

September 13, 2013

Mr. Martin Musonge Regional Water Quality Control Board San Francisco Bay Region 1515 Clay Street, Suite 1400 Oakland, California 94612

Subject: File No. 01-0098 (MYM) Site Located at 2844 Mountain Boulevard, Oakland, California

Dear Mr. Musonge:

Enclosed for your review is SOMA's "Additional Investigation and Monitoring Wells Replacement Report" for the subject property. It has been uploaded to the State's GeoTracker database and the Alameda County's FTP site.

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

Sincerely,

Mansour Sepehr, Ph.D., PE Principal Hydrogeologist

Enclosure



cc: Mr. Tejindar Singh w/enclosure

## Additional Investigation and Monitoring Wells Replacement Report

2844 Mountain Boulevard Oakland, California

September 13, 2013

Project 5082

**Prepared for:** 

Mr. Tejindar P. Singh 6400 Dublin Blvd. Dublin, California



#### PERJURY STATEMENT

Site Location: 2844 Mountain Boulevard, Oakland, California

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

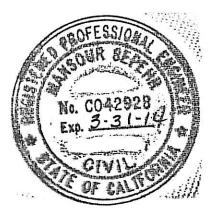
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Tejindar Singh 6400 Dublin Boulevard Dublin, California 94568 Responsible Party

### CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mr. Tejindar P. Singh for the site located at 2844 Mountain Blvd., Oakland, California. The report was prepared in accordance with SOMA's workplan dated December 26, 2012, and in compliance with San Francisco Bay Regional Water Quality Control Board correspondence dated April 3, 2013, granting approval of the workplan.

Mansour Sepehr, PhD, PE Principal Hydrogeologist



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### 1. INTRODUCTION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mr. Tejindar P. Singh for the site located at 2844 Mountain Blvd., Oakland, California. The report was prepared in accordance with SOMA's workplan dated December 26, 2012 and in compliance with correspondence from San Francisco Bay Regional Water Quality Control Board (SFB-RWQCB) dated April 3, 2013, granting approval of the workplan. This report documents results of additional investigation and monitoring well replacement.

The subject property is located in Alameda County, California. Figure 1 shows the location of the site and vicinity. The site is located on the eastern corner of the intersection of Mountain Boulevard and Werner Court in a commercial/residential area (Figure 2). The Warren Freeway is adjacent to Mountain Boulevard, and lies approximately 50 feet southwest of the site. The property was a historical retail gasoline station, and is currently non-operational. A bookstore has been operating in the site building since May 2013. The historical underground storage tanks (USTs), installed in 1994, contained various grades of unleaded gasoline and diesel and had individual storage capacities of 3,000, 4,000, and 10,000 gallons. In August 2011, under SOMA's oversight, the two remaining USTs were removed and disposed of off-site. UST removal activities are documented in SOMA's report dated September 14, 2011. Site history is summarized in Appendix A.

#### 1.1 Geologic and Hydrogeologic Conditions

The site is located in the eastern portion of the greater Oakland area approximately 6 miles inland from the San Francisco Bay. The site and the surrounding area is approximately one quarter mile southwest of Palo Seco Creek and is located on a slight gradient that slopes towards the southwest (Figure 1). Upper San Leandro reservoir is located approximately 3.5 mile east of the site. According to the USGS 7.S minute series quadrangle for the Oakland East area, the subject property is at an elevation of approximately 700 feet above mean sea level (msl).

The site lies east of the Alameda Bay Plain hydrologic subarea of the East San Francisco Bay Hydrologic study area. Small lenses of perched groundwater may lie beneath portions of this hydrologic area. Regional groundwater flow direction is expected to be southwesterly toward the Bay.

According to the Geologic Map of the San Francisco-San Jose Quadrangle (1990, Map 5A, California Division of Mines & Geology), the site is situated within the active Hayward Fault Zone (Figure 1). The fault is part of a northwest trending zone locally consisting of "slivers" or small blocks of bedrock. The rocks include Jurassic and Cretaceous-age ultramafic crystalline rocks and rhyolite of

the Coast Range Ophiolite, marine sandstone and shale, and Franciscan complex rocks. The weathering of these rocks typically yields clayey soil.

According to the RSI Corrective Action Plan report, dated February 3, 1995, the saturated sediments beneath the site are primarily comprised of fine-grained materials which are not capable of transmitting significant amount water to the wells. According to the above referenced report, the maximum extraction rate for groundwater extraction was less than 0.32 gallons per minute. Reportedly, this low extraction rate is insufficient for effective groundwater treatment; no data in support of this statement was available for review.

According to historical site reports (1995), the nearest well utilized for beneficial use, is located approximately 2200 feet southwest from the site (4315 Lincoln Ave, Oakland, CA) and is installed to the total depth of 260 feet bgs (depth to water at 240 feet bgs); this well is utilized for irrigation. No updated sensitive receptor survey was conducted at this time since it was not within the scope of this workplan.

During the previous CPT/MIP investigation at least two water bearing zones (WBZs) were present beneath the site. All existing site wells are screened from 5 to 25 feet bgs in what was previously designated as Perched WBZ. During the CPT/MIP investigation, groundwater samples were also collected from approximately 48 feet bgs from a lower WBZ which was designated as First WBZ.

During the most recent investigation, while logging the soil from boring DPT-5, there was a section where "very moist to wet" soil was encountered at approximately 13 feet bgs. SOMA's field geologist left the boring open at 15 feet in order to see if enough water would come into the boring in order to sample. Water did come into the boring and the groundwater sample was called DPT-5W-1. Soil borings that were drilled during previous investigations had also been left open to see if water would accumulate at similar depths and no water came into those borings. During the previous investigation it was concluded that the shallow groundwater appears to be perched and somewhat discontinuous, so this shallow zone that was encountered is the perched and discontinuous zone.

## 2. SCOPE OF WORK

High levels of TPH-g and TPH-d were detected at approximately 10 feet below ground surface in soil borings SB-1 and SB-2, located southwest of the existing pump islands. In order to assess the impact to groundwater from the soil contamination found in this area and to evaluate the impact of the soil contamination located immediately southwest of the former pump islands, an additional investigation was performed. In addition, two groundwater monitoring wells were installed to replace the two wells decommissioned during the most recent remedial excavation.

Based on the SFB-RWQCB directive dated April 3, 2013, SOMA advanced two soil boreholes (DPT-5 and DPT-5W) in order to determine the extent of soil and groundwater contamination at the site and installed two monitoring wells.

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: Advancement of two soil borings
- Task 3: Monitoring well replacement installations
- Task 3: Well Development and Wells Survey
- Task 4: Laboratory analysis of soil and groundwater samples
- Task 5: Waste disposal

# 2.1 Permit Acquisition, Health and Safety Plan Preparation, and Subsurface Utility Clearance

Prior to initiating field activities, SOMA obtained a drilling permit from Alameda County Public Works Agency (ACPWA) (Appendix A). ACPWA was contacted on May 7, 2013 to schedule the grouting inspection with Steve Miller.

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 May 1, 2013, prior to boring advancement 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 May 2, 2013 (Ticket 165680). A private utility locator (Cruz Brothers Locators, Inc.) surveyed proposed drilling areas on May 8, 2013 to locate any additional subsurface conduits.

Additional Investigation and Monitoring Wells Replacement Report

#### 2.2 Advancement of Soil Borings

On May 9, 2013, a C-57 licensed driller, Gregg Drilling and Testing (under SOMA's oversight) advanced two soil borings next to each other (DPT-5 and DPT-5W) for collection of soil (DPT-5) and groundwater (DPT-5W) samples. Both borings were located in the vicinity of historical borings SB-1 and SB-2 and well RS-4. Boring locations are shown in Figure 2. Borings were advanced approximately 50 feet below ground surface (bgs), where the drillers got refusal.

Direct Push Technology (DPT) was utilized for the borings. DPT is an efficient method of collecting continuous soil cores while preventing cross-contamination. It involves hydraulically hammering a set of steel rods into the subsurface with the lead section consisting of a polyethylene-lined sampler. After drilling rods are pushed to the desired depth, the soil-filled liner is retrieved. SOMA's field geologist logged continuous soil cores from advanced borings, characterizing the content of each soil-filled tube using the Unified Soil Classification System (USCS) Visual-Manual method. Encountered subsurface lithologies were recorded on geologic borehole logs. Contents of each science depth and results noted on respective boring logs (Appendix B).

For vertical definition, soil samples were collected at depths where historical soil contamination was observed, or where PID readings or visual observations indicated presence of significant soil contamination, or at significant changes in lithology. At each interval of depth-discrete soil sampling, the DPT drilling rig obtained a 4-foot soil sample core. For soil sample collection, SOMA's field geologist cut sections of the soil-filled tubes into 6-inch-long sections and capped each end with a Teflon liner and polyethylene end cap. Samples were labeled with unique identifiers and immediately placed in a chilled ice chest pending transportation to Curtis & Tompkins, Ltd. (C&T), a California state-certified environmental laboratory.

A minimum of one soil sample was analyzed from each soil boring, samples submitted for analyses were selected based on their elevated PID readings with respect to the rest of PID reading observed during advancement of the given boring; the remainder of collected soil samples were put on-hold, pending review of analytical results for the analyzed samples.

Observed subsurface soils consisted of sandy lean clays and clayey sands. Encountered subsurface lithologies were recorded on geologic borehole logs. The contents of each sediment-filled tube were screened using a PID at each screened depth and results were noted on respective boring logs. PID responds to all molecules with ionization potential below 10.6eV, including aromatics and molecules with carbon double bonds. Detected PID readings, summarized on boring logs (Appendix B), ranged between 0.5 ppm and 568 ppm (detected at 12

feet bgs).

To collect grab groundwater samples, a hydropunch sampler was used, where rods must be pulled up and water allowed to recover, a temporary 1-inchdiameter casing and a 5-foot-long well screen were installed over the desired depth-discrete interval. Depth of each soil boring at the time of grab groundwater sampling is documented in Table 2.

As previously mentioned, during the most recent investigation, while logging the soil from boring DPT-5, there was a section where "very moist to wet" soil was encountered at approximately 13 feet bgs. SOMA's field geologist left the boring open at 15 feet in order to see if enough water would come into the boring in order to sample. Water did come into the boring and the groundwater sample was called DPT-5W-1. Soil borings that were drilled during previous investigations had also been left open to see if water would accumulate at similar depths and no water came into those borings. During the previous investigation it was concluded that the shallow groundwater appears to be perched and somewhat discontinuous, so this shallow zone that was encountered is the perched and discontinuous zone.

During advancement of DPT-5W borings, SOMA's geologist waited for water to accumulate at 25 feet bgs. After a reasonable time, no water had accumulated at this depth so the boring was left open over night to see if enough water would accumulate for a sample. Upon returning to the site the next day, there was enough water for a groundwater sample, which was called DPT-5W-2. This is considered to be a part of the discontinuous and perched zone discussed above. The groundwater sample that was taken at 50 feet bgs was called DPT-5W-3, and is the First Water Bearing Zone (WBZ).

Where enough groundwater had accumulated, a bailer was utilized to collect groundwater samples. Equipment utilized in sample collection was field decontaminated to avoid cross-contaminating groundwater samples.

Each collected grab groundwater sample was transferred to appropriate vials with Teflon septa with no headspace. The samples were then labeled, logged on a chain-of-custody form, placed in an ice-filled cooler, and kept at 4<sup>o</sup>C pending transport to Curtis & Tompkins Laboratories for analysis.

#### 2.3 Monitoring Well Installations

On May 9 and 10, 2013, a C-57 licensed driller Gregg Drilling and Testing (under SOMA's oversight) installed two 4-inch diameter groundwater monitoring wells (MW-1 and MW-2). The wells were logged and sampled on May 9 and installed on May 10. Well locations are shown in Figure 2. To clear all subsurface utilities,

each well location was hand cleared to 5 feet below ground surface (bgs). Also on May 10, 2013, Del Secco was onsite to concrete core the location for MW-2.

A hollow stem auger (HSA) was used for drilling to construct these wells. The crew drilled and continuously sampled, where appropriate, for lithologic logging purposes (changing lithology) and visual observations such as odor and discoloration of encountered material. Soil samples were collected for chemical analysis in the areas of formerly elevated PID readings, odor, or visual observations indicative of contaminated area, in the absence of above indicators, a minimum of two samples was collected from each well borings from depths where contamination was historically present. Samples were collected using metal tubes.

Soils observed during well installations of MW-1 and MW-2 were predominantly clayey sands and sandy clays with very little variation from one boring to the next.

Recorded PID readings ranged from 25.2 ppm to 931 ppmv in well MW-1, and from 25.7 ppmv to 1015 ppmv in well MW-2. The highest PID reading was recorded in MW-2 at 10 feet bgs. Field observations and PID readings were noted on geological boring logs (Appendix B). SOMA's field geologist logged continuous soil cores from each boring location, characterizing the content of each soil-filled tube using the Unified Soil Classification System (USCS). Upon soil sampling, both ends of each tube were secured using Teflon tape and tubes were immediately placed in a chilled ice chest. Soil samples were labeled with unique sample identifiers and delivered to a state-certified environmental laboratory under established chain of custody protocol for analysis. No groundwater samples were collected during well installation activities.

These new wells were constructed with 4-inch diameter, schedule 40, polyvinyl chloride 0.02-inch screen, and blank casing, and #3 sand packs. The sand pack was installed from approximately 1 foot above the perforated well casing interval to the total depth of the wells. Approximately 1 foot of bentonite was installed above the sand pack, and a neat cement seal was installed to near ground surface. The grout seal was emplaced to near-surface grade where a flush-mount traffic-rated well vault was installed with a concrete foundation.

#### 2.4 Well Survey and Well Development

On May 24, 2013, Gregg Drilling and Testing developed the newly installed wells under SOMA's oversight. Wells were developed in a minimum of 72 hours following installation; monitoring well development logs are included in Appendix D. 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.

On May 28, 2013, a licensed surveyor surveyed (horizontally and vertically) newly installed wells; the survey report is included in Appendix D.

#### 2.5 Waste Disposal

Soil and wastewater generated during well installation, boring, and well development activities was temporarily stored on-site in separate DOT-rated, 55-gallon steel drums pending characterization, profiling, and transport to an approved disposal-recycling facility. The disposal facility required a composite sample from the stored 55-gallon drums to be analyzed for nickel. This sample was obtained on June 21, 2013. Laboratory analytical is attached in Appendix C.

On June 28, 2013, ten 55-gallon steel drums were removed from the site (7) contained soil cuttings and (3) contained wastewater and were transported to an approved facility for proper disposal. The waste manifest is included in Appendix E.

#### 2.6 Laboratory Analysis

Soil and groundwater samples were submitted to C&T for analysis of the following:

- Total petroleum hydrocarbons as gasoline and diesel (TPH-g and TPH-d)
- BTEX
- Fuel oxygenates, additives and lead scavengers including MtBE, tertiarybutyl alcohol (TBA), ethyl tertiary-butyl ether (ETBE), diisopropyl ether (DIPE), tertiary-amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), 1,2-dibromomethane (EDB), naphthalene, and ethanol.
- Bulk (in soil) and dissolved (in groundwater) cadmium and nickel

Analyses employed USEPA Methods 8015, 8260B, and 6010.

#### 2.6.1 Groundwater Analytical Results

Groundwater samples were collected from three zones: DPT-5W-1, DPT-5W-2, and DPT-5W-3. As previously mentioned, during the previous investigation it was concluded that the shallow groundwater appears to be perched and somewhat discontinuous, so it is possible the sample taken from the upper zone that was encountered (DPT-5W-1) is a part of the same discontinuous zone.

In DPT-5W-1, TPH-g was detected at 2,100  $\mu$ g/L and TPH-d was detected at 4,300  $\mu$ g/L. BTEX analytes were below laboratory reporting limits in this sample except for benzene and ethylbenzene, detected at 10  $\mu$ g/L and 23  $\mu$ g/L, respectively. MtBE was detected at 640  $\mu$ g/L and TBA was detected at 16,000  $\mu$ g/L. TAME was detected at 54  $\mu$ g/L and nickel was detected at 48  $\mu$ g/L.

In DPT-5W-2, TPH-g was below the laboratory detection limit, though the reporting limit was raised due to higher dilutions. TPH-d was detected at 630  $\mu$ g/L. All BTEX analytes were below laboratory reporting limits in this sample MtBE was detected at 40,000  $\mu$ g/L and TBA was detected at 59,000  $\mu$ g/L. TAME was detected at 2,200  $\mu$ g/L and nickel was detected at 24  $\mu$ g/L. Figures 3 through 7 illustrate contour maps of TPH-g, TPH-d, Benzene, MtBE and TBA concentrations in the Perched Zone.

In DPT-5W-3, TPH-g was below the laboratory detection limit. TPH-d was detected at 320  $\mu$ g/L. All BTEX analytes were below laboratory reporting limits in this sample. MtBE was detected at 2.8  $\mu$ g/L and TBA, TAME and nickel were below the laboratory reporting limit. Figures 8 through 10 illustrate maps of TPH-g, TPH-d, benzene, MtBE and TBA concentrations in First WBZ.

During the UST removal activities in August 2011, TPH-g, TPH-d and benzene were detected at 76,000  $\mu$ g/L, 14,000  $\mu$ g/L, and 1,600  $\mu$ g/L, respectively, in groundwater sample T-1 from the northern region of the UST pit. MtBE was detected in this sample at 5,700  $\mu$ g/L. Total metals such as lead, nickel, and zinc were also detected in T-1 in excess of ESLs established by California Regional Water Quality Control Board (CRWQCB), San Francisco Bay region. TPH-g, TPH-d and benzene were detected at 890  $\mu$ g/L, 1,500  $\mu$ g/L, and 8  $\mu$ g/L, respectively, in groundwater sample T-2 from the southern region of the UST pit. MtBE was detected in this sample at 5,700  $\mu$ g/L. Total metals such as lead and nickel were also detected in T-2 in excess of ESLs. Concentrations in T-1 and T-2 are shown on Figures 3 through 7 in parentheses.

During the previous CPT/MIP & DPT investigation in March 2012 TPH-g was below the laboratory reporting limit in all shallow groundwater samples. Reporting limits in CPT-1 and CPT-2 were raised due to higher dilutions. TPH-d was detected in a range of 140  $\mu$ g/L in CPT-1 to 820  $\mu$ g/L in CPT-2. BTEX analytes were below laboratory reporting limits in shallow groundwater samples except for benzene and toluene detected in CPT-1 at 94  $\mu$ g/L and 64  $\mu$ g/L, respectively. MtBE was detected in a range of 2,600  $\mu$ g/L in DPT-4 to 52,000  $\mu$ g/L in CPT-2. TBA detections ranged from 28  $\mu$ g/L in DPT-4 to 92,000  $\mu$ g/L in CPT-4 to 3,000  $\mu$ g/L in CPT-2. TPH-g was below laboratory reporting limit in deeper groundwater samples in DPT-3 and was detected in CPT/DPT-1 and CPT/DPT-2 at 96,000  $\mu$ g/L and 4,500  $\mu$ g/L, respectively. TPH-d was detected in concentrations ranging from 53  $\mu$ g/L in DPT-3 to 3,200  $\mu$ g/L in CPT/DPT-1. BTEX analytes were below laboratory reporting limits in DPT-3. The highest BTEX concentrations were

detected in CPT/DPT-1 at 2,400  $\mu$ g/L, 11,000  $\mu$ g/L, 3,100  $\mu$ g/L, and 14,700  $\mu$ g/L, respectively. As shown in Table 2, TPH-g, TPH-d, and BTEX concentrations were higher than their ESLs in CPT/DPT-1 and CPT/DPT-2. MtBE was detected in a range of 9,800  $\mu$ g/L in DPT-3 to 95,000  $\mu$ g/L in CPT/MIP-1. TBA detections ranged from 1,000  $\mu$ g/L in DPT-3 to 78,000  $\mu$ g/L in CPT/DPT-1. TAME was detected in a range of 690  $\mu$ g/L in DPT-3 to 7,400  $\mu$ g/L in CPT/DPT-1. Figures 8 through 10 show these concentrations in parentheses.

Current and historical groundwater analytical results with respective ESLs are summarized in Table 2 and Table 3. The laboratory analytical report is contained in Appendix C.

#### 2.6.2 Soil Analytical Results

During the current investigation, elevated PID readings and hydrocarbon odor and staining were observed in the borings for MW-1 and MW-2, as well as boring DPT-5. The maximum PID reading was recorded in boring MW-2 at 10 feet bgs (1,015 ppm).

TPH-g was detected above environmental screening levels (ESL) published by SB Bay Region RWQCB in MW-1 and MW-2. TPH-g was detected in MW-1 at 10 feet bgs (750 mg/kg), 12 feet bgs (910 mg/kg), and 15 feet bgs (460 mg/kg). In MW-2, TPH-g was detected at 10 feet bgs (960 mg/kg) and 12 feet bgs (270 mg/kg). In DPT-5, TPH-g was either below the laboratory-reporting limit or below ESL. Contour maps showing TPH-g concentrations in soil are shown in Figure 11 and Figure 14.

TPH-d was detected above ESL in samples collected from MW-1 at 10 feet bgs (130 mg/kg) and 12 feet bgs (140 mg/kg), and in MW-2 at 10 feet bgs (400 mg/kg). Contour maps showing TPH-d concentrations in soil are shown in Figure 12 and Figure 15.

BTEX was below the laboratory-reporting limit in all soil samples collected from DPT-5. Benzene was below the laboratory-reporting limit in the soil samples from MW-1 and MW-2. Toluene was below the laboratory-reporting limit in MW-2, and was detected above ESL in MW-1 at 12 feet bgs (5.6 mg/kg). Ethylbenzene was detected above ESL in MW-1 and MW-2, with the highest concentrations occurring at 10 feet in both borings at 22 mg/kg and 18 mg/kg, respectively. Xylenes were also detected above ESL in MW-1 (124 mg/kg) and at 10 feet bgs in MW-2 (64.5 mg/kg).

MtBE was detected above ESL in samples from DPT-5, MW-1 and MW-2, and ranged from 0.073 mg/kg at 15 feet bgs in DPT-5 to 27 mg/kg at 12 feet bgs in MW-2. TBA was also detected above ESL in all three borings and ranged from

6.20 mg/kg at five feet bgs in MW-1 to 14 mg/kg at 17 feet bgs in MW-2. Contour maps showing MtBE concentrations in soil are shown in Figure 13 and Figure 16.

Naphthalene was detected above ESL in a few samples from DPT-5, MW-1, and MW-2. Detectable naphthalene concentrations ranged from 0.58 mg/kg at 12 feet bgs in DPT-5 to 5.9 mg/kg at 10 feet bgs in MW-2.

Nickel was detected at levels above the ESL in all soil samples. Nickel concentrations ranged from 1,900 mg/kg in DPT-5 at 10 feet bgs to 780 mg/kg in MW-1 at 25 feet bgs.

Table 1 summarizes soil analytical results. The laboratory analytical report is contained in Appendix C.

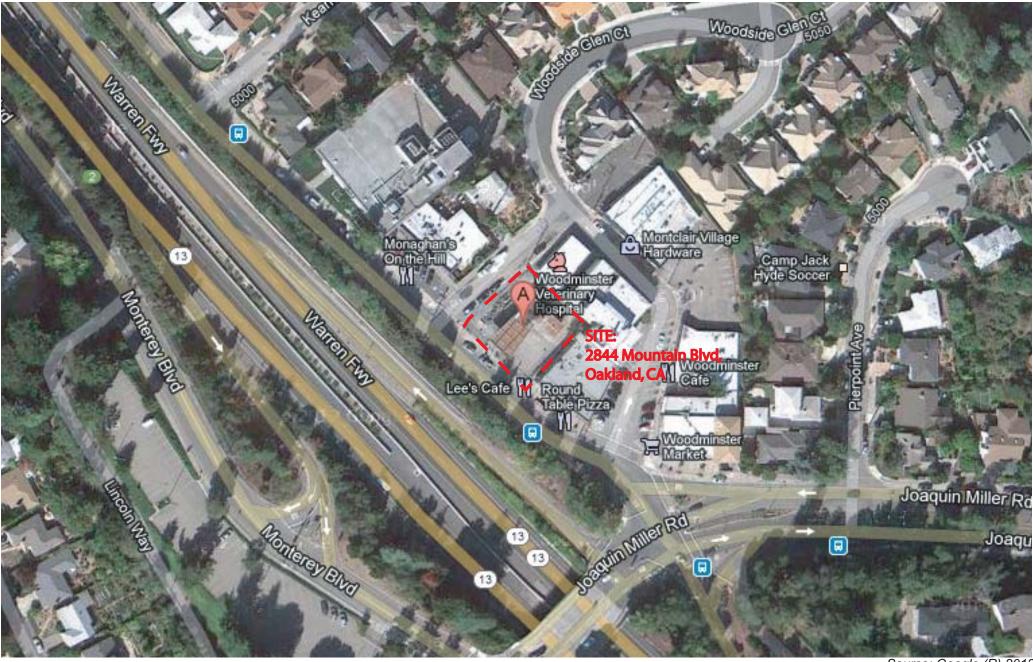
## 3. CONCLUSIONS AND RECOMMENDATIONS

- SOMA installed two replacement groundwater wells of MW-1 and MW-2, that will be utilized during groundwater monitoring events;
- SOMA drilled two deep soil borings to sample soil in one and three groundwater samples were collected from the second boring, spanning the perched and First WBZs;
- TPH-d was detected in all three samples, and ranged from 4,300  $\mu$ g/L in DPT-5W-1 to 320  $\mu$ g/L in DPT-5W-3;
- Maximum benzene concentration was detected in DPT-5W-1 at 10 μg/L; and was below the laboratory-detection limit in DPT-5W-2 and DPT-5W-3.
- TPH-g was detected above environmental screening levels (ESL) in MW-1 and MW-2. TPH-g was detected in MW-1 at 10 feet bgs (750 mg/kg), 12 feet bgs (910 mg/kg), and 15 feet bgs (460 mg/kg). In MW-2, TPH-g was detected at 10 feet bgs (960 mg/kg) and 12 feet bgs (270 mg/kg). In DPT-5, TPH-g was either below the laboratory-reporting limit or below ESL.
- TPH-d was detected above ESL in samples collected from MW-1 at 10 feet bgs (130 mg/kg) and 12 feet bgs (140 mg/kg), and in MW-2 at 10 feet bgs (400 mg/kg).
- Elevated levels of TPH-g, diesel and MtBE in groundwater was reported previously beneath the former USTs in groundwater sample T-1.
- Based on the observation made there, the discontinuous perched waterbearing zone at 13-15 feet bgs has been impacted by the petroleum hydrocarbons.

Due to proximity of the site to a public school, SOMA request for an air discharge permit from the Bay Area Air Quality Management District (BAAQMD) was delayed. As such, upon receiving the air discharge permit from the BAAQMD SOMA will conduct the MPE pilot test at the site. It is expected that results of the pilot test will show how effectively the MPE technology can extract and remove the remaining contaminants from the soil and groundwater from the inaccessible

area that could not be removed by excavation at the site. It is also recommended that another groundwater monitoring well be installed in close proximity of boring SS-1 in order to monitor elevated levels of chemicals in groundwater.

# **FIGURES**



Source: Google (R) 2012

approximate scale in feet

0

100 200





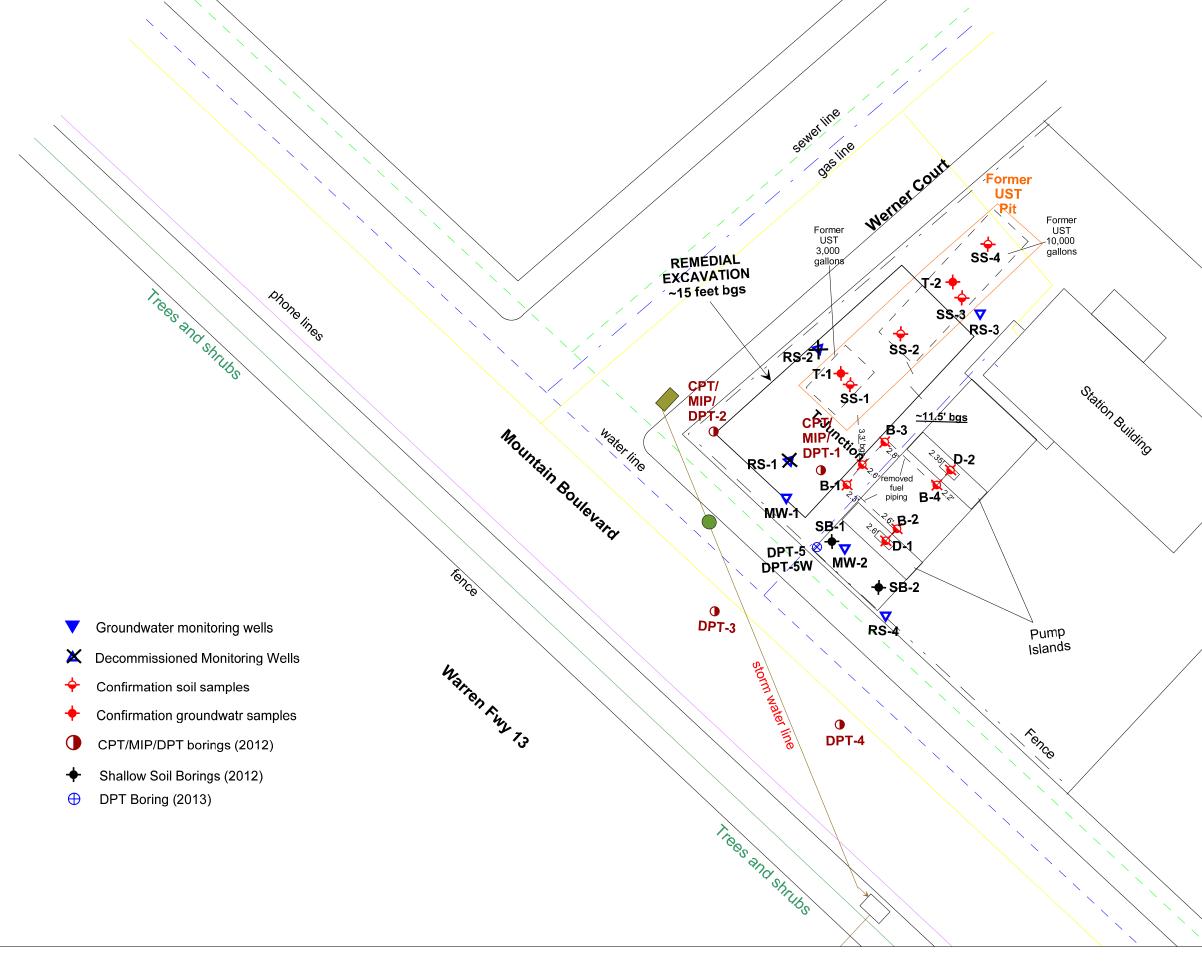


Figure 2: Site Map Showing Locations of Former USTs, Soil Borings, and Groundwater Monitoring Wells

generalized groundwater flow direction



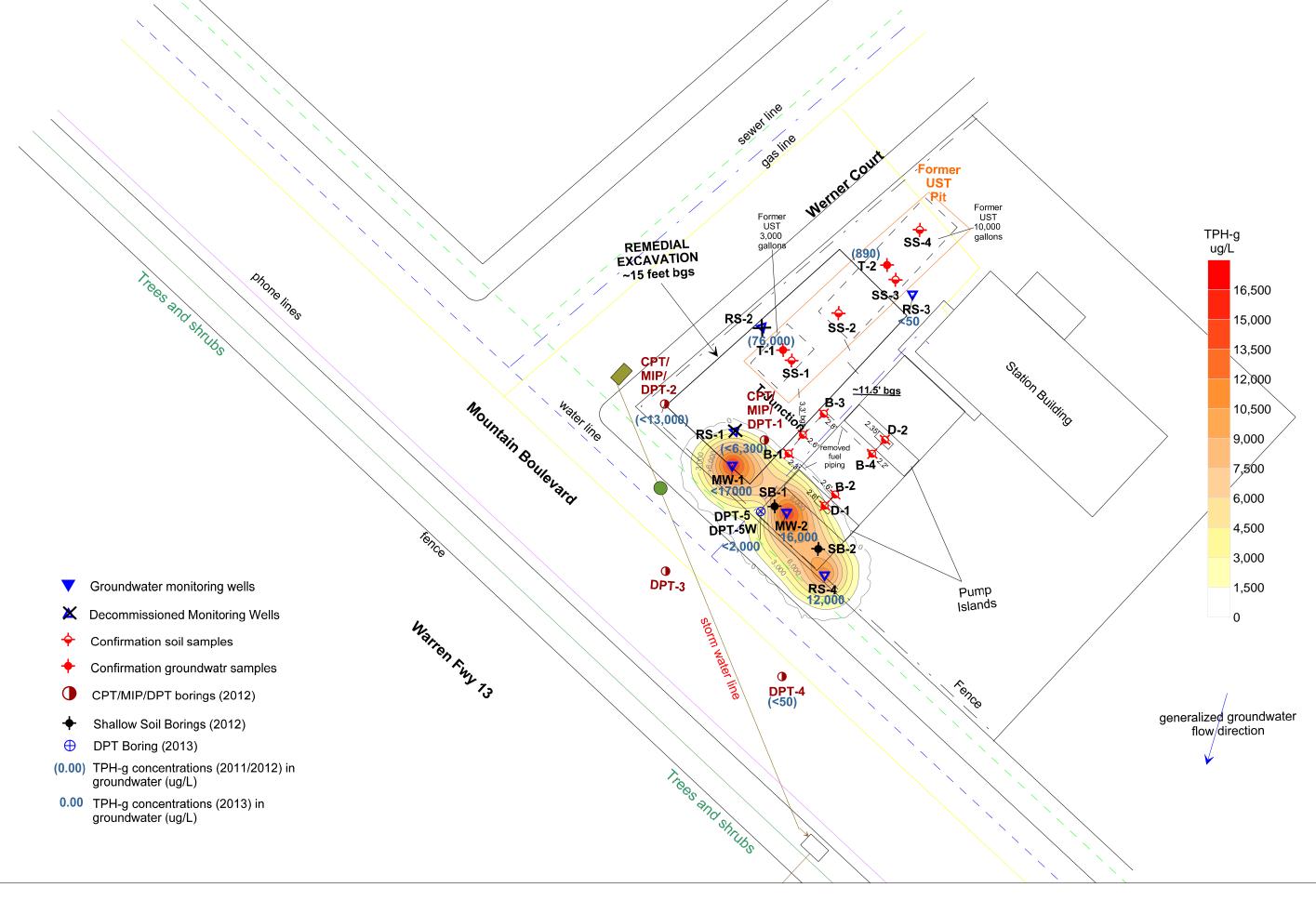


Figure 3: Contour map of TPH-g concentrations in groundwater in Perched Zone





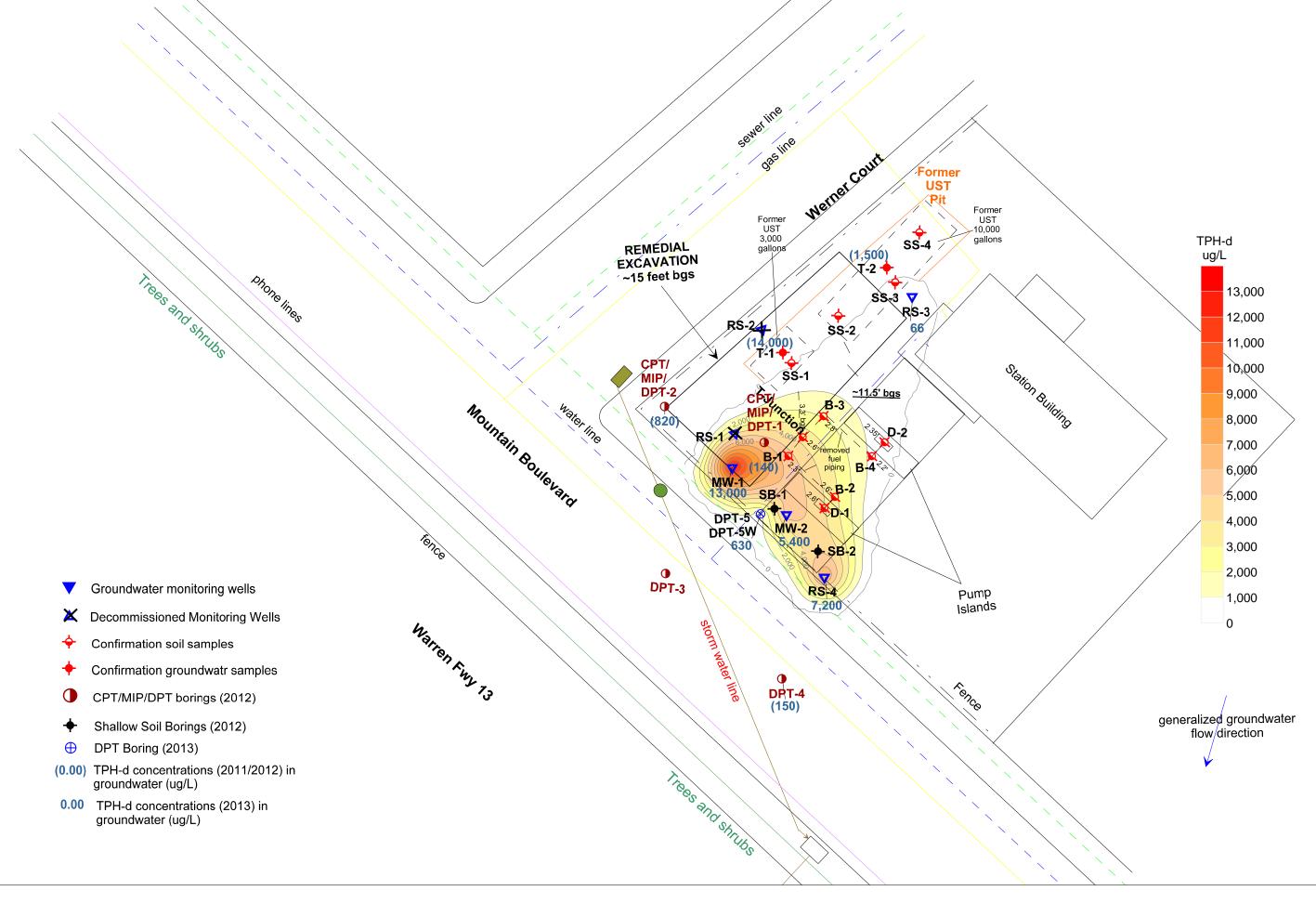
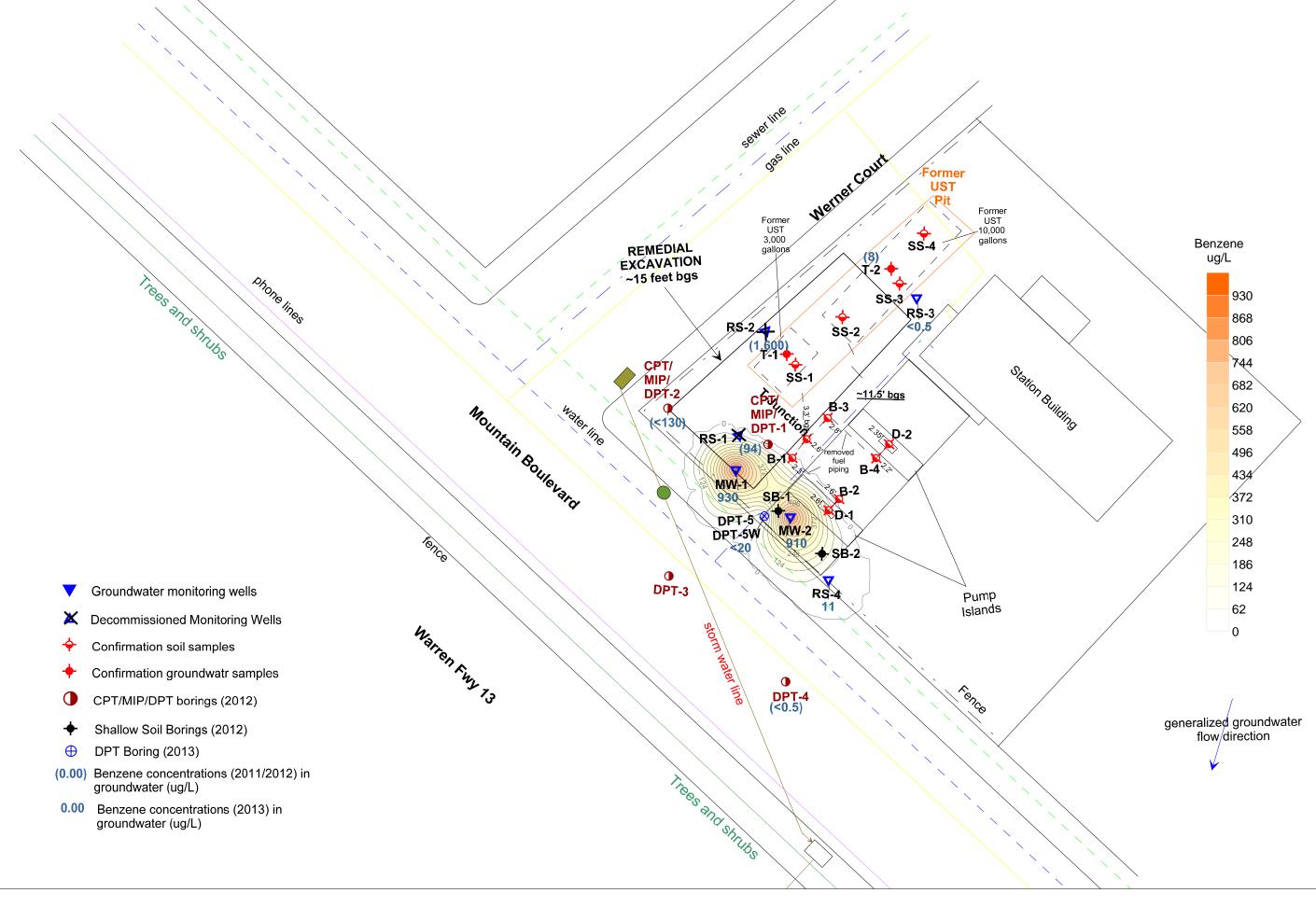


Figure 4: Contour map of TPH-d concentrations in groundwater in Perched Zone







20

Ω

Figure 5: Contour map of Benzene concentrations in groundwater in Perched Zone





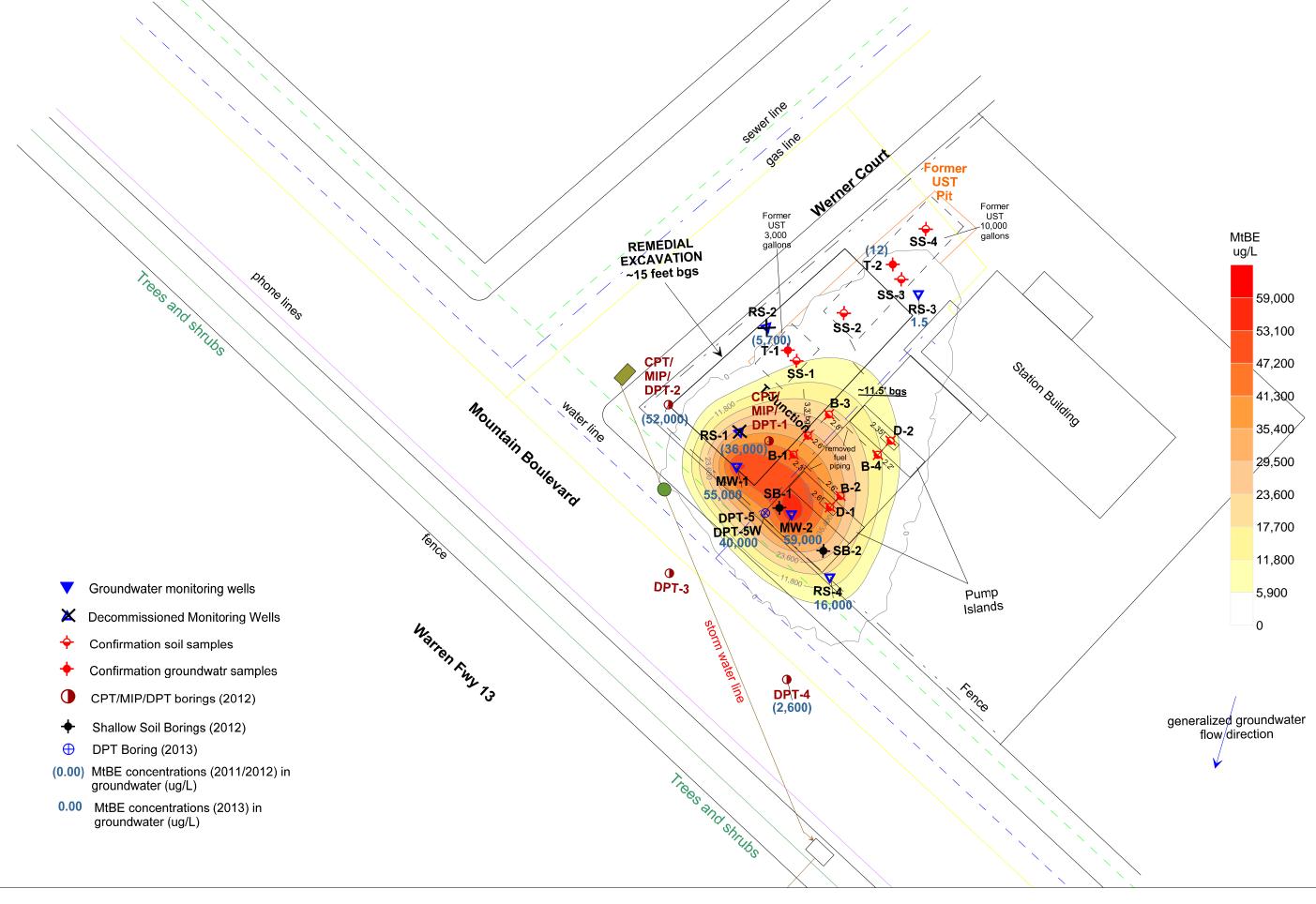
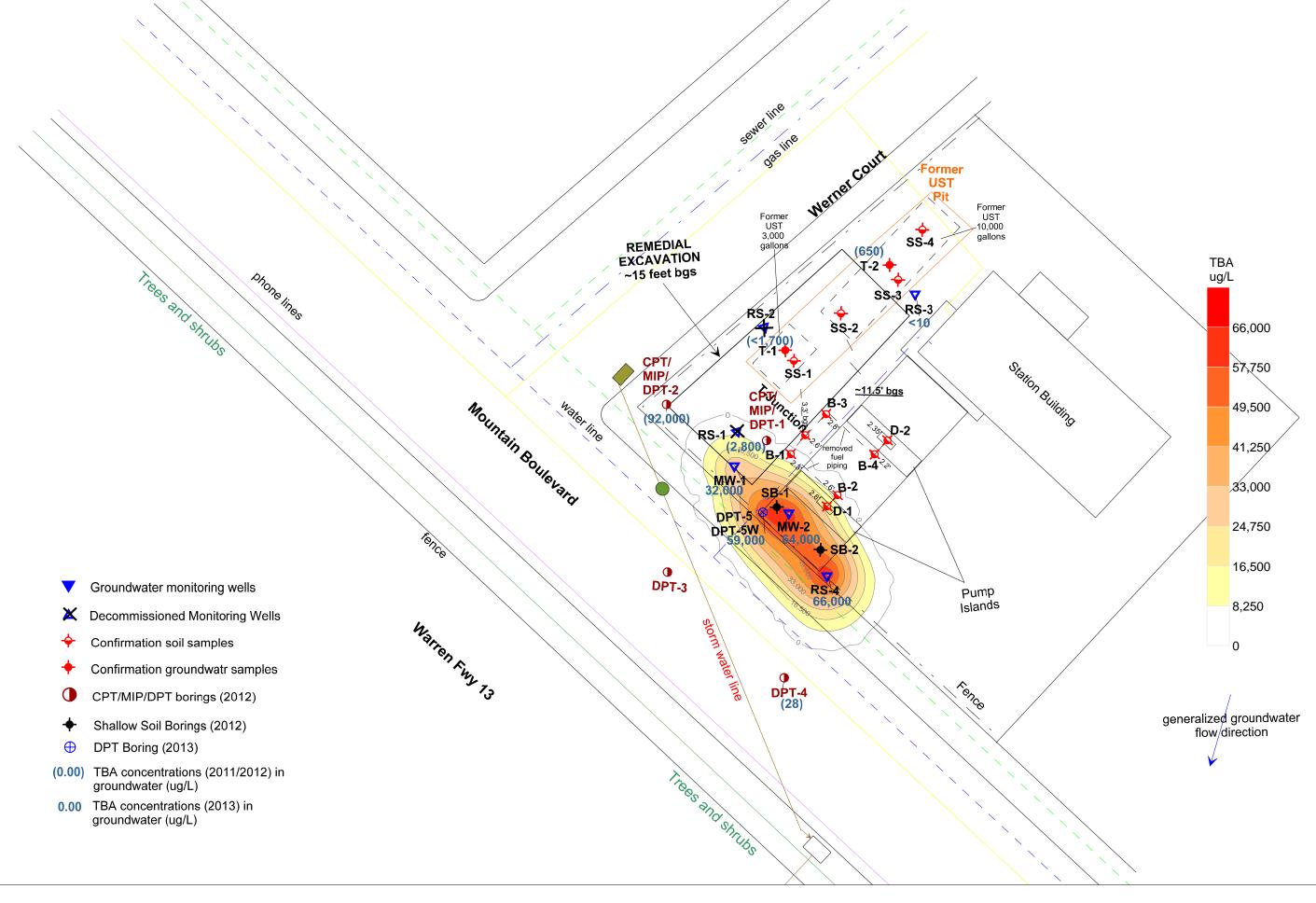


Figure 6: Contour map of MtBE concentrations in groundwater in Perched Zone



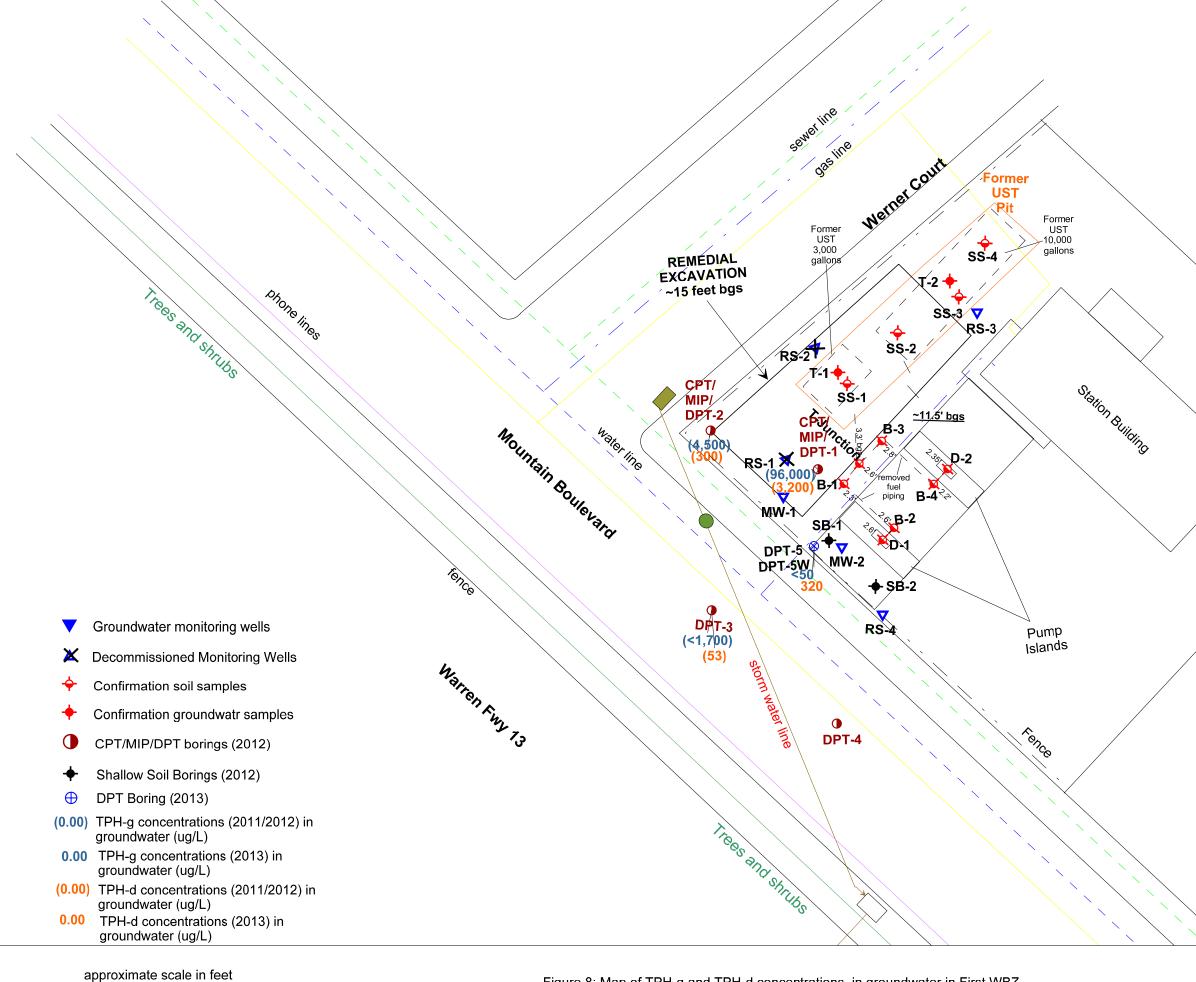




Ω

Figure 7: Contour map of TBA concentrations in Perched Zone





40

20

0

Figure 8: Map of TPH-g and TPH-d concentrations in groundwater in First WBZ

generalized groundwater flow direction



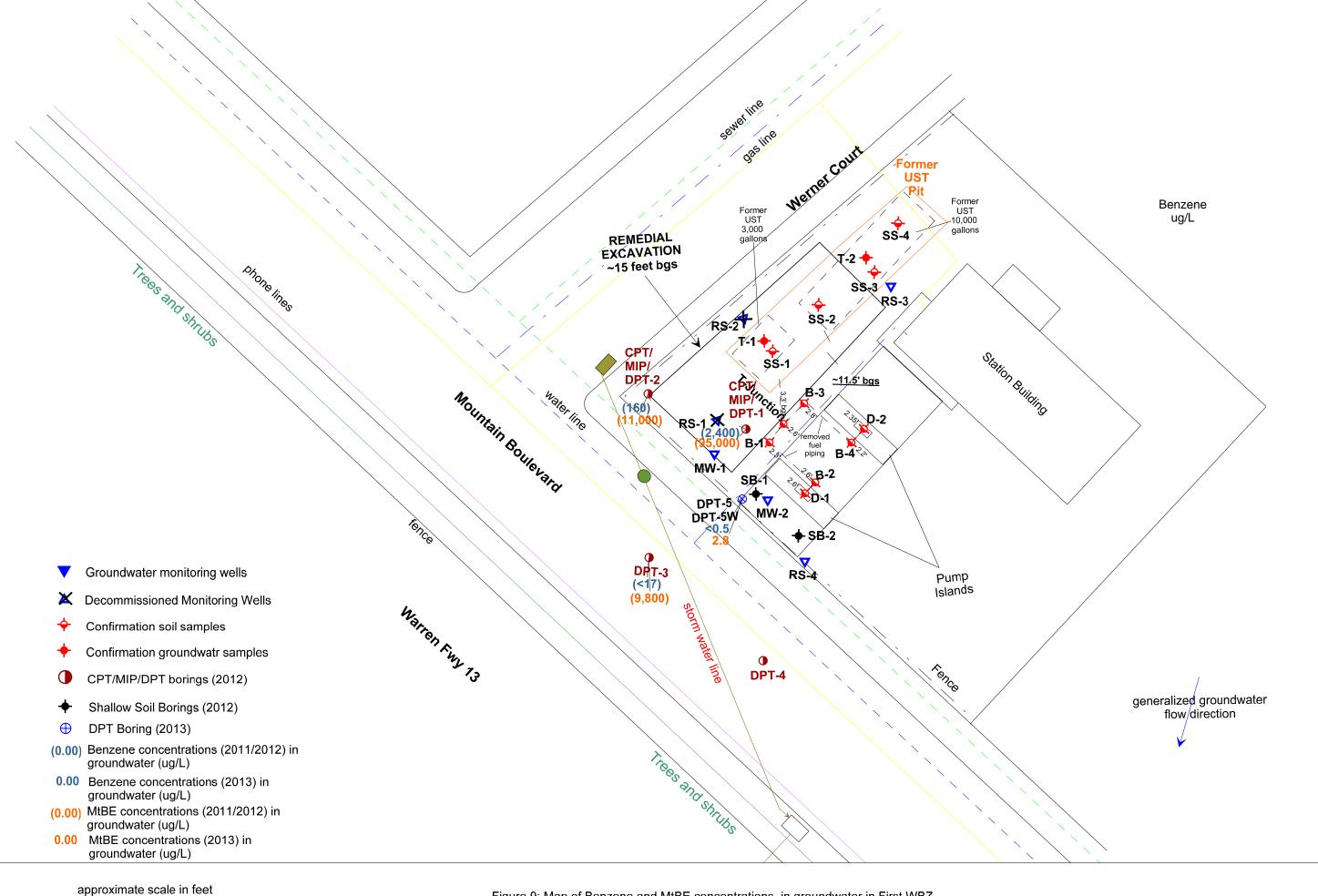
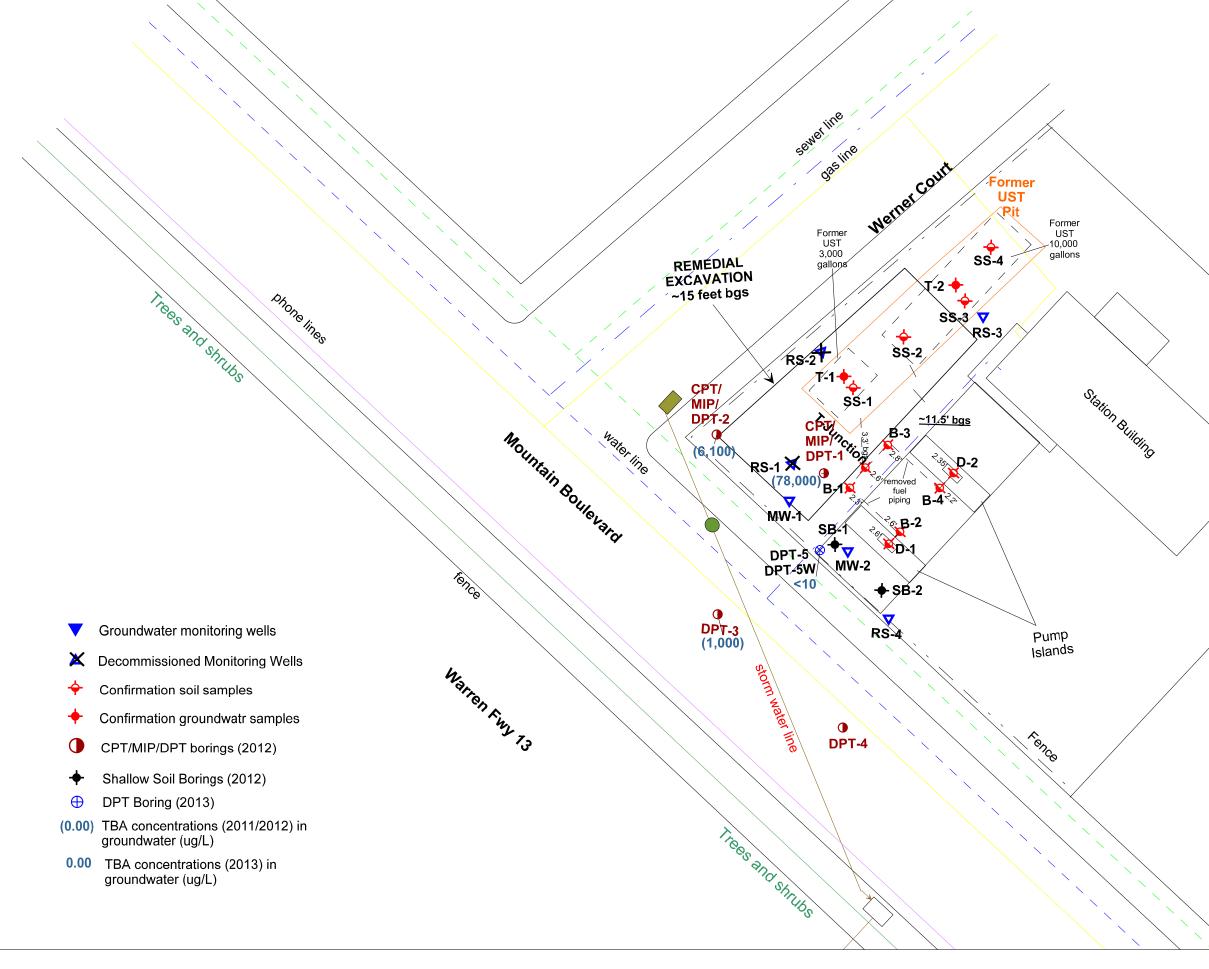


Figure 9: Map of Benzene and MtBE concentrations in groundwater in First WBZ





0

Figure 10: Map of TBA concentrations in groundwater in First WBZ

generalized groundwater flow direction



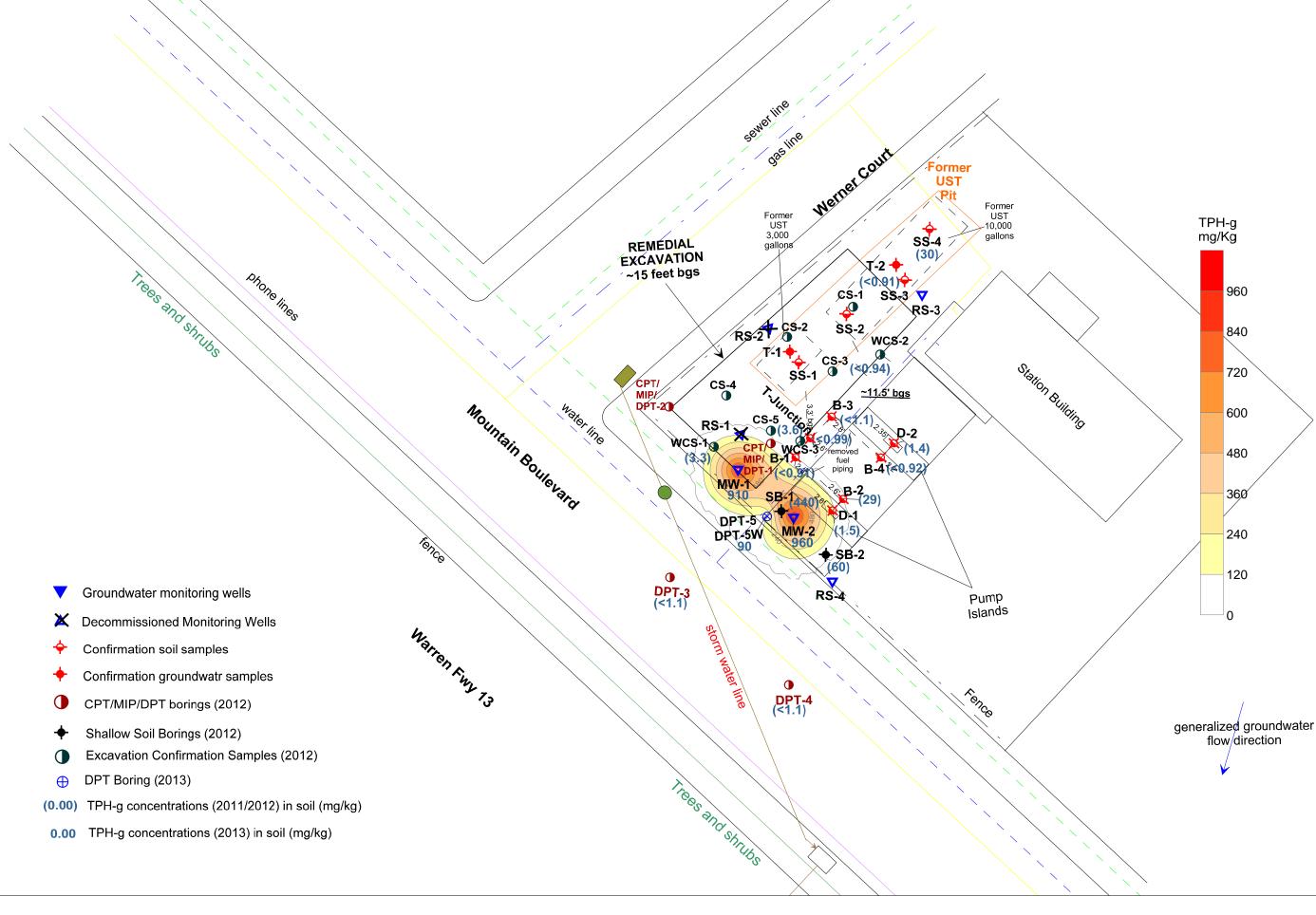
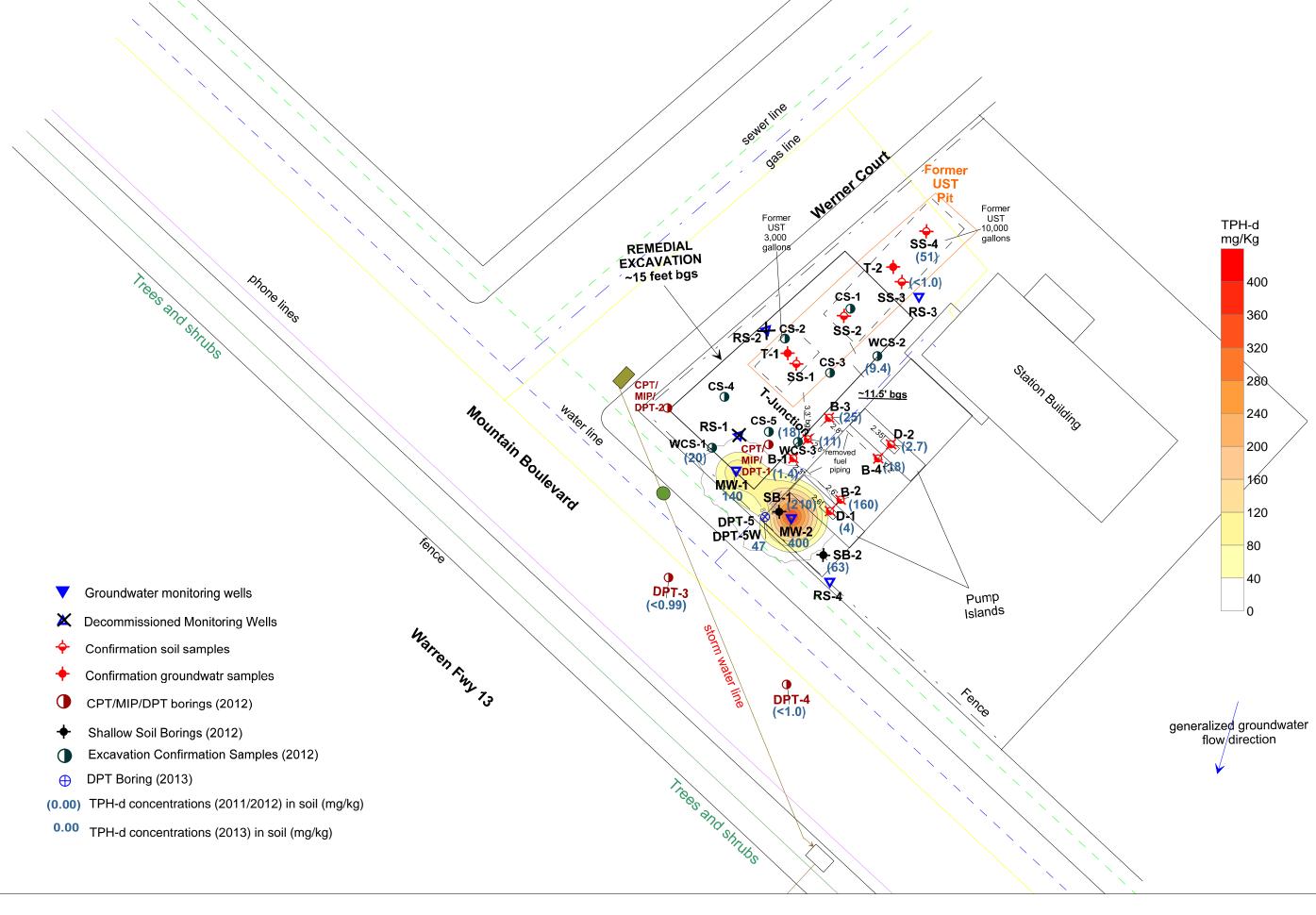


Figure 11: Contour map of TPH-g concentrations in soil at 0-12 ft bgs







20

Figure 12: Contour map of TPH-d concentrations in soil at 0-12 ft bgs





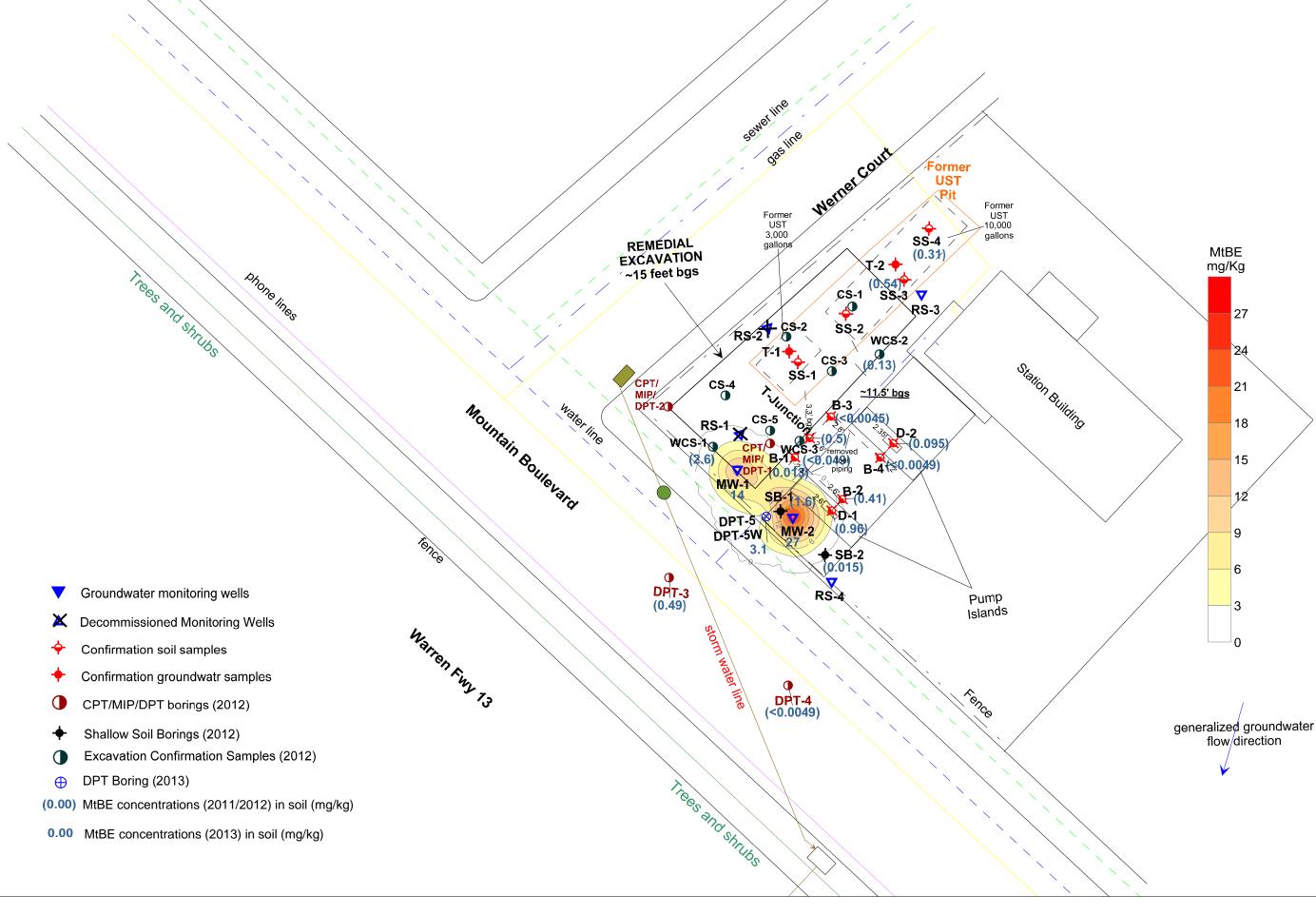
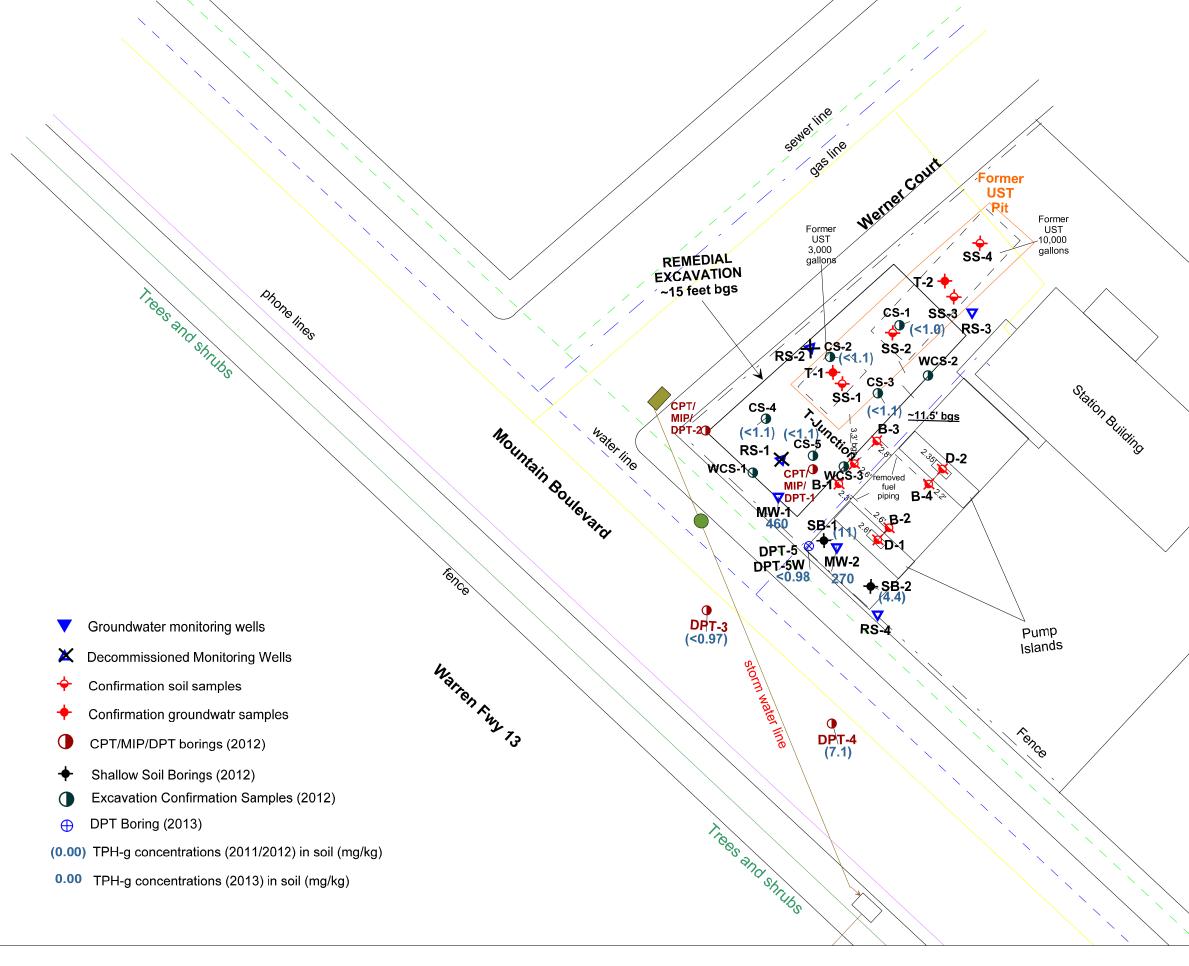


Figure 13: Contour map of MtBE concentrations in soil at 0-12 ft bgs





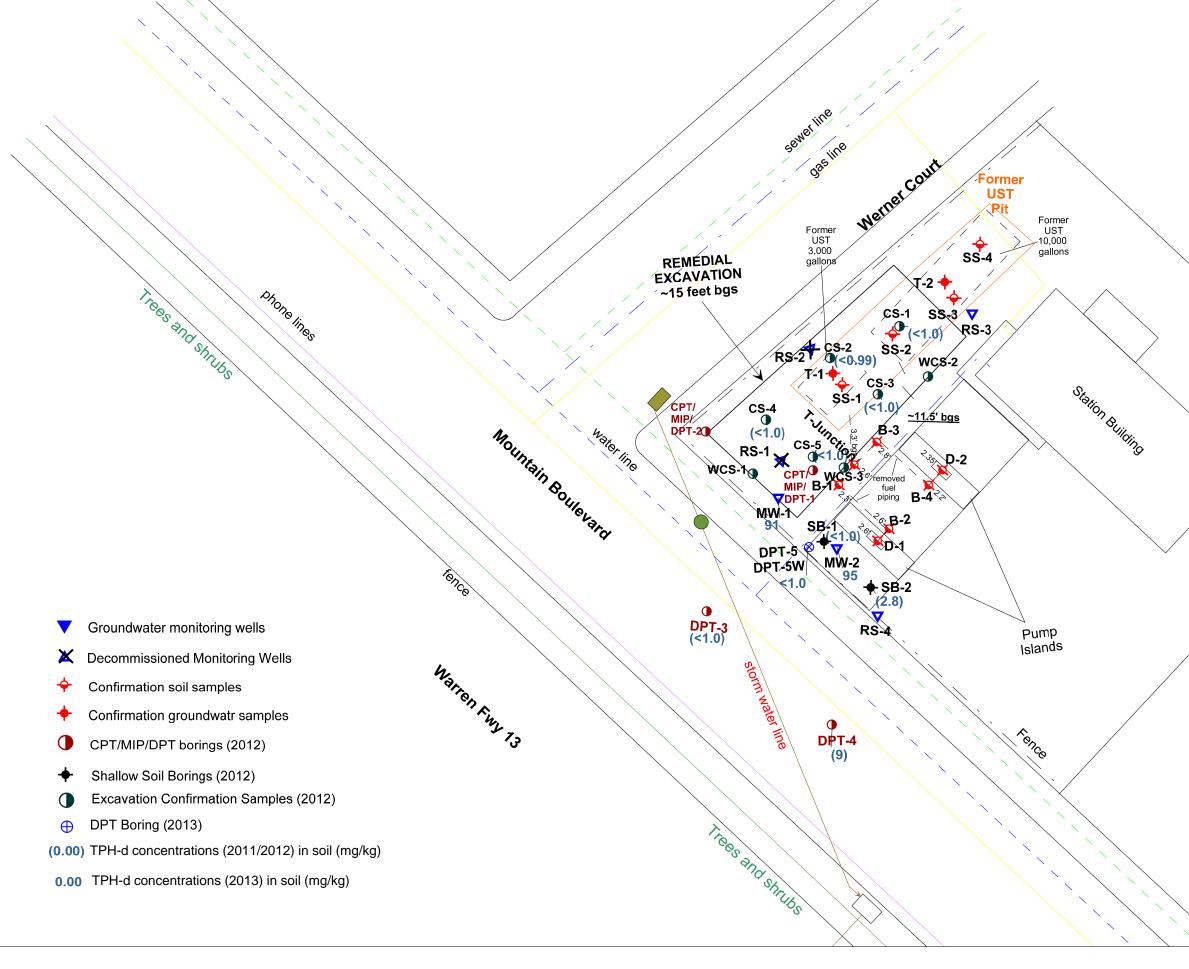
20

0

Figure 14: Map of TPH-g concentrations in soil at 12-20 ft bgs

generalized groundwater flow direction



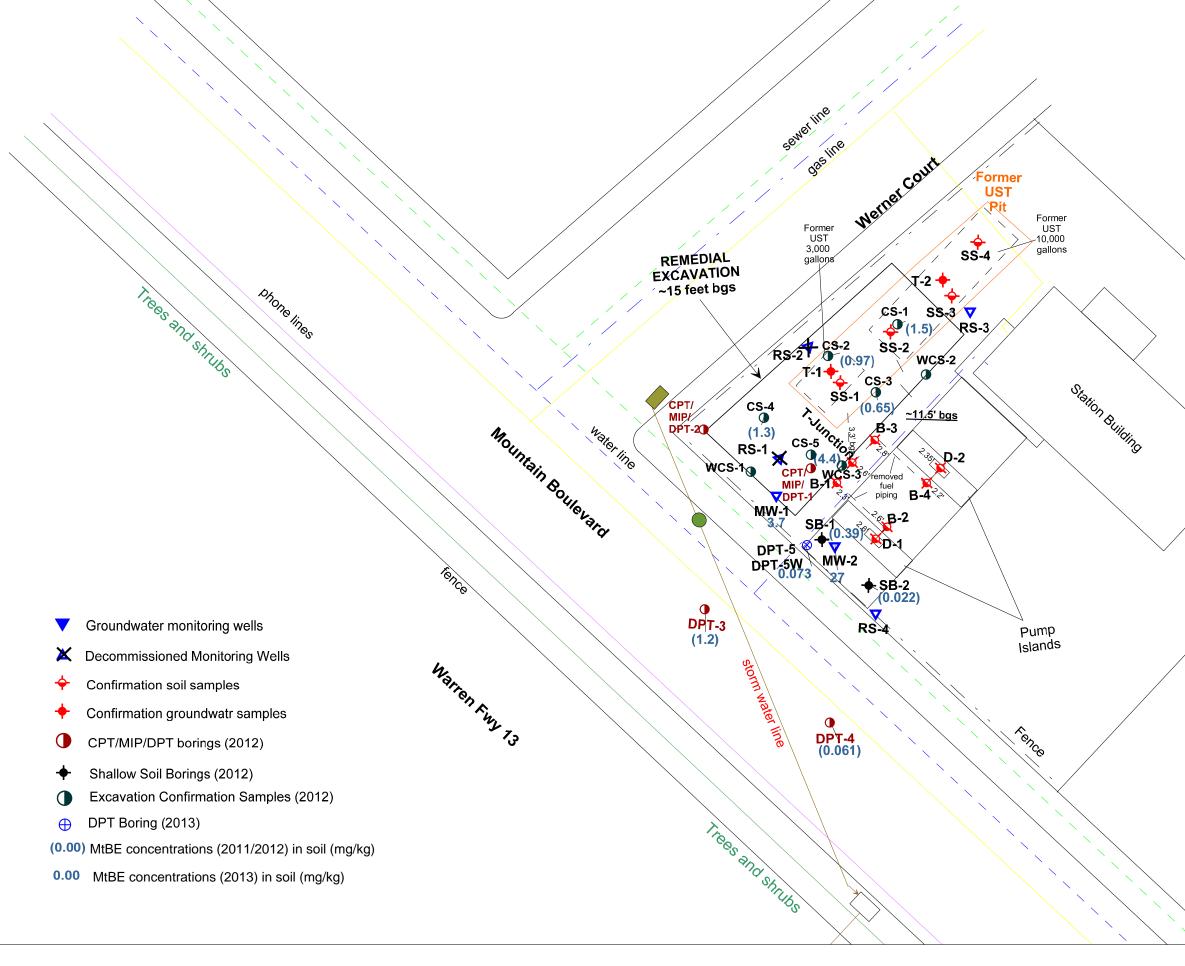


0

Figure 15: Map of TPH-d concentrations in soil at 12-20 ft bgs

generalized groundwater flow direction





0

Figure 16: Map of MtBE concentrations in soil (12-20) ft bgs

generalized groundwater flow direction



# TABLES

#### Table 1: Soil Analytical Data 2844 Mountain Blvd, Oakland, CA

Sample ID	Date	Sample Depth (feet)	TPH-g (mg/kg)	TPH-d (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzen e (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	Methanol( mg/kg)
		1			Sampling B	eneath UST			1			1
<del>\$\$-1</del>	8/9/2011	<del>11.50</del>	<del>2,300</del>	<del>630 Y</del>	< <del>2.5</del>	<del>15</del>	17	<del>123</del>	3.3	<del>&lt;50</del>	< <del>2.5</del>	<del>1.5 C</del>
<del>\$\$-2</del>	8/9/2011	<del>11.50</del>	<del>690 Y</del>	800	<del>&lt;2.0</del>	<del>&lt;2.0</del>	<del>&lt;2.0</del>	<del>&lt;2.0</del>	<del>&lt;2.0</del>	<40	<2.0	<1.0
SS-3	8/9/2011	11.50	<0.91	<1.0	0.0053	0.06	0.0078	0.0430	0.54	0.11	0.14	<1.0
SS-4	8/9/2011	11.50	30 Y	51 Y	0.0054	0.055	0.011	0.054	0.310	<0.1	0.064	<1.0
CS-1-CS-4 Composite	8/9/2011	NA	570 Y	180 Y	<1.3	2.1	4.8	35	<1.3	<25	<1.3	<1.0
				S	ampling Ben	eath Fuel Pi	ping		•			•
T-Junction	8/18/2011	2.6-3.3	<0.99	11 Y	< 0.0047	< 0.0047	< 0.0047	<0.0047	0.5	0.82	0.031	<0.98
B-1	8/18/2011	2.30	<0.91	1.4 Y	< 0.005	< 0.005	< 0.005	<0.005	0.013	<0.1	<5	<1
B-2	8/18/2011	2.60	29 Y	160	< 0.033	< 0.033	< 0.033	<0.033	0.410	1.6	0.044	<1
B-3	8/18/2011	2.80	<1.1	25 Y	< 0.0045	< 0.0045	<0.0045	<0.0045	< 0.0045	<0.091	<0.0045	<0.99
B-4	8/18/2011	2.20	<0.92	18 Y	< 0.0049	< 0.0049	< 0.0049	<0.0049	< 0.0049	<0.097	< 0.0049	<0.98
D-1	8/18/2011	2.60	2	4.0 Y	< 0.026	<0.026	<0.026	0.050	0.96	3.1	0.140	1.4 C
D-2	8/18/2011	2.35	1.4 Y	2.7 Y	<0.0048	<0.0048	<0.0048	<0.0048	0.095	0.57	<0.0048	<0.99
					-	-	-		-		-	-
CPT/DPT-1	3/16/2012	8	<del>1,300</del>	<del>99 Y</del>	<1.0	<del>&lt;1.0</del>	<del>16</del>	<del>58</del>	<del>16</del>	<del>&lt;20</del>	<del>1.6</del>	NA
CPT/DPT-1	<del>3/16/2012</del>	<del>15</del>	<del>1.9</del>	<del>1.6 Y</del>	<del>&lt;1.0</del>	<del>&lt;1.0</del>	<del>&lt;1.0</del>	<del>&lt;1.0</del>	13	38	<del>&lt;1.0</del>	NA
CPT/DPT-1	3/16/2012	4 <del>2</del>	<del>&lt;0.93</del>	<u>2.2 Y</u>	<del>&lt;0.0049</del>	<del>&lt;0.0049</del>	<0.0049	<del>&lt;0.0049</del>	<del>0.50</del>	<del>0.27</del>	0.020	NA
CPT/DPT-2	<del>3/16/2012</del>	<del>10</del>	28	<del>21 Y</del>	<del>&lt;0.25</del>	<del>&lt;0.25</del>	<del>&lt;0.25</del>	0.260	1.7	<del>7.10</del>	<del>&lt;0.25</del>	NA
CPT/DPT-2	3/16/2012	<del>16</del>	<del>&lt;0.98</del>	<del>&lt;1.0</del>	<del>&lt;0.046</del>	<del>&lt;0.046</del>	<del>&lt;0.046</del>	<del>&lt;0.046</del>	0.084	14.00	<del>&lt;0.046</del>	NA
CPT/DPT-2	3/16/2012	48	<del>&lt;1.0</del>	<del>1.1 Y</del>	<del>&lt;0.0049</del>	<del>&lt;0.0049</del>	<del>&lt;0.0049</del>	<del>&lt;0.0049</del>	0.200	<0.098	0.013	NA
DPT-3	3/15/2012	8	<1.1	<0.99	< 0.0049	< 0.0049	<0.0049	<0.0049	0.490	<0.099	0.027	NA
DPT-3	3/15/2012	15	<0.97	<1.0	< 0.0047	< 0.0047	<0.0047	<0.0047	1.200	< 0.094	0.026	NA
DPT-4	3/15/2012	8	<1.1	<1.0	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	<0.098	< 0.0049	NA
DPT-4	3/15/2012	16	7.1 Y	9.0 Y	< 0.0049	< 0.0049	< 0.0049	< 0.0049	0.061	<0.098	< 0.0049	NA
DPT-4	3/15/2012	43	<1.1	<1.0	< 0.0049	< 0.0049	< 0.0049	< 0.0049	0.025	<0.098	< 0.0049	NA
					Au	ig-12						
SB-1	8/31/2012	6	<1.1	<1.0	< 0.0049	< 0.0049	< 0.0049	< 0.0049	0.0051	NA	NA	NA
SB-1	8/31/2012	10	440 Y	210 Y	< 0.63	< 0.63	6.50	9.70	1.60	NA	NA	NA
SB-1	8/31/2012	13	11 Y	<1.0	< 0.02	<0.02	<0.02	< 0.02	0.39	NA	NA	NA
SB-2	8/31/2012	6	< 0.93	63 Y	< 0.0048	< 0.0048	<0.0048	< 0.0048	< 0.0048	NA	NA	NA
SB-2	8/31/2012	10	60 Y	3.4 Y	<0.01	<0.01	<0.01	0.016	0.015	NA	NA	NA
SB-2	8/31/2012	13	4.4 Y	2.8 Y	<0.0048	< 0.0048	< 0.0048	<0.0048	0.022	NA	NA	NA
				2.01		ct-12	1010010	1010010	0.022			
CS-1	10/4/2012	15	<1.0	<1.0	<0.049	< 0.049	<0.049	<0.049	1.50	<0.98	<0.049	NA
CS-2	10/4/2012	15	<1.1	< 0.99	< 0.0047	< 0.0047	< 0.0047	<0.0047	0.97	0.78	0.045	NA
CS-3	10/4/2012	15	<1.1	<1.0	< 0.0049	< 0.0049	< 0.0049	<0.0049	0.65	5.50	0.031	NA
CS-4	10/4/2012	15	<1.1	<1.0	<0.024	<0.024	< 0.024	<0.024	1.30	6.50	0.110	NA
CS-5	10/5/2012	15	<1.1	<1.0	<0.049	<0.049	< 0.049	<0.049	4.40	20	0.58	NA
WCS-1	10/8/2012	10	3.3	20 Y	<0.047	< 0.047	< 0.047	0.560	2.60	6.50	0.53	NA
WCS-2	10/8/2012	10	<0.94	9.4 Y	<0.01	<0.01	<0.01	<0.01	0.13	30	< 0.01	NA
WCS-3	10/8/2012	10	3.6 Y	18 Y	<0.049	<0.049	<0.049	<0.049	<0.049	4.50	<0.049	NA
	10,0/2012		0.0 1	101		ay-13	<u> </u>		<b>NO.040</b>	4.50	<u></u>	
DPT-5	5/9/2013	4 b	3.7 Y	16 Y	<0.25	<0.25	<0.25	<0.25	2.6	<5.0	1.0	NA
DPT-5	5/9/2013	10	90 Y	47	<0.25	<0.25	0.77	<0.25	1.5	<5.0	<0.25	NA
DPT-5	5/9/2013	12	56 Y	17	<0.25	<0.25	0.87	0.53	3.10	<5.0	0.36	NA
DPT-5	5/9/2013	15	<0.98	<1.0	<0.025	<0.025	< 0.025	<0.025	0.073	9.10	< 0.025	NA
DPT-5	5/9/2013	30	<0.96	1.1 Y	< 0.0047	<0.0047	<0.0047	< 0.0047	0.0063	< 0.094	<0.0047	NA
DPT-5	5/9/2013	50	<1.1	<1.0	< 0.0049	< 0.0049	<0.0049	< 0.0049	< 0.0049	<0.098	< 0.0049	NA
MW-1	5/9/2013	5 b	3.9	11 Y	<0.25	<0.25	<0.25	<0.25	7.6	6.20	0.45	NA
MW-1	5/9/2013	10	750	130	<1.0	<1.0	22	108	14	<20	2.1	NA
MW-1	5/9/2013	12	910	140	<2.0	5.6	19	124	7.7	<40	<2.0	NA
MW-1	5/9/2013	15 b	460	91 b	<0.5	1.7 b	6.8 b	42 b	3.7 b	<10	<0.5	NA
MW-1	5/9/2013	25	2	1.3 Y	<0.5	<0.5	<0.5	<0.5	11	<10	0.60	NA
MW-2	5/9/2013	7 b	7.2 Y	21 Y	<0.25	<0.25	<0.25	<0.25	0.39 b	<5.0	<0.25	NA
MW-2	5/9/2013	10	960	400	<1.3	<1.3	18	64.5	14	<25	3	NA
MW-2	5/9/2013	10	270	95	<1.0	<1.0	5	27	27	<20	4.8	NA
MW-2	5/9/2013	17	<0.99	<1.0	<0.25	<0.25	<0.25	<0.25	2.2	14	<0.25	NA
ESL - Shallow S	oil Residentia Drinking	II, Potential	100	100	0.044	2.9	3.3	2.3	0.023	0.075	NA	NA
ESL-Deep Soi	l Residential, Drinking	Potential	580	530	0.044	2.9	3.3	2.3	0.023	0.075	NA	NA

#### Table 1: Soil Analytical Data 2844 Mountain Blvd, Oakland, CA

Sample ID	Date	Sample Depth (feet)	Acetone (mg/kg)	Methylene chloride (mg/kg)	Isopropylb enzene (mg/kg)	Propylben zene (mg/kg)	1,3,5- Trimethylbe nzene (mg/kg)	1,2,4- Trimethylben zene (mg/kg)	sec- Butylbenz ene (mg/kg)	n- Butylbenz ene (mg/kg)	Naphthalen e (mg/kg)	Ethanol (mg/kg)
	-				Sampling B			-			-	
<del>\$\$-1</del>	<del>8/9/2011</del>	<del>11.50</del>	<del>&lt;10</del>	<10	<del>2.7</del>	<del>12</del>	<del>29</del>	<del>93</del>	<del>&lt;2.5</del>	<del>7.5</del>	<del>19</del>	2
<del>\$\$-2</del>	<del>8/9/2011</del>	<del>11.50</del>	<del>&lt;8.0</del>	<del>&lt;8.0</del>	<del>&lt;2.0</del>	<del>&lt;2.0</del>	<del>&lt;2.0</del>	<del>&lt;2.0</del>	<del>&lt;2.0</del>	<del>2.</del> 4	3.8	<del>&lt;1.0</del>
SS-3	8/9/2011	11.50	0.057	0.026	<0.0046	<0.0046	<0.0046	0.0059	<0.0046	<0.0046	<0.0046	<1.0
SS-4	8/9/2011	11.50	0.045	<0.02	<0.005	0.005	<0.005	<0.005	0.0066	0.011	<0.005	<1.0
CS-1-CS-4 Composite	8/9/2011	NA	<5.0	<5.0	<1.3	3.3	9.8	30	<1.3	1.8	4.5	<1.0
					ampling Bene	eath Fuel Pi						
T-Junction	8/18/2011	2.6-3.3	0.087	<0.019	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.98
B-1	8/18/2011	2.30	0.025	<0.02	< 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	< 0.005	<1
B-2	8/18/2011	2.60	0.320	<0.130	0.048	0.250	< 0.033	< 0.033	0.055	0.250	0.670	1.4
B-3	8/18/2011	2.80	<0.018	<0.018	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.99
B-4	8/18/2011	2.20	<0.019	<0.019	<0.0049	<0.0049	<0.0049	< 0.0049	<0.0049	<0.0049	< 0.0049	<0.98
D-1	8/18/2011	2.60	0.710	<0.1	<0.26	0.038	<0.026	0.099	<0.026	<0.026	<0.026	<0.98
D-2	8/18/2011	2.35	0.170	<0.019	<0.0048	0.0072	0.0054	0.029	<0.0048	<0.0048	<0.0048	<0.99
					Oc	:t-12						
CS-1	10/4/2012	15	<0.20	<0.20	< 0.049	<0.049	< 0.049	<0.049	< 0.049	<0.049	<0.049	<9.80
CS-2	10/4/2012	15	<0.019	<0.019	<0.0047	<0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.94
CS-3	10/4/2012	15	<0.019	<0.019	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	<0.97
CS-4	10/4/2012	15	< 0.097	< 0.097	< 0.024	< 0.024	< 0.024	<0.024	< 0.024	< 0.024	< 0.024	<4.90
CS-5	10/5/2012	15	0.25	<0.20	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	<9.80
WCS-1	10/8/2012	10	1.70	<0.19	< 0.047	< 0.047	0.15	0.24	< 0.047	< 0.047	< 0.047	<9.4
WCS-2	10/8/2012	10	2.90	<0.041	<0.01	<0.01	<0.01	<0.01	< 0.01	<0.01	0.013	<2.0
WCS-3	10/8/2012	10	0.91	<0.20	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	0.077	<9.8
		•		-	Ма	y-13						
DPT-5	5/9/2013	4	NA	NA	NA	NA	NA	NA	NA	NA	<0.25	<50
DPT-5	5/9/2013	10	NA	NA	NA	NA	NA	NA	NA	NA	1.40	<50
DPT-5	5/9/2013	12	NA	NA	NA	NA	NA	NA	NA	NA	0.58	<50
DPT-5	5/9/2013	15	NA	NA	NA	NA	NA	NA	NA	NA	< 0.048	<5.0
DPT-5	5/9/2013	30	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0047	< 0.94
DPT-5	5/9/2013	50	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0049	<0.98
MW-1	5/9/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	<0.25	<50
MW-1	5/9/2013	10	NA	NA	NA	NA	NA	NA	NA	NA	5.2	<200
MW-1	5/9/2013	12	NA	NA	NA	NA	NA	NA	NA	NA	5.3	<400
MW-1	5/9/2013	15	NA	NA	NA	NA	NA	NA	NA	NA	3.2	<100
MW-1	5/9/2013	25	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5	<100
MW-2	5/9/2013	7	NA	NA	NA	NA	NA	NA	NA	NA	<0.25	<50
MW-2	5/9/2013	10	NA	NA	NA	NA	NA	NA	NA	NA	5.9	<250
MW-2	5/9/2013	12	NA	NA	NA	NA	NA	NA	NA	NA	2.4	<200
MW-2	5/9/2013	17	NA	NA	NA	NA	NA	NA	NA	NA	<0.25	<50
	ESL - Shallow Soil Residential, Potential Drinking			0.077	NA	NA	NA	NA	NA	NA	1.2	NA
•	ESL-Deep Soil Residential, Potential Drinking			0.077	NA	NA	NA	NA	NA	NA	1.2	NA

Table 1:
Soil Analytical Data
2844 Mountain Blvd, Oakland, CA

				2044	Mountain I	Sivu, Oakia	iu, CA
Sample ID	Date	Sample Depth (feet)	( 0 0/	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
	-		ampling Benea		-		-
<del>\$\$-1</del>	8/9/2011	NA	<del>&lt;0.25</del>	190	<del>3.7</del>	800	45
<del>\$\$-2</del>	<del>8/9/2011</del>	NA	0.26	<del>320</del>	<del>1.9</del>	<del>1,400</del>	<del>36</del>
SS-3	8/9/2011	NA	<0.25	250	1.0	1,000	36
SS-4	8/9/2011	NA	<0.25	230	1.6	1,000	39
CS-1-CS-4 Composite	8/9/2011	NA	<0.25	280	2.5	1,100	39
•		Sam	oling Beneath	Fuel Piping			
T-Junction	8/18/2011	NA	<0.25	260	4.10	890	40
B-1	8/18/2011	NA	<0.25	240	3.00	840	38
B-2	8/18/2011	NA	<0.25	260	5.10	860	39
B-3	8/18/2011	NA	<0.25	260	2.70	900	400
B-4	8/18/2011	NA	<0.25	280	2.50	940	36
D-1	8/18/2011	NA	<0.25	220	2.50	800	35
D-2	8/18/2011	NA	<0.25	280	3.10	980	37
	<u>.</u>		Aug-12				-
SB-1	8/31/2012	6	NA	NA	3.60	NA	NA
SB-1	8/31/2012	10	NA	NA	3.20	NA	NA
SB-1	8/31/2012	13	NA	NA	2.70	NA	NA
SB-2	8/31/2012	6	NA	NA	3.80	NA	NA
SB-2	8/31/2012	10	NA	NA	3.80	NA	NA
SB-2	8/31/2012	13	NA	NA	4.70	NA	NA
	0/01/2012	10	May-13		4.70	107	10/1
DPT-5	5/9/2013	4	<0.23	NA	NA	1,600	NA
DPT-5	5/9/2013	10	<0.23	NA	NA	1,900	NA
DPT-5	5/9/2013	10	<0.24	NA	NA	1,300	NA
DPT-5	5/9/2013	15	<0.24	NA	NA	1,100	NA
DPT-5	5/9/2013	30	<0.24	NA	NA	910	NA
DPT-5	5/9/2013	50	<0.22	NA	NA	1,100	NA
MW-1	5/9/2013	5	<0.22	NA	NA	1,100	NA
MW-1	5/9/2013	10	<0.23	NA	NA	920	NA
MW-1	5/9/2013	10	<0.24	NA	NA	1.700	NA
MW-1	5/9/2013	15	<0.23	NA	NA	1,300	NA
MW-1	5/9/2013	25	<0.23	NA	NA	780	NA
MW-2	5/9/2013	7	<0.23	NA	NA	820	NA
MW-2	5/9/2013	, 10	<0.23	NA	NA	1,800	NA
MW-2	5/9/2013	10	<0.24	NA	NA	1,400	NA
MW-2	5/9/2013	17	<0.23	NA	NA	960	NA
	0,0,2010		<b>NU.24</b>	11/5	11/7	300	11/4
ESL - Shallow S	oil Residentia Drinking	al, Potential	12	0	80	150	600
ESL-Deep Soi	l Residential, Drinking	Potential	110	2,500	320	2,500	2,500

Note: C: Presence confirmed, but RPD between columns exceeds 40% Y: Sample exhibits chromatographic pattern which does not resemble standard <: Below laboratory-reporting limit

ESL: California Regional Water Quality Control Board, Environmental Screening Levels, Shallow/Deep Soil, Commercial, Groundwater is a current or potential source of drinking water. Revised May 2013

NA: Not Applicable
CPT/DPT-2
Excavated locations

#### Table 2: Grab Groundwater Analytical Data 2844 Mountain Blvd, Oakland, CA

Sample ID	Date	Depth of Boring at the time of sampling (feet)	Depth to water at the time of sampling (feet)	TPH-d (μg/L)	TPH-g (µg/L)	Benzene (µg/L)	Toluene(μ g/L)	Ethylbenz ene (μg/L)	Total Xylenes (μg/L)	MtBE (μg/L)	TBA (μg/L)	TAME (µg/L)	Naphthalene (μg/L)
				F	Perched Disc	ontinuous	Water Bea	aring Zone					
T-1	8/9/2011	NA	11.50	14,000	76,000	1,600	11,000	2,000	10,000	5,700	<1,700	5,600	530
T-2	8/9/2011	NA	11.50	1,500	890	8	7.3	<0.5	157	12	650	<0.5	7.6
CPT/DPT-1-1	3/16/2012	24	23.1	140 <sup>Y</sup>	<6,300	94	64	<63	<63	36,000	2,800	2,300	NA
CPT/DPT-2-1	3/16/2012	24	21.9	820	<13,000	<130	<130	<130	<130	52,000	92,000	3,000	NA
DPT-4-1	3/15/2012	32	29	150 <sup>Y</sup>	<50	<0.5	<0.5	<0.5	<0.5	2,600	28	210	NA
			-			201	3			-			-
DPT-5W-1	5/9/2013	15	14	4,300	2,100	10	<6.3	23	<6.3	640	16,000	54	<25
DPT-5W-2	5/10/2013	25	10	630 Y	<2,000	<20	<20	<20	<20	40,000	59,000	2,200	<80
					Firs	st Water Be	aring Zone	e					
CPT/DPT-1-2	3/16/2012	48	41.1	3,200	96,000	2,400	11,000	3,100	14,700	95,000	78,000	7,400	NA
CPT/DPT-2-2	3/16/2012	48	41.9	300 <sup>Y</sup>	4,500	160	390	170	800	11,000	6,100	1,500	NA
DPT-3-2	3/15/2012	49	39	53 <sup>Y</sup>	<1,700	<17	<17	<17	<17	9,800	1,000	690	NA
						201	3						
DPT-5W-3	5/9/2013	50	39	320 Y	<50	<0.5	<0.5	<0.5	<0.5	2.8	<10	<0.5	<2.0
ESL -	r	100	100	1.0	40.0	30.0	20.0	5.0	12	NA	6.2		

Sample ID	Date	Depth of Boring at the time of sampling (feet)	Depth to water at the time of sampling (feet)	Propylbenze ne (μg/L)	1,3,5- Trimethylbe nzene (μg/L)	1,2,4- Trimethyl benzene (μg/L)	Methanol (mg/L)	Ethanol (mg/L)	Cadmium (μg/L)	Chromium (μg/L)	Lead (µ g/L)	Nickel (µg/L)	Zinc (μg/L)
T-1	8/9/2011	NA	11.50	240	520	1,800	<1.0	<1.0	<5.0	11	39	140	210
T-2	8/9/2011	NA	11.50	<0.5	13	24	<1.0	<1.0	<5.0	6.1	8	43	73
	-	-	-	-	-				-	-	-		-
DPT-5W-1	5/9/2013	15	14	NA	NA	NA	NA	<13	<5.0	NA	NA	48	NA
DPT-5W-2	5/10/2013	25	10	NA	NA	NA	NA	<40	<5.0	NA	NA	24	NA
DPT-5W-3	5/9/2013	50	39	NA	NA	NA	NA	<1.0	<5.0	NA	NA	<5.0	NA
ESL -	NA	NA	NA	NA	NA	0.25	50.0	2.5	8.2	81.0			

Notes: < : below Laboratory Detection Limits NA- Not Applicable

ESL: California Regional Water Quality Control Board, Environmental Screening Levels, Shallow/Deep Soil, Commercial, Groundwater is a current or potential source of drinking water, Revised May 2013

Table 3
<b>Historical Groundwater Analytical Results</b>
2844 Mountain Boulevard, Oakland, CA

Monitoring Well	Date	Casing Elevation (Ft.)	Depth to Top Fluid (Ft.)	er (Ft.)	Free-Product Thickness	Groundwater Elevation	TPH-g μg/L	TPH-d μg/L	TPH-mo µg/L	Benzene µg/L	Toluene µg/L	Ethylbenz ene µg/L	Xylenes µg/L	MtBE µg/L	ΤΒΑ μg/L	TAME μg/L
RS-1	May-90	675.63	7.20	7.20	0.00	668.43	2,700			370	420	40	320			
	May-91	675.63	8.35	8.35	0.00	667.28	1,300			580	130	62	240			
	Oct-91	675.63	10.22	10.22	0.00	665.41	1,100			140	100	45	210			
	Jan-92	675.63	8.06	8.06	0.00	667.57	1,700			9.9	31	9.7	170			
	Jan-93	675.63	5.30	5.30	0.00	670.33	3,700			650	9.2	51	170			
	Aug-93	675.63	8.56	8.56	0.00	667.07	900			14	0.6	2.1	8			
	Nov-93	675.63	8.44	8.44	0.00	667.19	1,400			9.6	ND	0.9	5			
	Jan-94	675.63	6.88	6.88	0.00	668.75	4,200			95	3.1	58	130			
	May-94	675.63	7.87	7.87	0.00	667.76	7,500			270	11	37	96			
	Aug-94	675.63		16.28	16.28	659.35	130			12	0.5	2.6	5			
	Nov-94	675.63	8.02	8.02	0.00	667.61	270			4.7	0.7	0.6	15			
	Feb-95	675.63	6.51	6.51	0.00	669.12	12,000			81	2.3	1	12			
	Jun-95	675.63	7.34	7.34	0.00	668.29	37,000			460	ND	ND	ND	63,000		
	Nov-95	675.63	8.71	8.71	0.00	666.92	ND			660	16	140	330	31,000		
	Feb-96	675.63	6.95	6.95	0.00	668.68	66,000			110	ND	12	21	84,000		
	9/18/1996	675.63	8.44	8.52	0.08	667.17		OATING PR	ODUCT							
	12/11/1996	675.63	6.42	6.62	0.20	669.17	79,000			4,000	37,000	8,000	45,000	220,000		
	2/21/1997	675.63	6.88	6.92	0.04	668.74		LOATING F	RODUCT							
	5/28/1997	675.63	7.88	7.96	0.08	667.73	156,000			9,400	51,000	7,000	45,000	112,000		
	9/2/1997	675.63	8.34	8.38	0.04	667.28	1/2 INCH F									
	11/24/1997	675.63	6.98	7.00	0.02	668.65	1/4 INCH F									
	2/25/1998	675.63	3.51	3.52	0.01	672.12		LOATING F	RODUCT							
	5/27/1998	675.63	7.31	7.31	0.00	668.32	40,000			2,200	4,000	2,300	19,000	350,000		
	9/16/1998	675.63	8.10	8.10	0.00	667.53	62,000			2,400	2,300	2,100	14,000	250,000		
	11/23/1998	675.63	7.10	7.10	0.00	668.53	99,000			2,600	5,800	2,500	18,000	130,000		
	2/23/1999	675.67	4.82	4.87	0.05		5/8 INCH F									
	5/5/1999	675.67	6.86	6.90	0.04		FLOATING									
	8/24/1999	675.67	7.87	7.90	0.03	667.80	FLOATING									
	2/8/2012	675.67	6.80	6.80	0.00	668.87	60,000 x		<936	790	<6.4	2,000	430	65,000	41,000	5,100
	5/4/2012	675.67	6.57	6.57	0.00	669.10	18,000	10,000	NA	600	<36	2,000	870	22,000	11,000	1,800
	8/6/2012	675.67	7.61	7.61	0.00	668.06	16,000	12,000	NA	940	<130	2,000	560	42,000	35,000	3,400
							Well Destro	oyed Octob	er 1, 2012							
RS-2	May-90	689.00	7.06	7.06	0.00	681.94	23,000		T	7,200	4,800	300	3,300			
102	May-91	689.00	7.14	7.14	0.00	681.86	26,000			14,000	1,800	750	2,900			
	Oct-91	688.89	8.84	8.84	0.00	680.05	13,000			4,300	910	300	2,900			
	Jan-92	688.89	0.04 7.34	0.04 7.34	0.00	681.55	8,300			4,300	920	300 140	1,700			
	Jan-92 Jan-93	688.89	7.34 4.10	7.34 4.10	0.00	684.79	8,300 41,000			7,000	920 210	1,200	4,200			
	Aug-93	688.89	4.10 7.32	4.10 7.32	0.00	684.79 681.57	41,000 19,000			7,000 5,300	62	810	4,200			
	Nov-93	688.89	7.32	7.32	0.00		9,300				62 3.90	46	800			
	1404-93	000.09	1.34	1.34	0.00	681.55	9,300			2,400	3.90	40	800	1		

Table 3
<b>Historical Groundwater Analytical Results</b>
2844 Mountain Boulevard, Oakland, CA

Monitoring Well	Date	Casing Elevation (Ft.)	Depth to Top Fluid (Ft.)	Depth to Groundwat er (Ft.)	Free-Product Thickness	Groundwater Elevation	TPH-g µg/L	TPH-d µg/L	TPH-mo µg/L	Benzene µg/L	Toluene µg/L	Ethylbenz ene µg/L	Xylenes µg/L	MtBE µg/L	TBA μg/L	TAME μg/L
RS-2 cont.	Jan-94	688.89	5.52	5.52	0.00	683.37	30,000			4,900	ND	880	2,600			
	May-94	675.25	6.40	6.40	0.00	668.85	120,000			3,300	330	ND	2,200			
	Aug-94	675.25			0.00	675.25	510			7.30	3.80	3.50	32			
	Nov-94	675.25	9.82	9.82	0.00	665.43	620			6.60	3.90	1.10	47			
	Feb-95	675.25	4.81	4.81	0.00	670.44	22,000			228	80	2	463			
	Jun-95	675.25	5.80	5.80	0.00	669.45	49,000			1,300	160	200	1,600	71,000		
	Nov-95	675.25	7.64	7.64	0.00	667.61	ND			670	25	150	360	65,000		
	Feb-96	675.25	4.69	4.69	0.00	670.56	75,000			1,400	170	59	460	71,000		
	9/18/1996	675.25	7.34	7.34	0.00	667.91	6,300			2,000	48	350	570	160,000		
	12/11/1996	675.25	5.08	5.08	0.00	670.17	16,000			2,000	840	200	3,200	180,000		
	2/21/1997	675.25	5.42	5.42	0.00	669.83	22,000			2,100	1,300	600	5,100	56,000		
	5/28/1997	675.25	6.40	6.40	0.00	668.85	156,000			4,200	89	1,000	6,900	390,000		
	9/2/1997	675.25	6.93	6.93	0.00	668.32	<50			1,300	25	360	1,400	180,000		
	11/24/1997	675.25	5.93	5.93	0.00	669.32	<50			600	ND	ND	ND	610,000		
	2/25/1998	675.25	4.59	4.59	0.00	670.66	11,000			1,100	<50	320	2,400	330,000		
	5/27/1998	675.25	5.61	5.61	0.00	669.64	13,000			2,000	150	600	2,700	380,000		
	9/16/1998	675.25	6.84	6.84	0.00	668.41	11,000			1,600	20 84	1,600	1,600	280,000		
	11/23/1998 2/23/1999	675.25 675.28	6.24 4.62	6.24 4.62	0.00 0.00	669.01 670.66	12,000 8,800			1,200 1,500	84 650	<5 640	960 1,500	140,000 450,000		
	5/5/1999	675.28	4.62 7.55	4.62 7.55	0.00	667.73	29,000			2,000	1,300	500	3,700	270,000		
	8/24/1999	675.28	6.62	6.62	0.00	668.66	12,000			2,000	20	370	3,700 980	340,000		
	2/8/2012	675.28	5.52	5.52	0.00	669.76	12,000 x	6,800 x	<378	1,900 540	<6.4	120	980 710	2,800	64,000	420
	5/4/2012	675.28	5.18	5.18	0.00	670.10	16,000 X	13,000 X	×378 NA	690	23	460	1,140	6,800	21,000	960
	8/6/2012	675.28	6.33	6.33	0.00	668.95	11,000	10,000	NA	810	<25	210	473	3,300	18,000	580
	0/0/2012	070.20	0.00	0.00	0.00		,	oved Octob		010	120	210	470	0,000	10,000	000
							Well Desire	Jyca Octob	CI 1, 2012							
RS-3	May-90	670.00	6.00	6.00	0.00	664.00	330			2	1	1	150			
	May-91	670.00	6.76	6.76	0.00	663.24	ND			0.40	ND	0.80	8			
	Oct-91	670.00	8.98	8.98	0.00	661.02	ND			ND	ND	ND	ND			
	Jan-92	670.00	6.81	6.81	0.00	663.19	ND			2.20	7.20	0.60	4			
	Jan-93	670.00	4.05	4.05	0.00	665.95	ND			ND	ND	ND	ND			
	Aug-93	670.00	7.19	7.19	0.00	662.81	ND			30	6	2.40	5			
	Nov-93	670.00	7.12	7.12	0.00	662.88	ND			4.80	0.40	0.60	2			
	Jan-94	670.00	5.42	5.42	0.00	664.58	330			25	3.20	3.90	12			
	May-94	676.20	5.78	5.78	0.00	670.42	670			34	4	28	70			
	Aug-94	676.20	5.86	5.86	0.00	670.34	ND			ND	ND	ND	ND			
	Nov-94	676.20	5.08	5.08	0.00	671.12	69			2.50	3.10	1	4			
	Feb-95	676.20	4.51	4.51	0.00	671.69	ND			0.30	0.40	ND	1			
	Jun-95	676.20	5.29	5.29	0.00	670.91	ND			ND	ND	ND	ND	66		
	Nov-95	676.20	7.10	7.10	0.00	669.10	ND			ND	ND	ND	ND	44		

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<b>Historical Groundwater Analytical Results</b>
2844 Mountain Boulevard, Oakland, CA

Monitoring Well	Date	Casing Elevation (Ft.)	Depth to Top Fluid (Ft.)	Depth to Groundwat er (Ft.)	Free-Product Thickness	Groundwater Elevation	TPH-g µg/L	TPH-d	TPH-mo µg/L	Benzene	Toluene	Ethylbenz ene μg/L	Xylenes	MtBE	TBA μg/L	TAME µg/L
-		· /	. ,	. ,				µg/L	µg/∟	µg/L	µg/L		µg/L	µg/L	µy/∟	µg/∟
RS-3 cont.	Feb-96	676.20	4.48	4.48	0.00	671.72	120			ND	ND	ND	ND	110		
	9/18/1996 12/11/1996	676.20	6.92	6.92	0.00	669.28	1,000			13	8.60	10	17 14	33		
	2/21/1996	676.20 676.20	4.90 4.94	4.90 4.94	0.00 0.00	671.30 671.26	85 120			20 5	2 2	<0.5 2	14 6	4,700 850		
	2/21/1997 5/28/1997	676.20 676.20	4.94 7.92	4.94 7.92	0.00	668.28	<50			5 6	<0.5	<0.5	o <2	2,400		
	9/2/1997	676.20	6.60	6.60	0.00	669.60	<50 <50			0.90	<0.5	<0.5	<2 <2	2,400 8,600		
	11/24/1997	676.20	5.89	5.89	0.00	670.31	<30 140			13	<0.5 2	<0.5	<2 12	3,600		
	2/25/1998	676.20	4.29	4.29	0.00	671.91	<50			<0.5	<0.5	<0.5	4	3,000 850		
	5/27/1998	676.20	5.01	5.01	0.00	671.19	<50 <50			<0.5 7	<0.5	<0.5	11	940		
	9/16/1998	676.20	6.21	6.21	0.00	669.99	<50 <50			2	2	2	10	670		
	11/24/1998	676.20	5.58	5.58	0.00	670.62	85			9	23	< 0.5	10	180		
	2/24/1999	676.23	4.30	4.30	0.00	671.93	<50			<0.5	0.90	<0.5	<1.0	150		
	5/5/1999	676.23	4.92	4.92	0.00	671.31	<50			1	2	1	6	130		
	8/24/1999	676.23	6.64	6.64	0.00	669.59	80			0.80	< 0.5	0.60	<1	300		
	2/8/2012	676.23	5.72	5.72	0.00	670.51	130 x	<42	<94	<0.13	0.59	2.90	18.1	7.9	<1.5	<0.17
	5/4/2012	676.23	5.25	5.25	0.00	670.98	<50	330 Y	NA	<0.5	< 0.5	< 0.5	< 0.5	10	18	2.4
	8/6/2012	676.23	6.65	6.65	0.00	669.58	<50	390 Y	NA	< 0.5	< 0.5	< 0.5	< 0.5	13	<10	3.2
	3/29/2013	676.23	6.01	6.01	0.00	670.22	<50	90 <sup>Y</sup>	NA	<0.5	<0.5	<0.5	<0.5	3.6	<10	<0.5
	6/6/2013		6.45	6.45	0.00	669.63	<50 <50	66 Y	NA	<0.5 <0.5	<0.5 <0.5	<0.5	<0.5 <0.5	1.5	<10 <10	<0.5 <0.5
	6/6/2013	676.08	0.40	0.45	0.00	009.03	<00	00	NA	<0.5	<0.5	<0.5	<0.5	1.5	<10	<0.5
<b>DO 4</b>	May 00	075.00	0.04	0.04	0.00	007.04	440			0	4.4	0	40			
RS-4	May-90	675.38	8.34	8.34	0.00	667.04	440 ND			9	11 4	9 3	49 5			
	May-91	675.38	9.50	9.50		665.88				8		-	-			
	Oct-91	675.38	10.82	10.82	0.00	664.56	830			280	120	24	170			
	Jan-92 Jan-93	675.38	9.31	9.31	0.00 0.00	666.07	620			34	8.30	2.10	21			
		675.38	6.89	6.89		668.49	150			32	1.70	5.80	13			
	Aug-93	675.38	9.68	9.68	0.00	665.70	ND			0.90	0.70	ND	0			
	Nov-93	675.38	9.83	9.83	0.00	665.55	ND			ND	ND	ND	ND			
	Jan-94	675.38	8.17	8.17	0.00	667.21	ND			1.70	ND	0.81	2			
	May-94	675.38	8.69	8.69	0.00	666.69	ND			ND	ND	ND	1			
	Aug-94	675.38	9.04	9.04	0.00	666.34	420			6.50	4.10	1.90	40			
	Nov-94	675.38	8.00	8.00	0.00	667.38	130			4.10	0.70	1.70	8			
	Feb-95	675.38	7.93	7.93	0.00	667.45	ND			6	1.20	3.50	13			
	Jun-95	675.38	8.61	8.61	0.00	666.77	ND			ND	ND	ND	ND	69		
	Nov-95	675.38	10.43	10.43	0.00	664.95	ND			ND	ND	ND	ND	47		
	Feb-96	675.38	7.44	7.44	0.00	667.94	960			ND	ND	0.60	ND	80		
	9/18/1996	675.38	9.58	9.58	0.00	665.80	<50			<0.5	<0.5	<0.5	<2	200		
	12/11/1996	675.38	7.50	7.50	0.00	667.88	75			<0.5	0.60	<0.5	<0.5	104		
	2/21/1997	675.38	8.26	8.26	0.00	667.12	<50			1	1	<0.5	1	190		
	5/28/1997	675.38	8.92	8.92	0.00	666.46	<50			6	<0.5	<0.5	<2	110		
	9/2/1997	675.38	9.39	9.39	0.00	665.99	100			3	<0.5	<0.5	<2	39		
	11/24/1997	675.38	8.22	8.22	0.00	667.16	41			<0.5	2	<0.5	<2	210		

Table 3
Historical Groundwater Analytical Results
2844 Mountain Boulevard, Oakland, CA

Monitoring Well	Date	Casing Elevation (Ft.)	Depth to Top Fluid (Ft.)	Depth to Groundwat er (Ft.)	Free-Product Thickness	Groundwater Elevation	TPH-g μg/L	TPH-d μg/L	TPH-mo μg/L	Benzene µg/L	Toluene μg/L	Ethylbenz ene µg/L	Xylenes µg/L	MtBE μg/L	TBA μg/L	TAME μg/L
RS-4 cont.	2/25/1998	675.38	7.19	7.19	0.00	668.19	<50			3	<0.5	<0.5	<1	5,600		
	5/27/1998	675.38	8.40	8.40	0.00	666.98	<50			<0.5	<0.5	<0.5	<1	2,400		
	9/16/1998	675.38	9.26	9.26	0.00	666.12	<50			<0.5	<0.5	<0.5	<1	230		
	11/24/1998	675.38	8.50	8.50	0.00	666.88	<50			2	<0.5	<0.5	<1	100		
	2/24/1999	675.42	7.20	7.20	0.00	668.22	<50			2	3	0.80	5	670		
	5/5/1999	675.42	8.37	8.37	0.00	667.05	100			<0.5	<0.5	<0.5	<1	440		
	8/24/1999	675.42	8.36	8.36	0.00	667.06	<50			<0.5	<0.5	<0.5	<1	<500		
	2/8/2012	675.42	8.11	8.11	0.00	667.31	140,000	130,000 x	<9,360	120	2,600	4,700	28,200	28,000	100,000	1,800
	5/4/2012	675.42	8.31	8.31	0.00	667.11	67,000	12,000 Y	NA	61	900	2,100	9,700	32,000	69,000	1,700
	8/6/2012	675.42	9.01	9.01	0.00	666.41	49,000	8,900	NA	<130	350	1,700	8,100	19,000	90,000	1,300
	3/29/2013 6/6/2013	675.42 675.27	8.49 <b>8.48</b>	8.49 <b>8.48</b>	0.00 <b>0.00</b>	666.93 <b>666.79</b>	14,000	14,000	NA NA	<100 <b>11</b>	<100 <b>&lt;3.6</b>	440 <b>420</b>	1,340 <b>886</b>	14,000 <b>16,000</b>	110,000	590 <b>970</b>
	0/0/2013	0/5.2/	0.40	0.40	0.00	000.79	12,000	7,200	NA		<3.0	420	000	16,000	66,000	970
MW-1	6/6/13	674.92	6.03	6.03	0.00	668.89	<17,000	13,000	NA	930	370	470	1,760	55,000	32,000	7,200
		014.52	0.05	0.00		000.05	11,000	10,000	11/4	350	510	470	1,700	33,000	32,000	1,200
MW-2	6/6/13	675.02	6.70	6.70	0.00	668.32	16,000	5,400	NA	910	<130	610	2,290	59,000	64,000	7,700
ESLA (Unit)	Ground- water						100	100	100	1.00	40	30	20	5.00	12	NL
ESLs (µg/L)	Vapor Intrusion						NV	NV	NV	27	95,000	310	37,000	9,900	NV	NL

Note:

< : Below Laboratory Reporting Limit (Method Detection Limit)

x : Does not match pattern of reference Gasoline standard/ Not typical of diesel standard pattern (possibly fuel lighter than diesel)

ESL: Environmental Screening Level by California Regional Water Quality Control Board San Francisco Bay Region

revised May 2013 (Table-F1a, groundwater is a current or potential drinking water source)

NL: Not Listed

NV: No Value

## **APPENDIX A**

**DRILLING PERMIT** 

Additional Investigation and Monitoring Wells Replacement Report

#### 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: 04/25/2013 By jamesy Permit Numbers: W2013-0328 to W2013-0330 Permits Valid from 05/09/2013 to 05/10/2013 City of Project Site:Oakland Application Id: 1366912737136 Site Location: 2844 Mountain Blvd. **Project Start Date:** 05/09/2013 Completion Date:05/10/2013 Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org **Applicant:** SOMA Environmental Engineering - Mansour Phone: 925-734-6400 Sepehr 6620 Owens Drive, Suite A, Pleasanton, CA 94588 **Property Owner:** Tejindar Singh Phone: 925-360-7777 6400 Dublin Blvd., Dublin, CA 94568 **Client:** same as Property Owner \*\* **Contact:** Lizzie Hightower Phone: 925-734-6400 Cell: 925-330-5235 **.** . . . . . . .

	Total Due:	\$1059.00
Receipt Number: WR2013-0152	Total Amount Paid:	<u>\$1059.00</u>
Payer Name : Mansour Sepehr	Paid By: MC	PAID IN FULL
	•	

#### **Works Requesting Permits:**

Well Construction-Monitoring-Monitoring - 2 Wells Driller: Gregg Drilling & Testing - Lic #: 485165 - Method: hstem

#### Specifications Permit # Issued Date Expire Date Owner Well Hole Diam. Casing Seal Depth Max. Depth Diam. ld W2013-04/25/2013 08/07/2013 MW-1 10.00 in. 4.00 in. 5.00 ft 25.00 ft 0328 25.00 ft W2013-04/25/2013 08/07/2013 MW-2 10.00 in. 4.00 in. 5.00 ft 0329

#### **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. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

Work Total: \$794.00

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

4. 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 60 days. Include permit number and site map.

5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org 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 surface seal thickness is two inches of cement grout placed by tremie.

8. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

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.

Borehole(s) for Investigation-Contamination Study - 2 Boreholes Driller: Gregg Drilling & Testing - Lic #: 485165 - Method: DP

Work Total: \$265.00

#### Specifications

Permit	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
Number			Boreholes		
W2013-	04/25/2013	08/07/2013	2	3.25 in.	70.00 ft
0330					

#### **Specific Work Permit Conditions**

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities

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

or to Alameda County an 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.

5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

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

## **APPENDIX B**

## BORING LOGS, WELL COMPLETION REPORTS

Additional Investigation and Monitoring Wells Replacement Report

#### NVIRONMENTAL ENGINEERING, INC

#### PROJECT: 5082

SITE LOCATION: 2844 Mountain Blvd., Oakland

DRILLER: Gregg Drilling & Testing

**DRILLING METHOD: Direct Push** 

BORING DIAMETER: 2.25-inch

LOGGED BY: E. Hightower

#### DATE DRILLED: May 9, 2013

#### CASING ELEVATION: NA

First Encountered GW:1st: 13.0 ft; 2nd: 23.0 ft; 3rd: 45.0 ft Stablized GW:1st: 13.07 ft; 2nd: 10.37 ft; 3rd: 39.00 ft

T.O.C. TO SCREEN: NA

#### SCREEN LENGTH: NA

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON		GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
.1 120	-		CL	Hand Augered to 5 ft bgs SANDY LEAN CLAY: Dark brown, moist, ~30% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCl reaction, firm, no Petroleum Hydrocarbon (PHC) odor.					
152.1	- 5—		SC	CLAYEY SAND: Greenish-brown, moist, ~75% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.					
167	-		CL	SANDY LEAN CLAY:Greenish-brown, moist, ~30% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.					
492	- 10—		SC	CLAYEY SAND: Greenish-gray, moist, ~75% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.			▼		
.1 568	-			As above, very moist to wet, some gravel			⊻_	-	
9 24.1	15		CL	SANDY LEAN CLAY with gravel: Brown, moist, ~30% fine- to medium-grained sand, ~15% gravel, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, no PHC odor.					
2.5	-								
5.6	20—		CL	SANDY LEAN CLAY: Brown, moist, ~40% fine- to medium-grained sand,					
24.7	-			medium dry strength, no dilatancy, medium toughness, no HCl reaction, firm, no PHC odor.					
	-			Very moist to wet & some gravel at 23 ft.			V		
43.5	- 25—								
	COMMENTS:								

### PROJECT: 5082

SITE LOCATION: 2844 Mountain Blvd., Oakland

DRILLER: Gregg Drilling & Testing

DRILLING METHOD: Direct Push

BORING DIAMETER: 2.25-inch

LOGGED BY: E. Hightower

#### DATE DRILLED: May 9, 2013

#### CASING ELEVATION: NA

First Encountered GW:1st: 13.0 ft; 2nd: 23.0 ft; 3rd: 45.0 ft Stablized GW: 1st: 13.07 ft; 2nd: 10.37 ft; 3rd: 39.00 ft

T.O.C. TO SCREEN: NA

#### SCREEN LENGTH: NA

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	CORE SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
3.6	-		CL	SANDY LEAN CLAY: Brown, moist, ~40% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCl reaction, hard, no PHC odor. Some gravel at 28 ft.				
1.4	- 30–		CL	SANDY LEAN CLAY: Dark gray, moist, ~40% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCl reaction, hard, no PHC odor.				
1.3								
1.1	35—			As above, moist, no PHC odor.				
1.2						V		
1.1	40-			As above, moist, no PHC odor.				
0.8	-							
0.9	45— -			As above, very moist to wet, no PHC odor.		V		
0.5	-							
0.6	50—							
	C	OMMENT	S: Refus	al at 50 ft				

### PROJECT: 5082

SITE LOCATION: 2844 Mountain Blvd., Oakland

DRILLER: Gregg Drilling & Testing

DRILLING METHOD: DP & HSA

**BORING DIAMETER: 10 inches** 

LOGGED BY: E. Hightower

#### DATE DRILLED: May 9 & 10, 2013

CASING ELEVATION: 674.92 ft

First Encountered GW: 13 ft Stablized GW: 6.03 ft

T.O.C. TO SCREEN: 5 ft.

#### SCREEN LENGTH: 15 ft

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
	-		CL	Hand Augered to 5 ft bgs SANDY LEAN CLAY: Dark brown, moist, ~30% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCl reaction, firm, no Petroleum Hydrocarbon (PHC) odor.				hadule 40 PVC Casing
25.2	-							Bentonite Seal
555 679	5		CL	SANDY LEAN CLAY:Greenish-brown, moist, ~30% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.		V		
749	- 10—		SC	CLAYEY SAND: Greenish-gray, moist, ~75% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.				#3 Sand
723	-			As above, very moist to wet.		⊻		Schedule 40 PVC Screen 20 slot (0.020 inch)
931	15— - -		CL	SANDY LEAN CLAY with gravel: Brown, moist, ~30% fine- to medium-grained sand, ~15% gravel, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.				Scheduk 20 slo
875	-							
139.4	20		CL	SANDY LEAN CLAY: Brown, moist, ~40% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, slight PHC odor.				<u></u>
8.5	- - 25—			Very moist to wet & some gravel at 23 ft.				

#### PROJECT: 5082

SITE LOCATION: 2844 Mountain Blvd., Oakland

DRILLER: Gregg Drilling & Testing

DRILLING METHOD: DP & HSA

**BORING DIAMETER: 10 inches** 

LOGGED BY: E. Hightower

#### DATE DRILLED: May 9 & 10, 2013

CASING ELEVATION: 675.02 ft

First Encountered GW: 13 ft Stablized GW: 6.70 ft

T.O.C. TO SCREEN: 5 ft.

#### SCREEN LENGTH: 15 ft

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
-	-		CL	Hand Augered to 5 ft bgs SANDY LEAN CLAY: Dark brown, moist, ~30% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, no Petroleum Hydrocarbon (PHC) odor.				eal
5 107.1	-							Bentonite Sea
752 325			CL	SANDY LEAN CLAY:Greenish-brown, moist, ~30% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.		T		#1
1015	- 10—		SC	CLAYEY SAND: Greenish-gray, moist, ~75% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.				Screen inch) 
950	-			As above, very moist to wet.		⊻		Schedule 40 PVC Sc 20 slot (0.020 inct
216.5	15— - -		CL	SANDY LEAN CLAY with gravel: Brown, moist, ~30% fine- to medium-grained sand, ~15% gravel, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, PHC odor.				
121.6	-							
25.7	20		CL	SANDY LEAN CLAY: Brown, moist, ~40% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCI reaction, firm, slight PHC odor.				
	- - 25—			Very moist to wet & some gravel at 23 ft.				
		OMMENT	S: Well s	set at 20 feet				

# CONFIDENTIAL

## STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

## REMOVED

# CONFIDENTIAL

## STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

## REMOVED

## **APPENDIX C**

## LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS

Additional Investigation and Monitoring Wells Replacement Report



Laboratory Job Number 245203 ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	5
6620 Owens Dr.	Location : 2844 Mountain Blvd, Oakland
Pleasanton, CA 94588	Level : II

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.

Will fice

Signature: \_\_\_\_

Will S Rice Project Manager (510) 486-0900

Date: <u>05/31/2013</u>

NELAP # 01107CA



#### CASE NARRATIVE

Laboratory number: Client: Project: Location: Request Date: Samples Received: 245203 SOMA Environmental Engineering Inc. 5082 2844 Mountain Blvd, Oakland 05/10/13 05/10/13

This data package contains sample and QC results for fifteen soil samples and three water samples, requested for the above referenced project on 05/10/13. The samples were received cold and intact.

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

High surrogate recovery was observed for bromofluorobenzene (FID) in MW-2@10FT (lab # 245203-015). No other analytical problems were encountered.

#### TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

#### TPH-Extractables by GC (EPA 8015B) Soil:

Matrix spikes QC688617,QC688618 (batch 198466) were not reported because the parent sample required a dilution that would have diluted out the spikes. A number of samples were prepared outside of hold time; affected data was qualified with "b". No other analytical problems were encountered.

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

DPT-5W-3 (lab # 245203-022) had pH greater than 2. No other analytical problems were encountered.

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

High response was observed for 1,2-dichloroethane in the CCV analyzed 05/17/13 18:34; affected data was qualified with "b". Low response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 05/25/13 19:14; this analyte met minimum response criteria, and affected data was qualified with "b". Low response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 05/28/13 07:42; this analyte met minimum response criteria, and affected data was qualified with "b". Matrix spikes were not performed for this analysis in batch 198577 due to insufficient sample amount. Matrix spikes were not performed for this analysis in batch 198509 due to limited sample volume or interferences from the solvent in sample dilutions. Matrix spikes QC688437,QC688438 (batch 198415) were not reported because the parent sample was reanalyzed in another batch. Matrix spikes were not performed for this analysis in batch 198634 due to limited sample volume or interferences from the solvent in sample dilutions. Matrix spikes were not performed for this analysis in batch 198559 due to insufficient sample amount. High recoveries were observed for benzene in the MS/MSD for batch 198951; the parent sample was not a project sample, the BS/BSD were within limits, the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated samples. Low surrogate recoveries were

Page 1 of 2



#### CASE NARRATIVE

Laboratory number: Client: Project: Location: Request Date: Samples Received: 245203 SOMA Environmental Engineering Inc. 5082 2844 Mountain Blvd, Oakland 05/10/13 05/10/13

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

observed for 1,2-dichloroethane-d4 in the BS/BSD for batch 198945. A number of samples were analyzed outside of hold time; affected data was qualified with "b". DPT-5@10FT (lab # 245203-002) and DPT-5@12FT (lab # 245203-003) were diluted due to high hydrocarbons. No other analytical problems were encountered.

#### Metals (EPA 6010B) Soil:

No analytical problems were encountered.

#### Metals (EPA 6010B) Filtrate:

No analytical problems were encountered.

## **CHAIN OF CUSTODY**

-																				
	Curtis & Tompk ENVIRONMENTAL ANALYT	ins Lab	oratorie	25												le _		2		
	ENVIRONMENTAL ANALYT	CAL TESTING	LABORATO	RY			145	1.03		Chain of Custody #										
0000			usiness Since 1		C&L	JGIN #_	011				ANAL	LYTIC	AL	REG	QUEST	i i i				
Berkele	Fifth Street ey, CA 94710		510) 486-09 510) 486-05		871.2	8760 010														
	No: 5082	S	ampler: Li	rie	50	- 0														
Project	Name: 2844 Mountain E	s/vel, Oakland	eport To: J																	
Project	P. O. No:		Company: S				rente	0	∞ <del>4</del>	e la l										
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Lab	Sample ID.	SAMI	PLING	MATRIX	Containers		MICAL RVATIVI	F	F *	0x 4Pb										
No.		Date	Time		Con		TT		1177											
		Collected	Time Collected	<u>Wate</u> Solid	# of (	HCI H2SO4	HNO3 NaOH	None	HAL	र राष्ट्र										
	DPT-5@4ft	5913	9:45	X				$\overline{\mathbf{X}}$	XX	XX			>id-			╉╼╋		+		
2	DPT-5@ 10 ft	1	10.08	X				X	XX		<u> </u>		+	++				+{		
3	DPT-SCI2Ft		(0:17					<del>х</del> Т	1212			╉──┼╴	+-	╉╌╂	-+-	╉┯╋	+	+-+		
ч	DPT-50 15 ft		10-22	X				$\overline{\mathbf{X}}$	121X	<b>X</b> X				++		╉──╋		+ - 1		
<	DPT-50 20ft		10:44	X					XX	VX			nu			╋╾╋		+		
ý	DPT-SC 30ft		10:49	X				Ϋ́	XV		<u> </u>	r Th		$\square$		╉┯┼	+	┿┥		
1	DPT-5C 45ft		11:07	XI				<del>\</del>	ЬŔ	12121		1.1	ord	$\mathbf{L}$		╋╋		+-1		
9	DPT-58 SOFF		11,09	x			-+-+	<del>Ω</del>	HSHO				<u> 4</u>			╉┯╉		+-1		
9	MW-1C-5FF		14:08	X	-		-+-+	λ	<del> \$ \$</del>	125			toic		——	┼─┼		+		
v	mw-1@ loft		14.11	ÎX		┝──╁──┼		$\hat{\mathbf{x}}$	ŀ\$ <del> </del> \$	<del>[S]S</del> ]		No T	<u>TUIC</u>	╇		╉╼╍╋	+	┿┥		
u	MW-10 12ft	+	14:31	- ÎX   -				$\mathbf{x}$	<del>1) )</del>	문건				╉╾╉	_	╄─╋		–_		
12	MW-1@ 15ft	+	15:05	X				<del>x</del>	XX					+		++		+		
13	MW-10 25 Ft		15:10			┝━╊━╊		Ŷ	<b>⋛</b> ∲	XX			told	4		++		┿╌┤		
Notes:	EDFONTput Bedwired	SAMPLE		REI	INQUI	SHED BY	:	<u> </u>				REC	CEIVE					┷╼┥		
	X + Pb Scarchers:	RECEIPT	GHAD 5/10/13 2:45							1.		R	1	,	5/14	<del>, /3</del>	2.	$\overline{\varphi}$		
TRA	+, ETBE, DIPE,	🗌 intact				DATE	. 11	ME:		JA	<u> </u>		<u>yr</u>	<u> </u>	ATE: 1	TIM	<u>ک</u> ، ز E:	<u> </u> ľ		
TAN	nE, 1,2-DCA, EDB, thatene, ethanol		DATE: TIME:							DATE: TIME:										
naph K Lal	o Filter water eadmin frickelst	On Ice Ambient	DATE: TIME:											D/	ATE:	TIM	E:			
for	admin + nickel																			

## CHAIN OF CUSTODY

						_	-												1		1.	
C	Curtis & Tompk Environmental analyti	ins Lab	oratorie	es						Page <u>2</u> of <u>2</u> Chain of Custody #												
	ENVIRONMENTAL ANALYTI	CAL TESTING	LABORATO	RY 378	C&T L	OGIN #	¥ 7 (	1520	°₹ ∎				NAI	LYTICAL REQUEST								
	ifth Street ey, CA 94710		≥ (510) 486-0900 < (510) 486-0532								Q					6010						
Project	No: 5082	s	sampler: Lizzie Hightower							8260	6010	8260		82	+Nickel							
Project	Name: 2844 Mountain Blvd,	Oakland F							801S	VI I			1 1		Ď							
Project	P. O. No:		company: SOMA Environmental						—  ,	<u>801</u>		જ	MtBF		Å	,₹						
EDD For	mat: Report Level 🗌 11 🛛								`		Š	Nick	1 X	ω	Ner 1	¥						
Turnarou			south itelate a constant							1 HH-4	S S S	1 Nickel		801	Pb Scavengers	Cadmium						
Lab	Sample ID.	SAM	PLING	MATR	Containers		HEMI SERV	cal Ative				V NI	1, BTEX	Z	1							
No.		Date Collected	Time Collected	Vater olid	# of Cor	HCI H2SO4	HNO3	NaOH None		E-HAI	Sus OX	adminum	-Hd1	Hdt	Gus D	Dissolved						
14	MW-207ft	5913	15:32	X	1			z z V		1	1 V	$\overline{\checkmark}$		$\vdash$	4		1				+	
(٢	mw-2010ft	51913	15:35	X	++	┼┼╴		X	l K	汁袋	1	<del>)</del>	+	┠─┤	-+	+	<u>× v</u>	1012		+-	╂┨	
14	MW-2 @ 12ft	5913		X	$\left  \right _{1}$			<b>-</b> <del>\$</del>	Ιť	Э÷Э́	131	솻	+	$\vdash$	-+	+		+-	┠─┼╴	+	+	
17	MW-2 @ 17 ft.	5/9/13		X	++	┼╌┼╴		X	l K		父	余				-+-	+	+	┢┼┼	-+-	+	
(8)	mw-2 e 20ft	591		İX	$\frac{1}{1}$		+	- X	l K		+ +			$\vdash$	-+	+		±-	1	+	+	
ાવ	MW-2 @ 25 Ft	591		X	$\uparrow$	+	╈	-Â	5			<u>X</u>	+-		-+		**	1010		+	$\left  - \right $	
20	DPT-5W-1	Flatio																				
		5912			17	X	+	X					X	$\times$	$\times$	$\mathbf{X}$						
	DPT-5W-2	5/10/12			7	$\times$		X					X	$\left  \star \right $	$\mathbf{X}$	$\mathbf{Y}$						
	DPT- 5W-3	5)9/13	5 11:50	4+	7	X	┽┤						X	X	X	хŢ		$\square$	$\square$	$\square$		
				++-	┝-┠───		╉┈╉				┢╌╌┠		_			+		_	┞─┼╴		+	
		<u> </u>					╋		⊢	_	$\left  \right $				$\rightarrow$	+	_	+	┢──┼╸	+		
	EDF Output Required	SAMPLE		RE	LINQUI	SHED	BY:			-	<u> </u>			RF	CEL	VED	BY-					
Gias (	2X +Pb Scavengers;	RECEIPT	511-0	210		DA		D/13 TIME:	7:40	-	7			1 19	<u>× /</u>	<u></u>		5/	15		1	
TBA,	ETBE, DIPE, TAME,	C. My			DA	TE:/	TIME		DATE: MIME:2' 9								$\underline{\mathcal{D}}$					
Gas OX +Pb Scavengers, RECEIPT TBA, ETBE, DIPE, TAME, Distoct 1,2-DCA, EDB, Naphthalene, Dicold			DATE: TIME:						DATE: TIME;													
ethal	~01	On Ice	DATE: TIME:						-													
*Lak	Filter Water for Cramin +Nickel #	Ambient							-						<u></u>	DATE	<u></u>	TIME	::			
										1											1	

#### COOLER RECEIPT CHECKLIST

Login # 245203 Date	Received <b>5</b>	0/13	Number of coc	lers_1	
Client SUMA	Project_	2844 N	IOUNTAIN BLUG	<b>)</b>	
Date Opened _ By (print) Date Logged in By (print)			P.G.F		Ą
1. Did cooler come with a shipping slip Shipping info			Y	TES 🕅	9
2A. Were custody seals present? How many	□ YES (circle) Name	on cooler	on samples Date		NO NO
How many 2B. Were custody seals intact upon arr	ival?		Y	ES NO ES NO	
<ol> <li>Were custody papers dry and intact v</li> <li>Were custody papers filled out properties</li> </ol>	erly (ink, signed,	etc)?	Ø	ES NC	
5. Is the project identifiable from custo 6. Indicate the packing in cooler: (if of	ody papers? (If s	o fill out top	of form) Y	E8 NO	) 
☐ Bubble Wrap ☐ Foam b ☐ Cloth material ☐ Cardbo 7. Temperature documentation: *	oard 🔲	Styrofoam	□ None □ Pape ceeds 6°C		
Type of ice used: 🔀 Wet				S.D	
<b>2</b> Samples Received on ice &					IR gun
☐ Samples received on ice dire					0
8. Were Method 5035 sampling contai					KO
If YES, what time were they tra	nsferred to freez	er?			
9. Did all bottles arrive unbroken/unop				_¥ES	NO
10. Are there any missing / extra sample	.es?			YES	XII)
11. Are samples in the appropriate com	ainers for indica	ted tests?		_ XES	NO
12. Are sample labels present, in good				¥£8	
13. Do the sample labels agree with cu				_ <b>C</b>	NO
14. Was sufficient amount of sample se				_1088	NO
15. Are the samples appropriately prese				🕏 NO	N/A
16. Did you check preservatives for all	bottles for each	sample?	YE	ES NO	(SBA
17 Did you document your preservativ	e check?		YE	ES NO	<b>AZZA</b>
18. Did you change the hold time in LI	MS for unpreser	ved VOAs?	YE	ES NO	NBA .
19. Did you change the hold time in LI	MS for preserved	d terracores?	Y <u>F</u>	ES NO	
20. Are bubbles > 6mm absent in VOA				Ś NO	N/A
21. Was the client contacted concerning		ivery?	10 - 11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	_ YES	$\mathfrak{G}$
If YES, Who was called?	B	У	Date	e:	

COMMENTS

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		Total	Volatil	e Hydrocar	bons	
Project#: 508	A Environmental 2	Engineer	ing Inc.	Location: Prep: Analysis:		2844 Mountain Blvd, Oakland EPA 5030B EPA 8015B
Matrix: Units: Basis:	Soil mg/Kg as received			Sampled: Received:		05/09/13 05/10/13
Field ID: Type:	DPT-5@4FT SAMPLE			Diln Fac: Batch#:		1.000 198811
Lab ID:	245203-001			Analyzed:		05/23/13
Ana Gasoline C7-C2	alyte		Result	7	<b>RL</b>	0
		%REC		-		
Bromofluorober	<b>rogate</b> nzene (FID)	101	<b>Limits</b> 64-139			
Field ID:	DPT-5@10FT			Diln Fac:		100.0
Type: Lab ID:	SAMPLE 245203-002			Batch#: Analyzed:		198462 05/15/13
	alyte		Result		RL	
Gasoline C7-C			90 Y		20	
Sur: Bromofluorober	rogate nzene (FID)	%REC 124	Limits 64-139			
Field ID:	DPT-5@12FT			Diln Fac:		100.0
Type: Lab ID:	SAMPLE 245203-003			Batch#: Analyzed:		198462 05/15/13
			Result	Analy2cu:	DI	05715715
Gasoline C7-C	<b>alyte</b> 12		56 Y		<b>RL</b> 20	
	rogate	%REC				
Bromofluorobe	nzene (FID)	119	64-139			
Field ID: Type:	DPT-5@15FT SAMPLE			Diln Fac: Batch#:		1.000 198462
Lab ID:	245203-004			Analyzed:		05/14/13
Ana Gasoline C7-C	alyte	NĽ	Result		<b>RL</b>	98
		%REC			0.	
Bromofluorober	<b>rogate</b> nzene (FID)	117	<b>Limits</b> 64-139			

\*= Value outside of QC limits; see narrative Y= Sample exhibits chromatographic pattern which does not resemble standard ND= Not Detected RL= Reporting Limit

Page 1 of 5



		Total	Volatil	e Hydrocar	bons	
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineer	ing Inc.	Location: Prep: Analysis:	EP.	44 Mountain Blvd, Oakland A 5030B A 8015B
Matrix: Units: Basis:	Soil mg/Kg as received			Sampled: Received:		/09/13 /10/13
Field ID:	DPT-5@30FT			Diln Fac:		000
Type: Lab ID:	SAMPLE 245203-006			Batch#: Analyzed:	05	8462 /14/13
Gasoline	Analyte C7-C12	NI	Result		<u>RL</u> 0.96	
Bromofluo	<b>Surrogate</b> robenzene (FID)	% <b>REC</b> 117	<b>Limits</b> 64-139			
Field ID: Type: Lab ID:	DPT-5@50FT SAMPLE 245203-008			Diln Fac: Batch#: Analyzed:	19	000 8462 /14/13
Gasoline	Analyte C7-C12	NI	Result		<b>RL</b> 1.1	
	Surrogate	%REC	Limits			
Bromofluo						
	robelizelle (FID)	117	64-139			
Field ID: Type: Lab ID:	MW-1@5FT SAMPLE 245203-009	117	64-139	Diln Fac: Batch#: Analyzed:	19	000 8811 /23/13
Type: Lab ID:	MW-1@5FT SAMPLE 245203-009 <b>Analyte</b>	117	64-139 Result	Batch#:	19 05 <b>RL</b>	8811
Type: Lab ID: Gasoline	MW-1@5FT SAMPLE 245203-009 <b>Analyte</b>	117 *REC 102	Result	Batch#:	19 05	8811
Type: Lab ID: Gasoline	MW-1@5FT SAMPLE 245203-009 Analyte C7-C12 Surrogate	%REC	Result 3.9 Limits	Batch#:	19 05 <b>RL</b> 0.98	8811
Type: Lab ID: Gasoline Bromofluo Field ID: Type: Lab ID:	MW-1@5FT SAMPLE 245203-009 Analyte C7-C12 Surrogate robenzene (FID) MW-1@10FT SAMPLE 245203-010 Analyte	<b>%REC</b> 102	Result 3.9 Limits 64-139 Result	Batch#: Analyzed: Diln Fac: Batch#:	19 05 <b>RL</b> 0.98	8811 /23/13 0.0 8462
Type: Lab ID: Gasoline Bromofluo: Field ID: Type:	MW-1@5FT SAMPLE 245203-009 Analyte C7-C12 Surrogate robenzene (FID) MW-1@10FT SAMPLE 245203-010 Analyte	<b>%REC</b> 102	<b>Result</b> 3.9 <b>Limits</b> 64-139	Batch#: Analyzed: Diln Fac: Batch#:	19 05 RL 0.98 10 19 05 RL	8811 /23/13 0.0 8462

\*= Value outside of QC limits; see narrative Y= Sample exhibits chromatographic pattern which does not resemble standard ND= Not Detected RL= Reporting Limit Page 2 of 5



		Mata 7	770105-1		h a n c	
		Total	VOLATIL	.e Hydrocar	rbons	
Lab #: Client:	245203 SOMA Environmental	Engineer	ing Inc.	Location: Prep:		2844 Mountain Blvd, Oakland EPA 5030B
Project#:	5082	Ligineer	1.1.9 1.1.0.	Analysis:		EPA 8015B
Matrix: Units:	Soil mg/Kg			Sampled: Received:		05/09/13 05/10/13
Basis:	as received					
Field ID:	MW-1@12FT			Diln Fac:		100.0
Type:	SAMPLE			Batch#:		198462
Lab ID:	245203-011			Analyzed:		05/15/13
	Analyte		Result		RL	
Gasoline (	C7-C12		910		20	
Promofluo	Surrogate robenzene (FID)	<b>%REC</b> 137	<b>Limits</b> 64-139			
BI OMOLIUO.	TODEIIZEIIE (FID)	101	VI LJJ			
Field ID:	MW-1@15FT			Diln Fac:		166.7
Type: Lab ID:	SAMPLE 245203-012			Batch#: Analyzed:		198811 05/23/13
				111012/200		
Gasoline (	Analyte C7-C12		Result 460		<u>RL</u> 33	
	Surrogate	%REC	Limits			
Bromofluo	robenzene (FID)	111	64-139			
Field ID:	MW-1@25FT			Diln Fac:		1.000
Type:	SAMPLE			Batch#:		198462
Lab ID:	245203-013			Analyzed:		05/14/13
	Analyte		Result		RL	
Gasoline (			2.0		0.	٥ 
Bromofluo	Surrogate robenzene (FID)	%REC 113	Limits 64-139			
DI CIIIOLI I UO.			01 107			
Field ID:	MW-2@7FT			Diln Fac:		1.000
Type: Lab ID:	SAMPLE 245203-014			Batch#: Analyzed:		198811 05/23/13
	Analyte		Result		RL	
				-		0.2
Gasoline (	C7-C12		7.2	Ĺ	0.	93
Gasoline (	C7-C12 Surrogate	%REC	7.2 S	Z	0.	93

\*= Value outside of QC limits; see narrative Y= Sample exhibits chromatographic pattern which does not resemble standard ND= Not Detected RL= Reporting Limit Page 3 of 5



		Total	Volatil	e Hydrocar	bong	
<b>T 1 U :</b>	045000	IOCAL	VOTACII		DOUR	
	245203 SOMA Environmental	Engineer	ing Inc.	Location: Prep:		2844 Mountain Blvd, Oakland EPA 5030B
Project#:	5082		go.	Analysis:		EPA 8015B
Matrix: Units:	Soil mg/Kg			Sampled: Received:		05/09/13 05/10/13
Basis:	mg/Kg as received			Received.		05/10/15
Field ID:	MW-2@10FT			Diln Fac:		100.0
Type: Lab ID:	SAMPLE 245203-015			Batch#: Analyzed:		198462 05/15/13
	243203-013			Analyzeu		05/15/15
Gasoline C	Analyte		Result 960		RL	
Gasoline C	./-C12		900		20	
	Surrogate	%REC	Limits			
Bromolluor	obenzene (FID)	149 *	64-139			
Field ID:	MW-2@12FT			Diln Fac:		100.0
Type:	SAMPLE			Batch#:		198462
Lab ID:	245203-016			Analyzed:		05/15/13
	Analyte		Result		RL	
Gasoline C	-C12		270		20	
	Surrogate	%REC	Limits			
Bromofluor	obenzene (FID)	124	64-139			
Field ID:	MW-2@17FT			Diln Fac:		1.000
Type:	SAMPLE			Batch#:		198462
Lab ID:	245203-017			Analyzed:		05/14/13
	Analyte		Result		RL	
a 1' a						
Gasoline C	27-C12	ND	)		0.	99
	Surrogate	ND %REC	Limits		0.	99
		ND			0.	99
	Surrogate	ND %REC	Limits		0.	99
Bromofluor	<b>Surrogate</b> obenzene (FID)	ND %REC	Limits	Patek#:	0.	
Bromofluor Type:	Surrogate obenzene (FID) BLANK	ND %REC	Limits	Batch#:	0.	198462
Bromofluor	<b>Surrogate</b> obenzene (FID)	ND %REC	Limits	Batch#: Analyzed:	0.	
Bromofluor Type: Lab ID:	Surrogate obenzene (FID) BLANK QC688562 1.000	ND <b>%REC</b> 114	<b>Limits</b> 64-139			198462
Bromofluor Type: Lab ID:	Surrogate obenzene (FID) BLANK QC688562 1.000 Analyte	ND <b>%REC</b> 114	Limits 64-139 Result		0. 	198462 05/14/13
Bromofluor Type: Lab ID: Diln Fac: Gasoline C	Surrogate obenzene (FID) BLANK QC688562 1.000 Analyte	ND <b>%REC</b> 114	Limits 64-139 Result		RL	198462 05/14/13

\*= Value outside of QC limits; see narrative Y= Sample exhibits chromatographic pattern which does not resemble standard ND= Not Detected RL= Reporting Limit Page 4 of 5



		Total Volatil	e Hydrocar	bons	
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineering Inc.	Location: Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8015B	
Matrix: Units: Basis:	Soil mg/Kg as received		Sampled: Received:	05/09/13 05/10/13	
Type: Lab ID: Diln Fac:	BLANK QC689990 1.000		Batch#: Analyzed:	198811 05/22/13	
Gasoline (	Analyte C7-C12	Result ND		<b>RL</b> 0.20	
Bromofluo	<b>Surrogate</b> robenzene (FID)	<b>%REC Limits</b> 94 64-139			



### Batch QC Report

		Total Volatil	e Hydroca	rbons				
Lab #:	245203		Location:		2844 M	ountain	Blvd, (	Dakland
Client:	SOMA Environmental	Engineering Inc.	Prep:		EPA 50	30B		
Project#:	5082		Analysis:		EPA 80	15B		
Туре:	LCS		Diln Fac:		1.000			
Lab ID:	QC688561		Batch#:		198462			
Matrix:	Soil		Analyzed:		05/14/	13		
Units:	mg/Kg							
	Analyte	Spiked		Result		%REC	Limits	
Gasoline (	C7-C12	1.000		1.0	90	109	80-120	

Surrogate	%REC	Limits	
Bromofluorobenzene (FID)	116	64-139	



#### Batch QC Report

		Total	Volatil	e Hydroca	rbons				
Lab #:	245203			Location:		2844 Mountair	n Blvd, O	akland	1
Client:	SOMA Environmental	Engineer	ing Inc.	Prep:		EPA 5030B			
Project#:	5082			Analysis:		EPA 8015B			
Field ID:	ZZZZZZZZZ			Diln Fac:		1.000			
MSS Lab I	D: 245147-001			Batch#:		198462			
Matrix:	Soil			Sampled:		05/09/13			
Units:	mg/Kg			Received:		05/09/13			
Basis:	as received			Analyzed:		05/14/13			
Type:	MS	MSS Res	sult	Lab ID:	1	QC688565	%REC	Limi	lts
Gasoline	-	< 0	.05388	10.7		8.870	82	42-1	
				10.	, ,	0.070			
	Surrogate	%REC	Limits						
Bromofluo	robenzene (FID)	118	64-139						
Туре:	MSD			Lab ID:		QC688566			
	Analyte	S	Spiked		Result	%REC	Limits	RPD L	
Gasoline	C7-C12		10.87		8.8	368 82	42-120	1 4	12

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	117	64-139



### Batch QC Report

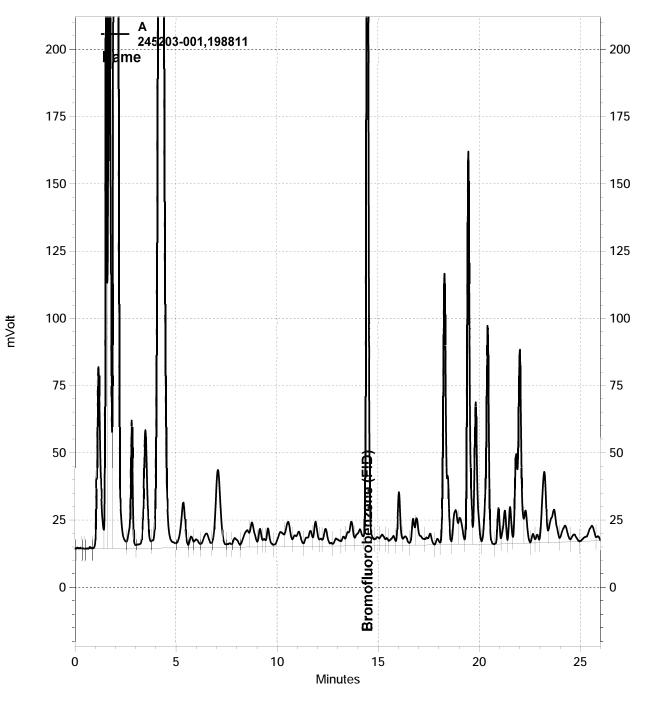
		Total Volatil	e Hydroca	rbons			
Lab #:	245203		Location:		2844 Mc	ountain	Blvd, Oakland
Client:	SOMA Environmental	Engineering Inc.	Prep:		EPA 503	30B	
Project#:	5082		Analysis:		EPA 801	L5B	
Type:	LCS		Diln Fac:		1.000		
Lab ID:	QC689986		Batch#:		198811		
Matrix:	Soil		Analyzed:		05/22/1	L3	
Units:	mg/Kg						
	Analyte	Spiked		Result		%REC	Limits
Gasoline (	C7-C12	1.000	)	1.0	00	100	80-120

Surrogate	%REC	Limits	
Bromofluorobenzene (FID)	99	64-139	

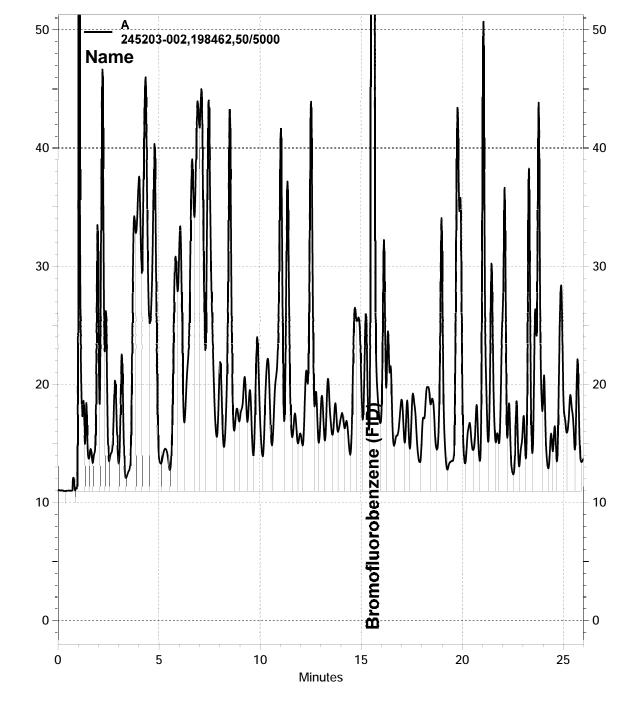


#### Batch QC Report

		Total	Volatil	e Hydrocarbor	ıs			
Lab #: 2452	203			Location:	2844 N	Mountain	Blvd, Oa	akland
Client: SOMA	Environmental	Engineer	ing Inc.	Prep:	EPA 50	)30B		
Project#: 5082	)			Analysis:	EPA 80	)15B		
Field ID:	ZZZZZZZZZZ			Diln Fac:	1.000			
MSS Lab ID:	245505-011			Batch#:	198811	L		
Matrix:	Soil			Sampled:	05/22/	/13		
Units:	mg/Kg			Received:	05/22/	/13		
Basis:	as received			Analyzed:	05/23/	/13		
Type:	MS			Lab ID:	QC6901	L03		
Anal	yte	MSS Re	esult	Spiked	Re	esult	%REC	Limits
Gasoline C7-C1	-		0.2179	<b>Spiked</b> 10.87	Re	esult 6.005	% <b>REC</b> 53	Limits 42-120
Gasoline C7-C1	2 rogate	%REC	0.2179 Limits	=	Re			
Gasoline C7-C1	2 rogate		0.2179	=	Re			
Gasoline C7-C1	2 rogate	%REC	0.2179 Limits	=	<b>Re</b> QC6901	6.005		
Gasoline C7-C1 Surr Bromofluorober Type: Ana	2 rogate nzene (FID) MSD NSD	%REC	0.2179 Limits	10.87	QC6901	6.005		
Gasoline C7-C1 Surr Bromofluorober	2 rogate nzene (FID) MSD NSD	%REC	0.2179 Limits 64-139	10.87 Lab ID:	QC6901	6.005 L04	53	42-120
Gasoline C7-C1 Surr Bromofluoroben Type: Ana Gasoline C7-C1	2 rogate nzene (FID) MSD NSD	%REC	0.2179 Limits 64-139 Spiked	10.87 Lab ID:	QC6901	6.005 L04 <b>%REC</b>	53 Limits	42-120 RPD Lim



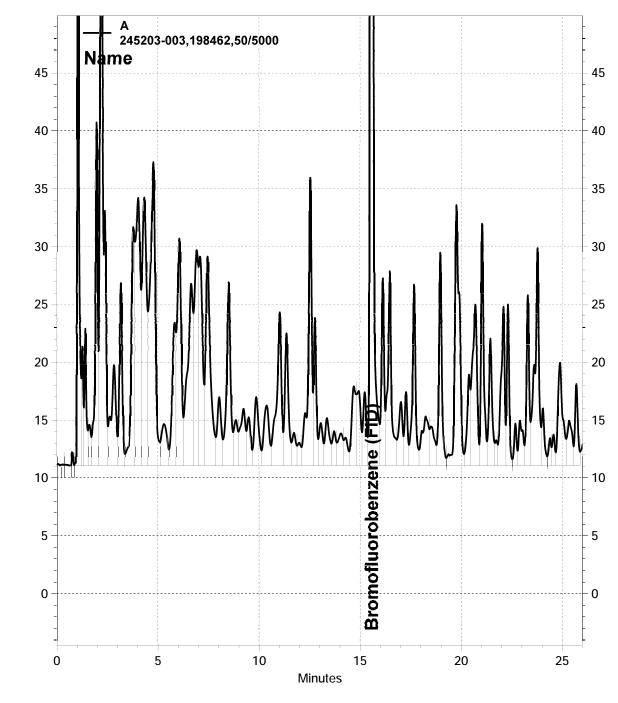
mVolt



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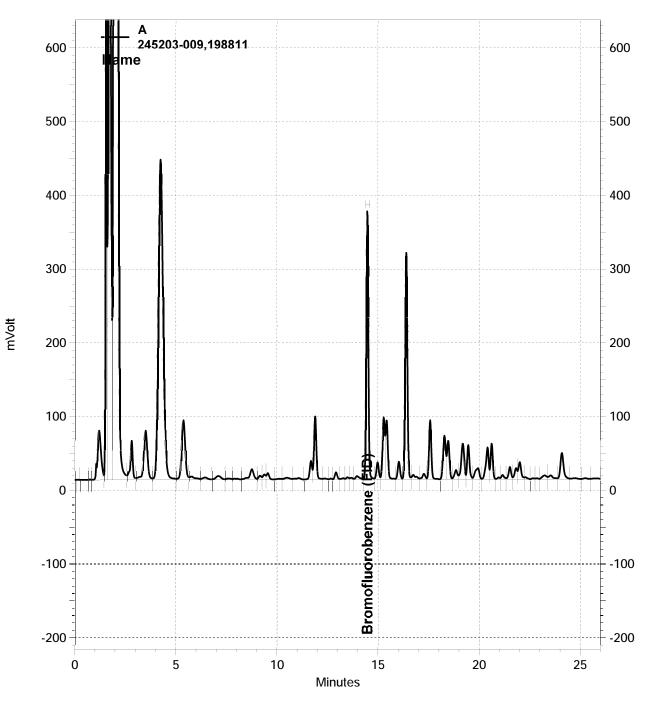
mVolt

mVolt

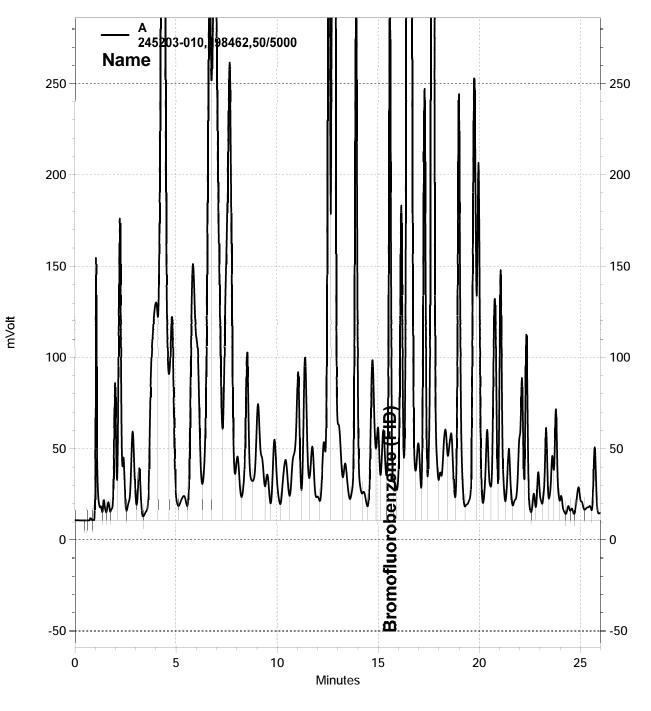


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mVolt

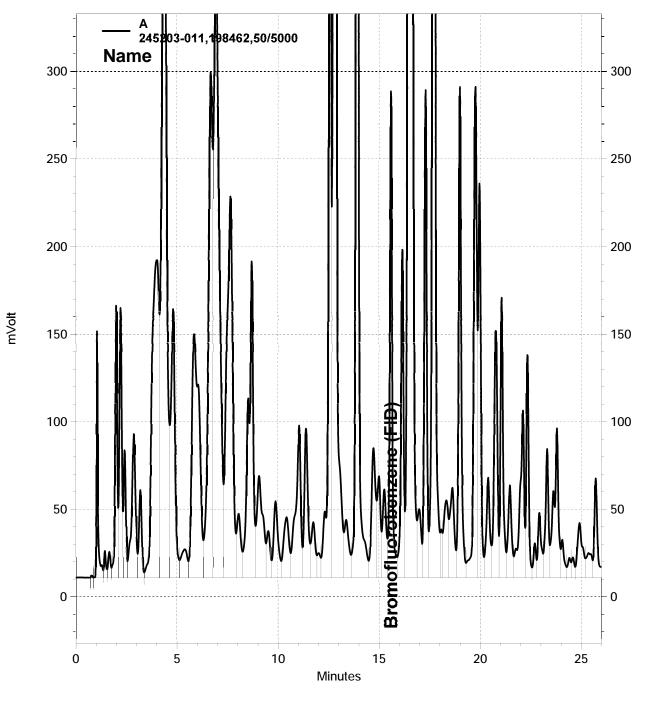




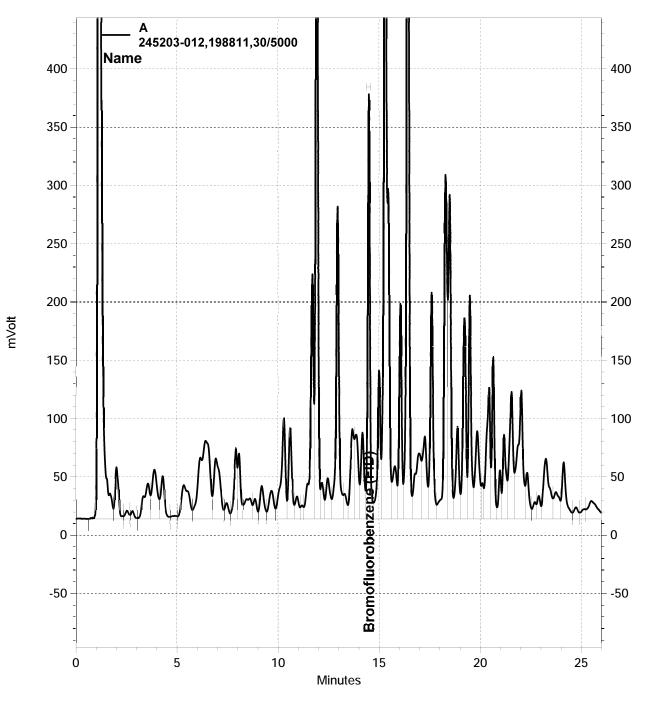


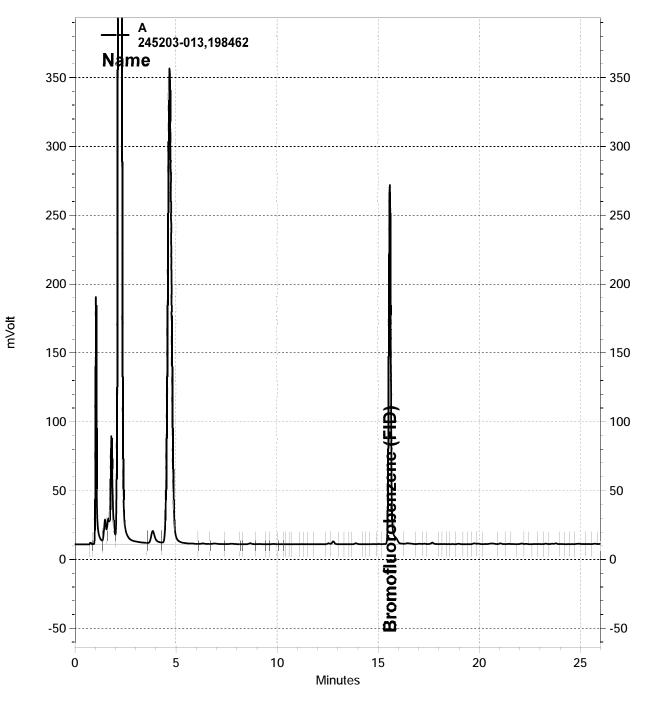
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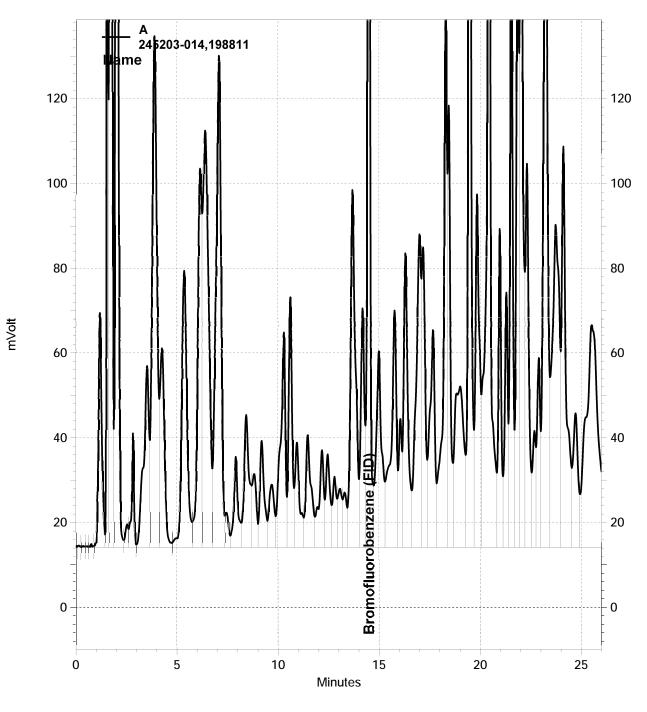
20 of 107

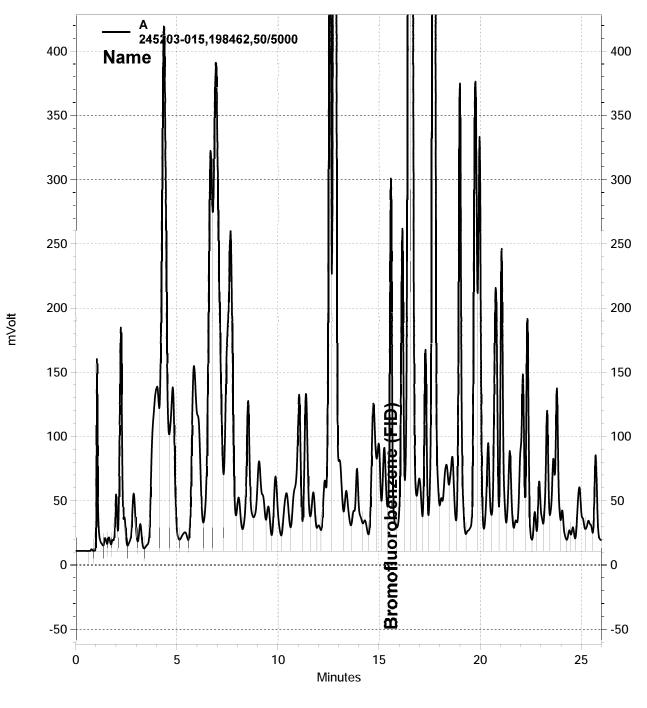


- \\Lims\gdrive\ezchrom\Projects\GC07\Data\134-028, A

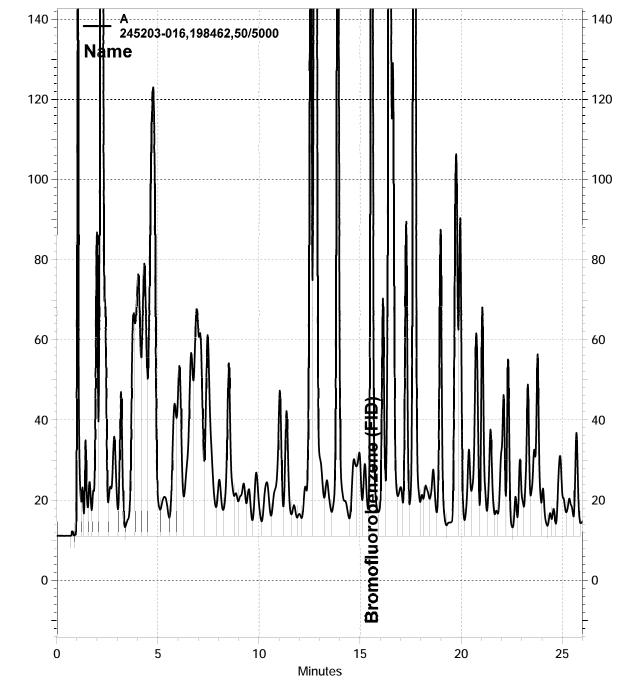






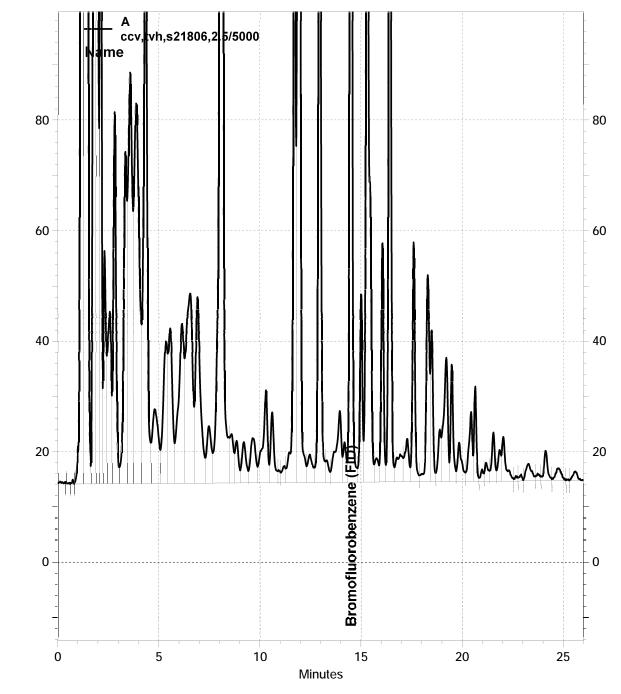


- \\Lims\gdrive\ezchrom\Projects\GC07\Data\134-029, A



- \\Lims\gdrive\ezchrom\Projects\GC07\Data\134-030, A

mVolt



- \\Lims\gdrive\ezchrom\Projects\GC04\Data\142-002, A

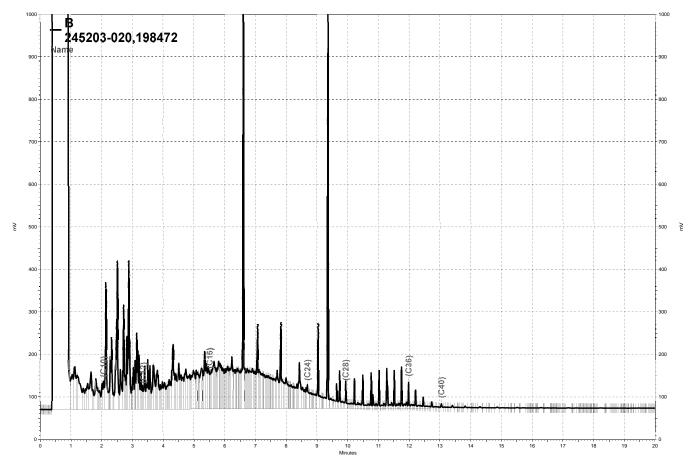
mVolt



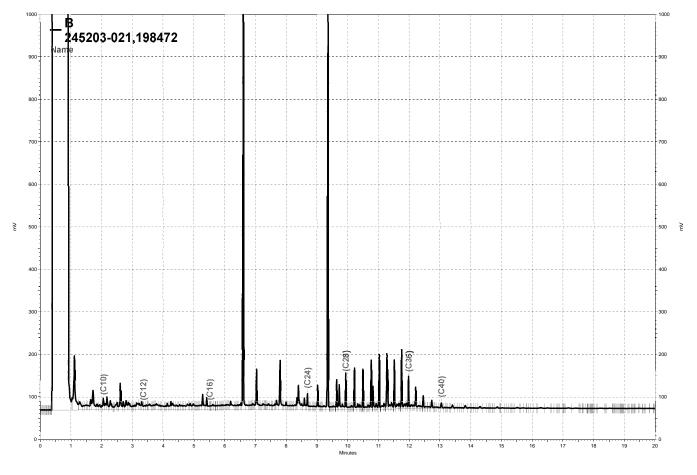
		Total	Extracta	ble Hydrod	arbor	າຮ
Tob #:	245203	10041				
Lab #: Client:	SOMA Environmental	Enginee	ring Inc.	Location: Prep:		2844 Mountain Blvd, Oakland EPA 3520C
Project#:	5082	-	-	Analysis:		EPA 8015B
Matrix: Units:	Water ug/L			Batch#: Received:		198472 05/10/13
Diln Fac:	1.000			Prepared:		05/14/13
Field ID:	דער 1			Compled		
Type:	DPT-5W-1 SAMPLE			Sampled: Analyzed:		05/09/13 05/15/13
Lab ID:	245203-020			-		
	Analyte		Result		RL	
Diesel Cl	0-C24		4,300		50	
	Surrogate	%REC				
o-Terphen	ΎТ	72	62-133			
Field ID:	DPT-5W-2			Sampled:		05/10/13
Type:	SAMPLE			Analyzed:		05/15/13
Lab ID:	245203-021					
Diagol C1	Analyte		Result		RL	
Diesel C1			<b>Result</b> 630 Y		<b>RL</b> 50	
	0-C24 Surrogate	%REC	630 Y <b>Limits</b>			
Diesel Cl	0-C24 Surrogate	<b>%REC</b> 79	630 Y			
	0-C24 Surrogate		630 Y <b>Limits</b>			
	0-C24 Surrogate yl DPT-5W-3		630 Y <b>Limits</b>	Sampled:		05/09/13
o-Terphen Field ID: Type:	0-C24 Surrogate yl DPT-5W-3 SAMPLE		630 Y <b>Limits</b>	Sampled: Analyzed:		05/09/13 05/15/13
o-Terphen Field ID:	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022		630 Y Limits 62-133		50	
o-Terphen Field ID: Type: Lab ID:	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte		630 Y Limits 62-133 Result		50 RL	
o-Terphen Field ID: Type:	0-C24 <b>Surrogate</b> yl DPT-5W-3 SAMPLE 245203-022 <b>Analyte</b> 0-C24	79	630 Y Limits 62-133 Result 320 Y		50	
o-Terphen Field ID: Type: Lab ID: Diesel Cl	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte 0-C24 Surrogate		630 Y Limits 62-133 Result 320 Y		50 RL	
o-Terphen Field ID: Type: Lab ID:	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte 0-C24 Surrogate	79 %REC	630 Y Limits 62-133 Result 320 Y Limits		50 RL	
o-Terphen Field ID: Type: Lab ID: Diesel Cl	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte 0-C24 Surrogate	79 %REC	630 Y Limits 62-133 Result 320 Y Limits		50 RL	
o-Terphen Field ID: Type: Lab ID: Diesel Cl o-Terphen Type:	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte 0-C24 Surrogate yl BLANK	79 %REC	630 Y Limits 62-133 Result 320 Y Limits		50 <b>RL</b> 51	
o-Terphen Field ID: Type: Lab ID: Diesel Cl	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte 0-C24 Surrogate yl	79 %REC	630 Y Limits 62-133 Result 320 Y Limits	Analyzed:	50 <b>RL</b> 51	05/15/13
o-Terphen Field ID: Type: Lab ID: Diesel Cl o-Terphen Type: Lab ID:	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte 0-C24 Surrogate yl BLANK QC688600 Analyte	79 % <b>REC</b> 92	630 Y Limits 62-133 Result 320 Y Limits 62-133 Result	Analyzed:	50 RL RL	05/15/13
o-Terphen Field ID: Type: Lab ID: Diesel Cl o-Terphen Type:	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte 0-C24 Surrogate yl BLANK QC688600 Analyte	79 %REC	630 Y Limits 62-133 Result 320 Y Limits 62-133 Result	Analyzed:	50 <b>RL</b> 51	05/15/13
o-Terphen Field ID: Type: Lab ID: Diesel Cl o-Terphen Type: Lab ID:	0-C24 Surrogate yl DPT-5W-3 SAMPLE 245203-022 Analyte 0-C24 Surrogate yl BLANK QC688600 Analyte 0-C24 Surrogate	79 % <b>REC</b> 92	630 Y Limits 62-133 Result 320 Y Limits 62-133 Result D	Analyzed:	50 RL RL	05/15/13



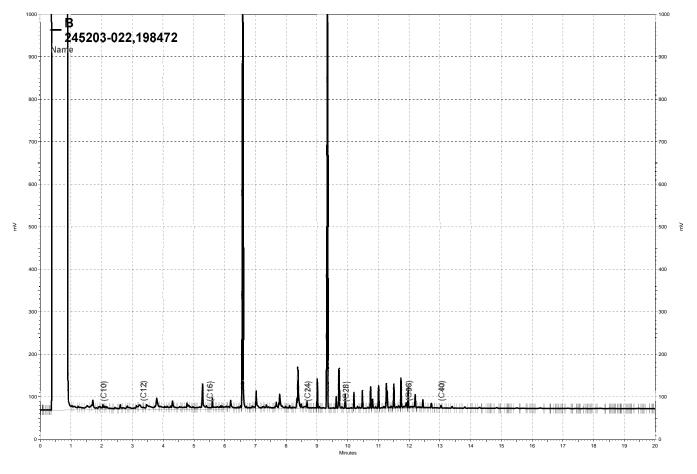
		Total 1	Extracta	ble Hydrocarbo	ns			
Lab #:	245203			Location:	2844 Mountain	Blvd, O	aklan	.d
Client:	SOMA Environmental	Engineer	ring Inc.	Prep:	EPA 3520C			
Project#:	5082			Analysis:	EPA 8015B			
Matrix:	Water			Batch#:	198472			
Units:	ug/L			Prepared:	05/14/13			
Diln Fac:	1.000			Analyzed:	05/16/13			
Type: Lab ID:	BS QC688601			Cleanup Method:	EPA 3630C			
	Analyte		Spiked	Result	REC	Limits		
Diesel C10	D-C24		2,500	2,321	93	59-120		
	Surrogate	%REC	Limits					
o-Terpheny	<u>/</u> 1	106	62-133					
Type:	BSD			Cleanup Method:	EPA 3630C			
Lab ID:	QC688602							
	Analyte		Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10	)-C24		2,500	2,185	87	59-120	б	46
	Surrogate	%REC	Limits					
o-Terpheny	/1	104	62-133					



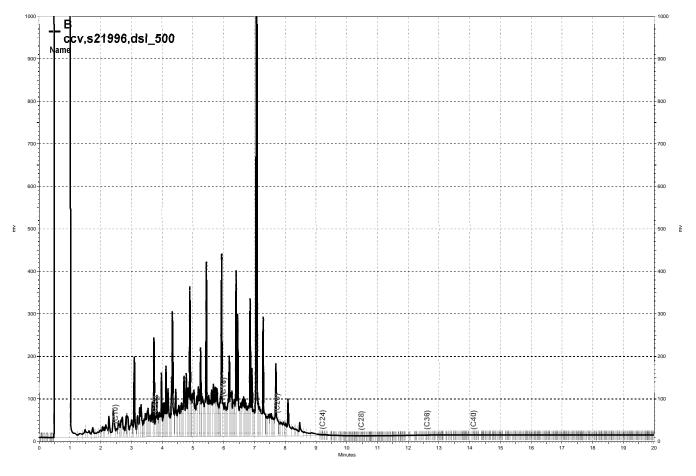
-\\Lims\gdrive\ezchrom\Projects\GC14B\Data\135b020, B



-\\Lims\gdrive\ezchrom\Projects\GC14B\Data\135b021, B



-\\Lims\gdrive\ezchrom\Projects\GC14B\Data\135b022, B



-\\Lims\gdrive\ezchrom\Projects\GC15B\Data\136b003, B



		Total Extra	ctable Hydroca	arbons	
Lab #: Client: <u>Project#:</u> Matrix: Units: Basis:	245203 SOMA Environmental 5082 Soil mg/Kg as received		Location: nc. Prep: <u>Analysis:</u> Diln Fac: Sampled: Received:	2844 Mountain Blvd, O EPA 3550B EPA 8015B 1.000 05/09/13 05/10/13	akland
Field ID: Type: Lab ID:	DPT-5@4FT SAMPLE 245203-001		Batch#: Prepared: Analyzed:	198943 05/25/13 05/26/13	
Diesel Cl	Analyte 0-C24	Resul 16	t Y b	RL 1.0	
01	Surrogate			· · ·	
o-Terpheny Field ID:		103 b 62-1		198466	
Type: Lab ID:	SAMPLE 245203-002		Prepared: Analyzed:	05/14/13 05/14/13	
	Analyte	Resul		RL	
Diesel Cl	0-C24	47		1.0	
1					
o-Terphen	<u>Surrogate</u> yl	<b>%REC Limi</b> 82 62-1			
o-Terphen Field ID: Type: Lab ID:		82 62-1	36 Batch#: Prepared: Analyzed:	198466 05/14/13 05/14/13	
Field ID: Type:	yl DPT-5@12FT SAMPLE 245203-003 Analyte		36 Batch#: Prepared: Analyzed: <b>t</b>	05/14/13	
Field ID: Type: Lab ID:	yl DPT-5@12FT SAMPLE 245203-003 <b>Analyte</b> 0-C24	82 62-1 <b>Resul</b> 17	36 Batch#: Prepared: Analyzed: <b>t</b>	05/14/13 05/14/13 <b>RL</b>	
Field ID: Type: Lab ID:	yl DPT-5@12FT SAMPLE 245203-003 Analyte 0-C24 Surrogate	82 62-1 Resul	36 Batch#: Prepared: Analyzed: t	05/14/13 05/14/13 <b>RL</b>	
Field ID: Type: Lab ID: Diesel C1	yl DPT-5@12FT SAMPLE 245203-003 Analyte 0-C24 Surrogate yl DPT-5@15FT SAMPLE 245203-004	82 62-1 <b>Resul</b> 17 <b>%REC Limi</b> 87 62-1	36 Batch#: Prepared: Analyzed: t t Batch#: Prepared: Analyzed:	05/14/13 05/14/13 <b>RL</b> 1.0 198466 05/14/13 05/14/13	
Field ID: Type: Lab ID: Diesel C1 o-Terpheny Field ID: Type: Lab ID:	yl DPT-5@12FT SAMPLE 245203-003 Analyte 0-C24 Surrogate yl DPT-5@15FT SAMPLE 245203-004 Analyte	82 62-1 Resul 17 %REC Limi 87 62-1 Resul	36 Batch#: Prepared: Analyzed: t t Batch#: Prepared: Analyzed:	05/14/13 05/14/13 RL 1.0 198466 05/14/13 05/14/13 RL	
Field ID: Type: Lab ID: Diesel Cl o-Terphen Field ID: Type:	yl DPT-5@12FT SAMPLE 245203-003 Analyte 0-C24 Surrogate yl DPT-5@15FT SAMPLE 245203-004 Analyte	82 62-1 <b>Resul</b> 17 <b>%REC Limi</b> 87 62-1	36 Batch#: Prepared: Analyzed: t Batch#: Prepared: Analyzed: t	05/14/13 05/14/13 <b>RL</b> 1.0 198466 05/14/13 05/14/13	

Y= Sample exhibits chromatographic pattern which does not resemble standard b= See narrative ND= Not Detected RL= Reporting Limit Page 1 of 5



		Total H	Extracta	ble Hydroc	arbon	S
Lab #:	245203			Location:		2844 Mountain Blvd, Oakland
Client:	SOMA Environmental	Engineer	ing Inc	Prep:		EPA 3550B
Project#:		Ligineer	1119 1110.	Analysis:		EPA 8015B
Matrix:	Soil			Diln Fac:		1.000
Units:	mg/Kg			Sampled:		05/09/13
Basis:	as received			Received:		05/10/13
Field ID:	DPT-5@30FT			Batch#:		198466
Type:	SAMPLE			Prepared:		05/14/13
Lab ID:	245203-006			Analyzed:		05/14/13
	Analyte		Result		RL	
Diesel Cl			1.1 \	7	1.(	
	Surrogate	%REC	Limits			
o-Terpheny		89	62-136			
	2		0			
Field ID:	DPT-5@50FT			Batch#:		198466
Type:	SAMPLE			Prepared:		05/14/13
Lab ID:	245203-008			Analyzed:		05/14/13
				1 1		
	Analyte		Result		RL	
	0 001					)
Diesel Cl(	0-C24	ND			1.0	)
	Surrogate	ND <b>%REC</b>	Limits			)
o-Terpheny	Surrogate	ND	)			)
	Surrogate	ND <b>%REC</b>	Limits			)
	Surrogate	ND <b>%REC</b>	Limits			)
o-Terpheny Field ID:	Surrogate yl MW-1@5FT	ND <b>%REC</b>	Limits	Batch#:		198943
o-Terpheny Field ID: Type:	Surrogate yl MW-1@5FT SAMPLE	ND <b>%REC</b>	Limits	Prepared:		198943 05/25/13
o-Terpheny Field ID:	Surrogate yl MW-1@5FT	ND <b>%REC</b>	Limits			198943
o-Terpheny Field ID: Type: Lab ID:	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte	ND <b>%REC</b> 84	Limits 62-136 Result	Prepared: Analyzed:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type:	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte	ND <b>%REC</b> 84	<b>Limits</b> 62-136	Prepared: Analyzed:	1.(	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID:	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24	ND <b>%REC</b> 84	<b>Limits</b> 62-136 <b>Result</b> 11 Y k	Prepared: Analyzed:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID:	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate	ND <b>%REC</b> 84	Limits 62-136 Result	Prepared: Analyzed:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel C10	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate	ND 84 84	Limits 62-136 Result 11 Y k Limits	Prepared: Analyzed:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel C10	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate	ND 84 84	Limits 62-136 Result 11 Y k Limits	Prepared: Analyzed:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel Clo o-Terpheny	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate yl	ND 84 84	Limits 62-136 Result 11 Y k Limits	Prepared: Analyzed:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny Field ID:	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate yl MW-1@10FT	ND 84 84	Limits 62-136 Result 11 Y k Limits	Prepared: Analyzed:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel Clo o-Terpheny	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate yl	ND 84 84	Limits 62-136 Result 11 Y k Limits	Prepared: Analyzed:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny Field ID: Type:	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate yl MW-1@10FT SAMPLE 245203-010	ND 84 84 84 84	Limits         62-136         Result         11 Y k         Limits         62-136	Prepared: Analyzed: Batch#: Prepared:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel Clo o-Terpheny Field ID: Type: Lab ID:	Surrogate Yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate Yl MW-1@10FT SAMPLE 245203-010 Analyte	ND 84 84 84 84	Limits         62-136         Result         11 Y k         Limits         62-136	Prepared: Analyzed: Batch#: Prepared:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny Field ID: Type:	Surrogate Yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate Yl MW-1@10FT SAMPLE 245203-010 Analyte	ND 84 84 84 84	Limits         62-136         Result         11 Y k         Limits         62-136	Prepared: Analyzed: Batch#: Prepared:	1.( 	198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny Field ID: Type: Lab ID:	Surrogate yl MW-1@5FT SAMPLE 245203-009 Analyte D-C24 Surrogate yl MW-1@10FT SAMPLE 245203-010 Analyte D-C24 Surrogate	ND 84 84 84 84	Limits         62-136         Result         11 Y k         Limits         62-136	Prepared: Analyzed: Batch#: Prepared:	1.( 	198943 05/25/13 05/26/13

Y= Sample exhibits chromatographic pattern which does not resemble standard b= See narrative ND= Not Detected RL= Reporting Limit Page 2 of 5



		Total E	Extracta	ble Hydroc	arbons
Lab #: Client: Project#:		Engineer	ing Inc.	Location: Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 3550B EPA 8015B
Matrix: Units: Basis:	Soil mg/Kg as received			Diln Fac: Sampled: Received:	1.000 05/09/13 05/10/13
Field ID: Type: Lab ID:	MW-1@12FT SAMPLE 245203-011			Batch#: Prepared: Analyzed:	198521 05/15/13 05/15/13
	Analyte		Result		RL
Diesel Cl			140		1.0
o-Terphen <sup>.</sup>	Surrogate	<b>%REC</b> 98	<b>Limits</b> 62-136		
0-terbiteu)	<u>у</u> т	70	061-70		
Field ID: Type: Lab ID:	MW-1@15FT SAMPLE 245203-012			Batch#: Prepared: Analyzed:	198943 05/25/13 05/26/13
	Analyte		Result		RL
Diesel Cl			91 b		1.0
	0-C24 Surrogate	%REC	91 b Limits		
Diesel Cl	0-C24 Surrogate		91 b		
	0-C24 Surrogate	%REC	91 b Limits	Batch#: Prepared: Analyzed:	
o-Terphen Field ID: Type: Lab ID:	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte	% <b>REC</b> 103 b	91 b Limits 62-136 Result	Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13 RL
o-Terphen Field ID: Type:	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte	% <b>REC</b> 103 b	91 b Limits 62-136	Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13
o-Terpheny Field ID: Type: Lab ID: Diesel C1	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte 0-C24 Surrogate	%REC 103 b %REC	91 b Limits 62-136 Result 1.3 Y Limits	Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13 RL
o-Terphen Field ID: Type: Lab ID:	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte 0-C24 Surrogate	% <b>REC</b> 103 b	91 b Limits 62-136 Result 1.3 Y	Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13 RL
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte 0-C24 Surrogate yl	%REC 103 b %REC	91 b Limits 62-136 Result 1.3 Y Limits	Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13 <b>RL</b> 1.0
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny Field ID:	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte 0-C24 Surrogate yl MW-2@7FT	%REC 103 b %REC	91 b Limits 62-136 Result 1.3 Y Limits	Prepared: Analyzed: 7 Batch#:	1.0 198521 05/15/13 05/15/13 RL 1.0 198943
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte 0-C24 Surrogate yl	%REC 103 b %REC	91 b Limits 62-136 Result 1.3 Y Limits	Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13 <b>RL</b> 1.0
o-Terpheny Field ID: Type: Lab ID: Diesel Cl o-Terpheny Field ID: Type: Lab ID:	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte 0-C24 Surrogate yl MW-2@7FT SAMPLE 245203-014 Analyte	%REC 103 b %REC 89	91 b Limits 62-136 Result 1.3 Y Limits 62-136 Result	Prepared: Analyzed: Batch#: Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13 <b>RL</b> 198943 05/25/13 05/26/13 <b>RL</b>
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny Field ID: Type:	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte 0-C24 Surrogate yl MW-2@7FT SAMPLE 245203-014 Analyte	%REC 103 b %REC 89	91 b Limits 62-136 Result 1.3 Y Limits 62-136	Prepared: Analyzed: Batch#: Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13 <b>RL</b> 1.0 198943 05/25/13 05/26/13
o-Terpheny Field ID: Type: Lab ID: Diesel Clu o-Terpheny Field ID: Type: Lab ID:	0-C24 Surrogate yl MW-1@25FT SAMPLE 245203-013 Analyte 0-C24 Surrogate yl MW-2@7FT SAMPLE 245203-014 Analyte 0-C24 Surrogate	%REC 103 b %REC 89 %REC	91 b Limits 62-136 Result 1.3 Y Limits 62-136 Result	Prepared: Analyzed: Batch#: Prepared: Analyzed:	1.0 198521 05/15/13 05/15/13 <b>RL</b> 198943 05/25/13 05/26/13 <b>RL</b>

Y= Sample exhibits chromatographic pattern which does not resemble standard b= See narrative ND= Not Detected RL= Reporting Limit Page 3 of 5



		Total E	Extracta	ble Hydroc	arbon	S
Lab #:	245203			Location:		2844 Mountain Blvd, Oakland
Client:	SOMA Environmental	Engineer	ing Inc	Prep:		EPA 3550B
Project#:	5082	Ingineer	111g 111c.	Analysis:		EPA 8015B
Matrix:	Soil			Diln Fac:		1.000
Units:	mg/Kg			Sampled:		05/09/13
Basis:	as received			Received:		05/10/13
Field ID:	MW-2@10FT			Batch#:		198521
Type:	SAMPLE			Prepared:		05/15/13
Lab ID:	245203-015			Analyzed:		05/15/13
				_		
	Analyte		Result 400		<u>RL</u>	
Diesel Cl	0-024		400		1.0	J
	Surrogate	%REC	Limits			
o-Terphen		96	62-136			
Field ID:	MW-2@12FT			Dot ob# •		198521
Type:	MW-Z@IZFI SAMPLE			Batch#: Prepared:		05/15/13
Lab ID:	245203-016			Analyzed:		05/15/13
	219203 010			maryzea		00/10/10
	Analyte		Result		RL	
Diesel Cl	0 001					
	0-024		95		1.0	)
		% <b>₽</b> ₽₽			1.0	)
o-Terpheny	Surrogate	% <b>REC</b> 93	Limits		1.0	)
o-Terpheny	Surrogate	<b>%REC</b> 93			1.0	
o-Terphen	Surrogate		Limits		1.0	)
	Surrogate yl		Limits			
Field ID:	Surrogate yl MW-2@17FT		Limits	Batch#:		198521
Field ID: Type:	Surrogate yl MW-2@17FT SAMPLE		Limits	Prepared:		198521 05/15/13
Field ID:	Surrogate yl MW-2@17FT		Limits			198521
Field ID: Type: Lab ID:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte	93	Limits 62-136 Result	Prepared:	RL	198521 05/15/13 05/15/13
Field ID: Type:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte	93	Limits 62-136 Result	Prepared:		198521 05/15/13 05/15/13
Field ID: Type: Lab ID:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24	93	Limits 62-136 Result	Prepared:	RL	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clo	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate	93 ND %REC	Limits 62-136 Result Limits	Prepared:	RL	198521 05/15/13 05/15/13
Field ID: Type: Lab ID:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate	93	Limits 62-136 Result	Prepared:	RL	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clo	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate	93 ND %REC	Limits 62-136 Result Limits	Prepared:	RL	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clu	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate yl	93 ND %REC	Limits 62-136 Result Limits	Prepared: Analyzed:	RL	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clu o-Terpheny Type:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate yl BLANK	93 ND %REC	Limits 62-136 Result Limits	Prepared: Analyzed: Prepared:	<b>RL</b> 1.0	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clo o-Terpheny Type: Lab ID:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate yl BLANK QC688577	93 ND %REC	Limits 62-136 Result Limits	Prepared: Analyzed:	<b>RL</b> 1.0	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clu o-Terpheny Type:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate yl BLANK	93 ND %REC	Limits 62-136 Result Limits	Prepared: Analyzed: Prepared:	<b>RL</b> 1.0	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clo o-Terpheny Type: Lab ID:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate yl BLANK QC688577 198466	93 ND %REC 97	Limits 62-136 Result Limits 62-136	Prepared: Analyzed: Prepared:	<b>RL</b> 1.0	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clo o-Terpheny Type: Lab ID:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate yl BLANK QC688577 198466 Analyte	93 ND %REC 97	Limits 62-136 Result Limits 62-136 Result	Prepared: Analyzed: Prepared:	<b>RL</b> 1.0	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clo o-Terpheny Type: Lab ID: Batch#:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate yl BLANK QC688577 198466 Analyte 0-C24	93 ND %REC 97 ND	Limits 62-136 Result Limits 62-136 Result	Prepared: Analyzed: Prepared:	RL 1.0	198521 05/15/13 05/15/13
Field ID: Type: Lab ID: Diesel Clo o-Terpheny Type: Lab ID: Batch#:	Surrogate yl MW-2@17FT SAMPLE 245203-017 Analyte 0-C24 Surrogate yl BLANK QC688577 198466 Analyte 0-C24 Surrogate	93 ND <b>%REC</b> 97	Limits 62-136 Result Limits 62-136 Result	Prepared: Analyzed: Prepared:	RL 1.0	198521 05/15/13 05/15/13

Y= Sample exhibits chromatographic pattern which does not resemble standard b= See narrative ND= Not Detected RL= Reporting Limit Page 4 of 5



		Total I	Extracta	ble Hydroc	carbons
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineer	ing Inc.	Location: Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 3550B EPA 8015B
Matrix: Units: Basis:	Soil mg/Kg as received			Diln Fac: Sampled: Received:	1.000 05/09/13 05/10/13
Type: Lab ID: Batch#:	BLANK QC688810 198521			Prepared: Analyzed:	05/15/13 05/15/13
Diesel Cl	Analyte 0-C24	NI	Result		<b>RL</b> 1.0
o-Terphen	<b>Surrogate</b> yl	% <b>REC</b> 108	<b>Limits</b> 62-136		
Type: Lab ID: Batch#:	BLANK QC690571 198943			Prepared: Analyzed:	05/25/13 05/25/13
Diesel Cl	Analyte 0-C24	NI	Result		<b>RL</b> 1.0
	Surrogate	% <b>REC</b> 97	<b>Limits</b> 62-136		



Total Extractable Hydrocarbons							
Lab #:	245203		Location:	2844 Mountain Blvd, Oakland			
Client:	SOMA Environmental E	Ingineering Inc.	Prep:	EPA 3550B			
Project#:	5082		Analysis:	EPA 8015B			
Type:	LCS		Diln Fac:	1.000			
Lab ID:	QC688578		Batch#:	198466			
Matrix:	Soil		Prepared:	05/14/13			
Units:	mg/Kg		Analyzed:	05/14/13			

Cleanup Method: EPA 3630C

Analyte		Spiked	Result	%REC	Limits
Diesel C10-C24		50.29	36.70	73	62-130
Surrogate	%REC	Limits			
o-Terphenyl	85	62-136			



# Batch QC Report

		Total Extracta	ble Hydro	carbons		
- 1 - 1	0.45.0.00					
Lab #:	245203		Location:	2	844 Mountain	Blvd, Oakland
Client:	SOMA Environmental	Engineering Inc.	Prep:	E	PA 3550B	
Project#:	5082		Analysis:	E	PA 8015B	
Type:	LCS		Diln Fac:	1	.000	
Lab ID:	QC688811		Batch#:	1	98521	
Matrix:	Soil		Prepared:	0	5/15/13	
Units:	mg/Kg		Analyzed:	0	5/15/13	
	Analyte	Spiked		Result	%REC	Limits
Diesel C10	D-C24	50.25		51.74	103	62-130

Surrogate	%REC	Limits	
o-Terphenyl	107	62-136	



			Total 1	Extracta	ble Hydrod	carbons				
Lab #:	24520	3			Location:	2844 M	ountain	Blvd, C	aklaı	nd
Client:	SOMA	Environmental	Engineer	ing Inc.	Prep:	EPA 35	50B			
Project#:	5082				Analysis:	EPA 80	15B			
Field ID:		ZZZZZZZZZZ			Batch#:	198521				
MSS Lab ID	):	245268-002			Sampled:	05/15/	13			
Matrix:		Soil			Received:	05/15/	13			
Units:		mg/Kg			Prepared:	05/15/	13			
Basis:		as received			Analyzed:	05/16/	13			
Diln Fac:		5.000			-					
Type: A Diesel C10	nalyt	MS e	MSS Res	sult 3.33	Lab ID: <b>Spiked</b> 49.74	QC6888 <b>Res</b> 9		<b>%REC</b> 97	<b>Lim</b> : 39-3	
	Surro	gate	%REC	Limits						
o-Terpheny		-	84	62-136						
Type:		MSD			Lab ID:	QC6888	13			
	Anal	yte		Spiked		Result	%REC	Limits	RPD	Lim
				49.74		100.9	106	39-148	4	45
Diesel Cl0	)-C24			17.71		100.0		07 110	-	
Diesel C10	Surro	gate	%REC	Limits					-	

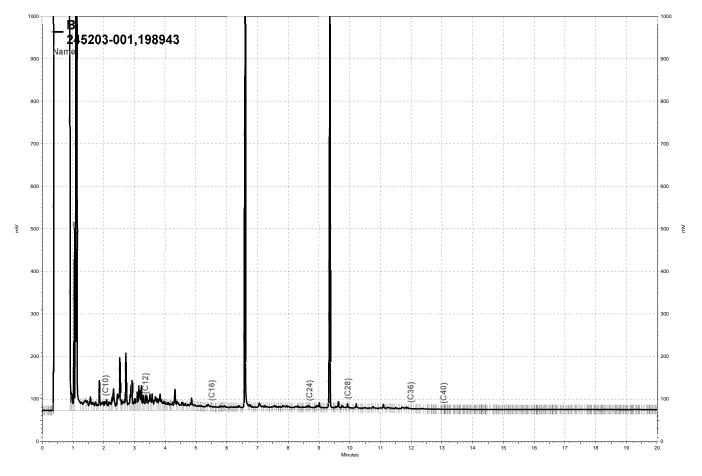


		Total Extracta	ble Hydro	carbons		
Lab #:	245203		Location:	28	344 Mountain	Blvd, Oakland
Client:	SOMA Environmental	Engineering Inc.	Prep:	EI	PA 3550B	
Project#:	5082		Analysis:	EI	PA 8015B	
Type:	LCS		Diln Fac:	1.	.000	
Lab ID:	QC690572		Batch#:	19	98943	
Matrix:	Soil		Prepared:	05	5/25/13	
Units:	mg/Kg		Analyzed:	05	5/25/13	
	Analyte	Spiked		Result	%REC	Limits
Diesel Cl(	D-C24	49.79		45.19	91	62-130

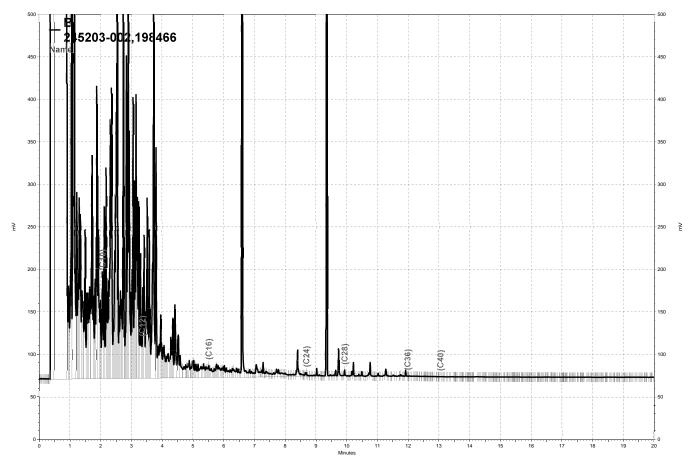
Surrogate	%REC	Limits
o-Terphenyl	98	62-136



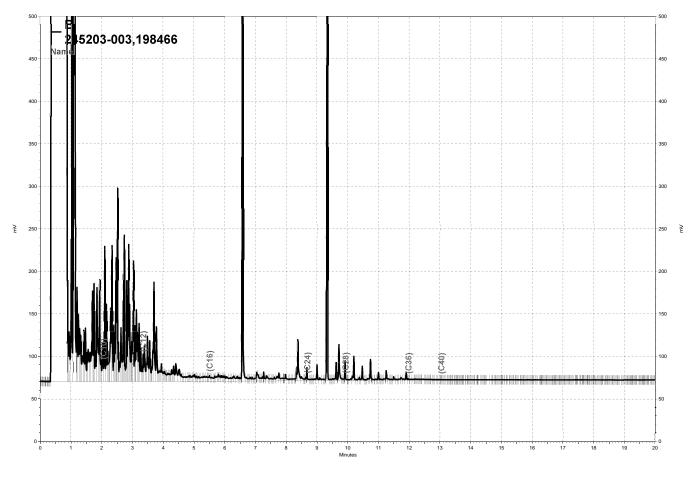
		Total Ex	tractable Hy	drocarbons				
Lab #:	245203		Locati	on: 284	4 Mountain	Blvd, C	akland	l
Client:	SOMA Environmental	Engineerir	ng Inc. Prep:	EPA	3550B			
Project#:	5082		Analys	is: EPA	8015B			
Field ID:	ZZZZZZZZZZ		Batch#	: 198	943			
MSS Lab ID	245531-003		Sample	d: 05/	23/13			
Matrix:	Soil		Receiv		23/13			
Units:	mg/Kg		Prepar	red: 05/	25/13			
Basis:	as received		Analyz		25/13			
Diln Fac:	1.000		1					
Туре:	MS		Lab II	~	90573			
A Diesel C10	nalyte -C24	MSS Resul 300.6		<b>ked</b> 9.73	Result 335.1	<b>%REC</b> 69 NM	<b>Limit</b> 39-14	
Diesel C10	-C24	300.6	5 4					
Diesel C10	Surrogate	300.6 %REC I	imits					
Diesel C10	Surrogate	300.6 %REC I	5 4					
Diesel C10 o-Terpheny	Surrogate	300.6 %REC I	imits	9.73				
Diesel C10	Surrogate	300.6 <b>%REC I</b> 104 6	<b>imits</b> 52-136	9.73	335.1			18
Diesel C10 o-Terpheny	MSD Analyte	300.6 <b>%REC I</b> 104 6	<b>.imits</b> 52-136 Lab II	9.73 9: QC6	335.1 90574	69 NM	39-14	18
Diesel C10 o-Terpheny Type: Diesel C10	MSD Analyte	300.6 <b>%REC I</b> 104 6 <b>S</b>	janits 52-136 Lab II	9.73 9: QC6 Result	335.1 90574 %REC	69 NM	39-14	18 Lim



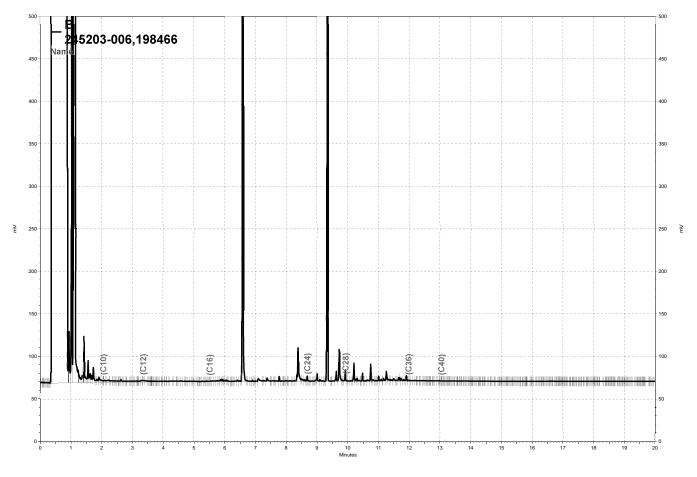
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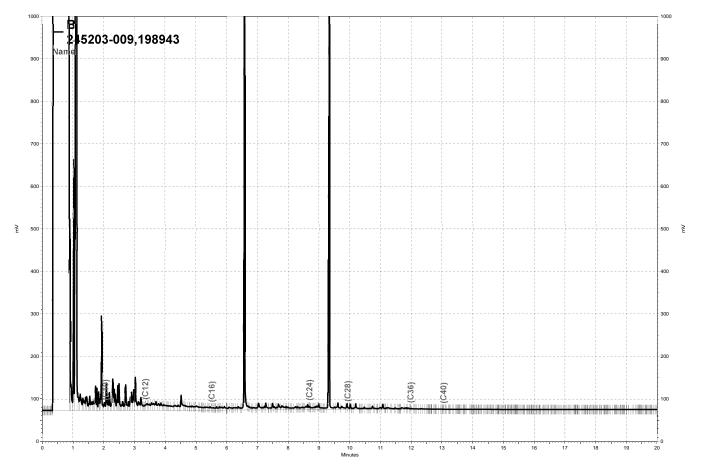
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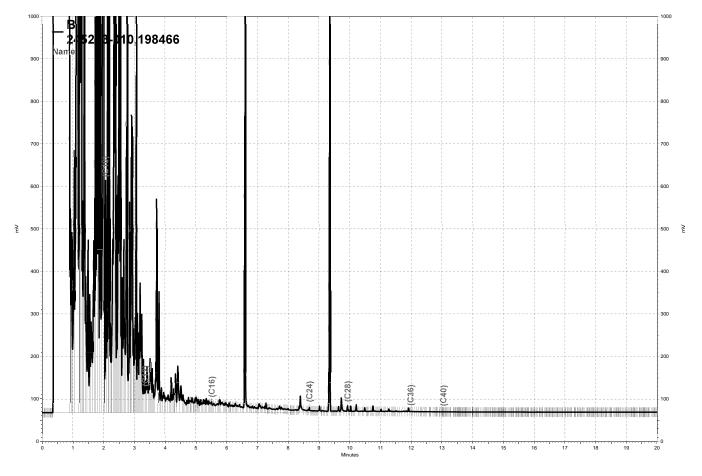
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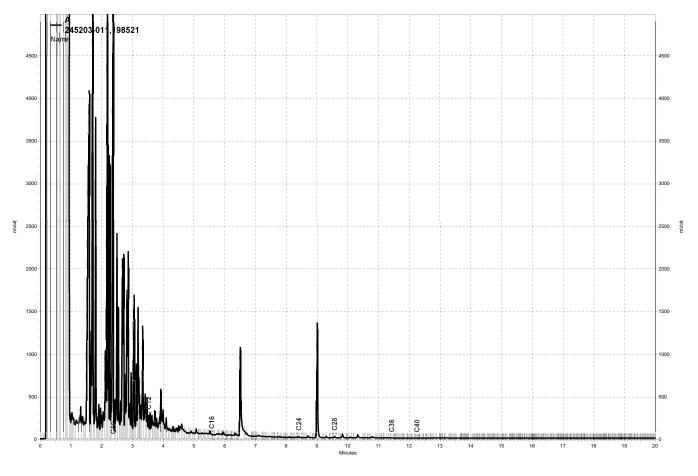
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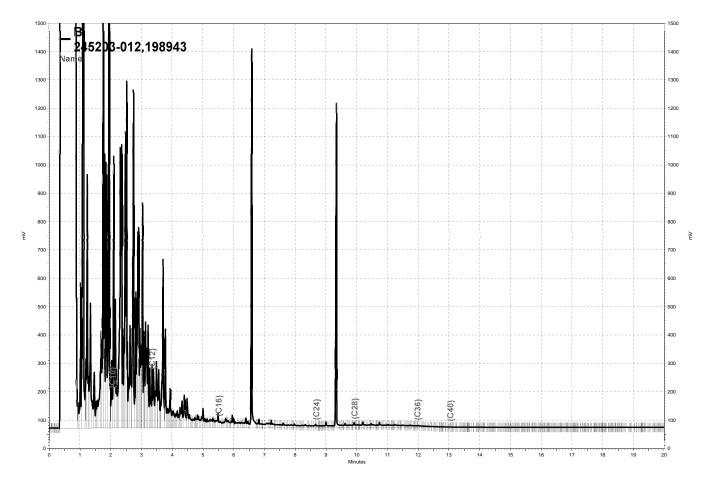
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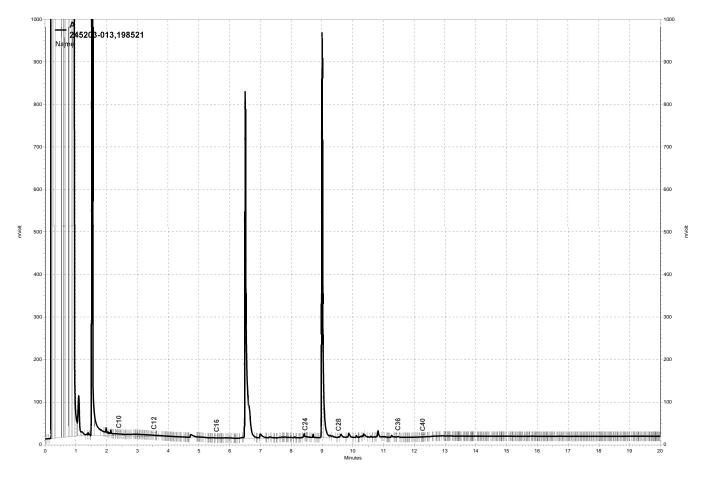
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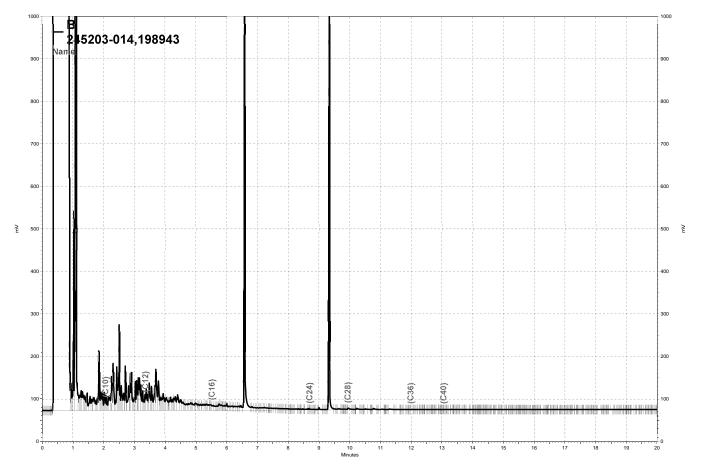
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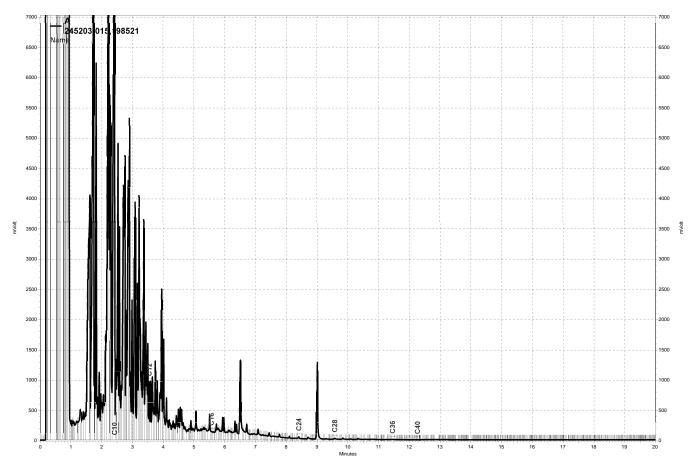
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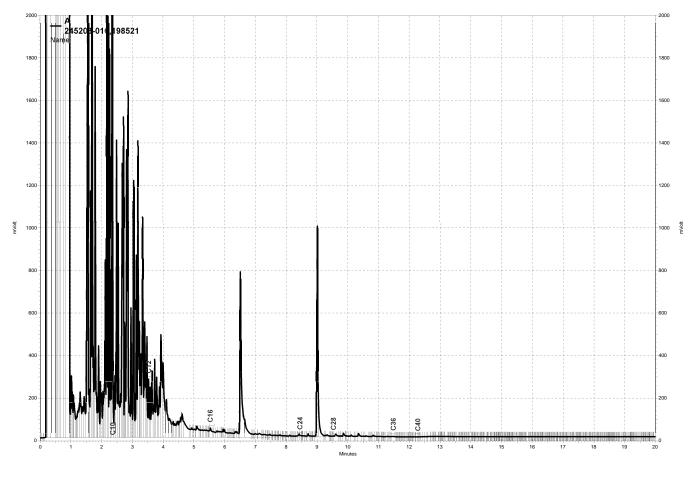
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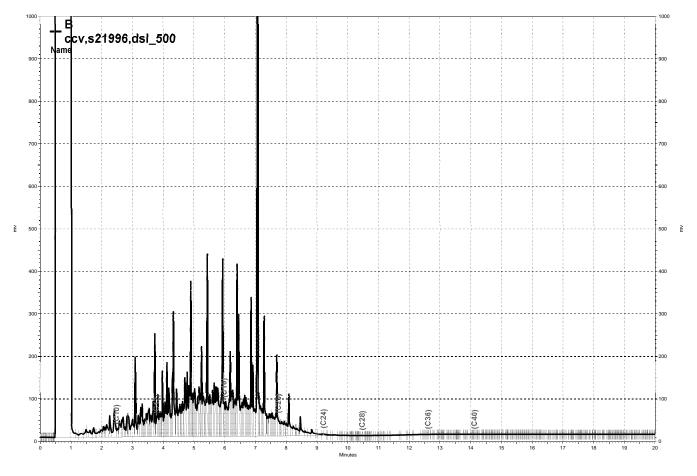
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### Purgeable Organics by GC/MS

Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	DPT-5W-1	Units:	ug/L
Lab ID:	245203-020	Sampled:	05/09/13
Matrix:	Water	Received:	05/10/13

Analyte	Result	RL	Diln Fac	Batch# Analyzed
Gasoline C7-C12	2,100	630	12.50	198504 05/15/13
tert-Butyl Alcohol (TBA)	16,000	3,300	333.3	198614 05/17/13
Isopropyl Ether (DIPE)	ND	6.3	12.50	198504 05/15/13
Ethyl tert-Butyl Ether (ETBE)	ND	6.3	12.50	198504 05/15/13
Methyl tert-Amyl Ether (TAME)	54	6.3	12.50	198504 05/15/13
Ethanol	ND	13,000	12.50	198504 05/15/13
MTBE	640	6.3	12.50	198504 05/15/13
1,2-Dichloroethane	ND	6.3	12.50	198504 05/15/13
Benzene	10	6.3	12.50	198504 05/15/13
Toluene	ND	6.3	12.50	198504 05/15/13
1,2-Dibromoethane	ND	6.3	12.50	198504 05/15/13
Ethylbenzene	23	6.3	12.50	198504 05/15/13
m,p-Xylenes	ND	6.3	12.50	198504 05/15/13
o-Xylene	ND	6.3	12.50	198504 05/15/13
Naphthalene	ND	25	12.50	198504 05/15/13

Surrogate	%REC	Limits	Diln Fac	Batch# Analyzed
Dibromofluoromethane	93	77-134	12.50	198504 05/15/13
1,2-Dichloroethane-d4	103	72-140	12.50	198504 05/15/13
Toluene-d8	101	80-120	12.50	198504 05/15/13
Bromofluorobenzene	98	80-120	12.50	198504 05/15/13



### Purgeable Organics by GC/MS

Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	DPT-5W-2	Units:	ug/L
Lab ID:	245203-021	Sampled:	05/10/13
Matrix:	Water	Received:	05/10/13

Analyte	Result	RL	Diln Fac	Batch# Analyzed
Gasoline C7-C12	ND	2,000	40.00	198504 05/15/13
tert-Butyl Alcohol (TBA)	59,000	10,000	1,000	198614 05/17/13
Isopropyl Ether (DIPE)	ND	20	40.00	198504 05/15/13
Ethyl tert-Butyl Ether (ETBE)	ND	20	40.00	198504 05/15/13
Methyl tert-Amyl Ether (TAME)	2,200	20	40.00	198504 05/15/13
Ethanol	ND	40,000	40.00	198504 05/15/13
MTBE	40,000	500	1,000	198614 05/17/13
1,2-Dichloroethane	ND	20	40.00	198504 05/15/13
Benzene	ND	20	40.00	198504 05/15/13
Toluene	ND	20	40.00	198504 05/15/13
1,2-Dibromoethane	ND	20	40.00	198504 05/15/13
Ethylbenzene	ND	20	40.00	198504 05/15/13
m,p-Xylenes	ND	20	40.00	198504 05/15/13
o-Xylene	ND	20	40.00	198504 05/15/13
Naphthalene	ND	80	40.00	198504 05/15/13

Surrogate	%REC	Surrogate	Limits	Diln Fac	Batch# Analyzed
Dibromofluoromethane	95	Dibromofluoromethane	77-134	40.00	198504 05/15/13
1,2-Dichloroethane-d4	102	1,2-Dichloroethane-d4	72-140	40.00	198504 05/15/13
Toluene-d8	103	Toluene-d8	80-120	40.00	198504 05/15/13
Bromofluorobenzene	94	Bromofluorobenzene	80-120	40.00	198504 05/15/13



#### Purgeable Organics by GC/MS

Lab #:	245203		Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental	Engineering Inc.	Prep:	EPA 5030B
Project#:	5082		Analysis:	EPA 8260B
Field ID:	DPT-5W-3		Batch#:	198504
Lab ID:	245203-022		Sampled:	05/09/13
Matrix:	Water		Received:	05/10/13
Units:	ug/L		Analyzed:	05/15/13
Diln Fac:	1.000			

Analyte	Result	RL	
Gasoline C7-C12	ND	50	
tert-Butyl Alcohol (TBA)	ND	10	
Isopropyl Ether (DIPE)	ND	0.50	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	
Methyl tert-Amyl Ether (TAME)	ND	0.50	
Ethanol	ND	1,000	
MTBE	2.8	0.50	
1,2-Dichloroethane	ND	0.50	
Benzene	ND	0.50	
Toluene	ND	0.50	
1,2-Dibromoethane	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylenes	ND	0.50	
o-Xylene	ND	0.50	
Naphthalene	ND	2.0	

Surrogate	%REC	Limits
Dibromofluoromethane	93	77-134
1,2-Dichloroethane-d4	104	72-140
Toluene-d8	102	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected RL= Reporting Limit Page 1 of 1



		Purgeable Org	anics by GC/MS	
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineering Inc.	Location: Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B
Matrix: Units: Diln Fac:	Water ug/L 1.000		Batch#: Analyzed:	198504 05/15/13

Type: BS			Lab ID:	QC68	8749	
Analyte		Spiked		Result	%REC	Limits
tert-Butyl Alcohol (TBA)		125.0		103.9	83	37-144
Isopropyl Ether (DIPE)		25.00		22.87	91	52-123
Ethyl tert-Butyl Ether (ETBE)		25.00		22.77	91	57-120
Methyl tert-Amyl Ether (TAME)		25.00		24.94	100	59-120
MTBE		25.00		23.17	93	58-120
1,2-Dichloroethane		25.00		28.71	115	73-136
Benzene		25.00		26.19	105	78-125
Toluene		25.00		25.63	103	79-123
1,2-Dibromoethane		25.00		25.18	101	78-120
Ethylbenzene		25.00		26.62	106	80-126
m,p-Xylenes		50.00		51.66	103	80-123
o-Xylene		25.00		24.14	97	75-120
Napĥthalene		25.00		26.04	104	56-136
Surrogate	%REC	Limits				
Dibromofluoromethane	94	77-134				
1,2-Dichloroethane-d4	113	72-140				
Toluene-d8	99	80-120				
Bromofluorobenzene	97	80-120				

Type: BSD			Lab ID:	QC6	88750			
Analyte		Spiked		Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		125.0		98.39	79	37-144	5	31
Isopropyl Ether (DIPE)		25.00		22.12	88	52-123	3	20
Ethyl tert-Butyl Ether (ETBE)		25.00		22.42	90	57-120	2	23
Methyl tert-Amyl Ether (TAME)		25.00		23.92	96	59-120	4	22
MTBE		25.00		22.53	90	58-120	3	23
1,2-Dichloroethane		25.00		27.16	109	73-136	6	20
Benzene		25.00		25.22	101	78-125	4	20
Toluene		25.00		25.35	101	79-123	1	20
1,2-Dibromoethane		25.00		24.89	100	78-120	1	20
Ethylbenzene		25.00		26.26	105	80-126	1	20
m,p-Xylenes		50.00		51.44	103	80-123	0	20
o-Xylene		25.00		24.01	96	75-120	1	20
Naphthalene		25.00		24.73	99	56-136	5	20
Surrogate	%REC	Limits						
Dibromofluoromethane	95	77-134						
1,2-Dichloroethane-d4	109	72-140						
Toluene-d8	102	80-120						
Bromofluorobenzene	96	80-120						



	Purgeable Org	ganics by GC/MS	
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC688751	Batch#:	198504
Matrix:	Water	Analyzed:	05/15/13
Units:	ug/L		

Analyte	Result	RL	
Gasoline C7-C12	ND	50	
tert-Butyl Alcohol (TBA)	ND	10	
Isopropyl Ether (DIPE)	ND	0.50	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	
Methyl tert-Amyl Ether (TAME)	ND	0.50	
Ethanol	ND	1,000	
MTBE	ND	0.50	
1,2-Dichloroethane	ND	0.50	
Benzene	ND	0.50	
Toluene	ND	0.50	
1,2-Dibromoethane	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylenes	ND	0.50	
o-Xylene	ND	0.50	
Naphthalene	ND	2.0	

Surrogate	%REC	Limits
Dibromofluoromethane	92	77-134
1,2-Dichloroethane-d4	103	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	99	80-120



		Purgeable Org	anics by GC/MS	
Lab #:	245203		Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental	Engineering Inc.	Prep:	EPA 5030B
Project#:	5082		Analysis:	EPA 8260B
Matrix:	Water		Batch#:	198504
Units:	ug/L		Analyzed:	05/15/13
Diln Fac:	1.000			

Type: BS			Lab ID:	QC68	88757			
Analyte		Spiked		Result	%REC	Limits		
Gasoline C7-C12		1,000		944.1	94	80-120		
Naphthalene			NA					
Surrogate	%REC	Limits						
Dibromofluoromethane	93	77-134						
1,2-Dichloroethane-d4	114	72-140						
Toluene-d8	102	80-120						
Bromofluorobenzene	98	80-120						
Type: BSD			Lab ID:	QC68	88758			
Analyte		Spiked		Result	%REC	Limits	RPD	Lim
Gasoline C7-C12		1,000		926.1	93	80-120	2	20
Naphthalene			NA					

Surrogate	%REC	Limits
Dibromofluoromethane	95	77-134
1,2-Dichloroethane-d4	114	72-140
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-120

NA= Not Analyzed RPD= Relative Percent Difference Page 1 of 1



		Purgeable Org	anics by GC/MS	
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineering Inc.	Location: Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B
Matrix: Units: Diln Fac:	Water ug/L 1.000		Batch#: Analyzed:	198614 05/17/13

Type: BS			Lab ID:	QC6	589192	
Analyte	C.	Spiked		Result	%REC	Limits
tert-Butyl Alcohol (TBA)		125.0		109.3	87	37-144
Isopropyl Ether (DIPE)		25.00		22.17	89	52-123
Ethyl tert-Butyl Ether (ETBE)		25.00		22.79	91	57-120
Methyl tert-Amyl Ether (TAME)		25.00		24.75	99	59-120
MTBE		25.00		24.39	98	58-120
1,2-Dichloroethane		25.00		26.08	104	73-136
Benzene		25.00		27.87	111	78-125
Toluene		25.00		29.34	117	79-123
1,2-Dibromoethane		25.00		27.77	111	78-120
Ethylbenzene		25.00		29.64	119	80-126
m,p-Xylenes		50.00		57.68	115	80-123
o-Xylene		25.00		27.60	110	75-120
Naphthalene		25.00		26.93	108	56-136
Surrogate	%REC	Limits				
Dibromofluoromethane	89	77-134				
1,2-Dichloroethane-d4	90	72-140				
Toluene-d8	97	80-120				
Bromofluorobenzene	92	80-120				

Type: BSD			Lab ID:	Q	2689193			
Analyte	1	Spiked		Result	%RE	C Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		125.0		103.5	83	37-144	5	31
Isopropyl Ether (DIPE)		25.00		19.23	77	52-123	14	20
Ethyl tert-Butyl Ether (ETBE)		25.00		20.08	80	57-120	13	23
Methyl tert-Amyl Ether (TAME)		25.00		22.99	92	59-120	7	22
MTBE		25.00		22.06	88	58-120	10	23
1,2-Dichloroethane		25.00		22.72	91	73-136	14	20
Benzene		25.00		25.27	101	78-125	10	20
Toluene		25.00		26.50	106	79-123	10	20
1,2-Dibromoethane		25.00		26.21	105	78-120	6	20
Ethylbenzene		25.00		27.23	109	80-126	8	20
m,p-Xylenes		50.00		54.31	109	80-123	6	20
o-Xylene		25.00		26.12	104	75-120	6	20
Naphthalene		25.00		25.72	103	56-136	5	20
	•							
Surrogate	%REC	Limits						
Dibromofluoromethane	89	77-134						
1,2-Dichloroethane-d4	92	72-140						
Toluene-d8	101	80-120						
Bromofluorobenzene	94	80-120						



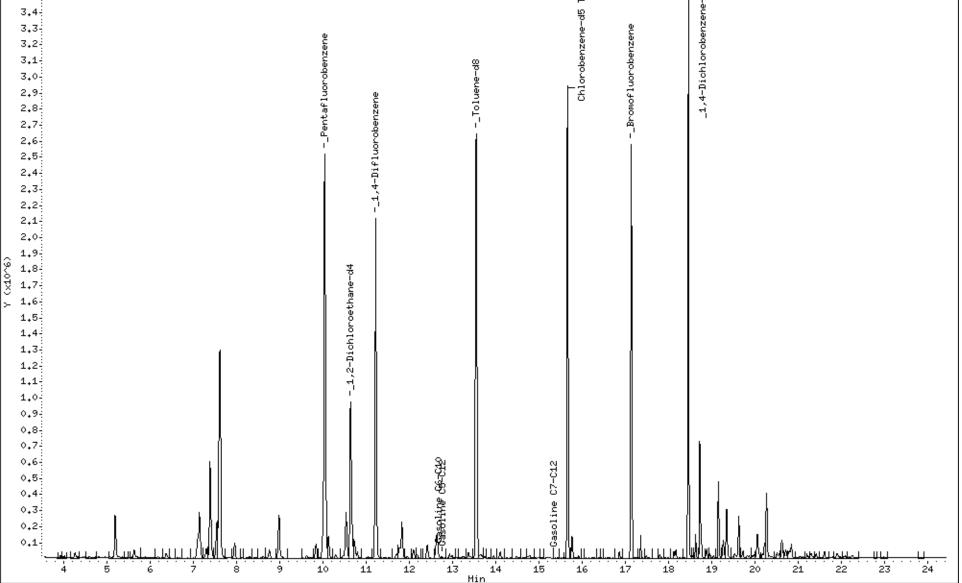
	Purgeable Org	ganics by GC/MS	
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC689194	Batch#:	198614
Matrix:	Water	Analyzed:	05/17/13
Units:	ug/L		

Analyte	Result	RL	
Gasoline C7-C12	NA		
tert-Butyl Alcohol (TBA)	ND	10	
Isopropyl Ether (DIPE)	ND	0.50	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	
Methyl tert-Amyl Ether (TAME)	ND	0.50	
Ethanol	ND	1,000	
MTBE	ND	0.50	
1,2-Dichloroethane	ND	0.50	
Benzene	ND	0.50	
Toluene	ND	0.50	
1,2-Dibromoethane	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylenes	ND	0.50	
o-Xylene	ND	0.50	
Naphthalene	ND	2.0	

Surrogate	%REC	Limits
Dibromofluoromethane	89	77-134
1,2-Dichloroethane-d4	94	72-140
Toluene-d8	100	80-120
Bromofluorobenzene	94	80-120

NA= Not Analyzed ND= Not Detected RL= Reporting Limit Page 1 of 1

Data File: \\Gcmsserver\DD\chem\MSVOA08.i\051513.b\HEF15TVH.D Date : 15-MAY-2013 16:15 Client ID: DYNA P&T Instrument: MSVOA08.i Sample Info: S,245203-020 Operator: VOC Column phase: Column diameter: 2.00 \\Gcmsserver\DD\chem\MSVOA08.i\051513.b\HEF15TVH.D Ξ Å 3.5-3.4-សិ 3,34 3,2-



Page 2

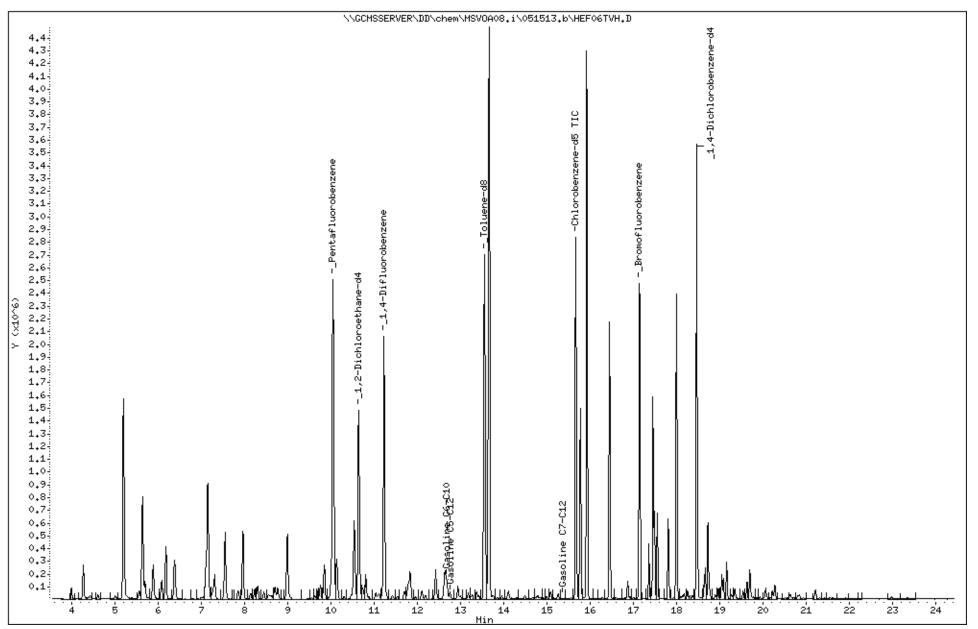
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Data File: \\GCMSSERVER\DD\chem\MSVOA08.i\051513.b\HEF06TVH.D
Date : 15-MAY-2013 10:46
Client ID: DYNA P&T
Sample Info: CCV/BS,QC688757,198504,S22314,.02/200

Instrument: MSV0A08.i

#### Operator: VOC

#### Column diameter: 2.00



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Column phase:



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	DPT-5@4FT	Basis:	as received
Lab ID:	245203-001	Diln Fac:	50.00
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13

Analyte	Result	RL	Batch# Analyzed
tert-Butyl Alcohol (TBA)	ND b	5,000	198945 05/25/13
MTBE	2,600 b	250	198951 05/26/13
Isopropyl Ether (DIPE)	ND b	250	198951 05/26/13
Ethyl tert-Butyl Ether (ETBE)	ND b	250	198951 05/26/13
1,2-Dichloroethane	ND b	250	198951 05/26/13
Benzene	ND b	250	198951 05/26/13
Methyl tert-Amyl Ether (TAME)	1,000 b	250	198951 05/26/13
Ethanol	ND b	50,000	198951 05/26/13
Toluene	ND b	250	198951 05/26/13
1,2-Dibromoethane	ND b	250	198951 05/26/13
Ethylbenzene	ND b	250	198951 05/26/13
m,p-Xylenes	ND b	250	198951 05/26/13
o-Xylene	ND b	250	198951 05/26/13
Naphthalene	ND b	250	198951 05/26/13

Surrogate	%REC	Limits	Batch# Analyzed
Dibromofluoromethane	101 b	80-124	198951 05/26/13
1,2-Dichloroethane-d4	101 b	80-137	198951 05/26/13
Toluene-d8	97 b	80-120	198951 05/26/13
Bromofluorobenzene	89 b	79-127	198951 05/26/13
Trifluorotoluene (MeOH)	109 b	46-140	198951 05/26/13

b= See narrative
ND= Not Detected
RL= Reporting Limit
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Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	DPT-5@10FT	Diln Fac:	50.00
Lab ID:	245203-002	Batch#:	198577
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/16/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	5,000	
MTBE	1,500	250	
Isopropyl Ether (DIPE)	ND	250	
Ethyl tert-Butyl Ether (ETBE)	ND	250	
1,2-Dichloroethane	ND	250	
Benzene	ND	250	
Methyl tert-Amyl Ether (TAME)	ND	250	
Ethanol	ND	50,000	
Toluene	ND	250	
1,2-Dibromoethane	ND	250	
Ethylbenzene	770	250	
m,p-Xylenes	ND	250	
o-Xylene	ND	250	
Naphthalene	1,400	250	

Surrogate	%REC	Limits	
Dibromofluoromethane	101	80-124	
1,2-Dichloroethane-d4	100	80-137	
Toluene-d8	108	80-120	
Bromofluorobenzene	103	79-127	
Trifluorotoluene (MeOH)	100	46-140	



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	DPT-5@12FT	Diln Fac:	50.00
Lab ID:	245203-003	Batch#:	198634
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/18/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	5,000	
MTBE	3,100	250	
Isopropyl Ether (DIPE)	ND	250	
Ethyl tert-Butyl Ether (ETBE)	ND	250	
1,2-Dichloroethane	ND	250	
Benzene	ND	250	
Methyl tert-Amyl Ether (TAME)	360	250	
Ethanol	ND	50,000	
Toluene	ND	250	
1,2-Dibromoethane	ND	250	
Ethylbenzene	870	250	
m,p-Xylenes	530	250	
o-Xylene	ND	250	
Naphthalene	580	250	

Surrogate	%REC	Limits
Dibromofluoromethane	90	80-124
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	81	79-127
Trifluorotoluene (MeOH)	114	46-140



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	DPT-5@15FT	Batch#:	198577
Lab ID:	245203-004	Sampled:	05/09/13
Matrix:	Soil	Received:	05/10/13
Units:	ug/Kg	Analyzed:	05/16/13
Basis:	as received		

Analyte	Result	RL	Diln Fac	
tert-Butyl Alcohol (TBA)	9,100	960	9.615	
MTBE	73	25	5.000	
Isopropyl Ether (DIPE)	ND	25	5.000	
Ethyl tert-Butyl Ether (ETBE)	ND	25	5.000	
1,2-Dichloroethane	ND	25	5.000	
Benzene	ND	25	5.000	
Methyl tert-Amyl Ether (TAME)	ND	25	5.000	
Ethanol	ND	5,000	5.000	
Toluene	ND	25	5.000	
1,2-Dibromoethane	ND	25	5.000	
Ethylbenzene	ND	25	5.000	
m,p-Xylenes	ND	25	5.000	
o-Xylene	ND	25	5.000	
Naphthalene	ND	48	9.615	

Surrogate	%REC	Limits	Diln Fac
Dibromofluoromethane	108	80-124	5.000
1,2-Dichloroethane-d4	103	80-137	5.000
Toluene-d8	105	80-120	5.000
Bromofluorobenzene	97	79-127	9.615



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	DPT-5@30FT	Diln Fac:	0.9434
Lab ID:	245203-006	Batch#:	198559
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/16/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	94	
MTBE	6.3	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Ethanol	ND	940	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	
Naphthalene	ND	4.7	

Surrogate	%REC	Limits	
Dibromofluoromethane	119	80-124	
1,2-Dichloroethane-d4	113	80-137	
Toluene-d8	101	80-120	
Bromofluorobenzene	104	79-127	



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	DPT-5@50FT	Diln Fac:	0.9804
Lab ID:	245203-008	Batch#:	198415
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/13/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Ethanol	ND	980	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	
Naphthalene	ND	4.9	

Surrogate	%REC	Limits	
Dibromofluoromethane	105	80-124	
1,2-Dichloroethane-d4	107	80-137	
Toluene-d8	96	80-120	
Bromofluorobenzene	98	79-127	



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-1@5FT	Diln Fac:	50.00
Lab ID:	245203-009	Batch#:	198970
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/27/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	6,200 b	5,000	
MTBE	7,600 b	250	
Isopropyl Ether (DIPE)	ND b	250	
Ethyl tert-Butyl Ether (ETBE)	ND b	250	
1,2-Dichloroethane	ND b	250	
Benzene	ND b	250	
Methyl tert-Amyl Ether (TAME)	450 b	250	
Ethanol	ND b	50,000	
Toluene	ND b	250	
1,2-Dibromoethane	ND b	250	
Ethylbenzene	ND b	250	
m,p-Xylenes	ND b	250	
o-Xylene	ND b	250	
Naphthalene	ND b	250	

Surrogate	%REC	Limits	
Dibromofluoromethane	106 b	80-124	
1,2-Dichloroethane-d4	109 b	80-137	
Toluene-d8	109 b	80-120	
Bromofluorobenzene	87 b	79-127	
Trifluorotoluene (MeOH)	111 b	46-140	

b= See narrative
ND= Not Detected
RL= Reporting Limit
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Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-1@10FT	Basis:	as received
Lab ID:	245203-010	Sampled:	05/09/13
Matrix:	Soil	Received:	05/10/13

Analyte	Result	RL	Diln Fac	Batch# Analyzed
tert-Butyl Alcohol (TBA)	ND	20,000	200.0	198509 05/15/13
MTBE	14,000	1,000	200.0	198509 05/15/13
Isopropyl Ether (DIPE)	ND	1,000	200.0	198509 05/15/13
Ethyl tert-Butyl Ether (ETBE)	ND	1,000	200.0	198509 05/15/13
1,2-Dichloroethane	ND	1,000	200.0	198509 05/15/13
Benzene	ND	1,000	200.0	198509 05/15/13
Methyl tert-Amyl Ether (TAME)	2,100	1,000	200.0	198509 05/15/13
Ethanol	ND	200,000	200.0	198509 05/15/13
Toluene	ND	1,000	200.0	198509 05/15/13
1,2-Dibromoethane	ND	1,000	200.0	198509 05/15/13
Ethylbenzene	22,000	1,000	200.0	198509 05/15/13
m,p-Xylenes	92,000	2,000	400.0	198577 05/16/13
o-Xylene	16,000	1,000	200.0	198509 05/15/13
Naphthalene	5,200	1,000	200.0	198509 05/15/13

Surrogate	%REC	Limits	Diln Fac	Batch# Analyzed
Dibromofluoromethane	90	80-124	200.0	198509 05/15/13
1,2-Dichloroethane-d4	89	80-137	200.0	198509 05/15/13
Toluene-d8	96	80-120	200.0	198509 05/15/13
Bromofluorobenzene	95	79-127	200.0	198509 05/15/13
Trifluorotoluene (MeOH)	99	46-140	200.0	198509 05/15/13

ND= Not Detected RL= Reporting Limit Page 1 of 1



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-1@12FT	Diln Fac:	400.0
Lab ID:	245203-011	Batch#:	198509
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/15/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	40,000	
MTBE	7,700	2,000	
Isopropyl Ether (DIPE)	ND	2,000	
Ethyl tert-Butyl Ether (ETBE)	ND	2,000	
1,2-Dichloroethane	ND	2,000	
Benzene	ND	2,000	
Methyl tert-Amyl Ether (TAME)	ND	2,000	
Ethanol	ND	400,000	
Toluene	5,600	2,000	
1,2-Dibromoethane	ND	2,000	
Ethylbenzene	19,000	2,000	
m,p-Xylenes	89,000	2,000	
o-Xylene	35,000	2,000	
Naphthalene	5,300	2,000	

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-124
1,2-Dichloroethane-d4	88	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	96	79–127
Trifluorotoluene (MeOH)	96	46-140



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-1@15FT	Diln Fac:	100.0
Lab ID:	245203-012	Sampled:	05/09/13
Matrix:	Soil	Received:	05/10/13
Units:	ug/Kg	Analyzed:	05/26/13
Basis:	as received		

Analyte	Result	RL	Batch#	
tert-Butyl Alcohol (TBA)	ND b	10,000	198945	
MTBE	3,700 b	500	198951	
Isopropyl Ether (DIPE)	ND b	500	198951	
Ethyl tert-Butyl Ether (ETBE)	ND b	500	198951	
1,2-Dichloroethane	ND b	500	198951	
Benzene	ND b	500	198951	
Methyl tert-Amyl Ether (TAME)	ND b	500	198951	
Ethanol	ND b	100,000	198951	
Toluene	1,700 b	500	198951	
1,2-Dibromoethane	ND b	500	198951	
Ethylbenzene	6,800 b	500	198951	
m,p-Xylenes	30,000 b	500	198951	
o-Xylene	12,000 b	500	198951	
Naphthalene	3,200 b	500	198951	

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	105 b	80-124	198951
1,2-Dichloroethane-d4	99 b	80-137	198951
Toluene-d8	98 b	80-120	198951
Bromofluorobenzene	90 b	79-127	198951
Trifluorotoluene (MeOH)	111 b	46-140	198951

b= See narrative
ND= Not Detected
RL= Reporting Limit
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Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-1@25FT	Diln Fac:	100.0
Lab ID:	245203-013	Batch#:	198577
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/16/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	10,000	
MTBE	11,000	500	
Isopropyl Ether (DIPE)	ND	500	
Ethyl tert-Butyl Ether (ETBE)	ND	500	
1,2-Dichloroethane	ND	500	
Benzene	ND	500	
Methyl tert-Amyl Ether (TAME)	600	500	
Ethanol	ND	100,000	
Toluene	ND	500	
1,2-Dibromoethane	ND	500	
Ethylbenzene	ND	500	
m,p-Xylenes	ND	500	
o-Xylene	ND	500	
Naphthalene	ND	500	

Surrogate	%REC	Limits
Dibromofluoromethane	82	80-124
1,2-Dichloroethane-d4	82	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	102	79-127
Trifluorotoluene (MeOH)	97	46-140



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-2@7FT	Basis:	as received
Lab ID:	245203-014	Diln Fac:	50.00
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13

Analyte	Result	RL	Batch# Analyzed
tert-Butyl Alcohol (TBA)	ND b	5,000	198945 05/25/13
MTBE	390 b	250	198951 05/26/13
Isopropyl Ether (DIPE)	ND b	250	198951 05/26/13
Ethyl tert-Butyl Ether (ETBE)	ND b	250	198951 05/26/13
1,2-Dichloroethane	ND b	250	198951 05/26/13
Benzene	ND b	250	198951 05/26/13
Methyl tert-Amyl Ether (TAME)	ND b	250	198951 05/26/13
Ethanol	ND b	50,000	198951 05/26/13
Toluene	ND b	250	198951 05/26/13
1,2-Dibromoethane	ND b	250	198951 05/26/13
Ethylbenzene	ND b	250	198951 05/26/13
m,p-Xylenes	ND b	250	198951 05/26/13
o-Xylene	ND b	250	198951 05/26/13
Naphthalene	ND b	250	198951 05/26/13

Surrogate	%REC	Limits	Batch# Analyzed
Dibromofluoromethane	104 b	80-124	198951 05/26/13
1,2-Dichloroethane-d4	100 b	80-137	198951 05/26/13
Toluene-d8	98 b	80-120	198951 05/26/13
Bromofluorobenzene	90 b	79-127	198951 05/26/13
Trifluorotoluene (MeOH)	104 b	46-140	198951 05/26/13

b= See narrative
ND= Not Detected
RL= Reporting Limit
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Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-2@10FT	Diln Fac:	250.0
Lab ID:	245203-015	Batch#:	198577
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/16/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	25,000	
MTBE	14,000	1,300	
Isopropyl Ether (DIPE)	ND	1,300	
Ethyl tert-Butyl Ether (ETBE)	ND	1,300	
1,2-Dichloroethane	ND	1,300	
Benzene	ND	1,300	
Methyl tert-Amyl Ether (TAME)	3,000	1,300	
Ethanol	ND	250,000	
Toluene	ND	1,300	
1,2-Dibromoethane	ND	1,300	
Ethylbenzene	18,000	1,300	
m,p-Xylenes	63,000	1,300	
o-Xylene	1,500	1,300	
Naphthalene	5,900	1,300	

Surrogate	%REC	Limits
Dibromofluoromethane	89	80-124
1,2-Dichloroethane-d4	84	80-137
Toluene-d8	93	80-120
Bromofluorobenzene	93	79-127
Trifluorotoluene (MeOH)	92	46-140



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-2@12FT	Diln Fac:	200.0
Lab ID:	245203-016	Batch#:	198577
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/16/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	20,000	
MTBE	27,000	1,000	
Isopropyl Ether (DIPE)	ND	1,000	
Ethyl tert-Butyl Ether (ETBE)	ND	1,000	
1,2-Dichloroethane	ND	1,000	
Benzene	ND	1,000	
Methyl tert-Amyl Ether (TAME)	4,800	1,000	
Ethanol	ND	200,000	
Toluene	ND	1,000	
1,2-Dibromoethane	ND	1,000	
Ethylbenzene	5,000	1,000	
m,p-Xylenes	20,000	1,000	
o-Xylene	7,000	1,000	
Naphthalene	2,400	1,000	

Surrogate	%REC	Limits
Dibromofluoromethane	81	80-124
1,2-Dichloroethane-d4	90	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	101	79-127
Trifluorotoluene (MeOH)	97	46-140



Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-2@17FT	Diln Fac:	50.00
Lab ID:	245203-017	Batch#:	198634
Matrix:	Soil	Sampled:	05/09/13
Units:	ug/Kg	Received:	05/10/13
Basis:	as received	Analyzed:	05/18/13

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	14,000	5,000	
MTBE	2,200	250	
Isopropyl Ether (DIPE)	ND	250	
Ethyl tert-Butyl Ether (ETBE)	ND	250	
1,2-Dichloroethane	ND	250	
Benzene	ND	250	
Methyl tert-Amyl Ether (TAME)	ND	250	
Ethanol	ND	50,000	
Toluene	ND	250	
1,2-Dibromoethane	ND	250	
Ethylbenzene	ND	250	
m,p-Xylenes	ND	250	
o-Xylene	ND	250	
Naphthalene	ND	250	

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-124
1,2-Dichloroethane-d4	109	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	83	79-127
Trifluorotoluene (MeOH)	121	46-140



	BTXE & Oxygenates									
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineering Ir	Location: nc. Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B						
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000		Batch#: Analyzed:	198415 05/13/13						

Type: BS			Lab ID:	QC6	88363	
Analyte		Spiked		Result	%REC	Limits
tert-Butyl Alcohol (TBA)		125.0		123.7	99	53-141
MTBE		25.00		22.73	91	65-121
Isopropyl Ether (DIPE)		25.00		21.34	85	57-122
Ethyl tert-Butyl Ether (ETBE)		25.00		21.74	87	62-121
1,2-Dichloroethane		25.00		24.75	99	74-133
Benzene		25.00		25.17	101	77-126
Methyl tert-Amyl Ether (TAME)		25.00		23.80	95	66-120
Toluene		25.00		23.80	95	76-124
1,2-Dibromoethane		25.00		24.67	99	78-120
Ethylbenzene		25.00		25.42	102	76-127
m,p-Xylenes		50.00		50.39	101	74-126
o-Xylene		25.00		23.70	95	70-120
Naphthalene		25.00		25.61	102	70-124
Surrogate	%REC	Limits				
Dibromofluoromethane	99	80-124				
1,2-Dichloroethane-d4	102	80-137				
Toluene-d8	91	80-120				
Bromofluorobenzene	93	79-127				

Type: BSD			Lab ID:	QC6	88364			
Analyte		Spiked		Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		125.0		120.5	96	53-141	3	34
MTBE		25.00		22.23	89	65-121	2	22
Isopropyl Ether (DIPE)		25.00		21.40	86	57-122	0	26
Ethyl tert-Butyl Ether (ETBE)		25.00		21.51	86	62-121	1	28
1,2-Dichloroethane		25.00		24.31	97	74-133	2	23
Benzene		25.00		23.73	95	77-126	б	20
Methyl tert-Amyl Ether (TAME)		25.00		21.34	85	66-120	11	24
Toluene		25.00		23.24	93	76-124	2	26
1,2-Dibromoethane		25.00		26.41	106	78-120	7	20
Ethylbenzene		25.00		25.48	102	76-127	0	24
m,p-Xylenes		50.00		50.82	102	74-126	1	24
o-Xylene		25.00		24.47	98	70-120	3	22
Naphthalene		25.00		25.66	103	70-124	0	23
decome me h e	0.580	T						
Surrogate	%REC	Limits						
Dibromofluoromethane	101	80-124						
1,2-Dichloroethane-d4	100	80-137						

%REC	limits	
101	30-124	
100	30-137	
96	30-120	
95	79-127	
	101 8 100 8 96 8	101 80-124 100 80-137 96 80-120



BTXE & Oxygenates						
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland			
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B			
Project#:	5082	Analysis:	EPA 8260B			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC688365	Batch#:	198415			
Matrix:	Soil	Analyzed:	05/13/13			
Units:	ug/Kg					

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Ethanol	ND	1,000	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Naphthalene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-124
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	91	79–127



BTXE & Oxygenates						
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland			
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B			
Project#:	5082	Analysis:	EPA 8260B			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC688769	Batch#:	198509			
Matrix:	Soil	Analyzed:	05/15/13			
Units:	ug/Kg					

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Ethanol	ND	1,000	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Naphthalene	ND	5.0	

Surrogate	%REC	Limits	
Dibromofluoromethane	81	80-124	
1,2-Dichloroethane-d4	93	80-137	
Toluene-d8	100	80-120	
Bromofluorobenzene	110	79-127	



	BTX	E & Oxygena	ates	
Project#:	245203 SOMA Environmental Engineering 5082	Analy	EPA 5030B sis: EPA 8260B	, Oakland
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000	Batch Analy		

Type: BS			Lab ID:	QCE	588770	
Analyte	S	piked		Result	%REC	Limits
tert-Butyl Alcohol (TBA)		100.0		106.2	106	53-141
MTBE		20.00		19.08	95	65-121
Isopropyl Ether (DIPE)		20.00		14.51	73	57-122
Ethyl tert-Butyl Ether (ETBE)		20.00		17.58	88	62-121
1,2-Dichloroethane		20.00		18.27	91	74-133
Benzene		20.00		16.54	83	77-126
Methyl tert-Amyl Ether (TAME)		20.00		19.73	99	66-120
Toluene		20.00		17.86	89	76-124
1,2-Dibromoethane		20.00		21.72	109	78-120
Ethylbenzene		20.00		19.60	98	76-127
m,p-Xylenes		40.00		37.06	93	74-126
o-Xylene		20.00		19.17	96	70-120
Naphthalene		20.00		23.48	117	70-124
Surrogate	%REC	Limits				
Dibromofluoromethane	94	80-124				
1,2-Dichloroethane-d4	92	80-137				
Toluene-d8	96	80-120				
Bromofluorobenzene	99	79-127				

Type: BSD			Lab ID:	QC68	38771			
Analyte		Spiked		Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		100.0		80.78	81	53-141	27	34
MTBE		20.00		17.29	86	65-121	10	22
Isopropyl Ether (DIPE)		20.00		14.03	70	57-122	3	26
Ethyl tert-Butyl Ether (ETBE)		20.00		16.47	82	62-121	7	28
1,2-Dichloroethane		20.00		17.79	89	74-133	3	23
Benzene		20.00		16.32	82	77-126	1	20
Methyl tert-Amyl Ether (TAME)		20.00		19.04	95	66-120	4	24
Toluene		20.00		18.59	93	76-124	4	26
1,2-Dibromoethane		20.00		20.29	101	78-120	7	20
Ethylbenzene		20.00		18.56	93	76-127	5	24
m,p-Xylenes		40.00		37.75	94	74-126	2	24
o-Xylene		20.00		18.64	93	70-120	3	22
Naphthalene		20.00		20.81	104	70-124	12	23
Surrogate	%REC	Limits						
Dibromofluoromethane	98	80-124						
1,2-Dichloroethane-d4	93	80-137						
Toluene-d8	96	80-120						
Bromofluorobenzene	98	79-127						



		BTXE &	Oxygenates	
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineering Inc.	Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000		Batch#: Analyzed:	198559 05/16/13

Type: BS			Lab ID:	QC68	8980		
Analyte		Spiked		Result	%REC	Limits	
tert-Butyl Alcohol (TBA)		125.0		123.4	99	53-141	
MTBE		25.00		23.78	95	65-121	
Isopropyl Ether (DIPE)		25.00		24.98	100	57-122	
Ethyl tert-Butyl Ether (ETBE	)	25.00		24.25	97	62-121	
1,2-Dichloroethane		25.00		25.89	104	74-133	
Benzene		25.00		26.27	105	77-126	
Methyl tert-Amyl Ether (TAME	)	25.00		24.13	97	66-120	
Toluene		25.00		25.42	102	76-124	
1,2-Dibromoethane		25.00		23.14	93	78-120	
Ethylbenzene		25.00		26.32	105	76-127	
m,p-Xylenes		50.00		51.13	102	74-126	
o-Xylene		25.00		23.36	93	70-120	
Naphthalene		25.00		23.76	95	70-124	
Surrogate	%REC	Limits					
Dibromofluoromethane	106	80-124					
1,2-Dichloroethane-d4	109	80-137					
Toluene-d8	100	80-120					
Bromofluorobenzene	102	79-127					

Type: BSD	Lab	ID: QC688	981			
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	112.8	90	53-141	9	34
MTBE	25.00	23.63	95	65-121	1	22
Isopropyl Ether (DIPE)	25.00	25.25	101	57-122	1	26
Ethyl tert-Butyl Ether (ETBE)	25.00	24.33	97	62-121	0	28
1,2-Dichloroethane	25.00	25.71	103	74-133	1	23
Benzene	25.00	25.87	103	77-126	2	20
Methyl tert-Amyl Ether (TAME)	25.00	23.24	93	66-120	4	24
Toluene	25.00	24.92	100	76-124	2	26
1,2-Dibromoethane	25.00	22.90	92	78-120	1	20
Ethylbenzene	25.00	25.96	104	76-127	1	24
m,p-Xylenes	50.00	50.09	100	74-126	2	24
o-Xylene	25.00	23.16	93	70-120	1	22
Naphthalene	25.00	23.73	95	70-124	0	23
Gurragata	%REC Limits					
Surrogate Dibromofluoromethane	106 80-124					
1 2-Dichloroethane-d4	106 80-124					

Surrogate	%REC	Limits	
Dibromofluoromethane	106	80-124	
1,2-Dichloroethane-d4	106	80-137	
Toluene-d8	102	80-120	
Bromofluorobenzene	102	79-127	
Bromofluorobenzene	102	79–127	



BTXE & Oxygenates							
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland				
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B				
Project#:	5082	Analysis:	EPA 8260B				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC688982	Batch#:	198559				
Matrix:	Soil	Analyzed:	05/16/13				
Units:	ug/Kg						

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Ethanol	ND	1,000	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Naphthalene	ND	5.0	

Surrogate	%REC	Limits	
Dibromofluoromethane	113	30-124	
1,2-Dichloroethane-d4	105	30-137	
Toluene-d8	101	30-120	
Bromofluorobenzene	104	79-127	



BTXE & Oxygenates							
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland				
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B				
Project#:	5082	Analysis:	EPA 8260B				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC689041	Batch#:	198577				
Matrix:	Soil	Analyzed:	05/16/13				
Units:	ug/Kg						

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Ethanol	ND	1,000	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Naphthalene	ND	5.0	

Surrogate	%REC	Limits	
Dibromofluoromethane	94	80-124	
1,2-Dichloroethane-d4	98	80-137	
Toluene-d8	101	80-120	
Bromofluorobenzene	106	79-127	



		BTXE	& Oxygenat	es	
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineering In	Location nc. Prep: Analysia	EPA 5030B	
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000		Batch#: Analyze		

Type: BS		Lab ID: Q	C689042	
Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	93.99	94	53-141
MTBE	20.0	0 19.09	95	65-121
Isopropyl Ether (DIPE)	20.0	0 14.38		57-122
Ethyl tert-Butyl Ether (ETBE)	20.0	0 17.32		62-121
1,2-Dichloroethane	20.0			74-133
Benzene	20.0	0 17.12		77-126
Methyl tert-Amyl Ether (TAME)	20.0			66-120
Toluene	20.0			76-124
1,2-Dibromoethane	20.0			78-120
Ethylbenzene	20.0			76-127
m,p-Xylenes	40.0			74-126
o-Xylene	20.0			70-120
Naphthalene	20.0	0 22.23	111	70-124
duran and a				
Surrogate	%REC Limits			
Dibromofluoromethane	96 80-124			
1,2-Dichloroethane-d4 Toluene-d8	95 80-137 100 80-120			
Bromofluorobenzene	100 80-120			
BLOWDLIGGIODEUZEUE	105 /9-12/			

Type: BSD			Lab ID:	QC	689043			
Analyte		Spiked		Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		100.0		84.69	85	53-141	10	34
MTBE		20.00		18.60	93	65-121	3	22
Isopropyl Ether (DIPE)		20.00		14.28	71	57-122	1	26
Ethyl tert-Butyl Ether (ETBE)		20.00		17.02	85	62-121	2	28
1,2-Dichloroethane		20.00		19.65	98	74-133	3	23
Benzene		20.00		17.50	88	77-126	2	20
Methyl tert-Amyl Ether (TAME)		20.00		19.74	99	66-120	2	24
Toluene		20.00		18.74	94	76-124	1	26
1,2-Dibromoethane		20.00		21.80	109	78-120	6	20
Ethylbenzene		20.00		20.28	101	76-127	3	24
m,p-Xylenes		40.00		39.70	99	74-126	3	24
o-Xylene		20.00		19.12	96	70-120	6	22
Naphthalene		20.00		19.93	100	70-124	11	23
Surrogate	%REC	Limits						
Dibromofluoromethane	99	80-124						
1,2-Dichloroethane-d4	99	80-137						
Toluene-d8	97	80-120						
Bromofluorobenzene	103	79-127						



	BTXE & Oxygenates						
Project#:	245203 SOMA Environmental Engineering 5082	Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B				
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000	Batch#: Analyzed:	198634 05/17/13				

Type: BS		Lab ID: QC68	39272	
Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	96.99	78	53-141
MTBE	25.00	20.32	81	65-121
Isopropyl Ether (DIPE)	25.00	22.96	92	57-122
Ethyl tert-Butyl Ether (ETBE)	25.00	21.23	85	62-121
1,2-Dichloroethane	25.00	33.19 b	133	74-133
Benzene	25.00	26.69	107	77-126
Methyl tert-Amyl Ether (TAME)	25.00	24.15	97	66-120
Toluene	25.00	22.92	92	76-124
1,2-Dibromoethane	25.00	25.86	103	78-120
Ethylbenzene	25.00	23.97	96	76-127
m,p-Xylenes	50.00	46.48	93	74-126
o-Xylene	25.00	20.94	84	70-120
Napĥthalene	25.00	23.62	94	70-124
Surrogate	%REC Limits			
Dibromofluoromethane	103 80-124			
1,2-Dichloroethane-d4	115 80-137			
Toluene-d8	95 80-120			
Bromofluorobenzene	84 79-127			

Type: BSD			Lab ID:	QC689	273			
Analyte	C.	Spiked		Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		125.0		77.08	62	53-141	23	34
MTBE		25.00		19.13	77	65-121	6	22
Isopropyl Ether (DIPE)		25.00		21.57	86	57-122	6	26
Ethyl tert-Butyl Ether (ETBE)		25.00		20.34	81	62-121	4	28
1,2-Dichloroethane		25.00		30.22 b	121	74-133	9	23
Benzene		25.00		26.08	104	77-126	2	20
Methyl tert-Amyl Ether (TAME)		25.00		22.19	89	66-120	8	24
Toluene		25.00		22.79	91	76-124	1	26
1,2-Dibromoethane		25.00		22.95	92	78-120	12	20
Ethylbenzene		25.00		23.31	93	76-127	3	24
m,p-Xylenes		50.00		44.24	88	74-126	5	24
o-Xylene		25.00		20.01	80	70-120	5	22
Naphthalene		25.00		20.04	80	70-124	16	23
Surrogate	%REC	Limits						
Dibromofluoromethane	99	80-124						
1,2-Dichloroethane-d4	105	80-137						

%REC	Limits	
99	80-124	
105	80-137	
97	80-120	
88	79-127	
	99 105 97	99 80-124 105 80-137 97 80-120

b= See narrative
RPD= Relative Percent Difference
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BTXE & Oxygenates						
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland			
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B			
Project#:	5082	Analysis:	EPA 8260B			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC689281	Batch#:	198634			
Matrix:	Soil	Analyzed:	05/17/13			
Units:	ug/Kg					

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Ethanol	ND	1,000	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Naphthalene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	86	79–127



	BTXE & Oxygenates						
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineering Inc	Location: . Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B			
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000		Batch#: Analyzed:	198945 05/25/13			

Type: BS	Lab	ID: QC690	578	
Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	134.0	107	53-141
MTBE	25.00	25.99	104	65-121
Isopropyl Ether (DIPE)	25.00	23.57	94	57-122
Ethyl tert-Butyl Ether (ETBE)	25.00	25.35	101	62-121
1,2-Dichloroethane	25.00	20.52	82	74-133
Benzene	25.00	24.19	97	77-126
Methyl tert-Amyl Ether (TAME)	25.00	25.60	102	66-120
Toluene	25.00	25.02	100	76-124
1,2-Dibromoethane	25.00	28.26	113	78-120
Ethylbenzene	25.00	25.29	101	76-127
m,p-Xylenes	50.00	51.19	102	74-126
o-Xylene	25.00	26.16	105	70-120
Naphthalene	25.00	29.85	119	70-124
Surrogate	%REC Limits			
Dibromofluoromethane	99 80-124			
1,2-Dichloroethane-d4	75 * 80-137			
Toluene-d8	91 80-120			
Bromofluorobenzene	98 79-127			

Type: BSD	Lab II	QC6905	79			
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	116.5	93	53-141	14	34
MTBE	25.00	25.17	101	65-121	3	22
Isopropyl Ether (DIPE)	25.00	23.02	92	57-122	2	26
Ethyl tert-Butyl Ether (ETBE)	25.00	25.15	101	62-121	1	28
1,2-Dichloroethane	25.00	19.66	79	74-133	4	23
Benzene	25.00	22.65	91	77-126	7	20
Methyl tert-Amyl Ether (TAME)	25.00	23.72	95	66-120	8	24
Toluene	25.00	24.55	98	76-124	2	26
1,2-Dibromoethane	25.00	27.58	110	78-120	2	20
Ethylbenzene	25.00	25.35	101	76-127	0	24
m,p-Xylenes	50.00	51.01	102	74-126	0	24
o-Xylene	25.00	26.79	107	70-120	2	22
Napĥthalene	25.00	28.41	114	70-124	5	23
durante met e	ADDC Timita					
Surrogate	%REC Limits					
Dibromofluoromethane	103 80-124 72 * 80-137					

Surrogate	%REC	Limits	
Dibromofluoromethane	103	80-124	
1,2-Dichloroethane-d4	73 *	80-137	
Toluene-d8	99	80-120	
Bromofluorobenzene	100	79-127	
		-	

\*= Value outside of QC limits; see narrative RPD= Relative Percent Difference Page 1 of 1



BTXE & Oxygenates						
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland			
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B			
Project#:	5082	Analysis:	EPA 8260B			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC690580	Batch#:	198945			
Matrix:	Soil	Analyzed:	05/25/13			
Units:	ug/Kg					

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Ethanol	ND	1,000	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Naphthalene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-124
1,2-Dichloroethane-d4	83	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	111	79–127



BTXE & Oxygenates						
Lab #: Client: Project#:	245203 SOMA Environmental 5082	Engineering Inc.	Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B		
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000		Batch#: Analyzed:	198951 05/25/13		

Type: BS		Lab ID: QC	2690600	
Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	86.78	b 69	53-141
MTBE	25.00		83	65-121
Isopropyl Ether (DIPE)	25.00		82	57-122
Ethyl tert-Butyl Ether (ETBE)	25.00	20.33	81	62-121
1,2-Dichloroethane	25.00		104	74-133
Benzene	25.00		106	77–126
Methyl tert-Amyl Ether (TAME)	25.00		82	66-120
Toluene	25.00	27.18	109	76-124
1,2-Dibromoethane	25.00		98	78-120
Ethylbenzene	25.00		111	76-127
m,p-Xylenes	50.00		110	74-126
o-Xylene	25.00		100	70-120
Naphthalene	25.0	) 24.39	98	70-124
Surrogate	%REC Limits			
Dibromofluoromethane	102 80-124			
1,2-Dichloroethane-d4	95 80-137			
Toluene-d8	99 80-120			
Bromofluorobenzene	90 79-127			

Type: BSD			Lab ID:	QC690	501			
Analyte		Spiked		Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		125.0		83.60 b	67	53-141	4	34
MTBE		25.00		19.77	79	65-121	5	22
Isopropyl Ether (DIPE)		25.00		20.31	81	57-122	1	26
Ethyl tert-Butyl Ether (ETBE)		25.00		19.99	80	62-121	2	28
1,2-Dichloroethane		25.00		26.15	105	74-133	1	23
Benzene		25.00		27.12	108	77-126	2	20
Methyl tert-Amyl Ether (TAME)		25.00		20.88	84	66-120	2	24
Toluene		25.00		26.62	106	76-124	2	26
1,2-Dibromoethane		25.00		23.92	96	78-120	3	20
Ethylbenzene		25.00		26.97	108	76-127	2	24
m,p-Xylenes		50.00		52.37	105	74-126	5	24
o-Xylene		25.00		24.11	96	70-120	4	22
Naphthalene		25.00		24.85	99	70-124	2	23
Surrogate	%REC	Limits						
Dibromofluoromethane	102	80-124						
1,2-Dichloroethane-d4	98	80-137						

%REC	Limits	
102	80-124	
98	80-137	
96	80-120	
89	79-127	
	102 98 96	102 80-124 98 80-137 96 80-120

b= See narrative
RPD= Relative Percent Difference
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BTXE & Oxygenates						
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland			
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B			
Project#:	5082	Analysis:	EPA 8260B			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC690602	Batch#:	198951			
Matrix:	Soil	Analyzed:	05/25/13			
Units:	ug/Kg					

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Ethanol	ND	1,000	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Naphthalene	ND	5.0	

Surrogate	%REC	Limits	
Dibromofluoromethane	106	80-124	
1,2-Dichloroethane-d4	101	80-137	
Toluene-d8	100	80-120	
Bromofluorobenzene	91	79-127	



BTXE & Oxygenates						
Lab #: 245203 Client: SOMA E	nvironmental Engineering Inc.	Location: Prep:	2844 Mountain Blvd, Oakland EPA 5030B			
Project#: 5082		Analysis:	EPA 8260B			
Field ID:	ZZZZZZZZZ	Batch#:	198951			
MSS Lab ID:	245575-004	Sampled:	05/24/13			
Matrix:	Soil	Received:	05/24/13			
Units:	ug/Kg	Analyzed:	05/25/13			
Basis:	as received	_				

Type: Lab ID:

MS QC690606

Diln Fac: 0.9141

Analyte	MSS	Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)		<3.561	228.5	121.4 b	53	42-135
MTBE		<0.3098	45.70	39.53	86	51-120
Isopropyl Ether (DIPE)		<0.1680	45.70	41.93	92	45-120
Ethyl tert-Butyl Ether (ETBE)		<0.3136	45.70	41.12	90	49-120
1,2-Dichloroethane		<0.3423	45.70	55.56	122	53-122
Benzene		<0.3812	45.70	57.48	126 *	54-121
Methyl tert-Amyl Ether (TAME)		<0.5024	45.70	43.51	95	50-120
Toluene		<1.043	45.70	52.47	115	47-120
1,2-Dibromoethane		<0.3333	45.70	43.91	96	50-120
Ethylbenzene		<0.3041	45.70	55.25	121	42-122
m,p-Xylenes		<0.5829	91.41	104.7	115	39-120
o-Xylene		<0.3313	45.70	49.16	108	39-120
Naphthalene		<0.5296	45.70	33.52	73	15-120
Surrogate	%REC	Limits				
Dibromofluoromethane	109	80-124				
1,2-Dichloroethane-d4	105	80-137				
Toluene-d8	97	80-120				
Bromofluorobenzene	90	79-127				

Type: Lab ID: MSD QC690607

Diln Fac:

0.9311

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	232.8	145.5 b	63	42-135	16	53
MTBE	46.55	42.75	92	51-120	6	43
Isopropyl Ether (DIPE)	46.55	43.50	93	45-120	2	45
Ethyl tert-Butyl Ether (ETBE)	46.55	41.99	90	49-120	0	46
1,2-Dichloroethane	46.55	54.45	117	53-122	4	41
Benzene	46.55	57.25	123 *	54-121	2	43
Methyl tert-Amyl Ether (TAME)	46.55	42.45	91	50-120	4	43
Toluene	46.55	53.06	114	47-120	1	53
1,2-Dibromoethane	46.55	44.56	96	50-120	0	44
Ethylbenzene	46.55	54.99	118	42-122	2	52
m,p-Xylenes	93.11	104.6	112	39-120	2	54
o-Xylene	46.55	47.94	103	39-120	4	54
Naphthalene	46.55	39.93	86	15-120	16	62

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	91	79-127

\*= Value outside of QC limits; see narrative b= See narrative

RPD= Relative Percent Difference

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	BTXE & C	xygenates	
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC690682	Batch#:	198970
Matrix:	Soil	Analyzed:	05/27/13
Units:	ug/Kg		

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Ethanol	ND	1,000	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	
Naphthalene	ND	5.0	

Surrogate	%REC	Limits	
Dibromofluoromethane	114	80-124	
1,2-Dichloroethane-d4	124	80-137	
Toluene-d8	102	80-120	
Bromofluorobenzene	92	79-127	



	BTXE	& Oxygenates	
Lab #: Client: Project#:	245203 SOMA Environmental Engineering 1 5082	Location: Inc. Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000	Batch#: Analyzed:	198970 05/27/13

Type: BS			Lab ID:	QC6	90683	
Analyte		Spiked		Result	%REC	Limits
tert-Butyl Alcohol (TBA)		100.0		97.19	97	53-141
MTBE		20.00		20.48	102	65-121
Isopropyl Ether (DIPE)		20.00		18.42	92	57-122
Ethyl tert-Butyl Ether (ETBE)		20.00		18.91	95	62-121
1,2-Dichloroethane		20.00		24.23	121	74-133
Benzene		20.00		21.76	109	77-126
Methyl tert-Amyl Ether (TAME)		20.00		18.97	95	66-120
Toluene		20.00		20.78	104	76-124
1,2-Dibromoethane		20.00		22.69	113	78-120
Ethylbenzene		20.00		21.17	106	76-127
m,p-Xylenes		40.00		41.97	105	74-126
o-Xylene		20.00		19.73	99	70-120
Napĥthalene		20.00		19.61	98	70-124
Surrogate	%REC	Limits				
Dibromofluoromethane	114	80-124				
1,2-Dichloroethane-d4	116	80-137				
Toluene-d8	96	80-120				
Bromofluorobenzene	87	79-127				

Type: BSD			Lab ID:	QC69	0684			
Analyte		Spiked		Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		100.0		86.21	86	53-141	12	34
MTBE		20.00		17.90	89	65-121	13	22
Isopropyl Ether (DIPE)		20.00		16.77	84	57-122	9	26
Ethyl tert-Butyl Ether (ETBE)		20.00		16.80	84	62-121	12	28
1,2-Dichloroethane		20.00		24.02	120	74-133	1	23
Benzene		20.00		22.17	111	77-126	2	20
Methyl tert-Amyl Ether (TAME)		20.00		18.10	91	66-120	5	24
Toluene		20.00		20.95	105	76-124	1	26
1,2-Dibromoethane		20.00		21.35	107	78-120	6	20
Ethylbenzene		20.00		21.37	107	76-127	1	24
m,p-Xylenes		40.00		41.27	103	74-126	2	24
o-Xylene		20.00		19.04	95	70-120	4	22
Naphthalene		20.00		21.24	106	70-124	8	23
	0.5.5.0	_						
Surrogate	%REC	Limits						
Dibromofluoromethane	114	80-124						
1,2-Dichloroethane-d4	115	80-137						

Surrogate	%REC	Limits	
Dibromofluoromethane	114	80-124	
1,2-Dichloroethane-d4	115	80-137	
Toluene-d8	98	80-120	
Bromofluorobenzene	89	79-127	



BTXE &	Oxygenates	
Lab #: 245203 Client: SOMA Environmental Engineering Inc Project#: 5082	Location: . Prep: Analysis:	2844 Mountain Blvd, Oakland EPA 5030B EPA 8260B
Field ID:ZZZZZZZZZMSS Lab ID:245582-001Matrix:SoilUnits:ug/KgBasis:as received	Batch#: Sampled: Received: Analyzed:	198970 05/24/13 05/24/13 05/28/13

Type: Lab ID:

MS QC690688

Diln Fac: 0.9058

					<u> </u>	
Analyte	MSS	Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)		<3.700	226.4	141.7 b	63	42-135
MTBE		<0.3219	45.29	34.60	76	51-120
Isopropyl Ether (DIPE)		<0.1745	45.29	40.95	90	45-120
Ethyl tert-Butyl Ether (ETBE)		<0.3259	45.29	40.95	90	49-120
1,2-Dichloroethane		<0.3557	45.29	51.46	114	53-122
Benzene		<0.3960	45.29	48.27	107	54-121
Methyl tert-Amyl Ether (TAME)		<0.5219	45.29	43.26	96	50-120
Toluene		<1.084	45.29	47.27	104	47-120
1,2-Dibromoethane		<0.3463	45.29	50.86	112	50-120
Ethylbenzene		<0.3159	45.29	48.97	108	42-122
m,p-Xylenes		<0.6056	90.58	93.55	103	39-120
o-Xylene		<0.3442	45.29	42.59	94	39-120
Naphthalene		<0.5503	45.29	49.94	110	15-120
Surrogate	%REC	Limits				
Dibromofluoromethane	111	80-124				
1,2-Dichloroethane-d4	112	80-137				
Toluene-d8	98	80-120				
Bromofluorobenzene	85	79-127				

Type: Lab ID:

MSD QC690689

Diln Fac:

0.8961

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	224.0	155.1 b	69	42-135	10	53
MTBE	44.80	38.45	86	51-120	12	43
Isopropyl Ether (DIPE)	44.80	36.06	80	45-120	12	45
Ethyl tert-Butyl Ether (ETBE)	44.80	36.54	82	49-120	10	46
1,2-Dichloroethane	44.80	46.86	105	53-122	8	41
Benzene	44.80	44.34	99	54-121	7	43
Methyl tert-Amyl Ether (TAME)	44.80	38.62	86	50-120	10	43
Toluene	44.80	44.63	100	47-120	5	53
1,2-Dibromoethane	44.80	47.57	106	50-120	6	44
Ethylbenzene	44.80	45.09	101	42-122	7	52
m,p-Xylenes	89.61	88.34	99	39-120	5	54
o-Xylene	44.80	41.09	92	39-120	2	54
Naphthalene	44.80	47.60	106	15-120	4	62
Naphthalene					4	1

Surrogate	%REC	Limits	
Dibromofluoromethane	106	80-124	
1,2-Dichloroethane-d4	111	80-137	
Toluene-d8	97	80-120	
Bromofluorobenzene	87	79-127	



	Cadmium							
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland					
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3050B					
Project#:	5082	Analysis:	EPA 6010B					
Analyte:	Cadmium	Diln Fac:	1.000					
Matrix:	Soil	Sampled:	05/09/13					
Units:	mg/Kg	Received:	05/10/13					
Basis:	as received							

Field ID	Туре	Lab ID	Result	RL	Batch#	Prepared	Analyzed
DPT-5@4FT	SAMPLE	245203-001	ND	0.23	198938	05/24/13	05/28/13
DPT-5@10FT	SAMPLE	245203-002	ND	0.23	198496	05/14/13	05/15/13
DPT-5@12FT	SAMPLE	245203-003	ND	0.24	198496	05/14/13	05/15/13
DPT-5@15FT	SAMPLE	245203-004	ND	0.24	198496	05/14/13	05/15/13
DPT-5@30FT	SAMPLE	245203-006	ND	0.25	198496	05/14/13	05/15/13
DPT-5@50FT	SAMPLE	245203-008	ND	0.22	198496	05/14/13	05/15/13
MW-1@5FT	SAMPLE	245203-009	ND	0.23	198938	05/24/13	05/28/13
MW-1@10FT	SAMPLE	245203-010	ND	0.24	198496	05/14/13	05/15/13
MW-1@12FT	SAMPLE	245203-011	ND	0.23	198496	05/14/13	05/15/13
MW-1@15FT	SAMPLE	245203-012	ND	0.23	198938	05/24/13	05/29/13
MW-1@25FT	SAMPLE	245203-013	ND	0.23	198496	05/14/13	05/15/13
MW-2@7FT	SAMPLE	245203-014	ND	0.23	198938	05/24/13	05/29/13
MW-2@10FT	SAMPLE	245203-015	ND	0.24	198496	05/14/13	05/15/13
MW-2@12FT	SAMPLE	245203-016	ND	0.23	198496	05/14/13	05/15/13
MW-2@17FT	SAMPLE	245203-017	ND	0.24	198496	05/14/13	05/15/13
	BLANK	QC688713	ND	0.25	198496	05/14/13	05/15/13
	BLANK	QC690546	ND	0.25	198938	05/24/13	05/28/13



			Ni	ckel				
	5203			Location:	284	4 Mounta	ain Blvd,	Oakland
		nmental Engi	neering Inc.	Prep:	EPA	3050B		
Project#: 50	82			Analysis:	EPA	6010B		
Analyte:	Nicke	el		Basis:	as	receive	d	
Matrix:	Soil			Sampled:	05/	09/13		
Units:	mg/Kg	9		Received:	05/	10/13		
Field ID	Type	Lab ID	Result	RL	Diln Fac	Batch#	Prepared	Analyzed
DPT-5@4FT	SAMPLE	245203-001	1,600	23	100.0	198938	05/24/13	05/30/13
DPT-5@10FT	SAMPLE	245203-002	1,900	23	100.0	198496	05/14/13	05/20/13
DPT-5@12FT	SAMPLE	245203-003	1,300	24	100.0	198496	05/14/13	05/20/13
DPT-5@15FT	SAMPLE	245203-004	1,100	24	100.0	198496	05/14/13	05/20/13
DPT-5@30FT	SAMPLE	245203-006	910	25	100.0	198496	05/14/13	05/20/13
DPT-5@50FT	SAMPLE	245203-008	1,100	22	100.0	198496	05/14/13	05/20/13
MW-1@5FT	SAMPLE	245203-009	1,100	23	100.0	198938	05/24/13	05/30/13
MW-1@10FT	SAMPLE	245203-010	920	24	100.0	198496	05/14/13	05/21/13
MW-1@12FT	SAMPLE	245203-011	1,700	23	100.0	198496	05/14/13	05/20/13
MW-1@15FT	SAMPLE	245203-012	1,300	23	100.0	198938	05/24/13	05/30/13
MW-1@25FT	SAMPLE	245203-013	780	23	100.0	198496	05/14/13	05/20/13
MW-2@7FT	SAMPLE	245203-014	820	23	100.0	198938	05/24/13	05/30/13
MW-2@10FT	SAMPLE	245203-015	1,800	24	100.0	198496	05/14/13	05/20/13
MW-2@12FT	SAMPLE	245203-016	1,400	23	100.0	198496	05/14/13	05/20/13
MW-2@17FT	SAMPLE	245203-017	960	24	100.0	198496	05/14/13	05/20/13
	BLANK	QC688713	ND	0.25	1.000	198496	05/14/13	05/15/13
	BLANK	QC690546	ND	0.25	1.000	198938	05/24/13	05/28/13

		Cadmium	
Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3050B
Project#:	5082	Analysis:	EPA 6010B
Analyte:	Cadmium	Basis:	as received
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg		

Field ID	Type	MSS Lab ID	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Batch#	Sampled	Received	Prepared	Analyzed
	BS		QC688714		10.00	10.38	104	80-120			198496			05/14/13	05/15/13
	BSD		QC688715		10.00	10.80	108	80-120	4	20	198496			05/14/13	05/15/13
DPT-5@10FT	MS	245203-002	QC688716	<0.01453	9.091	8.580	94	69-120			198496	05/09/13	05/10/13	05/14/13	05/15/13
DPT-5@10FT	MSD	245203-002	QC688717		9.524	8.823	93	69-120	2	23	198496	05/09/13	05/10/13	05/14/13	05/15/13
	BS		QC690547		10.00	10.24	102	80-120			198938			05/24/13	05/28/13
	BSD		QC690548		10.00	10.19	102	80-120	0	20	198938			05/24/13	05/28/13
ZZZZZZZZZZ	MS	245554-001	QC690549	0.1355	9.259	8.861	94	69-120			198938	05/23/13	05/24/13	05/24/13	05/28/13
ZZZZZZZZZZ	MSD	245554-001	QC690550		8.929	8.485	94	69-120	1	23	198938	05/23/13	05/24/13	05/24/13	05/28/13

RPD= Relative Percent Difference Page 1 of 1



	Nickel		
Lab #:	245203	Location:	2844 Mountain Blvd, Oakl
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3050B
Project#:	5082	Analysis:	EPA 6010B
Analyte:	Nickel	Basis:	as received
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg		

Field ID	Type	MSS Lab ID Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim Batch#	Sampled	Received	Prepared	Analyzed
	BS	QC688714		25.00	25.24	101	80-120		198496			05/14/13	05/15/13
	BSD	QC688715		25.00	26.20	105	80-120	4	20 198496			05/14/13	05/15/13
DPT-5@10FT	MS	245203-002 QC688716	1,903	22.73	1,286 >LR	-2714 NM	1 45-134		198496	05/09/13	05/10/13	05/14/13	05/15/13
DPT-5@10FT	MSD	245203-002 QC688717		23.81	898.8 >LR	-4216 NM	1 45-134	NC	38 198496	05/09/13	05/10/13	05/14/13	05/15/13
	BS	QC690547		25.00	24.66	99	80-120		198938			05/24/13	05/28/13
	BSD	QC690548		25.00	24.60	98	80-120	0	20 198938			05/24/13	05/28/13
ZZZZZZZZZZ	MS	245554-001 QC690549	21.86	23.15	44.09	96	45-134		198938	05/23/13	05/24/13	05/24/13	05/28/13
ZZZZZZZZZZ	MSD	245554-001 QC690550		22.32	42.45	92	45-134	2	38 198938	05/23/13	05/24/13	05/24/13	05/28/13

NC= Not Calculated NM= Not Meaningful: Sample concentration > 4X spike concentration >LR= Response exceeds instrument's linear range RPD= Relative Percent Difference Page 1 of 1





#### Dissolved Cadmium

Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5082	Analysis:	EPA 6010B
Analyte:	Cadmium	Batch#:	198551
Matrix:	Filtrate	Received:	05/10/13
Units:	ug/L	Prepared:	05/15/13
Diln Fac:	1.000	Analyzed:	05/16/13

Field ID	Туре	Lab ID	Result	RL	Sampled
DPT-5W-1	SAMPLE	245203-020	ND	5.0	05/09/13
DPT-5W-2	SAMPLE	245203-021	ND	5.0	05/10/13
DPT-5W-3	SAMPLE	245203-022	ND	5.0	05/09/13
	BLANK	QC688946	ND	5.0	

ND= Not Detected RL= Reporting Limit Page 1 of 1



#### Dissolved Nickel

Lab #:	245203	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5082	Analysis:	EPA 6010B
Analyte:	Nickel	Batch#:	198551
Matrix:	Filtrate	Received:	05/10/13
Units:	ug/L	Prepared:	05/15/13
Diln Fac:	1.000	Analyzed:	05/16/13

Field ID	Туре	Lab ID	Result	RL	Sampled	
DPT-5W-1	SAMPLE	245203-020	48	5.0	05/09/13	
DPT-5W-2	SAMPLE	245203-021	24	5.0	05/10/13	
DPT-5W-3	SAMPLE	245203-022	ND	5.0	05/09/13	
	BLANK	QC688946	ND	5.0		

ND= Not Detected RL= Reporting Limit Page 1 of 1



	Dis	solved Cadmium			
- 1			0044		
	245203	Location:	2844 Mountain E	Blvd, Oakland	d
Client:	SOMA Environmental Engineering	Inc. Prep:	METHOD		
Project#:	5082	Analysis:	EPA 6010B		
Analyte:	Cadmium	Batch#:	198551		
Field ID:	ZZZZZZZZZZ	Sampled:	05/09/13		
MSS Lab ID	: 245139-003	Received:	05/09/13		
Matrix:	Filtrate	Prepared:	05/15/13		
Units:	ug/L	Analyzed:	05/16/13		
Diln Fac:	1.000				
Type L	ab ID MSS Result	Spiked	Result %REC I	imits RPD	Lim

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC688947		50.00	53.58	107	80-120		
BSD	QC688948		50.00	52.94	106	80-120	1	20
MS	QC688949	1.293	50.00	54.26	106	72-121		
MSD	QC688950		50.00	54.21	106	72-121	0	20



Dissolved Nickel										
Lab #: 245	5203	Location:	2844 Mountain Bl	vd, Oakland						
Client: SOM	1A Environmental Engine	eering Inc. Prep:	METHOD							
Project#: 508	32	Analysis:	EPA 6010B							
Analyte:	Nickel	Batch#:	198551							
Field ID:	ZZZZZZZZZZ	Sampled:	05/09/13							
MSS Lab ID:	245139-003	Received:	05/09/13							
Matrix:	Filtrate	Prepared:	05/15/13							
Units:	ug/L	Analyzed:	05/16/13							
Diln Fac:	1.000									
Type Lab	ID MSS Result	Spiked	Result %REC Lin	nits RPD Lim						

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC688947		500.0	516.4	103	80-120		
BSD	QC688948		500.0	507.0	101	80-120	2	20
MS	QC688949	198.5	500.0	669.0	94	73-120		
MSD	QC688950		500.0	674.6	95	73-120	1	20



#### Laboratory Job Number 246398 ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	Project : 5082
6620 Owens Dr.	Location : 2844 Mountain Blvd, Oakland
Pleasanton, CA 94588	Level : II

<u>Sample ID</u> COMP <u>Lab ID</u> 246398-001

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.

The Bolin Signature:

Tracy Babjar Project Manager (510) 204-2226

Date: <u>06/27/2013</u>

NELAP # 01107CA



#### CASE NARRATIVE

Laboratory number: Client: Project: Location: Request Date: Samples Received: 246398 SOMA Environmental Engineering Inc. 5082 2844 Mountain Blvd, Oakland 06/21/13 06/21/13

This data package contains sample and QC results for one soil sample, requested for the above referenced project on 06/21/13. The sample was received cold and intact.

#### Metals (EPA 6010B):

No analytical problems were encountered.

# **CHAIN OF CUSTODY**



#### Analyses

Cu	rtis & Tompkins, Ltd																		Ana	alys	ses					
Anal	ytical Laboratory Since 1878 2323 Fifth Street Berkeley, CA 94710		LOGI	N #	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u> </u>	(6399																			
	(510)486-0900 Phone (510)486-0532 Fax		Samp	Sampler: Lizzie Hightower																						
Projec	et No: 5082		Repo	rt T	o:		Joyce Bob	ek																		
Projec	t Name: 2844 Mountain Blvd	., Oakland	Com	ban	y :		SOMA Envir	oni	men	tal																
Turnai	round Time: Standard		Telep	ho	ne:		925-734-640	0																		
			Fax:				925-734-640	)1						<u>_</u>												
					Matri	x			Pres	serva	ativ	e		ick B												
Lab No.	Sample ID.	Sampling Time		Soil	Water Waste		# of Containers	HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE			STLC (Nickel)						1						
	СОМР			*			9 oz jar				*			*						$\Box$						_
													-	_						_	$\downarrow$	$\square$	$ \rightarrow $	$\rightarrow$		4
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Notes:	EDF OUTPUT REQUIRE	D		RI	ELIN	ρι	JISHED BY:					<i>.</i>	- 1	RE	CEIV	ED	BY:	<i>q</i>					<u> </u>	<u> </u>		
	EDF OUTPUT REQUIRE	MA			z₩	Ŧ	sto		6	21	DA	TE/TI			In	D	/_	$\sum$	1			0/2	2/ / 	ぴ DATI	<i>戊</i> , E/TIMI	E
	CC C										DA	TE/TI	ME										!	DATI	E/TIM	E
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### **COOLER RECEIPT CHECKLIST**

	rrtis & Tompkins, Ltd.
--	------------------------

Login # 246348 Date Received 6/21/13	Number of coolers
Login #         246348         Date Received         6/21/13           Client         So M#         Project         So	P2
Date Opened $\frac{L(1)/2}{2}$ By (print) $m_{G}$ (sign)	M <sub>2</sub>
Date Opened $\underline{b(1)/2}$ By (print) $\underline{m}$ (sign) Date Logged in $\underline{\swarrow}$ By (print) $\underline{\bigtriangledown}$ (sign)	1
1. Did cooler come with a shipping slip (airbill, etc) Shipping info	YES NO
2A. Were custody seals present? □ YES (circle) on cooler How many Name	Date
3. Were custody papers dry and integt when manipulation	YES NO NO
<ul> <li>2B. were custody seals intact upon arrival?</li> <li>3. Were custody papers dry and intact when received?</li> <li>4. Were custody papers filled out properly (ink, signed, etc)?</li> </ul>	ATES NO
<ul> <li>4. Were custody papers filled out properly (ink, signed, etc)?</li> <li>5. Is the project identifiable from custody papers? (If so fill out top</li> <li>6. Indicate the prolying in another (if the state of the prolying in another (if the state of the prolying in another (if the state of the state of the prolying in another (if the state of the prolying in another (if the state of the</li></ul>	CES NO
6. Indicate the packing in cooler: (if other, describe)	of form)ES NO
☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☐ Cloth material ☐ Cardboard ☐ Styrofoam 7. Temperature documentation: * Notify PM if temperature ex	S None
Type of ice used: 🗌 Wet 🗌 Blue/Gel 🖉 None	
□ Samples Received on ice & cold without a temperature bl	
Samples received on ice directly from the field. Cooling p	rocess had begun
8 Were Method 5025 genuel	
It YES, what time were they transferred to freezer?	YES NO
9. Did all bottles arrive unbroken/unopened?	
10. Are there any missing / extra samples?	VES NO
11. Are samples in the appropriate containers for indicated tests?	YES (1) YES (1)
and a sufficient amount of sample sent for tests requested?	(VES NO
15. Are the samples appropriately preserved?	YES NO N/A
<ul> <li>15. Are the samples appropriately preserved?</li> <li>16. Did you check preservatives for all bottles for each sample?</li> <li>17. Did you document your preservative share bo</li> </ul>	YES NO WA
18. Did you change the hold time in LIMS for unpreserved VOAs?	VEG NO MA
<ul> <li>19. Did you change the hold time in LIMS for preserved terracores?</li> <li>20. Are bubbles &gt; 6mm absent in VOA samples?</li> </ul>	YES NO 🕢
21. Was the client contacted concerning this sample delivery?	YES NO NO
If YES, Who was called? By	YES NO
Dy	Date:

COMMENTS

Rev 10, 11/11



	Nickel										
Lab #:	246398	Location:	2844 Mountain Blvd, Oakland								
Client:	SOMA Environmental Engineer	ing Inc. Prep:	WET								
Project#:	5082	Analysis:	EPA 6010B								
Analyte:	Nickel	Batch#:	199995								
Field ID:	COMP	Sampled:	06/21/13								
Matrix:	WET Leachate	Received:	06/21/13								
Units:	ug/L	Prepared:	06/24/13								
Diln Fac:	10.00	Analyzed:	06/24/13								
Type I	ab ID Result	RL									
SAMPLE 246	5398-001 15,000	250									
BLANK QC6	594871 ND	250									

ND= Not Detected RL= Reporting Limit Page 1 of 1



Nickel										
Lab #: 246398	Location:	2844 Mountain Blvd, Oakland								
Client: SOMA Environmental Engineering 3	Inc. Prep:	WET								
Project#: 5082	Analysis:	EPA 6010B								
Analyte: Nickel	Batch#:	199995								
Field ID: ZZZZZZZZZ	Sampled:	06/19/13								
MSS Lab ID: 246392-001	Received:	06/19/13								
Matrix: WET Leachate	Prepared:	06/24/13								
Units: ug/L	Analyzed:	06/24/13								
Type Lab ID MSS Result Spiked	Result	%REC Limits RPD Lim Diln Fac								

туре	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC694872		500.0	496.6	99	80-120			1.000
BSD	QC694873		500.0	493.9	99	80-120	1	20	1.000
MS	QC694874	640.5	2,500	2,963	93	73-120			10.00
MSD	QC694875		2,500	2,965	93	73-120	0	20	10.00

## **APPENDIX D**

### MONITORING WELL DEVELOPMENT LOGS AND WELL SURVEY REPORT

Additional Investigation and Monitoring Wells Replacement Report



#### MONITORING WELL DEVELOPMENT LOG

四天, 我这些心理是不能是我的现在是不好。"这些是是是一些没有不能

Page \_\_\_\_\_ of \_\_\_\_\_

All measurements taken from: 🔄 Top	of Casing 🔲 Protective Casing 🔲 Ground Level	Sample ID
111V - I	<i>/0</i> <sup>+</sup>	Qty. of Drilling Fluid Lost
Well Number	Borehole Diameter	Minimum Gal. to be Purged
Date5,7(4,17)	Screen Length / 577 7	Development Method Bail-Some-
Time Start: 1160 End: 220	Measured Depth (pre-development)	BAIL-PORD
Client Som A	Measured Depth (post-development) 9.74	Purging Equipment SBAILER AM
Project	Static Water Level (ft.)	Water Level Equipment Solums 4
Job Number	Standing Water Column (ft.)	pH/EC Meter Hariba US2
Installation Date	One Casing Volume (gal.)	Turbidity Meter Horibra US2
Well Diameter	One Annulus Vol. (gal.)	Other

	Field Parameters Measured										
Time	Amount Purged (gal.)	рН	EC	Turbidity	D.O.	Temperature	SAL.	GPM W.L.	W.L	Comments	Field Tech.
1:08	20	7.55	1.35	>9000	-	17.72	0.7	1 GPF1	14.95	BA11-56	e (
1:11	23	7.42	1.87	810	-	17.79	0.7	16141	16.44	Surge-15	MA
1.14	26	7.45	1.53	755		18.13	69	•	17.61	-BA11-56	
1.17	29	7.40	1.95	和1000万-	. 875_	18.64	0.9		17.83		
1:21-	31	1			1 dry S	700 70 (	Zechen	ne -	An an an an an an an an an an an an an an	-	
	-33-				U			Û			
1:4D	30	7.56	1.89	627	1	17.94	6.5	14-	18.10		
1.45	31	7.60	1. 60	652	ł	16.25	0.0	11	18.21		
1.50	32	7.65	1.71e	644	2	18.28	0.8	112	18.40		
			- STO	P DUM	10-						
2.1				Y	1						
				FINAL	FIELD PARA	METER MEAS	UREMENTS				



#### MONITORING WELL DEVELOPMENT LOG

Page \_\_\_\_\_ of \_\_\_\_

All measurements taken from: 🕅 To	p of Casing 🔲 Protective Casing 🔲 Ground Level	Sample ID
1111-7	10 °	Qty. of Drilling Fluid Lost
Well Number MW - 2	Borehole Diameter/0	Minimum Gal. to be Purged
Date5,24,13	Screen Length 15 FT	Development Method
Time Start: 870 End: 111	Measured Depth (pre-development) 19.75	Bail- PURIP
Client 76FIA	Measured Depth (post-development)	Purging Equipment 49AILE - 37VMP
Project	Static Water Level (ft.) 8.99	Water Level Equipment
Job Number	Standing Water Column (ft.) 10-76	pH/EC Meter
Installation Date	One Casing Volume (gal.) 7.101 Le	Turbidity Meter HORIDA US2
Well Diameter 4°	One Annulus Vol. (gal.)	Other

Time     Amount Purged (gal.)     pH     EC     Turbidity     D.O.     Temperature     SAL.     GPM     Comments	Field Tech.							
10:15 32 7.65 1.73 118 - 16.96 0.9 1 LPM 17.30 - BAIL-20.	OAL.							
1818 35 6.89 1.80 46.2 - 16.82 0.9 1 17.83 JURGE 201	IN							
10:21 38 6.81 1.82 30.7 - 16.90 0.9 1 1852 BAIL-56	C							
10-24-41 - STOP TO RECHARGE LTOP TO 1	ECHARDE -							
10:45 39 6.91 1.77 20.9 - 16.44 0.9 14 17.96								
10.49 46 6.88 1.75 32.4 - 17.11 0.9 1/4 17.98								
10.53 10.5 6.89 1.78 30.7 - 17.06 0.9 11 195								
101100 11841 6.87 1.75 24.6 - 16.96 6.7 444 1500								
1109 1115 V. 83 1.76 20.5 - 17.10 0.9 - 18.21								
FINAL FIELD PARAMETER MEASUREMENTS								

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

SOMA ENVIRONMENTAL ENGINEERING 2844 MOUNTAIN BLVD OAKLAND, CA 94602

WELL ID #	NORTHING (FT.) / LATITUDE (D.DEG.)	EASTING (FT.) / LONGITUDE (D.DEG.)	ELEVATION (FT.)	DESCRIPTION		
MW-1	2122404.169	6071174.709	674.92	SET NOTCH N. SIDE 4" PVC		
	N37.81151896	W122.1980061	675.50	SET PUNCH N. SIDE		
			675.49	NORTH SIDE AC		
MW-2	2122393.627	6071186.912	675.02	SET NOTCH N. SIDE 4" PVC		
	N37.81149062	W122.1979632	675.53	SET PUNCH N. SIDE		
			675.51			
RS-3	2122442.569	6071215.114	676.08	SET NOTCH N. SIDE 4" PVC		
	N37.81162641	W122.1978687	676.47	SET PUNCH N. SIDE		
			676.38	NORTH SIDE AC		
RS-4	2122379.611	6071195.421	675.27	TOP 4" PVC		
	N37.81145256	W122.1979329	675.70	SET PUNCH N. SIDE		
			675.59	NORTH SIDE AC		
_						

HORIZONTAL CONTROL: CALIFORNIA COORDINATE SYSTEM ZONE 3, NAD83. ELLIPSOID: WGS 1984

EQUIPMENT USED: TRIMBLE GPS-R8 & TS S6, TOPCON AT-G2 LEVEL

EPOCH: NAD\_83 (2011) 2010.0000 GEOID MODEL: GEOID12A

VERTICAL CONTROL: BENCH MARK: CITY OF OAKLAND BM 2806 CINCH NAIL IN SOUTHWESTERLY CURB OF MOUNTAIN BLVD, 150' SOUTHEASTERLY FROM THE CENTERLINE OF KEARNEY AVE EXTENDED. NORTHING 2,122,547.687', EASTING 6,070,956.301' ELEVATION= 674.892' NAVD 88 DATUM



EDGIS LAND SURVEYING LAND SURVEYING AND MAPPING 1374 Garland Avenue, Clovis, CA 93612 Phone (559) 803-2679 email: edgis@aol.com

# **APPENDIX E**

WASTE MANIFEST

Additional Investigation and Monitoring Wells Replacement Report

Plea	e print or type (Form designed for use on elite (12 pltch) typewriter) NON-HAZARDOUS VASTE MANIFEST 1. Generator's US EPA ID No.			Manifest Document No. SOM 13 - 01 2 5 of 1			
	3. Generator's Name and Malling Address DESI 2.8 4. Generator's Phone ( ) OE 4	enerator's Name and Malling Address DESERT Petroleur 2844 Mountain Blud.					
	5. Transporter 1 Company Name INSTRATING	6. US EPA ID Number		and the second of the second s	A. State Transporter's ID B. Transporter (There) 374-3854		
	7. Transporter 2 Company Name	8. US EPA ID Number		C. State Transporter's ID D. Transporter 2 Phone			
	9. Designated Facility Name and Site Address     10. US EPA ID Number     INSTRAT, INC.			E. State Facility's ID			
	1105 C AIRPORT RD. RIO VISTA, CA 94571				Phone (707) 374-3834		
	11. WASTE DESCRIPTION		12. C No.	Containers Type	13. Total Quantity	14. Unit WL/VoL	
	NON- HOZ DRILL CUTT	1793	9	DRM	4000	ıb	
GEN	NON-HAZ Decon/Pu	'Y WATER	З	Dem	150	991	
E R A T	C.						
OB	đ						
ON-HAZARDOUS WASTE	G. Additional Descriptions for Materials Listed Above Column BRN. UDUR- 15 Solucy- DRY		H. Handling Codes for Wastes Listed Above				
	15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby certify that the cont in proper condition for transport. The materials described on this	ents of this shipment are fully and accurately des manifest are not subject to federal hazardous wa	cribed and are site regulations	in all respects			
	Prinled/Typed Name	Signature			Month	Date Day Yea	
TRANS	17. Transporter 1 Acknowledgement of Receipt of Materials          Printed/Typed Name         J Q S J M	1 lly		Mont	Date Day Yea 28 13		
AZSPORTER	18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name	Signalure			Monti	Date Day Yea	
FAC	19. Discrepancy Indication Space						
   L   1   T	20. Factility Owner or Operator; Certification of receipt of the waster	naterials covered by this manifest, except as note	d in item 19.	9	Monti	Date Daty Yea	
Y	Printed/ ypda Name Yorrick Mcharchin	-41	Thigh	,	6	128113	

### NON-HAZARDOUS WASTE MANIFEST