID readings showed that the high concentration hydrocarbons in the air stream is primarily contributed from EX-3 and very little mass is being removed from EX-1 and EX-2 located at the south side of the existing USTs. It appears that the majority of petroleum hydrocarbons mass exist at the eastern side of the USTs within the 2201 Valley Street property.

A total of 53,952 gallons of groundwater (Table 3) was extracted at an average rate of 3.50 gpm during this operation.

5.6 Zone of Influence

The zone of influence (ZOI) for MPE pilot testing was estimated by determining pressure changes in observation wells versus distance from the extraction well at the end of the pilot test (EPA 1995). The effective ZOI is defined as the distance at which a pressure drop of 0.10 in-H₂O is observed. The log of vacuum pressure measured in the observation well at the end of pilot testing is plotted against the distance from the MPE well. Table 6 and figures in Appendix K show the calculated ZOI for different well combinations. The data points describe straight lines and the lines intersect the pressure axis at 0.1 inches of water with the distance axis used to estimate the MPE ZOI. Due to the lack of sufficient number of observations that was described earlier (OB-1 and OB-3 could not be installed because of presence of pea gravel and utility lines being too close to the them) the ZOI for wells EX-1 could not be well defined due to its long distance from the OB-2, OB-4, and OB-5, however, when EX-1 and EX-2 worked simultaneously their combined effect could be observed at the observation wells.

5.6.1 Zone of Influence During Vacuum Extraction

While extracting from EX-1 and EX-2, the combined impact of their operation caused certain pressure drop at the observation wells. As Table 6 shows the estimated ZOI was about 30 feet from EX-2.

ZOI during pumping from EX-2 alone was also about 30 feet. During pumping from EX-1 and EX-3 the ZOI was about 21 feet. The maximum ZOI of 24 feet was observed when all three extraction wells were operating simultaneously.

During the pilot test operation water levels at the observation wells also monitored and the observed draw-downs were recorded. The maximum water level draw-downs was recorded when all of the extraction wells were simultaneously operating and extracting vapor and groundwater. The maximum draw-downs during the simultaneous operation of extraction wells at OB-2, OB-4 and OB-5 were approximately 1.0, 1.0 and 1.52 feet, respectively. Appendix K shows the draw-down curves. The table showing the recorded water level elevations within the observation wells is included in Appendix I.

5.7 Pilot Testing Results

Contaminant mass removed was estimated using flow rates and volume of air extracted during pilot testing, and VOC concentrations in ppmv as hexane measured by PID. VOC mass removal rate in lbs/day is estimated by dividing the estimated VOC mass removed during pilot testing by elapsed time.

The estimated total mass of VOCs removed from soil vapor extracted from extraction wells during this event was 135 lbs (as hexane). The estimated average VOC mass removal rate was approximately 13 lbs/day. The highest VOC mass removal rate was observed while extracting from EX-3 at approximately 64 lbs/day as calculated in Table 4. This is largely due to the presence of significant mass of contaminant around EX-3.

5.8 Soil Vapor Analytical Laboratory Results

Per requirements of the BAAQMD, soil vapor samples were collected in Tedlar bags to show compliance with the 'permit to operate'. Vapor sampling was conducted twice during the event. Vapor samples were collected on October 5 and October 13, 2017.

Vapor samples were submitted under chain-of-custody documentation to McCampbell Analytical, Inc. of Pittsburg, a California state-certified environmental laboratory, where they were analyzed for TPH-g, BTEX, MtBE using USEPA Analytical Method TO-15 and for Naphthalene using USEPA Analytical Method TO-17. Naphthalene analysis by TO-17 was conducted based on a request from ACDEH dated August 23, 2017.

Vapor samples were obtained from the oxidizer stack to demonstrate compliance with BAAQMD various-locations permit conditions to determine destruction efficiency of the extracted vapors. Soil vapor analytical results are presented in

Table 5. Certified laboratory analytical reports and chain of custody documentation are included in Appendix J.

Estimated total mass of contaminants removed using laboratory data is presented in Table 5. The mass of contaminants (mostly TPH-g, ethylbenzene, and total Xylenes) removed by the pilot test was estimated using soil vapor analytical results for the pilot test and the median flow rate. The estimated total mass removed from extracted soil vapor was approximately 57 lbs. The discrepancy between the estimated total mass of VOCs removed utilizing PID data and the total mass of contaminants removed utilizing laboratory analysis data is a result of the difference between PID measurements as hexane and laboratory analyses of the extracted vapor stream. Mass removed utilizing PID readings, when converted from hexane to TPH-g is approximately 31 lbs. Additionally, it appears that vapor sampling for laboratory analysis may have coincided with somewhat higher PID readings. These occurrences likely influenced the calculation of contaminant mass based on vapor analytical results, contributing to the difference between the mass derived from PID readings and mass derived from analytical results. Concentrations based on laboratory analysis are representative only of that moment in the pilot test at which the extracted vapor stream was sampled. Since laboratory analytical results may not be representative of the entire length of the pilot test, unlike PID measurements that were collected continuously over the entire duration of the pilot test using different combinations of the extraction wells, the calculated mass of VOCs removed during the pilot test seems to be more representative and realistic estimate than using laboratory analysis. Analytical results support compliance with the BAAQMD permit achieving an abatement efficiency of over 99%.

5.9 Extracted Groundwater Treatment and Disposal

Extracted groundwater water was treated and discharge to the on-site sewer system. Approximately 53,952 gallons was produced during the MPE pilot test. Extracted groundwater was treated through two 55-gallon GAC drums prior to discharge. In order to comply with discharge permit requirements SOMA will submit periodic discharge reports to EBMUD for the duration of permit validity.

6. GROUNDWATER MONITORING- POST MPE

A second groundwater monitoring event was conducted at the site on October 23, 2017 at the end of the MPE event in order to evaluate the efficiency of the MPE pilot test.

6.1 Field Activities

During this event, all newly installed wells were measured for depth to groundwater. Additional field measurements and groundwater samples were collected from all six wells. Properties measured in the field were pH, temperature, and electrical conductivity (EC).

6.2 Laboratory Analysis

Groundwater samples were submitted to a California state-certified laboratory Enthalpy Analytical, for the following analysis:

- TPH-g (gasoline by EPA Method 8260),
- BTEX (benzene, toluene, ethylbenzene, and total xylenes), MtBE, Naphthalene, and other VOCs (by EPA Method 8260).

6.3 Results

Results of field measurements and laboratory analyses for the groundwater monitoring event conducted on October 23, 2017 follow below.

6.3.1 Field Measurements

Monitoring wells EX-1, EX-2, EX-3, OB-2, OB-4, and OB-5 were measured for depth to groundwater (Table 2). Depths to groundwater ranged from 10.34 feet in OB-2 and OB-5 to 11.97 feet in EX-1. Groundwater elevations ranged from 9.56 feet in EX-2 to 9.95 feet in EX-3.

Figure 4 displays the groundwater elevation contour map. As illustrated, groundwater levels were disturbed at the time of this monitoring event, due to the continuous pumping from extraction wells during the MPE pilot test. Since the groundwater levels were not in equilibrium condition, therefore, no groundwater gradient or flow direction can be established at this time.

The newly installed wells are not designed for monitoring purposes due to their long screen intervals. They are appropriate only for extraction purposes. Also, at the time of post-MPE monitoring event, the groundwater was not in equilibrium due to the long period of pumping during MPE pilot test. However, SOMA is currently preparing to conduct a CPT investigation at the site. During the proposed CPT investigation, SOMA anticipates to achieve a better understanding of the hydrogeology beneath the site and hence be able to evaluate stratigraphy of saturated sediments beneath the site. It is quite possible that there exist a shallow and deep water-bearing zone beneath the site and that the groundwater direction at each layer may be different for each layer. The existing remediation wells may not be suitable for evaluation of groundwater flow direction.

6.3.2 Laboratory Analysis

Groundwater analytical data for this monitoring event is shown in Table 2. Appendix G includes the laboratory report and chain of custody form.

TPH-g was below laboratory reporting limit in OB-4 and was detected in concentrations ranging from 76 µg/L in EX-2 to 2,900 µg/L in OB-5. Figure 7 displays the contour map of TPH-g concentrations in groundwater. The TPH-g plume appears to be centered to the southeast of the UST cavity in off-site well OB-5. Since the previous monitoring event (prior to MPE event), TPH-g has increased in EX-3 and OB-5 and decreased in all other wells.

The following BTEX concentrations were observed:

- All BTEX analytes were below laboratory reporting limits in OB-2, and OB-4.
- Benzene and toluene were below laboratory reporting limits in all groundwater samples.
- Ethylbenzene was detected in EX-1, EX-3, and OB-5 at 3.3 µg/L, 5.3 µg/L, and 85 µg/L, respectively. Since the previous monitoring event (prior to MPE event), ethylbenzene has increased in EX-1, EX-3 and OB-5.
- Total xylenes were detected in concentration ranging from 0.6 µg/L in EX-2 to 12 µg/L in EX-3.

MtBE was below the laboratory-reporting limit in OB-2 and OB-4 and was detected in concentrations ranging from 1.7 µg/L in EX-3 to 23 µg/L in EX-1. Figure 8 displays the contour map of MtBE concentrations in groundwater. Since the previous monitoring event (prior to MPE event), MtBE has increased in EX-3, decreased in EX-1 and EX-2; remained same in OB-5, and remained below laboratory reporting limits in OB-2 and OB-4.

Naphthalene was detected in EX-1, EX-3, and OB-5 at 19 µg/L, 14 µg/L, and 69 µg/L, respectively and was below the laboratory-reporting limit in remaining groundwater samples. Figure 9 displays the contour map of Naphthalene concentrations in groundwater. Since the previous monitoring event (prior to MPE event), naphthalene has increased in EX-1, EX-3 and OB-5 and remained below laboratory reporting limits in remaining wells.

Other VOCs were detected at low levels, ranging from 0.5 µg/L (of 1,2,4-Trimethylbenzene in EX-2 and Isopropylbenzene in OB-2) to 81 µg/L of Propylbenzene in OB-5. All detectable VOC concentrations are listed in Table 2.

Appendix G includes the laboratory report and chain of custody form for this monitoring event.

7. CONCLUSIONS AND RECOMMENDATIONS

- During this most recent investigation, six groundwater remediation/observation wells were installed (EX-1, EX-2, EX-3, OB-2, OB-4, and OB-5).
- In soil samples obtained during well installation, all contaminants of concern were either below laboratory reporting limits or detected significantly below the ESLs.
- A groundwater monitoring event was conducted prior to the MPE pilot testing, utilizing all newly installed wells in order to establish a baseline subsurface conditions.
- An MPE pilot test was conducted at the site utilizing EX-1, EX-2, and EX-3 as extraction wells and OB-2, OB-4, and OB-5 as observation wells. This MPE test ran from September 14, 2017 through October 13, 2017.
- At the end of the MPE pilot test, another groundwater monitoring event was conducted in order to evaluate the efficiency of the test.
- During the MPE pilot test, approximately 135 pounds of VOCs (as hexane) or 31 pounds of VOCs (as TPH-g) were removed from the subsurface at the rate of approximately 13 pounds/day (as hexane).
- Results of MPE test indicate that due to high permeability of subsurface, DPE is more effective in dewatering the saturated zone and extract more contaminant mass.
- Results of the post MPE groundwater monitoring showed that TPH-g increased in EX-3 and OB-5 and decreased in all other wells; ethylbenzene increased in EX-1, EX-3 and OB-5; MtBE increased in EX-3, decreased in EX-1 and EX-2; remained same in OB-5; and naphthalene increased in EX-1, EX-3 and OB-5.
- Decreased concentrations of contaminants suggest that MPE is effective in stripping and removing fuel hydrocarbon constituents subsurface. Increasing concentrations suggest that significant fuel hydrocarbon constituents are adsorbed within the subsurface and are being drawn towards the extraction well.
- It appears that the contaminant plume has migrated from the USTs area to the downgradient area on 2201 Valley Street in the vicinity of wells EX-3 and OB-5. Increasing contaminant concentrations in these wells right after

termination of the MPE pilot test is due to the accumulation of contaminant mass next to the extraction points (around EX-3 and OB-5).

- Naphthalene is the contaminant of concern that needs to be removed in order to achieve the residential land use conditions at the site.

SOMA prepared a workplan for further investigation at the site. Due to the fact that no exploratory borings have been completed beyond 25 feet bgs and hydrogeology and chemical distribution, beyond 25 feet bgs being unknown, SOMA proposed to conduct an investigation utilizing CPT/MIP (cone penetrometer test/ membrane interface probe) to the depth of 60 feet. The CPT/MIP study was recently completed and a report is now being prepared. Based on the data gathered during these recent investigations, there are very minor levels of petroleum hydrocarbons in soil and groundwater samples collected from the north and south ends of USTs.

SOMA is currently preparing a workplan to convert OB-5 into an extraction well based on the increased concentrations of TPH-g and naphthalene in this well and in order to expedite the cleanup process. The workplan will also include installation of additional borings to delineate the extent of lead, based on high lead concentrations observed in SB-9, HA-3, and HA-7 (drilled and sampled by PES in April 2017).

Upon the completion of field work, SOMA will complete the site conceptual model, calculate the remaining mass of contaminants and prepare a corrective action plan for the site.

FIGURES



ENVIRONMENTAL ENGINEERING, INC.
6620 Owens Drive, Suite A • Pleasanton, CA 94588
TEL (925)734-6400 • FAX (925)734-6401

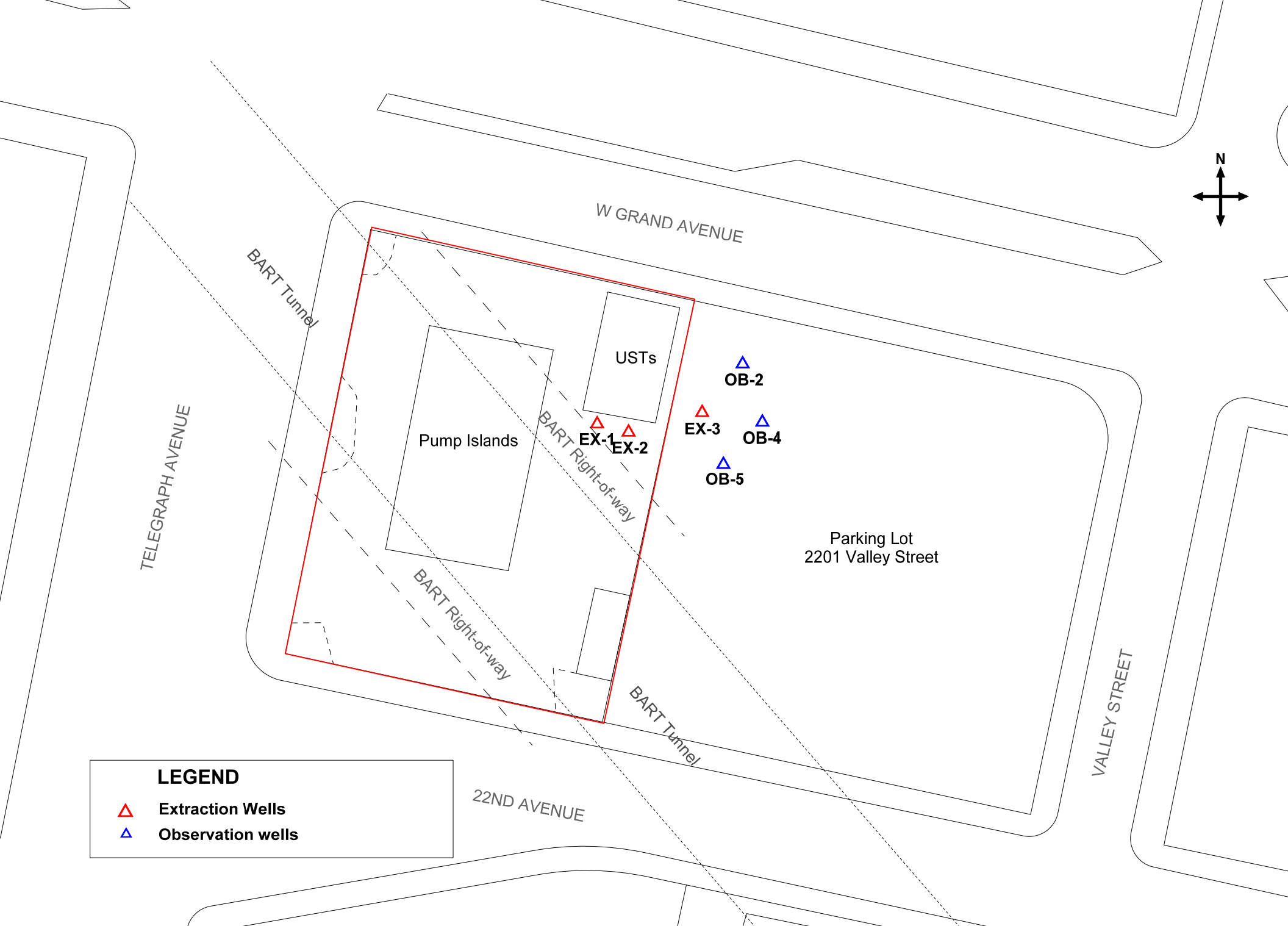
Figure 1: Site Vicinity Map

2200 Telegraph Avenue
Oakland CA 94612

PREPARED FOR:

PROJ. MGR:

DRAWN BY: Ruchi Mathur



LEGEND

- △ Extraction Wells
- △ Observation wells

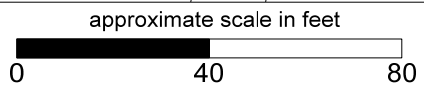


Figure 2: Site Map Showing Locations of Extraction and Observation Wells
2200 Telegraph Avenue, Oakland

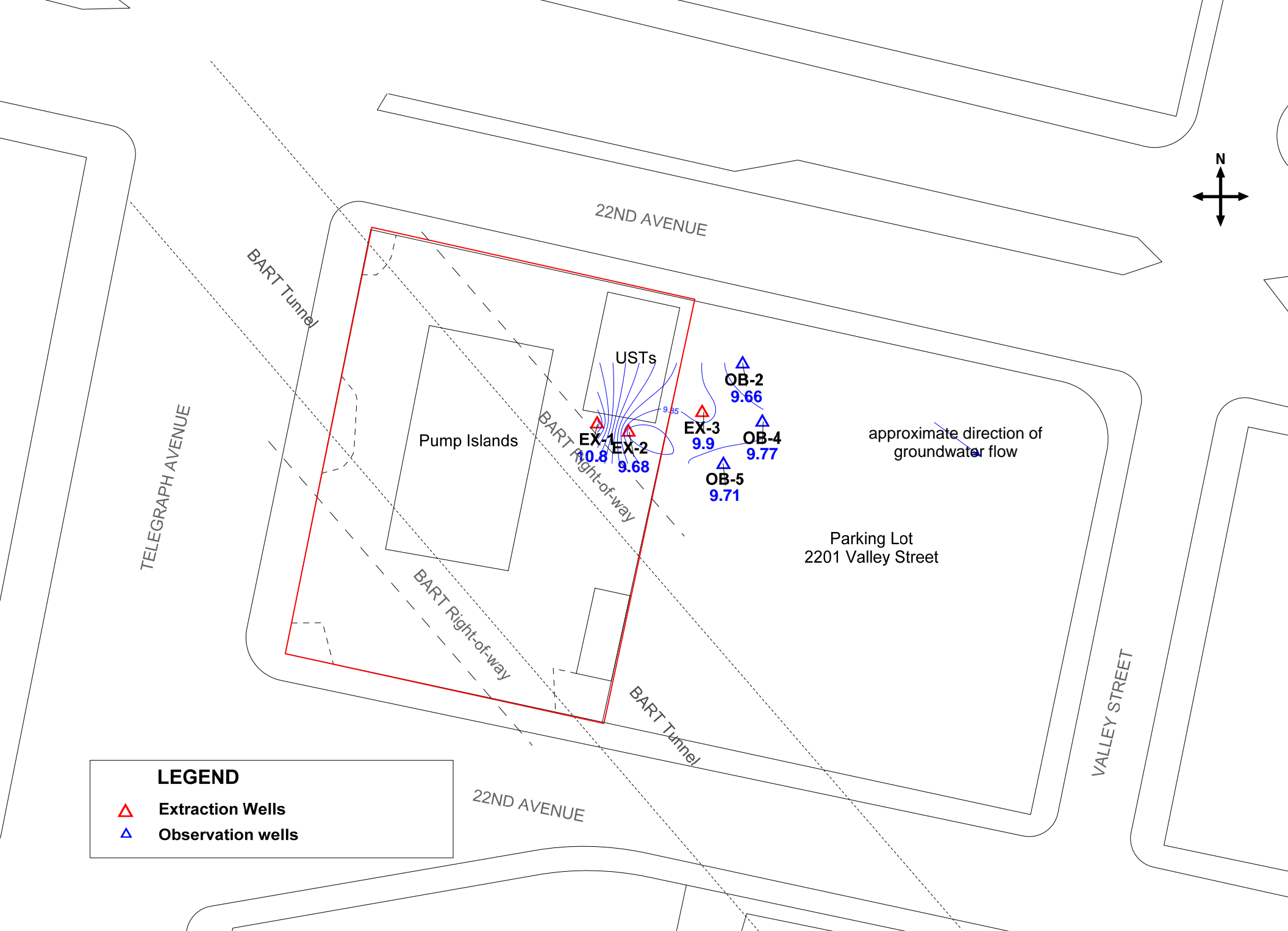
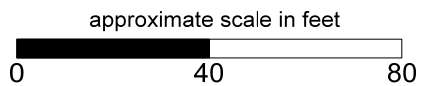
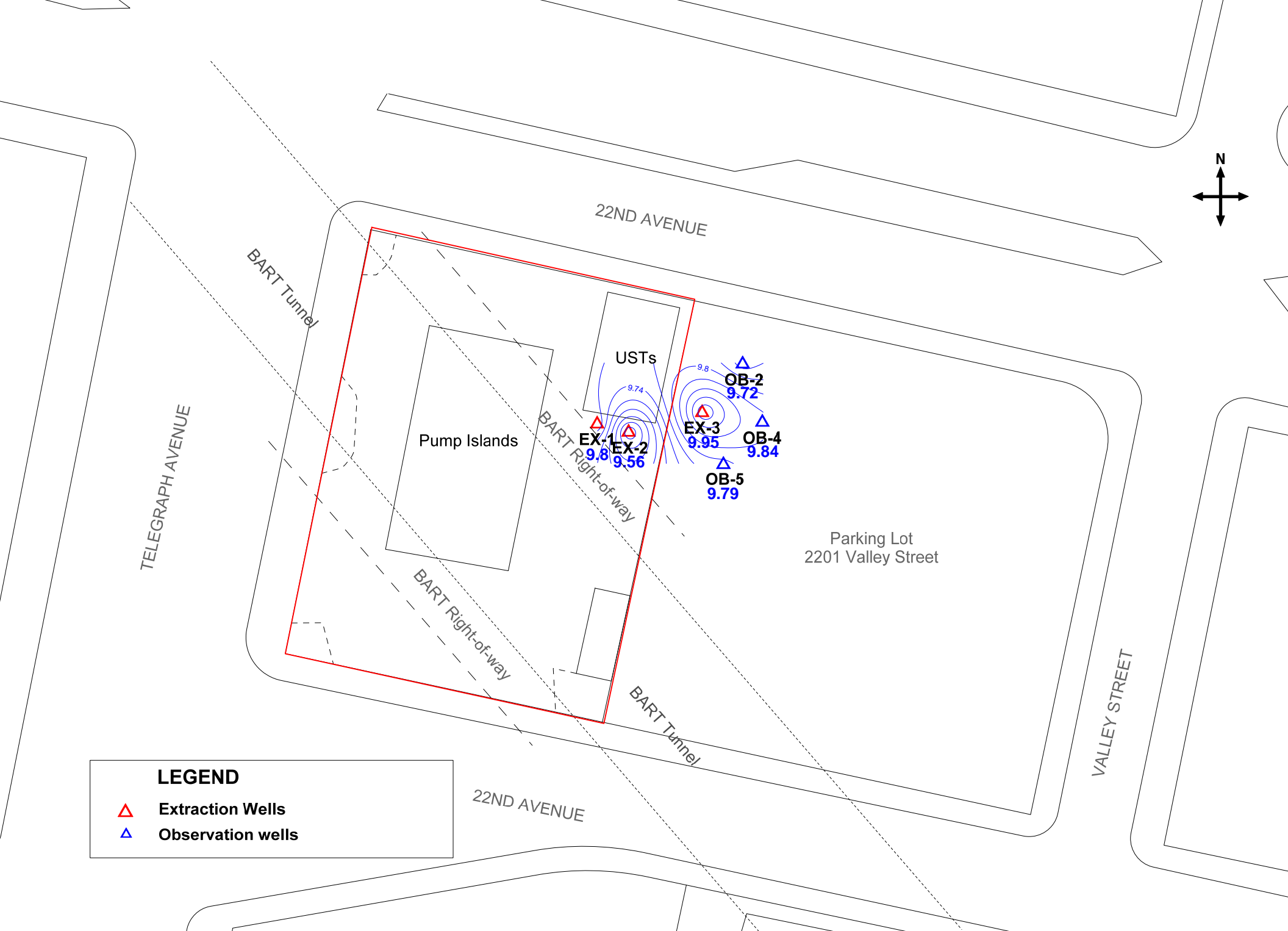


Figure 3: Site Map Showing Groundwater Elevation Contour Map, September 7, 2017





LEGEND

- △ Extraction Wells
- △ Observation wells

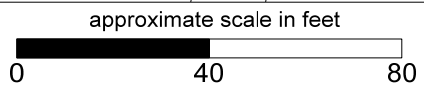


Figure 4: Site Map Showing Groundwater Elevation Contour Map, October 23, 2017



Figure 5: Contour map of TPH-g concentrations in Groundwater, September 7, 2017

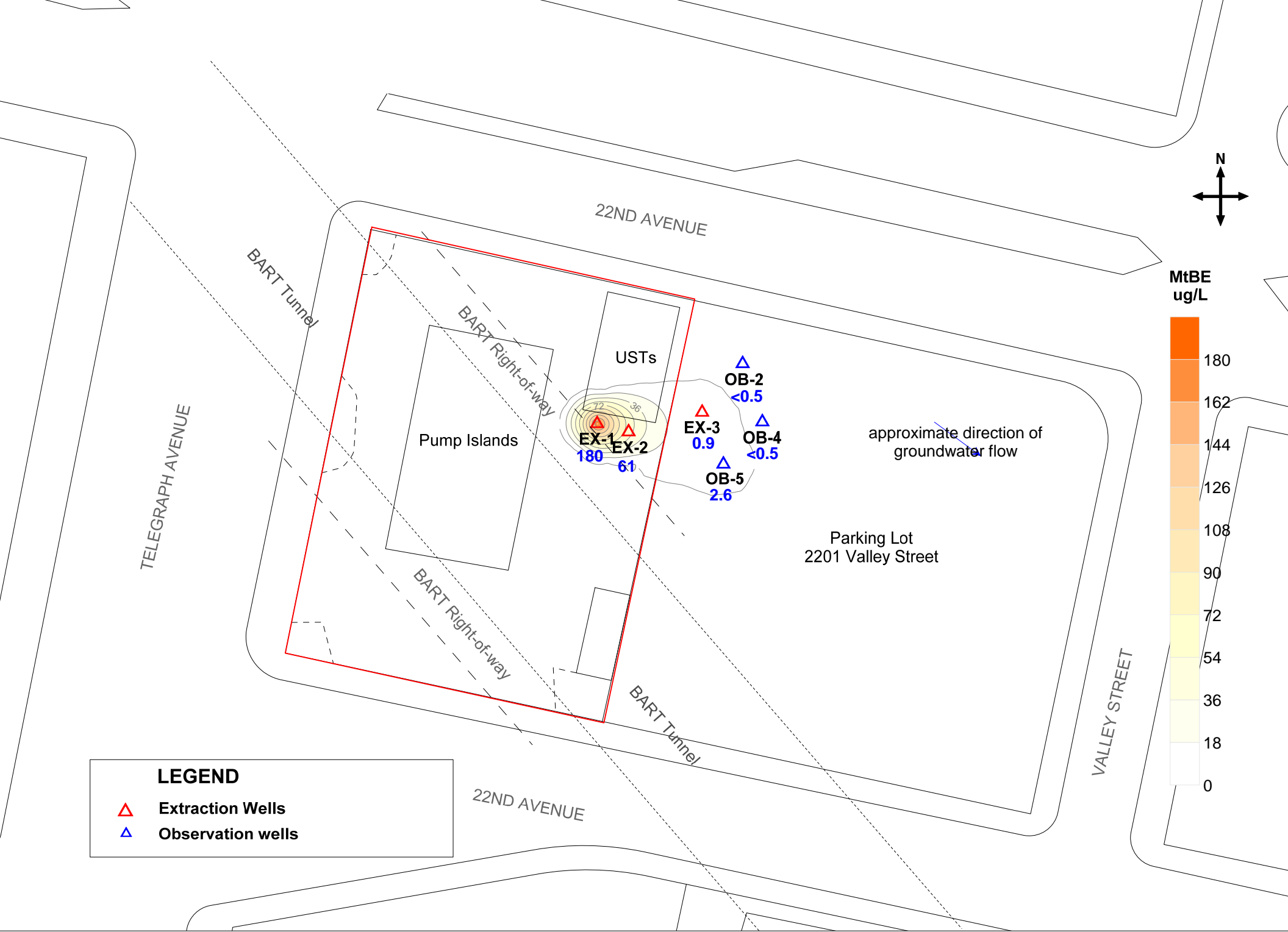


Figure 6: Contour map of MtBE concentrations in Groundwater, September 7, 2017

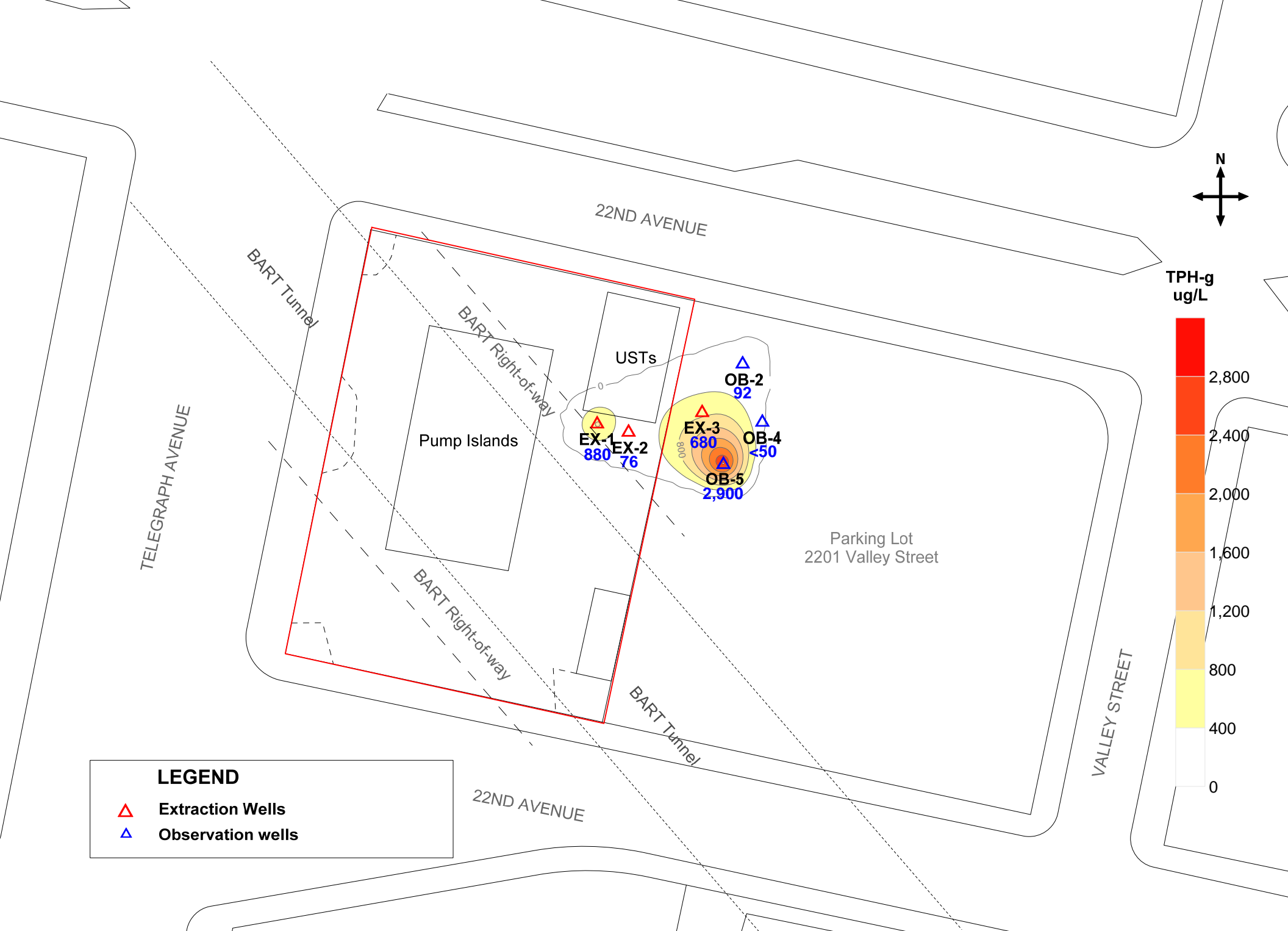


Figure 7: Contour Map of TPH-g concentrations in Groundwater, October 23, 2017

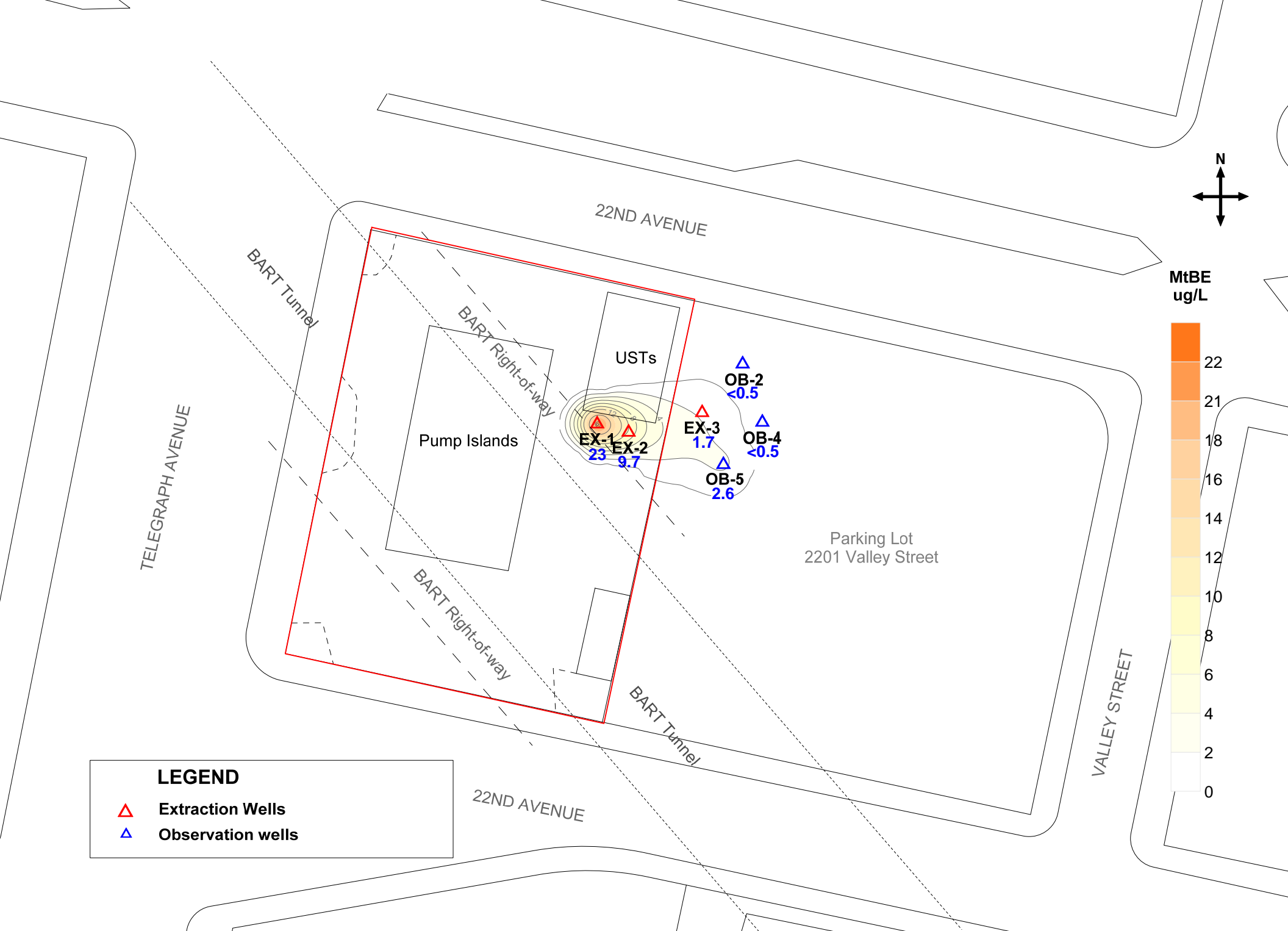


Figure 8: Contour Map of MtBE concentrations in Groundwater, October 23, 2017

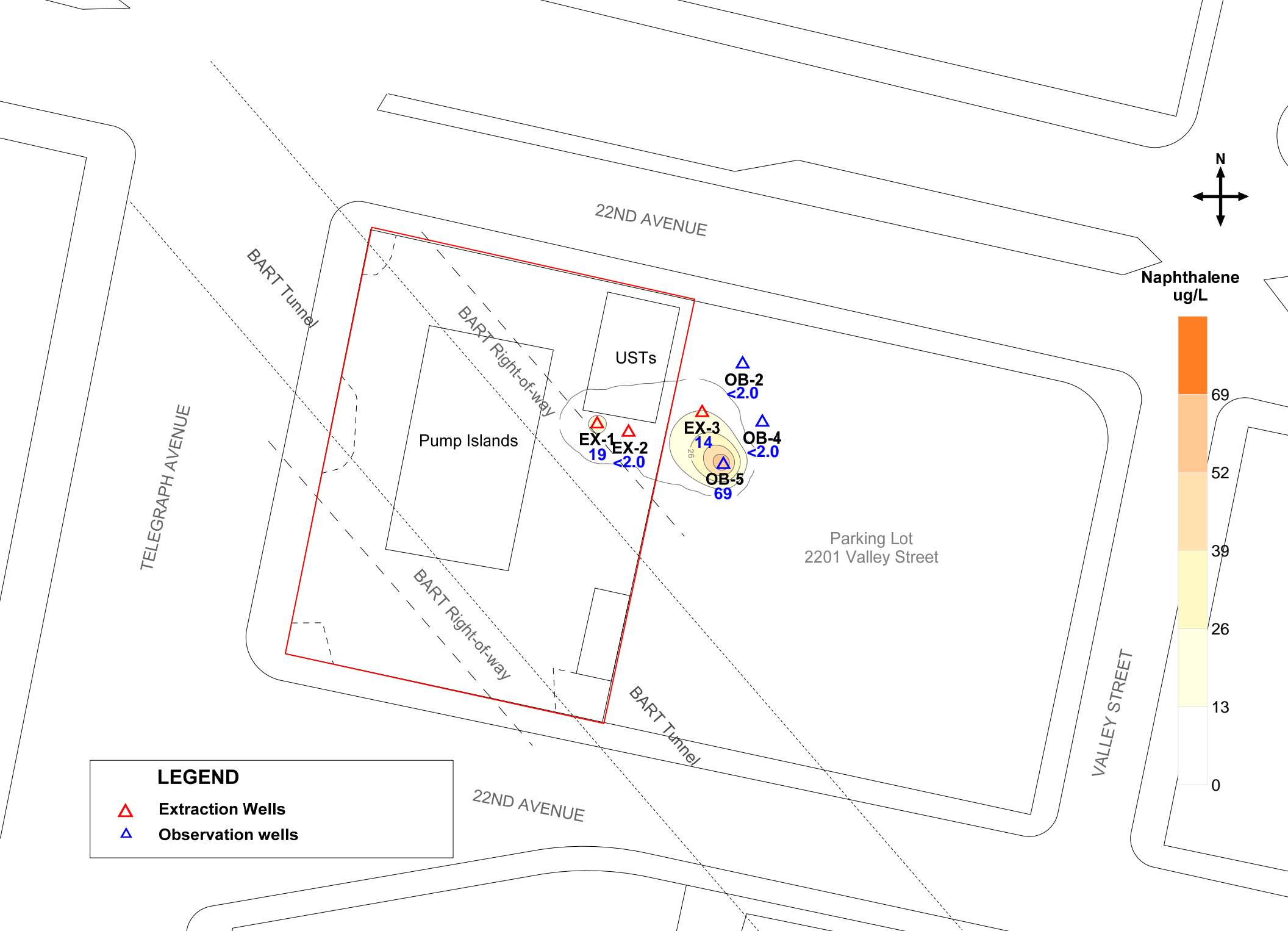
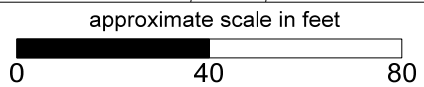
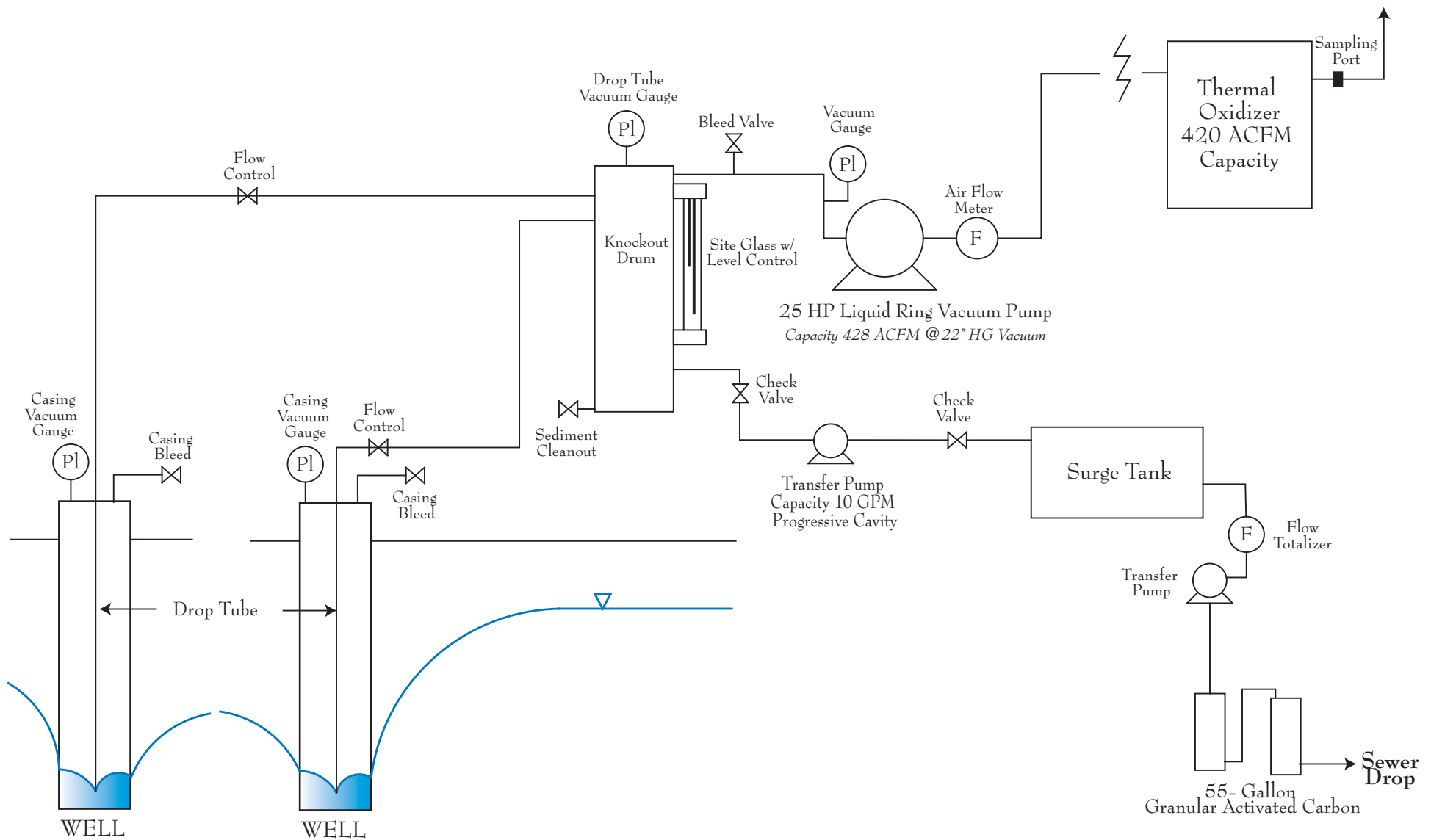


Figure 9: Contour Map of Naphthalene Concentrations in Groundwater, October 23, 2017





Not to Scale

Figure 10: MTS Process Schematic

TABLES

**Table 1:
Soil Analytical Data
2200 Telegraph Ave, Oakland**

Sample ID	Date	Sample Depth (feet)	TPH-g (mg/kg)	Acetone (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)	Napthalene (mg/kg)	Other VOCs (mg/kg)
April 2017											
SB-1	4/4/2017	6	0.27	0.045	<0.0035	<0.0035	<0.0035	<0.0071	<0.0035	<0.0071	All ND
SB-1	4/4/2017	12	7.1	0.057	<0.0038	<0.0038	0.045	<0.0076	<0.0038	<0.76	n-Butylbenzene - 0.12 sec-Butylbenzene - 0.062 Isopropylbenzene - 0.12
SB-1	4/4/2017	18	<0.16	<0.033	<0.0033	<0.0033	<0.0033	<0.0065	<0.0033	<0.0065	All ND
SB-2	4/4/2017	6	<0.21	0.044	<0.0043	<0.0043	<0.0043	<0.0085	<0.0043	<0.0085	All ND
SB-2	4/4/2017	12	0.56	0.07	<0.004	<0.004	0.0046	<0.008	<0.004	0.012	n-Butylbenzene - 0.011 sec-Butylbenzene - 0.0065 Isopropylbenzene - 0.0089 N-Propylbenzene - 0.053
SB-2	4/4/2017	18	<0.18	<0.036	<0.0036	<0.0036	<0.0036	<0.0072	<0.0036	<0.0072	All ND
SB-3	4/4/2017	6	<0.18	<0.037	<0.0037	<0.0037	<0.0037	<0.0073	<0.0037	<0.0073	All ND
SB-3	4/4/2017	12	610	<7.4	<0.74	<0.74	17	21	<0.74	8.90	n-Butylbenzene - 6.0 sec-Butylbenzene - 1.9 Isopropylbenzene - 3.4 N-Propylbenzene - 13 1,2,4-Trimethylbenzene - 32 1,3,5-Trimethylbenzene - 8.4
SB-3	4/4/2017	18	1.9	<0.042	<0.0042	<0.0042	0.036	0.018	<0.0042	0.025	n-Butylbenzene - 0.02 sec-Butylbenzene - 0.0074 Isopropylbenzene - 0.011 N-Propylbenzene - 0.047 1,2,4-Trimethylbenzene - 0.08 1,3,5-Trimethylbenzene - 0.013
SB-4	4/4/2017	6	<0.18	<0.036	<0.0036	<0.0036	<0.0036	<0.0071	<0.0036	<0.0071	All ND
SB-4	4/4/2017	12	<0.19	<0.038	<0.0038	<0.0038	<0.0038	<0.0075	<0.0038	<0.0075	All ND
SB-4	4/4/2017	18	<0.19	<0.038	<0.0038	<0.0038	<0.0038	<0.0076	<0.0038	<0.0076	All ND
SB-5	4/4/2017	6	<0.21	<0.041	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041	<0.0082	All ND
SB-5	4/4/2017	12	68	<3.5	<0.35	<0.35	1.5	3.7	<0.35	1.1	n-Butylbenzene - 0.4 N-Propylbenzene - 0.77 1,2,4-Trimethylbenzene - 3.6 1,3,5-Trimethylbenzene - 1.1
SB-5	4/4/2017	18	2.7	<0.033	<0.0033	<0.0033	0.013	0.027	<0.0033	<0.0066	1,2,4-Trimethylbenzene - 0.017
SB-6	4/5/2017	6	<0.16	<0.032	<0.0032	<0.0032	<0.0032	<0.0065	<0.0032	<0.0065	All ND
SB-6	4/5/2017	12	<0.17	<0.035	<0.0035	<0.0035	<0.0035	<0.0069	<0.0035	<0.0069	All ND
SB-6	4/5/2017	18	<0.19	<0.037	<0.0037	<0.0037	<0.0037	<0.0074	<0.0037	<0.0074	All ND

**Table 1:
Soil Analytical Data
2200 Telegraph Ave, Oakland**

Sample ID	Date	Sample Depth (feet)	TPH-g (mg/kg)	Acetone (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)	Napthalene (mg/kg)	Other VOCs (mg/kg)
SB-7	4/5/2017	6	<0.17	<0.034	<0.0034	<0.0034	<0.0034	<0.0069	<0.0034	<0.0069	All ND
SB-7	4/5/2017	12	0.17	<0.034	<0.0034	<0.0034	<0.0034	<0.0068	<0.0034	<0.0068	All ND
SB-7	4/5/2017	18	<0.19	<0.038	<0.0038	<0.0038	<0.0038	<0.0076	<0.0038	<0.0076	All ND
SB-8	4/5/2017	6	<0.16	<0.033	<0.0033	<0.0033	<0.0033	<0.0066	<0.0033	<0.0066	All ND
SB-8	4/5/2017	12	0.39	<0.035	<0.0035	<0.0035	0.0066	<0.007	<0.0035	<0.007	n-Butylbenzene - 0.0036 N-Propylbenzene - 0.011
SB-8	4/5/2017	18	<0.19	<0.038	<0.0038	<0.0038	<0.0038	<0.0075	<0.0038	<0.0075	All ND
SB-9	4/5/2017	6	<0.19	<0.037	<0.0037	<0.0037	<0.0037	<0.0074	<0.0037	<0.0074	All ND
SB-9	4/5/2017	12	<0.16	<0.033	<0.0033	<0.0033	<0.0033	<0.0065	<0.0033	<0.0065	All ND
SB-9	4/5/2017	18	<0.16	<0.031	<0.0031	<0.0031	<0.0031	<0.0063	<0.0031	<0.0063	All ND
SB-10	4/5/2017	6	<0.16	<0.032	<0.0032	<0.0032	<0.0032	<0.0065	<0.0032	<0.0065	All ND
SB-10	4/5/2017	12	58	<3.4	<0.34	<0.34	0.55	<0.68	<0.34	0.780	n-Butylbenzene - 0.76 Isopropylbenzene - 0.45 N-Propylbenzene - 1.70 1,2,4-Trimethylbenzene - 0.78
SB-10	4/5/2017	18	<0.18	<0.036	<0.0036	<0.0036	<0.0036	<0.0072	<0.0036	<0.0072	All ND
SB-11	4/6/2017	6	<0.18	<0.035	<0.0035	<0.0035	<0.0035	<0.007	<0.0035	<0.007	All ND
SB-11	4/6/2017	12	<0.16	<0.032	<0.0032	<0.0032	<0.0032	<0.0065	<0.0032	<0.0065	All ND
SB-11	4/6/2017	18	<0.17	<0.034	<0.0034	<0.0034	<0.0034	<0.0068	<0.0034	<0.0068	All ND
HA1	4/6/2017	2.0	<0.22	<0.043	<0.0043	<0.0043	<0.0043	<0.0086	<0.0043	<0.0086	All ND
HA2	4/6/2017	2.5	<0.24	<0.048	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	<0.0096	All ND
HA3	4/6/2017	2.0	<0.23	<0.045	<0.0045	<0.0045	<0.0045	<0.0091	<0.0045	<0.0091	All ND
HA4	4/6/2017	2.0	0.41	<0.036	<0.0036	<0.0036	<0.0036	<0.0073	<0.0036	<0.0073	All ND
HA5	4/6/2017	3.0	0.32	<0.059	<0.0059	<0.0059	<0.0059	<0.012	<0.0059	<0.012	All ND
HA5	4/6/2017	6.0	<0.14	<0.035	<0.0035	<0.0035	<0.0035	<0.0069	<0.0035	<0.0069	All ND
HA6	4/7/2017	3.0	<0.20	<0.040	<0.0040	<0.0040	<0.0040	<0.008	<0.0040	<0.008	All ND
HA6	4/7/2017	6.0	<0.23	<0.046	<0.0046	<0.0046	<0.0046	<0.0091	<0.0046	<0.0091	All ND
HA7	4/7/2017	3.0	<0.19	<0.038	<0.0038	<0.0038	<0.0038	<0.0075	<0.0038	<0.0075	All ND
HA7	4/7/2017	4.0	<0.17	<0.035	<0.0035	<0.0035	<0.0035	<0.007	<0.0035	<0.007	All ND
HA8	4/7/2017	3.0	<0.20	<0.039	<0.0039	<0.0039	<0.0039	<0.0078	<0.0039	<0.0078	All ND
HA8	4/7/2017	6.0	<0.17	<0.033	<0.0033	<0.0033	<0.0033	<0.0066	<0.0033	<0.0066	All ND
HA9	4/7/2017	3.0	<0.18	<0.036	<0.0036	<0.0036	<0.0036	<0.0072	<0.0036	<0.0072	All ND
HA9	4/7/2017	6.0	<0.17	<0.034	<0.0034	<0.0034	<0.0034	<0.0068	<0.0034	<0.0068	All ND
HA10	4/7/2017	3.0	<0.21	<0.041	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041	<0.0082	All ND
HA11	4/7/2017	2.75	0.23	0.064	<0.0038	<0.0038	<0.0038	<0.0075	<0.0038	<0.0075	All ND
HA12	4/7/2017	2.50	0.24	<0.047	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	All ND

**Table 1:
Soil Analytical Data
2200 Telegraph Ave, Oakland**

Sample ID	Date	Sample Depth (feet)	TPH-g (mg/kg)	Acetone (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)	Napthalene (mg/kg)	Other VOCs (mg/kg)
August 2017											
EX-1	8/29/2017	5	<0.98	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	All ND
EX-1	8/29/2017	10	13Y	<0.99	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	All ND
EX-1	8/29/2017	20	<1.1	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	All ND
EX-2	8/29/2017	10	45Y	<1.0	<0.25	<0.25	<0.25	<0.25	<0.25	4.40	Isopropylbenzene - 0.80 Propylbenzene - 3.80 sec-Butylbenzene - 1.10 n-Butylbenzene - 3.30
EX-2	8/29/2017	15	<1.0	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	All ND
EX-3	8/28/2017	5	25Y	<0.99	<0.25	<0.25	<0.25	<0.25	<0.25	0.41	Propylbenzene - 1.10 sec-Butylbenzene - 0.49 n-Butylbenzene - 1.50
EX-3	8/28/2017	10	120	<1.0	<0.25	<0.25	0.29	<0.25	<0.25	2.60	Isopropylbenzene - 0.32 Propylbenzene - 1.90 1,2,4-Trimethylbenzene - 1.80 sec-Butylbenzene - 0.44 n-Butylbenzene - 1.50
EX-3	8/28/2017	15	<1.0	<0.02	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	All ND
EX-3	8/28/2017	20	<0.98	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	All ND
EX-3	8/28/2017	25	<0.96	<0.02	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	All ND
OB-2	8/28/2017	15	<0.99	<0.02	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	All ND
OB-4	8/28/2017	15	<0.93	<0.02	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	All ND
OB-5	8/28/2017	10	24	<1.0	<0.25	<0.25	<0.25	<0.25	<0.25	0.47	Propylbenzene - 0.87 1,2,4-Trimethylbenzene - 0.52 sec-Butylbenzene - 0.32 n-Butylbenzene - 0.89
ESL-Construction Worker Soil Exposure			2,800	260,000	24	4,100	480	2,400	3,700	350	NA

Note:

Y: Sample exhibits chromatographic pattern which does not resemble standard

<: Below laboratory-reporting limit

ESL: California Regional Water Quality Control Board, Environmental Screening Levels, Direct Exposure, Construction Worker, February 2016 Rev 3 (Table S-1)

NA: Not Applicable

ND: Non-detect / below laboratory reporting limit

**Table 2
Groundwater Monitoring Data
2200 Telegraph Ave, Oakland**

Sample ID	Date	Top of Casing Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)	Naphthalene (µg/L)	Other VOCs (µg/L)
EX-1	9/7/2017	21.77	10.97	10.80	940	<0.5	<0.5	<0.5	<0.5	180	<2.0	Chloromethane-14 Bromomethane-1.1 Chloroform-0.7 Isopropylbenzene-3.5 Propylbenzene-3.9 tert-Butylbenzene-4.9 sec-Butylbenzene-1.1
	10/23/2017	21.77	11.97	9.80	880	<0.5	<0.5	3.3	0.9	23	19	Isopropylbenzene-11 Propylbenzene-17 1,3,5-Trimethylbenzene-1.2 tert-Butylbenzene-2.3 1,2,4-Trimethylbenzene-2.8 sec-Butylbenzene-2.1
EX-2	9/7/2017	21.46	11.78	9.68	92	<0.5	<0.5	<0.5	<0.5	61	<2.0	Chloromethane-2.2 Chloroform-0.9 1,2-Dichloroethane-0.8 Isopropylbenzene-0.7 Propylbenzene-1.4
	10/23/2017	21.46	11.90	9.56	76	<0.5	<0.5	<0.5	0.6	9.7	<2.0	1,2-Dichloroethane-1.0 Propylbenzene-0.6 1,2,4-Trimethylbenzene-0.5
EX-3	9/7/2017	20.47	10.57	9.90	280	<0.5	<0.5	3.2	<0.5	0.9	<2.0	Chloromethane-2.2 Isopropylbenzene-1.1 Propylbenzene-3.7 1,2,4-Trimethylbenzene-2.5 sec-Butylbenzene-0.6 n-Butylbenzene-0.9
	10/23/2017	20.47	10.52	9.95	680	<0.5	<0.5	5.3	12	1.7	14	Isopropylbenzene-3.4 Propylbenzene-6.1 1,3,5-Trimethylbenzene-10 tert-Butylbenzene-0.6 1,2,4-Trimethylbenzene-26 sec-Butylbenzene-1.6 n-Butylbenzene-1.3
OB-2	9/7/2017	20.06	10.40	9.66	200	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	Chloromethane-13 Isopropylbenzene-0.6 Propylbenzene-1.7
	10/23/2017	20.06	10.34	9.72	92	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	Isopropylbenzene-0.5 Propylbenzene-0.9

**Table 2
Groundwater Monitoring Data
2200 Telegraph Ave, Oakland**

Sample ID	Date	Top of Casing Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)	Naphthalene (µg/L)	Other VOCs (µg/L)
OB-4	9/7/2017	20.22	10.45	9.77	110	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	Chloromethane-26 Bromomethane-1.7 1,2-Dichloroethane-1.0 Propylbenzene-0.6
	10/23/2017	20.22	10.38	9.84	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	-
OB-5	9/7/2017	20.13	10.42	9.71	410	<0.5	<0.5	6.30	4.60	2.60	2.70	Chloromethane-10 Isopropylbenzene-1.6 Propylbenzene-4.0 1,3,5-Trimethylbenzene-4.5 1,2,4-Trimethylbenzene-7.5 sec-Butylbenzene-0.6 n-Butylbenzene-0.5
	10/23/2017	20.13	10.34	9.79	2,900	<0.5	<0.5	85	3.40	2.60	69	Isopropylbenzene-33 Propylbenzene-81 1,3,5-Trimethylbenzene-29 1,2,4-Trimethylbenzene-53 sec-Butylbenzene-10 para-Isopropyl toluene-2.4 n-Butylbenzene-12
ESL - Tier 1					100	1	40	13	20	5	0.17	

Notes:

< : below Laboratory Detection Limits

ESL: California Regional Water Quality Control Board, Environmental Screening Levels, Tier 1 (Residential, drinking water, shallow groundwater & soil), Groundwater is a current or potential source of drinking water, Feb 2016, Rev 3

Table 3

**MPE Event
Operational Data
September- October 2017**
2200 Telegraph Ave,
Oakland, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (°F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
9/14/2017	1300	17	25	1460	54	54	0	26	0	Begin extraction from EX-1, EX-2, and EX-3
	1400	12	18	1370	117	117	0	22		
	1500	9	18	1355	117	117	0	22	15	
9/19/2017	1600	10	17	1350	133	133	0	21		
	900	11	23	1610	104	104	0	22.8		
	1000	12	23	1615	104	104	0	22.8	42	
9/21/2017	1100	12	23	1615	104	104	0	22.8		
	1200	12	23	1615	104	104	0	22.8		
	1000	24	22.2	1685	101	101	0	23	132	
9/22/2017	1100	12	22.2	1680	96	96	0	23.3		
	1200	10	22	1670	93	93	0	23.5		
	1300	11	22.1	1585	93	93	0	23.5		
9/25/2017	1400	22	22.1	1480	93	93	0	23.5	762	
	1500	22	17.5	1470	112	112	0	22.3	882	
	1000		21	1495	38	73	35	24.8	1,172	
9/24/2017	1400	657	21	1501	63	68	5	25.1	2,583	Switched vapor extraction to EX-3 only; only water from EX-1
	1500	727	21.2	1520	68	73	5	24.8	2,853	
	1600	745	21.3	1531	66	71	5	24.9	3,122	
9/25/2017	1700	989	21.2	1470	68	73	5	24.8		
	900	712	16.1	1449	141	146	5	20.2	4,920	
	1000	1,890	21.5	1600	63	68	5	25.1	5,282	
9/26/2017	1100	2,220	21.7	1580	63	68	5	25.1	5,702	
	1200	2,110	21.5	1585	91	96	5	23.3		
	1300	1,980	22	1580	80	85	5	24	6,263	
9/27/2017	1400	1,995	22	1603	80	85	5	24		
	1500	2,010	21.3	1601	65	70	5	25	6,723	
	1600	1,857	21.2	1585	96	101	5	23	7,032	
9/26/2017	1700	1,955	22.1	1620	95	100	5	23.1		
	900	117	19.1	1455	96	101	5	23	8,482	
	1000	144	19.1	1464	96	101	5	23		
9/27/2017	1100	178	18.7	1477	99	104	5	22.8		
	1200	79	18	1452	96	101	5	23	8,753	
	1300	72	17.8	1455	101	106	5	22.7		
9/27/2017	1400	76	17.6	1472	106	111	5	22.4		
	1500	81	17.5	1466	109	114	5	22.2	9,152	
	1600	84	17.7	1462	104	109	5	22.5		
9/27/2017	1700	90	18	1460	101	106	5	22.7		
	1830	87	18	1461	104	109	5	22.5	9,552	
	900	970	11.2	1457	147	147	0	20.1	11,743	
9/27/2017	1000	945	11.3	1465	146	146	0	20.2	12,073	Extraction from EX-1, EX-2, and EX-3
	1100	871	11.3	1450	152	152	0	19.8	12,392	
	1200	841	11.1	1452	157	157	0	19.5	12,752	

Table 3
MPE Event
Operational Data
September- October 2017
2200 Telegraph Ave,
Oakland, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (°F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
9/28/2017	1300	845	11.1	1461	162	162	0	19.2	13,352	
	1400	847	11	1462	165	165	0	19		
	1500	819	10.8	1445	168	168	0	18.8		
	1600	788	10.8	1464	171	171	0	18.6		
	1700	767	10.7	1475	171	171	0	18.6		
	800	478	10.3	1401	168	168	0	18.8		
	900	372	9.8	1400	179	179	0	18.1		
	1000	200	10.2	1400	177	177	0	18.2		
	1100	329	9.8	1436	166	166	0	18.9		
	1200	380	9.5	1433	166	166	0	18.9		
	1300	415	10.5	1448	165	165	0	19		
9/29/2017	1800	500	15	1448	117	117	0	22	19,593	
	800	270	9	1400	181	181	0	18	22,538	
	900	260	8.6	1455	182	182	0	17.9	22,572	
	1000	206	9.4	1458	181	181	0	18	22,743	
	1100	218	8.4	1433	182	182	0	17.9	22,942	
	1200	220	8.7	1436	182	182	0	17.9	23,172	
	1300	230	8.8	1440	181	181	0	18	23,413	
	1400	242	9.8	1456	181	181	0	18	23,473	
	1500	240	8.8	1450	181	181	0	18	23,563	
	900	132	9.8	1473	171	171	0	18.6	23,793	
	1000	150	8.2	1450	181	181	0	18	24,062	
10/2/2017	1100	155	8	1450	184	184	0	17.8	24,282	
	1200	177	9	1465	177	177	0	18.2	24,512	
	1300	186	8	1470	187	187	0	17.6	24,753	
	1400	181	9	1463	181	181	0	18	24,972	
	1500	189	8.2	1458	184	184	0	17.8	25,183	
	800	96	0	1400	109	109	0	22.5	28,722	
	900	90	0	1400	101	101	0	23	28,822	
	1000	117	17.1	1400	93	93	0	23.5	28,882	Extraction from EX-2 only
	1100	200	19.4	1528	66	66	0	25.2	28,972	
	1200	225	17.1	1539	85	85	0	24	29,052	
	1300	170	19	1490	68	68	0	25.1	29,122	
10/4/2017	1400	176	19.2	1472	66	66	0	25.2	29,192	
	1500	140	19.2	1452	70	70	0	25	29,272	
	1600	130	19.5	1478	66	66	0	25.2	29,342	
	1700	128	19.5	1471	66	66	0	25.2	29,402	
	900	291	20.2	1554	63	63	0	25.4	30,722	Vapor extraction from EX-3 only, water only from EX-1
	1000	270	20	1550	57	57	0	25.8	30,742	
	1100	417	21.8	1510	54	54	0	26	30,772	
	1200	440	27	1609	38	38	0	27	30,802	
	1300	435	21.9	1606	38	38	0	27	30,832	
	1400	430	21	1600	38	38	0	27	30,853	
	1500	465	21.9	1611	38	38	0	27	30,882	

Table 3

**MPE Event
Operational Data
September- October 2017**
2200 Telegraph Ave,
Oakland, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (°F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
10/5/2017	1600	468	21.8	1593	38	38	0	27	30,912	
	1700	465	21.5	1580	41	41	0	26.8	30,932	
	800	422	21.4	1570	62	62	0	25.5	31,162	
	900	415	21.4	1560	47	47	0	26.4	31,422	
	1000	445	21.4	1551	47	47	0	26.4	31,562	
	1100	555	19.3	1471	66	66	0	25.2	31,762	
	1200	470	19.1	1468	66	66	0	25.2	31,922	
10/6/2017	1300	650	18.9	1483	71	71	0	24.9	32,242	
	1400	550	20.1	1550	66	66	0	25.2	32,482	
	1500	555	18.9	1481	71	71	0	24.9	32,572	
	800	580	18.8	1497	71	71	0	24.9	36,192	
	900	645	19	1512	71	71	0	24.9	36,342	
	1000	619	19	1483	70	70	0	25	36,492	
	1100	700	19	1487	66	66	0	25.2	36,732	
	1200	640	18.9	1473	54	54	0	26	36,932	
	1300	705	18.8	1471	70	70	0	25	37,132	
	1400	709	18.8	1461	73	73	0	24.8	37,342	
10/10/2017	1500	700	18.5	1465	73	73	0	24.8	37,562	Extraction from EX-1, EX-2, and EX-3
	1600	668	19	1476	70	70	0	25	37,732	
	900	328	13.8	1470	173	173	0	18.5	45,202	
	1000	505	17.8	1453	133	133	0	21	45,562	
	1100	500	16.1	1438	70	70	0	25	45,692	
	1200	490	16	1477	149	149	0	20	45,932	
	1300	462	16.2	1435	135	135	0	20.9	46,192	
	1400	441	15.8	1476	150	150	0	19.9	46,342	
	1500	442	15.5	1432	149	149	0	20	46,592	
	1600	402	15.5	1480	152	152	0	19.8	46,752	
10/11/2017	1700	410	17	1478	141	141	0	20.5	46,922	
	1200	229	15.1	1455	147	147	0	20.1	48,082	
	1300	260	15.9	1433	142	142	0	20.4	48,312	
	1400	280	17	1435	133	133	0	21	48,552	
	1500	285	15.9	1436	147	147	0	20.1	48,753	
10/12/2017	800	310	19	1400	98	98	0	23.2	51,922	Vapor extraction from EX-2 only, water only from EX-1
	900	295	18.9	1400	92	92	0	23.6	52,062	
	1000	298	18.5	1430	112	112	0	22.3	52,157	
	1100	380	18.4	1450	116	116	0	22.1	52,292	
	1200	365	18.2	1479	108	108	0	22.6	52,392	
	1300	390	18	1435	109	109	0	22.5	52,402	
	1400	330	16.8	1460	109	109	0	22.5	52,442	
	1500	325	16.5	1430	123	123	0	21.6	52,462	
	1600	348	16.6	1479	127	127	0	21.4	52,492	
	1700	310	17	1480	125	125	0	21.5	52,532	

Table 3
MPE Event
Operational Data
September- October 2017
2200 Telegraph Ave,
Oakland, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (°F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS	
10/13/2017	800	195	18	1400	112	112	0	22.3	53,482	Extraction from EX-1 and EX-2	
	900	198	18	1400	116	116	0	22.1	53,512		
	1000	192	17.9	1400	117	117	0	22	53,562		
	1100	225	15.9	1400	131	131	0	21.1	53,612		
	1200	245	17.9	1400	117	117	0	22	53,702		
	1300	240	17.9	1400	112	112	0	22.3	53,722		
	1400	250	17.9	1400	130	130	0	21.2	53,762		
	1500	252	17.8	1400	117	117	0	22	53,842		
	1600	235	17.9	1400	116	116	0	22.1	53,912		
	1700	209	15.8	1400	133	133	0	21	53,952		
	Totalizer readings = 53,952 gallons = 3.5 gpm										
	Total time of test = 15,275 minutes = 254.58 hours = 10.61 days										

- Notes
- ppmv parts per million vapor
 - In of Hg inches of mercury
 - In of H₂O inches of water
 - °F degrees Fahrenheit
 - scfm standard cubic feet per minute

Table 4

**MPE Event
Extraction Data and VOC Mass Removal Rate
September - October 2017**
2200 Telegraph Ave,
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	minutes	SCFM	ft ³ of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane
EX-1, EX-2, EX-3	START	9/14/2017	1300	0	0	54			17					
			1400	60	60	117	7,026	18.5389	12	0.0000	0.0192	0.0003	0.5	
			1500	60	120	117	7,026	18.5389	9	0.0000	0.0144	0.0002	0.3	
	PAUSE	9/19/2017	1600	60	180	133	7,978	21.0510	10	0.0000	0.0181	0.0003	0.4	
	START		900	30	210	104	3,132	8.2646	11	0.0000	0.0078	0.0003	0.4	
			1000	60	270	104	6,265	16.5292	12	0.0000	0.0171	0.0003	0.4	
		1100	60	330	104	6,265	16.5292	12	0.0000	0.0171	0.0003	0.4		
	PAUSE	9/21/2017	1200	60	390	104	6,265	16.5292	12	0.0000	0.0171	0.0003	0.4	
	START		1000	30	420	101	3,037	8.0134	24	0.0000	0.0166	0.0006	0.8	
			1100	60	480	96	5,789	15.2732	12	0.0000	0.0158	0.0003	0.4	
			9/22/2017	1200	60	540	93	5,598	14.7708	10	0.0000	0.0127	0.0002	0.3
		1300		60	600	93	5,598	14.7708	11	0.0000	0.0140	0.0002	0.3	
		1400		60	660	93	5,598	14.7708	22	0.0000	0.0280	0.0005	0.7	
			9/24/2017	1500	60	720	112	6,741	17.7853	22	0.0000	0.0337	0.0006	0.8
	PAUSE	1000		870	1,590	73	63,226	166.8233		0.0000	0.0000	0.0000	0.0	
START	1400	60		1,650	68	4,075	10.7514	657	0.0007	0.6089	0.0101	15		
		9/25/2017	1500	60	1,710	73	4,360	11.5051	727	0.0007	0.7210	0.0120	17	
			1600	60	1,770	71	4,265	11.2538	745	0.0007	0.7227	0.0120	17	
PAUSE			1700	60	1,830	73	4,360	11.5051	989	0.0010	0.9808	0.0163	24	
START	900		15	1,845	146	2,185	5.7652	712	0.0007	0.3538	0.0236	34		
	1000		60	1,905	68	4,075	10.7514	1,890	0.0019	1.7516	0.0292	42		
	1100		60	1,965	68	4,075	10.7514	2,220	0.0022	2.0574	0.0343	49		
	1200		60	2,025	96	5,789	15.2732	2,110	0.0021	2.7779	0.0463	67		
	1300		60	2,085	85	5,122	13.5147	1,980	0.0020	2.3066	0.0384	55		
	1400		60	2,145	85	5,122	13.5147	1,995	0.0020	2.3241	0.0387	56		
	PAUSE		1500	60	2,205	70	4,170	11.0026	2,010	0.0020	1.9063	0.0318	46	
	START	1600	15	2,220	101	1,519	4.0067	1,857	0.0019	0.6414	0.0428	62		
	PAUSE	9/26/2017	1700	60	2,280	100	5,979	15.7756	1,955	0.0020	2.6585	0.0443	64	
START	900		15	2,295	101	1,519	4.0067	117	0.0001	0.0404	0.0027	4		
	1000		60	2,355	101	6,074	16.0268	144	0.0001	0.1989	0.0033	5		
	1100		60	2,415	104	6,265	16.5292	178	0.0002	0.2536	0.0042	6		
EX-1			1200	60	2,475	101	6,074	16.0268	79	0.0001	0.1091	0.0018	3	

Table 4

**MPE Event
Extraction Data and VOC Mass Removal Rate
September - October 2017**
2200 Telegraph Ave,
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	minutes	SCFM	ft ³ of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane
EX-1, EX-2, EX-3	PAUSE START	9/27/2017	1300	60	2,535	106	6,360	16.7804	72	0.0001	0.1041	0.0017	2	
			1400	60	2,595	111	6,645	17.5341	76	0.0001	0.1149	0.0019	3	
			1500	60	2,655	114	6,836	18.0365	81	0.0001	0.1259	0.0021	3	
			1600	60	2,715	109	6,550	17.2828	84	0.0001	0.1251	0.0021	3	
			1700	60	2,775	106	6,360	16.7804	90	0.0001	0.1302	0.0022	3	
			1830	80	2,855	109	8,734	23.0438	87	0.0001	0.1728	0.0022	3	
			900	15	2,870	147	2,209	5.8280	970	0.0010	0.4873	0.0325	47	
			1000	60	2,930	146	8,740	23.0606	945	0.0009	1.8785	0.0313	45	
			1100	60	2,990	152	9,121	24.0655	871	0.0009	1.8068	0.0301	43	
			1200	60	3,050	157	9,406	24.8191	841	0.0008	1.7992	0.0300	43	
			1300	60	3,110	162	9,692	25.5727	845	0.0008	1.8627	0.0310	45	
			1400	60	3,170	165	9,882	26.0751	847	0.0008	1.9038	0.0317	46	
			1500	60	3,230	168	10,073	26.5776	819	0.0008	1.8763	0.0313	45	
			1600	60	3,290	171	10,263	27.0800	788	0.0008	1.8394	0.0307	44	
			1700	60	3,350	171	10,263	27.0800	767	0.0008	1.7904	0.0298	43	
			9/28/2017	800	900	4,250	168	151,093	398.6634	478	0.0005	16.4264	0.0183	26
			900	60	4,310	179	10,739	28.3360	372	0.0004	0.9086	0.0151	22	
			1000	60	4,370	177	10,644	28.0848	200	0.0002	0.4842	0.0081	12	
	1100	60	4,430	166	9,978	26.3264	329	0.0003	0.7466	0.0124	18			
	1200	60	4,490	166	9,978	26.3264	380	0.0004	0.8623	0.0144	21			
	1300	60	4,550	165	9,882	26.0751	415	0.0004	0.9328	0.0155	22			
	1330	30	4,580	117	3,513	9.2694	500	0.0005	0.3995	0.0133	19			
	9/29/2017	800	840	5,420	181	151,684	400.2212	270	0.0003	9.3147	0.0111	16		
	900	60	5,480	182	10,930	28.8384	260	0.0003	0.6463	0.0108	16			
	1000	60	5,540	181	10,835	28.5872	206	0.0002	0.5076	0.0085	12			
	1100	60	5,600	182	10,930	28.8384	218	0.0002	0.5419	0.0090	13			
	1200	60	5,660	182	10,930	28.8384	220	0.0002	0.5469	0.0091	13			
	1300	60	5,720	181	10,835	28.5872	230	0.0002	0.5668	0.0094	14			
	1400	60	5,780	181	10,835	28.5872	242	0.0002	0.5963	0.0099	14			
	1500	60	5,840	181	10,835	28.5872	240	0.0002	0.5914	0.0099	14			
	10/2/2017	900	30	5,870	171	5,132	13.5400	132	0.0001	0.1541	0.0051	7		
	1000	60	5,930	181	10,835	28.5872	150	0.0002	0.3696	0.0062	9			

Table 4

**MPE Event
Extraction Data and VOC Mass Removal Rate
September - October 2017**
2200 Telegraph Ave,
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	minutes	SCFM	ft ³ of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %
EX-2		10/3/2017	1100	60	5,990	184	11,025	29.0896	155	0.0002	0.3887	0.0065	9
			1200	60	6,050	177	10,644	28.0848	177	0.0002	0.4285	0.0071	10
			1300	60	6,110	187	11,215	29.5921	186	0.0002	0.4745	0.0079	11
			1400	60	6,170	181	10,835	28.5872	181	0.0002	0.4460	0.0074	11
			1500	60	6,230	184	11,025	29.0896	189	0.0002	0.4739	0.0079	11
			800	1020	7,250	109	111,353	293.8084	96	0.0001	2.4313	0.0024	3
			900	60	7,310	101	6,074	16.0268	90	0.0001	0.1243	0.0021	3
			1000	60	7,370	93	5,598	14.7708	117	0.0001	0.1490	0.0025	4
			1100	60	7,430	66	3,980	10.5002	200	0.0002	0.1810	0.0030	4
			1200	60	7,490	85	5,122	13.5147	225	0.0002	0.2621	0.0044	6
			1300	60	7,550	68	4,075	10.7514	170	0.0002	0.1576	0.0026	4
			1400	60	7,610	66	3,980	10.5002	176	0.0002	0.1593	0.0027	4
			1500	60	7,670	70	4,170	11.0026	140	0.0001	0.1328	0.0022	3
			1600	60	7,730	66	3,980	10.5002	130	0.0001	0.1177	0.0020	3
EX-3	PAUSE START	10/4/2017	1700	60	7,790	66	3,980	10.5002	128	0.0001	0.1159	0.0019	3
			900	30	7,820	63	1,895	4.9989	291	0.0003	0.1254	0.0042	6
			1000	60	7,880	57	3,408	8.9930	270	0.0003	0.2093	0.0035	5
			1100	60	7,940	54	3,218	8.4906	417	0.0004	0.3052	0.0051	7
			1200	60	8,000	38	2,266	5.9785	440	0.0004	0.2268	0.0038	5
			1300	60	8,060	38	2,266	5.9785	435	0.0004	0.2242	0.0037	5
			1400	60	8,120	38	2,266	5.9785	430	0.0004	0.2216	0.0037	5
			1500	60	8,180	38	2,266	5.9785	465	0.0005	0.2396	0.0040	6
			1600	60	8,240	38	2,266	5.9785	468	0.0005	0.2412	0.0040	6
			1700	60	8,300	41	2,456	6.4809	465	0.0005	0.2598	0.0043	6
			800	900	9,200	62	55,409	146.1989	422	0.0004	5.3182	0.0059	9
			900	60	9,260	47	2,837	7.4857	415	0.0004	0.2678	0.0045	6
			1000	60	9,320	47	2,837	7.4857	445	0.0004	0.2871	0.0048	7
			1100	60	9,380	66	3,980	10.5002	555	0.0006	0.5023	0.0084	12
1200	60	9,440	66	3,980	10.5002	470	0.0005	0.4254	0.0071	10			
1300	60	9,500	71	4,265	11.2538	650	0.0007	0.6306	0.0105	15			
1400	60	9,560	66	3,980	10.5002	550	0.0006	0.4978	0.0083	12			
1500	60	9,620	71	4,265	11.2538	555	0.0006	0.5384	0.0090	13			

Table 4

**MPE Event
Extraction Data and VOC Mass Removal Rate
September - October 2017**
2200 Telegraph Ave,
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	minutes	SCFM	ft ³ of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %
EX-1, EX-2, EX-3	PAUSE START	10/6/2017	800	1005	10,625	71	71,442	188.5019	580	0.0006	9.4243	0.0094	14
			900	60	10,685	71	4,265	11.2538	645	0.0006	0.6257	0.0104	15
			1000	60	10,745	70	4,170	11.0026	619	0.0006	0.5871	0.0098	14
			1100	60	10,805	66	3,980	10.5002	700	0.0007	0.6336	0.0106	15
			1200	60	10,865	54	3,218	8.4906	640	0.0006	0.4684	0.0078	11
			1300	60	10,925	70	4,170	11.0026	705	0.0007	0.6686	0.0111	16
			1400	60	10,985	73	4,360	11.5051	709	0.0007	0.7031	0.0117	17
			1500	60	11,045	73	4,360	11.5051	700	0.0007	0.6942	0.0116	17
		10/10/2017	1600	60	11,105	70	4,170	11.0026	668	0.0007	0.6335	0.0106	15
			900	210	11,315	173	36,255	95.6592	328	0.0003	2.7046	0.0129	19
			1000	60	11,375	133	7,978	21.0510	505	0.0005	0.9164	0.0153	22
			1100	60	11,435	70	4,170	11.0026	500	0.0005	0.4742	0.0079	11
			1200	60	11,495	149	8,930	23.5631	490	0.0005	0.9953	0.0166	24
			1300	60	11,555	135	8,074	21.3022	462	0.0005	0.8483	0.0141	20
			1400	60	11,615	150	9,026	23.8143	441	0.0004	0.9053	0.0151	22
			1500	60	11,675	149	8,930	23.5631	442	0.0004	0.8978	0.0150	22
10/11/2017	1600	60	11,735	152	9,121	24.0655	402	0.0004	0.8339	0.0139	20		
	1700	60	11,795	141	8,454	22.3070	410	0.0004	0.7884	0.0131	19		
	1200	300	12,095	147	44,176	116.5593	229	0.0002	2.3009	0.0077	11		
	1300	60	12,155	142	8,550	22.5582	260	0.0003	0.5056	0.0084	12		
	1400	60	12,215	133	7,978	21.0510	280	0.0003	0.5081	0.0085	12		
	1500	60	12,275	147	8,835	23.3119	285	0.0003	0.5727	0.0095	14		
	10/12/2017	800	1020	13,295	98	100,024	263.9146	310	0.0003	7.0523	0.0069	10	
		900	60	13,355	92	5,503	14.5196	295	0.0003	0.3692	0.0062	9	
1000		60	13,415	112	6,741	17.7853	298	0.0003	0.4569	0.0076	11		
1100		60	13,475	116	6,931	18.2877	380	0.0004	0.5990	0.0100	14		
1200		60	13,535	108	6,455	17.0316	365	0.0004	0.5359	0.0089	13		
1300		60	13,595	109	6,550	17.2828	390	0.0004	0.5810	0.0097	14		
1400		60	13,655	109	6,550	17.2828	330	0.0003	0.4916	0.0082	12		
1500		60	13,715	123	7,407	19.5437	325	0.0003	0.5475	0.0091	13		
EX-2	1600	60	13,775	127	7,597	20.0461	348	0.0003	0.6013	0.0100	14		
	1700	60	13,835	125	7,502	19.7949	310	0.0003	0.5290	0.0088	13		

Table 4

**MPE Event
Extraction Data and VOC Mass Removal Rate
September - October 2017
2200 Telegraph Ave,
Oakland, California**

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						SCFM	ft ³ of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
EX-1, EX-2		10/13/2017	800	900	14,735	112	101,109	266.7790	195	0.0002	4.4843	0.0050	7
			900	60	14,795	116	6,931	18.2877	198	0.0002	0.3121	0.0052	7
			1000	60	14,855	117	7,026	18.5389	192	0.0002	0.3068	0.0051	7
			1100	60	14,915	131	7,883	20.7998	225	0.0002	0.4034	0.0067	10
			1200	60	14,975	117	7,026	18.5389	245	0.0002	0.3915	0.0065	9
			1300	60	15,035	112	6,741	17.7853	240	0.0002	0.3679	0.0061	9
			1400	60	15,095	130	7,788	20.5486	250	0.0003	0.4428	0.0074	11
			1500	60	15,155	117	7,026	18.5389	252	0.0003	0.4027	0.0067	10
			1600	60	15,215	116	6,931	18.2877	235	0.0002	0.3705	0.0062	9
			1700	60	15,275	133	7,978	21.0510	209	0.0002	0.3793	0.0063	9
				STOP									
	TOTAL				15,275	109	1,698,538	4,482	310	0.0003	135	0.0088	13
	MEDIAN												

Notes

Q volumetric flow rate
 SCFM standard cubic feet per minute
 ft³ cubic feet per minute
 VOC volatile organic compounds
 PID photo-ionization detector
 ppmv parts per million vapor

DERIVATION OF MASS REMOVAL RATE

ppmv as hexane/1,000,000 = VOC mole %
 ft³ of extracted air/(379 ft³ air/lb-mole air) = moles of extracted air
 (moles of extracted air)(VOC mole %)(86.2 lb/lb-mole hexane) = lbs of VOC removed as hexane
 (lbs of VOC mass removed as hexane)(elapsed time) = lbs/min of VOC removed as hexane
 (lbs/min of VOC removed as hexane)(60 min/1 hour)(24 hours/1 day) = lbs/day of VOC removed as hexane

Table 5

**Soil Vapor Laboratory Analytical and Mass Removal During MPE
September-October 2017 MPE Event**

2200 Telegraph Ave,
Oakland, California

Extraction Well	Vapor Sample ID	Onboard Analyzer		Collection Date/Time	USEPA TO-15 MODIFIED						TO-17	Q (SCFM)	Average Mass Removal Rate (lbs/day) (TPHg/EB/Xyl)	Total Test time (minutes/ days)	Total Emissions (lbs) (TPHg/EB/Xyl)
		Date/Time	Reading (measured as hexane)		TPHg (ug/m ³)	Benzene (ug/m ³)	Toluene (ug/m ³)	Ethyl benzene (ug/m ³)	Total Xylenes (ug/m ³)	MtBE (ug/m ³)					
EX-3	Effluent	10/05/17 @ 1000	0	10/5/17 @ 1000	3,600	<6.5	8.6	<8.8	<27	<7.3	-	47	6.78/ 0.047/ 0.055	15,275/ 10.61	56.09/ 0.47/ 0.58
	Influent		445	10/5/17 @ 1010	1,600,000	<1,000	<1,000	11,000	13,000	<1,000	-				
				REMOVAL EFFICIENCIES	99.8%	NA	NA	99.9%	99.8%	NA	NA				
EX-1 & EX-2	Effluent	10/13/17 @ 1200	0	10/13/17 @ 1210	<3,600	<13	<15	<18	<54	<15	-	117	3.8/ 0.041/ -	15,275/ 10.61	56.09/ 0.47/ 0.58
	Influent		245	10/13/17 @ 1220	360,000	<160	<190	3,900	<1,100	<180	2.7				
				REMOVAL EFFICIENCIES	99.7%	NA	NA	99.6%	NA	NA	NA				
TOTAL EMISSIONS (LBS)														57.14	

Notes

SCFM standard cubic feet per minute
 lbs/day pounds per day
 ug/m³ micrograms per cubic meter

< not detected at or above laboratory detection limit

DERIVATION OF MASS REMOVAL RATE
 (ug/m³) [(1mg/1000ug) (1m³/1000 L)] = mg/L
 (mg/L) (28.32 L/1 ft³) (Q) ft³/min = mg/min
 (mg/min)(1g/1000mg)(1kg/1000g)(60min/1hr)(24hr/1day) = kg/day
 (kg/day)(2.2lbs/1kg) = lbs/day

DERIVATION OF TOTAL MASS REMOVED
 Total time of test = days
 (mass removal rate [lbs/day])(total time of test [days]) = Total Removed (lbs)

DERIVATION OF REMOVAL EFFICIENCIES
 1-[STACK sample concentration (lab)/Influent sample concentration(lab)]

Table 6

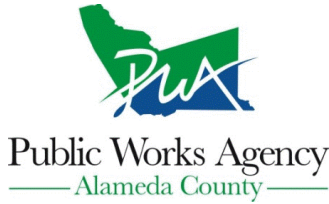
**Zone of Influence for Different Well Combinations
2200 Telegraph Ave, Oakland**

Extraction Well	Distance
EX-2	30 feet from EX-2
EX-1 & EX-2	30 feet from EX-2
EX-1 & EX-3	21 feet from EX-3
EX-1, EX-2, & EX-3	24 feet from EX-3

APPENDIX A

DRILLING PERMIT

Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 08/11/2017 By jamesy

Permit Numbers: W2017-0637
Permits Valid from 08/16/2017 to 08/18/2017

Application Id: 1501870026014
Site Location: 2200 Telegraph Avenue, Oakland, CA
Project Start Date: 08/16/2017
Assigned Inspector: Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org

City of Project Site:Oakland
Completion Date:08/18/2017

Applicant: SOMA Environmental - Mansour Sepehr
6620 Owens Drive, Pleasanton, CA 94588
Property Owner: MO Mashhoon
428 13th Street, Oakland, CA 94612
Client: ** same as Property Owner **
Contact: Mansour Sepehr

Phone: 925-734-6400
Phone: 925-891-9988
Phone: 925-381-3247
Cell: --

Receipt Number: WR2017-0371	Total Due:	\$265.00
Payer Name : Mansour Sepehr	Total Amount Paid:	\$265.00
	Paid By: VISA	PAID IN FULL

Works Requesting Permits:

Remediation Well Construction-Extraction - 4 Wells
Driller: Cascade Drilling - Lic #: 938110 - Method: auger

Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2017-0637	08/11/2017	11/14/2017	EX-1	10.00 in.	4.00 in.	3.00 ft	25.00 ft
W2017-0637	08/11/2017	11/14/2017	EX-2	10.00 in.	4.00 in.	3.00 ft	25.00 ft
W2017-0637	08/11/2017	11/14/2017	OB-1	8.00 in.	2.00 in.	3.00 ft	25.00 ft
W2017-0637	08/11/2017	11/14/2017	OB-3	8.00 in.	2.00 in.	3.00 ft	12.00 ft

Specific Work Permit Conditions

1. 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.

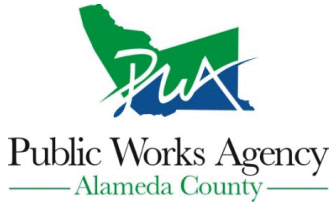
2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 30 days. Include permit number and site map.

Alameda County Public Works Agency - Water Resources Well Permit

4. Applicant shall submit the copies of the approved encroachment permit to this office within 10 days.
 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. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
 7. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).
 8. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 9. 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.
 10. 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.
 11. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
-

Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 08/11/2017 By jamesy

Permit Numbers: W2017-0638
Permits Valid from 08/16/2017 to 08/18/2017

Application Id: 1501875300760
Site Location: 2201 valley Street, Oakland, CA
Project Start Date: 08/16/2017
Assigned Inspector: Contact Marcelino Vialpando at (510) 670-5760 or Marcelino@acpwa.org

City of Project Site:Oakland
Completion Date:08/18/2017

Applicant: SOMA Environmental - mansour Sepehr
6620 owens Drive, Pleasanton, CA 94588
Property Owner: Denise Pinkston
100 Bush Street, Suite 2600, San Francisco, CA 94104
Client: ** same as Property Owner **
Contact: Mansour Sepehr

Phone: 925-734-6400
Phone: 415-772-5900
Phone: 925-381-3247
Cell: 925-381-3247

Receipt Number: WR2017-0372	Total Due:	\$265.00
Payer Name : Mansour Sepehr	Total Amount Paid:	\$265.00
	Paid By: VISA	PAID IN FULL

Works Requesting Permits:

Remediation Well Construction-Extraction - 4 Wells
Driller: Cascade Drilling - Lic #: 938110 - Method: auger

Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2017-0638	08/11/2017	11/14/2017	EX-3	10.00 in.	4.00 in.	3.00 ft	25.00 ft
W2017-0638	08/11/2017	11/14/2017	OB-2	8.00 in.	2.00 in.	3.00 ft	25.00 ft
W2017-0638	08/11/2017	11/14/2017	OB-4	8.00 in.	2.00 in.	3.00 ft	12.00 ft
W2017-0638	08/11/2017	11/14/2017	OB-5	8.00 in.	2.00 in.	3.00 ft	25.00 ft

Specific Work Permit Conditions

1. 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.

2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 30 days. Include permit number and site map.

Alameda County Public Works Agency - Water Resources Well Permit

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 7. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).
 8. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 9. 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.
 10. 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.
 11. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
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APPENDIX B

PHOTOGRAPHIC DOCUMENTATION AND BORING LOGS



Drilling of EX-3



Construction of EX-3



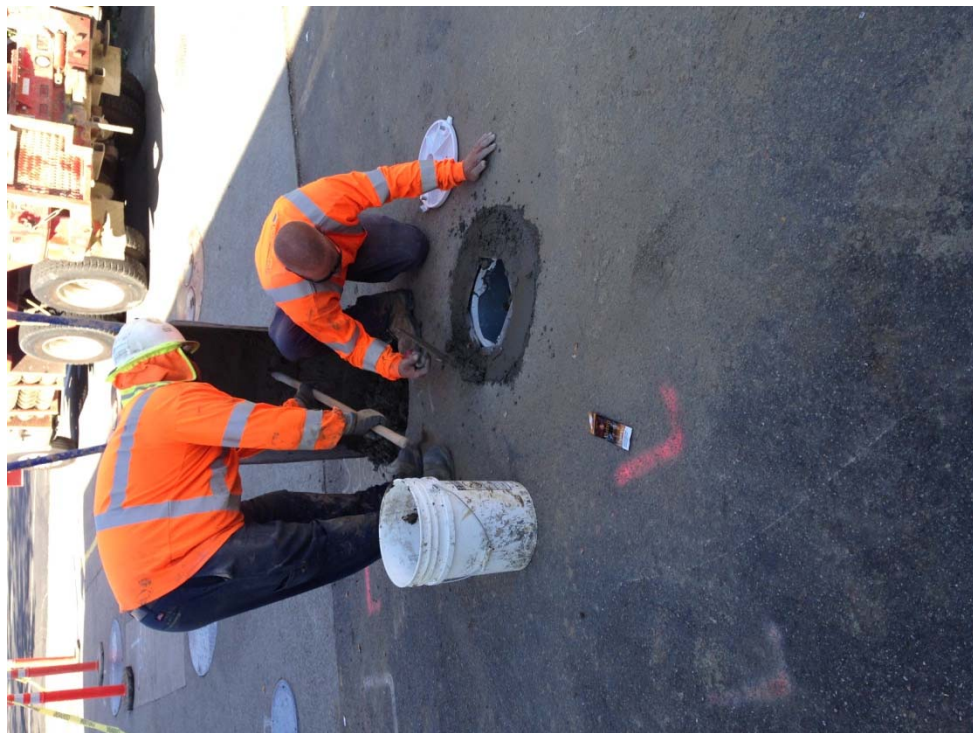
Construction of OB-4



Observation Well OB-5



Completion of EX=1



Observation Well OB-2

PROJECT: 6462

DATE DRILLED: August 29, 2017

SITE LOCATION: 2200 Telegraph Ave, Oakland, CA

CASING ELEVATION: N/A

DRILLER: Cascade Drilling

First Encountered GW: 9 Feet bgs

DRILLING METHOD: Hollow Stem Auger

T.O.C. TO SCREEN: 5 feet

BORING DIAMETER: 10 inch

SCREEN LENGTH: 20 feet

LOGGED BY: M. Sepehr

APPROVED BY: M. Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON CORE	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
	72		SP	Asphalt, Hand Augered to 5 ft bgs Sand and Gravel, dry, minor odor, clay content increasing by depth and becoming darker				
	5		CH	Blue clay, high plasticity, with some gravel, strong odor, moist first water encountered at 9'	X	▽		
	10		SC	Clayey sand, Changing color to brown, some odor, almost saturated some gravel and fine sand at 14'	X			
	15		CL	Silty clay, 10% gravel, yellowish, minor odor, completely saturated				
	20		CL	Sandy gravelly clay, no sample recovery, saturated, no odor well completed at 25'	X			
	25							

COMMENTS: TD @ 25 ft bgs

PROJECT: 6462

DATE DRILLED: August 29, 2017

SITE LOCATION: 2200 Telegraph Ave, Oakland, CA

CASING ELEVATION: N/A

DRILLER: Cascade Drilling

First Encountered GW: 8 Feet bgs

DRILLING METHOD: Hollow Stem Auger

T.O.C. TO SCREEN: 5 feet

BORING DIAMETER: 10 inch

SCREEN LENGTH: 20 feet

LOGGED BY: M. Sepehr

APPROVED BY: M. Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON CORE	SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
54	5		SM	Asphalt, Hand Augered to 5 ft bgs Silty sand, some gravel, dry, no odor increasing clay content, getting darker by depth					
320	5		SC	Blue clayey sand, 80% clay, 20% sand, strong petroleum odor first water encountered at 8'			▼		
100	10		SC	Clayey sand with some silt, color changing to brown, minor odor, almost saturated		X			
100	15		SC	Clayey sand with some silt, color changing to brown, minor odor, almost saturated		X			
28	20		SM	Silty sand with 10% clay, yellow, minor odor, fully saturated					
10	20		GP	Sandy gravel, no sample recovery, fully saturated, no odor well completed at 25'					
25	25								

COMMENTS: TD @ 25 ft bgs

PROJECT: 6462

DATE DRILLED: August 28, 2017

SITE LOCATION: 2200 Telegraph Ave, Oakland, CA

CASING ELEVATION: N/A

DRILLER: Cascade Drilling

First Encountered GW: 12 Feet bgs

DRILLING METHOD: Hollow Stem Auger

T.O.C. TO SCREEN: 5 feet

BORING DIAMETER: 10 inch

SCREEN LENGTH: 20 feet

LOGGED BY: M. Sepehr

APPROVED BY: M. Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON CORE	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
	5		SM	Asphalt, Hand Augered to 5 ft bgs Fine sand, silt, & gravel, 70% sand, 30% silt & clay, dry, no odor yellowish brown, changing color to blue clay, fine sand 30%, fat clay 70%, minor odor at 5 feet	X			<p>4" Schedule 40 PVC Pipe</p> <p>Cement Grout</p> <p>Cement/Bentonite Grout</p> <p>#3 Monterey Sand Pack</p> <p>0.02 Slotted Screen</p>
460	10		ML	Silt & clay, black silty clay with some sand, getting moist, minor odor becoming blue, 80% clay, 20% silt & sand	X	▽		
130	15		SC	Very fine sand and clay, 60% sand, 40% clay, minor odor water encountered at 12'				
280	20		SM	sandy silt, some clay, yellow in color, wet, minor odor	X			
81	25		GM	sand, gravel & silt, yellow in color, wet, minor odor well completed at 25'				

COMMENTS: TD @ 25 ft bgs

PROJECT: 6462
 SITE LOCATION: 2200 Telegraph Ave, Oakland, CA
 DRILLER: Cascade Drilling
 DRILLING METHOD: Hollow Stem Auger
 BORING DIAMETER: 8 inch
 LOGGED BY: M. Sepehr

DATE DRILLED: August 28, 2017
 CASING ELEVATION: N/A
 First Encountered GW: 10 Feet bgs
 T.O.C. TO SCREEN: 5 feet
 SCREEN LENGTH: 10 feet
 APPROVED BY: M. Sepehr

DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON CORE	SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
0.0		SM	Asphalt, gravel, yellowish, hand Augered to 5 ft bgs Brown sandy silt, minor clay, dry, no odor finer sand at the bottom, changing color to black, more clayey					<p>2" Schedule 40 PVC Pipe Cement Grout Cement/Bentonite Grout #3 Monterey Sand Pack 0.02 Slotted Screen</p>
5		CL	Black fat clay, over 80% clay with minor sand & silt, no odor getting moist at 10', first water encountered					
10		SC	fine sand & clay, turning into less clay, at the end is coarse sand & gravel, saturated					
15					X			
20								
25								

COMMENTS: TD @ 15 ft bgs

PROJECT: 6462
 SITE LOCATION: 2200 Telegraph Ave, Oakland, CA
 DRILLER: Cascade Drilling
 DRILLING METHOD: Hollow Stem Auger
 BORING DIAMETER: 8 inch
 LOGGED BY: M. Sepehr


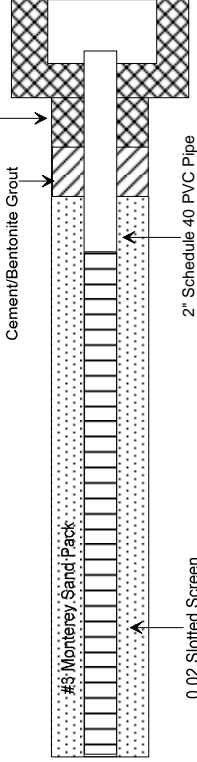


DATE DRILLED: August 28, 2017
 CASING ELEVATION: N/A
 First Encountered GW: 7 Feet bgs
 T.O.C. TO SCREEN: 5 feet
 SCREEN LENGTH: 20 feet
 APPROVED BY: M. Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON CORE	SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
0.0	0.0		SM	Asphalt, Hand Augered to 5 ft bgs Orange sand & silt, less clay, dry, no odor, color changes abruptly at 4 feet to black sandy silt, minor clay, & gravel					
20	5		SM	Mostly sand & silt, increasing clay content, water encountered at 7 feet At 10 feet more coarse sand and gravel, less clay content, very minor petroleum odor			▽		
10	10		SP	Coarse sand & gravel, saturated changing color to yellow, minor clay, mostly coarse sand & gravel, no odor					
15	15		SP	Same as above, sandy silt with some gravel upto 25' changing color to dark sand, very fine sand & silt well was set at 25'					
25	25								

COMMENTS: TD @ 25 ft bgs

PROJECT: 6462
 SITE LOCATION: 2200 Telegraph Ave, Oakland, CA
 DRILLER: Cascade Drilling
 DRILLING METHOD: Hollow Stem Auger
 BORING DIAMETER: 8 inch
 LOGGED BY: M. Sepehr

DATE DRILLED: August 28, 2017
 CASING ELEVATION: N/A
 First Encountered GW: 10 Feet bgs
 T.O.C. TO SCREEN: 5 feet
 SCREEN LENGTH: 10 feet
 APPROVED BY: M. Sepehr

PID, ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON CORE	SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
	0.0		SC	Asphalt, hand Augered to 5 ft bgs Orange sand & silt, changing color to blackish sandy clay with some fine gravel moist, no odor					 <p>2" Schedule 40 PVC Pipe Cement Grout Cement/Bentonite Grout #3 Monterey Sand Pack 0.02 Slotted Screen</p>
	5		SC	Changing color to brown, silt & sand with some clay, minor odor			▼		
	10		CL	Changing color to orange, 60% clay, 30% sand, 10% silt, wet, no odor	X				
	15								
	20								
	25								



COMMENTS: TD @ 15 ft bgs

APPENDIX C

WASTE DISPOSAL MANIFEST

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. SE17-1063	2. Page 1 of 1
3. Generator's Name and Mailing Address A+A GAS 2200 TELEGRAPH AVE. Oakland CA.		SOMA ENVIRONMENTAL			
4. Generator's Phone ()					
5. Transporter 1 Company Name InStrat Inc.		6. US EPA ID Number		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone (707) 374-3834	
9. Designated Facility Name and Site Address INSTRAT, INC. 1105 C AIRPORT RD. RIO VISTA, CA 94571		10. US EPA ID Number		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone (707) 374-3834	
11. WASTE DESCRIPTION			12. Containers		13. Total Quantity
			No.	Type	14. Unit Wt./Vol.
a. DRILL CUTTINGS			13	DRUM	6800
b. WELL / DECON WATER			1	DRUM	50
c.					
d.					
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					
					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name				Signature	
				SNA	
				Date	
				Month Day Year	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name		Signature		Month Day Year	
Jason Noble				9 13 17	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name				Signature	
InStrat Inc				P. McLaughlin	
				Date	
				Month Day Year	
				9 13 17	

NON-HAZARDOUS WASTE



APPENDIX D

WELL DEVELOPMENT DATA SHEETS

CLIENT: <u>Soma</u>		PROJECT #:		DAY: <u>Tue</u>		DATE: <u>9-5-17</u>					
JOB LOCATION:				DIG ALERT #:		JOB #:					
Well #	Depth	DESCRIPTION OF WORK				HOURS		Total Hrs	Charge Hours		
Bore #	Drilled					Start	Stop				
Please explain reasons for Down Time, Standby Time, and Shop Time											
		AM Shop Time	<u>Sol injection</u>				<u>5:45</u>	<u>6:00</u>			
		Travel to Site	<u>Setup, Fuel, and Travel</u>				<u>6:30</u>	<u>7:30</u>			
			<u>Safety and SUSA</u>				<u>7:30</u>	<u>8:00</u>			
<u>082</u>			<u>Development of a 2 inch Well TD: 152 D/W 10.14</u>				<u>8:00</u>	<u>9:30</u>			
<u>084</u>			<u>Development of a 2 inch Well TD: 25.25 D/W 10.27</u>				<u>9:30</u>	<u>11:00</u>			
<u>Ex.3</u>			<u>Development of a 4 inch Well TD 24.90 D/W 10.35</u>				<u>11:00</u>	<u>13:45</u>			
<u>085</u>			<u>Development of a 2 inch Well TD 15.20 D/W 10.24</u>				<u>13:45</u>	<u>15:30</u>			
			<u>site clean up, close Trac, hook-up</u>				<u>15:30</u>	<u>16:00</u>			
			<u>Lunch</u>				<u>16:30</u>	<u>17:00-30</u>			
		Travel to Shop	<u>Paperwork and Travel</u>				<u>16:00</u>	<u>16:30</u>			
		PM Shop Time									
Total Ft.		TOTAL CHARGEABLE RIG HOURS									
RIG ENGINE HOURS:		START	STOP		TOTAL <u>16.75</u>						
EQUIPMENT				CASING			MATERIALS				
DRILL RIG #	<u>065780</u>	COMPRESSOR/JACKHAMMER	TYPE	SLOT	2	4	ITEM	QTY	ITEM	QTY	
SUPPORT TRUCK #		SNOW FENCE RENTAL	20'	SCREEN			SAND		WELL COVER 8"		
SUPPORT TRUCK #		CONTINUOUS SAMPLER	10'	SCREEN			READYMIX		WELL COVER 12"		
TRAILER #	<u>34 616 98</u>	CONTINUOUS SAMPLER FOOTAGE	5'	SCREEN			QUICKSET		MONUMENT CASING		
BOBCAT		# OF CORE CUTS	20'	BLANK			PORTLAND		BOLLARDS		
AUTO HAMMER		# OF BULLDOG CUTS	10'	BLANK			ASPHALT		SOIL DRUMS		
GROUT MIXER		# OF SERVICE RUNS	5'	BLANK			BENTONITE GROUT		DEVELOPMENT DRUMS	<u>3</u>	
GROUT PUMP		# OF SAW CUTS	5'	PP SCREEN			BENTONITE CHIPS		DECON DRUMS		
PERISTALTIC PUMP		PORTABLE RESTROOM	10'	PP SCREEN			BENTONITE POWDER		HOLE COVER PLATES		
FORKLIFT/HOPPER		EXHAUST DUCTING		SLIP CAP			BENTONITE PELLETS		PLASTIC SHEETING		
LABOR				THREADED CAPS			BENTONITE GRANULAR		TRAFFIC CONTROL		
NAME	SIGNATURE	SHOP	TOTAL HRS	LOCKING CAPS			SAMPLER TUBES		CORE BOXES		
<u>Clayton</u>			<u>10.25</u>	DRIVE SHOE			SHELBY TUBES		PLYWOOD		
				CENTRALIZERS			PROBE POINTS		SOIL SAMPLES		
				LOCKS			GW PROBE POINTS		WATER SAMPLES		
							EXP POINTS		MACRO LINERS		
							SAMPLER SHOE		AUGER PLUGS		
CREW WITH PER DIEM			CHARGEABLE EXTRA LABOR HRS	UTILITIES FOUND OR HIT			DRILL OUT BITS				
REMARKS											

Client Signature [Signature]

Operator Signature [Signature]

T.O.C. - Top of Casing

VOLUME: GAL. PER

LIN./FT.

2 IN.=0.17

6 IN.=1.5

3 IN.=0.38

8 IN.=2.51

4 IN.=0.66

CASCADE DRILLING

Development / Purge Record

Date 9-5-17 Project # 107-17-1322 Site Osland

Well I.D. # OR-2 Water Level T.O.C. 10.14 Ft. Total Depth 15.2 Ft.

Set Up _____ Well Dia. 2 In. Water Column Height 5.06 Ft. Casing Volume 36 Gal. $V.D.=8.6$

TIME	GAL. PURGED	TEMP	COND. X	pH	TURB.	T.D.	DTW	OTHER
09:00	17				3.9.2			clear
09:05	21				4.0.2			
09:10	26				20.1			
09:15	31				3.05			
09:16	32				1.88			
09:17	33				1.62	15.20	10.30	clear

Comments: Final T.D. 15.20 DTW 10.30 WTU 1.62
Purge 33 Gal

Data Collected By: C

T.O.C. - Top of Casing
VOLUME: GAL. PER
LIN./FT.

2 IN.=0.17 6 IN.=1.5
3 IN.=0.38 8 IN.=2.51
4 IN.=0.66

CASCADE DRILLING

Development / Purge Record

Date 9-5-17 Project # 107-17-1322 Site Oakland

Well I.D. # OR-4 Water Level T.O.C. 1022 Ft. Total Depth 24.25 Ft.

Set Up 9:30 Well Dia. 2 In. Water Column Height 15.03 Ft. Casing Volume 2.5 Gal. $\times 0.25 = 25$

TIME	GAL. PURGED	TEMP	COND. X	pH	TURB.	T.D.	DTW	OTHER
10:15	20				41000			2 In. Purge
10:20	25				160			31.948 Purge
10:25	30				63			
10:45	45				2.31			
10:46	46				2.23			
10:47	47				1.37	24.50	10.24	11/10

Comments: Final TD 24.50 DTW=1024 NTU 1.37
Purge 47 Gal

Data Collected By: C

T.O.C. - Top of Casing
VOLUME: GAL. PER
LIN./FT.
2 IN.=0.17 6 IN.=1.5
3 IN.=0.38 8 IN.=2.51
4 IN.=0.66

CASCADE DRILLING

Development / Purge Record

Date 9-5-17 Project # 107-17-1322 Site Oakland

Well I.D. # OR-5 Water Level T.O.C. 1024 Ft. Total Depth 1520 Ft.

Set Up 13:45 Well Dia. 2 In. Water Column Height _____ Ft. Casing Volume _____ Gal.

TIME	GAL. PURGED	TEMP	COND. X	pH	TURB.	T.D.	DTW	OTHER
<u>14:45</u>	<u>4</u>				<u>26.3</u>			
<u>14:50</u>	<u>9</u>				<u>17.1</u>			
<u>14:55</u>	<u>14</u>				<u>8.98</u>			
<u>15:00</u>	<u>19</u>				<u>3.44</u>			
<u>15:01</u>	<u>20</u>				<u>3.34</u>			
<u>15:02</u>	<u>21</u>				<u>3.06</u>			

Comments: Final TD-1520 DTW=11.39 NTU 3.06
Purge 21 Gal

Data Collected By: C

T.O.C. - Top of Casing
VOLUME: GAL. PER
LIN./FT.

2 IN.=0.17 6 IN.=1.5
3 IN.=0.38 8 IN.=2.51
4 IN.=0.66

CASCADE DRILLING

Development / Purge Record

Date 9-5-17 Project # 107-17-1322 Site Dakland

Well I.D. # Fx-3 Water Level T.O.C. 10.35 Ft. Total Depth 24.90 Ft.

Set Up 1100 Well Dia. 4 In. Water Column Height 14.55 Ft. Casing Volume 9.6 Gal. 96.6 gal

TIME	GAL. PURGED	TEMP	COND. X	pH	TURB.	T.D.	DTW	OTHER
12:15	60				+ 1000			2nd screen
12:25	70				376			Brine
12:35	80				143			
12:45	90				85.4			
12:50	95	Strip up last down			39.4			Clear
13:00	110				9.2			Clear

Comments: Final TD 2490 DTW= 10.34 by 9.2
Page 10

Data Collected By: [Signature]

APPENDIX E

WELL SURVEY REPORT

DATE: 8/31/2017

JOB#17004

**TABLE OF ELEVATIONS & COORDINATES
ON MONITORING WELLS**

SOMA ENVIRONMENTAL ENGINEERING
2200 TELEGRAPH AVENUE
OAKLAND, CA 94612

WELL ID #	NORTHING (FT.) / LATITUDE (D.DEG.)	EASTING (FT.) / LONGITUDE (D.DEG.)	ELEVATION (FT.)	DESCRIPTION
EX-1	2122786.186	6050786.906	21.77	4"PVC NOTCH SIDE
	N37.811530955	W122.268594008	22.11	PUNCH NORTH SIDE
			22.08	AC NORTH SIDE
EX-2	2122783.403	6050797.64	21.46	4"PVC NOTCH NORTH SIDE
	N37.81152387	W122.268556675	21.89	PUNCH NORTH SIDE
			21.87	AC NORTH SIDE
EX-3	2122790.103	6050822.795	20.47	4"PVC NOTCH SIDE
	N37.811543573	W122.268470051	20.75	PUNCH NORTH SIDE
			20.64	AC NORTH SIDE
OB-2	2122806.687	6050836.606	20.06	2"PVC NOTCH SIDE
	N37.811589826	W122.268423335	20.49	PUNCH NORTH SIDE
			20.33	AC NORTH SIDE
OB-4	2122786.786	6050843.355	20.22	2"PVC NOTCH SIDE
	N37.811535532	W122.268398675	20.42	PUNCH NORTH SIDE
			20.33	AC NORTH SIDE
OB-5	2122772.362	6050830.056	20.13	2"PVC NOTCH SIDE
	N37.811495236	W122.26844376	20.57	PUNCH NORTH SIDE
			20.54	AC NORTH SIDE

HORIZONTAL AND VERTICAL CONTROL DERIVED FROM THE CALIFORNIA REAL TIME NETWORK (NSRS 2007) EPOCH 2011.00.

COORDINATE VALUES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE 3, NAD83. ELEVATIONS ARE NAVD 88 DATUM.

EQUIPMENT USED: TRIMBLE R8 GPS AND TOPCON AT-G3 LEVEL.

EDGIS LAND SURVEYING
Land Surveying and mapping
2519 W. Shaw Avenue, Ste. 111
Fresno, CA 93711
Phone (559) 803-2679
email: edgis@aol.com



A handwritten signature in blue ink, appearing to read "E. Espinoza", located below the professional seal.

APPENDIX F

WELL INSTALLATION LABORATORY REPORT AND CHAIN OF CUSTODY FORMS



Enthalpy Analytical


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

Laboratory Job Number 292017
ANALYTICAL REPORT

SOMA Environmental Engineering Inc. 6620 Owens Dr. Pleasanton, CA 94588	Project : 6462 Location : 2200 Telegraph Ave, Oakland Level : II
---	--

<u>Sample ID</u>	<u>Lab ID</u>
EX-1@5	292017-001
EX-1@10	292017-002
EX-1@20	292017-003
EX-2@10	292017-004
EX-2@15	292017-005
EX-3@5	292017-006
EX-3@10	292017-007
EX-3@15	292017-008
EX-3@20	292017-009
EX-3@25	292017-010
OB-2@15	292017-011
OB-4@15	292017-012
OB-5@10	292017-013

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

Signature: 
Tracy Babjar
Project Manager
tracy.babjar@enthalpy.com
(510) 204-2226 Ext 13107

Date: 09/08/2017

CASE NARRATIVE

Laboratory number: 292017
Client: SOMA Environmental Engineering Inc.
Project: 6462
Location: 2200 Telegraph Ave, Oakland
Request Date: 08/31/17
Samples Received: 08/31/17

This data package contains sample and QC results for thirteen soil samples, requested for the above referenced project on 08/31/17. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

Matrix spikes were not performed for this analysis in batch 251317 due to limited sample volume or interferences from the solvent in sample dilutions. Low surrogate recovery was observed for 1,2-dichloroethane-d4 in OB-5@10 (lab # 292017-013). EX-1@10 (lab # 292017-002), EX-3@10 (lab # 292017-007), and OB-5@10 (lab # 292017-013) were diluted due to high hydrocarbons. EX-2@10 (lab # 292017-004) and EX-3@5 (lab # 292017-006) were diluted due to high non-target analytes. No other analytical problems were encountered.

CHAIN OF CUSTODY

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

LOGIN # 292017

Sampler: Mansour Sepehr

Project No: 6462

Report To: Joyce Bobek

Project Name: 2200 Telegraph Ave, Oakland

Company: SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

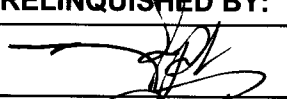
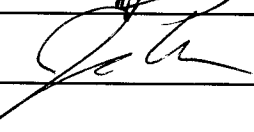
Fax: 925-734-6401

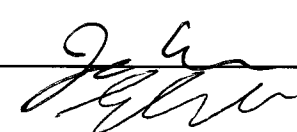
Analyses

Lab No.	Sample ID.	Sampling Date Time	Matrix				# of Containers	Preservative				
			Soil	Water	Waste	Oil		HCL	H ₂ SO ₄	HNO ₃	ICE	
1	EX-1@5	8/29/17 13:25	*				6-inch sleeve				*	
2	EX-1@10	8/29/17 13:30	*				6-inch sleeve				*	
3	EX-1@20	8/29/17 13:35	*				6-inch sleeve				*	
4	EX-2@10	8/29/17 9:45	*				6-inch sleeve				*	
5	EX-2@15	8/29/17 9:50	*				6-inch sleeve				*	
6	EX-3@5	8/28/17 9:45	*				6-inch sleeve				*	
7	EX-3@10	8/28/17 9:50	*				6-inch sleeve				*	
8	EX-3@15	8/28/17 9:55	*				6-inch sleeve				*	
9	EX-3@20	8/28/17 10:00	*				6-inch sleeve				*	
10	EX-3@25	8/28/17 10:05	*				6-inch sleeve				*	
11	OB-2@15	8/28/17 13:30	*				6-inch sleeve				*	
12	OB-4@15	8/28/17 14:30	*				6-inch sleeve				*	
13	OB-5@10	8/28/17 16:00	*				6-inch sleeve				*	

TPH-g. (8015B)	BTEX, MtBE, Naphthalene and full VOC list (8260B)																			
*	*																			
*	*																			
*	*																			
*	*																			
*	*																			
*	*																			
*	*																			
*	*																			
*	*																			
*	*																			

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:
 8/31/17 10:12
 DATE/TIME
 8/31 15:20
 DATE/TIME
 DATE/TIME

RECEIVED BY:
 8/31 10:12
 DATE/TIME
 8/31 15:20
 DATE/TIME
 DATE/TIME



Login # 292017 Date Received 08/31/17 Number of coolers 1
Client SOMA Environmental Project 6462

Date Opened 08/31/17 By (print) [signature] (sign) [signature]
Date Logged in [signature] By (print) EHS (sign) [signature]
Date Labelled [signature] By (print) [signature] (sign) [signature]

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

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

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

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

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

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

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 5.8

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

21. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

Detections Summary for 292017

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

Client : SOMA Environmental Engineering Inc.
 Project : 6462
 Location : 2200 Telegraph Ave, Oakland

Client Sample ID : EX-1@5 Laboratory Sample ID : 292017-001

No Detections

Client Sample ID : EX-1@10 Laboratory Sample ID : 292017-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	13	Y	1.1	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B

Client Sample ID : EX-1@20 Laboratory Sample ID : 292017-003

No Detections

Client Sample ID : EX-2@10 Laboratory Sample ID : 292017-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	45	Y	1.1	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Isopropylbenzene	800		250	ug/Kg	As Recd	50.10	EPA 8260B	EPA 5030B
Propylbenzene	3,800		250	ug/Kg	As Recd	50.10	EPA 8260B	EPA 5030B
sec-Butylbenzene	1,100		250	ug/Kg	As Recd	50.10	EPA 8260B	EPA 5030B
n-Butylbenzene	3,300		250	ug/Kg	As Recd	50.10	EPA 8260B	EPA 5030B
Naphthalene	4,400		250	ug/Kg	As Recd	50.10	EPA 8260B	EPA 5030B

Client Sample ID : EX-2@15 Laboratory Sample ID : 292017-005

No Detections

Client Sample ID : EX-3@5 Laboratory Sample ID : 292017-006

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	25	Y	1.1	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Propylbenzene	1,100		250	ug/Kg	As Recd	49.56	EPA 8260B	EPA 5030B
sec-Butylbenzene	490		250	ug/Kg	As Recd	49.56	EPA 8260B	EPA 5030B
n-Butylbenzene	1,500		250	ug/Kg	As Recd	49.56	EPA 8260B	EPA 5030B
Naphthalene	410		250	ug/Kg	As Recd	49.56	EPA 8260B	EPA 5030B

Client Sample ID : EX-3@10

Laboratory Sample ID :

292017-007

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	120		13	mg/Kg	As Recd	62.50	EPA 8015B	EPA 5030B
Ethylbenzene	290		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
Isopropylbenzene	320		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
Propylbenzene	1,900		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	1,800		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
sec-Butylbenzene	440		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
n-Butylbenzene	1,500		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
Naphthalene	2,600		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B

Client Sample ID : EX-3@15

Laboratory Sample ID :

292017-008

No Detections

Client Sample ID : EX-3@20

Laboratory Sample ID :

292017-009

No Detections

Client Sample ID : EX-3@25

Laboratory Sample ID :

292017-010

No Detections

Client Sample ID : OB-2@15

Laboratory Sample ID :

292017-011

No Detections

Client Sample ID : OB-4@15

Laboratory Sample ID :

292017-012

No Detections

Client Sample ID : OB-5@10

Laboratory Sample ID :

292017-013

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	24		1.1	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Propylbenzene	870		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	520		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
sec-Butylbenzene	320		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
n-Butylbenzene	890		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B
Naphthalene	470		250	ug/Kg	As Recd	49.95	EPA 8260B	EPA 5030B

Y = Sample exhibits chromatographic pattern which does not resemble standard

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	08/31/17

Field ID:	EX-1@5	Batch#:	251204
Type:	SAMPLE	Sampled:	08/29/17
Lab ID:	292017-001	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.98

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	70-138

Field ID:	EX-1@10	Batch#:	251181
Type:	SAMPLE	Sampled:	08/29/17
Lab ID:	292017-002	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	13 Y	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	126	70-138

Field ID:	EX-1@20	Batch#:	251181
Type:	SAMPLE	Sampled:	08/29/17
Lab ID:	292017-003	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	70-138

Field ID:	EX-2@10	Batch#:	251181
Type:	SAMPLE	Sampled:	08/29/17
Lab ID:	292017-004	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	45 Y	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	138	70-138

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	08/31/17

Field ID:	EX-2@15	Batch#:	251181
Type:	SAMPLE	Sampled:	08/29/17
Lab ID:	292017-005	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	70-138

Field ID:	EX-3@5	Batch#:	251181
Type:	SAMPLE	Sampled:	08/28/17
Lab ID:	292017-006	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	25 Y	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	123	70-138

Field ID:	EX-3@10	Batch#:	251243
Type:	SAMPLE	Sampled:	08/28/17
Lab ID:	292017-007	Analyzed:	09/01/17
Diln Fac:	62.50		

Analyte	Result	RL
Gasoline C7-C12	120	13

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	70-138

Field ID:	EX-3@15	Batch#:	251181
Type:	SAMPLE	Sampled:	08/28/17
Lab ID:	292017-008	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	70-138

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	08/31/17

Field ID:	EX-3@20	Batch#:	251181
Type:	SAMPLE	Sampled:	08/28/17
Lab ID:	292017-009	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.98

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	70-138

Field ID:	EX-3@25	Batch#:	251181
Type:	SAMPLE	Sampled:	08/28/17
Lab ID:	292017-010	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.96

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	70-138

Field ID:	OB-2@15	Batch#:	251181
Type:	SAMPLE	Sampled:	08/28/17
Lab ID:	292017-011	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.99

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	70-138

Field ID:	OB-4@15	Batch#:	251181
Type:	SAMPLE	Sampled:	08/28/17
Lab ID:	292017-012	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.93

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	70-138

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	08/31/17

Field ID:	OB-5@10	Batch#:	251243
Type:	SAMPLE	Sampled:	08/28/17
Lab ID:	292017-013	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	24	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	127	70-138

Type:	BLANK	Batch#:	251181
Lab ID:	QC899099	Analyzed:	08/31/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	90	70-138

Type:	BLANK	Batch#:	251204
Lab ID:	QC899194	Analyzed:	08/31/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	95	70-138

Type:	BLANK	Batch#:	251243
Lab ID:	QC899337	Analyzed:	09/01/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	96	70-138

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC899094	Batch#:	251181
Matrix:	Soil	Analyzed:	08/31/17
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	0.9759	98	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	101	70-138

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	292021-001	Batch#:	251181
Matrix:	Soil	Sampled:	08/31/17
Units:	mg/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/01/17

Type: MS Lab ID: QC899095

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1579	9.709	6.572	66	49-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	70-138

Type: MSD Lab ID: QC899096

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.75	7.246	66	49-120	0	32

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	70-138

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC899203	Batch#:	251204
Matrix:	Soil	Analyzed:	08/31/17
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.004	100	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	97	70-138

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	292044-002	Batch#:	251204
Matrix:	Soil	Sampled:	08/31/17
Units:	mg/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/01/17

Type: MS Lab ID: QC899204

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.08502	9.259	7.301	78	49-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	70-138

Type: MSD Lab ID: QC899205

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.87	8.112	74	49-120	5	32

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	70-138

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC899334	Batch#:	251243
Matrix:	Soil	Analyzed:	09/01/17
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	0.9603	96	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	70-138

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	292055-001	Batch#:	251243
Matrix:	Soil	Sampled:	08/31/17
Units:	mg/Kg	Received:	09/01/17
Basis:	as received	Analyzed:	09/01/17

Type: MS Lab ID: QC899335

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1497	10.53	8.314	78	49-120

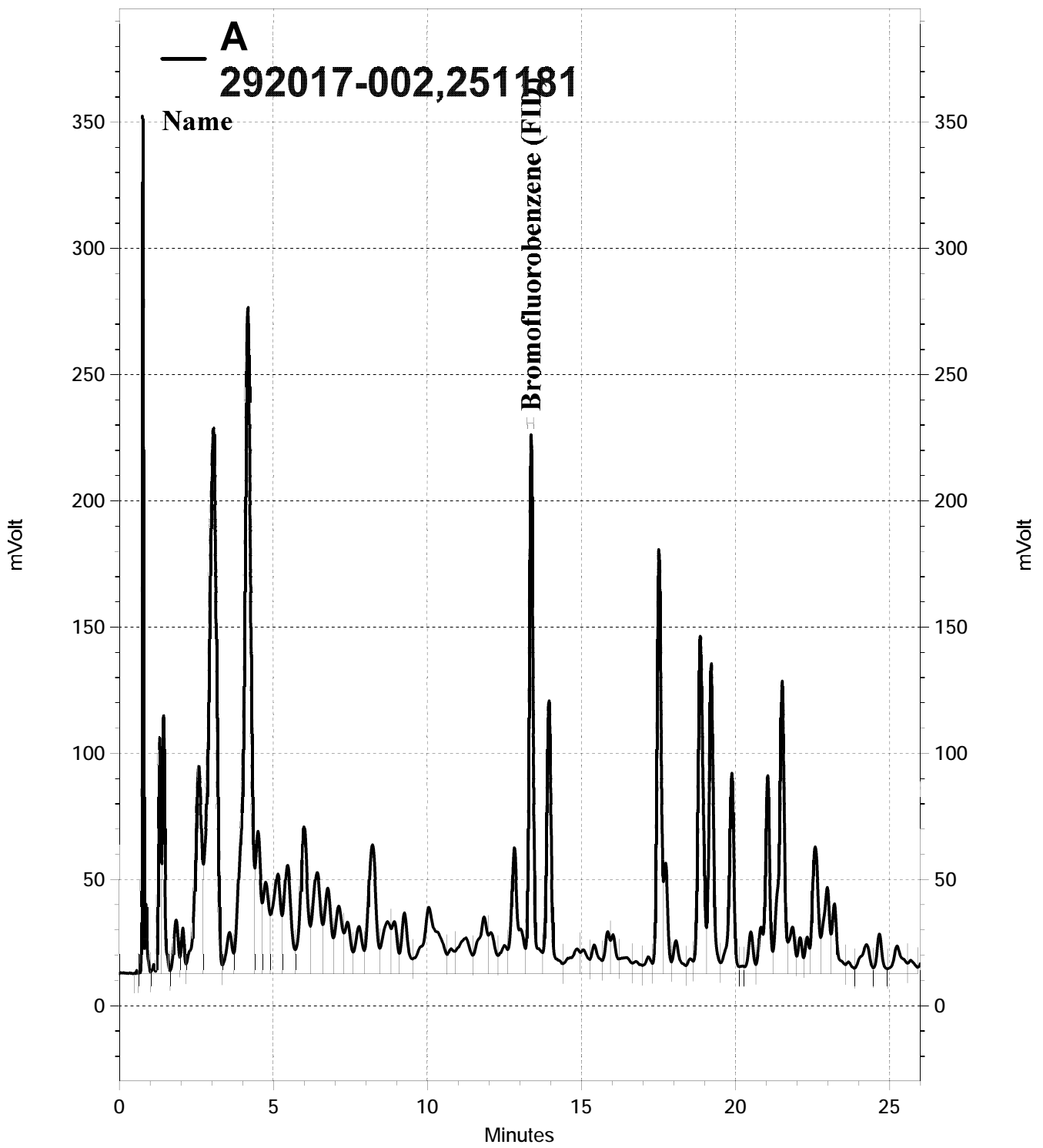
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	70-138

Type: MSD Lab ID: QC899336

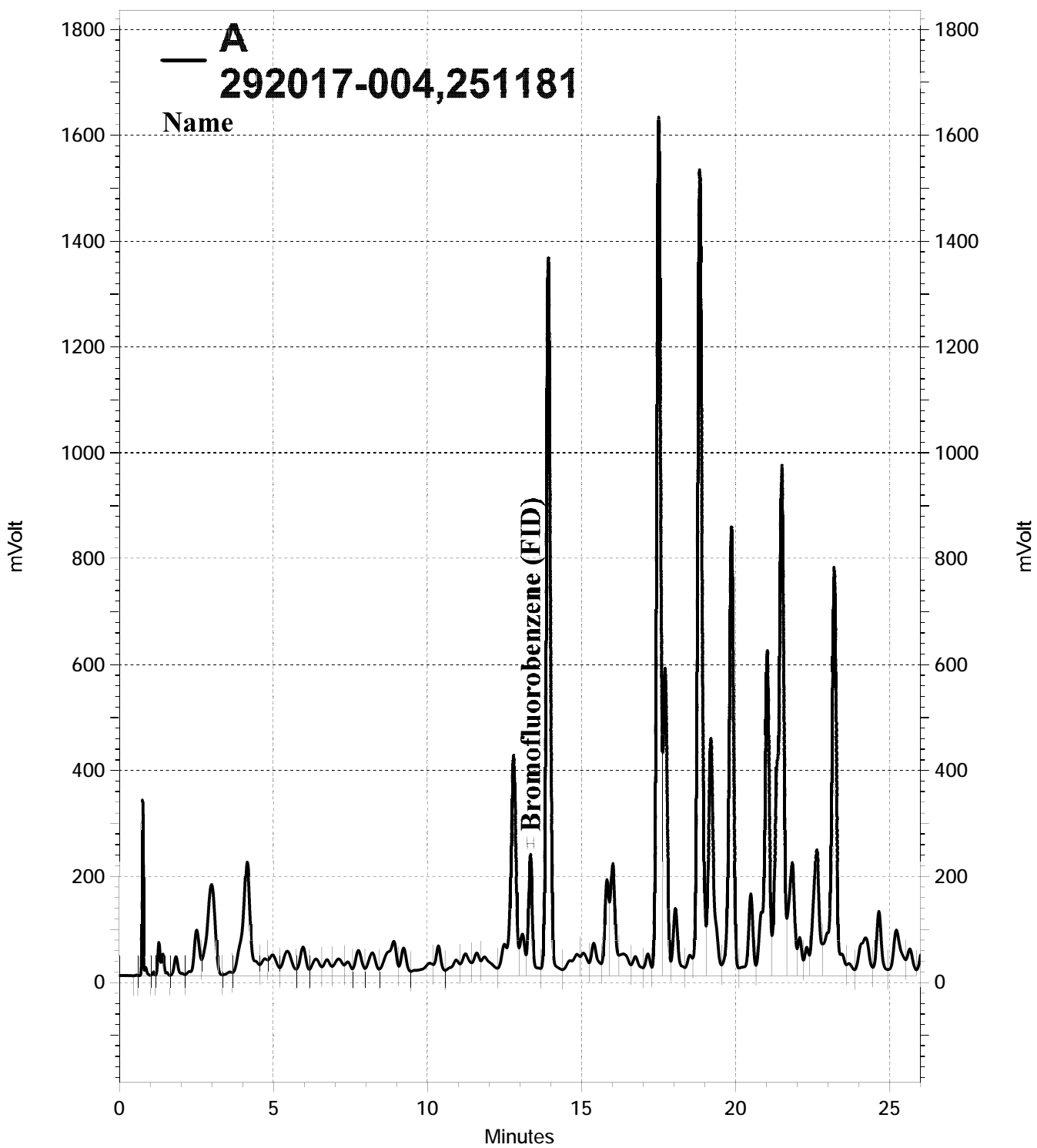
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.709	7.638	77	49-120	1	32

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	115	70-138

RPD= Relative Percent Difference

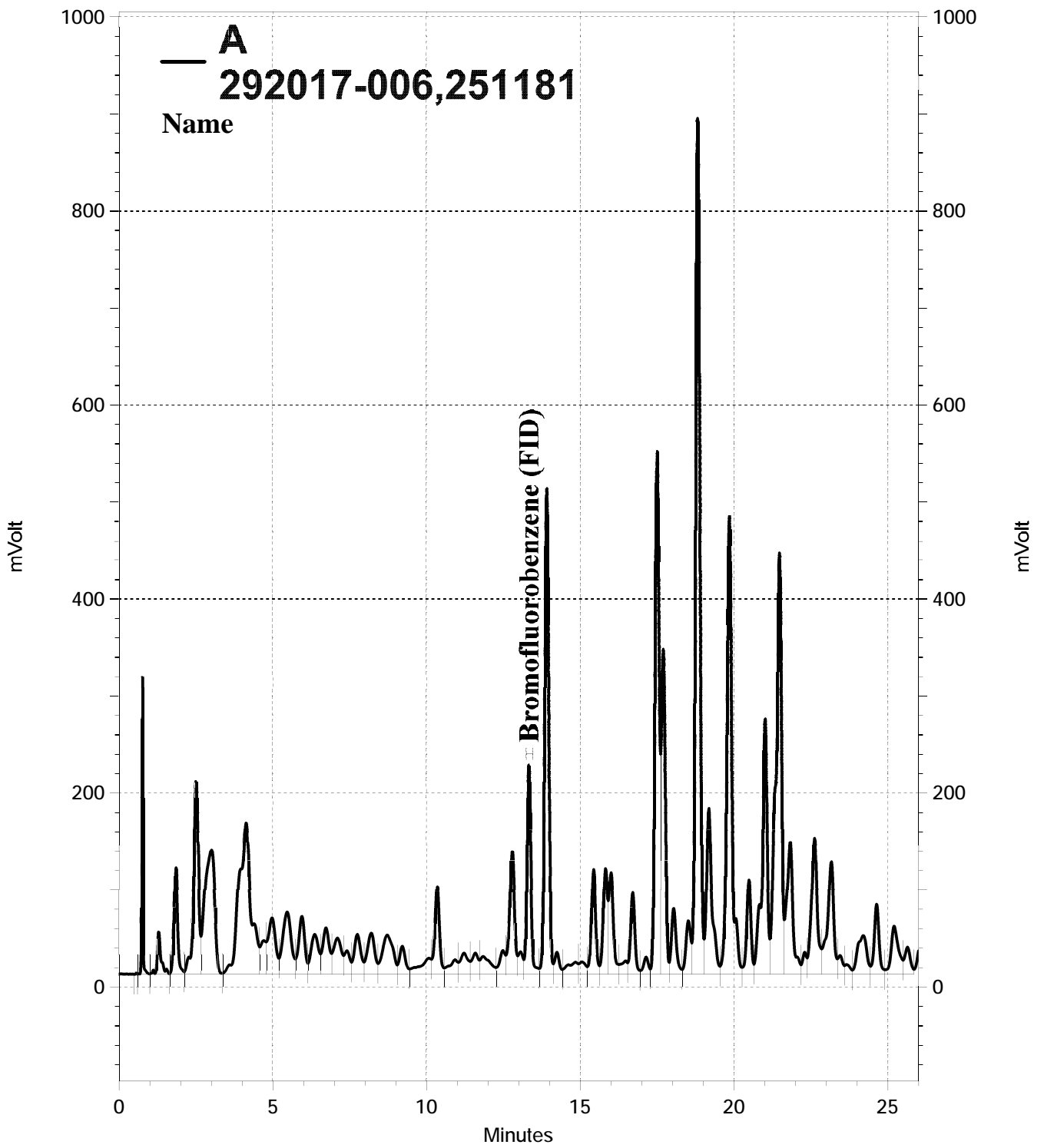


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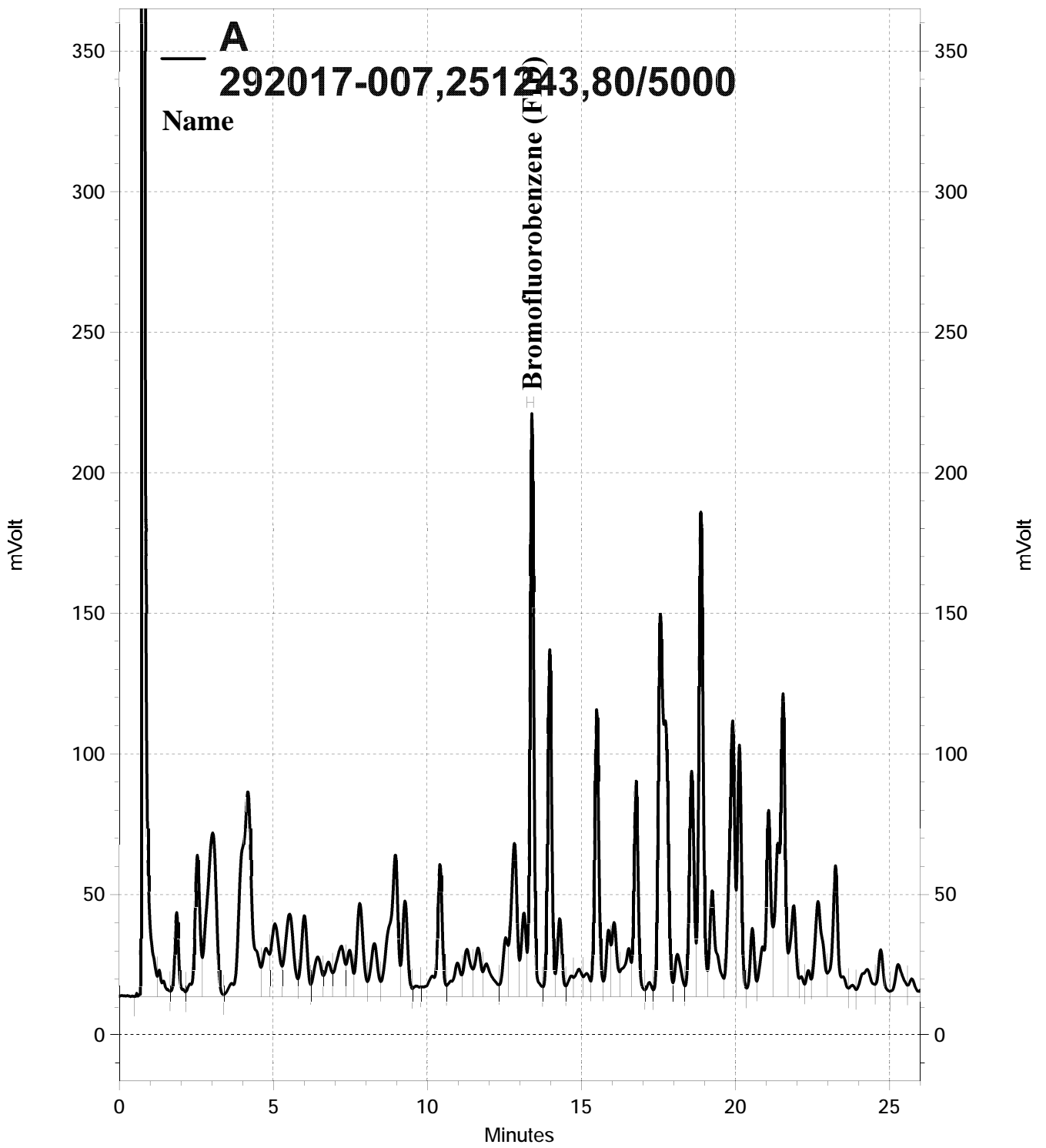


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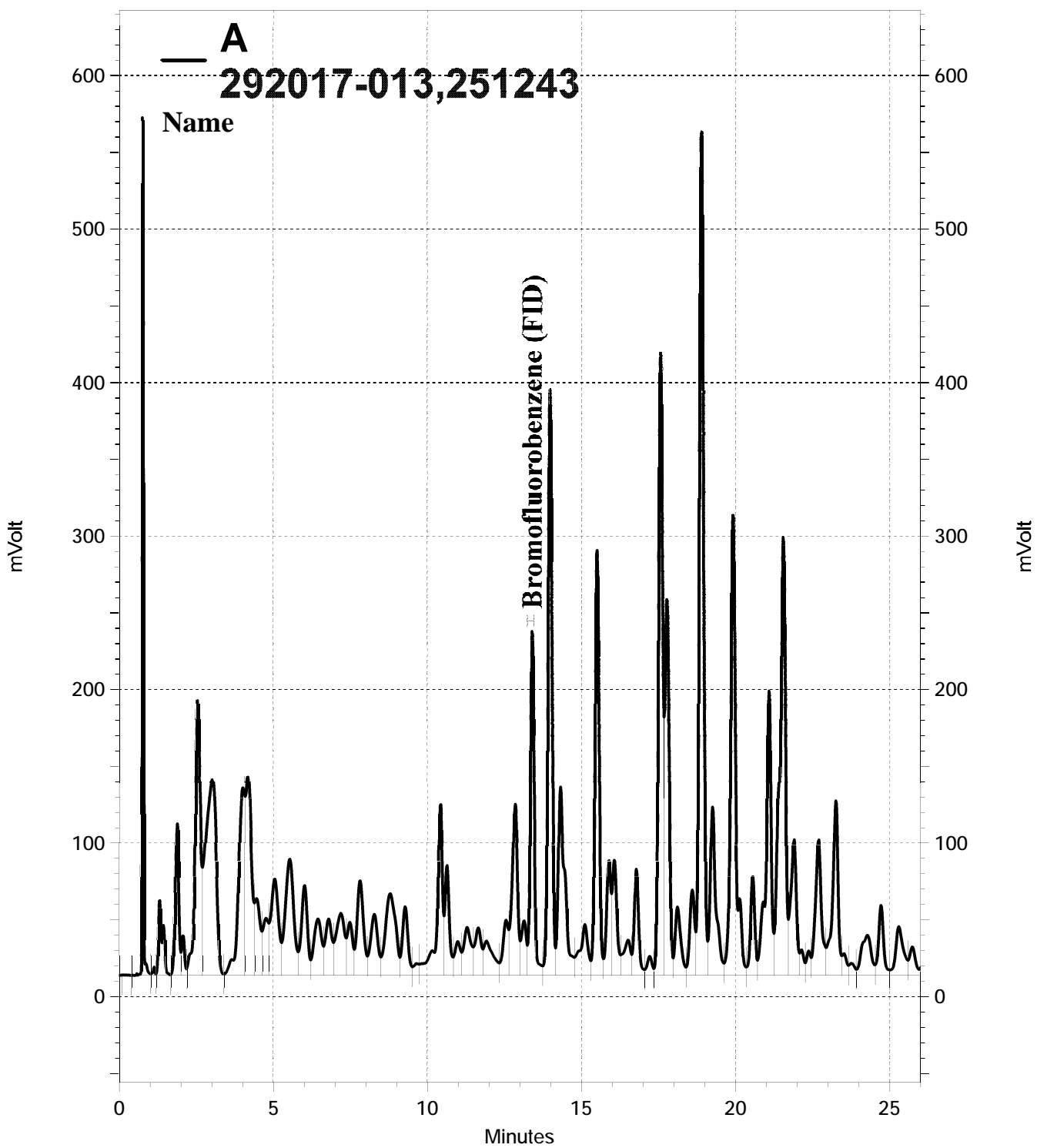
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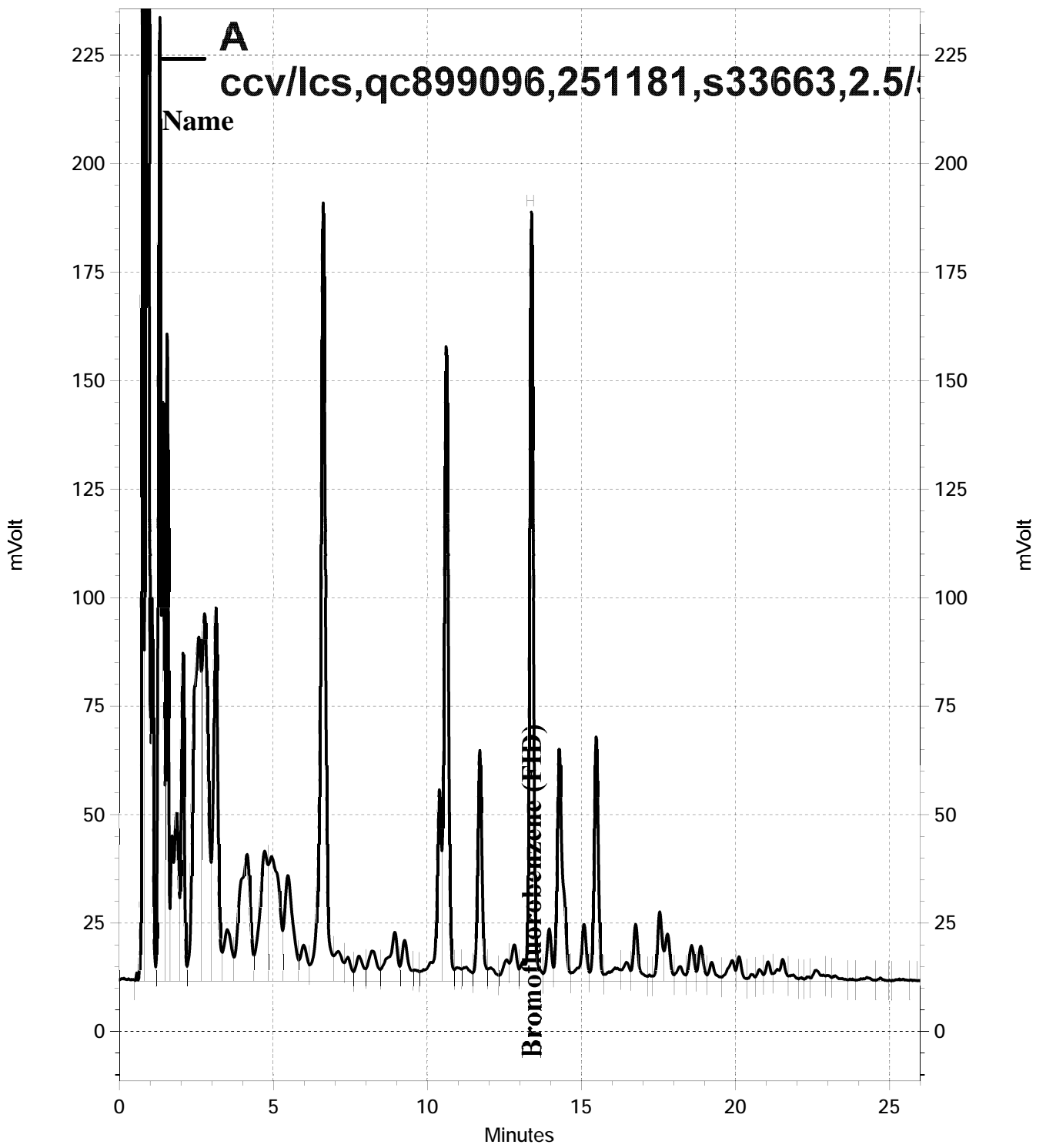
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Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-1@5	Diln Fac:	0.9940
Lab ID:	292017-001	Batch#:	251242
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/01/17

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-1@5	Diln Fac:	0.9940
Lab ID:	292017-001	Batch#:	251242
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/01/17

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	109	80-136
Toluene-d8	98	80-120
Bromofluorobenzene	105	80-132

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-1@10	Diln Fac:	49.56
Lab ID:	292017-002	Batch#:	251317
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/06/17

Analyte	Result	RL
Freon 12	ND	500
Chloromethane	ND	500
Vinyl Chloride	ND	500
Bromomethane	ND	500
Chloroethane	ND	500
Trichlorofluoromethane	ND	250
Acetone	ND	990
Freon 113	ND	250
1,1-Dichloroethene	ND	250
Methylene Chloride	ND	990
Carbon Disulfide	ND	250
MTBE	ND	250
trans-1,2-Dichloroethene	ND	250
Vinyl Acetate	ND	2,500
1,1-Dichloroethane	ND	250
2-Butanone	ND	500
cis-1,2-Dichloroethene	ND	250
2,2-Dichloropropane	ND	250
Chloroform	ND	250
Bromochloromethane	ND	250
1,1,1-Trichloroethane	ND	250
1,1-Dichloropropene	ND	250
Carbon Tetrachloride	ND	250
1,2-Dichloroethane	ND	250
Benzene	ND	250
Trichloroethene	ND	250
1,2-Dichloropropane	ND	250
Bromodichloromethane	ND	250
Dibromomethane	ND	250
4-Methyl-2-Pentanone	ND	500
cis-1,3-Dichloropropene	ND	250
Toluene	ND	250
trans-1,3-Dichloropropene	ND	250
1,1,2-Trichloroethane	ND	250
2-Hexanone	ND	500
1,3-Dichloropropane	ND	250
Tetrachloroethene	ND	250

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-1@10	Diln Fac:	49.56
Lab ID:	292017-002	Batch#:	251317
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/06/17

Analyte	Result	RL
Dibromochloromethane	ND	250
1,2-Dibromoethane	ND	250
Chlorobenzene	ND	250
1,1,1,2-Tetrachloroethane	ND	250
Ethylbenzene	ND	250
m,p-Xylenes	ND	250
o-Xylene	ND	250
Styrene	ND	250
Bromoform	ND	250
Isopropylbenzene	ND	250
1,1,2,2-Tetrachloroethane	ND	250
1,2,3-Trichloropropane	ND	250
Propylbenzene	ND	250
Bromobenzene	ND	250
1,3,5-Trimethylbenzene	ND	250
2-Chlorotoluene	ND	250
4-Chlorotoluene	ND	250
tert-Butylbenzene	ND	250
1,2,4-Trimethylbenzene	ND	250
sec-Butylbenzene	ND	250
para-Isopropyl Toluene	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
n-Butylbenzene	ND	250
1,2-Dichlorobenzene	ND	250
1,2-Dibromo-3-Chloropropane	ND	250
1,2,4-Trichlorobenzene	ND	250
Hexachlorobutadiene	ND	250
Naphthalene	ND	250
1,2,3-Trichlorobenzene	ND	250

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-128
1,2-Dichloroethane-d4	84	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	104	80-132
Trifluorotoluene (MeOH)	110	56-129

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-1@20	Diln Fac:	0.9940
Lab ID:	292017-003	Batch#:	251242
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/01/17

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-1@20	Diln Fac:	0.9940
Lab ID:	292017-003	Batch#:	251242
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/01/17

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	108	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-132

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-2@10	Diln Fac:	50.10
Lab ID:	292017-004	Batch#:	251317
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/06/17

Analyte	Result	RL
Freon 12	ND	500
Chloromethane	ND	500
Vinyl Chloride	ND	500
Bromomethane	ND	500
Chloroethane	ND	500
Trichlorofluoromethane	ND	250
Acetone	ND	1,000
Freon 113	ND	250
1,1-Dichloroethene	ND	250
Methylene Chloride	ND	1,000
Carbon Disulfide	ND	250
MTBE	ND	250
trans-1,2-Dichloroethene	ND	250
Vinyl Acetate	ND	2,500
1,1-Dichloroethane	ND	250
2-Butanone	ND	500
cis-1,2-Dichloroethene	ND	250
2,2-Dichloropropane	ND	250
Chloroform	ND	250
Bromochloromethane	ND	250
1,1,1-Trichloroethane	ND	250
1,1-Dichloropropene	ND	250
Carbon Tetrachloride	ND	250
1,2-Dichloroethane	ND	250
Benzene	ND	250
Trichloroethene	ND	250
1,2-Dichloropropane	ND	250
Bromodichloromethane	ND	250
Dibromomethane	ND	250
4-Methyl-2-Pentanone	ND	500
cis-1,3-Dichloropropene	ND	250
Toluene	ND	250
trans-1,3-Dichloropropene	ND	250
1,1,2-Trichloroethane	ND	250
2-Hexanone	ND	500
1,3-Dichloropropane	ND	250
Tetrachloroethene	ND	250

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-2@10	Diln Fac:	50.10
Lab ID:	292017-004	Batch#:	251317
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/06/17

Analyte	Result	RL
Dibromochloromethane	ND	250
1,2-Dibromoethane	ND	250
Chlorobenzene	ND	250
1,1,1,2-Tetrachloroethane	ND	250
Ethylbenzene	ND	250
m,p-Xylenes	ND	250
o-Xylene	ND	250
Styrene	ND	250
Bromoform	ND	250
Isopropylbenzene	800	250
1,1,2,2-Tetrachloroethane	ND	250
1,2,3-Trichloropropane	ND	250
Propylbenzene	3,800	250
Bromobenzene	ND	250
1,3,5-Trimethylbenzene	ND	250
2-Chlorotoluene	ND	250
4-Chlorotoluene	ND	250
tert-Butylbenzene	ND	250
1,2,4-Trimethylbenzene	ND	250
sec-Butylbenzene	1,100	250
para-Isopropyl Toluene	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
n-Butylbenzene	3,300	250
1,2-Dichlorobenzene	ND	250
1,2-Dibromo-3-Chloropropane	ND	250
1,2,4-Trichlorobenzene	ND	250
Hexachlorobutadiene	ND	250
Naphthalene	4,400	250
1,2,3-Trichlorobenzene	ND	250

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-128
1,2-Dichloroethane-d4	85	80-136
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-132
Trifluorotoluene (MeOH)	107	56-129

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-2@15	Diln Fac:	0.9960
Lab ID:	292017-005	Batch#:	251242
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-2@15	Diln Fac:	0.9960
Lab ID:	292017-005	Batch#:	251242
Matrix:	Soil	Sampled:	08/29/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	112	80-136
Toluene-d8	97	80-120
Bromofluorobenzene	105	80-132

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@5	Diln Fac:	49.56
Lab ID:	292017-006	Batch#:	251317
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/06/17

Analyte	Result	RL
Freon 12	ND	500
Chloromethane	ND	500
Vinyl Chloride	ND	500
Bromomethane	ND	500
Chloroethane	ND	500
Trichlorofluoromethane	ND	250
Acetone	ND	990
Freon 113	ND	250
1,1-Dichloroethene	ND	250
Methylene Chloride	ND	990
Carbon Disulfide	ND	250
MTBE	ND	250
trans-1,2-Dichloroethene	ND	250
Vinyl Acetate	ND	2,500
1,1-Dichloroethane	ND	250
2-Butanone	ND	500
cis-1,2-Dichloroethene	ND	250
2,2-Dichloropropane	ND	250
Chloroform	ND	250
Bromochloromethane	ND	250
1,1,1-Trichloroethane	ND	250
1,1-Dichloropropene	ND	250
Carbon Tetrachloride	ND	250
1,2-Dichloroethane	ND	250
Benzene	ND	250
Trichloroethene	ND	250
1,2-Dichloropropane	ND	250
Bromodichloromethane	ND	250
Dibromomethane	ND	250
4-Methyl-2-Pentanone	ND	500
cis-1,3-Dichloropropene	ND	250
Toluene	ND	250
trans-1,3-Dichloropropene	ND	250
1,1,2-Trichloroethane	ND	250
2-Hexanone	ND	500
1,3-Dichloropropane	ND	250
Tetrachloroethene	ND	250

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@5	Diln Fac:	49.56
Lab ID:	292017-006	Batch#:	251317
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/06/17

Analyte	Result	RL
Dibromochloromethane	ND	250
1,2-Dibromoethane	ND	250
Chlorobenzene	ND	250
1,1,1,2-Tetrachloroethane	ND	250
Ethylbenzene	ND	250
m,p-Xylenes	ND	250
o-Xylene	ND	250
Styrene	ND	250
Bromoform	ND	250
Isopropylbenzene	ND	250
1,1,2,2-Tetrachloroethane	ND	250
1,2,3-Trichloropropane	ND	250
Propylbenzene	1,100	250
Bromobenzene	ND	250
1,3,5-Trimethylbenzene	ND	250
2-Chlorotoluene	ND	250
4-Chlorotoluene	ND	250
tert-Butylbenzene	ND	250
1,2,4-Trimethylbenzene	ND	250
sec-Butylbenzene	490	250
para-Isopropyl Toluene	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
n-Butylbenzene	1,500	250
1,2-Dichlorobenzene	ND	250
1,2-Dibromo-3-Chloropropane	ND	250
1,2,4-Trichlorobenzene	ND	250
Hexachlorobutadiene	ND	250
Naphthalene	410	250
1,2,3-Trichlorobenzene	ND	250

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-128
1,2-Dichloroethane-d4	81	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	104	80-132
Trifluorotoluene (MeOH)	108	56-129

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@10	Diln Fac:	49.95
Lab ID:	292017-007	Batch#:	251317
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/06/17

Analyte	Result	RL
Freon 12	ND	500
Chloromethane	ND	500
Vinyl Chloride	ND	500
Bromomethane	ND	500
Chloroethane	ND	500
Trichlorofluoromethane	ND	250
Acetone	ND	1,000
Freon 113	ND	250
1,1-Dichloroethene	ND	250
Methylene Chloride	ND	1,000
Carbon Disulfide	ND	250
MTBE	ND	250
trans-1,2-Dichloroethene	ND	250
Vinyl Acetate	ND	2,500
1,1-Dichloroethane	ND	250
2-Butanone	ND	500
cis-1,2-Dichloroethene	ND	250
2,2-Dichloropropane	ND	250
Chloroform	ND	250
Bromochloromethane	ND	250
1,1,1-Trichloroethane	ND	250
1,1-Dichloropropene	ND	250
Carbon Tetrachloride	ND	250
1,2-Dichloroethane	ND	250
Benzene	ND	250
Trichloroethene	ND	250
1,2-Dichloropropane	ND	250
Bromodichloromethane	ND	250
Dibromomethane	ND	250
4-Methyl-2-Pentanone	ND	500
cis-1,3-Dichloropropene	ND	250
Toluene	ND	250
trans-1,3-Dichloropropene	ND	250
1,1,2-Trichloroethane	ND	250
2-Hexanone	ND	500
1,3-Dichloropropane	ND	250
Tetrachloroethene	ND	250

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 292017	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6462	Analysis: EPA 8260B
Field ID: EX-3@10	Diln Fac: 49.95
Lab ID: 292017-007	Batch#: 251317
Matrix: Soil	Sampled: 08/28/17
Units: ug/Kg	Received: 08/31/17
Basis: as received	Analyzed: 09/06/17

Analyte	Result	RL
Dibromochloromethane	ND	250
1,2-Dibromoethane	ND	250
Chlorobenzene	ND	250
1,1,1,2-Tetrachloroethane	ND	250
Ethylbenzene	290	250
m,p-Xylenes	ND	250
o-Xylene	ND	250
Styrene	ND	250
Bromoform	ND	250
Isopropylbenzene	320	250
1,1,2,2-Tetrachloroethane	ND	250
1,2,3-Trichloropropane	ND	250
Propylbenzene	1,900	250
Bromobenzene	ND	250
1,3,5-Trimethylbenzene	ND	250
2-Chlorotoluene	ND	250
4-Chlorotoluene	ND	250
tert-Butylbenzene	ND	250
1,2,4-Trimethylbenzene	1,800	250
sec-Butylbenzene	440	250
para-Isopropyl Toluene	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
n-Butylbenzene	1,500	250
1,2-Dichlorobenzene	ND	250
1,2-Dibromo-3-Chloropropane	ND	250
1,2,4-Trichlorobenzene	ND	250
Hexachlorobutadiene	ND	250
Naphthalene	2,600	250
1,2,3-Trichlorobenzene	ND	250

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-128
1,2-Dichloroethane-d4	82	80-136
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-132
Trifluorotoluene (MeOH)	108	56-129

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@15	Diln Fac:	0.9785
Lab ID:	292017-008	Batch#:	251242
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Freon 12	ND	9.8
Chloromethane	ND	9.8
Vinyl Chloride	ND	9.8
Bromomethane	ND	9.8
Chloroethane	ND	9.8
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.8
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.8
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.8
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@15	Diln Fac:	0.9785
Lab ID:	292017-008	Batch#:	251242
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	110	80-136
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-132

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@20	Diln Fac:	0.9921
Lab ID:	292017-009	Batch#:	251242
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@20	Diln Fac:	0.9921
Lab ID:	292017-009	Batch#:	251242
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-128
1,2-Dichloroethane-d4	112	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-132

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@25	Diln Fac:	0.9843
Lab ID:	292017-010	Batch#:	251177
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Freon 12	ND	9.8
Chloromethane	ND	9.8
Vinyl Chloride	ND	9.8
Bromomethane	ND	9.8
Chloroethane	ND	9.8
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.8
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.8
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.8
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@25	Diln Fac:	0.9843
Lab ID:	292017-010	Batch#:	251177
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	85	80-136
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-132

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	OB-2@15	Diln Fac:	0.9766
Lab ID:	292017-011	Batch#:	251177
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Freon 12	ND	9.8
Chloromethane	ND	9.8
Vinyl Chloride	ND	9.8
Bromomethane	ND	9.8
Chloroethane	ND	9.8
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.8
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.8
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.8
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	OB-2@15	Diln Fac:	0.9766
Lab ID:	292017-011	Batch#:	251177
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	86	80-136
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-132

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	OB-4@15	Diln Fac:	0.9862
Lab ID:	292017-012	Batch#:	251177
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	OB-4@15	Diln Fac:	0.9862
Lab ID:	292017-012	Batch#:	251177
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/02/17

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	86	80-136
Toluene-d8	97	80-120
Bromofluorobenzene	103	80-132

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 292017	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6462	Analysis: EPA 8260B
Field ID: OB-5@10	Diln Fac: 49.95
Lab ID: 292017-013	Batch#: 251317
Matrix: Soil	Sampled: 08/28/17
Units: ug/Kg	Received: 08/31/17
Basis: as received	Analyzed: 09/06/17

Analyte	Result	RL
Freon 12	ND	500
Chloromethane	ND	500
Vinyl Chloride	ND	500
Bromomethane	ND	500
Chloroethane	ND	500
Trichlorofluoromethane	ND	250
Acetone	ND	1,000
Freon 113	ND	250
1,1-Dichloroethene	ND	250
Methylene Chloride	ND	1,000
Carbon Disulfide	ND	250
MTBE	ND	250
trans-1,2-Dichloroethene	ND	250
Vinyl Acetate	ND	2,500
1,1-Dichloroethane	ND	250
2-Butanone	ND	500
cis-1,2-Dichloroethene	ND	250
2,2-Dichloropropane	ND	250
Chloroform	ND	250
Bromochloromethane	ND	250
1,1,1-Trichloroethane	ND	250
1,1-Dichloropropene	ND	250
Carbon Tetrachloride	ND	250
1,2-Dichloroethane	ND	250
Benzene	ND	250
Trichloroethene	ND	250
1,2-Dichloropropane	ND	250
Bromodichloromethane	ND	250
Dibromomethane	ND	250
4-Methyl-2-Pentanone	ND	500
cis-1,3-Dichloropropene	ND	250
Toluene	ND	250
trans-1,3-Dichloropropene	ND	250
1,1,2-Trichloroethane	ND	250
2-Hexanone	ND	500
1,3-Dichloropropane	ND	250
Tetrachloroethene	ND	250
Dibromochloromethane	ND	250
1,2-Dibromoethane	ND	250
Chlorobenzene	ND	250
1,1,1,2-Tetrachloroethane	ND	250
Ethylbenzene	ND	250
m,p-Xylenes	ND	250
o-Xylene	ND	250
Styrene	ND	250
Bromoform	ND	250
Isopropylbenzene	ND	250
1,1,2,2-Tetrachloroethane	ND	250
1,2,3-Trichloropropane	ND	250
Propylbenzene	870	250
Bromobenzene	ND	250
1,3,5-Trimethylbenzene	ND	250
2-Chlorotoluene	ND	250

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	OB-5@10	Diln Fac:	49.95
Lab ID:	292017-013	Batch#:	251317
Matrix:	Soil	Sampled:	08/28/17
Units:	ug/Kg	Received:	08/31/17
Basis:	as received	Analyzed:	09/06/17

Analyte	Result	RL
4-Chlorotoluene	ND	250
tert-Butylbenzene	ND	250
1,2,4-Trimethylbenzene	520	250
sec-Butylbenzene	320	250
para-Isopropyl Toluene	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
n-Butylbenzene	890	250
1,2-Dichlorobenzene	ND	250
1,2-Dibromo-3-Chloropropane	ND	250
1,2,4-Trichlorobenzene	ND	250
Hexachlorobutadiene	ND	250
Naphthalene	470	250
1,2,3-Trichlorobenzene	ND	250

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-128
1,2-Dichloroethane-d4	79 *	80-136
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-132
Trifluorotoluene (MeOH)	111	56-129

*= Value outside of QC limits; see narrative
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	251177
Units:	ug/Kg	Analyzed:	09/01/17
Diln Fac:	1.000		

Type: BS Lab ID: QC899084

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	30.49	122	65-127
Benzene	25.00	24.41	98	75-124
Trichloroethene	25.00	22.97	92	76-122
Toluene	25.00	23.01	92	77-120
Chlorobenzene	25.00	22.59	90	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	92	80-136
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-132

Type: BSD Lab ID: QC899085

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	30.14	121	65-127	1	28
Benzene	25.00	26.24	105	75-124	7	25
Trichloroethene	25.00	25.27	101	76-122	10	26
Toluene	25.00	24.60	98	77-120	7	25
Chlorobenzene	25.00	25.00	100	80-120	10	24

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	91	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-132

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899086	Batch#:	251177
Matrix:	Soil	Analyzed:	09/01/17
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899086	Batch#:	251177
Matrix:	Soil	Analyzed:	09/01/17
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	117	80-128
1,2-Dichloroethane-d4	101	80-136
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-132

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	251242
Units:	ug/Kg	Analyzed:	09/01/17
Diln Fac:	1.000		

Type: BS Lab ID: QC899331

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	24.95	100	65-127
Benzene	25.00	23.67	95	75-124
Trichloroethene	25.00	23.65	95	76-122
Toluene	25.00	22.93	92	77-120
Chlorobenzene	25.00	23.43	94	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-128
1,2-Dichloroethane-d4	94	80-136
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-132

Type: BSD Lab ID: QC899332

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	24.33	97	65-127	3	28
Benzene	25.00	23.81	95	75-124	1	25
Trichloroethene	25.00	23.69	95	76-122	0	26
Toluene	25.00	22.49	90	77-120	2	25
Chlorobenzene	25.00	22.95	92	80-120	2	24

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	95	80-136
Toluene-d8	97	80-120
Bromofluorobenzene	95	80-132

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899333	Batch#:	251242
Matrix:	Soil	Analyzed:	09/01/17
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899333	Batch#:	251242
Matrix:	Soil	Analyzed:	09/01/17
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	98	80-136
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-132

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	251242
MSS Lab ID:	292044-002	Sampled:	08/31/17
Matrix:	Soil	Received:	08/31/17
Units:	ug/Kg	Analyzed:	09/02/17
Basis:	as received		

Type: MS Diln Fac: 0.9881
 Lab ID: QC899347

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5620	49.41	52.01	105	65-131
Benzene	<0.5015	49.41	44.29	90	68-123
Trichloroethene	<0.6061	49.41	42.55	86	60-136
Toluene	<0.5390	49.41	38.18	77	64-120
Chlorobenzene	<0.3382	49.41	33.29	67	59-120

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-128
1,2-Dichloroethane-d4	113	80-136
Toluene-d8	98	80-120
Bromofluorobenzene	97	80-132

Type: MSD Diln Fac: 0.9766
 Lab ID: QC899348

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	48.83	51.99	106	65-131	1	33
Benzene	48.83	45.77	94	68-123	4	30
Trichloroethene	48.83	45.31	93	60-136	7	34
Toluene	48.83	40.12	82	64-120	6	31
Chlorobenzene	48.83	35.76	73	59-120	8	33

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	109	80-136
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-132

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Field ID:	EX-3@25	Batch#:	251177
MSS Lab ID:	292017-010	Sampled:	08/28/17
Matrix:	Soil	Received:	08/31/17
Units:	ug/Kg	Analyzed:	09/02/17
Basis:	as received		

Type: MS Diln Fac: 0.9728
 Lab ID: QC899349

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5892	48.64	53.94	111	65-131
Benzene	<0.6865	48.64	50.67	104	68-123
Trichloroethene	<0.7150	48.64	50.83	105	60-136
Toluene	<0.7520	48.64	46.50	96	64-120
Chlorobenzene	<0.6165	48.64	45.12	93	59-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	92	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-132

Type: MSD Diln Fac: 0.9980
 Lab ID: QC899350

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	49.90	49.45	99	65-131	11	33
Benzene	49.90	44.12	88	68-123	16	30
Trichloroethene	49.90	44.61	89	60-136	16	34
Toluene	49.90	40.78	82	64-120	16	31
Chlorobenzene	49.90	39.13	78	59-120	17	33

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	92	80-136
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-132

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	251317
Units:	ug/Kg	Analyzed:	09/06/17
Diln Fac:	1.000		

Type: BS Lab ID: QC899599

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	26.65	107	65-127
Benzene	25.00	27.03	108	75-124
Trichloroethene	25.00	27.02	108	76-122
Toluene	25.00	24.67	99	77-120
Chlorobenzene	25.00	24.02	96	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-128
1,2-Dichloroethane-d4	88	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-132

Type: BSD Lab ID: QC899600

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	24.93	100	65-127	7	28
Benzene	25.00	23.56	94	75-124	14	25
Trichloroethene	25.00	22.68	91	76-122	17	26
Toluene	25.00	21.69	87	77-120	13	25
Chlorobenzene	25.00	21.44	86	80-120	11	24

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	91	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-132

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899601	Batch#:	251317
Matrix:	Soil	Analyzed:	09/06/17
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292017	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6462	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899601	Batch#:	251317
Matrix:	Soil	Analyzed:	09/06/17
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-128
1,2-Dichloroethane-d4	89	80-136
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-132

ND= Not Detected
 RL= Reporting Limit



Enthalpy Analytical

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

Laboratory Job Number 292016
ANALYTICAL REPORT

SOMA Environmental Engineering Inc. 6620 Owens Dr. Pleasanton, CA 94588	Project : 6462 Location : 2200 Telegraph Ave, Oakland Level : II
---	--

Sample ID
COMP

Lab ID
292016-001

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

Signature: _____

Tracy Babjar
Project Manager
tracy.babjar@enthalpy.com
(510) 204-2226 Ext 13107

Date: 09/08/2017

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 292016
Client: SOMA Environmental Engineering Inc.
Project: 6462
Location: 2200 Telegraph Ave, Oakland
Request Date: 08/31/17
Samples Received: 08/31/17

This data package contains sample and QC results for one soil sample, requested for the above referenced project on 08/31/17. The sample was received cold and intact.

Metals (EPA 6010B):

No analytical problems were encountered.

COOLER RECEIPT CHECKLIST



Login # 292016 Date Received 08/31/17 Number of coolers 1
Client SOMA Environmental Project 6462

Date Opened 08/31/17 By (print) DC (sign) [Signature]
Date Logged in _____ By (print) EJS (sign) [Signature]
Date Labelled _____ By (print) DC (sign) [Signature]

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

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

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

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

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

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

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 5.8

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

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

8. Were Method 5035 sampling containers present? _____ YES NO

If YES, what time were they transferred to freezer? _____

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

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

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

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

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

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

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

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

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

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

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

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

21. Was the client contacted concerning this sample delivery? _____ YES NO

If YES, Who was called? _____ By _____ Date: _____

COMMENTS _____

Detections Summary for 292016

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

Client : SOMA Environmental Engineering Inc.
 Project : 6462
 Location : 2200 Telegraph Ave, Oakland

Client Sample ID : COMP Laboratory Sample ID : 292016-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Lead	0.44		0.25	mg/L	STLC	10.00	EPA 6010B	WET

Lead			
Lab #:	292016	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	WET
Project#:	6462	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	251258
Field ID:	COMP	Sampled:	08/31/17
Matrix:	WET Leachate	Received:	08/31/17
Units:	mg/L	Prepared:	09/03/17
Diln Fac:	10.00		

Type	Lab ID	Result	RL	Analyzed
SAMPLE	292016-001	0.44	0.25	09/06/17
BLANK	QC899376	ND	0.25	09/05/17

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

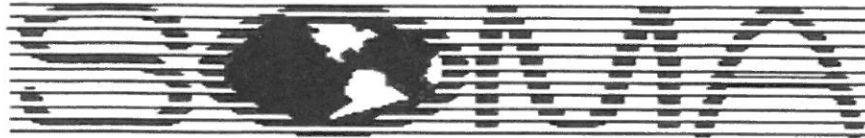
Lead			
Lab #:	292016	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	WET
Project#:	6462	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	251258
Field ID:	ZZZZZZZZZZ	Sampled:	08/30/17
MSS Lab ID:	291972-001	Received:	08/30/17
Matrix:	WET Leachate	Prepared:	09/03/17
Units:	mg/L	Analyzed:	09/05/17

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln	Fac
BS	QC899377		0.1000	0.1151	115	77-120				1.000
BSD	QC899378		0.1000	0.1102	110	77-120	4	20		1.000
MS	QC899379	0.09126	0.5000	0.5441	91	56-127				10.00
MSD	QC899380		0.5000	0.6946	121	56-127	24	33		10.00

RPD= Relative Percent Difference

APPENDIX G

GROUNDWATER MONITORING FIELD DATA SHEETS,
GRADIENT CALCULATIONS, AND LABORATORY REPORTS



ENVIRONMENTAL ENGINEERING, INC

Well No.: EX-1
Casing Diameter: 4" inches
Depth of Well: 25.00 feet
Top of Casing Elevation: 21.77 feet
Depth to Groundwater: 10.97 feet
Groundwater Elevation: 10.80 feet
Water Column Height: 14.03 feet
Purged Volume: 6 gallons

Project No.: 6461
Address: 2200 Telegraph Ave
Oakland, CA
Date: September 7, 2017
Sampler: Davoud Bazrpash

Purging Method: Bailer Pump
Sampling Method: Bailer Pump

Color: Yes No Describe: cloudy
Sheen: Yes No Describe: _____
Odor: Yes No Describe: not Petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
START				
12.53	2	7.15	22.2	1061
12.57	4	7.02	22.0	1037
13.00	6	7.01	22.2	1035

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: EX-2
 Casing Diameter: 4" inches
 Depth of Well: 25.00 feet
 Top of Casing Elevation: 21.46 feet
 Depth to Groundwater: 11.78 feet
 Groundwater Elevation: 9.68 feet
 Water Column Height: 13.22 feet
 Purged Volume: 6 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: September 7, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No

Describe: cloudy

Sheen: Yes No

Describe: _____

Odor: Yes No

Describe: ner petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
START				
12:30	2	7.11	22.4	1110
12:34	4	7.17	22.1	1098
12:38	6	7.19	22.2	1097
START SAMPLING				

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: EX-3
 Casing Diameter: 4" inches
 Depth of Well: 25.00 feet
 Top of Casing Elevation: 20.47 feet
 Depth to Groundwater: 10.57 feet
 Groundwater Elevation: 9.90 feet
 Water Column Height: 14.43 feet
 Purged Volume: 6 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: September 7, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer Pump
 Sampling Method: Bailer Pump

Color: Yes No Describe: cloudy
 Sheen: Yes No Describe: _____
 Odor: Yes No Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
START	0			
11:15	2	6.99	21.4	872
11:19	4	6.96	21.6	840
11:23	6	6.97	21.6	834
START SAMPLING				

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: 013-2
 Casing Diameter: 2" inches
 Depth of Well: 15.00 feet
 Top of Casing Elevation: 20.06 feet
 Depth to Groundwater: 10.40 feet
 Groundwater Elevation: 9.66 feet
 Water Column Height: 4.60 feet
 Purged Volume: 6.5 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: September 7, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer

Pump

Sampling Method: Bailer

Pump

Color: Yes No

Describe: cloudy

Sheen: Yes No

Describe: _____

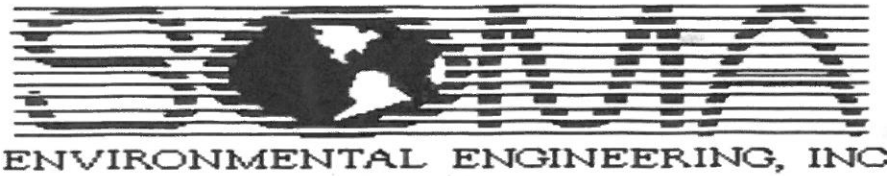
Odor: Yes No

Describe: not Petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
START				
11:50	1.5	6.99	21.8	1117
11:54	3	7.01	21.6	1070
11:57	4.5	6.97	21.7	1109
START SAMPLING				

Notes:



Well No.: OB-4
 Casing Diameter: 2" inches
 Depth of Well: 25.00 feet
 Top of Casing Elevation: 20.22 feet
 Depth to Groundwater: 10.45 feet
 Groundwater Elevation: 9.77 feet
 Water Column Height: 14.55 feet
 Purged Volume: 6.5 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: September 7, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer Pump
 Sampling Method: Bailer Pump

Color: Yes No Describe: soil colour
 Sheen: Yes No Describe: _____
 Odor: Yes No Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
START				
10:00	1.5	6.77	23.8	1007
10:04	3	6.82	23.0	986
10:08	4.5	6.83	22.6	977
START SAMPLING				

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: 013-5
 Casing Diameter: 2" inches
 Depth of Well: 15.00 feet
 Top of Casing Elevation: 20.13 feet
 Depth to Groundwater: 10.42 feet
 Groundwater Elevation: 9.71 feet
 Water Column Height: 4.58 feet
 Purged Volume: 4.5 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: September 7, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No Describe: _____

Sheen: Yes No Describe: _____

Odor: Yes No Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
START				
10:45	1.5	6.77	23.7	1010
10:49	3	6.90	22.6	1191
10:54	4.5	6.94	22.6	1194
START SAMPLING				

Notes:

EPA On-line Tools for Site Assessment Calculation

Hydraulic Gradient -- Magnitude and Direction

Gradient Calculation from fitting a plane to as many as thirty points

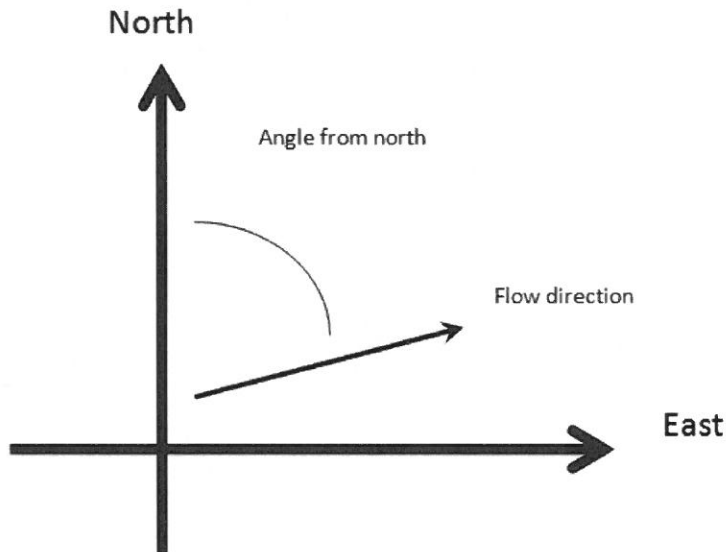
$$\begin{aligned}
 a x_1 + b y_1 + c &= h_1 \\
 a x_2 + b y_2 + c &= h_2 \\
 a x_3 + b y_3 + c &= h_3 \\
 &\dots \\
 a x_{30} + b y_{30} + c &= h_{30}
 \end{aligned}$$

where (x_i, y_i) are the coordinates of the well and h_i is the head

$i = 1, 2, 3, \dots, 30$

The coefficients a , b , and c are calculated by a least-squares fitting of the the data to a plane

The gradient is calculated from the square root of $(a^2 + b^2)$ and the angle from the arctangent of a/b or b/a depending on the quadrant



Inputs

Site Name

Date

Calculation basis

Coordinates

I.D.	x-coordinate	y-coordinate	head	<input type="text" value="ft"/>
1) EX-1	6050787.023	2122786.102	10.80	
2) EX-2	6050797.83	2122783.56	9.68	
3) EX-3	6050823.258	2122790.234	9.9	
4) OB-2	6050836.607	2122807.08	9.66	
5) OB-4	6050843.6	2122787.056	9.77	
6) OB-5	6050829.933	2122772.753	9.71	
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
15)				
16)				

17)			
18)			
19)			
20)			
21)			
22)			
23)			
24)			
25)			
26)			
27)			
28)			
29)			
30)			

Results

Number of Points Used in Calculation	6
Max. Difference Between Head Values	0.3475
Gradient Magnitude (i)	0.01414
Flow direction as degrees from North (positive y axis)	103.2
Coefficient of Determination (R^2)	0.473

WCMS

Last updated on 2/23/2016



ENVIRONMENTAL ENGINEERING, INC

Well No.: EX-1 Project No.: 6461
 Casing Diameter: 4" inches Address: 2200 Telegraph Ave
 Depth of Well: 25.00 feet Oakland, CA
 Top of Casing Elevation: 21.77 feet Date: October 23, 2017
 Depth to Groundwater: 11.97 feet Sampler: Davoud Bazrpash
 Groundwater Elevation: 9.80 feet
 Water Column Height: 13.03 feet
 Purged Volume: 6 gallons

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No Describe: cloudy

Sheen: Yes No Describe: _____

Odor: Yes No Describe: not petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
<u>START</u>				
<u>13 13 138</u>	<u>2</u>	<u>7.14</u>	<u>23.6</u>	<u>885</u>
<u>13 13 141</u>	<u>4</u>	<u>7.17</u>	<u>22.9</u>	<u>892</u>
<u>13 13 145</u>	<u>6</u>	<u>7.22</u>	<u>23.0</u>	<u>879</u>
<u>START SAMPLING</u>				
<u>13:55</u>				

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: EX-2
 Casing Diameter: 4" inches
 Depth of Well: 25.0 feet
 Top of Casing Elevation: 21.46 feet
 Depth to Groundwater: 11.90 feet
 Groundwater Elevation: 9.56 feet
 Water Column Height: 13.10 feet
 Purged Volume: 6 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: October 23, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No Describe: cloudy

Sheen: Yes No Describe: _____

Odor: Yes No Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
START				
13:06	2	7.87	23.3	894
13:10	4	7.75	24.6	887
13:14	6	7.39	23.7	890
START SAMPLING				
13:25				

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: EX-3
 Casing Diameter: 4" inches
 Depth of Well: 25.00 feet
 Top of Casing Elevation: 20.47 feet
 Depth to Groundwater: 10.52 feet
 Groundwater Elevation: 9.95 feet
 Water Column Height: 14.48 feet
 Purged Volume: 6 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: October 23, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No

Describe: cloudy

Sheen: Yes No

Describe: _____

Odor: Yes No

Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
<u>START</u>				
<u>12:38</u>	<u>2</u>	<u>7.08</u>	<u>24.0</u>	<u>847</u>
<u>12:41</u>	<u>4</u>	<u>6.97</u>	<u>23.2</u>	<u>854</u>
<u>12:45</u>	<u>6</u>	<u>6.96</u>	<u>23.8</u>	<u>870</u>
<u>START SAMPLING</u>				
<u>12:50</u>				

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: OB-2
 Casing Diameter: 2" inches
 Depth of Well: 15.00 feet
 Top of Casing Elevation: 20.06 feet
 Depth to Groundwater: 10.34 feet
 Groundwater Elevation: 9.72 feet
 Water Column Height: 4.66 feet
 Purged Volume: 3 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: October 23, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No Describe: cloudy

Sheen: Yes No Describe: _____

Odor: Yes No Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
START				
11:08	1.8	7.10	25.4	720
11:12	2	7.12	23.9	740
11:16	3.4	6.94	24.5	740
START SAMPLING				
11:25				

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: 013-4 Project No.: 6461
 Casing Diameter: 2" inches Address: 2200 Telegraph Ave
 Depth of Well: 25.00 feet Oakland, CA
 Top of Casing Elevation: 20.22 feet Date: October 23, 2017
 Depth to Groundwater: 10.38 feet Sampler: Davoud Bazrpash
 Groundwater Elevation: 9.84 feet
 Water Column Height: 14.62 feet
 Purged Volume: 4.5 gallons

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No Describe: cloudy

Sheen: Yes No Describe: _____

Odor: Yes No Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
<u>START</u>				
<u>12:17</u>	<u>1.5</u>	<u>6.92</u>	<u>25.3</u>	<u>660</u>
<u>12:20</u>	<u>3</u>	<u>6.95</u>	<u>23.9</u>	<u>658</u>
<u>12:23</u>	<u>4.5</u>	<u>6.98</u>	<u>23.4</u>	<u>671</u>
<u>START SAMPLING</u>				

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: CB-5
 Casing Diameter: 2" inches
 Depth of Well: 15.00 feet
 Top of Casing Elevation: 20.13 feet
 Depth to Groundwater: 10.34 feet
 Groundwater Elevation: 9.79 feet
 Water Column Height: 4.66 feet
 Purged Volume: 3 gallons

Project No.: 6461
 Address: 2200 Telegraph Ave
 Oakland, CA
 Date: October 23, 2017
 Sampler: Davoud Bazrpash

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No

Describe: cloudy

Sheen: Yes No

Describe: _____

Odor: Yes No

Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
<u>START</u>				
<u>11:44</u>	<u>1</u>	<u>7.09</u>	<u>26.2</u>	<u>978</u>
<u>11:48</u>	<u>2</u>	<u>7.08</u>	<u>25.5</u>	<u>949</u>
<u>11:52</u>	<u>3</u>	<u>7.14</u>	<u>25.1</u>	<u>955</u>
<u>START SAMPLING</u>				
<u>10:55</u>				

Notes:



Enthalpy Analytical

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

Laboratory Job Number 292209
ANALYTICAL REPORT

SOMA Environmental Engineering Inc. 6620 Owens Dr. Pleasanton, CA 94588	Project : 6461 Location : 2200 Telegraph Ave, Oakland Level : II
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<u>Sample ID</u>	<u>Lab ID</u>
EX-1	292209-001
EX-2	292209-002
EX-3	292209-003
OB-2	292209-004
OB-4	292209-005
OB-5	292209-006

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

Signature: _____

Tracy Babjar
Project Manager
tracy.babjar@enthalpy.com
(510) 204-2226 Ext 13107

Date: 09/14/2017

CASE NARRATIVE

Laboratory number: 292209
Client: SOMA Environmental Engineering Inc.
Project: 6461
Location: 2200 Telegraph Ave, Oakland
Request Date: 09/07/17
Samples Received: 09/07/17

This data package contains sample and QC results for six water samples, requested for the above referenced project on 09/07/17. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

No analytical problems were encountered.

CHAIN OF CUSTODY

Curtis & Tompkins, Ltd

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

LOGIN # 292209

Analyses

Project No: 6461

Sampler: Davoud Bazrpash

Project Name: 2200 Telegraph Ave, Oakland

Report To: Joyce Bobek

Turnaround Time: Standard

Company: SOMA Environmental

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix				# of Containers	Preservative				
			Soil	Water	Waste	Oil		HCL	H ₂ SO ₄	HNO ₃	ICE	
1	EX-1	9/7/17 13:10	*				3-VOAs	*			*	
2	EX-2	9/7/17 12:40	*				3-VOAs	*			*	
3	EX-3	9/7/17 11:30	*				3-VOAs	*			*	
4	OB-2	9/7/17 12:00	*				3-VOAs	*			*	
5	OB-4	9/7/17 10:25	*				3-VOAs	*			*	
6	OB-5	9/7/17 10:05	*				3-VOAs	*			*	

TPH-g. BTEX, MBE, Naphthalene (8260B)	VOCs (8260B)																
*	*																
*	*																
*	*																
*	*																
*	*																
*	*																
*	*																
*	*																

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:

9/7/17 14:00 *[Signature]* DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

9/7/17 14:00 *[Signature]* DATE/TIME

DATE/TIME

DATE/TIME

COOLER RECEIPT CHECKLIST



Login # 292209 Date Received 9.7.17 Number of coolers 1
Client SOMA Project 2200 Telegraph Ave, Oakland Berkeley

Date Opened 9.7.17 By (print) DC (sign)
Date Logged in By (print) DC (sign)
Date Labelled By (print) DC (sign)

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

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

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

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

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

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

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

7. Temperature documentation: * Notify PM if temperature exceeds 6°C
Type of ice used: Wet, Blue/Gel, None Temp(°C) 17.1

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

COMMENTS

Detections Summary for 292209

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

Client : SOMA Environmental Engineering Inc.
 Project : 6461
 Location : 2200 Telegraph Ave, Oakland

Client Sample ID : EX-1 Laboratory Sample ID : 292209-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	940		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Chloromethane	14		1.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Bromomethane	1.1		1.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	180		1.7	ug/L	As Recd	3.333	EPA 8260B	EPA 5030B
Chloroform	0.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	3.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	3.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
tert-Butylbenzene	4.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
sec-Butylbenzene	1.1		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : EX-2 Laboratory Sample ID : 292209-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	92		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Chloromethane	2.2		1.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	61		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Chloroform	0.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2-Dichloroethane	0.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	0.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	1.4		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : EX-3 Laboratory Sample ID : 292209-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	280		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Chloromethane	12		1.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	0.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	3.2		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	1.1		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	3.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	2.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
sec-Butylbenzene	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
n-Butylbenzene	0.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : OB-2

Laboratory Sample ID :

292209-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	200		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Chloromethane	13		1.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	1.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : OB-4

Laboratory Sample ID :

292209-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	110		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Chloromethane	26		1.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Bromomethane	1.7		1.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2-Dichloroethane	1.0		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : OB-5

Laboratory Sample ID :

292209-006

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	410		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Chloromethane	10		1.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	2.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	6.3		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
m,p-Xylenes	4.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	1.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	4.0		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	4.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	7.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
sec-Butylbenzene	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
n-Butylbenzene	0.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Naphthalene	2.7		2.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-1	Units: ug/L
Lab ID: 292209-001	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	940	50	1.000	251458	09/09/17
Freon 12	ND	1.0	1.000	251458	09/09/17
Chloromethane	14	1.0	1.000	251458	09/09/17
Vinyl Chloride	ND	0.5	1.000	251458	09/09/17
Bromomethane	1.1	1.0	1.000	251458	09/09/17
Chloroethane	ND	1.0	1.000	251458	09/09/17
Trichlorofluoromethane	ND	1.0	1.000	251458	09/09/17
Ethanol	ND	250	1.000	251458	09/09/17
Acetone	ND	10	1.000	251458	09/09/17
Freon 113	ND	2.0	1.000	251458	09/09/17
1,1-Dichloroethene	ND	0.5	1.000	251458	09/09/17
Methylene Chloride	ND	10	1.000	251458	09/09/17
Carbon Disulfide	ND	0.5	1.000	251458	09/09/17
MTBE	180	1.7	3.333	251534	09/12/17
trans-1,2-Dichloroethene	ND	0.5	1.000	251458	09/09/17
Vinyl Acetate	ND	10	1.000	251458	09/09/17
1,1-Dichloroethane	ND	0.5	1.000	251458	09/09/17
2-Butanone	ND	10	1.000	251458	09/09/17
cis-1,2-Dichloroethene	ND	0.5	1.000	251458	09/09/17
2,2-Dichloropropane	ND	0.5	1.000	251458	09/09/17
Chloroform	0.7	0.5	1.000	251458	09/09/17
Bromochloromethane	ND	0.5	1.000	251458	09/09/17
1,1,1-Trichloroethane	ND	0.5	1.000	251458	09/09/17
1,1-Dichloropropene	ND	0.5	1.000	251458	09/09/17
Carbon Tetrachloride	ND	0.5	1.000	251458	09/09/17
1,2-Dichloroethane	ND	0.5	1.000	251458	09/09/17
Benzene	ND	0.5	1.000	251458	09/09/17
Trichloroethene	ND	0.5	1.000	251458	09/09/17
1,2-Dichloropropane	ND	0.5	1.000	251458	09/09/17
Bromodichloromethane	ND	0.5	1.000	251458	09/09/17
Dibromomethane	ND	0.5	1.000	251458	09/09/17
4-Methyl-2-Pentanone	ND	10	1.000	251458	09/09/17
cis-1,3-Dichloropropene	ND	0.5	1.000	251458	09/09/17
Toluene	ND	0.5	1.000	251458	09/09/17
trans-1,3-Dichloropropene	ND	0.5	1.000	251458	09/09/17
1,1,2-Trichloroethane	ND	0.5	1.000	251458	09/09/17
2-Hexanone	ND	10	1.000	251458	09/09/17
1,3-Dichloropropane	ND	0.5	1.000	251458	09/09/17
Tetrachloroethene	ND	0.5	1.000	251458	09/09/17

ND= Not Detected
 RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-1	Units: ug/L
Lab ID: 292209-001	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Dibromochloromethane	ND	0.5	1.000	251458	09/09/17
1,2-Dibromoethane	ND	0.5	1.000	251458	09/09/17
Chlorobenzene	ND	0.5	1.000	251458	09/09/17
1,1,1,2-Tetrachloroethane	ND	0.5	1.000	251458	09/09/17
Ethylbenzene	ND	0.5	1.000	251458	09/09/17
m,p-Xylenes	ND	0.5	1.000	251458	09/09/17
o-Xylene	ND	0.5	1.000	251458	09/09/17
Styrene	ND	0.5	1.000	251458	09/09/17
Bromoform	ND	1.0	1.000	251458	09/09/17
Isopropylbenzene	3.5	0.5	1.000	251458	09/09/17
1,1,2,2-Tetrachloroethane	ND	0.5	1.000	251458	09/09/17
1,2,3-Trichloropropane	ND	0.5	1.000	251458	09/09/17
Propylbenzene	3.9	0.5	1.000	251458	09/09/17
Bromobenzene	ND	0.5	1.000	251458	09/09/17
1,3,5-Trimethylbenzene	ND	0.5	1.000	251458	09/09/17
2-Chlorotoluene	ND	0.5	1.000	251458	09/09/17
4-Chlorotoluene	ND	0.5	1.000	251458	09/09/17
tert-Butylbenzene	4.9	0.5	1.000	251458	09/09/17
1,2,4-Trimethylbenzene	ND	0.5	1.000	251458	09/09/17
sec-Butylbenzene	1.1	0.5	1.000	251458	09/09/17
para-Isopropyl Toluene	ND	0.5	1.000	251458	09/09/17
1,3-Dichlorobenzene	ND	0.5	1.000	251458	09/09/17
1,4-Dichlorobenzene	ND	0.5	1.000	251458	09/09/17
n-Butylbenzene	ND	0.5	1.000	251458	09/09/17
1,2-Dichlorobenzene	ND	0.5	1.000	251458	09/09/17
1,2-Dibromo-3-Chloropropane	ND	2.0	1.000	251458	09/09/17
1,2,4-Trichlorobenzene	ND	0.5	1.000	251458	09/09/17
Hexachlorobutadiene	ND	2.0	1.000	251458	09/09/17
Naphthalene	ND	2.0	1.000	251458	09/09/17
1,2,3-Trichlorobenzene	ND	0.5	1.000	251458	09/09/17

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	106	80-120	1.000	251458	09/09/17
1,2-Dichloroethane-d4	111	72-135	1.000	251458	09/09/17
Toluene-d8	101	80-120	1.000	251458	09/09/17
Bromofluorobenzene	105	80-120	1.000	251458	09/09/17

ND= Not Detected

RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-2	Batch#: 251458
Lab ID: 292209-002	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	92	50
Freon 12	ND	1.0
Chloromethane	2.2	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	61	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	0.9	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	0.8	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	0.7	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	1.4	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-2	Batch#: 251458
Lab ID: 292209-002	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-120
1,2-Dichloroethane-d4	106	72-135
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-3	Batch#: 251458
Lab ID: 292209-003	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	280	50
Freon 12	ND	1.0
Chloromethane	12	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	0.9	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	3.2	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	1.1	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	3.7	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-3	Batch#: 251458
Lab ID: 292209-003	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	2.5	0.5
sec-Butylbenzene	0.6	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	0.9	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-120
1,2-Dichloroethane-d4	104	72-135
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-2	Batch#: 251458
Lab ID: 292209-004	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	200	50
Freon 12	ND	1.0
Chloromethane	13	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	0.6	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	1.7	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-2	Batch#: 251458
Lab ID: 292209-004	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-120
1,2-Dichloroethane-d4	104	72-135
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-4	Batch#: 251458
Lab ID: 292209-005	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	110	50
Freon 12	ND	1.0
Chloromethane	26	1.0
Vinyl Chloride	ND	0.5
Bromomethane	1.7	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	1.0	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	0.6	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-4	Batch#: 251458
Lab ID: 292209-005	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-120
1,2-Dichloroethane-d4	104	72-135
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-5	Batch#: 251458
Lab ID: 292209-006	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	410	50
Freon 12	ND	1.0
Chloromethane	10	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	2.6	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	6.3	0.5
m,p-Xylenes	4.6	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	1.6	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	4.0	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	4.5	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-5	Batch#: 251458
Lab ID: 292209-006	Sampled: 09/07/17
Matrix: Water	Received: 09/07/17
Units: ug/L	Analyzed: 09/09/17
Diln Fac: 1.000	

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	7.5	0.5
sec-Butylbenzene	0.6	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	0.5	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	2.7	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-120
1,2-Dichloroethane-d4	103	72-135
Toluene-d8	103	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	292209	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	251458
Units:	ug/L	Analyzed:	09/09/17
Diln Fac:	1.000		

Type: BS Lab ID: QC900118

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	500.0	547.9	110	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-120
1,2-Dichloroethane-d4	107	72-135
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-120

Type: BSD Lab ID: QC900119

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	500.0	532.7	107	70-130	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-120
1,2-Dichloroethane-d4	109	72-135
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-120

RPD= Relative Percent Difference

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	292209	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	251458
Units:	ug/L	Analyzed:	09/09/17
Diln Fac:	1.000		

Type: BS Lab ID: QC900120

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.45	100	72-126
Benzene	12.50	12.30	98	80-124
Trichloroethene	12.50	12.09	97	78-120
Toluene	12.50	12.40	99	80-120
Chlorobenzene	12.50	11.95	96	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-120
1,2-Dichloroethane-d4	105	72-135
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-120

Type: BSD Lab ID: QC900121

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	13.02	104	72-126	5	20
Benzene	12.50	12.72	102	80-124	3	20
Trichloroethene	12.50	12.45	100	78-120	3	20
Toluene	12.50	12.62	101	80-120	2	20
Chlorobenzene	12.50	12.22	98	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-120
1,2-Dichloroethane-d4	104	72-135
Toluene-d8	102	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	292209	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC900122	Batch#:	251458
Matrix:	Water	Analyzed:	09/09/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	292209	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC900122	Batch#:	251458
Matrix:	Water	Analyzed:	09/09/17
Units:	ug/L		

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-120
1,2-Dichloroethane-d4	107	72-135
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 292209	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Type: BLANK	Diln Fac: 1.000
Lab ID: QC900409	Batch#: 251534
Matrix: Water	Analyzed: 09/12/17
Units: ug/L	

Analyte	Result	RL
Gasoline C7-C12	NA	
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report
Enthalpy Analytical - Berkeley Analytical Report

Lab #:	292209	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC900409	Batch#:	251534
Matrix:	Water	Analyzed:	09/12/17
Units:	ug/L		

Analyte	Result	RL
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-120
1,2-Dichloroethane-d4	109	72-135
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	292209	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	251534
Units:	ug/L	Analyzed:	09/12/17
Diln Fac:	1.000		

Type: BS Lab ID: QC900410

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	14.43	115	72-126
Benzene	12.50	13.90	111	80-124
Trichloroethene	12.50	13.65	109	78-120
Toluene	12.50	13.82	111	80-120
Chlorobenzene	12.50	13.25	106	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-120
1,2-Dichloroethane-d4	106	72-135
Toluene-d8	102	80-120
Bromofluorobenzene	101	80-120

Type: BSD Lab ID: QC900411

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	13.43	107	72-126	7	20
Benzene	12.50	13.48	108	80-124	3	20
Trichloroethene	12.50	13.26	106	78-120	3	20
Toluene	12.50	13.24	106	80-120	4	20
Chlorobenzene	12.50	12.81	102	80-120	3	20

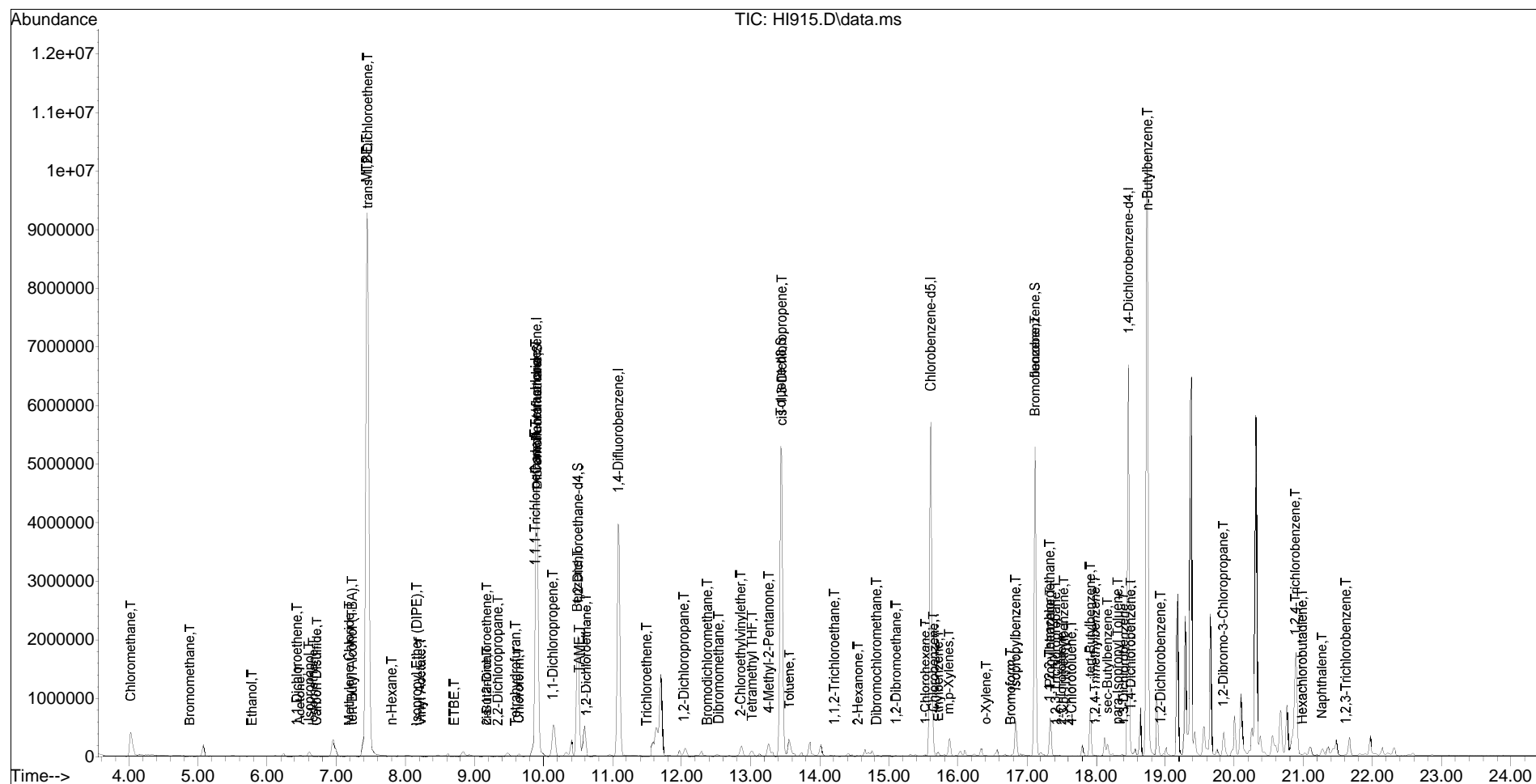
Surrogate	%REC	Limits
Dibromofluoromethane	104	80-120
1,2-Dichloroethane-d4	105	72-135
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

Quantitation Report (QT Reviewed)

Data Path : G:\msvoa08\090917\
 Data File : HI915.D
 Acq On : 9 Sep 2017 3:50 pm
 Operator :
 Sample : S,292209-001
 Misc : 251458,1/1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 11 12:54:52 2017
 Quant Method : C:\msdchem\1\METHODS\8260X08W.M
 Quant Title : MSVOA08 MSVOA WATER
 QLast Update : Fri Apr 21 17:51:00 2017
 Response via : Initial Calibration



Date : 09-SEP-2017 16:23

Client ID:

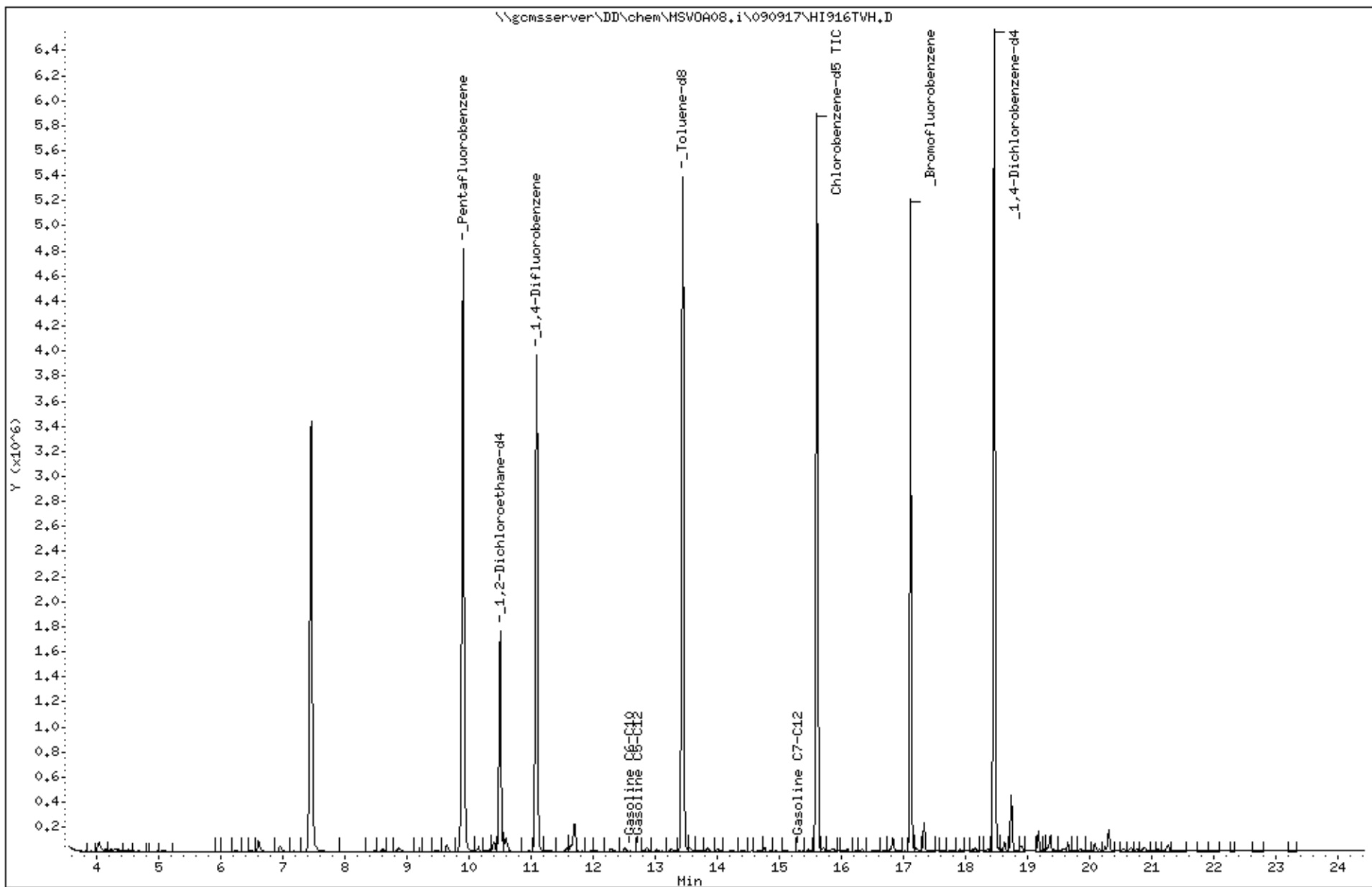
Sample Info: S_292209-002

Instrument: MSV0A08.i

Operator: VOC

Column diameter: 2.00

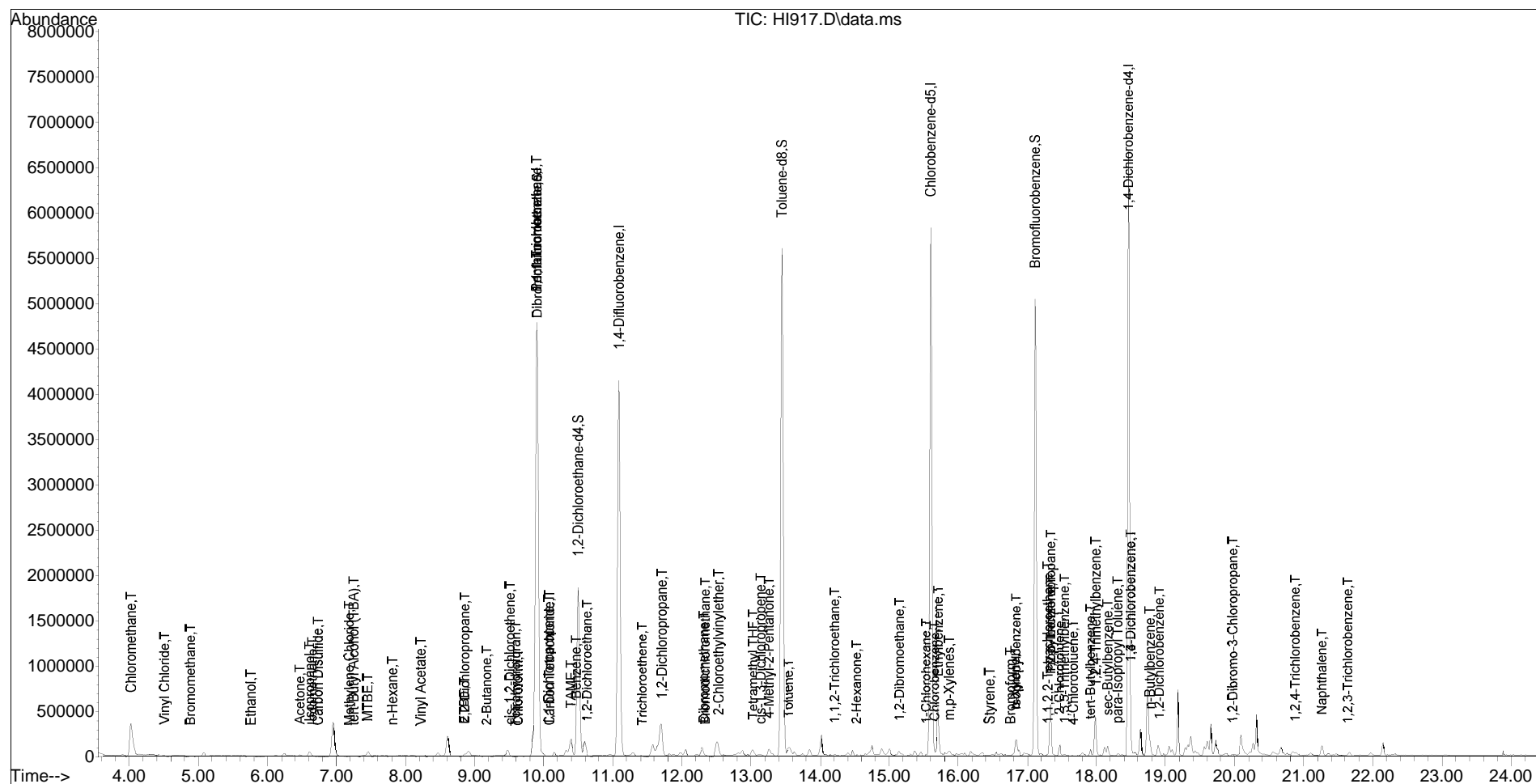
Column phase:



Quantitation Report (QT Reviewed)

Data Path : G:\msvoa08\090917\
 Data File : HI917.D
 Acq On : 9 Sep 2017 4:56 pm
 Operator :
 Sample : S,292209-003
 Misc : 251458,1/1
 ALS Vial : 16 Sample Multiplier: 1

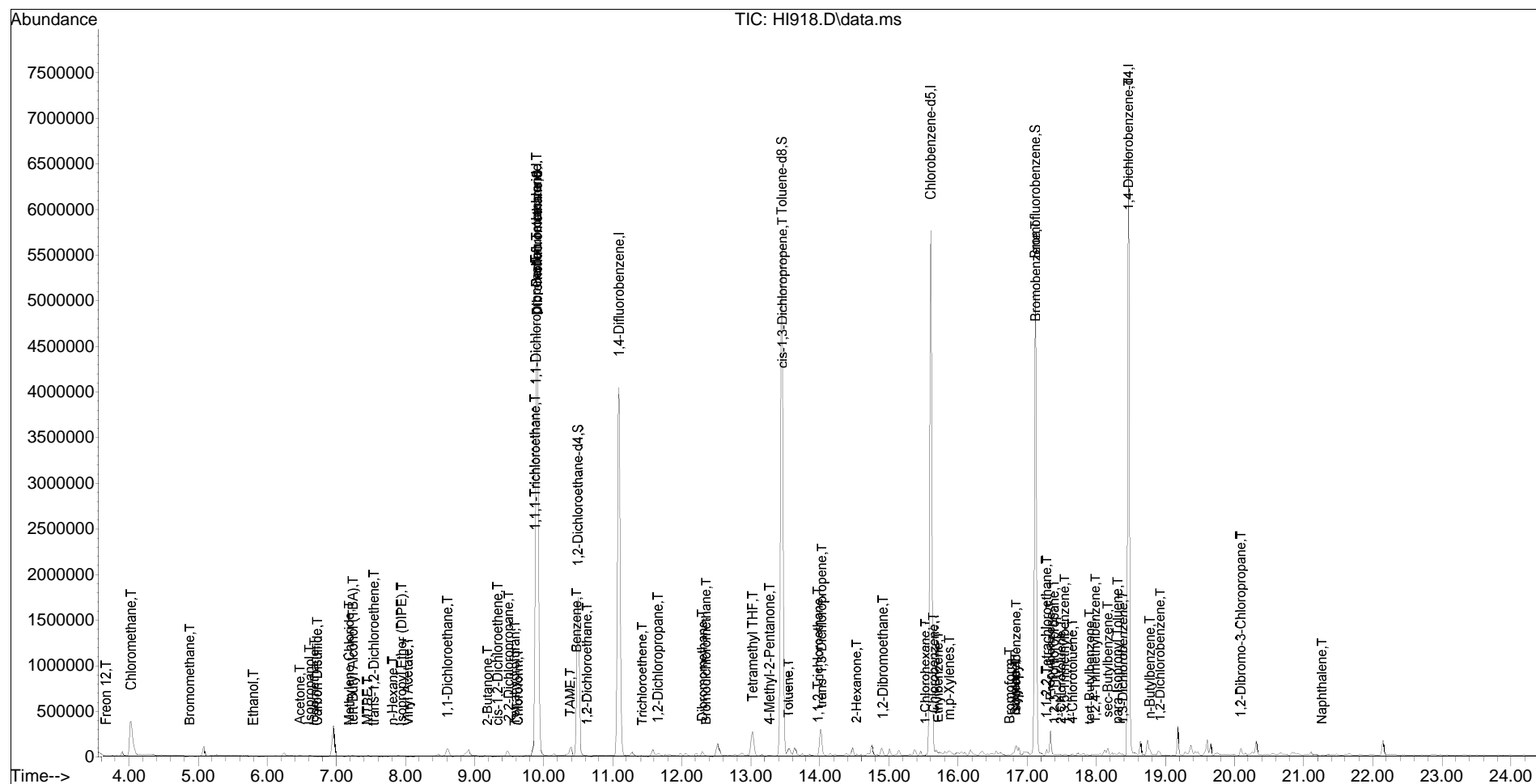
Quant Time: Sep 11 12:46:59 2017
 Quant Method : C:\msdchem\1\METHODS\8260X08W.M
 Quant Title : MSVOA08 MSVOA WATER
 QLast Update : Fri Apr 21 17:51:00 2017
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : G:\msvoa08\090917\
 Data File : HI918.D
 Acq On : 9 Sep 2017 5:29 pm
 Operator :
 Sample : S,292209-004
 Misc : 251458,1/1
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 11 12:53:58 2017
 Quant Method : C:\msdchem\1\METHODS\8260X08W.M
 Quant Title : MSVOA08 MSVOA WATER
 QLast Update : Fri Apr 21 17:51:00 2017
 Response via : Initial Calibration



Date : 09-SEP-2017 18:02

Client ID:

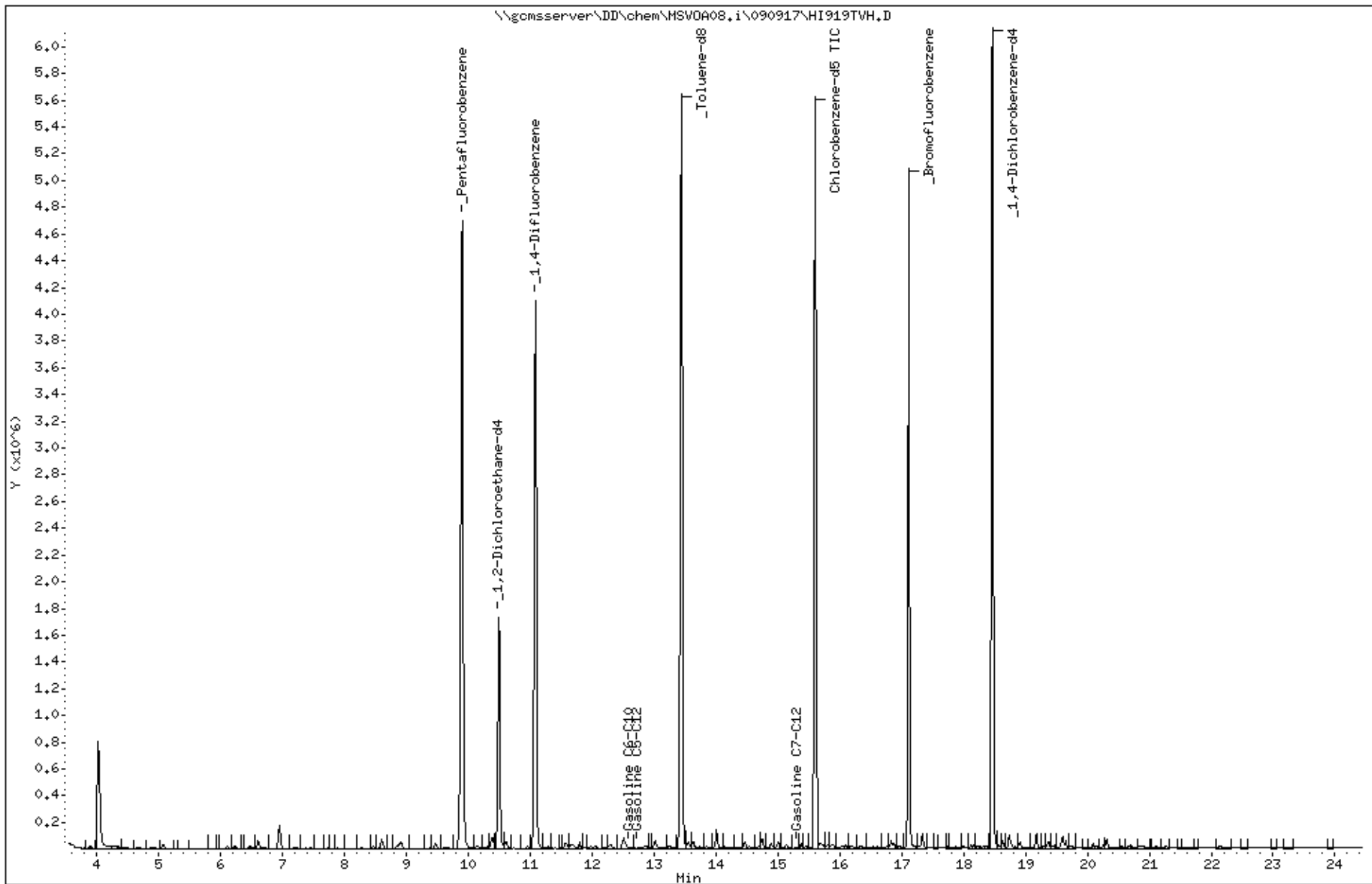
Sample Info: S_292209-005

Instrument: MSV0A08.i

Operator: VOC

Column diameter: 2.00

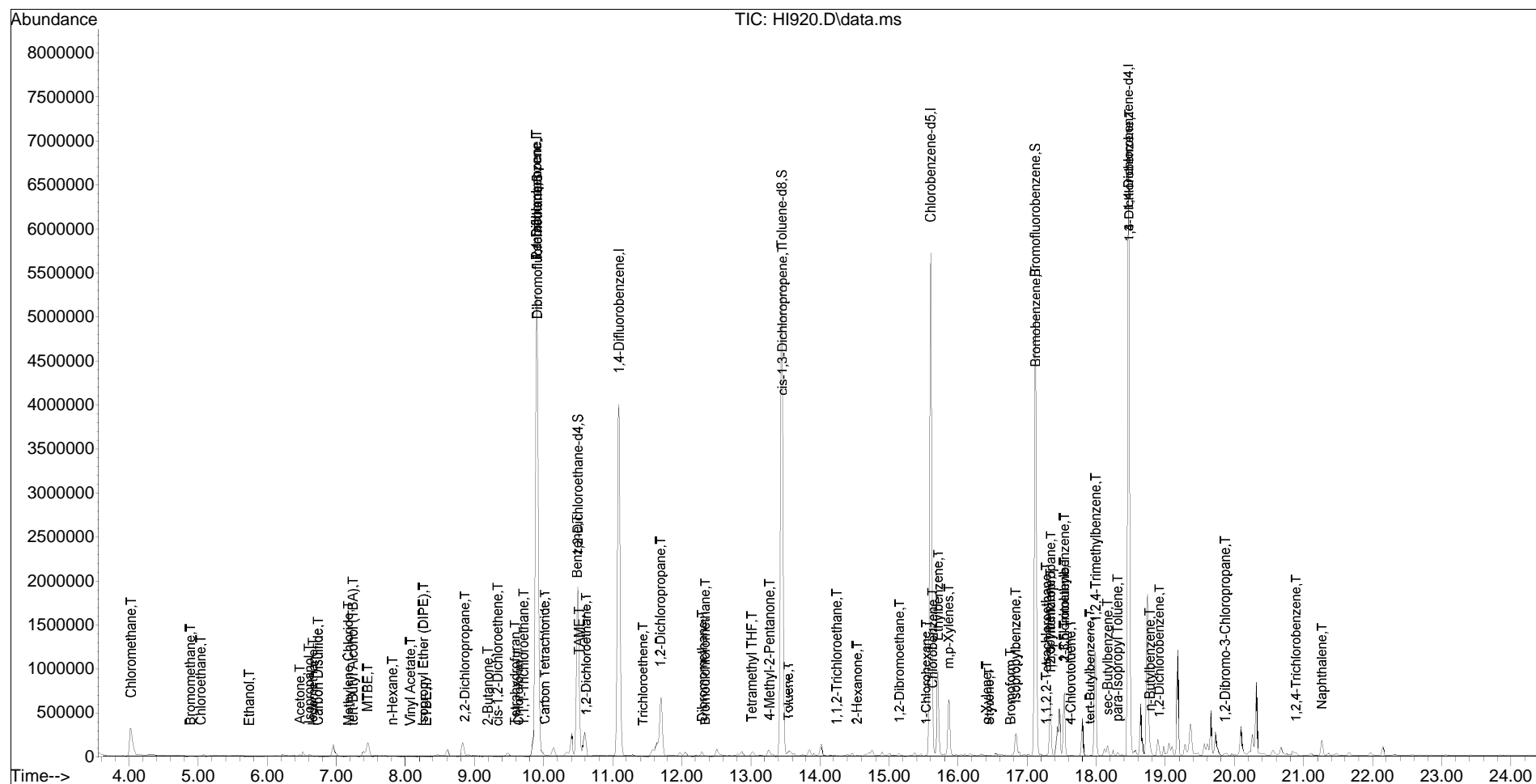
Column phase:

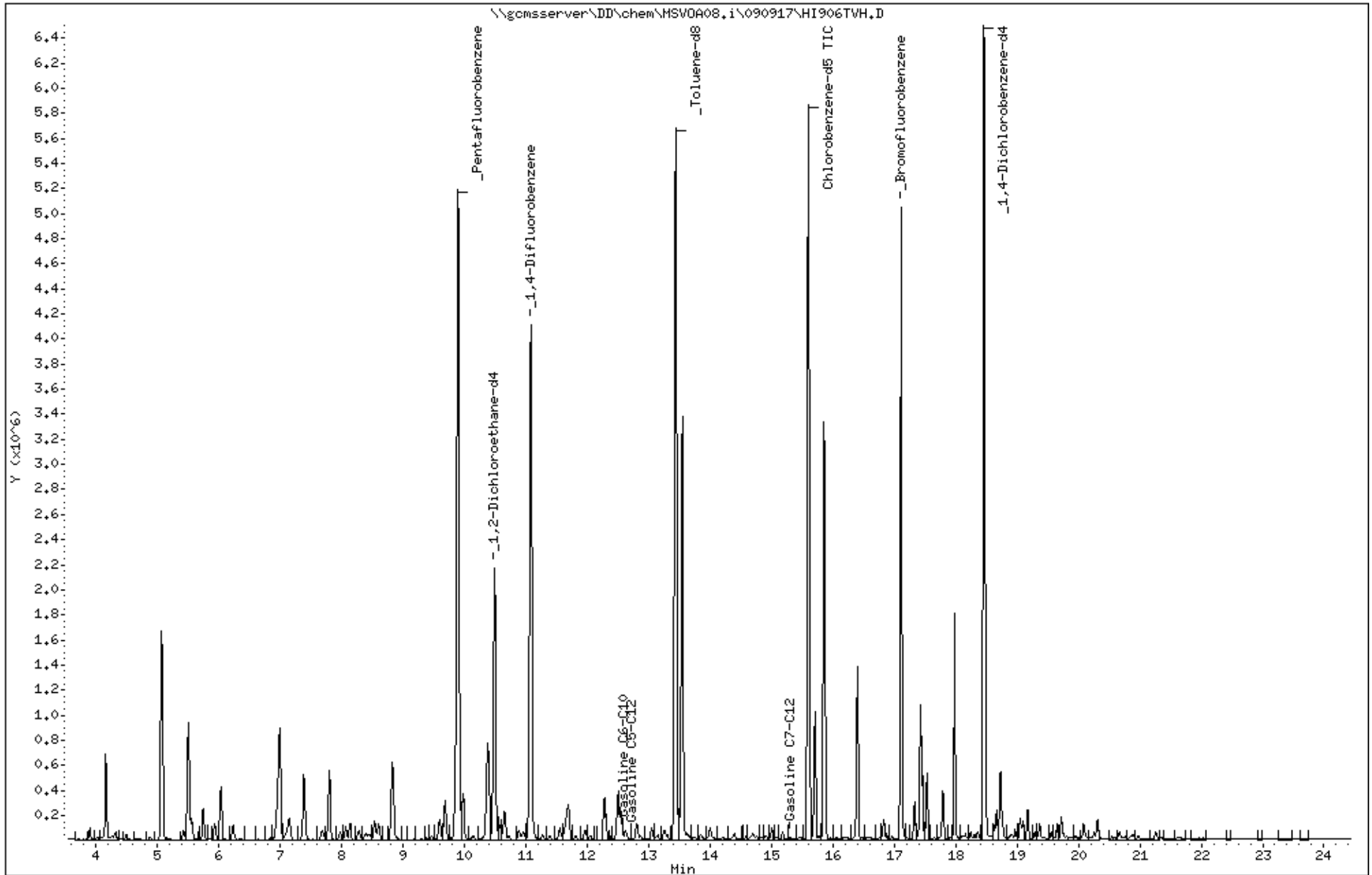


Quantitation Report (QT Reviewed)

Data Path : G:\msvoa08\090917\
 Data File : HI920.D
 Acq On : 9 Sep 2017 6:35 pm
 Operator :
 Sample : S,292209-006
 Misc : 251458,1/1
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 11 12:59:48 2017
 Quant Method : C:\msdchem\1\METHODS\8260X08W.M
 Quant Title : MSVOA08 MSVOA WATER
 QLast Update : Fri Apr 21 17:51:00 2017
 Response via : Initial Calibration







Enthalpy Analytical


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

Laboratory Job Number 293663
ANALYTICAL REPORT

SOMA Environmental Engineering Inc. 6620 Owens Dr. Pleasanton, CA 94588	Project : 6461 Location : 2200 Telegraph Ave, Oakland Level : II
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<u>Sample ID</u>	<u>Lab ID</u>
EX-1	293663-001
EX-2	293663-002
EX-3	293663-003
OB-2	293663-004
OB-4	293663-005
OB-5	293663-006

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

Signature: 
Tracy Babjar
Project Manager
tracy.babjar@enthalpy.com
(510) 204-2226 Ext 13107

Date: 10/30/2017

CA ELAP# 2896, NELAP# 4044-001


CASE NARRATIVE

Laboratory number: 293663
Client: SOMA Environmental Engineering Inc.
Project: 6461
Location: 2200 Telegraph Ave, Oakland
Request Date: 10/23/17
Samples Received: 10/23/17

This data package contains sample and QC results for six water samples, requested for the above referenced project on 10/23/17. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

293663

ENTHALPY ANALYTICAL, INC.			Chain of Custody Record				Turn Around Time (Rush by advanced notice only)					
806 N. Batavia St., Orange, CA 92868			Lab No:		Standard:		4 Day:		3 Day:			
Phone: (714) 771-6900 Fax: (714)771-9933			Page: 1 of 1		2 Day:		1 Day:		Same Day:			
Billing: Enthalpy - SoCal c/o Montrose Environmental Group 1 Park Plaza, Suite 1000, Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other				Preservatives: 1 = Na ₂ S ₂ O ₃ 2 = HCl 3 = HNO ₃ 4 = H ₂ SO ₄ 5 = NaOH 6 = Other						

CUSTOMER INFORMATION				PROJECT INFORMATION				Analysis Request								Test Instructions / Comments	
Company:	SOMA Environmental Engineering, Inc.			Name:	Telegraph			TPH-g, BTEX, MtBE, Naph(8260B) VOCs (8260B)								EDF Output is Required	
Report To:	Joyce Bobek			Number:	6461												
Email:	jbobek@somaenv.com/ rmathur@somaenv.com			P.O. #:	6461												
Address:	6620 Owens Dr, Suite A Pleasanton, CA-94588			Address:	2200 Telegraph Ave												
Phone:	925-734-6400			Global ID:	T10000010738												
Fax:	925-734-6401			Sampled By:	Davoud Bazrpash												
Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.												
1 EX-1	10/23/17	13:55	W	3 VOAs	2	✓	✓										
2 EX-2	10/23/17	13:25	W	3 VOAs	2	✓	✓										
3 EX-3	10/23/17	12:50	W	3 VOAs	2	✓	✓										
4 OB-2	10/23/17	11:25	W	3 VOAs	2	✓	✓										
5 OB-4	10/23/17	12:50	W	3 VOAs	2	✓	✓										
6 OB-5	10/23/17	10:55	W	3 VOAs	2	✓	✓										
7																	
8																	
9																	
10																	

	Signature	Print Name	Company / Title	Date / Time
¹ Relinquished By:	<i>DB</i>	10/23/17	14:45	
¹ Received By:	<i>Pat Gonzalez</i>	Pat Gonzalez	Enthalpy	10/23/17 1445
² Relinquished By:				
² Received By:				
³ Relinquished By:				
³ Received By:				

COOLER RECEIPT CHECKLIST



Login # 293 663 Date Received 10/23/17 Number of coolers 1
 Client SCMA Environmental Engineering Project _____

Date Opened 10/23/17 By (print) ELU (sign) _____
 Date Logged in ↓ By (print) ↓ (sign) _____
 Date Labelled ↓ By (print) ↓ (sign) ↓

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

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

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

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

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

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

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) _____

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

COMMENTS _____

Detections Summary for 293663

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

Client : SOMA Environmental Engineering Inc.
 Project : 6461
 Location : 2200 Telegraph Ave, Oakland

Client Sample ID : EX-1 Laboratory Sample ID : 293663-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	880		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	23		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	3.3		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
m,p-Xylenes	0.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	11		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	17		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	1.2		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
tert-Butylbenzene	2.3		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	2.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
sec-Butylbenzene	2.1		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Naphthalene	19		2.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : EX-2 Laboratory Sample ID : 293663-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	76		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	9.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2-Dichloroethane	1.0		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
m,p-Xylenes	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	0.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : EX-3 Laboratory Sample ID : 293663-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	680		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	1.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	5.3		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
m,p-Xylenes	8.1		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
o-Xylene	3.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	3.4		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	6.1		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	10		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
tert-Butylbenzene	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	26		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
sec-Butylbenzene	1.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
n-Butylbenzene	1.3		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Naphthalene	14		2.0	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : OB-2

Laboratory Sample ID :

293663-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	92		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	0.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	0.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : OB-4

Laboratory Sample ID :

293663-005

No Detections

Client Sample ID : OB-5

Laboratory Sample ID :

293663-006

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	2,900		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	2.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	85		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
m,p-Xylenes	3.4		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Isopropylbenzene	33		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	81		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	29		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	53		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
sec-Butylbenzene	10		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
para-Isopropyl Toluene	2.4		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
n-Butylbenzene	12		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Naphthalene	69		4.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-1	Batch#: 253125
Lab ID: 293663-001	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	Analyzed: 10/28/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	880	50
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	23	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	3.3	0.5
m,p-Xylenes	0.9	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	11	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	17	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	1.2	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Field ID:	EX-1	Batch#:	253125
Lab ID:	293663-001	Sampled:	10/23/17
Matrix:	Water	Received:	10/23/17
Units:	ug/L	Analyzed:	10/28/17
Diln Fac:	1.000		

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	2.3	0.5
1,2,4-Trimethylbenzene	2.8	0.5
sec-Butylbenzene	2.1	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	19	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-120
1,2-Dichloroethane-d4	117	72-135
Toluene-d8	104	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-2	Batch#: 252971
Lab ID: 293663-002	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	Analyzed: 10/24/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	76	50
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	9.7	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	1.0	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	0.6	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	0.6	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-2	Batch#: 252971
Lab ID: 293663-002	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	Analyzed: 10/24/17
Diln Fac: 1.000	

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	0.5	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	102	72-135
Toluene-d8	109	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-3	Diln Fac: 1.000
Lab ID: 293663-003	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	

Analyte	Result	RL	Batch#	Analyzed
Gasoline C7-C12	680	50	252971	10/24/17
Freon 12	ND	1.0	252971	10/24/17
Chloromethane	ND	1.0	252971	10/24/17
Vinyl Chloride	ND	0.5	252971	10/24/17
Bromomethane	ND	1.0	252971	10/24/17
Chloroethane	ND	1.0	252971	10/24/17
Trichlorofluoromethane	ND	1.0	252971	10/24/17
Ethanol	ND	250	252971	10/24/17
Acetone	ND	10	252971	10/24/17
Freon 113	ND	2.0	252971	10/24/17
1,1-Dichloroethene	ND	0.5	252971	10/24/17
Methylene Chloride	ND	10	252971	10/24/17
Carbon Disulfide	ND	0.5	252971	10/24/17
MTBE	1.7	0.5	252971	10/24/17
trans-1,2-Dichloroethene	ND	0.5	252971	10/24/17
Vinyl Acetate	ND	10	252971	10/24/17
1,1-Dichloroethane	ND	0.5	252971	10/24/17
2-Butanone	ND	10	252971	10/24/17
cis-1,2-Dichloroethene	ND	0.5	252971	10/24/17
2,2-Dichloropropane	ND	0.5	252971	10/24/17
Chloroform	ND	0.5	252971	10/24/17
Bromochloromethane	ND	0.5	252971	10/24/17
1,1,1-Trichloroethane	ND	0.5	252971	10/24/17
1,1-Dichloropropene	ND	0.5	252971	10/24/17
Carbon Tetrachloride	ND	0.5	252971	10/24/17
1,2-Dichloroethane	ND	0.5	252971	10/24/17
Benzene	ND	0.5	252971	10/24/17
Trichloroethene	ND	0.5	252971	10/24/17
1,2-Dichloropropane	ND	0.5	252971	10/24/17
Bromodichloromethane	ND	0.5	252971	10/24/17
Dibromomethane	ND	0.5	252971	10/24/17
4-Methyl-2-Pentanone	ND	10	252971	10/24/17
cis-1,3-Dichloropropene	ND	0.5	252971	10/24/17
Toluene	ND	0.5	252971	10/24/17
trans-1,3-Dichloropropene	ND	0.5	252971	10/24/17
1,1,2-Trichloroethane	ND	0.5	252971	10/24/17
2-Hexanone	ND	10	252971	10/24/17
1,3-Dichloropropane	ND	0.5	252971	10/24/17

ND= Not Detected

RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: EX-3	Diln Fac: 1.000
Lab ID: 293663-003	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	

Analyte	Result	RL	Batch#	Analyzed
Tetrachloroethene	ND	0.5	252971	10/24/17
Dibromochloromethane	ND	0.5	252971	10/24/17
1,2-Dibromoethane	ND	0.5	252971	10/24/17
Chlorobenzene	ND	0.5	252971	10/24/17
1,1,1,2-Tetrachloroethane	ND	0.5	252971	10/24/17
Ethylbenzene	5.3	0.5	252971	10/24/17
m,p-Xylenes	8.1	0.5	252971	10/24/17
o-Xylene	3.9	0.5	252971	10/24/17
Styrene	ND	0.5	252971	10/24/17
Bromoform	ND	1.0	252971	10/24/17
Isopropylbenzene	3.4	0.5	252971	10/24/17
1,1,2,2-Tetrachloroethane	ND	0.5	252971	10/24/17
1,2,3-Trichloropropane	ND	0.5	252971	10/24/17
Propylbenzene	6.1	0.5	252971	10/24/17
Bromobenzene	ND	0.5	252971	10/24/17
1,3,5-Trimethylbenzene	10	0.5	252971	10/24/17
2-Chlorotoluene	ND	0.5	252971	10/24/17
4-Chlorotoluene	ND	0.5	252971	10/24/17
tert-Butylbenzene	0.6	0.5	252971	10/24/17
1,2,4-Trimethylbenzene	26	0.5	252971	10/24/17
sec-Butylbenzene	1.6	0.5	252971	10/24/17
para-Isopropyl Toluene	ND	0.5	252971	10/24/17
1,3-Dichlorobenzene	ND	0.5	252971	10/24/17
1,4-Dichlorobenzene	ND	0.5	252971	10/24/17
n-Butylbenzene	1.3	0.5	252971	10/24/17
1,2-Dichlorobenzene	ND	0.5	252971	10/24/17
1,2-Dibromo-3-Chloropropane	ND	2.0	252971	10/24/17
1,2,4-Trichlorobenzene	ND	0.5	252971	10/24/17
Hexachlorobutadiene	ND	2.0	252971	10/24/17
Naphthalene	14	2.0	253013	10/25/17
1,2,3-Trichlorobenzene	ND	0.5	252971	10/24/17

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	98	80-120	252971	10/24/17
1,2-Dichloroethane-d4	103	72-135	252971	10/24/17
Toluene-d8	108	80-120	252971	10/24/17
Bromofluorobenzene	101	80-120	252971	10/24/17

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-2	Batch#: 252971
Lab ID: 293663-004	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	Analyzed: 10/24/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	92	50
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	0.5	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	0.9	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-2	Batch#: 252971
Lab ID: 293663-004	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	Analyzed: 10/24/17
Diln Fac: 1.000	

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	103	72-135
Toluene-d8	110	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-4	Batch#: 252971
Lab ID: 293663-005	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	Analyzed: 10/24/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-4	Batch#: 252971
Lab ID: 293663-005	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17
Units: ug/L	Analyzed: 10/24/17
Diln Fac: 1.000	

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	101	72-135
Toluene-d8	109	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected
RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-5	Units: ug/L
Lab ID: 293663-006	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	2,900	50	1.000	252971	10/24/17
Freon 12	ND	1.0	1.000	252971	10/24/17
Chloromethane	ND	1.0	1.000	252971	10/24/17
Vinyl Chloride	ND	0.5	1.000	252971	10/24/17
Bromomethane	ND	1.0	1.000	252971	10/24/17
Chloroethane	ND	1.0	1.000	252971	10/24/17
Trichlorofluoromethane	ND	1.0	1.000	252971	10/24/17
Ethanol	ND	250	1.000	252971	10/24/17
Acetone	ND	10	1.000	252971	10/24/17
Freon 113	ND	2.0	1.000	252971	10/24/17
1,1-Dichloroethene	ND	0.5	1.000	252971	10/24/17
Methylene Chloride	ND	10	1.000	252971	10/24/17
Carbon Disulfide	ND	0.5	1.000	252971	10/24/17
MTBE	2.6	0.5	1.000	252971	10/24/17
trans-1,2-Dichloroethene	ND	0.5	1.000	252971	10/24/17
Vinyl Acetate	ND	10	1.000	252971	10/24/17
1,1-Dichloroethane	ND	0.5	1.000	252971	10/24/17
2-Butanone	ND	10	1.000	252971	10/24/17
cis-1,2-Dichloroethene	ND	0.5	1.000	252971	10/24/17
2,2-Dichloropropane	ND	0.5	1.000	252971	10/24/17
Chloroform	ND	0.5	1.000	252971	10/24/17
Bromochloromethane	ND	0.5	1.000	252971	10/24/17
1,1,1-Trichloroethane	ND	0.5	1.000	252971	10/24/17
1,1-Dichloropropene	ND	0.5	1.000	252971	10/24/17
Carbon Tetrachloride	ND	0.5	1.000	252971	10/24/17
1,2-Dichloroethane	ND	0.5	1.000	252971	10/24/17
Benzene	ND	0.5	1.000	252971	10/24/17
Trichloroethene	ND	0.5	1.000	252971	10/24/17
1,2-Dichloropropane	ND	0.5	1.000	252971	10/24/17
Bromodichloromethane	ND	0.5	1.000	252971	10/24/17
Dibromomethane	ND	0.5	1.000	252971	10/24/17
4-Methyl-2-Pentanone	ND	10	1.000	252971	10/24/17
cis-1,3-Dichloropropene	ND	0.5	1.000	252971	10/24/17
Toluene	ND	0.5	1.000	252971	10/24/17
trans-1,3-Dichloropropene	ND	0.5	1.000	252971	10/24/17
1,1,2-Trichloroethane	ND	0.5	1.000	252971	10/24/17
2-Hexanone	ND	10	1.000	252971	10/24/17
1,3-Dichloropropane	ND	0.5	1.000	252971	10/24/17
Tetrachloroethene	ND	0.5	1.000	252971	10/24/17

ND= Not Detected

RL= Reporting Limit

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Field ID: OB-5	Units: ug/L
Lab ID: 293663-006	Sampled: 10/23/17
Matrix: Water	Received: 10/23/17

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Dibromochloromethane	ND	0.5	1.000	252971	10/24/17
1,2-Dibromoethane	ND	0.5	1.000	252971	10/24/17
Chlorobenzene	ND	0.5	1.000	252971	10/24/17
1,1,1,2-Tetrachloroethane	ND	0.5	1.000	252971	10/24/17
Ethylbenzene	85	1.0	2.000	253013	10/25/17
m,p-Xylenes	3.4	0.5	1.000	252971	10/24/17
o-Xylene	ND	0.5	1.000	252971	10/24/17
Styrene	ND	0.5	1.000	252971	10/24/17
Bromoform	ND	1.0	1.000	252971	10/24/17
Isopropylbenzene	33	0.5	1.000	252971	10/24/17
1,1,2,2-Tetrachloroethane	ND	0.5	1.000	252971	10/24/17
1,2,3-Trichloropropane	ND	0.5	1.000	252971	10/24/17
Propylbenzene	81	0.5	1.000	252971	10/24/17
Bromobenzene	ND	0.5	1.000	252971	10/24/17
1,3,5-Trimethylbenzene	29	0.5	1.000	252971	10/24/17
2-Chlorotoluene	ND	0.5	1.000	252971	10/24/17
4-Chlorotoluene	ND	0.5	1.000	252971	10/24/17
tert-Butylbenzene	ND	0.5	1.000	252971	10/24/17
1,2,4-Trimethylbenzene	53	0.5	1.000	252971	10/24/17
sec-Butylbenzene	10	0.5	1.000	252971	10/24/17
para-Isopropyl Toluene	2.4	0.5	1.000	252971	10/24/17
1,3-Dichlorobenzene	ND	0.5	1.000	252971	10/24/17
1,4-Dichlorobenzene	ND	0.5	1.000	252971	10/24/17
n-Butylbenzene	12	0.5	1.000	252971	10/24/17
1,2-Dichlorobenzene	ND	0.5	1.000	252971	10/24/17
1,2-Dibromo-3-Chloropropane	ND	2.0	1.000	252971	10/24/17
1,2,4-Trichlorobenzene	ND	0.5	1.000	252971	10/24/17
Hexachlorobutadiene	ND	2.0	1.000	252971	10/24/17
Naphthalene	69	4.0	2.000	253013	10/25/17
1,2,3-Trichlorobenzene	ND	0.5	1.000	252971	10/24/17

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	96	80-120	1.000	252971	10/24/17
1,2-Dichloroethane-d4	104	72-135	1.000	252971	10/24/17
Toluene-d8	111	80-120	1.000	252971	10/24/17
Bromofluorobenzene	100	80-120	1.000	252971	10/24/17

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	252971
Units:	ug/L	Analyzed:	10/24/17
Diln Fac:	1.000		

Type: BS Lab ID: QC906099

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.39	99	72-126
Benzene	12.50	13.18	105	80-124
Trichloroethene	12.50	12.23	98	78-120
Toluene	12.50	13.80	110	80-120
Chlorobenzene	12.50	12.08	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	102	72-135
Toluene-d8	109	80-120
Bromofluorobenzene	101	80-120

Type: BSD Lab ID: QC906100

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.89	95	72-126	4	20
Benzene	12.50	12.76	102	80-124	3	20
Trichloroethene	12.50	11.89	95	78-120	3	20
Toluene	12.50	13.18	105	80-120	5	20
Chlorobenzene	12.50	11.82	95	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	102	72-135
Toluene-d8	111	80-120
Bromofluorobenzene	102	80-120

RPD= Relative Percent Difference

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC906101	Batch#:	252971
Matrix:	Water	Analyzed:	10/24/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
 RL= Reporting Limit

Batch QC Report
Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC906101	Batch#:	252971
Matrix:	Water	Analyzed:	10/24/17
Units:	ug/L		

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	103	72-135
Toluene-d8	109	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	252971
Units:	ug/L	Analyzed:	10/24/17
Diln Fac:	1.000		

Type: BS Lab ID: QC906102

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	750.0	759.9	101	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	102	72-135
Toluene-d8	110	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC906103

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	750.0	742.9	99	70-130	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	104	72-135
Toluene-d8	110	80-120
Bromofluorobenzene	103	80-120

RPD= Relative Percent Difference

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	253013
Units:	ug/L	Analyzed:	10/25/17
Diln Fac:	1.000		

Type: BS Lab ID: QC906268

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	13.31	106	72-126
Benzene	12.50	12.49	100	80-124
Trichloroethene	12.50	12.71	102	78-120
Toluene	12.50	12.83	103	80-120
Chlorobenzene	12.50	12.49	100	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-120
1,2-Dichloroethane-d4	113	72-135
Toluene-d8	102	80-120
Bromofluorobenzene	99	80-120

Type: BSD Lab ID: QC906269

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	13.08	105	72-126	2	20
Benzene	12.50	12.09	97	80-124	3	20
Trichloroethene	12.50	12.73	102	78-120	0	20
Toluene	12.50	13.20	106	80-120	3	20
Chlorobenzene	12.50	12.65	101	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	110	72-135
Toluene-d8	103	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #: 293663	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6461	Analysis: EPA 8260B
Type: BLANK	Diln Fac: 1.000
Lab ID: QC906270	Batch#: 253013
Matrix: Water	Analyzed: 10/25/17
Units: ug/L	

Analyte	Result	RL
Gasoline C7-C12	NA	
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report
Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC906270	Batch#:	253013
Matrix:	Water	Analyzed:	10/25/17
Units:	ug/L		

Analyte	Result	RL
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	2.0

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	111	72-135
Toluene-d8	103	80-120
Bromofluorobenzene	112	80-120

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	253125
Units:	ug/L	Analyzed:	10/28/17
Diln Fac:	1.000		

Type: BS Lab ID: QC906697

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.11	97	72-126
Benzene	12.50	13.22	106	80-124
Trichloroethene	12.50	13.29	106	78-120
Toluene	12.50	13.17	105	80-120
Chlorobenzene	12.50	12.80	102	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-120
1,2-Dichloroethane-d4	108	72-135
Toluene-d8	103	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC906698

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.90	95	72-126	2	20
Benzene	12.50	12.94	103	80-124	2	20
Trichloroethene	12.50	12.72	102	78-120	4	20
Toluene	12.50	12.86	103	80-120	2	20
Chlorobenzene	12.50	12.44	100	80-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-120
1,2-Dichloroethane-d4	110	72-135
Toluene-d8	104	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC906699	Batch#:	253125
Matrix:	Water	Analyzed:	10/28/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Ethanol	ND	250
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC906699	Batch#:	253125
Matrix:	Water	Analyzed:	10/28/17
Units:	ug/L		

Analyte	Result	RL
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-120
1,2-Dichloroethane-d4	117	72-135
Toluene-d8	106	80-120
Bromofluorobenzene	119	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	293663	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6461	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	253125
Units:	ug/L	Analyzed:	10/28/17
Diln Fac:	1.000		

Type: BS Lab ID: QC906703

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	916.9	92	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-120
1,2-Dichloroethane-d4	113	72-135
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-120

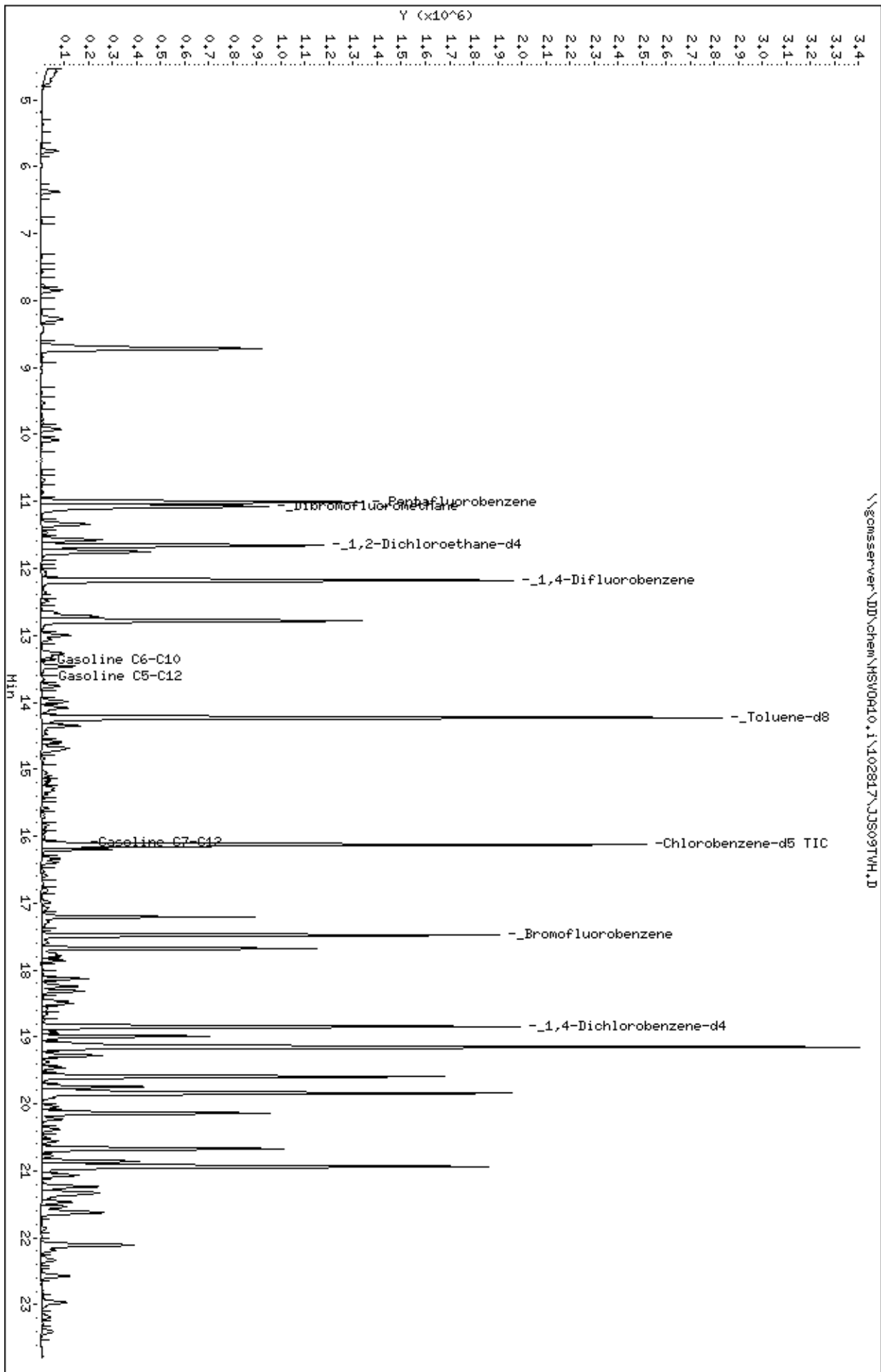
Type: BSD Lab ID: QC906704

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	915.7	92	70-130	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-120
1,2-Dichloroethane-d4	114	72-135
Toluene-d8	104	80-120
Bromofluorobenzene	98	80-120

RPD= Relative Percent Difference

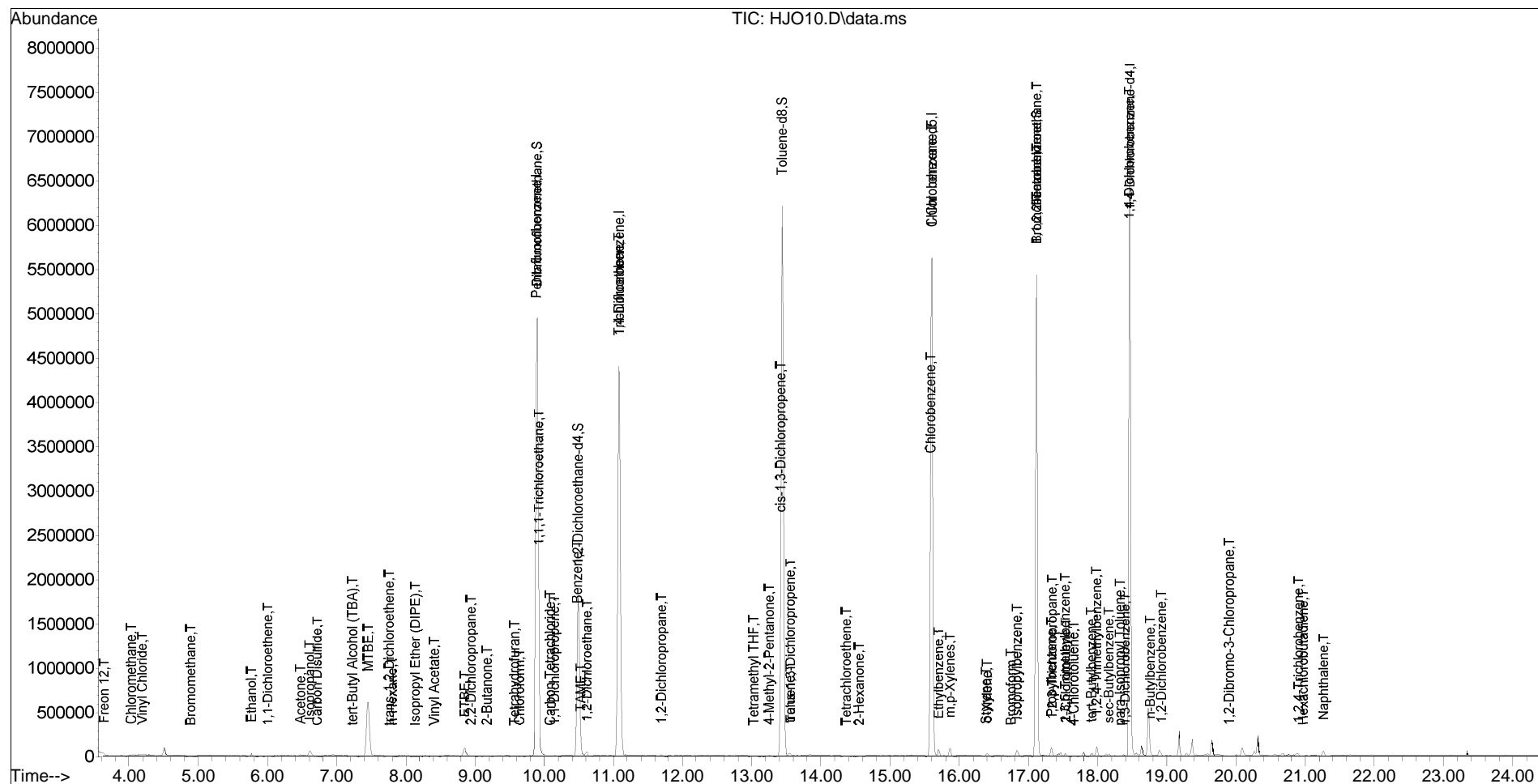
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Quantitation Report (QT Reviewed)

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 Operator :
 Sample : S,293663-002
 Misc : 252971,1/1
 ALS Vial : 8 Sample Multiplier: 1

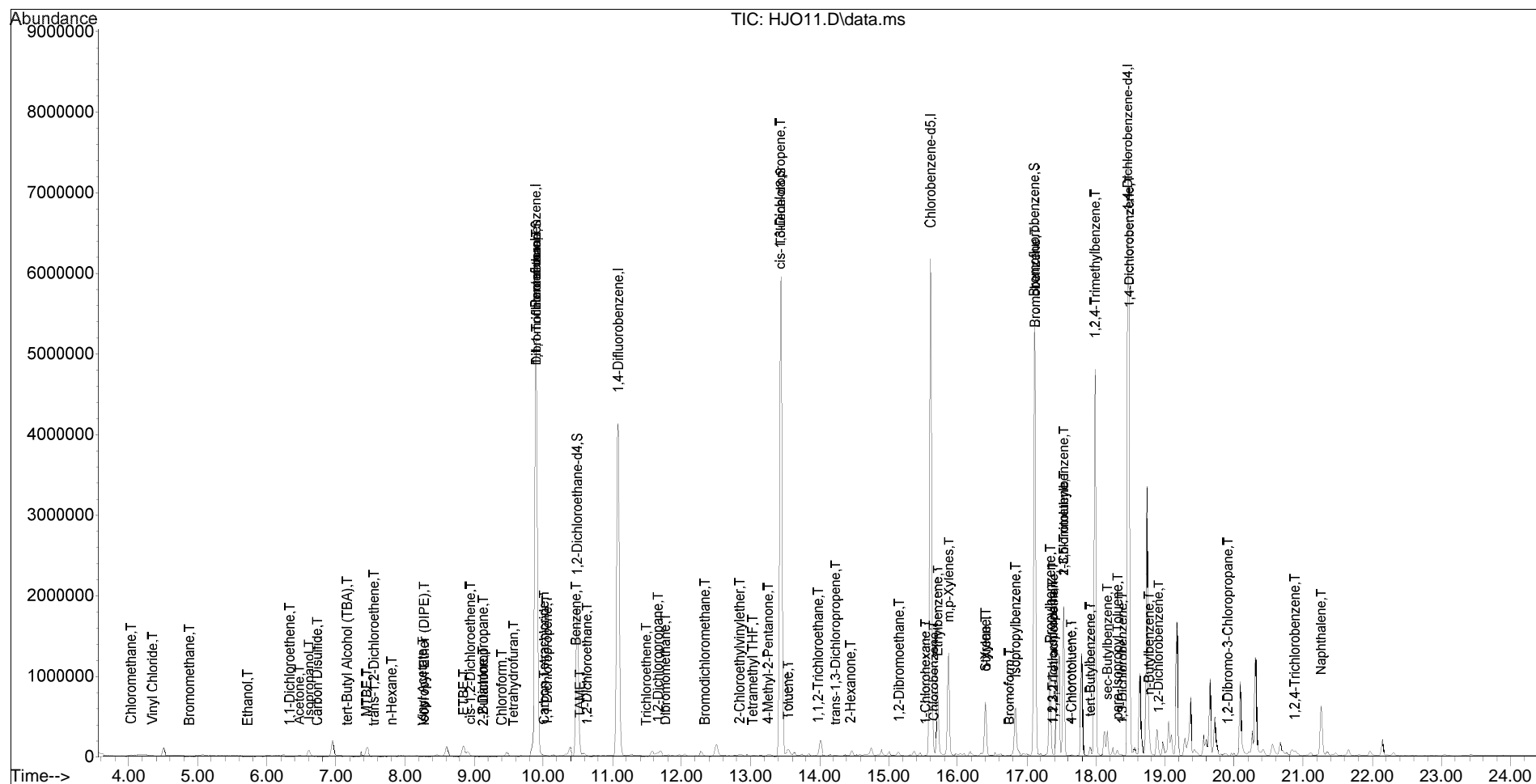
Quant Time: Oct 24 15:15:01 2017
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 Quant Title : MSVOA08 MSVOA WATER
 QLast Update : Fri Apr 21 17:51:00 2017
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : G:\msvoa08\102417\
 Data File : HJO11.D
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 Operator :
 Sample : S,293663-003
 Misc : 252971,1/1
 ALS Vial : 9 Sample Multiplier: 1

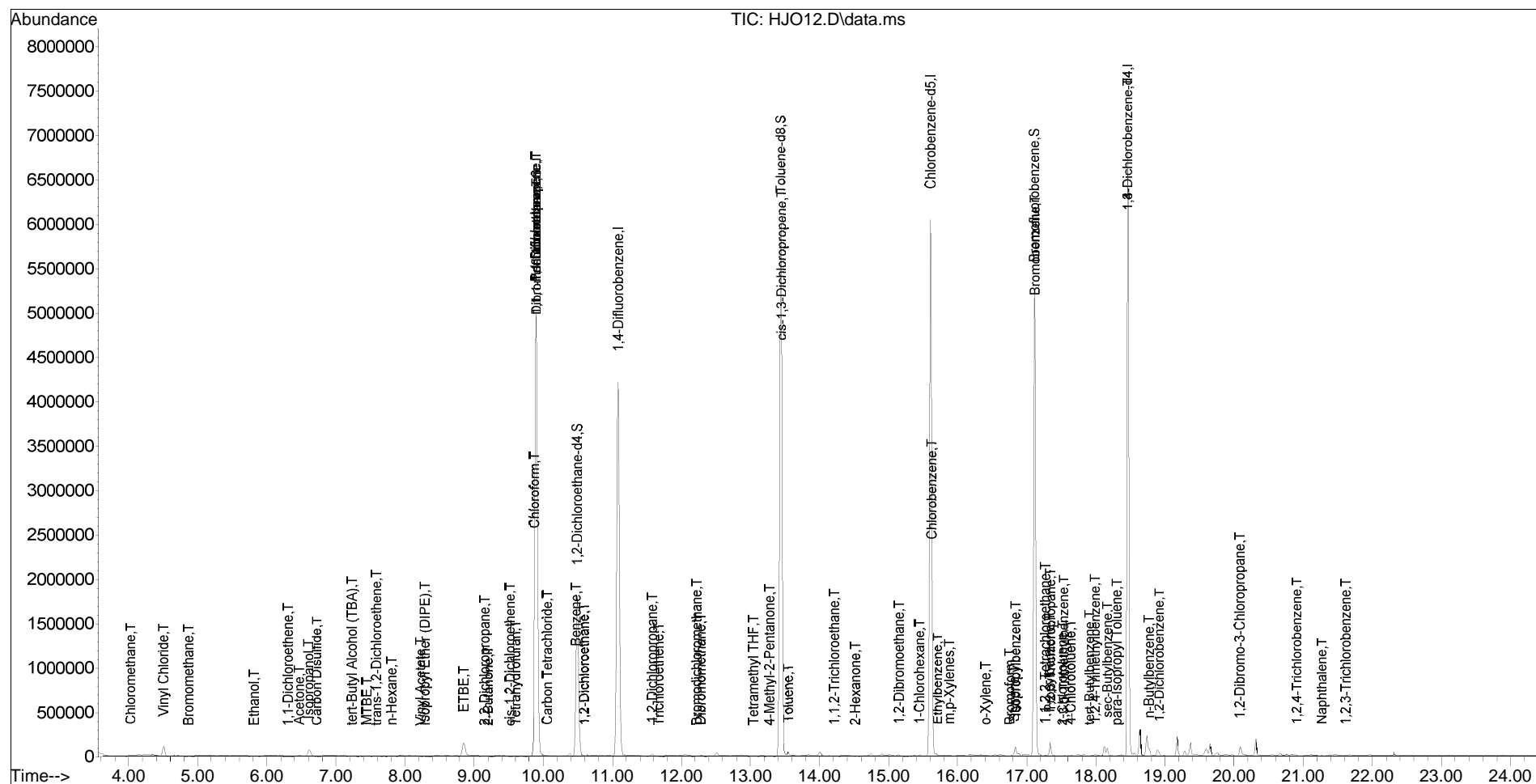
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 Quant Title : MSVOA08 MSVOA WATER
 QLast Update : Fri Apr 21 17:51:00 2017
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : G:\msvoa08\102417\
 Data File : HJO12.D
 Acq On : 24 Oct 2017 3:43 pm
 Operator :
 Sample : S,293663-004
 Misc : 252971,1/1
 ALS Vial : 10 Sample Multiplier: 1

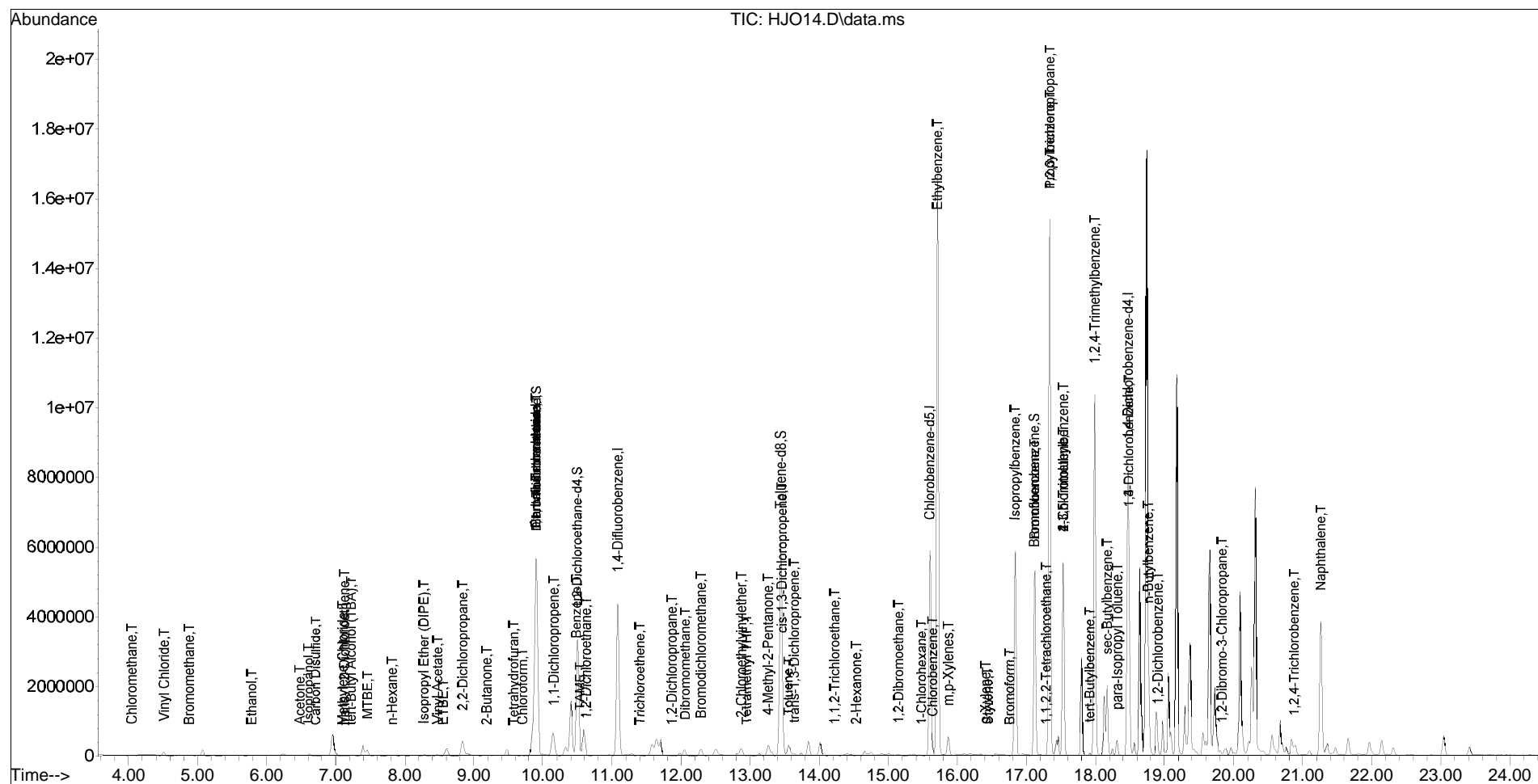
Quant Time: Oct 25 07:50:15 2017
 Quant Method : G:\msvoa08\102417\8260X08W.M
 Quant Title : MSVOA08 MSVOA WATER
 QLast Update : Fri Apr 21 17:50:59 2017
 Response via : Initial Calibration

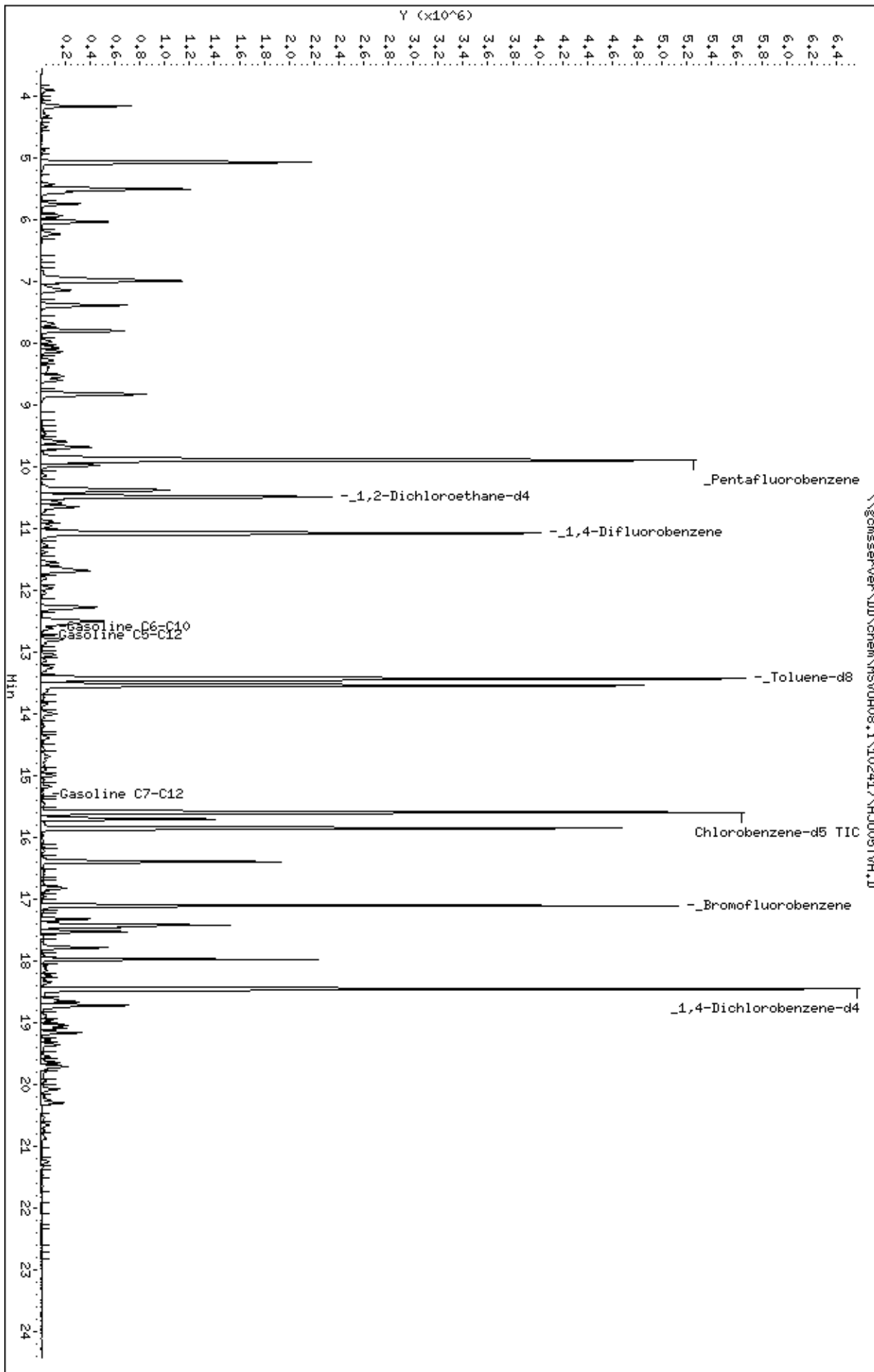


Quantitation Report (QT Reviewed)

Data Path : G:\msvoa08\102417\
 Data File : HJO14.D
 Acq On : 24 Oct 2017 4:49 pm
 Operator :
 Sample : S,293663-006
 Misc : 252971,1/1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 25 07:51:22 2017
 Quant Method : G:\msvoa08\102417\8260X08W.M
 Quant Title : MSVOA08 MSVOA WATER
 QLast Update : Fri Apr 21 17:50:59 2017
 Response via : Initial Calibration





APPENDIX H

BAAQMD AND GROUNDWATER DISCHARGE PERMITS



This document does not permit the holder to violate any BAAQMD regulation or any other law.

PERMIT EXPIRATION DATE

NOV 1, 2017

Plant# 19396

SOMA Environmental Engineering, Inc
6620 Owens Dr, Suite A
Pleasanton, CA 94588

Portable Sources

S#	DESCRIPTION	[Schedule]	PAID
1	CHEM> Contaminated soil remediation, Contaminated soil vapor Portable Soil Vapor Extraction System Abated by: A1 SVE Abatement System	[G1]	2006
2	CHEM> Contaminated soil remediation, Contaminated soil vapor Portable Dual Phase Extraction System Abated by: A2 Adsorption, Activated Carbon/Charcoal Emissions at: P2 Stack	[G1, 427 days]	2134
A1	Catalytic Afterburner, 282K BTU/hr max, LPG Thermal/Catalytic Oxidizer	[exempt]	0

2 Permitted Sources, 1 Exempt Source

*** See attached Permit Conditions ***

The operating parameters described above are based on information supplied by permit holder and may differ from the limits set forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to be exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.

SOMA Environmental Engineering, Inc
Ruchi Mathur
6620 Owens Dr, Suite A
Pleasanton, CA 94588

Dear Ruchi Mathur:

Re: Wastewater Special Discharge Permit No. 97215975

Enclosed is the Special Discharge Permit for SOMA Environmental Engineering for your information and records. A copy of *EBMUD Wastewater Control Ordinance* is available at www.ebmud.com. As a Permit holder, you are legally responsible for complying with all Permit conditions and requirements. Your permit expires on September 30, 2018.

Please note that this Permit requires SOMA Environmental Engineering, Inc. to submit analytical data to EBMUD for approval prior to the initial discharge to the community sewer.

SOMA Environmental Engineering, Inc. shall report to the Environmental Services Division any changes, permanent or temporary, to the premises or operations that significantly affect the quality or volume of the permitted discharge or deviate from the terms and conditions under which the Permit was granted.

If you have any questions regarding this Permit, please contact Charles Wittorp of the Environmental Services Division at (510) 287-1065.

Sincerely,



Jacqueline T. Zipkin, P.E.
Manager of Wastewater Environmental Services

JTZ:caw

Enclosures

W:\NAB\IDS\Permits\Special Discharge\Permits\SOMA Environmental Engineering, Inc\Cover Letter_SOMA Environmental Engineering Inc..docx



SPECIAL DISCHARGE PERMIT

APPLICANT FORM

Special discharge permits are issued for short-term, limited volume discharge of many different types of wastewater or groundwater meeting special discharge criteria. An application must be completed when applying for a special discharge permit.

INSTRUCTIONS FOR COMPLETING APPLICATION

Please Type or Print the Requested Information

Permit Number – The permit number will be provided by EBMUD.

Applicant's Business Name – Enter the name of the business that has legal responsibility for wastewater discharge, including responsibility for any enforcement actions or penalties imposed by the District.

SIC Code – Enter the Standard Industrial Classification Code. The code may be found in the United States Office of Management and Budget, Standard Industrial Classification Manual.

Address of Site Discharging Wastewater – Enter the street address, side sewer, or manhole location of the site discharging the wastewater.

Applicant Mailing Address – Enter the applicant's business mailing address.

Contact Persons – Enter the name, title, and phone number of those persons thoroughly familiar with the information reported in this application.

Certification – Enter the name and title of the person signing the application. The person signing the application must meet the signatory criteria of 40 CFR 403.12 (l). Persons meeting these criteria include:

- 1) A responsible corporate officer, such as:
 - a. a president, vice-president, secretary, treasurer, or other person performing similar policy or decision making functions or;
 - b. a manager of one or more manufacturing, production, or operating facilities. The facility must employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars). The person must have authority to sign documents.
- 2) A general partner or sole proprietor.
- 3) A duly authorized representative. The duly authorized representative must be:
 - a. an individual having responsibility for the overall operation of the facility from which the wastewater discharge originates. Examples include plant manager, field superintendent, or environmental manager;
 - b. authorized in writing by a person described in paragraph 1) or 2). The written authorization must be submitted to the District.

Return the Signed Original Application to:

EAST BAY MUNICIPAL UTILITY DISTRICT
Environmental Services Division, MS 702
P.O. Box 24055
Oakland, CA 94623-1055

Questions? Call the Environmental Services Division hotline at 510-287-1651.

permit no. 97215975



SPECIAL DISCHARGE PERMIT

PERMIT NUMBER 97215975

APPLICANT FORM

APPLICANT BUSINESS NAME <u>SOMA ENVIRONMENTAL ENGINEERING, INC.</u>	SIC CODE
--	----------

ADDRESS OF SITE DISCHARGING WASTEWATER <u>2200 Telegraph Ave</u> STREET ADDRESS <u>Oakland</u> <u>94612</u> CITY ZIP CODE	APPLICANT MAILING ADDRESS <u>6620 Owens Dr, Suite A</u> STREET ADDRESS <u>Pleasanton</u> <u>94588</u> CITY ZIP CODE
---	---

CONTACT PERSONS

APPLICANT
Ruchi Mathur Project Engineer 925-734-6400
NAME TITLE PHONE NUMBER

CONSULTANT
Mansour Sepehr President 925-734-6400
NAME TITLE PHONE NUMBER

CONTRACTOR

NAME TITLE PHONE NUMBER

CERTIFICATION

I understand that issuance of a Special Discharge Permit does not exempt or preclude the facility from being issued a Discharge Minimization or Pollution Prevention Permit.

I understand that I am legally responsible for discharge of wastewater from the facility and for complying with the Terms and Conditions of this Special Discharge Permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Mansour Sepehr
NAME

President
TITLE

SIGNATURE (SEE CERTIFICATION REQUIREMENTS ON INSTRUCTIONS)

8/24/17
DATE



SPECIAL DISCHARGE PERMIT

PERMIT NUMBER 97215975

APPLICANT FORM

Purpose: This information demonstrates the wastewater meets established criteria for a Special Discharge Permit. Check each statement that applies and supply required information.

Reasonable and cost effective means of recycling and reuse of the wastewater are unavailable. Provide information describing what means were considered, and why they were not implemented.

The site is under tight time and budget constraints for groundwater cleanup

The wastewater is unsuitable for discharge to the storm sewer. Provide explanation.

This is an underground storage tank site where groundwater has been impacted by petroleum hydrocarbons. As a remedial effort, impacted groundwater will be xtracted, treated and discharged to the sewer.

The wastewater is generated only within the SD-1 wastewater service area. Provide location.

2200 Telegraph Ave, Oakland

The wastewater meets source criteria. Describe the source and operations generating the wastewater. Include the Wastewater Source Category from Special Discharge Permit Standard Terms and Conditions, Section A, II.

Groundwater extracted during a four week long multi-phase extraction (MPE) event at the site will be treated through two 55- gallon granular activated carbon (GAC) drums connected in series, prior to discharge. Source category (f): Other sources for temporary discharge

The wastewater is discharged during a limited period of time.

Maximum Discharge Duration: 1 year | days Start Sep 5, 2017 Hours of Discharge: 24 hrs/day

Wastewater volume and flow will not exceed 100 gals/minute.

Total Discharge Volume: | ^{apprx} 80,000 | gallons

Discharge to the sanitary sewer during a rain even may be prohibited. Describe containment capacity during a 10-year rain event (3.16 inches of rainfall in a 24-hour period).

MPE event will be paused during rain and hence no discharge will occur.

The side sewer through which the wastewater is discharged has been identified. Applicant is responsible for obtaining local permits to use manholes or cleanouts for discharge.

Attach a site diagram. Show facility location, property lines, wastewater source, drainage plumbing, the side sewer, and sampling location.

Known and potential pollutants present in the wastewater are characterized.

Attach a summarized list of all pollutant concentrations present in the wastewater. Also include the complete certified laboratory analytical report. ^{is available.} See attached list of contaminants. Lab report will be submitted as soon as t

Treatment technology or best management practices have been identified that will result in the wastewater meeting discharge limits, and sediment or silt does not enter collection system.

- 1) Describe pretreatment or best management practices that will be used to ensure the wastewater discharge complies with EBMUD Wastewater Control Ordinance wastewater discharge limits or permit-specific limits as necessary.

Extracted groundwater from site monitoring/remediation wells will be pretreated through two 55 gallon GAC drums connected in series. The final effluent from these drums will be sampled and sent to the laboratory for analysis to demonstrate compliance.

- 2) Attach a schematic flow diagram of the pretreatment system. The diagram must accurately depict the pretreatment system as constructed. Field deviation from the diagram is not allowed, unless pretreatment system modifications are approved and the permit revised prior to the discharge.



SOMA Environmental Engineering, Inc.
Permit Number 97215975

**SPECIAL DISCHARGE PERMIT
Terms and Conditions**

GENERAL CONDITIONS

- I. SOMA Environmental Engineering, Inc. shall comply with all items of the *EBMUD Special Discharge Permit Standard Terms and Conditions*, most recent edition available at <http://www.ebmud.com/wastewater/commercial-waste/permits-and-wastewater-discharges/>.
- II. This Special Discharge Permit is a waiver of *EBMUD Wastewater Control Ordinance (Ordinance)*, which prohibits the discharge of stormwater, drainage water, and groundwater to the sanitary sewer. The most recent edition of the Ordinance is available at <http://www.ebmud.com/wastewater/commercial-waste/wastewater-control-ordinance-discharge-limits/>
- III. SOMA Environmental Engineering, Inc. shall discharge Special Discharge Wastewater only from the specific source described in the *Special Discharge Permit Applicant Form – 2200 Telegraph Ave, Oakland*.
- IV. SOMA Environmental Engineering, Inc. shall immediately cease discharge of treated or managed Special Discharge Wastewater if not in compliance with the terms and conditions of this Special Discharge Permit.
- V. SOMA Environmental Engineering, Inc. shall not discharge Special Discharge Wastewater authorized by this Special Discharge Permit after the expiration date.

COMPLIANCE REQUIREMENTS

- I. SOMA Environmental Engineering, Inc. shall pretreat, including sediment control, all Special Discharge Wastewater prior to discharge to the sanitary sewer. Pretreatment shall be sufficient to achieve compliance with the benchmark values and discharge limits established in this Special Discharge Permit.
- II. SOMA Environmental Engineering, Inc. shall post a sign in the work area stating "All Wastewater Discharge must comply with the Special Discharge Permit."
- III. SOMA Environmental Engineering, Inc. shall not discharge Special Discharge Wastewater to the sanitary sewer during a rain event or within 24 hours after a rain event, which is defined as any precipitation greater than a drizzle.
- IV. SOMA Environmental Engineering, Inc. shall not discharge Special Discharge Wastewater to the sanitary sewer at a flow rate greater than 100 gallons/minute.
- V. SOMA Environmental Engineering, Inc. shall obtain permission from the applicable city agency to discharge Special Discharge Wastewater to the sanitary sewer.
- VI. SOMA Environmental Engineering, Inc. shall discharge all Special Discharge Wastewater to the sanitary sewer through a totalizing flow meter.
- VII. SOMA Environmental Engineering, Inc. shall maintain a discharge log recording the date, time, and total volume of all Special Discharge Wastewater discharged to the sanitary sewer.



WASTEWATER DISCHARGE LIMITS

SOMA Environmental Engineering, Inc. shall not discharge Special Discharge Wastewater to the sanitary sewer if the strength of the wastewater exceeds:

- EBMUD Wastewater Control Ordinance, Wastewater Discharge Limits
- Total Petroleum Hydrocarbon for diesel, motor oil, and gasoline limit of 100 mg/L.

SELF-MONITORING REQUIREMENTS

I. SOMA Environmental Engineering, Inc. shall collect a representative sample of **first batch of effluent discharge**, as depicted in the *Sanitary Sewer Schematic for Groundwater Discharge*.

II. SOMA Environmental Engineering, Inc. shall submit analytical data to EBMUD for approval prior to discharge.

- **Discharge of Special Discharge Wastewater to the sanitary sewer is prohibited until EBMUD reviews the self-monitoring report and grants approval.**
- EBMUD may prohibit the discharge of the Special Discharge Wastewater and require additional treatment if any constituents exceed Wastewater Discharge Limits set forth by the permit.
- Requirement for subsequent testing will depend on the initial test results. The parameters to be monitored, sample type, and analytical test methods shall be in accordance with the following table:

Parameter	Sample Type	Method
Total Metals ¹	Grab	EPA 200.7
Oil & Grease (HC)	Grab	EPA 1664 HEM-SGT
Volatile Organics	Grab	EPA 624
TPH-diesel, motor oil, gasoline	Grab	EPA 8015B
pH	Grab	SM 4500-H+B

⁽¹⁾ Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc

III. The self-monitoring report shall be submitted by email to Charles.Wittorp@ebmud.com. The self-monitoring report shall include:

- A signed analytical report
- The chain of custody documentation
- The authorized signature and certification statement



REPORTING REQUIREMENTS

SOMA Environmental Engineering, Inc. shall submit a discharge log report, including:

- A copy of discharge logs which include dates, times, volumes, flow totalizer readings, and the total volume of Special Discharge Wastewater discharged to the sanitary sewer to date.
- The authorized signature and certification statement.

The discharge log report is due quarterly by the 10th of each month according to the following schedule:

Discharge Period	Discharge Log Due
September 2017 – November 2017	December 10, 2017
December 2017 – February 2018	March 10, 2018

The final discharge log is due within ten days of the final discharge to the community sewer. Submit all reports to EBMUD by email to Charles.Wittorp@ebmud.com.

INSPECTION

The District may conduct random, unannounced inspections to verify compliance with the terms and conditions of this Special Discharge Permit. SOMA Environmental Engineering, Inc. shall grant District personnel access to the facility and discharge logs to conduct inspections and collect Special Discharge Wastewater samples.

ENFORCEMENT AND PENALTIES

Failure to comply with the terms and conditions of this Special Discharge Permit and *Special Discharge Permit Standard Terms and Conditions* may result in enforcement actions, including violation follow-up fees, civil enforcement penalties, and administrative fines of up to \$5,000 per day.

RATES AND CHARGES

This Special Discharge Permit may be amended to include changes to rates and charges that may be established by the District during the term of this Special Discharge Permit. The treatment charge is \$1.18 per hundred cubic feet (Ccf) for the wastewater discharged to the community sewer. The permit fee is \$2,500 per year.

AUTHORIZATION

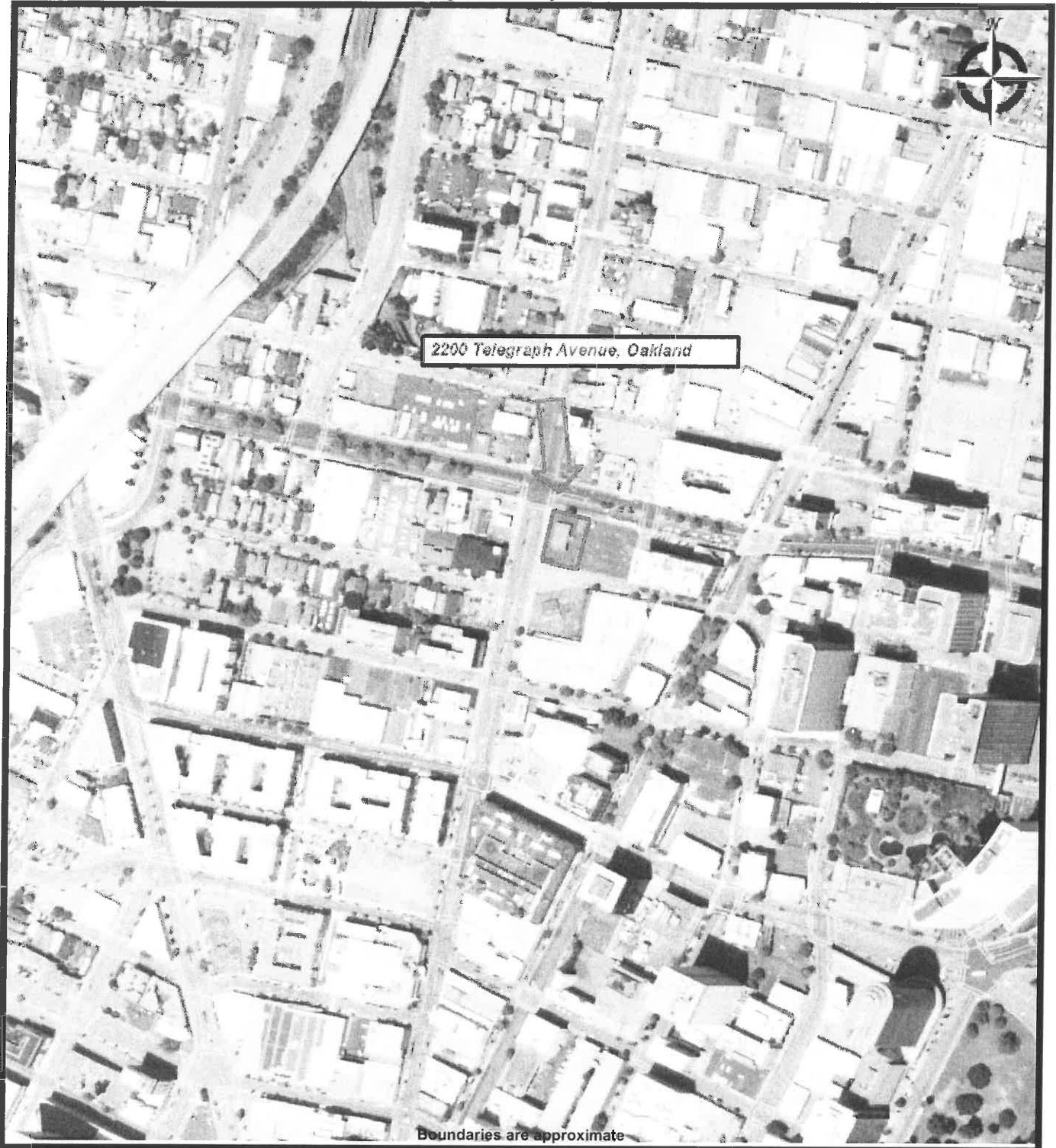
Special Discharger SOMA Environmental Engineering, Inc. is hereby authorized to discharge Special Discharge Wastewater to the sanitary sewer, subject to compliance with EBMUD Wastewater Control Ordinance, EBMUD Special Discharge Permit Standard Terms and Conditions, and billing conditions.

Effective: 07 SEP 17

Expiration: 30 SEP 18

Steven M. White 9/7/17
Director, Wastewater Department

Image Provided By EDR Aerials



SOMA

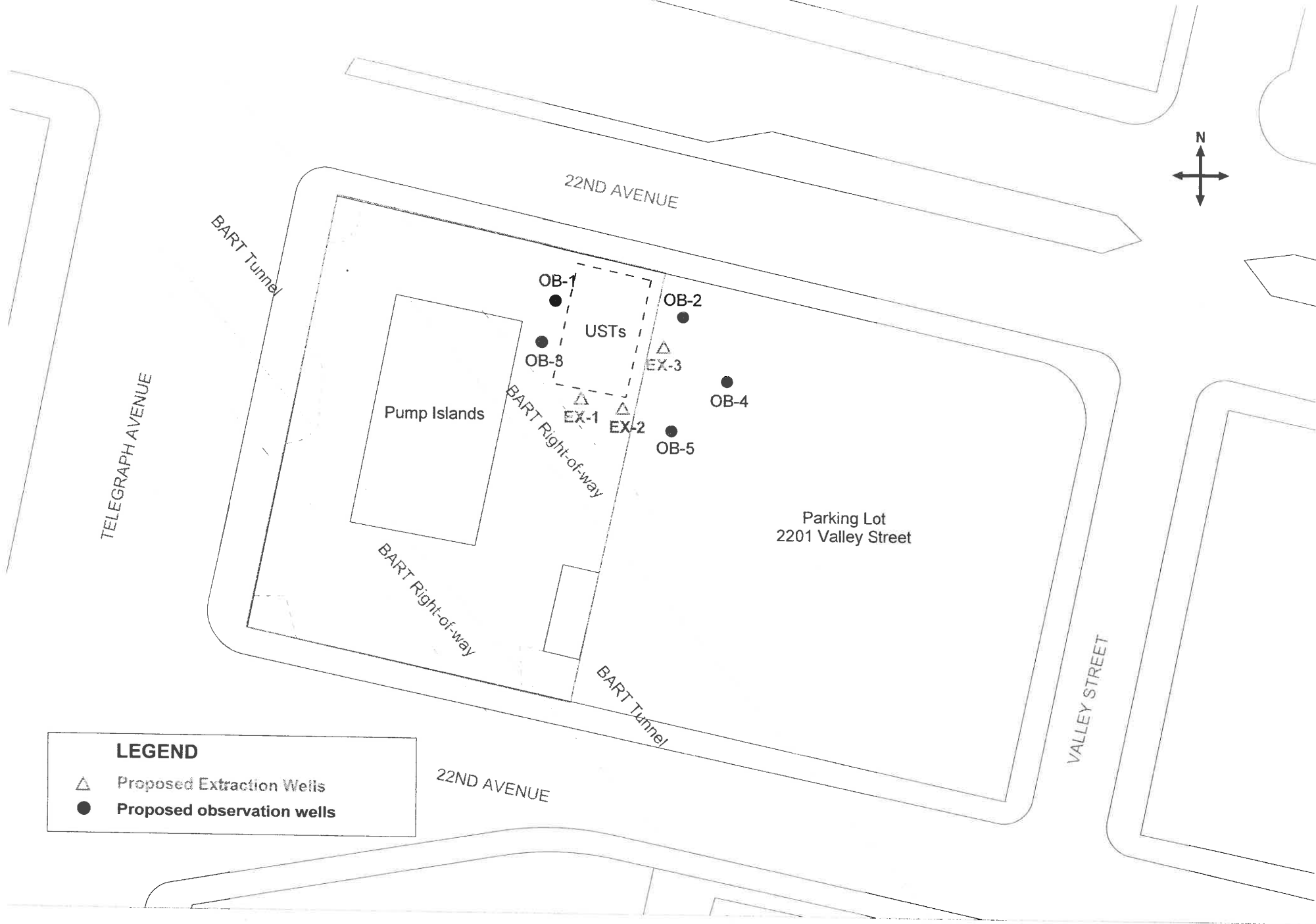
ENVIRONMENTAL ENGINEERING, INC.
6620 Owens Drive, Suite A - Pleasanton, CA 94588
TEL (925)734-6400 • FAX (925)734-6401

Figure 1: SITE MAP

2200 Telegraph Avenue
Oakland CA 94612

PREPARED FOR:
PROJ. MGR:
DRAWN BY: Ruchi Mathur

permit no. 97215975



LEGEND
 △ Proposed Extraction Wells
 ● Proposed observation wells

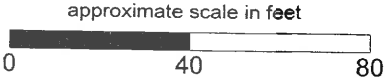
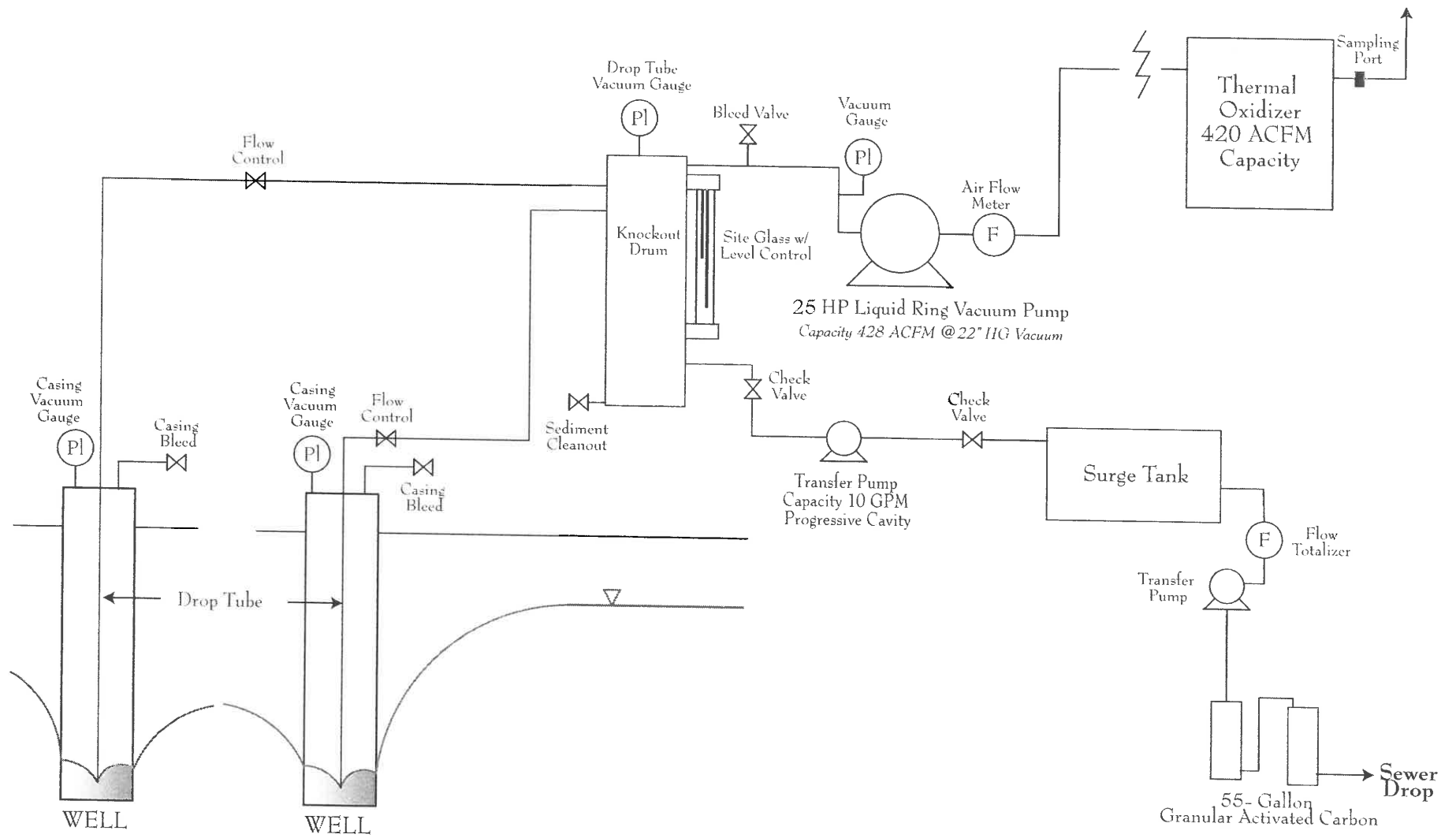


Figure 3: Site Map with Proposed Extraction and Observation Well Locations
 2200 Telegraph Avenue, Oakland



permit no. 97215975



Not to Scale

Figure 3: MTS Process Schematic



permit no. 97215975

SPECIAL DISCHARGE PERMIT APPLICATION - EBMUD

LIST OF POLLUTANTS AT 2200 TELEGRAPH AVE., OAKLAND, CA

1. Gasoline -TPH-g
2. Benzene
3. Toluene
4. Ethylbenzene
5. Total xylenes
6. Methyl-tert butyl ether (MtBE)
7. Ter-butyl alcohol (TBA)
8. Ter amyl methyl ether (TAME)
9. Other VOCs (Volatile Organic Compounds)

Groundwater samples will be collected and analyzed for the above pollutants and results will be submitted to the EBMUD as soon as they become available.

APPENDIX I

MPE EVENT FIELD DATA SHEETS



ENVIRONMENTAL ENGINEERING, INC.
 5620 Owens Drive, Suite A - Pleasanton, CA 94588
 TEL: (925) 734-6900 FAX: (925) 734-6902

ADDRESS: 2200 Telegraph Ave, Oakland
 PROJECT #: 6465

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
		Begin extraction using EX-1, EX-2, nd EX-3								
9/14/2017	1300	1460	174	25	26	54	0	54	17	0
	1400	1370	179	18	22	117	0	117	12	
	1500	1355	179	18	22	117	0	117	9	15
	1600	1350	179	17	21	133	0	133	10	
		System shut down & restart on 9/19/17 @ 830AM								
9/19/2017	900	1610	172	23	22.8	104	0	104	11	
	1000	1615	173	23	22.8	104	0	104	12	42
	1100	1615	173	23	22.8	104	0	104	12	
	1200	1615	173	23	22.8	104	0	104	12	
		System shut down & restart on 9/21/17 @ 930AM								
9/21/2017	1000	1685	172	22.2	23	101	0	101	24	132
	1100	1680	173	22.2	23.3	96	0	96	12	
	1200	1670	173	22	23.5	93	0	93	10	
	1300	1585	172	22.1	23.5	93	0	93	11	
	1400	1480	172	22.1	23.5	93	0	93	22	762
	1500	1470	174	17.5	22.3	112	0	112	22	882
9/22/2017	1000	1495	172	21	24.8	73	35	38		1,172
		System shut down & restart on 9/24/17 @ 1300								
9/24/2017	1300	Switched vapor extraction to EX-3 only; pumping water from EX-1								
	1400	1501	176	21	25.1	68	5	63	657	2,583
	1500	1520	176	21.2	24.8	73	5	68	727	2,853



ENVIRONMENTAL ENGINEERING, INC.
 5620 Owens Drive, Suite A - Pleasanton, CA 94588
 TEL: (925) 734-6900 FAX: (925) 734-6902

ADDRESS: 2200 Telegraph Ave, Oakland
 PROJECT #: 6465

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1600	1531	177	21.3	24.9	71	5	66	745	3,122
	1700	1470	178	21.2	24.8	73	5	68	989	
System shut down & restart on 9/25/17 @ 0845AM										
9/25/2017	900	1449	172	16.1	20.2	146	5	141	712	4,920
	1000	1600	173	21.5	25.1	68	5	63	1890	5,282
	1100	1580	173	21.7	25.1	68	5	63	2220	5,702
	1200	1585	175	21.5	23.3	96	5	91	2110	
	1300	1580	176	22	24	85	5	80	1980	6,263
	1400	1603	177	22	24	85	5	80	1995	
	1500	1601	178	21.3	25	70	5	65	2010	6,723
	1600	1585	178	21.2	23	101	5	96	1857	7,032
	1700	1620	177	22.1	23.1	100	5	95	1955	
System shut down & restart on 9/26/17 @ 0845AM										
9/26/2017	900	1455	173	19.1	23	101	5	96	117	8,482
	1000	1464	175	19.1	23	101	5	96	144	
	1100	1477	177	18.7	22.8	104	5	99	178	
	1200	1452	179	18	23	101	5	96	79	8,753
	1300	1455	179	17.8	22.7	106	5	101	72	
	1400	1472	180	17.6	22.4	111	5	106	76	
	1500	1466	180	17.5	22.2	114	5	109	81	9,152
	1600	1462	181	17.7	22.5	109	5	104	84	



ENVIRONMENTAL ENGINEERING, INC.
 5620 Owens Drive, Suite A - Pleasanton, CA 94588
 TEL: (925) 734-6900 FAX: (925) 734-6902

ADDRESS: 2200 Telegraph Ave, Oakland
 PROJECT #: 6465

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1700	1460	181	18	22.7	106	5	101	90	
	1830	1461	180	18	22.5	109	5	104	87	9,552
System shut down & restart on 9/27/17 @ 0845AM										
9/27/2017	845	Extraction from EX-1, EX-2, and EX-3								
	900	1457	173	11.2	20.1	147	0	147	970	11,743
	1000	1465	176	11.3	20.2	146	0	146	945	12,073
	1100	1450	178	11.3	19.8	152	0	152	871	12,392
	1200	1452	179	11.1	19.5	157	0	157	841	12,752
	1300	1461	179	11.1	19.2	162	0	162	845	
	1400	1462	178	11	19	165	0	165	847	13,352
	1500	1445	177	10.8	18.8	168	0	168	819	
	1600	1464	177	10.8	18.6	171	0	171	788	
	1700	1475	176	10.7	18.6	171	0	171	767	14,223
9/28/2017	800	1401	173	10.3	18.8	168	0	168	478	18,231
	900	1400	174	9.8	18.1	179	0	179	372	18,397
	1000	1400	176	10.2	18.2	177	0	177	200	18,511
	1100	1436	176	9.8	18.9	166	0	166	329	18,729
	1200	1433	176	9.5	18.9	166	0	166	380	18,915
	1300	1448	176	10.5	19	165	0	165	415	19,003
	1800	1448	174	15	22	117	0	117	500	19,593
9/29/2017	800	1400	170	9	18	181	0	181	270	22,538
	900	1455	173	8.6	17.9	182	0	182	260	22,572



ENVIRONMENTAL ENGINEERING, INC.
 5620 Owens Drive, Suite A - Pleasanton, CA 94588
 TEL: (925) 734-6900 FAX: (925) 734-6902

ADDRESS: 2200 Telegraph Ave, Oakland
 PROJECT #: 6465

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1000	1458	175	9.4	18	181	0	181	206	22,743
	1100	1433	176	8.4	17.9	182	0	182	218	22,942
	1200	1436	175	8.7	17.9	182	0	182	220	23,172
	1300	1440	176	8.8	18	181	0	181	230	23,413
	1400	1456	173	9.8	18	181	0	181	242	23,473
	1500	1450	174	8.8	18	181	0	181	240	23,563
System shut down & restart on 10/2/17 @ 0830AM										
10/2/2017	900	1473	172	9.8	18.6	171	0	171	132	23,793
	1000	1450	176	8.2	18	181	0	181	150	24,062
	1100	1450	175	8	17.8	184	0	184	155	24,282
	1200	1465	176	9	18.2	177	0	177	177	24,512
	1300	1470	177	8	17.6	187	0	187	186	24,753
	1400	1463	176	9	18	181	0	181	181	24,972
	1500	1458	176	8.2	17.8	184	0	184	189	25,183
10/3/2017	800	1400	171	0	22.5	109	0	109	96	28,722
	900	1400	170	0	23	101	0	101	90	28,822
Extraction from EX-2 only										
	1000	1400	171	17.1	23.5	93	0	93	117	28,882
	1100	1528	172	19.4	25.2	66	0	66	200	28,972
	1200	1539	172	17.1	24	85	0	85	225	29,052
	1300	1490	174	19	25.1	68	0	68	170	29,122
	1400	1472	174	19.2	25.2	66	0	66	176	29,192



ENVIRONMENTAL ENGINEERING, INC.
 5620 Owens Drive, Suite A - Pleasanton, CA 94588
 TEL: (925) 734-6900 FAX: (925) 734-6902

ADDRESS: 2200 Telegraph Ave, Oakland
 PROJECT #: 6465

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1500	1452	175	19.2	25	70	0	70	140	29,272
	1600	1478	174	19.5	25.2	66	0	66	130	29,342
	1700	1471	174	19.5	25.2	66	0	66	128	29,402
		System shut down & restart on 10/4/17 @ 0830AM								
10/4/2017	830	Vapor extraction from EX-3 only; pumping water from EX-1								
	900	1554	168	20.2	25.4	63	0	63	291	30,722
	1000	1550	172	20	25.8	57	0	57	270	30,742
	1100	1510	171	21.8	26	54	0	54	417	30,772
	1200	1609	171	27	27	38	0	38	440	30,802
	1300	1606	172	21.9	27	38	0	38	435	30,832
	1400	1600	171	21	27	38	0	38	430	30,853
	1500	1611	172	21.9	27	38	0	38	465	30,882
	1600	1593	174	21.8	27	38	0	38	468	30,912
	1700	1580	172	21.5	26.8	41	0	41	465	30,932
10/5/2017	800	1570	169	21.4	25.5	62	0	62	422	31,162
	900	1560	170	21.4	26.4	47	0	47	415	31,422
	1000	1551	172	21.4	26.4	47	0	47	445	31,562
	1100	1471	175	19.3	25.2	66	0	66	555	31,762
	1200	1468	175	19.1	25.2	66	0	66	470	31,922
	1300	1483	175	18.9	24.9	71	0	71	650	32,242
	1400	1550	173	20.1	25.2	66	0	66	550	32,482
	1500	1481	177	18.9	24.9	71	0	71	555	32,572



ENVIRONMENTAL ENGINEERING, INC.
 5620 Owens Drive, Suite A - Pleasanton, CA 94588
 TEL: (925) 731-6900 FAX: (925) 731-6902

ADDRESS: 2200 Telegraph Ave, Oakland
 PROJECT #: 6465

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
10/6/2017	800	1497	171	18.8	24.9	71	0	71	580	36,192
	900	1512	172	19	24.9	71	0	71	645	36,342
	1000	1483	175	19	25	70	0	70	619	36,492
	1100	1487	175	19	25.2	66	0	66	700	36,732
	1200	1473	175	18.9	26	54	0	54	640	36,932
	1300	1471	178	18.8	25	70	0	70	705	37,132
	1400	1461	178	18.8	24.8	73	0	73	709	37,342
	1500	1465	178	18.5	24.8	73	0	73	700	37,562
	1600	1476	177	19	25	70	0	70	668	37,732
		System shut down @ 1900 & restart on 10/10/17 @ 0830AM								
		Extraction from EX-1, EX-2, and EX-3								
10/10/2017	900	1470	168	13.8	18.5	173	0	173	328	45,202
	1000	1453	173	17.8	21	133	0	133	505	45,562
	1100	1438	175	16.1	25	70	0	70	500	45,692
	1200	1477	177	16	20	149	0	149	490	45,932
	1300	1435	178	16.2	20.9	135	0	135	462	46,192
	1400	1476	179	15.8	19.9	150	0	150	441	46,342
	1500	1432	176	15.5	20	149	0	149	442	46,592
	1600	1480	175	15.5	19.8	152	0	152	402	46,752
	1700	1478	175	17	20.5	141	0	141	410	46,922
10/11/2017	1200	1455	173	15.1	20.1	147	0	147	229	48,082
	1300	1433	176	15.9	20.4	142	0	142	260	48,312



ENVIRONMENTAL ENGINEERING, INC.
 5620 Owens Drive, Suite A - Pleasanton, CA 94588
 TEL: (925) 734-6900 FAX: (925) 734-6902

ADDRESS: 2200 Telegraph Ave, Oakland
 PROJECT #: 6465

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1400	1435	175	17	21	133	0	133	280	48,552
	1500	1436	175	15.9	20.1	147	0	147	285	48,753
10/12/2017	800	1400	173	19	23.2	98	0	98	310	51,922
	900	1400	174	18.9	23.6	92	0	92	295	52,062
		Vapor extraction from EX-2 only; pumping water from EX-1								
	1000	1430	176	18.5	22.3	112	0	112	298	52,157
	1100	1450	177	18.4	22.1	116	0	116	380	52,292
	1200	1479	177	18.2	22.6	108	0	108	365	52,392
	1300	1435	178	18	22.5	109	0	109	390	52,402
	1400	1460	179	16.8	22.5	109	0	109	330	52,442
	1500	1430	179	16.5	21.6	123	0	123	325	52,462
	1600	1479	178	16.6	21.4	127	0	127	348	52,492
	1700	1480	178	17	21.5	125	0	125	310	52,532
		Extraction from EX-1 and EX-2								
10/13/2017	800	1400	172	18	22.3	112	0	112	195	53,482
	900	1400	173	18	22.1	116	0	116	198	53,512
	1000	1400	175	17.9	22	117	0	117	192	53,562
	1100	1400	176	15.9	21.1	131	0	131	225	53,612
	1200	1400	178	17.9	22	117	0	117	245	53,702
	1300	1400	177	17.9	22.3	112	0	112	240	53,722
	1400	1400	179	17.9	21.2	130	0	130	250	53,762
	1500	1400	179	17.8	22	117	0	117	252	53,842



ENVIRONMENTAL ENGINEERING, INC.
5620 Owens Drive, Suite A - Pleasanton, CA 94588
TEL: (925) 734-4500 FAX: (925) 734-4502

ADDRESS: 2200 Telegraph Ave, Oakland

PROJECT #: 6465

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1600	1400	178	17.9	22.1	116	0	116	235	53,912
	1700	1400	179	15.8	21	133	0	133	209	53,952
		End Extraction								



SITE ADDRESS: 2200 Telegraph Ave, Oakland
PROJECT #: 6465

MTS MONITORING POINT DATA

DATE	TIME	WELL ID EX-1		WELL ID EX-2		WELL ID EX-3		WELL ID OB-2		WELL ID OB-4		WELL ID OB-5	
		GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)
9/21/2017	1100	16.8		21.1		13.69		10.7		10.81		10.75	
	1600	17.71		21.16		19.27		10.78		10.84		10.81	
		Extraction Well (water only)				Extraction Well							
9/24/2017	1300	22.5	-	12.15	0	22.4	-	10.58	0.1	10.7	0.1	10.58	0.12
	1430	22.5	0.05	12.16	0	23.5	21	10.94	0.11	11	0.12	10.98	0.13
	1630	22.5	0.05	12.56	0	23.15	21.3	11	0.11	11.03	0.13	11.01	0.14
9/25/2017	900	22.55	0.1	10.38	0.15	22.91	16.1	10.87	0.1	10.96	0.1	10.9	0.1
	1100	22.72	0.1	12.57	0.2	23.1	21.7	11.08	0.1	11.1	0.12	11.05	0.12
	1300	23	0.1	12.65	0.2	23.5	22	11.15	0.06	11.17	0.12	11.14	0.2
9/26/2017	930	22.02	0.2	13.06	0.6	22.17	19.1	10.65	0.04	10.67	0.1	10.65	0.1
	1200	22.1	0.2	12.57	0.03	22.92	18	10.7	0.04	10.74	0.08	10.71	0.08
9/29/2017	1200	Extraction Well		Extraction Well		Extraction Well		11	0.04	11.05	0.1	11.05	0.4
	1300	-	8.8	-	8.8	-	8.8	11.1	0.1	11.1	0.1	11.08	0.3
	1500	-	8.8	-	8.8	-	8.8	11	0.09	11.05	0.1	11.07	0.3
10/2/2017	900							10.9	0.12	10.98	0.2	10.9	0.4
	1100							10.9	0.1	11.08	0.14	11.4	0.6
	1300							11.2	0.1	11.1	0.15	11.3	0.4
	1500							11.3	0.1	11.15	0.22	11.8	0.4



SITE ADDRESS: 2200 Telegraph Ave, Oakland
PROJECT #: 6465

MTS MONITORING POINT DATA

DATE	TIME	WELL ID EX-1		WELL ID EX-2		WELL ID EX-3		WELL ID OB-2		WELL ID OB-4		WELL ID OB-5	
		GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)
10/3/2017	900							10.9	0.1	10.9	0.1	10.9	0.5
	1100			Extraction Well				10.85	0.1	10.86	0.1	10.82	0.4
	1300			-	19			10.85	0.01	10.82	0.01	10.82	0.03
	1500			-	19.2			10.8	0.01	10.8	0.01	10.8	0.03
	1700			-	19.5			10.8	0.01	10.8	0.01	10.8	0.03
10/4/2017	900	Extraction Well (water only)				Extraction Well		10.95	0.09	10.96	0.11	10.96	0.3
	1300					-	21.9	10.9	0.09	10.97	0.13	10.91	0.3
	1600					-	21.8	10.9	0.12	10.94	0.16	10.91	0.3
10/5/2017	900	22.25		19.61	-	22.1	21.4	10.9	0.12	10.94	0.2	10.92	0.3
	1300	22.3		19.6	-	22.2	18.9	10.91	0.12	10.92	0.2	10.9	0.3
	1500	22.88		20.15	-	22.1	18.9	10.9	0.12	10.91	0.2	10.9	0.3
10/6/2017	900	21.6		20.2	-	23.4	19	11.2	0.12	11.25	0.35	11.22	0.4
	1300	21.4		20.2	-	23.3	18.8	11.1	0.12	11.22	0.32	11.2	0.4
	1600	21.6		20.56	-	23.2	19	11.23	0.14	11.28	0.3	11.22	0.45
10/9/2017	900	21.5		20.32	-	23.1	-	10.87	0.12	10.9	0.1	10.9	0.3
		Extraction Well		Extraction Well		Extraction Well							
10/10/2017	900	22.3	13.8	22.5	13.8	23.15	13.8	11.13	0.1	11.2	0.27	11.18	0.3
	1300	22.1	16.2	22.2	16.2	23.1	16.2	11.1	0.11	11.1	0.22	11.16	0.3
	1600	22.3	15.5	22.1	15.5	23	15.5	11.2	0.1	11.22	0.3	11.2	0.35



SITE ADDRESS: 2200 Telegraph Ave, Oakland
PROJECT #: 6465

MTS MONITORING POINT DATA

DATE	TIME	WELL ID EX-1		WELL ID EX-2		WELL ID EX-3		WELL ID OB-2		WELL ID OB-4		WELL ID OB-5	
		GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)	GW ELEVATION (FEET BELOW TOC)	VACCUM (IN WATER)
10/11/2017	1200	22.4	15.1	22.2	15.1	23.2	15.1	11.1	0.11	11.21	0.32	11.14	0.35
	1500	22.3	15.9	22.2	15.9	23.1	15.9	11.15	0.1	11.2	0.22	11.2	0.35
		Extraction Well		Extraction Well									
10/12/2017	900	22.1	18.9	22.2	18.9	11.25	-	11.17	0.01	11.18	0.01	11.11	0.03
	1300	22	18	22.2	18	11.2	-	11.16	0.01	11.15	0.01	11.1	0.03
	1600	22.1	16.6	22.1	16.6	10.82	-	10.81	0.01	10.8	0.01	10.83	0.03
10/13/2017	900	22	18	22.1	18	10.95	-	10.72	0.01	10.75	0.01	10.8	0.03
	1300	22	17.9	22.1	17.9	10.95	-	10.73	0.01	10.77	0.01	10.79	0.03
	1600	22	15.8	22.1	15.8	10.94	-	10.72	0.01	10.76	0.01	10.75	0.03

APPENDIX J

MPE LABORATORY REPORTS AND CHAIN OF CUSTODY FORM



Enthalpy Analytical

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

Laboratory Job Number 292015
ANALYTICAL REPORT

SOMA Environmental Engineering Inc. 6620 Owens Dr. Pleasanton, CA 94588	Project : 6465 Location : 2200 Telegraph Ave, Oakland Level : II
---	--

Sample ID
EFFLUENT

Lab ID
292015-001

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

Signature: _____

Date: 09/06/2017

Dina Ali
Project Manager
dina.ali@enthalpy.com
(510) 204-2223 Ext 13105

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 292015
Client: SOMA Environmental Engineering Inc.
Project: 6465
Location: 2200 Telegraph Ave, Oakland
Request Date: 08/31/17
Samples Received: 08/31/17

This data package contains sample and QC results for one water sample, requested for the above referenced project on 08/31/17. The sample was received on ice and intact.

Volatile Organics by GC/MS (EPA 8260B):

EFFLUENT (lab # 292015-001) had pH greater than 2. No other analytical problems were encountered.

Metals (EPA 6010B and EPA 7470A):

No analytical problems were encountered.

Total Oil & Grease (HEM) (EPA 1664A):

Matrix spikes were not performed for this analysis due to insufficient sample volume. No analytical problems were encountered.

CHAIN OF CUSTODY

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

Analyses

LOGIN # 292015

Sampler: Davoud Bazrpash

Project No: 6465

Report To: Joyce Bobek

Project Name: 2200 Telegraph Ave, Oakland

Company: SOMA Environmental

Turnaround Time: RUSH - 3 day

Telephone: 925-734-6400


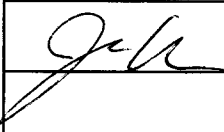
Fax: 925-734-6401

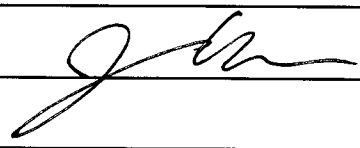
Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				TPH-g, BTEX, MtBE (full VOC list 8260B)	Gasoline Oxygenates 8260B	Oil and Grease (OGHC)	CAM-17 Metals	
			Soil	Water	Waste		HCL	H ₂ SO ₄	HNO ₃	ICE					
	EFFLUENT	8/29/17 11:35		*		4 VOAs	*			*					
		8/29/17 11:35		*		500 ml			*	*					
		8/29/17 11:35		*		1 L Amber	*			*					

Notes: EDF OUTPUT REQUIRED
 GasOx: DIPE, ETBE, TAME, TBA

RELINQUISHED BY:

RECEIVED BY:

8/31/17 10:12  DATE/TIME
 8/31 11:520 DATE/TIME
 DATE/TIME

 8-31-17 10:12 DATE/TIME
 DATE/TIME
 DATE/TIME

COOLER RECEIPT CHECKLIST



Login # 292015 Date Received 08/31/17 Number of coolers 1
 Client SOMA Environmental Project 6465

Date Opened 08/31/17 By (print) EHS (sign) [Signature]
 Date Logged in ↓ By (print) ↓ (sign) ↓
 Date Labelled ↓ By (print) ↓ (sign) ↓

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

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

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

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

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

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

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 3.8

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

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

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

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

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

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

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

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

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

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

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

17. Did you document your preservative check? (pH strip lot# 50840871) _____ YES NO N/A

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

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

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

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

COMMENTS (15) HNO₃ was added but pH did not adjust < 2, sample 1
(2017013053)
@ 17:15 on 08/31/17 by EHS

Enthalpy Berkeley Sample Preservation for 292015

<u>Sample</u>	<u>pH:</u>	<u><2</u>	<u>>9</u>	<u>>12</u>	<u>Other</u>
-001a		[]	[]	[]	_____
b		[]	[]	[]	_____
c		[]	[]	[]	_____
d		[]	[]	[]	<u>could not preserve</u>
e		[]	[]	[]	_____
f		[]	[]	[]	_____

Analyst: EHS

Date: 08/31/17

Detections Summary for 292015

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

Client : SOMA Environmental Engineering Inc.
 Project : 6465
 Location : 2200 Telegraph Ave, Oakland

Client Sample ID : EFFLUENT Laboratory Sample ID : 292015-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
tert-Butyl Alcohol (TBA)	290		10	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Acetone	12		10	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
2-Butanone	14		10	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Antimony	16		10	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Arsenic	15		10	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Barium	46		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Chromium	9.0		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	8.7		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Molybdenum	39		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Nickel	10		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Silver	7.8		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Vanadium	44		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	150		20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A

Purgeable Organics by GC/MS

Lab #: 292015	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6465	Analysis: EPA 8260B
Field ID: EFFLUENT	Batch#: 251233
Lab ID: 292015-001	Sampled: 08/29/17
Matrix: Water	Received: 08/31/17
Units: ug/L	Analyzed: 09/01/17
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	290	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Ethanol	ND	1,000
Acetone	12	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	14	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 292015	Location: 2200 Telegraph Ave, Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 6465	Analysis: EPA 8260B
Field ID: EFFLUENT	Batch#: 251233
Lab ID: 292015-001	Sampled: 08/29/17
Matrix: Water	Received: 08/31/17
Units: ug/L	Analyzed: 09/01/17
Diln Fac: 1.000	

Analyte	Result	RL
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-120
1,2-Dichloroethane-d4	117	73-136
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6465	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899304	Batch#:	251233
Matrix:	Water	Analyzed:	09/01/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Ethanol	ND	1,000
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6465	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899304	Batch#:	251233
Matrix:	Water	Analyzed:	09/01/17
Units:	ug/L		

Analyte	Result	RL
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-120
1,2-Dichloroethane-d4	111	73-136
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6465	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	251233
Units:	ug/L	Analyzed:	09/01/17
Diln Fac:	1.000		

Type: BS Lab ID: QC899305

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	800.0	908.3	114	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-120
1,2-Dichloroethane-d4	109	73-136
Toluene-d8	104	80-120
Bromofluorobenzene	104	80-120

Type: BSD Lab ID: QC899306

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	800.0	925.1	116	70-130	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-120
1,2-Dichloroethane-d4	108	73-136
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	6465	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	251233
Units:	ug/L	Analyzed:	09/01/17
Diln Fac:	1.000		

Type: BS Lab ID: QC899307

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	83.21	133	42-149
Isopropyl Ether (DIPE)	12.50	13.07	105	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	13.76	110	67-124
Methyl tert-Amyl Ether (TAME)	12.50	13.87	111	71-120
1,1-Dichloroethene	12.50	14.80	118	66-127
Benzene	12.50	13.60	109	78-123
Trichloroethene	12.50	13.93	111	75-120
Toluene	12.50	13.41	107	80-120
Chlorobenzene	12.50	13.18	105	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-120
1,2-Dichloroethane-d4	107	73-136
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

Type: BSD Lab ID: QC899308

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	80.93	129	42-149	3	38
Isopropyl Ether (DIPE)	12.50	12.53	100	57-128	4	20
Ethyl tert-Butyl Ether (ETBE)	12.50	13.45	108	67-124	2	20
Methyl tert-Amyl Ether (TAME)	12.50	13.27	106	71-120	4	20
1,1-Dichloroethene	12.50	13.39	107	66-127	10	20
Benzene	12.50	12.92	103	78-123	5	20
Trichloroethene	12.50	12.54	100	75-120	10	20
Toluene	12.50	12.70	102	80-120	5	20
Chlorobenzene	12.50	12.40	99	80-120	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-120
1,2-Dichloroethane-d4	108	73-136
Toluene-d8	103	80-120
Bromofluorobenzene	102	80-120

RPD= Relative Percent Difference

California Title 22 Metals			
Lab #:	292015	Project#:	6465
Client:	SOMA Environmental Engineering Inc.	Location:	2200 Telegraph Ave, Oakland
Field ID:	EFFLUENT	Diln Fac:	1.000
Lab ID:	292015-001	Sampled:	08/29/17
Matrix:	Water	Received:	08/31/17
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	16	10	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Arsenic	15	10	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Barium	46	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Chromium	9.0	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Copper	8.7	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Lead	ND	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Mercury	ND	0.20	251339	09/06/17	09/06/17	METHOD	EPA 7470A
Molybdenum	39	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Nickel	10	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Selenium	ND	10	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Silver	7.8	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Thallium	ND	10	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Vanadium	44	5.0	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B
Zinc	150	20	251193	08/31/17	09/01/17	EPA 3010A	EPA 6010B

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3010A
Project#:	6465	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC899147	Batch#:	251193
Matrix:	Water	Prepared:	08/31/17
Units:	ug/L	Analyzed:	09/01/17

Analyte	Result	RL
Antimony	ND	10
Arsenic	ND	10
Barium	ND	5.0
Beryllium	ND	2.0
Cadmium	ND	5.0
Chromium	ND	5.0
Cobalt	ND	5.0
Copper	ND	5.0
Lead	ND	5.0
Molybdenum	ND	5.0
Nickel	ND	5.0
Selenium	ND	10
Silver	ND	5.0
Thallium	ND	10
Vanadium	ND	5.0
Zinc	ND	20

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3010A
Project#:	6465	Analysis:	EPA 6010B
Matrix:	Water	Batch#:	251193
Units:	ug/L	Prepared:	08/31/17
Diln Fac:	1.000	Analyzed:	09/01/17

Type: BS Lab ID: QC899148

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	103.8	104	73-120
Arsenic	100.0	99.44	99	78-120
Barium	100.0	96.98	97	80-120
Beryllium	100.0	98.84	99	80-120
Cadmium	100.0	100.5	101	80-120
Chromium	100.0	103.0	103	80-120
Cobalt	100.0	93.43	93	79-120
Copper	100.0	98.65	99	80-120
Lead	100.0	102.8	103	77-120
Molybdenum	100.0	107.5	108	80-120
Nickel	100.0	94.58	95	80-120
Selenium	100.0	102.7	103	76-120
Silver	100.0	88.58	89	80-120
Thallium	50.00	52.52	105	80-126
Vanadium	100.0	101.1	101	80-120
Zinc	100.0	100.6	101	78-120

Type: BSD Lab ID: QC899149

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	102.3	102	73-120	1	21
Arsenic	100.0	97.62	98	78-120	2	20
Barium	100.0	96.13	96	80-120	1	20
Beryllium	100.0	97.44	97	80-120	1	20
Cadmium	100.0	99.41	99	80-120	1	20
Chromium	100.0	101.0	101	80-120	2	20
Cobalt	100.0	92.88	93	79-120	1	20
Copper	100.0	97.93	98	80-120	1	20
Lead	100.0	103.4	103	77-120	1	20
Molybdenum	100.0	105.4	105	80-120	2	20
Nickel	100.0	92.10	92	80-120	3	20
Selenium	100.0	100.8	101	76-120	2	20
Silver	100.0	86.89	87	80-120	2	23
Thallium	50.00	53.60	107	80-126	2	20
Vanadium	100.0	98.86	99	80-120	2	20
Zinc	100.0	99.08	99	78-120	2	26

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	6465	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	251339
Lab ID:	QC899675	Prepared:	09/06/17
Matrix:	Water	Analyzed:	09/06/17
Units:	ug/L		

Result	RL
ND	0.20

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	6465	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	251339
Matrix:	Water	Prepared:	09/06/17
Units:	ug/L	Analyzed:	09/06/17
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC899676	2.000	2.026	101	80-120		
BSD	QC899677	2.000	2.026	101	80-120	0	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	6465	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	251339
Field ID:	ZZZZZZZZZZ	Sampled:	08/29/17
MSS Lab ID:	292019-003	Received:	08/31/17
Matrix:	Water	Prepared:	09/06/17
Units:	ug/L	Analyzed:	09/06/17
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC899678	<0.04000	2.000	1.839	92	63-120		
MSD	QC899679		2.000	2.059	103	63-120	11	42

RPD= Relative Percent Difference

Total Oil & Grease (HEM)			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	6465	Analysis:	EPA 1664A
Analyte:	Oil & Grease (HEM)	Diln Fac:	1.000
Field ID:	EFFLUENT	Batch#:	251138
Matrix:	Water	Sampled:	08/29/17 11:35
Units:	mg/L	Received:	08/31/17

Type	Lab ID	Result	RL	MDL	Prepared	Analyzed
SAMPLE	292015-001	ND	5.00	1.70	08/31/17 15:57	08/31/17 18:00
BLANK	QC898903	ND	5.00	1.70	08/31/17 09:04	08/31/17 12:00

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Total Oil & Grease (HEM)			
Lab #:	292015	Location:	2200 Telegraph Ave, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	6465	Analysis:	EPA 1664A
Analyte:	Oil & Grease (HEM)	Batch#:	251138
Matrix:	Water	Prepared:	08/31/17 09:04
Units:	mg/L	Analyzed:	08/31/17 12:00
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC898904	40.00	37.70	94	78-114		
BSD	QC898905	40.00	37.10	93	78-114	2	18

RPD= Relative Percent Difference



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1710214

Report Created for: SOMA Environmental Engineering, Inc.

6620 Owens Drive, Ste. A
Pleasanton, CA 94588

Project Contact: Ruchi Mathur

Project P.O.: 6465

Project Name: 6465; Telegraph

Project Received: 10/05/2017

Analytical Report reviewed & approved for release on 10/11/2017 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: SOMA Environmental Engineering, Inc.
Project: 6465; Telegraph
WorkOrder: 1710214

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)

Analytical Qualifiers

H Samples were analyzed out of holding time



Glossary of Terms & Qualifier Definitions

Client: SOMA Environmental Engineering, Inc.
Project: 6465; Telegraph
WorkOrder: 1710214

Quality Control Qualifiers

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



Analytical Report

Client: SOMA Environmental Engineering, Inc.
Date Received: 10/5/17 11:45
Date Prepared: 10/7/17
Project: 6465; Telegraph

WorkOrder: 1710214
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
INF MPE	1710214-002A	Air	10/05/2017	GC38 10071719.D	146712

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Benzene	ND	H	1000	4	10/07/2017 19:39
Ethylbenzene	11,000	H	1000	4	10/07/2017 19:39
Methyl-t-butyl ether (MTBE)	ND	H	1000	4	10/07/2017 19:39
Toluene	ND	H	1000	4	10/07/2017 19:39
Xylenes, Total	13,000	H	1000	4	10/07/2017 19:39

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
Dibromofluoromethane	109	H	84-115	10/07/2017 19:39
Toluene-d8	104	H	86-112	10/07/2017 19:39
4-BFB	116	H	66-121	10/07/2017 19:39

Analyst(s): AK



Analytical Report

Client: SOMA Environmental Engineering, Inc.
Date Received: 10/5/17 11:45
Date Prepared: 10/9/17
Project: 6465; Telegraph

WorkOrder: 1710214
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³

TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
INF MPE	1710214-002A	Air	10/05/2017	GC10 10091714.D	146712

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g) (C6-C12)	1,600,000	H	250,000	10	10/09/2017 15:53

Surrogates	REC (%)	Qualifiers	Limits	
Dibromofluoromethane	102	H	70-130	10/09/2017 15:53

Analyst(s): KF



Analytical Report

Client: SOMA Environmental Engineering, Inc.
Date Received: 10/5/17 11:45
Date Prepared: 10/6/17
Project: 6465; Telegraph

WorkOrder: 1710214
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EFF MPE	1710214-001A	Air	10/05/2017	GC43 10051731.D	146703

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
NA	NA	HK

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	3600	H	1800	1	10/06/2017 16:55
Surrogates	REC (%)	Qualifiers	Limits		
1,2-DCA-d4	106	H	70-130		10/06/2017 16:55

 Angela Rydelius, Lab Manager



Analytical Report

Client: SOMA Environmental Engineering, Inc.
Date Received: 10/5/17 11:45
Date Prepared: 10/6/17
Project: 6465; Telegraph

WorkOrder: 1710214
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EFF MPE	1710214-001A	Air	10/05/2017	GC43 10051731.D	146703

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
NA	NA	HK

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Benzene	ND	H	6.5	1	10/06/2017 16:55
Ethylbenzene	ND	H	8.8	1	10/06/2017 16:55
Methyl-t-butyl ether (MTBE)	ND	H	7.3	1	10/06/2017 16:55
Toluene	8.6	H	7.6	1	10/06/2017 16:55
Xylenes, Total	ND	H	27	1	10/06/2017 16:55
Surrogates	REC (%)	Qualifiers	Limits		Date Analyzed
1,2-DCA-d4	110	H	70-130		10/06/2017 16:55
Toluene-d8	96	H	70-130		10/06/2017 16:55
4-BFB	115	H	70-130		10/06/2017 16:55

 Angela Rydelius, Lab Manager



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/7/17
Date Analyzed: 10/7/17
Instrument: GC38
Matrix: Air
Project: 6465; Telegraph

WorkOrder: 1710214
BatchID: 146712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-146712

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
tert-Amyl methyl ether (TAME)	ND	250	-	-	-
Benzene	ND	250	-	-	-
Bromobenzene	ND	250	-	-	-
Bromochloromethane	ND	250	-	-	-
Bromodichloromethane	ND	250	-	-	-
Bromoform	ND	250	-	-	-
Bromomethane	ND	250	-	-	-
t-Butyl alcohol (TBA)	ND	2500	-	-	-
n-Butyl benzene	ND	250	-	-	-
sec-Butyl benzene	ND	250	-	-	-
tert-Butyl benzene	ND	250	-	-	-
Carbon Disulfide	ND	250	-	-	-
Carbon Tetrachloride	ND	250	-	-	-
Chlorobenzene	ND	250	-	-	-
Chloroethane	ND	250	-	-	-
Chloroform	ND	250	-	-	-
Chloromethane	ND	250	-	-	-
2-Chlorotoluene	ND	250	-	-	-
4-Chlorotoluene	ND	250	-	-	-
Dibromochloromethane	ND	250	-	-	-
1,2-Dibromo-3-chloropropane	ND	250	-	-	-
1,2-Dibromoethane (EDB)	ND	250	-	-	-
Dibromomethane	ND	250	-	-	-
1,2-Dichlorobenzene	ND	250	-	-	-
1,3-Dichlorobenzene	ND	250	-	-	-
1,4-Dichlorobenzene	ND	250	-	-	-
Dichlorodifluoromethane	ND	250	-	-	-
1,1-Dichloroethane	ND	250	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	250	-	-	-
1,1-Dichloroethene	ND	250	-	-	-
cis-1,2-Dichloroethene	ND	250	-	-	-
trans-1,2-Dichloroethene	ND	250	-	-	-
1,2-Dichloropropane	ND	250	-	-	-
1,3-Dichloropropane	ND	250	-	-	-
2,2-Dichloropropane	ND	250	-	-	-
1,1-Dichloropropene	ND	250	-	-	-
cis-1,3-Dichloropropene	ND	250	-	-	-
trans-1,3-Dichloropropene	ND	250	-	-	-
Diisopropyl ether (DIPE)	ND	250	-	-	-

(Cont.)



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/7/17
Date Analyzed: 10/7/17
Instrument: GC38
Matrix: Air
Project: 6465; Telegraph

WorkOrder: 1710214
BatchID: 146712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-146712

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Ethylbenzene	ND	250	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	250	-	-	-
Freon 113	ND	5000	-	-	-
Hexachlorobutadiene	ND	250	-	-	-
Hexachloroethane	ND	250	-	-	-
2-Hexanone	ND	250	-	-	-
Isopropylbenzene	ND	250	-	-	-
4-Isopropyl toluene	ND	250	-	-	-
Methyl-t-butyl ether (MTBE)	ND	250	-	-	-
Methylene chloride	ND	250	-	-	-
n-Propyl benzene	ND	250	-	-	-
Styrene	ND	250	-	-	-
1,1,1,2-Tetrachloroethane	ND	250	-	-	-
1,1,2,2-Tetrachloroethane	ND	250	-	-	-
Tetrachloroethene	ND	250	-	-	-
Toluene	ND	250	-	-	-
1,2,3-Trichlorobenzene	ND	250	-	-	-
1,2,4-Trichlorobenzene	ND	250	-	-	-
1,1,1-Trichloroethane	ND	250	-	-	-
1,1,2-Trichloroethane	ND	250	-	-	-
Trichloroethene	ND	250	-	-	-
Trichlorofluoromethane	ND	250	-	-	-
1,2,3-Trichloropropane	ND	250	-	-	-
1,2,4-Trimethylbenzene	ND	250	-	-	-
1,3,5-Trimethylbenzene	ND	250	-	-	-
Vinyl Chloride	ND	250	-	-	-
Xylenes, Total	ND	250	-	-	-

Surrogate Recovery

Dibromofluoromethane	13740		12500	110	79-131
Toluene-d8	12970		12500	104	81-124
4-BFB	1432		1250	115	74-128

(Cont.)



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/7/17
Date Analyzed: 10/7/17
Instrument: GC38
Matrix: Air
Project: 6465; Telegraph

WorkOrder: 1710214
BatchID: 146712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB/LCS/LCSD-146712

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	4160	3980	5000	83	80	65-113	4.61	30
Benzene	4050	4160	5000	81	83	74-118	2.73	30
t-Butyl alcohol (TBA)	17,200	15,600	20000	86	78	30-117	9.89	30
Chlorobenzene	4120	4140	5000	82	83	72-107	0.274	30
1,2-Dibromoethane (EDB)	4170	3940	5000	83	79	68-110	5.76	30
1,2-Dichloroethane (1,2-DCA)	4180	4020	5000	83	80	68-115	3.85	30
1,1-Dichloroethene	4650	4870	5000	93	97	58-127	4.64	30
Diisopropyl ether (DIPE)	4260	4190	5000	85	84	72-119	1.64	30
Ethyl tert-butyl ether (ETBE)	4240	4100	5000	85	82	70-118	3.61	30
Methyl-t-butyl ether (MTBE)	4120	3890	5000	82	78	65-125	5.52	30
Toluene	3950	4070	5000	79	81	70-112	2.93	30
Trichloroethene	3890	4030	5000	78	81	73-117	3.58	30
Xylenes, Total	11,800	11,900	15000	79	79	70-109	0	30
Surrogate Recovery								
Dibromofluoromethane	13,700	13,700	12500	110	110	79-131	0	30
Toluene-d8	12,900	12,900	12500	103	103	81-124	0	30
4-BFB	1480	1470	1250	118	118	74-128	0	30



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/9/17
Date Analyzed: 10/9/17
Instrument: GC10
Matrix: Air
Project: 6465; Telegraph

WorkOrder: 1710214
BatchID: 146712
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/m³
Sample ID: MB-146712

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	25,000	-	-	-
Surrogate Recovery					
Dibromofluoromethane	12460		12500	100	70-130



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/5/17 - 10/6/17
Date Analyzed: 10/5/17 - 10/6/17
Instrument: GC43
Matrix: Tedlar
Project: 6465; Telegraph

WorkOrder: 1710214
BatchID: 146703
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-146703

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	75.4	12	60	-	126	60-140
Acrolein	ND	48.6	5.8	58.25	-	83	60-140
Acrylonitrile	ND	49.3	4.4	55	-	90	60-140
tert-Amyl methyl ether (TAME)	ND	106	8.5	105	-	100	60-140
Benzene	ND	63.9	6.5	80	-	80	60-140
Benzyl chloride	ND	107	11	132.5	-	81	60-140
Bromodichloromethane	ND	170	14	175	-	97	60-140
Bromoform	ND	264	21	262.5	-	100	60-140
Bromomethane	ND	69.7	7.9	97.5	-	71	60-140
1,3-Butadiene	ND	28.3	4.5	55	-	52, F2	60-140
2-Butanone (MEK)	ND	65.7	15	75	-	88	60-140
t-Butyl alcohol (TBA)	ND	77.4	16	77.5	-	100	60-140
Carbon Disulfide	ND	78.5	6.3	80	-	98	60-140
Carbon Tetrachloride	ND	168	13	160	-	105	60-140
Chlorobenzene	ND	109	9.4	117.5	-	93	60-140
Chloroethane	ND	60.2	5.4	67	-	90	60-140
Chloroform	ND	114	9.9	122.5	-	93	60-140
Chloromethane	ND	54.9	4.2	52.5	-	105	60-140
Cyclohexane	ND	85.4	18	87.5	-	98	60-140
Dibromochloromethane	ND	219	17	217	-	101	60-140
1,2-Dibromo-3-chloropropane	ND	206	20	245	-	84	60-140
1,2-Dibromoethane (EDB)	ND	171	16	195	-	87	60-140
1,2-Dichlorobenzene	ND	158	12	152.5	-	103	60-140
1,3-Dichlorobenzene	ND	158	12	152.5	-	104	60-140
1,4-Dichlorobenzene	ND	141	12	152.5	-	92	60-140
Dichlorodifluoromethane	ND	132	10	125	-	105	60-140
1,1-Dichloroethane	ND	98.1	8.2	102.5	-	96	60-140
1,2-Dichloroethane (1,2-DCA)	ND	103	8.2	102.5	-	101	60-140
1,1-Dichloroethene	ND	90.5	8.1	100	-	91	60-140
cis-1,2-Dichloroethene	ND	95.7	8.1	100	-	96	60-140
trans-1,2-Dichloroethene	ND	92.9	8.1	100	-	93	60-140
1,2-Dichloropropane	ND	95.6	9.4	117.5	-	81	60-140
cis-1,3-Dichloropropene	ND	117	9.2	115	-	101	60-140
trans-1,3-Dichloropropene	ND	115	9.2	115	-	100	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	149	14	177.5	-	84	60-140
Diisopropyl ether (DIPE)	ND	93.5	8.5	105	-	89	60-140
1,4-Dioxane	ND	80.2	7.3	92.5	-	87	60-140

(Cont.)

 QA/QC Officer



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/5/17 - 10/6/17
Date Analyzed: 10/5/17 - 10/6/17
Instrument: GC43
Matrix: Tedlar
Project: 6465; Telegraph

WorkOrder: 1710214
BatchID: 146703
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-146703

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethanol	ND	32.8	9.6	47.5	-	69	60-140
Ethyl acetate	ND	85.2	19	92.5	-	92	60-140
Ethyl tert-butyl ether (ETBE)	ND	108	8.5	105	-	103	60-140
Ethylbenzene	ND	110	8.8	110	-	100	60-140
4-Ethyltoluene	ND	143	10	125	-	115	60-140
Freon 113	ND	179	16	195	-	92	60-140
Heptane	ND	97.4	21	105	-	93	60-140
Hexachlorobutadiene	ND	172	22	270	-	64	60-140
Hexane	ND	94.9	18	90	-	105	60-140
2-Hexanone	ND	90.6	21	105	-	86	60-140
4-Methyl-2-pentanone (MIBK)	ND	94.8	8.3	105	-	90	60-140
Methyl-t-butyl ether (MTBE)	ND	96.7	7.3	92.5	-	105	60-140
Methylene chloride	ND	77.5	7.1	87.5	-	89	60-140
Propene	ND	44.2	8.8	42.5	-	104	60-140
Styrene	ND	97.5	8.6	107.5	-	91	60-140
1,1,1,2-Tetrachloroethane	ND	157	14	175	-	90	60-140
1,1,2,2-Tetrachloroethane	ND	145	14	175	-	83	60-140
Tetrachloroethene	ND	167	14	175.5	-	95	60-140
Tetrahydrofuran	ND	73.1	6.0	75	-	97	60-140
Toluene	ND	89.7	7.6	95	-	94	60-140
1,2,4-Trichlorobenzene	ND	165	15	187.5	-	88	60-140
1,1,1-Trichloroethane	ND	150	11	137.5	-	109	60-140
1,1,2-Trichloroethane	ND	120	11	137.5	-	87	60-140
Trichloroethene	ND	118	11	137.5	-	85	60-140
Trichlorofluoromethane	ND	151	11	142.5	-	106	60-140
1,2,4-Trimethylbenzene	ND	146	10	125	-	117	60-140
1,3,5-Trimethylbenzene	ND	136	10	125	-	109	60-140
Vinyl Acetate	ND	112	18	90	-	124	60-140
Vinyl Chloride	ND	35.7	5.2	65	-	55, F2	60-140
Xylenes, Total	ND	316	27	330	-	96	60-140
Surrogate Recovery							
1,2-DCA-d4	538.6	557		500	108	111	60-140
Toluene-d8	487.3	477		500	97	95	60-140
4-BFB	537.3	546		500	107	109	60-140

 QA/QC Officer



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

WaterTrax WriteOn EDF

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1710214

ClientCode: SOMA

Excel EQulS Email HardCopy ThirdParty J-flag
 Detection Summary Dry-Weight

Report to:

Ruchi Mathur
SOMA Environmental Engineering, Inc.
6620 Owens Drive, Ste. A
Pleasanton, CA 94588
(925) 734-6400 FAX: (925) 734-6401

Email: rmathur@somaenv.com
cc/3rd Party:
PO: 6465
ProjectNo: 6465; Telegraph

Bill to:

Joyce Bobek
SOMA Environmental Engineering, Inc.
6620 Owens Drive, Ste. A
Pleasanton, CA 94588
jbobek@somaenv.com

Requested TAT: 5 days;

Date Received: 10/05/2017

Date Logged: 10/05/2017

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	
1710214-001	EFF MPE	Air	10/5/2017 00:00	<input type="checkbox"/>	A	A	A	A	A	A	A	A					
1710214-002	INF MPE	Air	10/5/2017 00:00	<input type="checkbox"/>	A	A		A	A	A	A						

Test Legend:

1	8260B_A(UG/M3)	2	8260GAS_A(UG/M3)	3	PREFD REPORT	4	TO15_HIGHLEVEL_TEDLAR(UG/M3)
5	TO15_TEDLAR(UG/M3) [N]	6	TO15GAS_TEDLAR(UG/M3)	7	TO15-LC_TEDLAR(UG/M3) [N]	8	
9		10		11		12	

Project Manager: Heidi Fruhlinger

Prepared by: Tina Perez

The following SamplIDs: 001A, 002A contain testgroup TO15+GAS_TEDLAR.

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: SOMA ENVIRONMENTAL ENGINEERING, INC. **Project:** 6465; Telegraph
Client Contact: Ruchi Mathur
Contact's Email: rmathur@somaenv.com

Work Order: 1710214
QC Level:
Date Logged: 10/5/2017

Comments:

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
1710214-001A	EFF MPE	Air	TO15 + TPHgas for Tedlar	1	Tedlar	<input type="checkbox"/>	10/5/2017	5 days		<input type="checkbox"/>	
1710214-002A	INF MPE	Air	TO15 + TPHgas for Tedlar	1	Tedlar	<input type="checkbox"/>	10/5/2017	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.

McCAMPBELL ANALYTICAL, INC.
 1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701
 Telephone: (877) 252-9262 / Fax: (925) 252-9269
 www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush	2 Day Rush	3 Day Rush	STD <input checked="" type="radio"/>	Quote # 7158
J-Flag / MDL	ESL	Cleanup Approved	Bottle Order #	
Delivery Format: PDF <input checked="" type="radio"/>	GeoTracker EDF <input checked="" type="radio"/>	EDD	Write On (DW)	EQulS

Report To: Ruchi Mathur Bill To: Joyce Bobek
 Company: SOMA Environmental Engineering, Inc.
 Email: rmathur@somaenv.com
 Alt Email: jbobek@somaenv.com Tele: 925-734-6400
 Project Name: Telegraph Project#: 6465
 Project Location: 2200 Telegraph Ave, Oakland PO # 6465
 Sampler Signature:

Analysis Requested

Helium Shroud SN#
Leak Check Default is IPA
 Notes: Please specify units if different than default: VOCs is reported in µg/m³, fixed is reported in %.

SAMPLE ID Location / Field Point	Sampling Start		End	Canister SN#	Sample Kit / Manifold #	VOCs TO-15 (µg/m ³) - See Notes	SO10 by TO-15 (µg/m ³)	TPH(g) (µg/m ³)	LEED: (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas (CO ₂ , Methane, Ethane, Ethylene, Acetylene, Propane, CO) %	Fixed Gas: (O ₂ , N ₂) %	APH: Aliphatic and/or Aromatic (circle one) µg/m ³	Helium Leak Check %	Leak Check (IPA, Norflorane, 1,1-difluoroethane) µg/m ³	TPH-g, BTEX, MIBE, Naphth (TO-15)	TPH-g, BTEX, MIBE, Naphth (TO-17)	Matrix			Canister Pressure / Vacuum				
	Date	Time	Time														Soilgas	Indoor Air	Initial	Final				
EFF MPE	10/5/17			1 tedlar bag																				
INF MPE	10/5/17			1 tedlar bag																				
INF MPE	10/5/17			2 sorbent tubes																				

****MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.**

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time	Comments / Instructions
Mani Sour Sefeh SOMA Env.	10/5/17	11:45	[Signature]	10/5/17	11:45	*Naphthalene not set up out of tedlars 10/5/17



Sample Receipt Checklist

Client Name: **SOMA Environmental Engineering, Inc.**
 Project Name: **6465; Telegraph**
 WorkOrder No: **1710214** Matrix: Air
 Carrier: Client Drop-In

Date and Time Received: **10/5/2017 11:45**
 Date Logged: **10/5/2017**
 Received by: Tina Perez
 Logged by: Tina Perez

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Date and Time of collection noted by Client on COC?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Sampler's name noted on COC?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
COC agrees with Quote?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

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

UCMR Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Comments: Method SW8260B (VOCs) was received past its 0.25-day holding time. Method SW8260B (TPH-gas) was received past its 0.25-day holding time. Method TO15 (VOCs) (µg/m³) was received past its 0.25-day holding time. Method TO15 (TPHgas) (µg/m³) was received past its 0.25-day holding time. Method Leak Check Compound by TO15 (µg/m³) was received past its 0.25-day holding time.



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1710545

Report Created for: SOMA Environmental Engineering, Inc.

6620 Owens Drive, Ste. A
Pleasanton, CA 94588

Project Contact: Ruchi Mathur

Project P.O.:

Project Name: 6465; Telegraph

Project Received: 10/13/2017

Analytical Report reviewed & approved for release on 10/19/2017 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: SOMA Environmental Engineering, Inc.
Project: 6465; Telegraph
WorkOrder: 1710545

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: SOMA Environmental Engineering, Inc.
Project: 6465; Telegraph
WorkOrder: 1710545

Analytical Qualifiers

H Samples were analyzed out of holding time
a3 Sample diluted due to high organic content.

Quality Control Qualifiers

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



Case Narrative

Client: SOMA Environmental Engineering, Inc.
Project: 6465; Telegraph

Work Order: 1710545
October 19, 2017

TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Active Soil Gas Advisory of July 2015.



Analytical Report

Client: SOMA Environmental Engineering, Inc.
Date Received: 10/13/17 13:11
Date Prepared: 10/14/17-10/17/17
Project: 6465; Telegraph

WorkOrder: 1710545
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EFF MPE	1710545-001A	Air	10/13/2017	GC24 10131712.D	147111

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	ND	H	3600	2	10/14/2017 03:32

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
1,2-DCA-d4	93	H	70-130	10/14/2017 03:32
Toluene-d8	98	H	70-130	10/14/2017 03:32

Analyst(s): HK Analytical Comments: a3

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
INF MPE	1710545-002A	Air	10/13/2017	GC43 10171710.D	147180

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	360,000	H	18,000	10	10/17/2017 20:24

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
1,2-DCA-d4	104	H	70-130	10/17/2017 20:24
Toluene-d8	99	H	70-130	10/17/2017 20:24

Analyst(s): HK

 Angela Rydelius, Lab Manager



Analytical Report

Client: SOMA Environmental Engineering, Inc.

WorkOrder: 1710545

Date Received: 10/13/17 13:11

Extraction Method: TO15

Date Prepared: 10/16/17

Analytical Method: TO15

Project: 6465; Telegraph

Unit: µg/m³

Volatile Organic Compounds High Level

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
INF MPE	1710545-002A	Air	10/13/2017	GC43 10161710.D	147180

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Benzene	ND	H	160	10	10/16/2017 20:15
Ethylbenzene	3900	H	220	10	10/16/2017 20:15
Methyl-t-butyl ether (MTBE)	ND	H	180	10	10/16/2017 20:15
Toluene	ND	H	190	10	10/16/2017 20:15
Xylenes, Total	ND	H	1100	10	10/16/2017 20:15

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
1,2-DCA-d4	110	H	70-130	10/16/2017 20:15
Toluene-d8	96	H	70-130	10/16/2017 20:15
4-BFB	126	H	70-130	10/16/2017 20:15

Analyst(s): HK

 Angela Rydelius, Lab Manager



Analytical Report

Client: SOMA Environmental Engineering, Inc.
Date Received: 10/13/17 13:11
Date Prepared: 10/14/17
Project: 6465; Telegraph

WorkOrder: 1710545
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³

Volatile Organic Compounds

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
EFF MPE	1710545-001A	Air	10/13/2017	GC24 10131712.D	147111

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Benzene	ND	H	13	2	10/14/2017 03:32
Ethylbenzene	ND	H	18	2	10/14/2017 03:32
Methyl-t-butyl ether (MTBE)	ND	H	15	2	10/14/2017 03:32
Toluene	ND	H	15	2	10/14/2017 03:32
Xylenes, Total	ND	H	54	2	10/14/2017 03:32

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
1,2-DCA-d4	96	H	70-130	10/14/2017 03:32
Toluene-d8	100	H	70-130	10/14/2017 03:32
4-BFB	102	H	70-130	10/14/2017 03:32

Analyst(s): HK

 Angela Rydelius, Lab Manager



Analytical Report

Client: SOMA Environmental Engineering, Inc.

WorkOrder: 1710545

Date Received: 10/13/17 13:11

Extraction Method: TO17

Date Prepared: 10/17/17

Analytical Method: TO17

Project: 6465; Telegraph

Unit: µg/m³

TPH-Gas by TO17

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
INF MPE	1710545-003A	SoilGas	10/13/2017	GC37 F1016170805.D	147178

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	21,000	12,000	12	10/17/2017 12:25

Surrogates	REC (%)	Limits	Date Analyzed
toluene-d8	93	70-130	10/17/2017 12:25

Analyst(s): KBO

 Angela Rydelius, Lab Manager



Analytical Report

Client: SOMA Environmental Engineering, Inc.
Date Received: 10/13/17 13:11
Date Prepared: 10/17/17
Project: 6465; Telegraph

WorkOrder: 1710545
Extraction Method: TO17
Analytical Method: TO17
Unit: µg/m³

Volatile Organic Compounds by TO17

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
INF MPE	1710545-003A	SoilGas	10/13/2017	GC37 F1016171204.D	147178

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	2.0	1	10/17/2017 10:35
Ethylbenzene	110	2.0	1	10/17/2017 10:35
Methyl-t-butyl ether (MTBE)	ND	2.0	1	10/17/2017 10:35
Naphthalene	2.7	2.0	1	10/17/2017 10:35
Toluene	3.8	2.0	1	10/17/2017 10:35
Xylenes, Total	26	6.0	1	10/17/2017 10:35

Surrogates	REC (%)	Limits	Date Analyzed
1,2-DCA-d4	92	70-130	10/17/2017 10:35
toluene-d8	98	70-130	10/17/2017 10:35
4-BFB	95	70-130	10/17/2017 10:35

Analyst(s): KBO

 Angela Rydelius, Lab Manager



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/14/17
Date Analyzed: 10/14/17
Instrument: GC24
Matrix: Tedlar
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147111
Extraction Method: TO15
Analytical Method: TO15
Unit: $\mu\text{g}/\text{m}^3$
Sample ID: MB-147111

QC Summary Report for TO15

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g)	ND	1800	-	-	-
Surrogate Recovery					
1,2-DCA-d4	471.3		500	94	70-130
Toluene-d8	495.9		500	99	70-130
4-BFB	514.7		500	103	70-130



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/17/17
Date Analyzed: 10/17/17
Instrument: GC43
Matrix: Tedlar
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147180
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB-147180

QC Summary Report for TO15

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g)	ND	1800	-	-	-
Surrogate Recovery					
1,2-DCA-d4	510.4		500	102	70-130
Toluene-d8	483.7		500	97	70-130
4-BFB	502.1		500	100	70-130

QA/QC Officer



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/16/17
Date Analyzed: 10/16/17
Instrument: GC43
Matrix: Tedlar
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147180
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-147180

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	238	12	240	-	99	60-140
Acrolein	ND	231	12	233	-	99	60-140
Acrylonitrile	ND	208	11	220	-	95	60-140
tert-Amyl methyl ether (TAME)	ND	444	21	420	-	106	60-140
Benzene	ND	290	16	320	-	91	60-140
Benzyl chloride	ND	703	26	530	-	133	60-140
Bromodichloromethane	ND	730	35	700	-	104	60-140
Bromoform	ND	1260	52	1050	-	120	60-140
Bromomethane	ND	295	20	390	-	76	60-140
1,3-Butadiene	ND	210	11	220	-	96	60-140
2-Butanone (MEK)	ND	298	15	300	-	99	60-140
t-Butyl alcohol (TBA)	ND	333	16	310	-	108	60-140
Carbon Disulfide	ND	317	16	320	-	99	60-140
Carbon Tetrachloride	ND	740	32	640	-	116	60-140
Chlorobenzene	ND	472	24	470	-	100	60-140
Chloroethane	ND	273	14	268	-	102	60-140
Chloroform	ND	482	24	490	-	98	60-140
Chloromethane	ND	202	10	210	-	96	60-140
Cyclohexane	ND	347	18	350	-	99	60-140
Dibromochloromethane	ND	950	44	870	-	109	60-140
1,2-Dibromo-3-chloropropane	ND	988	49	980	-	101	60-140
1,2-Dibromoethane (EDB)	ND	772	39	780	-	99	60-140
1,2-Dichlorobenzene	ND	703	30	610	-	115	60-140
1,3-Dichlorobenzene	ND	700	30	610	-	115	60-140
1,4-Dichlorobenzene	ND	659	30	610	-	108	60-140
Dichlorodifluoromethane	ND	540	25	500	-	108	60-140
1,1-Dichloroethane	ND	395	20	410	-	96	60-140
1,2-Dichloroethane (1,2-DCA)	ND	427	20	410	-	104	60-140
1,1-Dichloroethene	ND	378	20	400	-	94	60-140
cis-1,2-Dichloroethene	ND	391	20	400	-	98	60-140
trans-1,2-Dichloroethene	ND	386	20	400	-	96	60-140
1,2-Dichloropropane	ND	421	24	470	-	90	60-140
cis-1,3-Dichloropropene	ND	482	23	460	-	105	60-140
trans-1,3-Dichloropropene	ND	501	23	460	-	109	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	654	36	710	-	92	60-140
Diisopropyl ether (DIPE)	ND	388	21	420	-	92	60-140
1,4-Dioxane	ND	350	18	370	-	95	60-140

(Cont.)

 QA/QC Officer



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/16/17
Date Analyzed: 10/16/17
Instrument: GC43
Matrix: Tedlar
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147180
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-147180

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethanol	ND	161	9.5	190	-	85	60-140
Ethyl acetate	ND	350	19	370	-	95	60-140
Ethyl tert-butyl ether (ETBE)	ND	438	21	420	-	104	60-140
Ethylbenzene	ND	457	22	440	-	104	60-140
4-Ethyltoluene	ND	560	25	500	-	112	60-140
Freon 113	ND	767	39	780	-	98	60-140
Heptane	ND	408	21	420	-	97	60-140
Hexachlorobutadiene	ND	1640	54	1080	-	152, F2	60-140
Hexane	ND	336	18	360	-	93	60-140
2-Hexanone	ND	391	21	420	-	93	60-140
4-Methyl-2-pentanone (MIBK)	ND	400	21	420	-	95	60-140
Methyl-t-butyl ether (MTBE)	ND	394	18	370	-	106	60-140
Methylene chloride	ND	337	18	350	-	96	60-140
Propene	ND	184	8.5	170	-	108	60-140
Styrene	ND	469	22	430	-	109	60-140
1,1,1,2-Tetrachloroethane	ND	736	35	700	-	105	60-140
1,1,2,2-Tetrachloroethane	ND	642	35	700	-	92	60-140
Tetrachloroethene	ND	742	34	690	-	107	60-140
Tetrahydrofuran	ND	283	15	300	-	94	60-140
Toluene	ND	384	19	380	-	101	60-140
1,2,4-Trichlorobenzene	ND	1220	38	750	-	163, F2	60-140
1,1,1-Trichloroethane	ND	643	28	550	-	117	60-140
1,1,2-Trichloroethane	ND	520	38	550	-	94	60-140
Trichloroethene	ND	539	28	550	-	98	60-140
Trichlorofluoromethane	ND	630	29	570	-	111	60-140
1,2,4-Trimethylbenzene	ND	588	25	500	-	118	60-140
1,3,5-Trimethylbenzene	ND	576	25	500	-	115	60-140
Vinyl Acetate	ND	364	18	360	-	101	60-140
Vinyl Chloride	ND	214	13	260	-	82	60-140
Xylenes, Total	ND	1350	110	1320	-	102	60-140
Surrogate Recovery							
1,2-DCA-d4	521.2	540		500	104	108	60-140
Toluene-d8	494.3	493		500	99	99	60-140
4-BFB	525.9	525		500	105	105	60-140

 QA/QC Officer



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/13/17 - 10/14/17
Date Analyzed: 10/13/17 - 10/14/17
Instrument: GC24
Matrix: Tedlar
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147111
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-147111

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	59.2	12	60	-	99	60-140
Acrolein	ND	48.9	5.8	58.25	-	84	60-140
Acrylonitrile	ND	54.0	4.4	55	-	98	60-140
tert-Amyl methyl ether (TAME)	ND	95.9	8.5	105	-	91	60-140
Benzene	ND	69.0	6.5	80	-	86	60-140
Benzyl chloride	ND	126	11	132.5	-	95	60-140
Bromodichloromethane	ND	172	14	175	-	98	60-140
Bromoform	ND	269	21	262.5	-	103	60-140
Bromomethane	ND	81.6	7.9	97.5	-	84	60-140
1,3-Butadiene	ND	55.3	4.5	55	-	100	60-140
2-Butanone (MEK)	ND	73.3	15	75	-	98	60-140
t-Butyl alcohol (TBA)	ND	78.0	16	77.5	-	101	60-140
Carbon Disulfide	ND	78.0	6.3	80	-	98	60-140
Carbon Tetrachloride	ND	174	13	160	-	109	60-140
Chlorobenzene	ND	115	9.4	117.5	-	98	60-140
Chloroethane	ND	64.8	5.4	67	-	97	60-140
Chloroform	ND	107	9.9	122.5	-	87	60-140
Chloromethane	ND	47.4	4.2	52.5	-	90	60-140
Cyclohexane	ND	82.5	18	87.5	-	94	60-140
Dibromochloromethane	ND	237	17	217	-	109	60-140
1,2-Dibromo-3-chloropropane	ND	292	20	245	-	119	60-140
1,2-Dibromoethane (EDB)	ND	179	16	195	-	92	60-140
1,2-Dichlorobenzene	ND	152	12	152.5	-	99	60-140
1,3-Dichlorobenzene	ND	154	12	152.5	-	101	60-140
1,4-Dichlorobenzene	ND	152	12	152.5	-	99	60-140
Dichlorodifluoromethane	ND	115	10	125	-	92	60-140
1,1-Dichloroethane	ND	96.5	8.2	102.5	-	94	60-140
1,2-Dichloroethane (1,2-DCA)	ND	85.4	8.2	102.5	-	83	60-140
1,1-Dichloroethene	ND	86.3	8.1	100	-	86	60-140
cis-1,2-Dichloroethene	ND	94.9	8.1	100	-	95	60-140
trans-1,2-Dichloroethene	ND	95.1	8.1	100	-	95	60-140
1,2-Dichloropropane	ND	105	9.4	117.5	-	89	60-140
cis-1,3-Dichloropropene	ND	123	9.2	115	-	107	60-140
trans-1,3-Dichloropropene	ND	125	9.2	115	-	109	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	167	14	177.5	-	94	60-140
Diisopropyl ether (DIPE)	ND	96.1	8.5	105	-	92	60-140
1,4-Dioxane	ND	103	7.3	92.5	-	112	60-140

(Cont.)

 QA/QC Officer



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/13/17 - 10/14/17
Date Analyzed: 10/13/17 - 10/14/17
Instrument: GC24
Matrix: Tedlar
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147111
Extraction Method: TO15
Analytical Method: TO15
Unit: µg/m³
Sample ID: MB/LCS-147111

QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethanol	ND	50.3	9.6	47.5	-	106	60-140
Ethyl acetate	ND	91.3	19	92.5	-	99	60-140
Ethyl tert-butyl ether (ETBE)	ND	96.1	8.5	105	-	92	60-140
Ethylbenzene	ND	107	8.8	110	-	97	60-140
4-Ethyltoluene	ND	125	10	125	-	100	60-140
Freon 113	ND	181	16	195	-	93	60-140
Heptane	ND	95.6	21	105	-	91	60-140
Hexachlorobutadiene	ND	262	22	270	-	97	60-140
Hexane	ND	87.6	18	90	-	97	60-140
2-Hexanone	ND	125	21	105	-	119	60-140
4-Methyl-2-pentanone (MIBK)	ND	116	8.3	105	-	111	60-140
Methyl-t-butyl ether (MTBE)	ND	85.6	7.3	92.5	-	92	60-140
Methylene chloride	ND	76.9	7.1	87.5	-	88	60-140
Propene	ND	38.6	8.8	42.5	-	91	60-140
Styrene	ND	103	8.6	107.5	-	96	60-140
1,1,1,2-Tetrachloroethane	ND	179	14	175	-	103	60-140
1,1,2,2-Tetrachloroethane	ND	175	14	175	-	100	60-140
Tetrachloroethene	ND	158	14	175.5	-	90	60-140
Tetrahydrofuran	ND	70.1	6.0	75	-	94	60-140
Toluene	ND	92.3	7.6	95	-	97	60-140
1,2,4-Trichlorobenzene	ND	188	15	187.5	-	100	60-140
1,1,1-Trichloroethane	ND	137	11	137.5	-	99	60-140
1,1,2-Trichloroethane	ND	132	11	137.5	-	96	60-140
Trichloroethene	ND	122	11	137.5	-	89	60-140
Trichlorofluoromethane	ND	132	11	142.5	-	93	60-140
1,2,4-Trimethylbenzene	ND	124	10	125	-	99	60-140
1,3,5-Trimethylbenzene	ND	122	10	125	-	97	60-140
Vinyl Acetate	ND	92.7	18	90	-	103	60-140
Vinyl Chloride	ND	65.9	5.2	65	-	101	60-140
Xylenes, Total	ND	316	27	330	-	96	60-140
Surrogate Recovery							
1,2-DCA-d4	472.5	499		500	95	100	60-140
Toluene-d8	505.7	510		500	101	102	60-140
4-BFB	488.8	500		500	98	100	60-140

 QA/QC Officer



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/16/17 - 10/17/17
Date Analyzed: 10/16/17 - 10/17/17
Instrument: GC37
Matrix: Sorbent Tube
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147178
Extraction Method: TO17
Analytical Method: TO17
Unit: µg/m³
Sample ID: MB/LCS-147178

QC Summary Report for TPH-Gas by TO17

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(g)	ND	9340	1000	10000	-	93	60-140
Surrogate Recovery							
toluene-d8	93.67	94.2		100	94	94	60-140

QA/QC Officer



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/16/17 - 10/17/17
Date Analyzed: 10/16/17 - 10/17/17
Instrument: GC37
Matrix: Sorbent Tube
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147178
Extraction Method: TO17
Analytical Method: TO17
Unit: µg/m³
Sample ID: MB/LCS-147178

QC Summary Report for VOCs by TO17

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1,1-Trichloroethane	ND	51.6	2.0	50	-	103	60-140
1,1-Dichloroethane	ND	56.0	2.0	50	-	112	60-140
1,1-Dichloroethene	ND	49.5	2.0	50	-	99	60-140
1,1-Dichloropropene	ND	51.9	2.0	50	-	104	60-140
2,2-Dichloropropane	ND	50.4	2.0	50	-	101	60-140
2-Butanone (MEK)	ND	226	8.0	200	-	113	60-140
2-Hexanone	ND	49.6	2.0	50	-	99	60-140
4-Methyl-2-pentanone (MIBK)	ND	54.4	2.0	50	-	109	60-140
Acetone	ND	1090	20	1000	-	109	60-140
Bromochloromethane	ND	53.9	2.0	50	-	108	60-140
Carbon Disulfide	ND	46.0	2.0	50	-	92	60-140
Carbon Tetrachloride	ND	56.1	2.0	50	-	112	60-140
Chloroform	ND	57.4	2.0	50	-	115	60-140
cis-1,2-Dichloroethene	ND	49.0	2.0	50	-	98	60-140
Dibromomethane	ND	50.6	2.0	50	-	101	60-140
Dichlorodifluoromethane	ND	30.6	2.0	50	-	61	60-140
Diisopropyl ether (DIPE)	ND	48.1	2.0	50	-	96	60-140
Ethyl tert-butyl ether (ETBE)	ND	53.5	2.0	50	-	107	60-140
Methylene chloride	ND	47.2	2.0	50	-	94	60-140
n-Butyl benzene	ND	43.9	2.0	50	-	88	60-140
t-Butyl alcohol (TBA)	ND	228	8.0	200	-	114	60-140
tert-Amyl methyl ether (TAME)	ND	50.9	2.0	50	-	102	60-140
Tetrahydrofuran	ND	438	2.0	500	-	88	60-140
trans-1,2-Dichloroethene	ND	49.2	2.0	50	-	98	60-140
Trichlorofluoromethane	ND	48.5	2.0	50	-	97	60-140
Benzene	ND	47.6	2.0	50	-	95	60-140
Bromobenzene	ND	45.0	2.0	50	-	90	60-140
Bromodichloromethane	ND	50.5	2.0	50	-	101	60-140
Bromoform	ND	52.3	2.0	50	-	105	60-140
sec-Butyl benzene	ND	48.6	2.0	50	-	97	60-140
tert-Butyl benzene	ND	49.2	2.0	50	-	98	60-140
Chlorobenzene	ND	52.0	2.0	50	-	104	60-140
2-Chlorotoluene	ND	50.1	2.0	50	-	100	60-140
4-Chlorotoluene	ND	49.7	2.0	50	-	99	60-140
Dibromochloromethane	ND	55.9	2.0	50	-	112	60-140
1,2-Dibromo-3-chloropropane	ND	21.8	2.0	20	-	109	60-140
1,2-Dibromoethane (EDB)	ND	49.6	2.0	50	-	99	60-140

(Cont.)

QA/QC Officer



Quality Control Report

Client: SOMA Environmental Engineering, Inc.
Date Prepared: 10/16/17 - 10/17/17
Date Analyzed: 10/16/17 - 10/17/17
Instrument: GC37
Matrix: Sorbent Tube
Project: 6465; Telegraph

WorkOrder: 1710545
BatchID: 147178
Extraction Method: TO17
Analytical Method: TO17
Unit: µg/m³
Sample ID: MB/LCS-147178

QC Summary Report for VOCs by TO17

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,2-Dichlorobenzene	ND	49.4	2.0	50	-	99	60-140
1,3-Dichlorobenzene	ND	50.4	2.0	50	-	101	60-140
1,4-Dichlorobenzene	ND	48.9	2.0	50	-	98	60-140
1,2-Dichloroethane (1,2-DCA)	ND	55.8	2.0	50	-	112	60-140
1,2-Dichloropropane	ND	54.8	2.0	50	-	110	60-140
1,3-Dichloropropane	ND	48.1	2.0	50	-	96	60-140
cis-1,3-Dichloropropene	ND	51.0	2.0	50	-	102	60-140
trans-1,3-Dichloropropene	ND	51.2	2.0	50	-	102	60-140
Ethylbenzene	ND	44.6	2.0	50	-	89	60-140
Hexachlorobutadiene	ND	51.8	2.0	50	-	104	60-140
Isopropylbenzene	ND	43.6	2.0	50	-	87	60-140
4-Isopropyl toluene	ND	46.0	2.0	50	-	92	60-140
Methyl-t-butyl ether (MTBE)	ND	54.3	2.0	50	-	109	60-140
Naphthalene	ND	49.6	2.0	50	-	99	60-140
n-Propyl benzene	ND	52.4	2.0	50	-	105	60-140
Styrene	ND	45.9	2.0	50	-	92	60-140
1,1,1,2-Tetrachloroethane	ND	50.8	2.0	50	-	101	60-140
1,1,2,2-Tetrachloroethane	ND	46.3	2.0	50	-	93	60-140
Tetrachloroethene	ND	51.4	2.0	50	-	103	60-140
Toluene	ND	48.7	2.0	50	-	97	60-140
1,2,3-Trichlorobenzene	ND	53.3	2.0	50	-	107	60-140
1,2,4-Trichlorobenzene	ND	52.7	2.0	50	-	105	60-140
1,1,2-Trichloroethane	ND	49.3	2.0	50	-	99	60-140
Trichloroethene	ND	53.4	2.0	50	-	107	60-140
1,2,3-Trichloropropane	ND	46.7	2.0	50	-	93	60-140
1,2,4-Trimethylbenzene	ND	50.4	2.0	50	-	101	60-140
1,3,5-Trimethylbenzene	ND	48.4	2.0	50	-	97	60-140
Xylenes, Total	ND	130	6.0	150	-	87	60-140
Surrogate Recovery							
1,2-DCA-d4	95.87	108		100	96	108	70-130
toluene-d8	94.98	93.0		100	95	93	70-130
4-BFB	88.42	92.5		100	88	92	70-130

 QA/QC Officer

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



WaterTrax WriteOn EDF

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1710545

ClientCode: SOMA

Excel EQuIS Email HardCopy ThirdParty J-flag
 Detection Summary Dry-Weight

Report to:

Ruchi Mathur
SOMA Environmental Engineering, Inc.
6620 Owens Drive, Ste. A
Pleasanton, CA 94588
(925) 734-6400 FAX: (925) 734-6401

Email: rmathur@somaenv.com
cc/3rd Party: rmathur@somaenv.com;
PO:
ProjectNo: 6465; Telegraph

Bill to:

Joyce Bobek
SOMA Environmental Engineering, Inc.
6620 Owens Drive, Ste. A
Pleasanton, CA 94588
jbobek@somaenv.com

Requested TATs:

; **5 days;**

Date Received: 10/13/2017

Date Logged: 10/13/2017

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
1710545-001	EFF MPE	Air	10/13/2017 00:00	<input type="checkbox"/>	A	A			A	A	A	A				
1710545-002	INF MPE	Air	10/13/2017 00:00	<input type="checkbox"/>	A	A			A	A	A	A				
1710545-003	INF MPE	SoilGas	10/13/2017 00:00	<input type="checkbox"/>									A	A		
1710545-003	UNUSED SORBENT TUBES	SoilGas	10/13/2017 00:00	<input type="checkbox"/>			B	B								B

Test Legend:

1	8260B_A(UG/M3)	2	8260GAS_A(UG/M3)	3	PREFD REPORT	4	PRUNUSEDSUMMA
5	TO15_HIGHLEVEL_TEDLAR(UG/M3)	6	TO15_TEDLAR(UG/M3) [N]	7	TO15GAS_TEDLAR(UG/M3)	8	TO15-LC_TEDLAR(UG/M3) [N]
9	TO17GAS_ST(UG/M3)	10	TO17VOC_ST(UGM3)	11	UNUSED_SUMMA	12	

Project Manager: Jennifer Lagerbom

Prepared by: Kena Ponce

The following SampIDs: 001A, 002A contain testgroup TO15+GAS_TEDLAR.; The following SampID: 003A contains testgroup TO17VOC+GAS.

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: SOMA ENVIRONMENTAL ENGINEERING, INC.

Project: 6465; Telegraph

Work Order: 1710545

Client Contact: Ruchi Mathur

QC Level: LEVEL 2

Contact's Email: rmathur@somaenv.com

Comments:

Date Logged: 10/13/2017

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
1710545-001A	EFF MPE	Air	TO15 + TPHgas for Tedlar	1	Tedlar	<input type="checkbox"/>	10/13/2017	5 days		<input type="checkbox"/>	
1710545-002A	INF MPE	Air	TO15 + TPHgas for Tedlar	1	Tedlar	<input type="checkbox"/>	10/13/2017	5 days		<input type="checkbox"/>	
1710545-003A	INF MPE	SoilGas	TO17VOC+GAS	2	Sorbent Tube	<input type="checkbox"/>	10/13/2017	5 days		<input type="checkbox"/>	
1710545-003B	UNUSED SORBENT TUBES	SoilGas	Unused Summa	6	unused Sorbent tubes	<input type="checkbox"/>	10/13/2017			<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.



McCAMPBELL ANALYTICAL, INC.
 1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701
 Telephone: (877) 252-9262 / Fax: (925) 252-9269
 www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD										
Turn Around Time: 1 Day Rush	2 Day Rush	3 Day Rush	STD	●	Quote #	7158				
J-Flag / MDL	ESL	Cleanup Approved		Bottle Order #						
Delivery Format: PDF	●	GeoTracker EDF	●	EDD	Write On (DW)	EQulS				

Report To: Ruchi Mathur Bill To: Joyce Bobek
 Company: SOMA Environmental Engineering, Inc.
 Email: rmathur@somaenv.com
 Alt Email: jbobek@somaenv.com Tele: 925-734-6400
 Project Name: Telegraph Project#: 6465
 Project Location: 2200 Telegraph Ave, Oakland PO # 6465
 Sampler Signature: *[Signature]*

Analysis Requested									
Helium Shroud SN#									
Leak Check Default is IPA									
Notes: Please specify units if different than default: VOCs is reported in µg/m ³ , fixed is reported in %.									

SAMPLE ID Location / Field Point	Sampling Start		End	Canister SN#	Sample Kit / Manifold #	VOCs TO-15 (µg/m ³) - See Notes	8010 by TO-15 (µg/m ³)	TPH(g) (µg/m ³)	LEED: (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas (CO ₂ , Methane, Ethane, Ethylene, Acetylene, Propane, CO) %	Fixed Gas: (O ₂ , N ₂) %	APH: Aliphatic and/or Aromatic (circle one) µg/m ³	Helium Leak Check %	Leak Check (IPA, Norflorane, 1,1-difluoroethane) µg/m ³	TPH-g, BTEX, MIBE, Naphth (TO-15)	TPH-g, BTEX, MIBE, Naphth (TO-17)	Matrix			Canister Pressure / Vacuum			
	Date	Time	Time														Soilgas	Indoor Air	Initial	Final			
EFF MPE	10/13/17			1 tedlar bag														●					
INF MPE	10/13/17			1 tedlar bag														●					
INF MPE	10/13/17			2 sorbent tubes														●	●				

****MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.**

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time	Comments / Instructions
<i>[Signature]</i>	10/13/17	1311	<i>[Signature]</i>	10/13/17	1311	



Sample Receipt Checklist

Client Name: **SOMA Environmental Engineering, Inc.**
 Project Name: **6465; Telegraph**
 WorkOrder No: **1710545** Matrix: Air/SoilGas
 Carrier: Client Drop-In

Date and Time Received: **10/13/2017 13:11**
 Date Logged: **10/13/2017**
 Received by: Jena Alfaro
 Logged by: Kena Ponce

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
 COC agrees with Quote? Yes No NA

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: 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

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: Method SW8260B (VOCs) was received past its 0.25-day holding time. Method TO15 (VOCs) ($\mu\text{g}/\text{m}^3$) was received past its 0.25-day holding time. Method SW8021B/8015Bm (GMBTEX) was received past its 0.25-day holding time. Method SW8260B (TPH-gas) was received past its 0.25-day holding time. Method TO15 (TPHgas) ($\mu\text{g}/\text{m}^3$) was received past its 0.25-day holding time. Method Leak Check Compound by TO15 ($\mu\text{g}/\text{m}^3$) was received past its 0.25-day holding time.

APPENDIX K

GRAPHICAL REPRESENTATION OF ZONE OF INFLUENCE

Figure K1: Zone of Influence for Extraction from EX-2

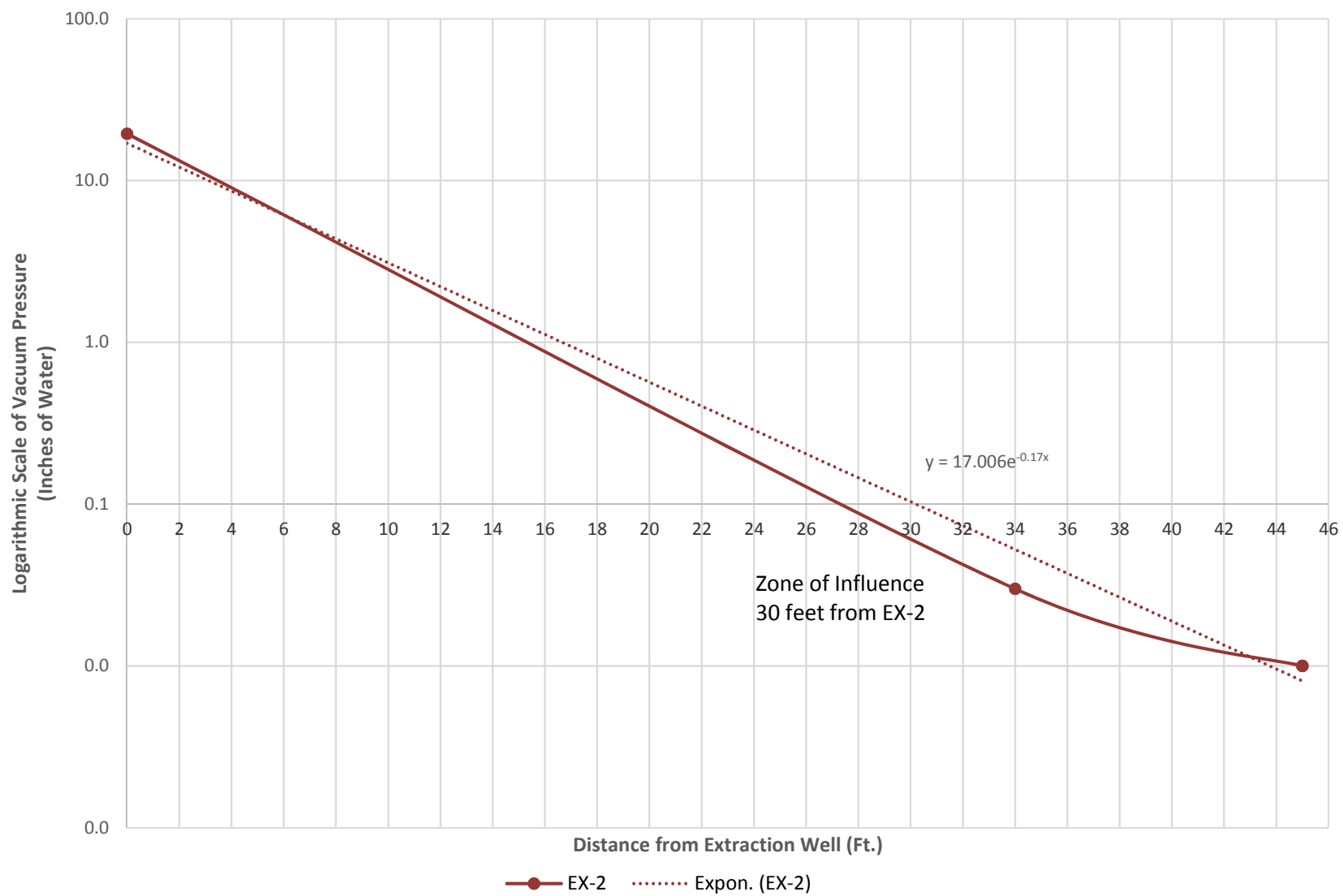


Figure K2: Zone of Influence for Extraction from EX-1 and EX-2

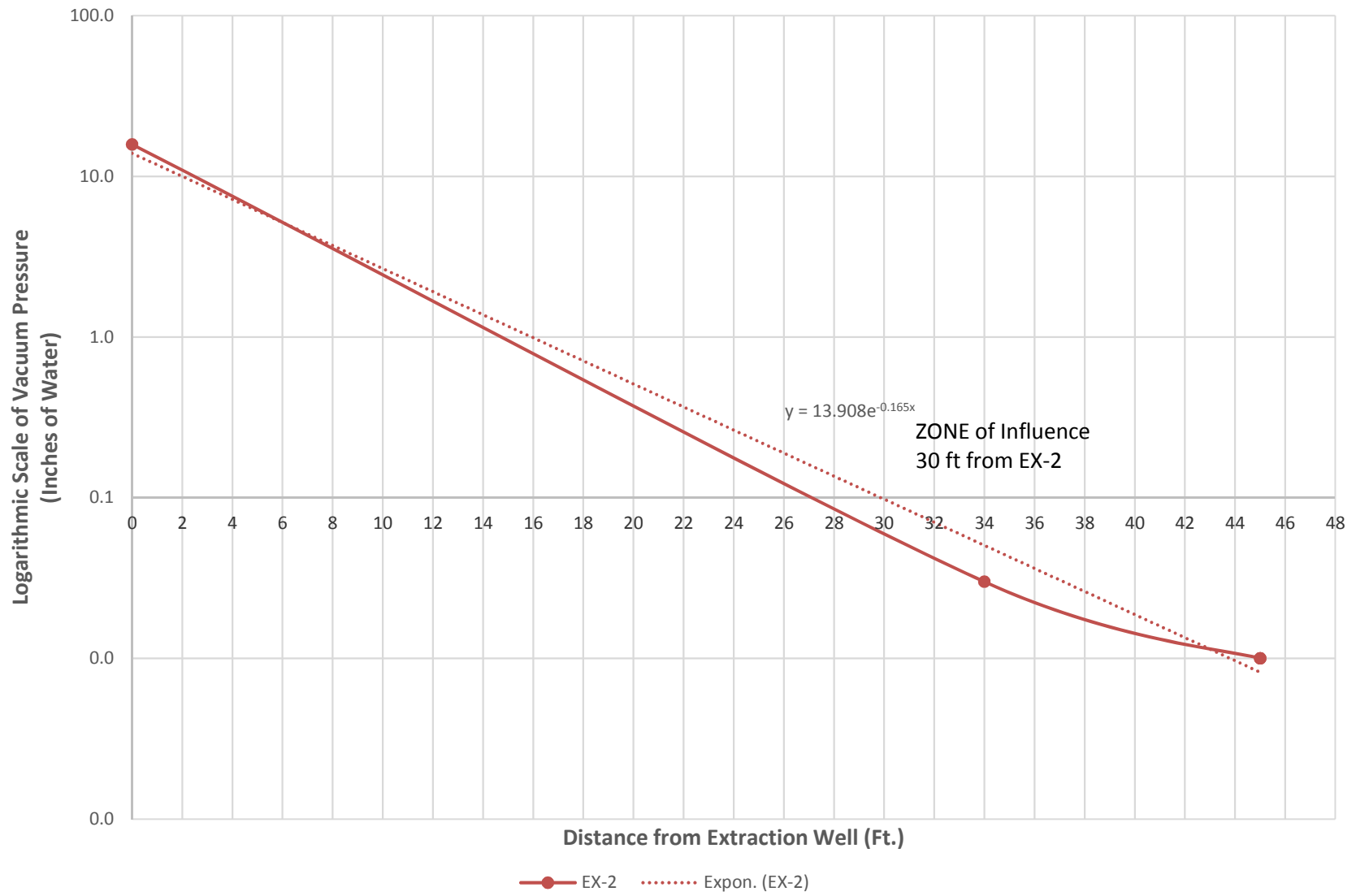


Figure K3: Zone of Influence for Extraction from EX-1 and EX-3

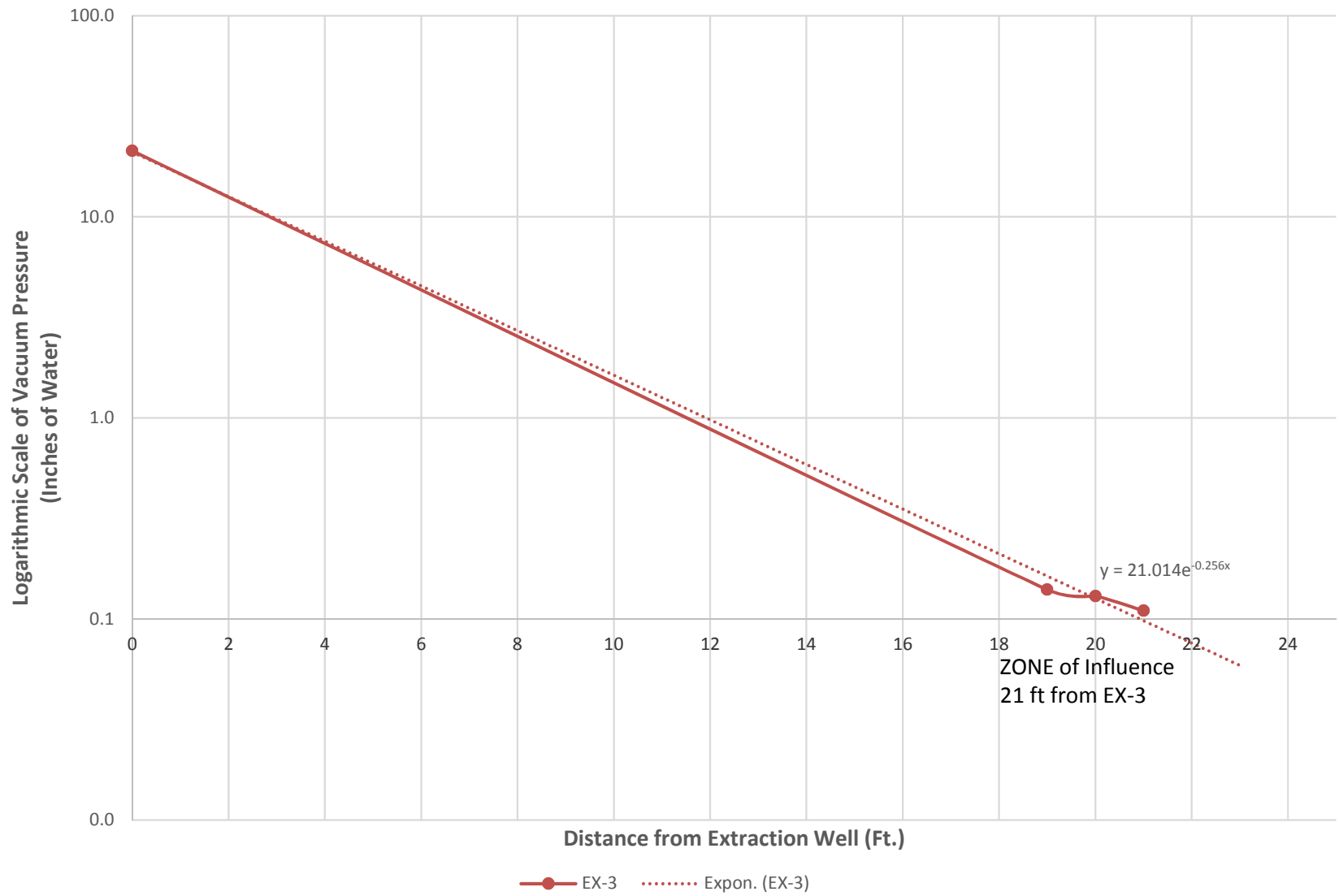


Figure K4: Zone of Influence for Extraction from EX-1, EX-2, and EX-3

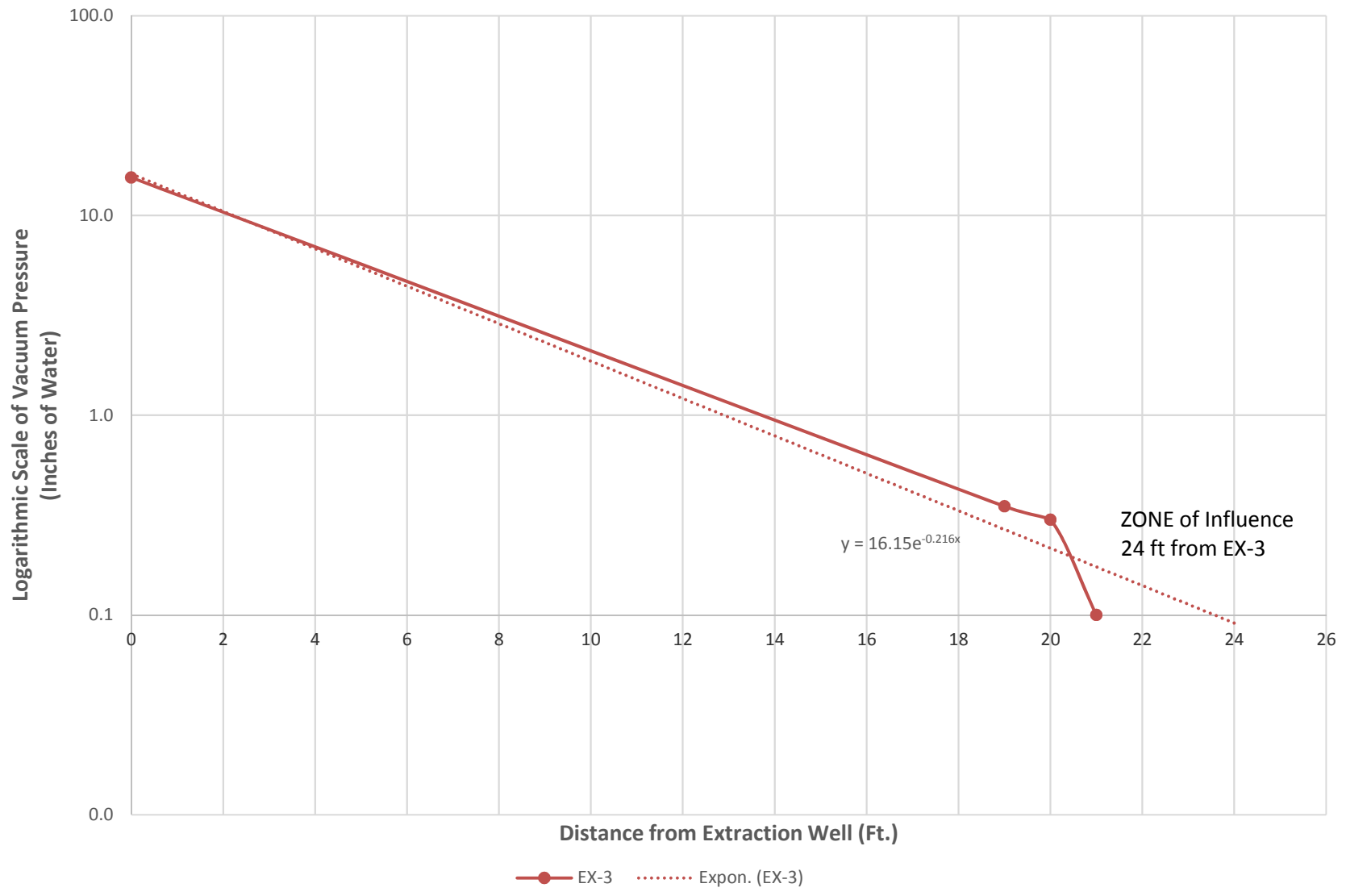


Figure K5: Drawdown in Observation Wells during Extraction from EX-1, EX-2, and EX-3

