SOMA
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June 30, 2015

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 "Well Installation and Multi-Phase Extraction 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

REGISTERED PROFESSIONAL ENGINEER
MANSOUR SEPEHR
No. C042928
Exp. 3-31-16
CIVIL
STATE OF CALIFORNIA

Well Installation and Multi-Phase Extraction Report

2844 Mountain Boulevard
Oakland, California

June 30, 2015

Project 5082/5086

Prepared for:

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

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PERJURY STATEMENT

Site Location: 2844 Mountain Boulevard, Oakland, California

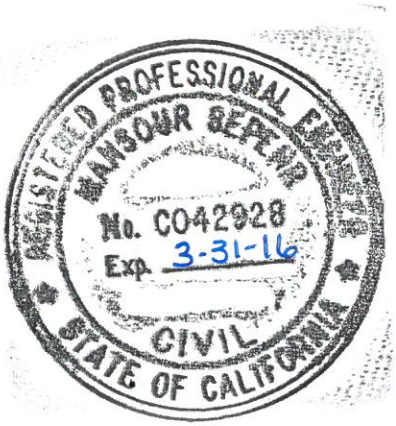
"I declare under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge".

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 compliance with email correspondence from San Francisco Bay Regional Water Quality Control Board (SFB-RWQCB) dated April 3, 2015.

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 compliance with email correspondence from San Francisco Bay Regional Water Quality Control Board (SFB-RWQCB) dated April 3, 2015. This report documents installation of MW-3 and results of an extended multi-phase extraction (MPE) event conducted at the site from May 19, 2015 to June 19, 2015.

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.

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. 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 20-25 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.

Sediments encountered during previous drilling activities consisted predominantly of sandy clay, silty clay, sandy clay with gravel, as well as some small sandy gravel stringers. Groundwater was not consistently seen in the soil borings and was very slow to recover.

The upper portion of the previously explored interval is composed of sandy clay with some gravel extending to a depth of approximately 32 feet bgs. Existing on-site groundwater monitoring wells are completed to 20 or 25 feet bgs. Underlying soils have been found to be comprised of sandy clay extending from approximately 32 to 36 feet bgs. Small hardpan areas (identified as very stiff fine grained material during CPT drilling) were observed on CPT logs - at 38 to 39 feet bgs and 47 to 48 feet bgs in CPT/MIP-1, and 31 to 32 feet bgs in CPTMIP-2). Beneath this very stiff and fine-grained layer the lithology is composed mostly of sandy clay (with some gravel) extending from approximately 36 to 50 feet bgs. Figure 3 illustrates locations of geologic cross-sections and Figures 4 and 5 illustrate geologic cross-section AA' and BB'.

2. SCOPE OF WORK FOR WELL INSTALLATION

SOMA installed a 4-inch diameter MPE/monitoring well in the vicinity of T-1 to be utilized during the next MPE event and to monitor elevated levels of chemicals in groundwater.

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: Monitoring well installation

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 April 29, 2015, 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 April 29, 2015 (Ticket 196977). A private utility locator (OHJ) surveyed proposed drilling areas on April 30, 2015 to locate any additional subsurface conduits.

2.2 Monitoring Well Installation

On May 1, 2015, a C-57 licensed driller Gregg Drilling and Testing (under SOMA's oversight) installed one 4-inch diameter MPE/monitoring well (MW-3). The well location is shown in Figure 2. To clear all subsurface utilities, the well location was hand cleared to 5 feet below ground surface (bgs).

A hollow stem auger (HSA) was used for drilling to construct this well. 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. MW-3 is located in the previously excavated tank pit area, so soil samples were collected for chemical analysis from areas of native soil below 15 feet bgs. Samples were collected using metal tubes.

MW-3 was installed in the excavation footprint. Therefore soil logging and sampling did not begin until the total depth of the excavation (15 feet) was reached. Soil observed from 15 feet to 25 feet was predominantly sandy clays. Recorded PID readings ranged from 3.7 ppm to 9 ppmv in MW-3. Field observations and PID readings were noted on geological boring logs (Appendix B). SOMA's field geologist logged continuous soil cores beginning at 15 feet in the 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. Table 2 includes historical grab groundwater analytical data. However, groundwater samples from this newly installed well were collected during the Second Quarter groundwater monitoring event conducted on May 13, 2015 and during the post MPE sampling event conducted on June 22, 2015. Results of groundwater monitoring event were documented in SOMA's report dated June 24, 2015. Table 6 includes the groundwater sampling results from these two events.

The new well was 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. Appendix B includes photographic documentation of installation activities.

2.3 Well Survey and Well Development

On May 8, 2015, Gregg Drilling and Testing developed the newly installed well under SOMA's oversight. MW-3 was developed after 72 hours following installation; the well development log is included in Appendix B. The well was 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 16, 2015, a licensed surveyor surveyed (horizontally and vertically) newly installed wells; the survey report is included in Appendix D.

2.4 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. On May 28, 2015, six 55-gallon steel drums were removed from the site, three containing soil cuttings and four containing wastewater, were transported to an approved facility for proper disposal. The waste manifest is included in Appendix D.

2.5 Laboratory Analysis

Soil 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, tertiary-butyl 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.

Analyses employed USEPA Methods 8015 and 8260B

2.5.1 Soil Analytical Results

TPH-g, TPH-d, BTEX were below the laboratory reporting limit in both soil samples from MW-3. MtBE was detected in MW-3@20ft and MW-3@24ft at 0.16 mg/kg and 0.79 mg/kg, respectively which was above the environmental screening levels (ESLs-0.023 mg/kg) for protection of Human Health set forth by San Francisco Bay Regional Water Quality Control Board. TAME was detected in MW-3@20ft and MW-3@24ft at 0.0056 mg/kg and 0.032 mg/kg, respectively.

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

3. MULTI-PHASE EXTRACTION EVENT

3.1 Background

From December 2 to 16, 2013, an MPE pilot test was conducted at the site under SOMA's oversight utilizing the site's groundwater monitoring wells as extraction wells. Approximately 497 pounds of volatile PHCs were removed during the MPE pilot test at an average VOC mass removal rate of approximately 36 lbs/day. Details and results of the pilot test were documented in SOMA's 'Multi-Phase Extraction Pilot Testing Report' dated January 21, 2014. Another MPE event was conducted from September to November 2015.

Based on the effectiveness of these two events, SOMA recommended conducting further MPE events at the site.

3.2 MPE Event

Upon SFB-RWQCB's approval an MPE event was conducted from May 19 to June 19, 2015 utilizing MW-1, MW-2, RS-4, and newly installed MW-3 as extraction wells. This event was conducted by Golden Gate Remediation Technology (GGRT) under SOMA's oversight.

There are two primary MPE system configurations: dual-phase extraction (DPE) and two-phase extraction (TPE).

- DPE utilizes separate mechanical systems for pumping groundwater and extracting soil vapor from the smear zone.
- TPE utilizes a single vacuum pump to extract both groundwater and soil vapor through a small-diameter drop tube (stinger) piping inserted in the well. The TPE is ideal for soil and groundwater remediation when the extraction well is not capable of producing more than two gallons per minute (gpm) of water.

The water production rate at the beginning of extraction from the newly installed well (MW-3) was >2 gpm and was <2 gpm for all other extraction wells. Therefore, DPE was selected as appropriate application for MW-3 and TPE was selected for all other extraction wells.

3.3 Permits, Notifications, and Health and Safety Plan Preparation

SOMA prepared a site-specific Health and Safety Plan (HASP). The HASP was prepared according to 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 was designed to address safety provisions during field activities and protect the field crew from physical and chemical hazards resulting from drilling and sampling. The HASP establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans. The HASP was reviewed and signed by field staff and contractors prior to beginning field operations.

The thermal oxidizer on the mobile MPE unit is fueled by propane. Therefore, a 500 gallon propane tank was delivered to the site by Suburban Propane. A 'permit to operate propane tank' (PTO) was obtained from OSHA. In order to comply with OSHA requirements, the propane tank was connected to the mobile MPE unit by installing appropriate vapor piping. A fence was installed around the propane tank and the entire MPE equipment. An OSHA inspector visited the site on May 18, 2015 to inspect and approve the system setup. At this time a PTO was issued to GGRT. Appendix E includes a copy of the permit.

At the end of MPE event, the propane tank was picked up from the site on June 22, 2015 and fence was removed on June 24, 2015.

This event was conducted in accordance with conditions of the air discharge permit issued by BAAQMD modified for presence of a school within 1,000 feet of the site (Appendix E). As required, SOMA notified the BAAQMD of the location, date, and estimated duration of the MPE event, and the vapor treatment to be utilized at least three days prior to start of the event.

3.4 Wastewater Treatment

Wastewater was discharged to the sanitary sewer under the wastewater discharge permit issued by East Bay Municipal Utility District (EBMUD). The wastewater discharge permit No. 05928020 was originally issued on July 24, 2013 prior to the pilot testing and was last renewed on May 15, 2014 (Appendix E). Extracted groundwater was pre-treated on-site through two 55-gallon units of granulated activated carbon (GAC) prior to discharging into the EBMUD sewer. The district was notified of the start of the MPE event on May 14, 2015. Groundwater samples (extracted influent and treated effluent) were collected on June 15, 2015 to ensure compliance with the discharge permit requirements (Appendix G). Quarterly self-monitoring reports are submitted to the EBMUD in order to maintain compliance with this discharge permit.

3.5 Mobile Treatment System

The MPE event was performed using a self-contained mobile treatment system (MTS). The MTS is equipped with an electrical generator, propane tank, liquid ring vacuum pump rated at 25 horsepower and 420 actual cubic feet per minute (acfm), transfer pumps, air/water separator vessel, discharge hoses and traffic-rated hose ramps, downhole stingers, photo-ionization detector (PID), and a thermal/catalytic oxidizer for vapor abatement.

Extracted vapor was treated using an on-board thermal/catalytic oxidizer. The oxidizer operates under a valid various-locations permit issued by Bay Area Air Quality Management District (BAAQMD). Both soil vapor and groundwater were extracted from the subsurface. Figure 6 shows a schematic of the MTS.

3.6 MPE Event Documentation

MTS operational data collected during the pilot test included:

- Oxidizer temperature
- Pump/air temperature
- Total flow
- Dilution flow
- PID readings

Oxidizer temperature and pump/air temperature are displayed on the MTS control panel and total flow was measured using a mass flow meter. Dilution flow was read directly from the gas flow gauge at the air dilution flow control valve before the liquid ring pump; flow is reported in standard cubic feet per minute. Appendix F includes MTS Operational Data Sheets. All equipment was calibrated in the field in accordance with manufacturer recommendations. Stingers were connected by flexible hose to the MTS and extended into the extraction well.

Extracted soil vapor concentrations were measured with a PID calibrated to hexane. MPE operational data is presented in Table 3. Extraction well data is presented in Table 3.

3.7 Mobile MPE Operation

MPE extraction at MW-1 and MW-2 began at 0930 on May 19, 2015. Throughout the event, extraction occurred from various well combinations in order to maximize efficiency, utilizing RS-3, RS-4, MW-1, MW-2, and MW-3. Applied vacuum ranged from 15.1 inches of mercury (in. of Hg) to 22.6 in. of Hg, and vapor extraction flow rate ranged from 108 to 228 scfm (Tables 3 and 4). VOC

concentrations in the extracted soil vapor stream ranged from 67 to 2,190 parts per million vapor (ppmv) as hexane (Tables 3 and 4). Approximately 20,401 gallons of groundwater were extracted at the rate of approximately 0.74 gallons per minute (gpm) (Table 1). MPE operation was terminated at 1400 on June 19, 2015.

3.8 Soil Vapor Sampling and Analysis

Samples of extracted soil vapor and samples from the stack of the thermal oxidizer were collected at the start and intermittently during the MPE event to show compliance with the BAAQMD permit. Table 5 lists the sample identifiers, results of analyses, and abatement efficiencies of the MTS. As illustrated, the operation was in compliance with permit requirements.

Per requirements of the BAAQMD, vapor samples were collected in Tedlar bags within the first 24 hours of extraction on May 19, 2015 at 12:55. Vapor sampling was repeated on May 27, 2015 at 15:10. Influent soil vapor samples were collected through a sampling port located on the vacuum pump discharge manifold and thermal oxidizer stack. The air samples were submitted under chain-of-custody (COC) documentation to a California state-certified analytical laboratory and analyzed for the following: total petroleum hydrocarbons as gasoline (TPH-g) using USEPA Analytical Method TO-3; benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary-butyl ether (MtBE), and other VOCs using USEPA Analytical Method TO-15. Analytical results are presented in Table 6. Certified laboratory analytical reports and COC documentation are included in Appendix G.

3.9 Mass Removal Rate

Estimated VOC mass removal rates and total VOC mass removed are presented in Table 4.

The total VOC mass removed was estimated using flow rate, volume of air extracted, and VOC concentration in ppmv as hexane measured by the PID. Approximately 328 pounds of volatile PHCs were removed during this MPE event. The average VOC mass removal rate was approximately 17 lbs/day.

Since the MPE pilot test of December 2013, approximately 1,712 pounds of contaminants have been removed from the subsurface, including the extended MPE events of September 2014 and the current event.

3.10 Pre and Post MPE Groundwater Sampling

All site wells utilized during the event were sampled prior to initiating the event on May 13, 2015. To minimize costs, this sampling event was coordinated with the Second Quarter 2015 groundwater monitoring event. In order to evaluate the effectiveness of the MPE operation all site wells were sampled again on June 22, 2015, after termination of MPE event.

Groundwater samples were submitted for the following analyses:

- TPH-g (EPA Method 8260), TPH-d (EPA Method 8015)
- VOCs (benzene, toluene, ethylbenzene, total xylenes- collectively termed as BTEX, MtBE, and fuel gasoline oxygenates) (EPA Method 8260)

The results of pre and post groundwater sampling are listed in Table 6. Since the pre-MPE sampling event (Second Quarter 2015 groundwater monitoring event), TPH-g decreased in MW-1 and remained below-laboratory reporting limits in other site wells; TPH-d decreased in MW-1, MW-2, MW-3, and RS-4 and remained below laboratory-reporting limit in RS-3; benzene and ethylbenzene decreased in MW-1 and MW-2 and remained below laboratory-reporting limits in other site wells; toluene remained below laboratory-reporting limits in all site wells; total xylenes decreased in MW-1 and was below laboratory-reporting limit in all other site wells. MtBE decreased in RS-3 while it increased in MW-1, MW-2, MW-3, and MW-4; TBA decreased in MW-2, MW-3, and RS-4, while it increased in MW-1, and remained below laboratory-reporting limit in RS-3; TAME decreased in MW-3, increased in MW-1, MW-2, and RS-4, and remained below laboratory-reporting limit in RS-3.

Certified laboratory analytical reports and COC documentation are included in Appendix G.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

- SOMA installed a 4-inch diameter MPE/monitoring well in the vicinity of T-1 boring (this boring was drilled in August 2011and groundwater samples showed elevated levels of petroleum hydrocarbons, see Table-2) to be utilized by MPE event and to be used for monitoring the chemicals in groundwater;
- TPH-g, TPH-d, BTEX were below the laboratory reporting limit in both soil samples from MW-3. MtBE was detected in MW-3@20ft and MW-3@24ft at 0.16 mg/kg and 0.79 mg/kg, respectively, which was above the ESL of

0.023 mg/kg). TAME was detected in MW-3@20ft and MW-3@24ft at 0.0056 mg/kg and 0.032 mg/kg, respectively.

- SOMA conducted an MPE event at the site from May 19, 2015 to June 19, 2015 utilizing MW-1, MW-2, RS-3, RS-4, and newly installed MW-3 as extraction wells. Approximately 328 pounds of volatile PHCs were removed during this event with an average VOC mass removal rate of approximately 17 lbs/day. As illustrated by the post-MPE groundwater sampling results, TPH-g, TPH-d, and benzene decreased in MW-1, while MtBE, TBA, and TAME increased. Similarly in MW-2, TPH-d and benzene decreased while MtBE, TBA, and TAME increased. In the newly installed MW-3, TPH-d, TBA, and TAME decreased while MtBE increased slightly. In RS-4, TPH-d and TBA decreased while MtBE and TAME increased.
- TPH-d has decreased significantly in MW-3 and TBA has decreased significantly in MW-2 and RS-4 due to the MPE operation. Decreased concentrations indicate that contaminants are being stripped and removed from the subsurface and demonstrates the effectiveness of MPE. Increased concentrations indicate that contaminants are still present in the subsurface and further remediation is required.
- Based on the effectiveness of this MPE event, al petroleum hydrocarbons were removed from groundwater in the upper perched water-bearing zone. However, elevated levels of MtBE, TBA and TAME still remains in the upper and First water bearing zone beneath the site.

4.2 Recommendations

Reviewing the site data indicates that still elevated levels of MtBE, TBA and TAME exist in deeper levels (First Water Bearing Zone) at depth ranging up to 43 feet bgs (see cross-sections A-A' and B-B' in Figures 4 and 5). The results of the Second Quarter 2015 groundwater monitoring event also showed elevated levels of MtBE and TBA in the shallow perched zone.

The results of the previous site investigation have shown elevated levels of MtBE in off-site area in DPT-4 and DPT-3 in shallow and especially in the deeper water bearing zone. It appears that horizontal and vertical extent of MtBE and TBA has not been adequately defined. SOMA is recommending to conduct addition site investigation for delineation of the extent of MtBE and TBA in subsurface. Once the extent of MtBE and TBA is completed, SOMA will prepare a corrective action plan to address the remediation of MtBE and TBA in the subsurface.

FIGURES

Source: Google (R) 2012

N

approximate scale in feet

0 100 200

Figure 1: Site Vicinity Map

SOMA ENVIRONMENTAL ENGINEERING, INC.

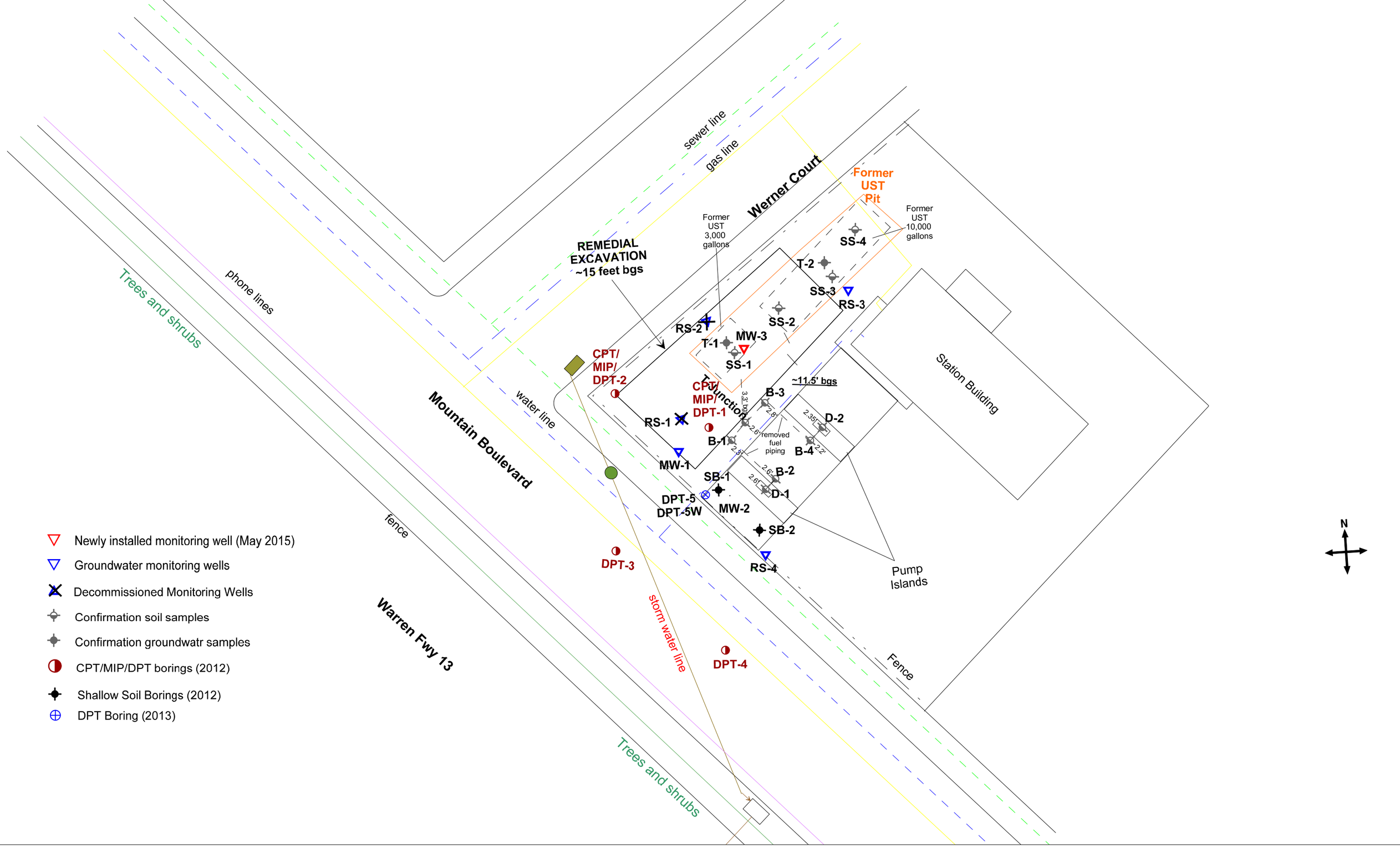

Figure 2: Site Map Showing Locations of Former USTs, Soil Borings, and Groundwater Monitoring Wells

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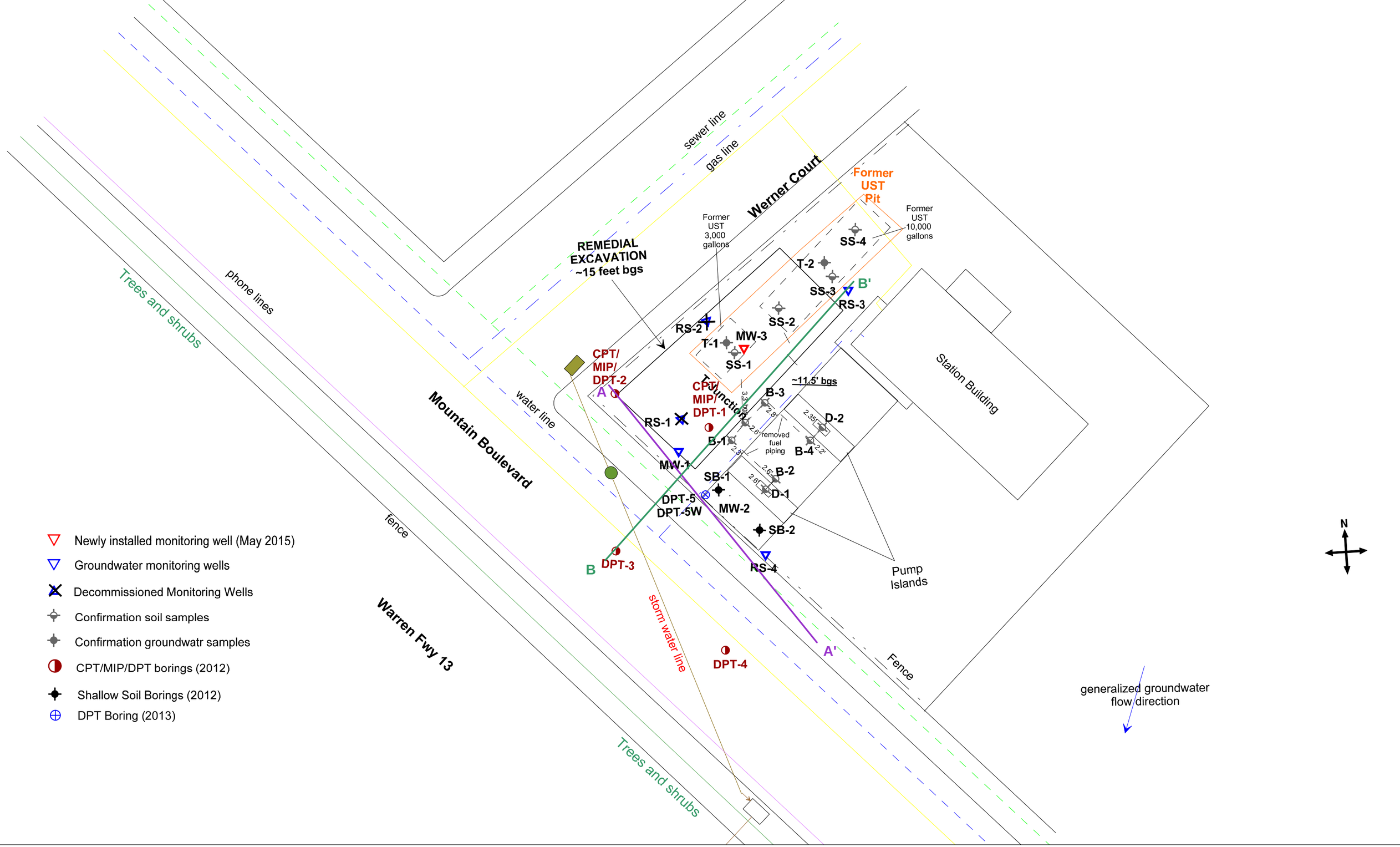

Figure 3: Locations of Geological Cross-Sections

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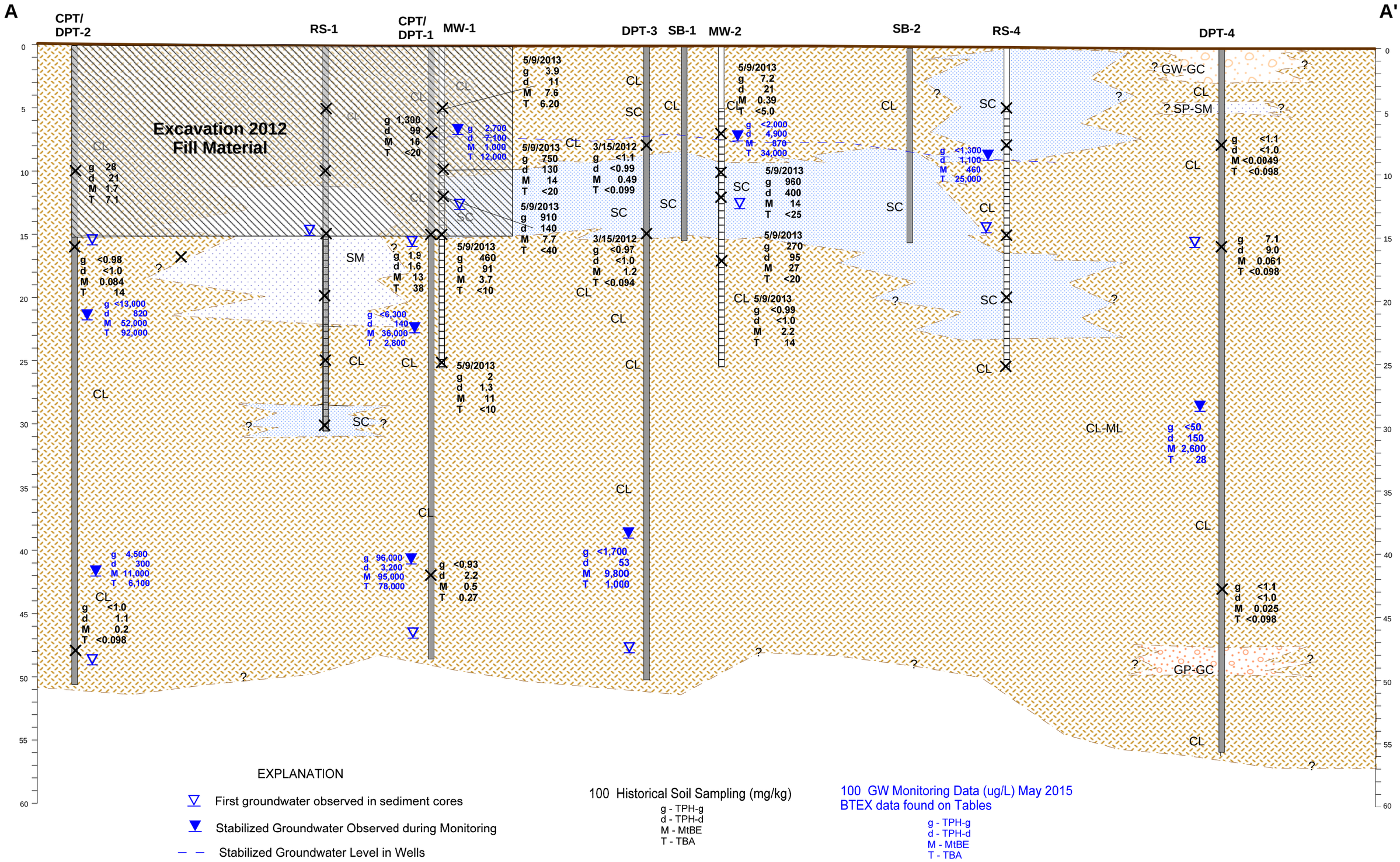

Figure 4: Geological Cross-Section A-A'

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B

DPT-3

MW-1 SB-1 RS-1

CPT/ DPT-1

MW-3

RS-3

B'

Excavation 2012
Fill Material

DPT-3: GW; CL; 3/15/2012 g <1.1 d <0.99 M 0.49 T <0.099; 3/15/2012 g <0.97 d <1.0 M 1.2 T <0.094; CL; g <1,700 d 53 M 9,800 T 1,000; CL

MW-1 SB-1 RS-1: CL; 5/9/2013 g 3.9 d 11 M 7.6 T 6.20; g 2,700 d 7,100 M 1,000 T 12,000; CL; 5/9/2013 g 750 d 130 M 14 T <20; 5/9/2013 g 910 d 140 M 7.7 T <40; SC; 5/9/2013 g 460 d 91 M 3.7 T <10; SM; CL; 5/9/2013 g 2 d 1.3 M 11 T <10; CL

CPT/ DPT-1: CL; g 1,300 d 99 M 16 T <20; CL; g 1.9 d 1.6 M 13 T 38; g <6,300 d 140 M 36,000 T 2,800; CL; g 96,000 d 3,200 M 95,000 T 78,000; CL; g <0.93 d 2.2 M 0.5 T 0.27

MW-3: g <50 d 7,000 M 160 T 380; 5/1/2015 g <1.1 d <1.0 M 0.16 T 0.0056; CL; 5/1/2015 g <1.1 d <1.0 M 0.79 T 0.0320; CL

RS-3: CL; g <50 d <50 M 4.6 T <10; CL; CL

EXPLANATION

- First groundwater observed in sediment cores
- Stabilized Groundwater Observed during Monitoring
- Stabilized Groundwater Level in Wells

100 Historical Soil Sampling (mg/kg)

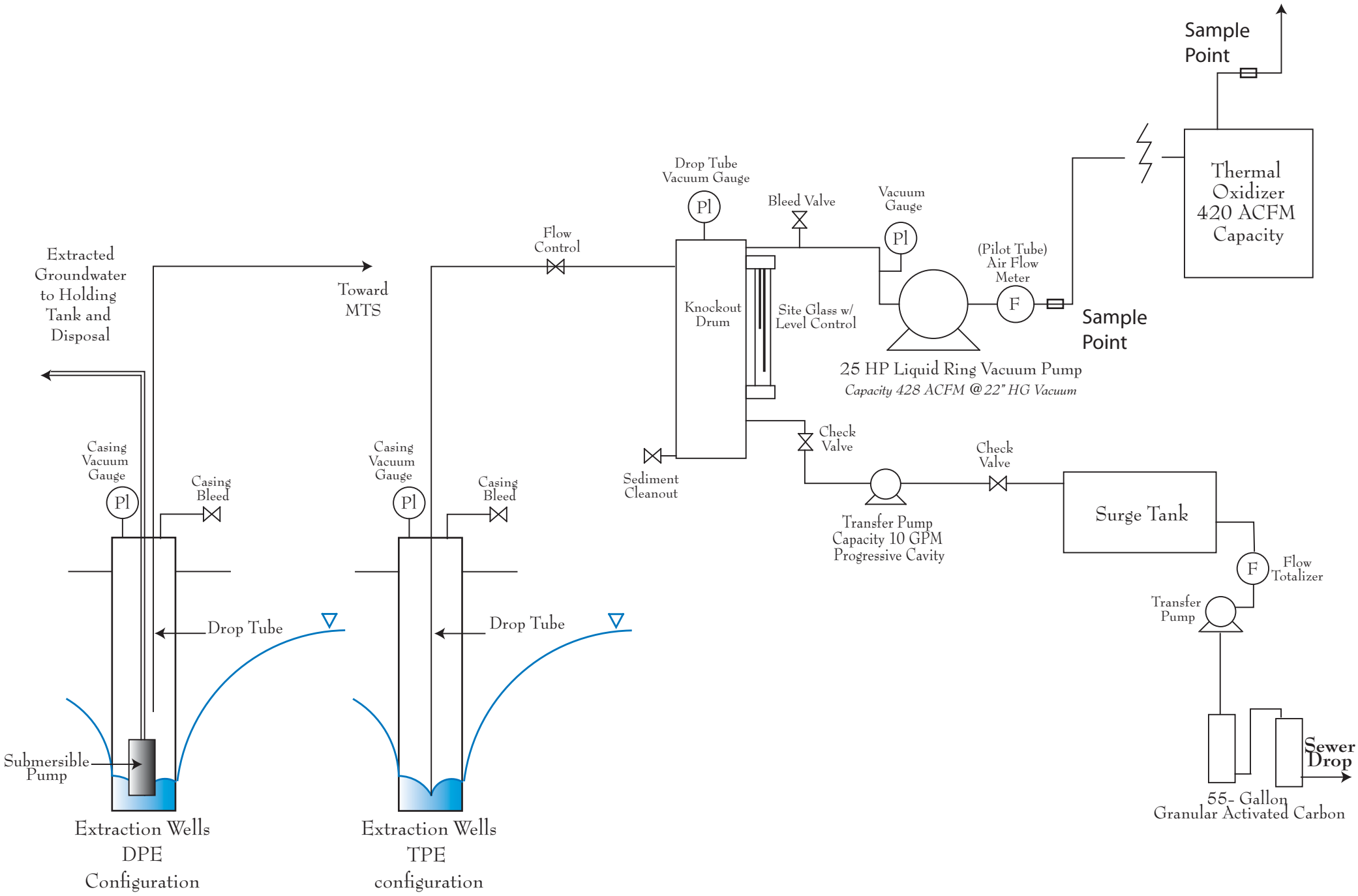
g - TPH-g
d - TPH-d
M - MtBE
T - TBA

100 GW Monitoring Data (ug/L) May 2015
BTEX data found on Tables

g - TPH-g
d - TPH-d
M - MtBE
T - TBA

Figure 5: Geological Cross-Section B-B'

ENVIRONMENTAL ENGINEERING, INC.



Not to Scale

Figure 6: MTS Schematic

ENVIRONMENTAL ENGINEERING, INC.

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)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	Methanol(mg/kg)
Sampling Beneath USTs												
~~**SS-1**~~	~~8/9/2011~~	~~11.50~~	~~**2,300**~~	~~**630 Y**~~	~~<2.5~~	~~**15**~~	~~**17**~~	~~**123**~~	~~**3.3**~~	~~<50~~	~~<2.5~~	~~1.5 C~~
~~**SS-2**~~	~~8/9/2011~~	~~11.50~~	~~**690 Y**~~	~~**800**~~	~~<2.0~~	~~<2.0~~	~~<2.0~~	~~<2.0~~	~~<2.0~~	~~<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
Sampling Beneath Fuel Piping												
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~~	~~**1,300**~~	~~99 Y~~	~~<1.0~~	~~<1.0~~	~~**16**~~	~~**58**~~	~~**16**~~	~~<20~~	~~1.6~~	~~NA~~
~~**CPT/DPT-1**~~	~~3/16/2012~~	~~15~~	~~1.9~~	~~1.6 Y~~	~~<1.0~~	~~<1.0~~	~~<1.0~~	~~<1.0~~	~~**13**~~	~~**38**~~	~~<1.0~~	~~NA~~
~~**CPT/DPT-1**~~	~~3/16/2012~~	~~42~~	~~<0.93~~	~~2.2 Y~~	~~<0.0049~~	~~<0.0049~~	~~<0.0049~~	~~<0.0049~~	~~**0.50**~~	~~**0.27**~~	~~0.020~~	~~NA~~
~~**CPT/DPT-2**~~	~~3/16/2012~~	~~10~~	~~28~~	~~21 Y~~	~~<0.25~~	~~<0.25~~	~~<0.25~~	~~0.260~~	~~**1.7**~~	~~**7.10**~~	~~<0.25~~	~~NA~~
~~**CPT/DPT-2**~~	~~3/16/2012~~	~~16~~	~~<0.98~~	~~<1.0~~	~~<0.046~~	~~<0.046~~	~~<0.046~~	~~<0.046~~	~~**0.084**~~	~~**14.00**~~	~~<0.046~~	~~NA~~
~~**CPT/DPT-2**~~	~~3/16/2012~~	~~48~~	~~<1.0~~	~~1.1 Y~~	~~<0.0049~~	~~<0.0049~~	~~<0.0049~~	~~<0.0049~~	~~**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
Aug-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
Oct-12												
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

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)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	Methanol(mg/kg)
May-13												
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	12	**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
May-15												
MW-3	**5/1/2015**	20	<1.1	<1.0	<0.0049	<0.0049	<0.0049	<0.0049	**0.16**	<0.099	0.0056	NA
MW-3	**5/1/2015**	24	<1.1	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	**0.79**	<0.096	0.0320	NA
ESL - Shallow Soil Residential, Potential Drinking			**100**	**100**	**0.044**	**2.9**	**3.3**	**2.3**	**0.023**	**0.075**	NA	NA
ESL-Deep Soil Residential, Potential Drinking			**500**	**110**	**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)	Isopropylbenzene (mg/kg)	Propylbenzene (mg/kg)	1,3,5-Trimethylbenzene (mg/kg)	1,2,4-Trimethylbenzene (mg/kg)	sec-Butylbenzene (mg/kg)	n-Butylbenzene (mg/kg)	Naphthalene (mg/kg)	Ethanol (mg/kg)
Sampling Beneath USTs												
~~**SS-1**~~	~~8/9/2011~~	~~11.50~~	~~<10~~	~~<10~~	~~2.7~~	~~12~~	~~29~~	~~93~~	~~<2.5~~	~~7.5~~	~~**19**~~	~~2~~
~~**SS-2**~~	~~8/9/2011~~	~~11.50~~	~~<8.0~~	~~<8.0~~	~~<2.0~~	~~<2.0~~	~~<2.0~~	~~<2.0~~	~~<2.0~~	~~2.4~~	~~**3.8**~~	~~<1.0~~
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
Sampling Beneath Fuel Piping												
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
Oct-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
May-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			0.500	0.077	NA	NA	NA	NA	NA	NA	1.2	NA
ESL-Deep Soil Residential, Potential Drinking			0.500	0.077	NA	NA	NA	NA	NA	NA	1.2	NA

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

Sample ID	Date	Sample Depth (feet)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
Sampling Beneath USTs							
~~**SS-1**~~	~~8/9/2011~~	~~NA~~	~~<0.25~~	~~**190**~~	~~3.7~~	~~**800**~~	~~45~~
~~**SS-2**~~	~~8/9/2011~~	~~NA~~	~~0.26~~	~~**320**~~	~~1.9~~	~~**1,400**~~	~~36~~
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
Sampling 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
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
May-13							
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	12	<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	<0.25	NA	NA	**910**	NA
DPT-5	5/9/2013	50	<0.22	NA	NA	**1,100**	NA
MW-1	5/9/2013	5	<0.23	NA	NA	**1,100**	NA
MW-1	5/9/2013	10	<0.24	NA	NA	**920**	NA
MW-1	5/9/2013	12	<0.23	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	<0.24	NA	NA	**1,800**	NA
MW-2	5/9/2013	12	<0.23	NA	NA	**1,400**	NA
MW-2	5/9/2013	17	<0.24	NA	NA	**960**	NA
ESL - Shallow Soil Residential, Potential Drinking			**12**	**1,000**	**80**	**150**	**600**
ESL-Deep Soil Residential, Potential Drinking			**78**	**2,500**	**80**	**1,500**	**2,500**

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

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. December 2013

NA: Not Applicable

~~**CPT/DPT-2**~~ Excavated locations

Table 2:
Historical 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(µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)	TBA (µg/L)	TAME (µg/L)	Naphthalene (µg/L)
Perched Discontinuous Water Bearing 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** [Y]	<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** [Y]	<50	<0.5	<0.5	<0.5	<0.5	**2,600**	**28**	210	NA
2013													
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
First Water Bearing Zone													
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** [Y]	**4,500**	**160**	**390**	**170**	**800**	**11,000**	**6,100**	1,500	NA
DPT-3-2	3/15/2012	49	39	53 [Y]	<1,700	<17	<17	<17	<17	**9,800**	**1,000**	690	NA
2013													
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 - Potential Drinking Water				**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)	Propylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	Methanol (mg/L)	Ethanol (mg/L)	*Cadmium (µg/L)*	*Chromium (µg/L)*	*Lead (µg/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 - Potential Drinking Water				**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

MPE Event
Operational Data-September 2014

2844 Mountain Blvd.
Oakland, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
5/19/2015	930									Begin extraction from MW-1 & MW-2
	1000	287	14.5	1452	139	139	0	20.6	0	
	1100	275	14.1	1450	147	147	0	20.1		
	1200	141	13.9	1451	149	149	0	20		
	1300	128	13.8	1448	149	149	0	20		
	1400	101	13.8	1451	149	149	0	20		
	1500	175	13.7	1452	149	149	0	20		
	1600	91	13.3	1450	152	152	0	19.8		
	1700	181	13.3	1449	150	150	0	19.9		
	1800	194	13.3	1452	150	150	0	19.9		
5/20/2015	1000	803	12.3	1449	162	162	0	19.2		
	1100	81	12.3	1451	162	162	0	19.2		
	1200	90	12.1	1452	162	162	0	19.2		
	1300	87	12.1	1452	163	163	0	19.1		
	1400	86	12.1	1454	163	163	0	19.1		
	1500	92	12.1	1452	163	163	0	19.1		
	1600	89	12.1	1452	163	163	0	19.1	605	
5/21/2015	1000	67	11.7	1452	168	168	0	18.8	915	Extracting from RS-1, MW-1 and MW-2
	1100	81	11.7	1463	166	166	0	18.9		
	1200	98	11.6	1459	166	166	0	18.9		
	1300	78	10.9	1449	182	182	0	17.9		
	1400	95	11	1455	182	182	0	17.9		
	1500	72	10.3	1452	182	182	0	17.9		
	1600	82	10	1454	189	189	0	17.5		Extracting from RS-1, RS-3, MW-1 and MW-2
	1700	71	9.8	1449	189	189	0	17.5		
5/22/2015	900	71	13.5	1453	155	155	0	19.6	1,533	Extracting from RS-1, MW-1 and MW-3
	1000	67	16	1455	127	127	0	21.4		
	1100	91	14.8	1448	150	150	0	19.9		
	1200	84	14.8	1445	136	136	0	20.8		
	1300	73	14.8	1453	136	136	0	20.8		
	1400	82	14.8	1455	135	135	0	20.9		
	1500	75	14.8	1463	135	135	0	20.9		
	1600	82	14.7	1448	136	136	0	20.8		
	1700	84	14.2	1450	144	144	0	20.3		Shut down for weekend
5/26/2015	1500	553	14.8	1451	135	135	0	20.9	2,758	Restart @ 14:30; Extracting from MW-1, MW-2 and MW-3
	1600	232	14.5	1452	138	138	0	20.7		
5/27/2015	1000	267	14.4	1449	147	147	0	20.1		Extracting from MW-1, MW-2 and RS-3
	1100	252	14.3	1452	149	149	0	20		
	1200	228	14.2	1451	152	152	0	19.8		
	1300	238	14.1	1449	152	152	0	19.8		
	1400	240	14.1	1450	152	152	0	19.8		
	1500	247	14.1	1452	152	152	0	19.8	5,770	
	1600	264	14.1	1453	152	152	0	19.8		
	1700	275	14.1	1449	152	152	0	19.8		

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2844 Mountain Blvd.
Oakland, California

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5/28/2015	900	379	13.9	1451	154	154	0	19.7	6,053	
	1000	398	13.8	1453	154	154	0	19.7		
	1100	386	13.8	1452	155	155	0	19.6		
	1200	376	13.8	1451	155	155	0	19.6		
	1300	389	13.8	1449	155	155	0	19.6		
	1400	403	13.8	1451	155	155	0	19.6		
	1500	401	13.6	1451	158	158	0	19.4	6,093	
	1600	398	13.4	1448	158	158	0	19.4		
5/29/2015	1100	850	13.5	1452	150	150	0	19.9	6,319	Filled up propane on truck
	1200	675	13.4	1449	152	152	0	19.8		
	1300	515	10.7	1453	182	182	0	17.9		Extracting from RS-3, RS-4, MW-1 and MW-2
	1400	435	10.6	1448	184	184	0	17.8		
	1500	374	10.5	1451	185	185	0	17.7		
	1600	367	10.5	1449	187	187	0	17.6		
	1700	348	10.5	1452	187	187	0	17.6		Shut down for the weekend
6/1/2015	900	1,522	14	1453	163	163	0	19.1	6,414	Restart @ 8:30
	1000	608	13.7	1449	157	157	0	19.5		
	1100	579	13.7	1448	157	157	0	19.5		
	1200	441	13.7	1451	155	155	0	19.6		
	1300	387	13.7	1452	155	155	0	19.6		
	1400	349	13.7	1454	155	155	0	19.6		
	1500	301	13.8	1448	157	157	0	19.5		
	1600	298	13.6	1454	157	157	0	19.5		
6/2/2015	900	395	13.4	1450	158	158	0	19.4	11,630	
	1000	384	13.4	1453	158	158	0	19.4		
	1100	421	9.6	1499	211	211	0	16.1		Extracting from MW-1, MW-2 and MW-3
	1200	435	11.1	1452	184	184	0	17.8		Extracting from MW-2, MW-3 and RS-3
	1300	412	8.2	1448	208	208	0	16.3		
	1400	335	9	1453	182	182	0	17.9		
	1500	449	7.9	1450	195	195	0	17.1		Extracting from RS-3, MW-1, MW-2 and MW-3
	1600	417	9.6	1452	198	198	0	16.9		Extracting from RS-3, MW-1 and MW-3
6/3/2015	900	447	10	1451	192	192	0	17.3	12,314	
	1000	436	10	1453	193	193	0	17.2		
	1100	384	9.7	1450	196	196	0	17		
	1200	351	9.7	1449	196	196	0	17		
	1300	322	9.7	1452	196	196	0	17		
	1400	385	7.5	1451	217	217	0	15.7		Extracting from RS-3, MW-1, MW-2 and MW-3
	1500	348	7.5	1449	217	217	0	15.7		
	1600	327	7.4	1452	220	220	0	15.5		
6/4/2015	800	297	7.3	1450	219	219	0	15.6	12,971	
	900	311	7.3	1453	219	219	0	15.6		
	1000	308	7	1451	219	219	0	15.6		
	1100	298	7.3	1452	219	219	0	15.6		
	1200	292	7.2	1452	217	217	0	15.7		

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2844 Mountain Blvd.
Oakland, California

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6/4/2015	1300	289	7.1	1454	223	223	0	15.3		
	1400	295	7.2	1453	219	219	0	15.6		
	1500	302	7.2	1452	222	222	0	15.4		
	1600	308	7.3	1450	222	222	0	15.4		
6/5/2015	900	298	7.6	1452	215	215	0	15.8	13,602	
	1000	280	7.2	1448	215	215	0	15.8		
	1100	267	6.9	1452	225	225	0	15.2		
	1200	263	6.8	1452	227	227	0	15.1		
	1300	258	6.3	1451	225	225	0	15.2		
	1400	261	6.4	1449	228	228	0	15		
	1500	250	6.2	1452	228	228	0	15		
	1600	249	6.8	1453	227	227	0	15.1		Shut down for the weekend
6/8/2015	900	2,190	12	1452	169	169	0	18.7	13,979	Restart extraction @ 8:30 from RS-3, MW-1, MW-2 and MW-3
	1000	1,415	12	1450	171	171	0	18.6		
	1100	924	11.5	1453	181	181	0	18		
	1200	818	10	1449	189	189	0	17.5		
	1300	645	9.5	1451	192	192	0	17.3		
	1400	568	9.9	1448	193	193	0	17.2		
	1500	526	9.9	1451	193	193	0	17.2		
	1600	474	11.5	1449	184	184	0	17.8		
6/9/2015	900	346	9.3	1452	201	201	0	16.7	15,298	
	1000	379	9.2	1450	201	201	0	16.7		
	1100	325	8.1	1449	209	209	0	16.2		Extracting from RS-3, RS-4, MW-1, & MW-2
	1200	230	8.1	1451	211	211	0	16.1		
	1300	220	7.9	1449	212	212	0	16		Extracting from RS-3, RS-4, MW-1, & MW-3
	1400	243	6.5	1451	215	215	0	15.8		
	1500	227	8.9	1450	206	206	0	16.4		
	1600	235	8.7	1452	204	204	0	16.5		
6/10/2015	900	214	8.7	1452	204	204	0	16.5	15,851	
	1000	217	8.9	1453	201	201	0	16.7		
	1100	215	8.9	1453	206	206	0	16.4		
	1200	213	8.2	1453	208	208	0	16.3		
	1300	208	8.3	1452	208	208	0	16.3		
	1400	181	8.7	1452	204	204	0	16.5		
	1500	200	8.8	1449	208	208	0	16.3		
	1600	194	8.9	1453	201	201	0	16.7		
6/11/2015	900	187	9.1	1450	201	201	0	16.7	16,386	
	1000	163	8.9	1452	201	201	0	16.7		
	1100	162	8.9	1451	200	200	0	16.8		
	1200	158	8.9	1452	184	184	0	17.8		
	1300	148	8.9	1448	189	189	0	17.5		
	1400	158	8.9	1452	206	206	0	16.4		
	1500	154	7.3	1451	222	222	0	15.4		
	1600	153	8.1	1452	211	211	0	16.1		

Table 3

MPE Event
Operational Data-September 2014

2844 Mountain Blvd.
Oakland, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
6/12/2015	900	138	8.7	1448	208	208	0	16.3	16,851	
	1000	139	8.7	1453	209	209	0	16.2		
	1100	157	8.7	1449	206	206	0	16.4		
	1200	141	8.2	1452	211	211	0	16.1		
	1300	139	8.2	1460	211	211	0	16.1		
	1400	150	8.3	1449	211	211	0	16.1		
	1500	138	8.6	1451	209	209	0	16.2		
	1600	142	8.5	1453	211	211	0	16.1		Shut down for weekend
6/15/2015	1000	1968	16.1	1448	117	117	0	22	17,068	Restart extraction @ 9:30 from RS-3, RS-4, MW-1, & MW-3
	1100	689	15.1	1449	108	108	0	22.6		
	1200	520	14.8	1453	138	138	0	20.7		
	1300	431	14.7	1455	146	146	0	20.2		
	1400	308	13.5	1449	152	152	0	19.8		
	1500	295	13	1449	154	154	0	19.7		
	1600	291	13	1452	157	157	0	19.5		
6/16/2015	900	197	10.8	1450	185	185	0	17.7	18,531	
	1000	184	10.8	1453	185	185	0	17.7		
	1100	171	10.5	1449	189	189	0	17.5		
	1200	141	9.8	1453	193	193	0	17.2		
	1300	144	9.9	1453	195	195	0	17.1		
	1400	142	9.9	1452	195	195	0	17.1		
	1500	140	9.8	1450	196	196	0	17		
	1600	145	9.7	1451	200	200	0	16.8		
6/17/2015	900	138	7.8	1452	215	215	0	15.8	19,189	
	1000	126	6.3	1453	214	214	0	15.9		
	1100	134	6.2	1449	214	214	0	15.9		
	1200	126	6.3	1450	215	215	0	15.8		
	1300	130	6.2	1449	217	217	0	15.7		
	1400	129	6.2	1451	215	215	0	15.8		
	1500	127	6.1	1453	215	215	0	15.8		
	1600	123	6.2	1453	217	217	0	15.7		
6/18/2015	900	127	7.8	1451	214	214	0	15.9	19,739	
	1000	138	7.8	1453	214	214	0	15.9		
	1100	129	7.7	1450	214	214	0	15.9		
	1200	132	7.7	1452	215	215	0	15.8		
	1300	133	7.7	1449	215	215	0	15.8		
	1400	135	7.6	1451	217	217	0	15.7		
	1500	131	7.6	1450	217	217	0	15.7		
	1600	129	7.6	1453	217	217	0	15.7		

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MPE Event
Operational Data-September 2014

2844 Mountain Blvd.
Oakland, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
6/19/2015	900	129	7.6	1452	215	215	0	15.8	20,214	
	1000	122	7.6	1450	215	215	0	15.8		
	1100	120	7.6	1453	217	217	0	15.7		
	1200	121	7.5	1452	217	217	0	15.7		
	1300	119	7.5	1451	217	217	0	15.7		
	1400	125	7.5	1449	219	219	0	15.6	20,401	End Extraction
Totalizer readings = 20,401 gallons = 0.74 gpm										
Total time of test = 27,690 minutes = 461.5 hours = 19.23 days										

Notes

ppmv	parts per million vapor
In of Hg	inches of mercury
In of H_20	inches of water
^{0}F	degrees Fahrenheit
scfm	standard cubic feet per minute

Table 4

MPE Event
Extraction Data and VOC Mass Removal Rate
May 2015

2844 Mountain Blvd.
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
MW-1 & MW-2	**START**	**5/19/2015**	930	0	0								
			1000	30	30	139	4,180	11.0279	287	0.0003	0.2728	0.0091	13
			1100	60	90	147	8,835	23.3119	275	0.0003	0.5526	0.0092	13
			1200	60	150	149	8,930	23.5631	141	0.0001	0.2864	0.0048	7
			1300	60	210	149	8,930	23.5631	128	0.0001	0.2600	0.0043	6
			1400	60	270	149	8,930	23.5631	101	0.0001	0.2051	0.0034	5
			1500	60	330	149	8,930	23.5631	175	0.0002	0.3554	0.0059	9
			1600	60	390	152	9,121	24.0655	91	0.0001	0.1888	0.0031	5
			1700	60	450	150	9,026	23.8143	181	0.0002	0.3716	0.0062	9
			1800	60	510	150	9,026	23.8143	194	0.0002	0.3982	0.0066	10
		5/20/2015	1000	960	1,470	162	155,073	409.1637	803	0.0008	28.3217	0.0295	42
			1100	60	1,530	162	9,692	25.5727	81	0.0001	0.1786	0.0030	4
			1200	60	1,590	162	9,692	25.5727	90	0.0001	0.1984	0.0033	5
			1300	60	1,650	163	9,787	25.8239	87	0.0001	0.1937	0.0032	5
			1400	60	1,710	163	9,787	25.8239	86	0.0001	0.1914	0.0032	5
			1500	60	1,770	163	9,787	25.8239	92	0.0001	0.2048	0.0034	5
			1600	60	1,830	163	9,780	25.8047	89	0.0001	0.1980	0.0033	5
RS-1, MW-1, & MW-2		**5/21/2015**	1000	1080	2,910	168	181,312	478.3961	67	0.0001	2.7629	0.0026	4
			1100	60	2,970	166	9,978	26.3264	81	0.0001	0.1838	0.0031	4
			1200	60	3,030	166	9,978	26.3264	98	0.0001	0.2224	0.0037	5
			1300	60	3,090	182	10,930	28.8384	78	0.0001	0.1939	0.0032	5
			1400	60	3,150	182	10,930	28.8384	95	0.0001	0.2362	0.0039	6
			1500	60	3,210	182	10,930	28.8384	72	0.0001	0.1790	0.0030	4
RS-1, RS-3, MW-1, & MW-2			1600	60	3,270	189	11,311	29.8433	82	0.0001	0.2109	0.0035	5
			1700	60	3,330	189	11,311	29.8433	71	0.0001	0.1826	0.0030	4
RS-1, MW-1, MW-3		**5/22/2015**	900	960	4,290	155	148,980	393.0863	71	0.0001	2.4058	0.0025	4
			1000	60	4,350	127	7,597	20.0461	67	0.0001	0.1158	0.0019	3
			1100	60	4,410	150	9,026	23.8143	91	0.0001	0.1868	0.0031	4
			1200	60	4,470	136	8,169	21.5534	84	0.0001	0.1561	0.0026	4
			1300	60	4,530	136	8,169	21.5534	73	0.0001	0.1356	0.0023	3
			1400	60	4,590	135	8,074	21.3022	82	0.0001	0.1506	0.0025	4
			1500	60	4,650	135	8,074	21.3022	75	0.0001	0.1377	0.0023	3
			1600	60	4,710	136	8,169	21.5534	82	0.0001	0.1523	0.0025	4
	PAUSE		1700	60	4,770	144	8,645	22.8094	84	0.0001	0.1652	0.0028	4

Table 4

MPE Event
Extraction Data and VOC Mass Removal Rate
May 2015

2844 Mountain Blvd.
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
MW-1, MW-2, MW-3	START	5/26/2015	1500	30	4,800	135	4,037	10.6511	553	0.0006	0.5077	0.0169	24
			1600	60	4,860	138	8,264	21.8046	232	0.0002	0.4361	0.0073	10
MW-1, MW-2, RS-3		5/27/2015	1000	1080	5,940	147	159,033	419.6133	267	0.0003	9.6576	0.0089	13
			1100	60	6,000	149	8,930	23.5631	252	0.0003	0.5118	0.0085	12
			1200	60	6,060	152	9,121	24.0655	228	0.0002	0.4730	0.0079	11
			1300	60	6,120	152	9,121	24.0655	238	0.0002	0.4937	0.0082	12
			1400	60	6,180	152	9,121	24.0655	240	0.0002	0.4979	0.0083	12
			1500	60	6,240	152	9,121	24.0655	247	0.0002	0.5124	0.0085	12
			1600	60	6,300	152	9,121	24.0655	264	0.0003	0.5477	0.0091	13
			1700	60	6,360	152	9,121	24.0655	275	0.0003	0.5705	0.0095	14
		5/28/2015	900	960	7,320	154	147,456	389.0670	379	0.0004	12.7107	0.0132	19
			1000	60	7,380	154	9,216	24.3167	398	0.0004	0.8342	0.0139	20
			1100	60	7,440	155	9,311	24.5679	386	0.0004	0.8175	0.0136	20
			1200	60	7,500	155	9,311	24.5679	376	0.0004	0.7963	0.0133	19
			1300	60	7,560	155	9,311	24.5679	389	0.0004	0.8238	0.0137	20
			1400	60	7,620	155	9,311	24.5679	403	0.0004	0.8535	0.0142	20
			1500	60	7,680	158	9,502	25.0703	401	0.0004	0.8666	0.0144	21
			1600	60	7,740	158	9,502	25.0703	398	0.0004	0.8601	0.0143	21
		5/29/2015	1100	1140	8,880	150	171,487	452.4711	850	0.0009	33.1526	0.0291	42
			1200	60	8,940	152	9,121	24.0655	675	0.0007	1.4002	0.0233	34
RS-3, RS-4, MW-1, MW-2			1300	60	9,000	182	10,930	28.8384	515	0.0005	1.2802	0.0213	31
			1400	60	9,060	184	11,025	29.0896	435	0.0004	1.0908	0.0182	26
			1500	60	9,120	185	11,120	29.3409	374	0.0004	0.9459	0.0158	23
			1600	60	9,180	187	11,215	29.5921	367	0.0004	0.9362	0.0156	22
	PAUSE		1700	60	9,240	187	11,215	29.5921	348	0.0003	0.8877	0.0148	21
RS-3, RS-4, MW-1, MW-2	START	6/1/2015	900	30	9,270	163	4,894	12.9120	1,522	0.0015	1.6940	0.0565	81
			1000	60	9,330	157	9,406	24.8191	608	0.0006	1.3008	0.0217	31
			1100	60	9,390	157	9,406	24.8191	579	0.0006	1.2387	0.0206	30
			1200	60	9,450	155	9,311	24.5679	441	0.0004	0.9339	0.0156	22
			1300	60	9,510	155	9,311	24.5679	387	0.0004	0.8196	0.0137	20
			1400	60	9,570	155	9,311	24.5679	349	0.0003	0.7391	0.0123	18
			1500	60	9,630	157	9,406	24.8191	301	0.0003	0.6440	0.0107	15
			1600	60	9,690	157	9,406	24.8191	298	0.0003	0.6375	0.0106	15

Table 4

MPE Event
Extraction Data and VOC Mass Removal Rate
May 2015

2844 Mountain Blvd.
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
		6/2/2015	900	1020	10,710	158	161,528	426.1953	395	0.0004	14.5115	0.0142	20
			1000	60	10,770	158	9,502	25.0703	384	0.0004	0.8298	0.0138	20
MW-1, MW-2, MW-3			1100	60	10,830	211	12,644	33.3602	421	0.0004	1.2106	0.0202	29
MW-2, MW-3, RS-3			1200	60	10,890	184	11,025	29.0896	435	0.0004	1.0908	0.0182	26
			1300	60	10,950	208	12,453	32.8578	412	0.0004	1.1669	0.0194	28
			1400	60	11,010	182	10,930	28.8384	335	0.0003	0.8328	0.0139	20
RS-3, MW-1, MW-2, MW-3			1500	60	11,070	195	11,691	30.8481	449	0.0004	1.1939	0.0199	29
RS-3, MW-1, MW-3			1600	60	11,130	198	11,882	31.3505	417	0.0004	1.1269	0.0188	27
		6/3/2015	900	1020	12,150	192	195,517	515.8767	447	0.0004	19.8775	0.0195	28
			1000	60	12,210	193	11,596	30.5969	436	0.0004	1.1499	0.0192	28
			1100	60	12,270	196	11,787	31.0993	384	0.0004	1.0294	0.0172	25
			1200	60	12,330	196	11,787	31.0993	351	0.0004	0.9409	0.0157	23
			1300	60	12,390	196	11,787	31.0993	322	0.0003	0.8632	0.0144	21
RS-3, MW-1, MW-2, MW-3			1400	60	12,450	217	13,024	34.3650	385	0.0004	1.1405	0.0190	27
			1500	60	12,510	217	13,024	34.3650	348	0.0003	1.0309	0.0172	25
			1600	60	12,570	220	13,215	34.8674	327	0.0003	0.9828	0.0164	24
		6/4/2015	800	960	13,530	219	209,913	553.8597	297	0.0003	14.1796	0.0148	21
			900	60	13,590	219	13,120	34.6162	311	0.0003	0.9280	0.0155	22
			1000	60	13,650	219	13,120	34.6162	308	0.0003	0.9190	0.0153	22
			1100	60	13,710	219	13,120	34.6162	298	0.0003	0.8892	0.0148	21
			1200	60	13,770	217	13,024	34.3650	292	0.0003	0.8650	0.0144	21
		6/4/2015	1300	60	13,830	223	13,405	35.3699	289	0.0003	0.8811	0.0147	21
			1400	60	13,890	219	13,120	34.6162	295	0.0003	0.8803	0.0147	21
			1500	60	13,950	222	13,310	35.1186	302	0.0003	0.9142	0.0152	22
			1600	60	14,010	222	13,310	35.1186	308	0.0003	0.9324	0.0155	22
		6/5/2015	900	1020	15,030	215	219,795	579.9349	298	0.0003	14.8971	0.0146	21
			1000	60	15,090	215	12,929	34.1138	280	0.0003	0.8234	0.0137	20
			1100	60	15,150	225	13,500	35.6211	267	0.0003	0.8198	0.0137	20
			1200	60	15,210	227	13,596	35.8723	263	0.0003	0.8132	0.0136	20
			1300	60	15,270	225	13,500	35.6211	258	0.0003	0.7922	0.0132	19
			1400	60	15,330	228			261				
			1500	60	15,390	228	13,691	36.1235	250	0.0003	0.7785	0.0130	19
	PAUSE		1600	60	15,450	227	13,596	35.8723	249	0.0002	0.7700	0.0128	18

Table 4

MPE Event
Extraction Data and VOC Mass Removal Rate
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2844 Mountain Blvd.
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
RS-3, MW-1, MW-2, MW-3	**START**	**6/8/2015**	900	30	15,480	169	5,084	13.4144	2,190	0.0022	2.5323	0.0844	122
			1000	60	15,540	171	10,263	27.0800	1,415	0.0014	3.3030	0.0551	79
			1100	60	15,600	181	10,835	28.5872	924	0.0009	2.2769	0.0379	55
			1200	60	15,660	189	11,311	29.8433	818	0.0008	2.1043	0.0351	51
			1300	60	15,720	192	11,501	30.3457	645	0.0006	1.6872	0.0281	40
			1400	60	15,780	193	11,596	30.5969	568	0.0006	1.4981	0.0250	36
			1500	60	15,840	193	11,596	30.5969	526	0.0005	1.3873	0.0231	33
			1600	60	15,900	184	11,025	29.0896	474	0.0005	1.1886	0.0198	29
		6/9/2015	900	1020	16,920	201	205,228	541.5000	346	0.0003	16.1503	0.0158	23
			1000	60	16,980	201	12,072	31.8529	379	0.0004	1.0406	0.0173	25
RS-3, RS-4, MW-1, MW-2			1100	60	17,040	209	12,548	33.1090	325	0.0003	0.9275	0.0155	22
			1200	60	17,100	211	12,644	33.3602	230	0.0002	0.6614	0.0110	16
RS-3, RS-4, MW-1, MW-3			1300	60	17,160	212	12,739	33.6114	220	0.0002	0.6374	0.0106	15
			1400	60	17,220	215	12,929	34.1138	243	0.0002	0.7146	0.0119	17
			1500	60	17,280	206	12,358	32.6066	227	0.0002	0.6380	0.0106	15
			1600	60	17,340	204	12,263	32.3554	235	0.0002	0.6554	0.0109	16
		6/10/2015	900	1020	18,360	204	208,466	550.0411	214	0.0002	10.1465	0.0099	14
			1000	60	18,420	201	12,072	31.8529	217	0.0002	0.5958	0.0099	14
			1100	60	18,480	206	12,358	32.6066	215	0.0002	0.6043	0.0101	15
			1200	60	18,540	208	12,453	32.8578	213	0.0002	0.6033	0.0101	14
			1300	60	18,600	208	12,453	32.8578	208	0.0002	0.5891	0.0098	14
			1400	60	18,660	204	12,263	32.3554	181	0.0002	0.5048	0.0084	12
			1500	60	18,720	208	12,453	32.8578	200	0.0002	0.5665	0.0094	14
			1600	60	18,780	201	12,072	31.8529	194	0.0002	0.5327	0.0089	13
		6/11/2015	900	1020	19,800	201	205,228	541.5000	187	0.0002	8.7287	0.0086	12
			1000	60	19,860	201	12,072	31.8529	163	0.0002	0.4476	0.0075	11
			1100	60	19,920	200	11,977	31.6017	162	0.0002	0.4413	0.0074	11
			1200	60	19,980	184	11,025	29.0896	158	0.0002	0.3962	0.0066	10
			1300	60	20,040	189	11,311	29.8433	148	0.0001	0.3807	0.0063	9
			1400	60	20,100	206	12,358	32.6066	158	0.0002	0.4441	0.0074	11
			1500	60	20,160	222	13,310	35.1186	154	0.0002	0.4662	0.0078	11
			1600	60	20,220	211	12,644	33.3602	153	0.0002	0.4400	0.0073	11

Table 4

MPE Event
Extraction Data and VOC Mass Removal Rate
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Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
		6/12/2015	900	1020	21,240	208	211,703	558.5821	138	0.0001	6.6447	0.0065	9
			1000	60	21,300	209	12,548	33.1090	139	0.0001	0.3967	0.0066	10
			1100	60	21,360	206	12,358	32.6066	157	0.0002	0.4413	0.0074	11
			1200	60	21,420	211	12,644	33.3602	141	0.0001	0.4055	0.0068	10
			1300	60	21,480	211	12,644	33.3602	139	0.0001	0.3997	0.0067	10
			1400	60	21,540	211	12,644	33.3602	150	0.0002	0.4313	0.0072	10
			1500	60	21,600	209	12,548	33.1090	138	0.0001	0.3939	0.0066	9
	PAUSE		1600	60	21,660	211	12,644	33.3602	142	0.0001	0.4083	0.0068	10
RS-3, RS-4, MW-1, MW-3	**START**	**6/15/2015**	1000	30	21,690	117	3,510	9.2612	1968	0.0020	1.5711	0.0524	75
			1100	60	21,750	108	6,480	17.0976	689	0.0007	1.0155	0.0169	24
			1200	60	21,810	138	8,280	21.8470	520	0.0005	0.9793	0.0163	24
			1300	60	21,870	146	8,760	23.1135	431	0.0004	0.8587	0.0143	21
			1400	60	21,930	152	9,120	24.0633	308	0.0003	0.6389	0.0106	15
			1500	60	21,990	154	9,240	24.3799	295	0.0003	0.6200	0.0103	15
			1600	60	22,050	157	9,420	24.8549	291	0.0003	0.6235	0.0104	15
		6/16/2015	900	1020	23,070	185	188,700	497.8892	197	0.0002	8.4549	0.0083	12
			1000	60	23,130	185	11,100	29.2876	184	0.0002	0.4645	0.0077	11
			1100	60	23,190	189	11,340	29.9208	171	0.0002	0.4410	0.0074	11
			1200	60	23,250	193	11,580	30.5541	141	0.0001	0.3714	0.0062	9
			1300	60	23,310	195	11,700	30.8707	144	0.0001	0.3832	0.0064	9
			1400	60	23,370	195	11,700	30.8707	142	0.0001	0.3779	0.0063	9
			1500	60	23,430	196	11,760	31.0290	140	0.0001	0.3745	0.0062	9
			1600	60	23,490	200	12,000	31.6623	145	0.0001	0.3957	0.0066	9
		6/17/2015	900	1020	24,510	215	219,795	579.9349	138	0.0001	6.8987	0.0068	10
			1000	60	24,570	214	12,834	33.8626	126	0.0001	0.3678	0.0061	9
			1100	60	24,630	214	12,834	33.8626	134	0.0001	0.3911	0.0065	9
			1200	60	24,690	215	12,929	34.1138	126	0.0001	0.3705	0.0062	9
			1300	60	24,750	217	13,024	34.3650	130	0.0001	0.3851	0.0064	9
			1400	60	24,810	215	12,929	34.1138	129	0.0001	0.3793	0.0063	9
			1500	60	24,870	215	12,929	34.1138	127	0.0001	0.3735	0.0062	9
			1600	60	24,930	217	13,024	34.3650	123	0.0001	0.3644	0.0061	9

Table 4

MPE Event
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May 2015

2844 Mountain Blvd.
Oakland, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
		6/18/2015	900	1020	25,950	214	218,177	575.6643	127	0.0001	6.3020	0.0062	9
			1000	60	26,010	214	12,834	33.8626	138	0.0001	0.4028	0.0067	10
			1100	60	26,070	214	12,834	33.8626	129	0.0001	0.3765	0.0063	9
			1200	60	26,130	215	12,929	34.1138	132	0.0001	0.3882	0.0065	9
			1300	60	26,190	215	12,929	34.1138	133	0.0001	0.3911	0.0065	9
			1400	60	26,250	217	13,024	34.3650	135	0.0001	0.3999	0.0067	10
			1500	60	26,310	217	13,024	34.3650	131	0.0001	0.3881	0.0065	9
			1600	60	26,370	217	13,024	34.3650	129	0.0001	0.3821	0.0064	9
		6/19/2015	900	1020	27,390	215	219,795	579.9349	129	0.0001	6.4488	0.0063	9
			1000	60	27,450	215	12,929	34.1138	122	0.0001	0.3588	0.0060	9
			1100	60	27,510	217	13,024	34.3650	120	0.0001	0.3555	0.0059	9
			1200	60	27,570	217	13,024	34.3650	121	0.0001	0.3584	0.0060	9
			1300	60	27,630	217	13,024	34.3650	119	0.0001	0.3525	0.0059	8
			1400	60	27,690	219	13,120	34.6162	125	0.0001	0.3730	0.0062	9
	STOP												
	TOTAL				**27,690**		**5,143,921**	**13,572**			**328**	**0.0118**	**17**
	MEDIAN					**192**			**231**	**0.0002**			

Notes

Q	volumetric flow rate
SCFM	standard cubic feet per minute
ft^3	cubic feet per minute
VOC	volatile organic compounds
PID	photo-ionization detector
ppmv	parts per million vapor

DERIVATION OF MASS REMOVAL RATE

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

Table 5
SVE Abatement System Emissions
2844 Mountain Blvd., Oakland, CA

Operation Start Date/Time	Onboard Analyzer Sample Date/Time	Onboard Analyzer		Lab Sample Date/Time	USEPA TO-3 MODIFIED		USEPA TO-15 MODIFIED		Q (SCFM)	Abatement Efficiency	Emissions Rate Benzene (lbs/day)
		Hydrocarbons (TPH-g + BTEX) (ppmv as hexane)			TPH-g (ppmv)		Benzene (ppmv)				
		Inlet	Outlet		Inlet	Outlet	Inlet	Outlet			
5/19/15 @ 09:30	5/19/15 @ 13:00	128	0	5/19/15 @ 12:55	37	0.44	0.24	0.0026	149	98.917%	1.12E-04
	5/27/15 @ 15:00	247	0	5/27/15 @ 15:10	77	0.18	1.1	0.0012	152	99.891%	5.21E-05

Duration of Event = 27,690 mins or 19.23 days

Total Benzene Emmissions = 0.0016 lbs.

SCFM standard cubic feet per minute

lbs/day pounds per day

Table 6
Pre & Post MPE Event Groundwater Analytical Results
2844 Mountain Blvd., Oakland, CA

Monitoring Well	Date	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)	TBA (µg/L)	TAME (µg/L)
MW-1	5/13/2015	2,700	7,100	150	<8.3	170	76	1,000	12,000	150
	6/22/2015	**<1,300**	**2,600**	**<13**	**<13**	**<13**	**<13**	**4,800**	**17,000**	**450**
MW-2	5/13/2015	<2,000	4,900	86	<20	45	<20	870	34,000	96
	6/22/2015	**<2,000**	**3,300**	**<20**	**<20**	**<20**	**<20**	**3,400**	**18,000**	**460**
MW-3	5/13/2015	<50	7,000	<0.5	<0.5	<0.5	0.75	160	380	8.40
	6/22/2015	**<100**	**650 Y**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**190**	**17**	**6.30**
RS-3	5/13/2015	<50	<50	<0.5	<0.5	<0.5	<0.5	4.60	<10	<0.5
	6/22/2015	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<10**	**<0.5**
RS-4	5/13/2015	<1,300	1,100	<13	<13	<13	<13	460	25,000	21
	6/22/2015	**<1,300**	**770**	**<13**	**<13**	**<13**	**<13**	**5,900**	**7,900**	**500**

Notes:

TPH-g: Total hydrocarbons as gasoline

TPH-d: Total hydrocarbons as diesel

Y: Sample exhibits chromatographic pattern which does not resemble standard.

<: Not detected above the laboratroy reporting limit.

NA: Not Analyzed

* : Laboratory instruments for EPA8260 were down. Therefore, TPH-g was analyzed by EPA8015B for samples collected on 11/13/2014 unlike the pre-MPE sampling event which was analyzed by EPA8260

APPENDIX A

DRILLING PERMIT

Alameda County Public Works Agency - Water Resources Well Permit

Public Works Agency
Alameda County

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

Application Approved on: 04/20/2015 By jamesy

Permit Numbers: W2015-0332
Permits Valid from 05/01/2015 to 05/01/2015

Application Id:	1429302500218	**City of Project Site:**	Oakland
Site Location:	2844 Mountain Blvd.		
Project Start Date:	05/01/2015	**Completion Date:**	05/01/2015
Assigned Inspector:	Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org		
Applicant:	SOMA Environmental Engineering, Inc. - Mansour Sepehr 6620 Owens Drive, Suite A, Pleasanton, CA 94588	**Phone:**	925-734-6400
Property Owner:	Tejindar Singh 6400 Dublin Blvd., Dublin, CA 94568	**Phone:**	925-360-7777
Client:	** same as Property Owner **		
Contact:	Lizzie Hightower	**Phone:** **Cell:**	925-734-6400 925-330-5235

	Total Due:	$397.00
Receipt Number: WR2015-0184	**Total Amount Paid:**	$397.00
Payer Name : Mansour Sepehr	Paid By: VISA	**PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 1 Wells
Driller: Gregg Drilling & Testing - Lic #: 485165 - Method: CA **Work Total: $397.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2015-0332	04/20/2015	07/30/2015	MW-3	10.00 in.	4.00 in.	13.00 ft	25.00 ft

Specific Work Permit Conditions

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

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

3. 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.

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 assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

7. Minimum 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.

APPENDIX B

BORING LOG,

WELL DEVELOPMENT LOG

AND PHOTOGRAPHIC DOCUMENTATION

ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE: MW-3

PROJECT: 5082

DATE DRILLED: May 1, 2015

SITE LOCATION: 2844 Mountain Blvd., Oakland

CASING ELEVATION: 675.58

DRILLER: Gregg Drilling & Testing

First Encountered GW: NA
Stablized GW: 6.60 feet

DRILLING METHOD: HSA

T.O.C. TO SCREEN: 15 feet

BORING DIAMETER: 10 inches

SCREEN LENGTH: 10 feet

LOGGED BY: E. Hightower

APPROVED BY: M. Sepehr

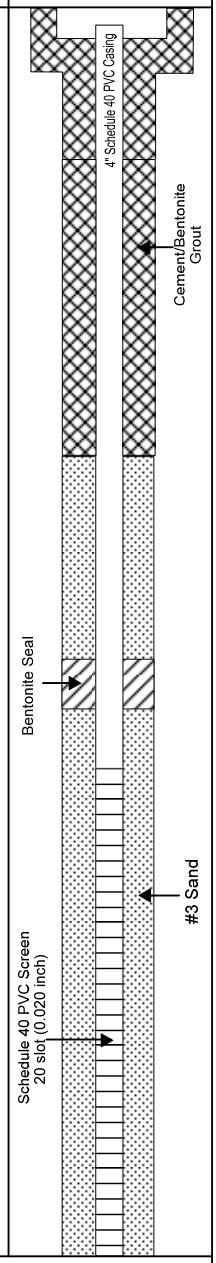
PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
	0			Excavation Fill
8	15		CL	SANDY LEAN CLAY with gravel: Brown, moist, ~30% fine- to medium-grained sand, ~15% gravel, medium dry strength, no dilatancy, medium toughness, no HCl reaction, firm, PHC odor.
9	20		CL	SANDY LEAN CLAY: Brown, moist, ~40% fine- to medium-grained sand, medium dry strength, no dilatancy, medium toughness, no HCl reaction, firm, slight PHC odor.
3.7	25			

SAMPLED: SPLIT SPOON, CORE

GW LEVEL

BLOWCOUNTS

WELL DIAGRAM



COMMENTS:

GREGG

MONITORING WELL DEVELOPMENT LOG

Page _____ of _____

All measurements taken from: ☒ Top of Casing ☐ Protective Casing ☐ Ground Level

Sample ID _____

Well Number MW-3 | Borehole Diameter 10" | Qty. of Drilling Fluid Lost _____

Date 5-8-15 | Screen Length 10FT | Minimum Gal. to be Purged _____

Time Start: 810 End: _____ | Measured Depth (pre-development) 23.65 | Development Method Bail-Surge-Bail-pump

Client Soma ENVIRONMENTAL | Measured Depth (post-development) 24.80 | Purging Equipment SS Bailer-3pump

Project 2544 Mountain Blvd, Oakland CA | Static Water Level (ft.) 6.45 | Water Level Equipment Solinst

Job Number D2120467 | Standing Water Column (ft.) 18.35 | pH/EC Meter Horiba U52

Installation Date -5-1-15 | One Casing Volume (gal.) 12.111 | Turbidity Meter Horiba U52

Well Diameter 4" | One Annulus Vol. (gal.) _____ | Other _____

Time	Amount Purged (gal.)	Field Parameters Measured						GPM / W.L.	W.L.	Comments	Field Tech.
		pH	EC	Turbidity	D.O.	Temperature	SAL.				
928	75	7.96	.731	890	-	17.10	0.4	2	6.82	Bail-20gal	
933	85	7.25	.664	125	-	17.09	0.4	2	6.82	Surge-15MIN	
938	95	7.23	.665	26.2	-	17.10	0.4	2	6.82	Bail-20gal	
943	105	7.25	.661	15.3	-	17.13	0.4	2	6.82		
948	110	7.22	.664	9.0	-	17.20	0.4	2	6.82		
950	115	7.21	.662	11.5	-	17.18	0.4	2	6.82		

FINAL FIELD PARAMETER MEASUREMENTS

Plate 1. Gregg Drilling setting up on MW-3

Plate 2. Drilling MW-3

Plate 3. Gregg Drilling putting PVC casing into MW-3

Plate 4. Gregg Drilling adding sand to MW-3

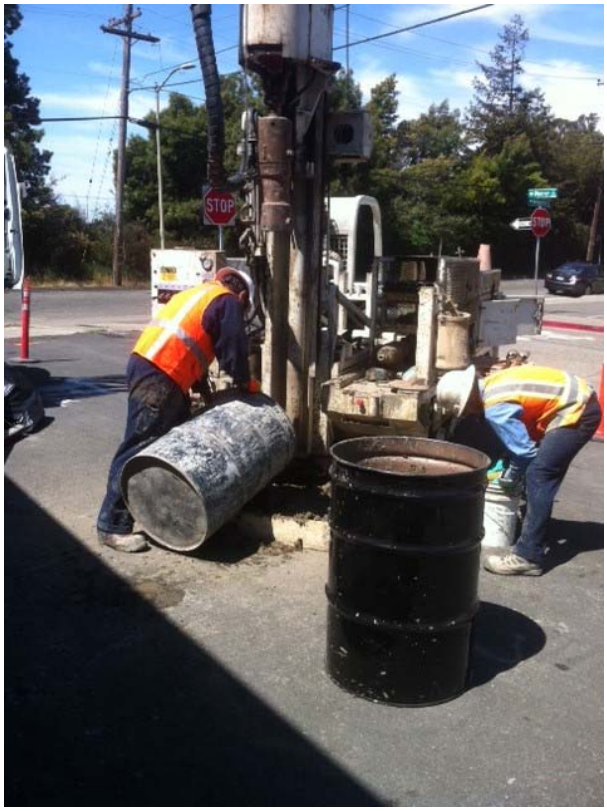


Plate 5. Gregg Drilling pouring grout into MW-3

Plate 6. MW-3 installed

Plate 7. Gregg Drilling bailing & surging MW-3

Plate 8. Gregg Drilling pumping groundwater from MW-3

APPENDIX C

LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS FOR WELL INSTALLATION

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

Laboratory Job Number 266604
ANALYTICAL REPORT

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

Sample ID	Lab ID
MW-3 @ 20FT	266604-001
MW-3 @ 24FT	266604-002

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

Signature: Tracy Babjar Date: 05/12/2015

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**266604**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**5082**
Location:	**2844 Mountain Blvd, Oakland**
Request Date:	**05/06/15**
Samples Received:	**05/06/15**

This data package contains sample and QC results for two soil samples, requested for the above referenced project on 05/06/15. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):
Low recoveries were observed for MTBE in the MS/MSD of MW-3 @ 20FT (lab # 266604-001); the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

CHAIN OF CUSTODY

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

LOGIN # 246604

Project No: 5082

Project Name: 2844 Mountain Blvd., Oakland

Turnaround Time: Standard

Sampler: Lizzie Hightower

Report To: Joyce Bobek

Company : SOMA Environmental

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	Analyses: BTEX, MtBE 8260	Analyses: Gasoline Oxygenates, Lead Scavengers 8260	Analyses: TPH-g, TPH-d 8015
	mw-3@20ft	5/1/15 09:42	X			6" Sleeve				X	X	X	X
	mw-3@24ft	5/1/15 09:47	X			↓				X	X	X	X

Notes: EDF OUTPUT REQUIRED

RELINQUISHED BY:

5/6/14 09:44 DATE/TIME

5/6/14 1525 DATE/TIME

DATE/TIME

RECEIVED BY:

5/6/14 9:44 DATE/TIME

5/6/14 1525 DATE/TIME

DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 246604 Date Received 5/6/15 Number of coolers 1
Client SOMA Environmental Project 2844 Mountain Blvd.

Date Opened 5/6 By (print) SL (sign)
Date Logged in 5/6 By (print) (sign)

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

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many Name Date
2B. Were custody seals intact upon arrival? YES NO N/A
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

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

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

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 5.7°

☒ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

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

8. Were Method 5035 sampling containers present? YES (NO)
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? YES NO (N/A)
21. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? By Date:

COMMENTS

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 266604

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

Client : SOMA Environmental Engineering Inc.
Project : 5082
Location : 2844 Mountain Blvd, Oakland

Client Sample ID : MW-3 @ 20FT Laboratory Sample ID : 266604-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
MTBE	160		4.9	ug/Kg	As Recd	0.9862	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	5.6		4.9	ug/Kg	As Recd	0.9862	EPA 8260B	EPA 5030B

Client Sample ID : MW-3 @ 24FT Laboratory Sample ID : 266604-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
MTBE	790		50	ug/Kg	As Recd	10.00	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	32		4.8	ug/Kg	As Recd	0.9579	EPA 8260B	EPA 5030B

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	222960
Units:	mg/Kg	Sampled:	05/01/15
Basis:	as received	Received:	05/06/15
Diln Fac:	1.000	Analyzed:	05/07/15

Field ID: MW-3 @ 20FT Lab ID: 266604-001
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	115	78-138

Field ID: MW-3 @ 24FT Lab ID: 266604-002
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	119	78-138

Type: BLANK Lab ID: QC787065

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	96	78-138

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC787066	Batch#:	222960
Matrix:	Soil	Analyzed:	05/07/15
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.066	107	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	115	78-138

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8015B
Field ID:	MW-3 @ 20FT	Diln Fac:	1.000
MSS Lab ID:	266604-001	Batch#:	222960
Matrix:	Soil	Sampled:	05/01/15
Units:	mg/Kg	Received:	05/06/15
Basis:	as received	Analyzed:	05/07/15

Type: MS Lab ID: QC787081

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.09482	10.42	10.30	98	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	78-138

Type: MSD Lab ID: QC787082

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.87	10.49	96	50-120	2	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	125	78-138

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3550B
Project#:	5082	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	05/01/15
Units:	mg/Kg	Received:	05/06/15
Basis:	as received	Prepared:	05/07/15
Diln Fac:	1.000	Analyzed:	05/07/15
Batch#:	222965		

Field ID: MW-3 @ 20FT Lab ID: 266604-001
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
o-Terphenyl	108	59-140

Field ID: MW-3 @ 24FT Lab ID: 266604-002
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
o-Terphenyl	113	59-140

Type: BLANK Lab ID: QC787089

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
o-Terphenyl	111	59-140

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3550B
Project#:	5082	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC787090	Batch#:	222965
Matrix:	Soil	Prepared:	05/07/15
Units:	mg/Kg	Analyzed:	05/07/15

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.01	49.41	99	58-137

Surrogate	%REC	Limits
o-Terphenyl	109	59-140

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3550B
Project#:	5082	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	222965
MSS Lab ID:	266608-015	Sampled:	05/06/15
Matrix:	Soil	Received:	05/06/15
Units:	mg/Kg	Prepared:	05/07/15
Basis:	as received	Analyzed:	05/07/15
Diln Fac:	1.000		

Type: MS Lab ID: QC787091

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	0.9774	49.99	52.75	104	46-154

Surrogate	%REC	Limits
o-Terphenyl	116	59-140

Type: MSD Lab ID: QC787092

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.64	52.12	103	46-154	1	50

Surrogate	%REC	Limits
o-Terphenyl	107	59-140

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

BTXE & Oxygenates

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-3 @ 20FT	Diln Fac:	0.9862
Lab ID:	266604-001	Batch#:	222910
Matrix:	Soil	Sampled:	05/01/15
Units:	ug/Kg	Received:	05/06/15
Basis:	as received	Analyzed:	05/07/15

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	99
MTBE	160	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)	5.6	4.9
Ethanol	ND	990
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

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	102	80-138
Toluene-d8	92	80-120
Bromofluorobenzene	99	78-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

BTXE & Oxygenates

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-3 @ 24FT	Basis:	as received
Lab ID:	266604-002	Sampled:	05/01/15
Matrix:	Soil	Received:	05/06/15
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
tert-Butyl Alcohol (TBA)	ND	96	0.9579	222950	05/07/15
MTBE	790	50	10.00	223022	05/09/15
Isopropyl Ether (DIPE)	ND	4.8	0.9579	222950	05/07/15
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	0.9579	222950	05/07/15
1,2-Dichloroethane	ND	4.8	0.9579	222950	05/07/15
Benzene	ND	4.8	0.9579	222950	05/07/15
Methyl tert-Amyl Ether (TAME)	32	4.8	0.9579	222950	05/07/15
Ethanol	ND	960	0.9579	222950	05/07/15
Toluene	ND	4.8	0.9579	222950	05/07/15
1,2-Dibromoethane	ND	4.8	0.9579	222950	05/07/15
Ethylbenzene	ND	4.8	0.9579	222950	05/07/15
m,p-Xylenes	ND	4.8	0.9579	222950	05/07/15
o-Xylene	ND	4.8	0.9579	222950	05/07/15

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	112	78-134	0.9579	222950	05/07/15
1,2-Dichloroethane-d4	106	80-138	0.9579	222950	05/07/15
Toluene-d8	99	80-120	0.9579	222950	05/07/15
Bromofluorobenzene	102	78-123	0.9579	222950	05/07/15

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC786830	Batch#:	222910
Matrix:	Soil	Analyzed:	05/06/15
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	117.1	117	49-131
MTBE	20.00	23.35	117	61-122
Isopropyl Ether (DIPE)	20.00	21.25	106	54-129
Ethyl tert-Butyl Ether (ETBE)	20.00	21.94	110	60-120
1,2-Dichloroethane	20.00	21.86	109	78-136
Benzene	20.00	23.45	117	80-123
Methyl tert-Amyl Ether (TAME)	20.00	21.36	107	70-120
Toluene	20.00	21.95	110	80-120
1,2-Dibromoethane	20.00	21.63	108	80-124
Ethylbenzene	20.00	22.49	112	80-122
m,p-Xylenes	40.00	46.24	116	80-127
o-Xylene	20.00	22.30	111	80-125

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	94	80-138
Toluene-d8	94	80-120
Bromofluorobenzene	93	78-123

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	266604	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:	QC786832	Batch#:	222910
Matrix:	Soil	Analyzed:	05/06/15
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

Surrogate	%REC	Limits
Dibromofluoromethane	103	78-134
1,2-Dichloroethane-d4	97	80-138
Toluene-d8	94	80-120
Bromofluorobenzene	98	78-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-3 @ 20FT	Batch#:	222910
MSS Lab ID:	266604-001	Sampled:	05/01/15
Matrix:	Soil	Received:	05/06/15
Units:	ug/Kg	Analyzed:	05/07/15
Basis:	as received		

Type: MS Diln Fac: 0.9766
Lab ID: QC786920

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<13.06	244.1	214.3	88	44-120
MTBE	157.5	48.83	177.3	41 *	49-120
Isopropyl Ether (DIPE)	<0.8582	48.83	42.05	86	46-120
Ethyl tert-Butyl Ether (ETBE)	<0.7226	48.83	43.10	88	48-120
1,2-Dichloroethane	<0.9135	48.83	43.20	88	55-124
Benzene	<0.8898	48.83	48.12	99	57-120
Methyl tert-Amyl Ether (TAME)	5.555	48.83	44.80	80	52-120
Toluene	<0.7015	48.83	45.47	93	51-120
1,2-Dibromoethane	<0.6412	48.83	40.57	83	51-120
Ethylbenzene	<0.6694	48.83	45.24	93	45-120
m,p-Xylenes	<1.234	97.66	92.55	95	45-123
o-Xylene	<0.6174	48.83	45.42	93	44-122

Surrogate	%REC	Limits
Dibromofluoromethane	106	78-134
1,2-Dichloroethane-d4	97	80-138
Toluene-d8	93	80-120
Bromofluorobenzene	91	78-123

Type: MSD Diln Fac: 0.9560
Lab ID: QC786921

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	239.0	230.5	96	44-120	9	46
MTBE	47.80	154.1	-7 *	49-120	14	40
Isopropyl Ether (DIPE)	47.80	40.55	85	46-120	1	41
Ethyl tert-Butyl Ether (ETBE)	47.80	41.17	86	48-120	2	40
1,2-Dichloroethane	47.80	41.64	87	55-124	2	41
Benzene	47.80	47.18	99	57-120	0	44
Methyl tert-Amyl Ether (TAME)	47.80	43.53	79	52-120	1	36
Toluene	47.80	45.24	95	51-120	2	47
1,2-Dibromoethane	47.80	40.40	85	51-120	2	45
Ethylbenzene	47.80	45.16	94	45-120	2	55
m,p-Xylenes	95.60	89.87	94	45-123	1	53
o-Xylene	47.80	44.89	94	44-122	1	55

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	97	80-138
Toluene-d8	94	80-120
Bromofluorobenzene	92	78-123

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

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	222950
Units:	ug/Kg	Analyzed:	05/07/15
Diln Fac:	1.000		

Type: BS Lab ID: QC787006

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	99.79	80	49-131
MTBE	25.00	23.70	95	61-122
Isopropyl Ether (DIPE)	25.00	24.97	100	54-129
Ethyl tert-Butyl Ether (ETBE)	25.00	24.11	96	60-120
1,2-Dichloroethane	25.00	24.89	100	78-136
Benzene	25.00	24.89	100	80-123
Methyl tert-Amyl Ether (TAME)	25.00	22.53	90	70-120
Toluene	25.00	24.63	99	80-120
1,2-Dibromoethane	25.00	23.69	95	80-124
Ethylbenzene	25.00	25.15	101	80-122
m,p-Xylenes	50.00	52.43	105	80-127
o-Xylene	25.00	24.41	98	80-125

Surrogate	%REC	Limits
Dibromofluoromethane	108	78-134
1,2-Dichloroethane-d4	103	80-138
Toluene-d8	100	80-120
Bromofluorobenzene	104	78-123

Type: BSD Lab ID: QC787007

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	99.67	80	49-131	0	40
MTBE	25.00	23.58	94	61-122	1	26
Isopropyl Ether (DIPE)	25.00	24.50	98	54-129	2	24
Ethyl tert-Butyl Ether (ETBE)	25.00	23.49	94	60-120	3	24
1,2-Dichloroethane	25.00	24.75	99	78-136	1	21
Benzene	25.00	24.90	100	80-123	0	21
Methyl tert-Amyl Ether (TAME)	25.00	22.33	89	70-120	1	22
Toluene	25.00	24.38	98	80-120	1	20
1,2-Dibromoethane	25.00	23.61	94	80-124	0	21
Ethylbenzene	25.00	24.85	99	80-122	1	20
m,p-Xylenes	50.00	51.84	104	80-127	1	20
o-Xylene	25.00	24.33	97	80-125	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	103	80-138
Toluene-d8	100	80-120
Bromofluorobenzene	102	78-123

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	266604	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:	QC787008	Batch#:	222950
Matrix:	Soil	Analyzed:	05/07/15
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

Surrogate	%REC	Limits
Dibromofluoromethane	109	78-134
1,2-Dichloroethane-d4	102	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	101	78-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Field ID:	MW-3 @ 24FT	Batch#:	222950
MSS Lab ID:	266604-002	Sampled:	05/01/15
Matrix:	Soil	Received:	05/06/15
Units:	ug/Kg	Analyzed:	05/07/15
Basis:	as received		

Type: MS Diln Fac: 0.9880
Lab ID: QC787076

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	31.98	247.0	238.4	84	44-120
MTBE	943.1 >LR	49.40	634.8 >LR	-624 NM	49-120
Isopropyl Ether (DIPE)	<0.5413	49.40	48.87	99	46-120
Ethyl tert-Butyl Ether (ETBE)	<0.5451	49.40	47.20	96	48-120
1,2-Dichloroethane	<0.5982	49.40	45.72	93	55-124
Benzene	<0.6681	49.40	48.49	98	57-120
Methyl tert-Amyl Ether (TAME)	31.81	49.40	67.58	72	52-120
Toluene	<0.7318	49.40	46.91	95	51-120
1,2-Dibromoethane	<0.4915	49.40	43.34	88	51-120
Ethylbenzene	<0.6834	49.40	48.27	98	45-120
m,p-Xylenes	<1.321	98.80	98.98	100	45-123
o-Xylene	<0.5702	49.40	47.25	96	44-122

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	109	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	102	78-123

Type: MSD Diln Fac: 0.9490
Lab ID: QC787077

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	237.3	241.2	88	44-120	5	46
MTBE	47.45	876.6 >LR	-140 NM	49-120	NC	40
Isopropyl Ether (DIPE)	47.45	46.42	98	46-120	1	41
Ethyl tert-Butyl Ether (ETBE)	47.45	45.36	96	48-120	0	40
1,2-Dichloroethane	47.45	46.52	98	55-124	6	41
Benzene	47.45	49.02	103	57-120	5	44
Methyl tert-Amyl Ether (TAME)	47.45	77.50	96	52-120	16	36
Toluene	47.45	48.59	102	51-120	8	47
1,2-Dibromoethane	47.45	45.29	95	51-120	8	45
Ethylbenzene	47.45	49.95	105	45-120	7	55
m,p-Xylenes	94.90	102.6	108	45-123	8	53
o-Xylene	47.45	48.66	103	44-122	7	55

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	109	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	102	78-123

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

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	266604	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5082	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	223022
Units:	ug/Kg	Analyzed:	05/09/15
Diln Fac:	1.000		

Type: BS Lab ID: QC787352

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	75.00	68.16	91	49-131
MTBE	15.00	15.74	105	61-122
Isopropyl Ether (DIPE)	15.00	13.38	89	54-129
Ethyl tert-Butyl Ether (ETBE)	15.00	14.10	94	60-120
1,2-Dichloroethane	15.00	14.91	99	78-136
Benzene	15.00	15.24	102	80-123
Methyl tert-Amyl Ether (TAME)	15.00	13.77	92	70-120
Toluene	15.00	13.93	93	80-120
1,2-Dibromoethane	15.00	13.97	93	80-124
Ethylbenzene	15.00	14.51	97	80-122
m,p-Xylenes	30.00	29.51	98	80-127
o-Xylene	15.00	15.02	100	80-125

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	97	80-138
Toluene-d8	92	80-120
Bromofluorobenzene	91	78-123

Type: BSD Lab ID: QC787353

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	87.50	72.73	83	49-131	9	40
MTBE	17.50	16.04	92	61-122	14	26
Isopropyl Ether (DIPE)	17.50	13.98	80	54-129	11	24
Ethyl tert-Butyl Ether (ETBE)	17.50	14.33	82	60-120	14	24
1,2-Dichloroethane	15.00	15.28	102	78-136	2	21
Benzene	15.00	15.46	103	80-123	1	21
Methyl tert-Amyl Ether (TAME)	17.50	14.03	80	70-120	14	22
Toluene	15.00	14.14	94	80-120	2	20
1,2-Dibromoethane	15.00	14.30	95	80-124	2	21
Ethylbenzene	15.00	14.60	97	80-122	1	20
m,p-Xylenes	30.00	29.32	98	80-127	1	20
o-Xylene	15.00	14.70	98	80-125	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	78-134
1,2-Dichloroethane-d4	101	80-138
Toluene-d8	92	80-120
Bromofluorobenzene	90	78-123

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	266604	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:	QC787354	Batch#:	223022
Matrix:	Soil	Analyzed:	05/09/15
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

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-134
1,2-Dichloroethane-d4	101	80-138
Toluene-d8	92	80-120
Bromofluorobenzene	97	78-123

ND= Not Detected
RL= Reporting Limit

APPENDIX D

WELL SURVEY REPORT

AND WASTE MANIFEST

DATE: 5/16/2015
JOB# 15006

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-3	2122428.726	6071190.266	675.58	SET NOTCH N. SIDE 4" PVC
	N37.811587175	W122.197953799	675.85	SET PUNCH N. SIDE
			675.83	NORTH SIDE AC

HORIZONTAL CONTROL:
SURVEY BASED ON PREVIOUS SURVEY BY EDGIS LAND SURVEYING DATED: 5/28/2013
COORDINATE VALUES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE 3, NAD83.

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

PROFESSIONAL LAND SURVEYOR
EDUARDO A. ESPINOZA
No. L 6772
STATE OF CALIFORNIA

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

5/16/15

EDGIS LAND SURVEYING
LAND SURVEYING AND MAPPING
2519 Shaw Ave., Ste. 111
Fresno, CA 93711
Phone (559) 803-2679
Email: edgis@aol.com

NON-HAZARDOUS WASTE MANIFEST

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

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 1

3. Generator's Name and Mailing Address DESERT PETROLEUM
2844 MOUNTAIN BLVD.
OAKLAND, CA

4. Generator's Phone ( )

SOMA ENV

5. Transporter 1 Company Name: INSTRAT INC

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone

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
[redacted]

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone [redacted]

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZ DRILL CUTTINGS	3	DRM	1500 #	LBS.
b. NON-HAZ MONITORING WELL WATER	4	DRM	175	GAL
c.				
d.				

GENERATOR

G. Additional Descriptions for Materials Listed Above
BROWN, SOIL/MUD, NO ODOR

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

NON-HAZARDOUS WASTE

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name | Signature | Date (Month / Day / Year)

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Jason Noble | Signature | Date (Month / Day / Year): 5 / 28 / 15

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date (Month / Day / Year)

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name: MICHAEL WHITEHEAD | Signature | Date (Month / Day / Year): 5 / 28 / 15

APPENDIX E

BAAQMD, EBMUD, AND OSHA PERMITS FOR MPE EVENT

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

October 16, 2013

SOMA Environmental Engineering, Inc
6620 Owens Dr, Suite A
Pleasanton, CA 94588

Attention: Erica Fisker

Application Number: 25513
Plant Number: 19396

Dear Applicant:

SUBJECT: CHANGE OF PERMIT CONDITIONS

This letter is to advise you that your application for changes in permit conditions for the following equipment has been approved:

S-1 Portable Soil Vapor Extraction System

Operation of this equipment will be subject to permit condition no. 23387 which is attached. If you have any questions regarding this matter, please call **Flora W Chan, Air Quality Engineer II at (415) 749-4630**.

Very truly yours

Jim Karas, P.E.
Director of Engineering

by _____
Air Quality Engineering Manager

BGY:FWC
Attachment: Permit Condition no. 23387

Plant No. 19396, SOMA Environmental Engineering, Inc
Source No. 1, Portable Soil Vapor Extraction System
Condition No. 23387 Application No. 25513

1. The operator of this source shall notify the District at least 3 days prior to start-up of operation at any new location. The notification shall include:
   a. Application Number (25513, 23258, 19214, 15435) and Plant Number (19396, 18119)
   b. Street address, including zip code, for the location where the equipment will be operated.
   c. The name and telephone number of a contact person where the equipment will be operated.
   d. The date of initial start-up and estimated duration of operations at that location.
   e. The distance from the source to the outer boundary of the nearest K-12 school, or indication that the distance is greater than 1500 feet.

   In the event that the start-up is delayed less than 5 days, the operator may provide telephone notice of said change to the assigned Plant Engineer in the Permit Services Division. If the start-up is delayed more than 5 days, written notification must be resubmitted.

2. This equipment shall not remain at any single location for a period in excess of 12 consecutive months, following the date of initial operation except as allowed under Section 2-1-220.10. If this portable equipment remains at any fixed location for more than 12 months, the portable permit will automatically revert to a conventional permanent location permit and will lose its portability. [Basis: Regulation 2-1-220.2]

3. This portable equipment, S-1, shall operate at all times in conformance with the eligibility requirements set forth in Regulation 2-1-220 for portable equipment.

4. This equipment is not to be operated within 1000 feet of the outer boundary of any K-12 school. Such operation will require the submittal of an application for a revised permit to operate so that the applicable requirements of the California Health and Safety Code Section 42301.6 may be met. These notification requirements have been satisfied for operation at the 2001 Sir Francis Drake Boulevard in Fairfax and 2844 Mountain Boulevard,Oakland,CA 94602 [basis:reg 2-1-220.4]

5. This equipment shall be used exclusively for the removal of non-chlorinated volatile organic compounds associated with petroleum products from extracted soil vapor. This shall be demonstrated by onsite sampling required in condition 10 below.

6. Precursor Organic Compound (POC) emissions from Source S-1 shall be abated by Abatement device A-1, Thermal Oxidizer, Catalytic Oxidizer or Carbon adsorption,

during all periods of operation. Soil vapor flow rate shall not exceed 250 scfm. [Basis: Regulation 8-47-301.1,2]

7. The POC abatement efficiency of abatement device A-1 shall be maintained at a minimum of 98.5% by weight for inlet POC concentrations greater than or equal to 2000 ppmv (measured as hexane). For inlet concentrations below 2000 ppmv and greater than or equal to 200 ppmv, a minimum abatement efficiency of 97% shall be maintained. For inlet concentrations below 200 ppmv, a minimum abatement efficiency of 90% shall be maintained. The minimum abatement efficiency shall be waived if outlet POC concentrations are shown to be less than 10 ppmv (measured as hexane). In no event shall benzene emissions to the atmosphere exceed 0.250 pounds per day. Annual emissions of benzene shall not exceed 3.8 pounds per year.

8. While operating as a thermal oxidizer, the minimum operating temperature of A-1 shall not be less than 1400 degrees Fahrenheit. While operating as a catalytic oxidizer, the minimum operating temperature of A-1 shall not be less than 600 degrees Fahrenheit.

9. To determine compliance with Condition Number 8, the dual-mode oxidizer shall be equipped with continuous measuring and temperature recording instrumentation. The temperature data collected from the temperature recorder shall be maintained in a file which shall be available for District inspection for a period of at least 2 years following the date on which such data are recorded.

10. To determine compliance with Condition 7, within 24 hours after start-up of the thermal/catalytic oxidizer at any new location, and within 24 hours of conversion from thermal to catalytic mode at an existing location, the operator of this source shall:
    a. Analyze the inlet gas to determine the vapor flow rate and concentration of POC present.
    b. Analyze exhaust gas to determine the flow rate, and the concentration of benzene and POC present.
    c. Calculate the benzene emission rate in pounds per day based on the exhaust gas analysis and the operating exhaust flow rate. The soil vapor flow rate shall be decreased, if necessary, to demonstrate compliance with Condition 7.
    d. Calculate the POC abatement efficiency based on the inlet and outlet gas sampling analysis. For the purpose of determining compliance with condition 7, the POC concentration shall be reported as hexane.

e. Submit to the District's Permit Services Division the test results and emission calculations within one month from the testing date. Samples shall be analyzed according to modified EPA test methods 8015 and 8021 or their equivalent to determine the concentrations of POC and benzene.

11. Within 30 days from the completion of each treatment operation at a given location, the operator of this source shall provide the assigned Plant Engineer in the Permit Services Division with a summary showing the following information:
    a. The dates and total number of days that the equipment was at that location and the dates, and total number of days that the equipment was operated at that location.
    b. A summary of the abatement efficiency and benzene emission rate as determined and reported in the start-up sampling report required by condition 10e above.
    c. The results of any additionally performed emission test, analysis, or monitoring result logged in for the day of operation they were taken.
    d. The total throughput of contaminated soil vapor processed by S-1 at that location (indicated in cubic feet).
    e. The total emissions of benzene at that location based on the sampling results required by conditions 10 above (indicated in pounds).

12. During operation of the Activated Carbon Vessels, the operator of this source shall monitor with a photo-ionization detector (PID), flame-ionization detector (FID), or other method approved in writing by the District's Source Test Manager at the following locations:
    a. At the inlet to the second to last Carbon vessel in series.
    b. At the inlet to the last Carbon vessel in series.
    c. At the outlet of the Carbon vessel that is last in series prior to venting to the atmosphere.

    When using an FID to monitor breakthrough, readings may be taken with and without a Carbon filter tip fitted on the FID probe. Concentrations measured with the Carbon filter tip in place shall be considered methane for the purposes of these permit conditions.

13. These monitor readings shall be recorded in a monitoring log at the time they are taken. The monitoring results shall be used to estimate the frequency of Carbon change

out necessary to maintain compliance with conditions number 14 and 15, and shall be conducted on a daily basis. The operator of this source may propose for District review, based on actual measurements taken at the site during operation of the source, that the monitoring schedule be changed based on the decline in organic emissions and/or the demonstrated breakthrough rates of the carbon vessels. Written approval by the District's Engineering Division must be received by the operator prior to a change to the monitoring schedule.

14. The second to last Carbon vessel shall be immediately changed out with unspent carbon upon breakthrough, defined as the detection at its outlet in excess of the higher of the following limits:
    a. 10 % of the inlet stream concentration to the carbon bed.
    b. 10 ppmv (measured as hexane).
15. The last Carbon vessel shall be immediately changed out with unspent Carbon upon detection at its outlet of 10 ppmv or greater (measured as hexane).
16. The operator of this source shall maintain the following information for each month of operation of the Activated Carbon Vessels:

    a. Hours and time of operation.
    b. Each emission test, analysis or monitoring results logged in for the day of operation they were taken.
    c. The number of Carbon vessels removed from service.

    Such records shall be retained and made available for inspection by the District for two years following the date the data is recorded. [basis: Reg.523]

17. Within 30 days after the end of every calendar year, the operator of this source shall provide the assigned Plant Engineer in the Permit Services Division a year end summary showing the following information:
    a. The location(s) at which the equipment was operated including the dates operated at each location.
    b. The total throughput of contaminated soil vapor for the previous four quarters (indicated in cubic feet).
    c. The total benzene emissions for the previous four quarters (indicated in pounds).

    [Basis: Regulation 1-523]

18. The operator shall maintain a file containing all measurements, records and other data that are required to be collected pursuant to the various provisions of this conditional Permit to Operate. All measurements, records and data required to be maintained by the

operator shall be retained for at least two years following the date the data is recorded. [Basis: Regulation 1-523]

19. Any non-compliance with these conditions shall be reported to the Compliance and Enforcement Division at the time that it is first discovered. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well as the time of occurrence.

End of Conditions

EAST BAY
MUNICIPAL UTILITY DISTRICT

BENNETT K. HORENSTEIN
DIRECTOR OF WASTEWATER

May 15, 2014

CERTIFIED MAIL
(Return Receipt Requested)
Certified Mail No. 7005 2570 0000 6630 4038

Mr. Mansour Sepehr
President
SOMA Environmental Engineering, Inc.
6620 Owens Dr., Suite A
Pleasanton, CA 94588

Re: Wastewater Discharge Permit No. 05928020 – 2844 Mountain Blvd., Oakland

Dear Mr. Sepehr:

Enclosed is the revised Special Discharge Permit for SOMA Environmental Engineering, Inc. (SOMA). The permit was revised to extend the expiration date for two years to accommodate additional multi-phase extraction (MPE) events planned for this site in order to remediate contaminated soil and groundwater. No changes to the current terms and conditions are required. Therefore, all terms of the existing permit remain in effect. The new permit expiration date is July 31, 2016.

As a Permit Holder, you are legally responsible for complying with all permit conditions and requirements. SOMA shall report to the Wastewater Environmental Services Division any changes to the operations that significantly affect the quality or volume of wastewater discharge or that deviate from the Permit Terms and Conditions.

If you have any questions regarding this Permit revision, please contact Laurice Brown of the Wastewater Environmental Services Division at (510) 287-1613.

Sincerely,

JACQUELINE T. KEPKE
Manager of Wastewater Environmental Services

JTK:KH:llb

W:\NAB\IDS\Permits\Special Discharge\Permits\SOMA Engineering\Permit Extension Letter.doc

EBMUD

SPECIAL DISCHARGE PERMIT
Terms and Conditions

Permit Number 05928020 SOMA Environmental Engineering, Inc.

REVISION EFFECTIVE 5 / 17 / 14

GENERAL CONDITIONS

I. SOMA Environmental Engineering, Inc. shall comply with all items of the attached Special Discharge Permit Standard Terms and Conditions.

II. SOMA Environmental Engineering, Inc. shall discharge Special Discharge wastewater only from the specific source described in the *Special Discharge Permit Standard Terms & Conditions* as **other sources**. This permit is for the discharge of wastewater generated from excavation and remediation activities located at 2844 Mountain Blvd., Oakland, CA.

III. SOMA Environmental Engineering, Inc. shall immediately cease discharge of treated Special Discharge wastewater if not in compliance with any of the terms and conditions of this Special Discharge Permit.

IV. This Special Discharge Permit is considered a **waiver** of the EBMUD Wastewater Control Ordinance prohibiting:

- Discharge of wastewater directly into a manhole or other opening into the community sewer system.
- Discharge of stormwater, drainage water, and groundwater to the community sewer.

V. SOMA Environmental Engineering, Inc. shall not discharge Special Discharge wastewater after this Permit expiration date.

COMPLIANCE REQUIREMENTS

I. SOMA Environmental Engineering, Inc. shall pretreat or manage all Special Discharge wastewater sufficient to achieve compliance with the limits established in this Special Discharge Permit. Pretreatment shall be according to Figure 2: MTS Process Schematic diagram submitted by SOMA Environmental Engineering, Inc.

II. SOMA Environmental Engineering, Inc. shall post a sign in the discharge area stating, "All Wastewater Discharge must comply with the Special Discharge Permit."

III. SOMA Environmental Engineering, Inc. shall not discharge to the sanitary sewer during a rain event or within 24-hours after a rain event, which is defined as any precipitation greater than a drizzle.

IV. SOMA Environmental Engineering, Inc. shall not discharge wastewater at a flow rate greater than 100 gallons per minute.

V. All discharge shall be through a totalizing flow meter and logged with date, time, and volume of each discharge and signed by Site Manager.

VI. SOMA Environmental Engineering, Inc. is responsible for obtaining local permits or approval from the City of Oakland for the use of manholes, cleanouts, and/or side sewers for the discharge of Special Discharge wastewater.

WASTEWATER DISCHARGE LIMITS

SOMA Environmental Engineering, Inc. shall not discharge Special Discharge wastewater into the community sewer if the strength of the wastewater exceeds EBMUD Wastewater Control Ordinance Discharge Limits.

EBMUD

SPECIAL DISCHARGE PERMIT
Terms and Conditions

Permit Number 05928020 **REVISION EFFECTIVE** 5/17/14

MONITORING AND REPORTING REQUIREMENTS

I. Permit Holder shall monitor wastewater discharge operations to ensure compliance with the terms and conditions of this Special Discharge Permit. Sampling of discharge has been submitted and meets EBMUD limits. Data submitted includes analyses for Purgeable Organics (BTEX), Volatile Organics (VOCs), and Oil and Grease Hydrocarbon (HC). EBMUD reserves the right to require additional testing if the site work warrants.

II. SOMA Environmental Engineering, Inc. shall submit discharge logs including dates, times, volumes and signature of Site Manager including the authorized signature and certification statement to EBMUD. **The logs are due quarterly based on a calendar year.**

INSPECTIONS

The District may conduct random, unannounced inspections to verify compliance with the terms and conditions of this Special Discharge Permit. SOMA Environmental Engineering, Inc. shall grant District personnel access to the facility and discharge logs to conduct inspections and collect Special Discharge Wastewater samples.

ENFORCEMENT AND PENALTIES

Failure to comply with the terms and conditions of this Special Discharge Permit and *Special Discharge Permit Standard Terms and Conditions* may result in enforcement actions, including violation follow-up fees, civil enforcement penalties, and administrative fines of up to $5,000 per day.

RATES AND CHARGES

This Special Discharge Permit may be amended to include changes to rates and charges that may be established by the District during the term of this Special Discharge Permit. The discharge shall be charged $0.02 per gallon for the entire volume of discharge and the permit fee is $995 per year.

AUTHORIZATION

Special Discharger SOMA Environmental Engineering, Inc. is hereby authorized to discharge Special Discharge Wastewater to the community sewer subject to compliance with EBMUD Wastewater Control Ordinance, Special Discharge Permit Terms and Conditions, and billing conditions.

Effective: August 4, 2013

Expires: July 31, 2016

Director, Wastewater Department

5/17/14
Date

State of California
DOSH, Pressure Vessel Unit
1515 Clay Street, Suite 1302
Oakland, CA 94612-1499

RETURN SERVICE REQUESTED

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
PRESSURE VESSEL UNIT
Phone (510) 622-3052 / Fax (510) 622-3063

OWNER/USER:

GOLDEN GATE REMEDIATION
TECHNOLOGY
2844 MOUNTAIN BLVD.
OAKLAND CA 94602-2662

LOCATION: DRIVEWAY

BILL TO:

MANSOUR SEPEHR
GOLDEN GATE REMEDIATION TECHNOLOGY
6620 OWENS DR STE A
PLEASANTON CA 94588-3342

✂----------

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY & HEALTH
PRESSURE VESSEL UNIT
1515 Clay Street, Suite 1302
Oakland, CA 94612
Phone (510) 622-3052 / Fax (510) 622-3063

Permit to Operate Liquefied Petroleum Gas Tank

STATE SERIAL NO. **L004516-10** N.B.#/SER.# 208078

BILL TO:

MANSOUR SEPEHR
GOLDEN GATE REMEDIATION
TECHNOLOGY
6620 OWENS DR STE A
PLEASANTON CA 94588-3342

OWNER/USER:

GOLDEN GATE REMEDIATION
TECHNOLOGY
2844 MOUNTAIN BLVD.
OAKLAND CA 94602-2662

LOCATION: DRIVEWAY

This Permit to Operate shall be kept conspicuously posted under glass on or near the tank or at a convenient location near the tank and shall be made available to any authorized person(s). Labor Code Section 7680

Date of Inspection: 05/18/2015 **This Permit Expires: 07/18/2015**

This is to certify that the above described tank has been inspected, or caused to be inspected, by the Division of Occupational Safety & Health and may be operated at a pressure not to exceed 250 pounds per square inch.

Inspected By: BRUCE SHERMAN **Employed By: State of California**

APPENDIX F

MTS OPERATIONAL DATA SHEETS

Golden Gate Remediation Technology

ADDRESS: 2844 Mountain Blvd, Oakland
PROJECT #: 5086

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
5/19/2015	930	Begin Extraction at MW-1 and MW-2								
	1000	1452	176	14.5	20.6	139	0	139	287	0
	1100	1450	176	14.1	20.1	147	0	147	275	
	1200	1451	177	13.9	20	149	0	149	141	
	1300	1448	178	13.8	20	149	0	149	128	
	1400	1451	179	13.8	20	149	0	149	101	
	1500	1452	179	13.7	20	149	0	149	175	
	1600	1450	179	13.3	19.8	152	0	152	91	
	1700	1449	178	13.3	19.9	150	0	150	181	
	1800	1452	177	13.3	19.9	150	0	150	194	
5/20/2015	1000	1449	176	12.3	19.2	162	0	162	803	
	1100	1451	176	12.3	19.2	162	0	162	81	
	1200	1452	176	12.1	19.2	162	0	162	90	
	1300	1452	178	12.1	19.1	163	0	163	87	
	1400	1454	177	12.1	19.1	163	0	163	86	
	1500	1452	177	12.1	19.1	163	0	163	92	
	1600	1452	177	12.1	19.1	163	0	163	89	605
5/21/2015	930	Extracting from RS-1, MW-1 and MW-2								
	1000	1452	176	11.7	18.8	168	0	168	67	915
	1100	1463	177	11.7	18.9	166	0	166	81	

P. O. Box 12072, Pleasanton, California 94588 (925) 847-0684

Golden Gate Remediation Technology

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PROJECT #: 5086

MTS OPERATIONAL DATA

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5/21/2015	1200	1459	178	11.6	18.9	166	0	166	98	
	1300	1449	178	10.9	17.9	182	0	182	78	
	1400	1455	179	11	17.9	182	0	182	95	
	1500	1452	179	10.3	17.9	182	0	182	72	
	1530	Extracting from RS-1, RS-3, MW-1 and MW-2								
	1600	1454	180	10	17.5	189	0	189	82	
	1700	1449	180	9.8	17.5	189	0	189	71	
5/22/2015	830	Extracting from RS-1, MW-1 and MW-3								
	900	1453	177	13.5	19.6	155	0	155	71	1,533
	1000	1455	179	16	21.4	127	0	127	67	
	1100	1448	179	14.8	19.9	150	0	150	91	
	1200	1445	179	14.8	20.8	136	0	136	84	
	1300	1453	178	14.8	20.8	136	0	136	73	
	1400	1455	179	14.8	20.9	135	0	135	82	
	1500	1463	178	14.8	20.9	135	0	135	75	
	1600	1448	179	14.7	20.8	136	0	136	82	
	1700	1450	178	14.2	20.3	144	0	144	84	
		System shut down for weekend								
5/26/2015	1430	Restart; Extracting from MW-1, MW-2 and MW-3								
	1500	1451	176	14.8	20.9	135	0	135	553	2,758
	1600	1452	180	14.5	20.7	138	0	138	232	

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5/27/2015	930	Extracting from MW-1, MW-2 and RS-3								
	1000	1449	177	14.4	20.1	147	0	147	267	
	1100	1452	178	14.3	20	149	0	149	252	
	1200	1451	179	14.2	19.8	152	0	152	228	
	1300	1449	180	14.1	19.8	152	0	152	238	
	1400	1450	180	14.1	19.8	152	0	152	240	
	1500	1452	180	14.1	19.8	152	0	152	247	5,770
	1600	1453	181	14.1	19.8	152	0	152	264	
	1700	1449	182	14.1	19.8	152	0	152	275	
5/28/2015	900	1451	177	13.9	19.7	154	0	154	379	6,053
	1000	1453	177	13.8	19.7	154	0	154	398	
	1100	1452	178	13.8	19.6	155	0	155	386	
	1200	1451	179	13.8	19.6	155	0	155	376	
	1300	1449	181	13.8	19.6	155	0	155	389	
	1400	1451	183	13.8	19.6	155	0	155	403	
	1500	1451	186	13.6	19.4	158	0	158	401	6,093
	1600	1448	188	13.4	19.4	158	0	158	398	
5/29/2015	1030	Filled up propane on truck								
	1100	1452	175	13.5	19.9	150	0	150	850	6,319
	1200	1449	175	13.4	19.8	152	0	152	675	

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5/29/2015	1230	Extracting from RS-3, RS-4, MW-1 and MW-2								
	1300	1453	176	10.7	17.9	182	0	182	515	
	1400	1448	178	10.6	17.8	184	0	184	435	
	1500	1451	182	10.5	17.7	185	0	185	374	
	1600	1449	182	10.5	17.6	187	0	187	367	
	1700	1452	182	10.5	17.6	187	0	187	348	
		Shut down for the weekend. Restart @ 8:30 am on 6/1/15								
6/1/2015	900	1453	179	14	19.1	163	0	163	1522	6,414
	1000	1449	181	13.7	19.5	157	0	157	608	
	1100	1448	183	13.7	19.5	157	0	157	579	
	1200	1451	184	13.7	19.6	155	0	155	441	
	1300	1452	184	13.7	19.6	155	0	155	387	
	1400	1454	185	13.7	19.6	155	0	155	349	
	1500	1448	186	13.8	19.5	157	0	157	301	
	1600	1454	186	13.6	19.5	157	0	157	298	
6/2/2015	900	1450	181	13.4	19.4	158	0	158	395	11,630
	1000	1453	182	13.4	19.4	158	0	158	384	
	1030	Extracting from MW-1, MW-2 and MW-3								
	1100	1499	181	9.6	16.1	211	0	211	421	
	1130	Extracting from MW-2, MW-3 and RS-3								
	1200	1452	182	11.1	17.8	184	0	184	435	

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6/2/2015	1300	1448	182	8.2	16.3	208	0	208	412	
	1400	1453	182	9	17.9	182	0	182	335	
	1430	Extracting from RS-3, MW-1, MW-2 and MW-3								
	1500	1450	183	7.9	17.1	195	0	195	449	
	1530	Extracting from RS-3, MW-1 and MW-3								
	1600	1452	184	9.6	16.9	198	0	198	417	
6/3/2015	900	1451	179	10	17.3	192	0	192	447	12,314
	1000	1453	179	10	17.2	193	0	193	436	
	1100	1450	180	9.7	17	196	0	196	384	
	1200	1449	181	9.7	17	196	0	196	351	
	1300	1452	182	9.7	17	196	0	196	322	
	1330	Extracting from RS-3, MW-1, MW-2 and MW-3								
	1400	1451	182	7.5	15.7	217	0	217	385	
	1500	1449	181	7.5	15.7	217	0	217	348	
	1600	1452	180	7.4	15.5	220	0	220	327	
6/4/2015	800	1450	177	7.3	15.6	219	0	219	297	12,971
	900	1453	178	7.3	15.6	219	0	219	311	
	1000	1451	180	7	15.6	219	0	219	308	
	1100	1452	181	7.3	15.6	219	0	219	298	
	1200	1452	183	7.2	15.7	217	0	217	292	

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Golden Gate Remediation Technology

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6/4/2015	1300	1454	184	7.1	15.3	223	0	223	289	
	1400	1453	185	7.2	15.6	219	0	219	295	
	1500	1452	187	7.2	15.4	222	0	222	302	
	1600	1450	187	7.3	15.4	222	0	222	308	
6/5/2015	900	1452	181	7.6	15.8	215	0	215	298	13,602
	1000	1448	182	7.2	15.8	215	0	215	280	
	1100	1452	182	6.9	15.2	225	0	225	267	
	1200	1452	183	6.8	15.1	227	0	227	263	
	1300	1451	180	6.3	15.2	225	0	225	258	
	1400	1449	180	6.4	15	228	0	228	261	
	1500	1452	181	6.2	15	228	0	228	250	
	1600	1453	179	6.8	15.1	227	0	227	249	
		Shut down for the weekend. Restart @ 8:30 am on 6/8/15								
6/8/2015	900	1452	185	12	18.7	169	0	169	2190	13,979
	1000	1450	188	12	18.6	171	0	171	1415	
	1100	1453	192	11.5	18	181	0	181	924	
	1200	1449	194	10	17.5	189	0	189	818	
	1300	1451	196	9.5	17.3	192	0	192	645	
	1400	1448	198	9.9	17.2	193	0	193	568	
	1500	1451	203	9.9	17.2	193	0	193	526	
	1600	1449	208	11.5	17.8	184	0	184	474	

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Golden Gate Remediation Technology

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6/9/2015	900	1452	187	9.3	16.7	201	0	201	346	15,298
		Extracting from RS-3, RS-4, MW-1, & MW-2								
	1000	1450	187	9.2	16.7	201	0	201	379	
	1100	1449	190	8.1	16.2	209	0	209	325	
	1200	1451	191	8.1	16.1	211	0	211	230	
		Extracting from RS-3, RS-4, MW-1, & MW-3								
	1300	1449	193	7.9	16	212	0	212	220	
	1400	1451	194	6.5	15.8	215	0	215	243	
	1500	1450	191	8.9	16.4	206	0	206	227	
	1600	1452	186	8.7	16.5	204	0	204	235	
6/10/2015	900	1452	184	8.7	16.5	204	0	204	214	15,851
	1000	1453	184	8.9	16.7	201	0	201	217	
		Extracting from RS-3, RS-4, MW-1, and MW-2								
	1100	1453	184	8.9	16.4	206	0	206	215	
	1200	1453	186	8.2	16.3	208	0	208	213	
		Extracting from RS-3, RS-4, MW-1, and MW-3								
	1300	1452	186	8.3	16.3	208	0	208	208	
	1400	1452	187	8.7	16.5	204	0	204	181	
	1500	1449	185	8.8	16.3	208	0	208	200	
	1600	1453	183	8.9	16.7	201	0	201	194	

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Golden Gate Remediation Technology

ADDRESS: 2844 Mountain Blvd, Oakland
PROJECT #: 5086

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
6/11/2015	900	1450	184	9.1	16.7	201	0	201	187	16,386
	1000	1452	184	8.9	16.7	201	0	201	163	
	1100	1451	189	8.9	16.8	200	0	200	162	
	1200	1452	190	8.9	17.8	184	0	184	158	
	1300	1448	192	8.9	17.5	189	0	189	148	
	1400	1452	194	8.9	16.4	206	0	206	158	
	1500	1451	193	7.3	15.4	222	0	222	154	
	1600	1452	193	8.1	16.1	211	0	211	153	
6/12/2015	900	1448	190	8.7	16.3	208	0	208	138	16,851
	1000	1453	192	8.7	16.2	209	0	209	139	
	1100	1449	193	8.7	16.4	206	0	206	157	
	1200	1452	195	8.2	16.1	211	0	211	141	
	1300	1460	196	8.2	16.1	211	0	211	139	
	1400	1449	198	8.3	16.1	211	0	211	150	
	1500	1451	196	8.6	16.2	209	0	209	138	
	1600	1453	194	8.5	16.1	211	0	211	142	
		Shut down for the weekend. Restart @ 9:30 am on 6/15/15								

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Golden Gate Remediation Technology

ADDRESS: 2844 Mountain Blvd, Oakland
PROJECT #: 5086

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
6/15/2015	1000	1448	174	16.1	22	117	0	117	1968	17,068
	1100	1449	177	15.1	22.6	108	0	108	689	
	1200	1453	180	14.8	20.7	138	0	138	520	
	1300	1455	182	14.7	20.2	146	0	146	431	
	1400	1449	180	13.5	19.8	152	0	152	308	
	1500	1449	183	13	19.7	154	0	154	295	
	1600	1452	182	13	19.5	157	0	157	291	
6/16/2015	900	1450	184	10.8	17.7	185	0	185	197	18,531
	1000	1453	185	10.8	17.7	185	0	185	184	
	1100	1449	183	10.5	17.5	189	0	189	171	
	1200	1453	186	9.8	17.2	193	0	193	141	
	1300	1453	188	9.9	17.1	195	0	195	144	
	1400	1452	190	9.9	17.1	195	0	195	142	
	1500	1450	192	9.8	17	196	0	196	140	
	1600	1451	191	9.7	16.8	200	0	200	145	
6/17/2015	900	1452	184	7.8	15.8	215	0	215	138	19,189
	1000	1453	184	6.3	15.9	214	0	214	126	
	1100	1449	186	6.2	15.9	214	0	214	134	
	1200	1450	189	6.3	15.8	215	0	215	126	
	1300	1449	191	6.2	15.7	217	0	217	130	
	1400	1451	190	6.2	15.8	215	0	215	129	
	1500	1453	192	6.1	15.8	215	0	215	127	
	1600	1453	190	6.2	15.7	217	0	217	123	

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Golden Gate Remediation Technology

ADDRESS: 2844 Mountain Blvd, Oakland
PROJECT #: 5086

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
6/18/2015	900	1451	183	7.8	15.9	214	0	214	127	19,739
	1000	1453	183	7.8	15.9	214	0	214	138	
	1100	1450	184	7.7	15.9	214	0	214	129	
	1200	1452	184	7.7	15.8	215	0	215	132	
	1300	1449	185	7.7	15.8	215	0	215	133	
	1400	1451	185	7.6	15.7	217	0	217	135	
	1500	1450	186	7.6	15.7	217	0	217	131	
	1600	1453	187	7.6	15.7	217	0	217	129	
6/19/2015	900	1452	182	7.6	15.8	215	0	215	129	20,214
	1000	1450	183	7.6	15.8	215	0	215	122	
	1100	1453	185	7.6	15.7	217	0	217	120	
	1200	1452	188	7.5	15.7	217	0	217	121	
	1300	1451	190	7.5	15.7	217	0	217	119	
	1400	1449	191	7.5	15.6	219	0	219	125	20,401
		End Extraction								

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APPENDIX G

LABORATORY REPORTS AND
CHAIN OF CUSTODY FORMS
FOR MPE EVENTS

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

Laboratory Job Number 266878
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	Project : 5085
6620 Owens Dr.	Location : 2844 Mountain Blvd., Oakland
Pleasanton, CA 94588	Level : II

Sample ID	Lab ID
EFF MPE	266878-001
INF MPE	266878-002

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

Signature: _____ Date: 05/22/2015

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**266878**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**5085**
Location:	**2844 Mountain Blvd., Oakland**
Request Date:	**05/19/15**
Samples Received:	**05/19/15**

This data package contains sample and QC results for two air samples, requested for the above referenced project on 05/19/15. The samples were received intact.

Volatile Organics in Air by MS (EPA TO-15):
No analytical problems were encountered.

Volatile Organics in Air GC (EPA TO-3):
No analytical problems were encountered.

CHAIN OF CUSTODY

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2840 8th Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

C&T LOGIN # 266878

Sampler: Davoud Bazrpash

Project No: 5085

Report To: **Joyce Bobek**

Project Name: 2844 Mountain Blvd., Oakland, CA

Company : SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste	Air	# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE	NONE	Analyses: TO-3	TO-15
1	EFF MPE	5,19,15 12:55				*	Tedlar bag					*	*	*
2	INF MPE	5,19,15 11:10				*	Tedlar bag					*	*	*

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:

DB 5,19,15 1:25 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

5/19/15 1125 DATE/TIME

DATE/TIME

DATE/TIME

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 266878 Date Received 5/19/15 Number of coolers 0
Client SOMA Project 2844 Mountain Blvd

Date Opened 5/19/15 By (print) AM (sign)
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) ____ YES (NO)
   Shipping info ____
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☑ ~~NO~~
   How many ____ Name ____ Date ____
2B. Were custody seals intact upon arrival? ____ YES NO (N/A)
3. Were custody papers dry and intact when received? ____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? ____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) ____

☐ Bubble Wrap ☐ ~~Foam~~ blocks ☐ Bags ☐ None
☐ Cloth material ☑ Cardboard ☐ Styrofoam ☐ Paper towels

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

Type of ice used: ☐ Wet ☐ Blue/Gel ☑ None Temp(°C) ____

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

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

8. Were Method 5035 sampling containers present? ____ YES (~~NO~~)
   If YES, what time were they transferred to freezer? ____
9. Did all bottles arrive unbroken/unopened? ____ (YES) NO
10. Are there any missing / extra samples? ____ YES (~~NO~~)
11. Are samples in the appropriate containers for indicated tests? ____ (YES) NO
12. Are sample labels present, in good condition and complete? ____ (YES) NO
13. Do the sample labels agree with custody papers? ____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? ____ (YES) NO
15. Are the samples appropriately preserved? ____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? ____ YES NO (N/A)
17. Did you document your preservative check? ____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? ____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? ____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? ____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? ____ YES (~~NO~~)
   If YES, Who was called? ____ By ____ Date: ____

COMMENTS

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 266878

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

Client : SOMA Environmental Engineering Inc.
Project : 5085
Location : 2844 Mountain Blvd., Oakland

Client Sample ID : EFF MPE Laboratory Sample ID : 266878-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Acrolein	7.1		2.0		ppbv	As Recd	1.000	EPA TO-15	METHOD
Acetone	21		2.0		ppbv	As Recd	1.000	EPA TO-15	METHOD
2-Butanone	3.1		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Ethyl Acetate	1.0		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Tetrahydrofuran	6.2		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Benzene	2.6		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
1,2-Dichloroethane	0.54		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
n-Heptane	0.53		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Toluene	3.2		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
m,p-Xylenes	1.8		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
o-Xylene	0.77		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	0.98		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Gasoline Range Organics C6-C12	440		50	5.6	ppbv	As Recd	1.000	EPA TO-3	METHOD

Client Sample ID : INF MPE Laboratory Sample ID : 266878-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
MTBE	2,500		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
n-Hexane	400		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
Benzene	240		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
n-Heptane	380		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
Toluene	460		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
Ethylbenzene	160		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
m,p-Xylenes	510		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
o-Xylene	190		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
4-Ethyltoluene	53		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
1,3,5-Trimethylbenzene	78		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	180		20		ppbv	As Recd	40.00	EPA TO-15	METHOD
Gasoline Range Organics C6-C12	37,000		1,000	110	ppbv	As Recd	20.00	EPA TO-3	METHOD

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Field ID:	EFF MPE	Diln Fac:	1.000
Lab ID:	266878-001	Batch#:	223338
Matrix:	Air	Sampled:	05/19/15
Units (V):	ppbv	Received:	05/19/15
Units (M):	ug/m3	Analyzed:	05/20/15

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	7.1	2.0	16	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	21	2.0	49	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	3.1	0.50	9.0	1.5
Ethyl Acetate	1.0	0.50	3.7	1.8
Tetrahydrofuran	6.2	0.50	18	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	2.6	0.50	8.4	1.6
1,2-Dichloroethane	0.54	0.50	2.2	2.0
n-Heptane	0.53	0.50	2.2	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3
4-Methyl-2-Pentanone	ND	0.50	ND	2.0

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Field ID:	EFF MPE	Diln Fac:	1.000
Lab ID:	266878-001	Batch#:	223338
Matrix:	Air	Sampled:	05/19/15
Units (V):	ppbv	Received:	05/19/15
Units (M):	ug/m3	Analyzed:	05/20/15

Analyte	Result (V)	RL	Result (M)	RL
Toluene	3.2	0.50	12	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	1.8	0.50	8.0	2.2
o-Xylene	0.77	0.50	3.3	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	0.98	0.50	4.8	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	93	80-121

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Field ID:	INF MPE	Diln Fac:	40.00
Lab ID:	266878-002	Batch#:	223338
Matrix:	Air	Sampled:	05/19/15
Units (V):	ppbv	Received:	05/19/15
Units (M):	ug/m3	Analyzed:	05/20/15

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	20	ND	99
Freon 114	ND	20	ND	140
Chloromethane	ND	20	ND	41
Vinyl Chloride	ND	20	ND	51
1,3-Butadiene	ND	20	ND	44
Bromomethane	ND	20	ND	78
Chloroethane	ND	20	ND	53
Trichlorofluoromethane	ND	20	ND	110
Acrolein	ND	80	ND	180
1,1-Dichloroethene	ND	20	ND	79
Freon 113	ND	20	ND	150
Acetone	ND	80	ND	190
Carbon Disulfide	ND	20	ND	62
Methylene Chloride	ND	20	ND	69
trans-1,2-Dichloroethene	ND	20	ND	79
MTBE	2,500	20	9,000	72
n-Hexane	400	20	1,400	70
1,1-Dichloroethane	ND	20	ND	81
Vinyl Acetate	ND	20	ND	70
cis-1,2-Dichloroethene	ND	20	ND	79
2-Butanone	ND	20	ND	59
Ethyl Acetate	ND	20	ND	72
Tetrahydrofuran	ND	20	ND	59
Chloroform	ND	20	ND	98
1,1,1-Trichloroethane	ND	20	ND	110
Cyclohexane	ND	20	ND	69
Carbon Tetrachloride	ND	20	ND	130
Benzene	240	20	770	64
1,2-Dichloroethane	ND	20	ND	81
n-Heptane	380	20	1,600	82
Trichloroethene	ND	20	ND	110
1,2-Dichloropropane	ND	20	ND	92
Bromodichloromethane	ND	20	ND	130
cis-1,3-Dichloropropene	ND	20	ND	91
4-Methyl-2-Pentanone	ND	20	ND	82

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Field ID:	INF MPE	Diln Fac:	40.00
Lab ID:	266878-002	Batch#:	223338
Matrix:	Air	Sampled:	05/19/15
Units (V):	ppbv	Received:	05/19/15
Units (M):	ug/m3	Analyzed:	05/20/15

Analyte	Result (V)	RL	Result (M)	RL
Toluene	460	20	1,700	75
trans-1,3-Dichloropropene	ND	20	ND	91
1,1,2-Trichloroethane	ND	20	ND	110
Tetrachloroethene	ND	20	ND	140
2-Hexanone	ND	20	ND	82
Dibromochloromethane	ND	20	ND	170
1,2-Dibromoethane	ND	20	ND	150
Chlorobenzene	ND	20	ND	92
Ethylbenzene	160	20	700	87
m,p-Xylenes	510	20	2,200	87
o-Xylene	190	20	830	87
Styrene	ND	20	ND	85
Bromoform	ND	20	ND	210
1,1,2,2-Tetrachloroethane	ND	20	ND	140
4-Ethyltoluene	53	20	260	98
1,3,5-Trimethylbenzene	78	20	380	98
1,2,4-Trimethylbenzene	180	20	900	98
1,3-Dichlorobenzene	ND	20	ND	120
1,4-Dichlorobenzene	ND	20	ND	120
Benzyl chloride	ND	20	ND	100
1,2-Dichlorobenzene	ND	20	ND	120
1,2,4-Trichlorobenzene	ND	20	ND	150
Hexachlorobutadiene	ND	20	ND	210
Naphthalene	ND	80	ND	420

Surrogate	%REC	Limits
Bromofluorobenzene	115	80-121

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223338
Units (V):	ppbv	Analyzed:	05/20/15
Diln Fac:	1.000		

Type: BS Lab ID: QC788628

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	7.975	80	70-130
Freon 114	10.00	7.992	80	70-130
Chloromethane	10.00	8.500	85	70-130
Vinyl Chloride	10.00	9.304	93	70-130
1,3-Butadiene	10.00	8.362	84	70-130
Bromomethane	10.00	8.041	80	70-130
Chloroethane	10.00	8.818	88	70-130
Trichlorofluoromethane	10.00	7.949	79	70-130
Acrolein	10.00	8.362	84	70-130
1,1-Dichloroethene	10.00	9.323	93	70-130
Freon 113	10.00	8.268	83	70-130
Acetone	10.00	7.675	77	70-130
Carbon Disulfide	10.00	8.292	83	70-130
Methylene Chloride	10.00	8.879	89	70-130
trans-1,2-Dichloroethene	10.00	9.301	93	70-130
MTBE	10.00	8.837	88	70-130
n-Hexane	10.00	8.148	81	70-130
1,1-Dichloroethane	10.00	9.396	94	70-130
Vinyl Acetate	10.00	8.880	89	70-130
cis-1,2-Dichloroethene	10.00	9.367	94	70-130
2-Butanone	10.00	7.456	75	70-130
Ethyl Acetate	10.00	8.476	85	70-130
Tetrahydrofuran	10.00	12.23	122	70-130
Chloroform	10.00	8.212	82	70-130
1,1,1-Trichloroethane	10.00	10.34	103	70-130
Cyclohexane	10.00	11.03	110	70-130
Carbon Tetrachloride	10.00	9.291	93	70-130
Benzene	10.00	10.47	105	70-130
1,2-Dichloroethane	10.00	11.42	114	70-130
n-Heptane	10.00	10.52	105	70-130
Trichloroethene	10.00	9.272	93	70-130
1,2-Dichloropropane	10.00	11.24	112	70-130
Bromodichloromethane	10.00	10.16	102	70-130
cis-1,3-Dichloropropene	10.00	10.60	106	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223338
Units (V):	ppbv	Analyzed:	05/20/15
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
4-Methyl-2-Pentanone	10.00	11.72	117	70-130
Toluene	10.00	9.153	92	70-130
trans-1,3-Dichloropropene	10.00	10.37	104	70-130
1,1,2-Trichloroethane	10.00	9.884	99	70-130
Tetrachloroethene	10.00	8.818	88	70-130
2-Hexanone	10.00	10.55	105	70-130
Dibromochloromethane	10.00	8.622	86	70-130
1,2-Dibromoethane	10.00	9.236	92	70-130
Chlorobenzene	10.00	8.701	87	70-130
Ethylbenzene	10.00	9.099	91	70-130
m,p-Xylenes	20.00	18.70	94	70-130
o-Xylene	10.00	9.408	94	70-130
Styrene	10.00	8.861	89	70-130
Bromoform	10.00	8.156	82	70-130
1,1,2,2-Tetrachloroethane	10.00	9.400	94	70-130
4-Ethyltoluene	10.00	9.482	95	70-130
1,3,5-Trimethylbenzene	10.00	9.568	96	70-130
1,2,4-Trimethylbenzene	10.00	10.25	102	70-130
1,3-Dichlorobenzene	10.00	9.233	92	70-130
1,4-Dichlorobenzene	10.00	8.898	89	70-130
Benzyl chloride	10.00	8.674	87	70-130
1,2-Dichlorobenzene	10.00	9.441	94	70-130
1,2,4-Trichlorobenzene	10.00	10.09	101	70-130
Hexachlorobutadiene	10.00	9.789	98	70-130
Naphthalene	10.00	10.75	108	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	95	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223338
Units (V):	ppbv	Analyzed:	05/20/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC788629

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	8.269	83	70-130	4	25
Freon 114	10.00	8.178	82	70-130	2	25
Chloromethane	10.00	8.815	88	70-130	4	25
Vinyl Chloride	10.00	9.371	94	70-130	1	25
1,3-Butadiene	10.00	8.430	84	70-130	1	25
Bromomethane	10.00	8.068	81	70-130	0	25
Chloroethane	10.00	9.083	91	70-130	3	25
Trichlorofluoromethane	10.00	8.089	81	70-130	2	25
Acrolein	10.00	8.744	87	70-130	4	25
1,1-Dichloroethene	10.00	9.411	94	70-130	1	25
Freon 113	10.00	8.315	83	70-130	1	25
Acetone	10.00	7.966	80	70-130	4	25
Carbon Disulfide	10.00	8.224	82	70-130	1	25
Methylene Chloride	10.00	8.909	89	70-130	0	25
trans-1,2-Dichloroethene	10.00	9.175	92	70-130	1	25
MTBE	10.00	8.913	89	70-130	1	25
n-Hexane	10.00	7.955	80	70-130	2	25
1,1-Dichloroethane	10.00	9.158	92	70-130	3	25
Vinyl Acetate	10.00	8.761	88	70-130	1	25
cis-1,2-Dichloroethene	10.00	9.284	93	70-130	1	25
2-Butanone	10.00	7.554	76	70-130	1	25
Ethyl Acetate	10.00	8.390	84	70-130	1	25
Tetrahydrofuran	10.00	11.79	118	70-130	4	25
Chloroform	10.00	8.212	82	70-130	0	25
1,1,1-Trichloroethane	10.00	10.24	102	70-130	1	25
Cyclohexane	10.00	10.71	107	70-130	3	25
Carbon Tetrachloride	10.00	9.187	92	70-130	1	25
Benzene	10.00	10.25	103	70-130	2	25
1,2-Dichloroethane	10.00	11.01	110	70-130	4	25
n-Heptane	10.00	10.60	106	70-130	1	25
Trichloroethene	10.00	8.930	89	70-130	4	25
1,2-Dichloropropane	10.00	11.31	113	70-130	1	25
Bromodichloromethane	10.00	10.12	101	70-130	0	25
cis-1,3-Dichloropropene	10.00	10.36	104	70-130	2	25

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223338
Units (V):	ppbv	Analyzed:	05/20/15
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
4-Methyl-2-Pentanone	10.00	11.49	115	70-130	2	25
Toluene	10.00	8.986	90	70-130	2	25
trans-1,3-Dichloropropene	10.00	10.14	101	70-130	2	25
1,1,2-Trichloroethane	10.00	9.819	98	70-130	1	25
Tetrachloroethene	10.00	8.696	87	70-130	1	25
2-Hexanone	10.00	10.10	101	70-130	4	25
Dibromochloromethane	10.00	8.445	84	70-130	2	25
1,2-Dibromoethane	10.00	8.902	89	70-130	4	25
Chlorobenzene	10.00	8.626	86	70-130	1	25
Ethylbenzene	10.00	8.898	89	70-130	2	25
m,p-Xylenes	20.00	18.45	92	70-130	1	25
o-Xylene	10.00	9.421	94	70-130	0	25
Styrene	10.00	8.683	87	70-130	2	25
Bromoform	10.00	7.966	80	70-130	2	25
1,1,2,2-Tetrachloroethane	10.00	9.250	93	70-130	2	25
4-Ethyltoluene	10.00	9.512	95	70-130	0	25
1,3,5-Trimethylbenzene	10.00	9.636	96	70-130	1	25
1,2,4-Trimethylbenzene	10.00	10.23	102	70-130	0	25
1,3-Dichlorobenzene	10.00	9.263	93	70-130	0	25
1,4-Dichlorobenzene	10.00	9.171	92	70-130	3	25
Benzyl chloride	10.00	8.538	85	70-130	2	25
1,2-Dichlorobenzene	10.00	9.189	92	70-130	3	25
1,2,4-Trichlorobenzene	10.00	9.877	99	70-130	2	25
Hexachlorobutadiene	10.00	9.842	98	70-130	1	25
Naphthalene	10.00	9.960	100	70-130	8	25

Surrogate	%REC	Limits
Bromofluorobenzene	97	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC788630	Diln Fac:	1.000
Matrix:	Air	Batch#:	223338
Units (V):	ppbv	Analyzed:	05/20/15

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

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC788630	Diln Fac:	1.000
Matrix:	Air	Batch#:	223338
Units (V):	ppbv	Analyzed:	05/20/15

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

Surrogate	%REC	Limits
Bromofluorobenzene	90	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Aromatic / Petroleum Hydrocarbons in Air

Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Batch#:	223285
Matrix:	Air	Sampled:	05/19/15
Units (V):	ppbv	Received:	05/19/15
Units (M):	ug/m3	Analyzed:	05/19/15

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln Fac
EFF MPE	SAMPLE	266878-001	440	50	5.6	1,800	200	23	1.000
INF MPE	SAMPLE	266878-002	37,000	1,000	110	150,000	4,100	460	20.00
	BLANK	QC788440	ND	50	5.6	ND	200	23	1.000

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Aromatic / Petroleum Hydrocarbons in Air

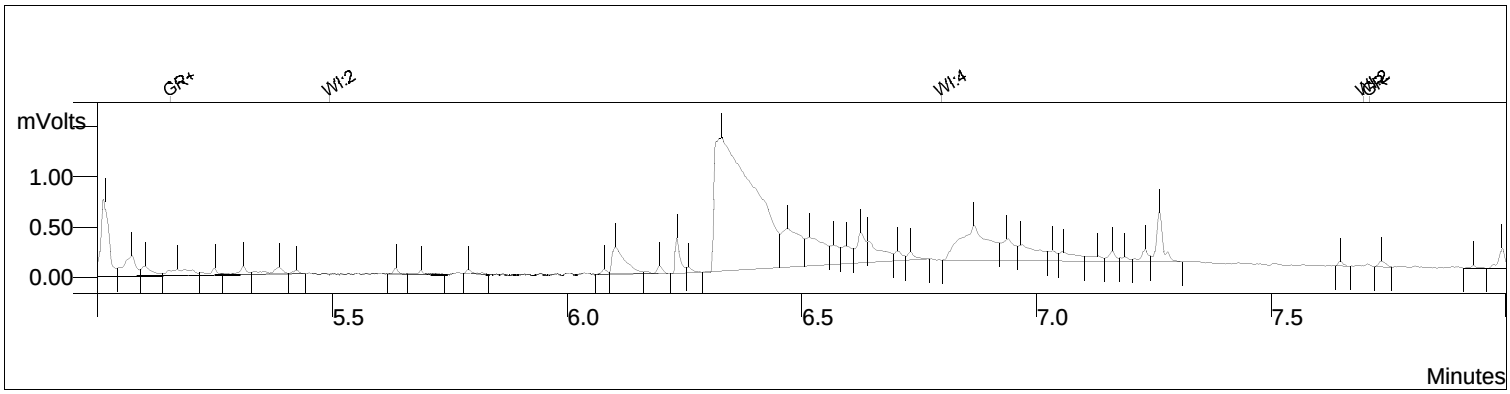
Lab #:	266878	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Diln Fac:	1.000
Matrix:	Air	Batch#:	223285
Units (V):	ppbv	Analyzed:	05/19/15

Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim
BS	QC788438	210.0	239.1	114	70-130		
BSD	QC788439	210.0	217.1	103	70-130	10	25

RPD= Relative Percent Difference
Result V= Result in volume units

GRO by TO-3

Sample ID:	266878-001,223285		
Data File:	c:\varianws\data\051915\139_004.run		
Sample List:	c:\varianws\051915b.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	05/19/2015 14:02:13		
Calculation Date:	05/19/2015 14:14:16		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	1x		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	16323	439.379
		Totals	**16323**	**439.379**

Integration Parameters

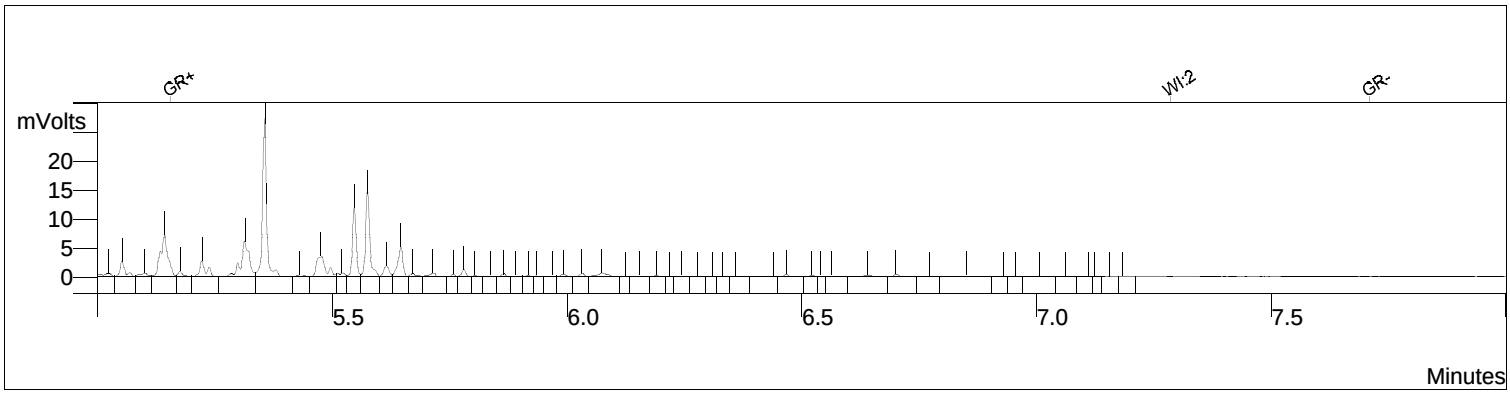
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	5

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
5.495	WI 2.0 sec
6.797	WI 4.0 sec
7.695	WI 2.0 sec
7.708	GR off

GRO by TO-3

Sample ID:	266878-002,223285		
Data File:	c:\varianws\data\051915\139_007.run		
Sample List:	c:\varianws\051915b.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	05/19/2015 15:15:41		
Calculation Date:	05/19/2015 15:27:43		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	20x		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	68861	1853.572
		Totals	**68861**	**1853.572**

Integration Parameters

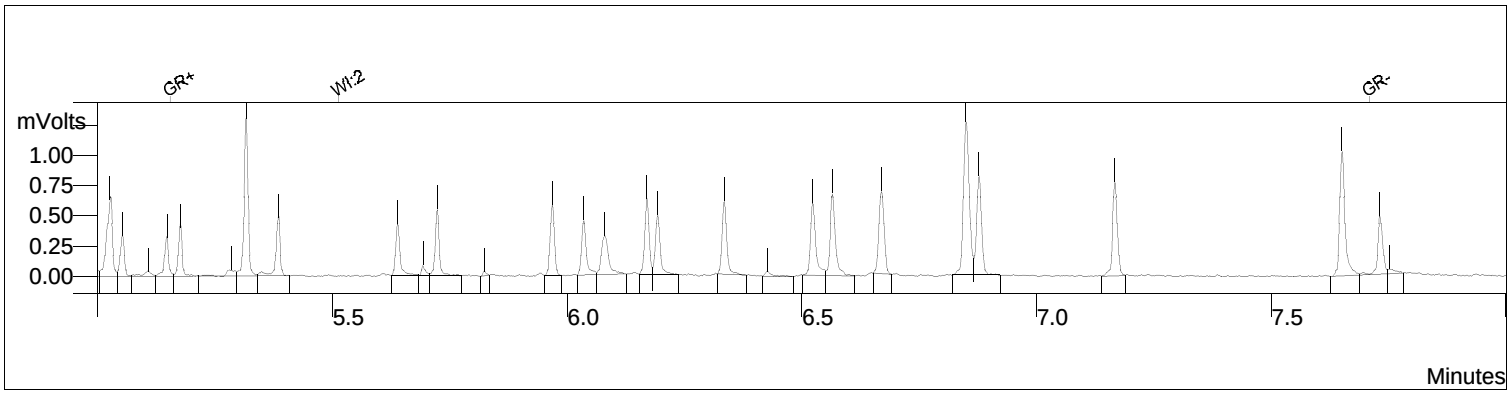
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	5

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
7.284	WI 2.0 sec
7.708	GR off

GRO by TO-3

Sample ID:	ccv/bs,qc788438		
Data File:	c:\varianws\data\051915\139_001.run		
Sample List:	c:\varianws\051915.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	05/19/2015 08:08:11		
Calculation Date:	05/19/2015 08:20:15		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	223285,s27287,1x		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	8883	239.097
		Totals	**8883**	**239.097**

Integration Parameters

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

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
5.513	WI 2.0 sec
7.708	GR off

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

Laboratory Job Number 267064
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	Project : 5085
6620 Owens Dr.	Location : 2844 Mountain Blvd., Oakland
Pleasanton, CA 94588	Level : II

Sample ID	Lab ID
EFF MPE	267064-001
INF MPE	267064-002

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

Signature: _____ Date: 06/01/2015

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**267064**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**5085**
Location:	**2844 Mountain Blvd., Oakland**
Request Date:	**05/27/15**
Samples Received:	**05/27/15**

This data package contains sample and QC results for two air samples, requested for the above referenced project on 05/27/15. The samples were received intact.

Volatile Organics in Air by MS (EPA TO-15):
No analytical problems were encountered.

Volatile Organics in Air GC (EPA TO-3):
No analytical problems were encountered.

CHAIN OF CUSTODY

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2840 8th Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

C&T LOGIN # 267064

Sampler: Davoud Bazrpash

Project No: 5085

Report To: Joyce Bobek

Project Name: 2844 Mountain Blvd., Oakland, CA

Company : SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste	Air	# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE	NONE	Analyses: TO-3	TO-15
1	EFF MPE	5,27,15 3:10pm				*	Tedlar bag					*	*	*
2	INF MPE	5,27,15 3:15pm				*	Tedlar bag					*	*	*

Notes: EDF OUTPUT REQUIRED

RELINQUISHED BY: [signature] 5,27,15 3:41PM DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY: [signature] 5/27/15 1541 DATE/TIME

DATE/TIME

DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 267064 Date Received 5/27/15 Number of coolers 0
Client SOMA Project 2444 Mountain Blvd Oakland (5085)

Date Opened 5/27/15 By (print) KARI MARTINEZ (sign)
Date Logged in ↓ By (print) ↓ (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
   Shipping info
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☐ NO
   How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

   ☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☒ None
   ☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels
7. Temperature documentation: * Notify PM if temperature exceeds 6°C

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

   ☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

   ☐ Samples received on ice directly from the field. Cooling process had begun
8. Were Method 5035 sampling containers present? YES (NO)
   If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? YES (NO)
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? YES NO (N/A)
21. Was the client contacted concerning this sample delivery? YES (NO)
   If YES, Who was called? By Date:

COMMENTS
13. COC : GFF MPE bag: Effluent Mountain BLVd
↓ INF MPE ↓ INFLUENT ↓

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 267064

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

Client : SOMA Environmental Engineering Inc.
Project : 5085
Location : 2844 Mountain Blvd., Oakland

Client Sample ID : EFF MPE Laboratory Sample ID : 267064-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Chloromethane	1.8		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Acrolein	10		2.0		ppbv	As Recd	1.000	EPA TO-15	METHOD
Acetone	14		2.0		ppbv	As Recd	1.000	EPA TO-15	METHOD
n-Hexane	0.55		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
2-Butanone	1.8		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Ethyl Acetate	0.80		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Cyclohexane	1.6		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Benzene	1.2		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Toluene	2.2		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
m,p-Xylenes	0.97		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	0.80		0.50		ppbv	As Recd	1.000	EPA TO-15	METHOD
Gasoline Range Organics C6-C12	180		50	5.6	ppbv	As Recd	1.000	EPA TO-3	METHOD

Client Sample ID : INF MPE Laboratory Sample ID : 267064-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
MTBE	6,000		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
n-Hexane	3,000		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
Cyclohexane	4,700		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
Benzene	1,100		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
n-Heptane	2,600		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
Toluene	1,700		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
Ethylbenzene	1,300		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
m,p-Xylenes	3,600		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
o-Xylene	800		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
4-Ethyltoluene	150		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
1,3,5-Trimethylbenzene	180		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	300		60		ppbv	As Recd	120.0	EPA TO-15	METHOD
Gasoline Range Organics C6-C12	77,000		1,000	110	ppbv	As Recd	20.00	EPA TO-3	METHOD

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Field ID:	EFF MPE	Diln Fac:	1.000
Lab ID:	267064-001	Batch#:	223596
Matrix:	Air	Sampled:	05/27/15
Units (V):	ppbv	Received:	05/27/15
Units (M):	ug/m3	Analyzed:	05/28/15

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	1.8	0.50	3.6	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	10	2.0	23	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	14	2.0	32	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	0.55	0.50	1.9	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	1.8	0.50	5.5	1.5
Ethyl Acetate	0.80	0.50	2.9	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	1.6	0.50	5.5	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	1.2	0.50	3.9	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3
4-Methyl-2-Pentanone	ND	0.50	ND	2.0

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Field ID:	EFF MPE	Diln Fac:	1.000
Lab ID:	267064-001	Batch#:	223596
Matrix:	Air	Sampled:	05/27/15
Units (V):	ppbv	Received:	05/27/15
Units (M):	ug/m3	Analyzed:	05/28/15

Analyte	Result (V)	RL	Result (M)	RL
Toluene	2.2	0.50	8.1	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	0.97	0.50	4.2	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	0.80	0.50	3.9	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	102	80-121

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Field ID:	INF MPE	Diln Fac:	120.0
Lab ID:	267064-002	Batch#:	223542
Matrix:	Air	Sampled:	05/27/15
Units (V):	ppbv	Received:	05/27/15
Units (M):	ug/m3	Analyzed:	05/27/15

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	60	ND	300
Freon 114	ND	60	ND	420
Chloromethane	ND	60	ND	120
Vinyl Chloride	ND	60	ND	150
1,3-Butadiene	ND	60	ND	130
Bromomethane	ND	60	ND	230
Chloroethane	ND	60	ND	160
Trichlorofluoromethane	ND	60	ND	340
Acrolein	ND	240	ND	550
1,1-Dichloroethene	ND	60	ND	240
Freon 113	ND	60	ND	460
Acetone	ND	240	ND	570
Carbon Disulfide	ND	60	ND	190
Methylene Chloride	ND	60	ND	210
trans-1,2-Dichloroethene	ND	60	ND	240
MTBE	6,000	60	22,000	220
n-Hexane	3,000	60	10,000	210
1,1-Dichloroethane	ND	60	ND	240
Vinyl Acetate	ND	60	ND	210
cis-1,2-Dichloroethene	ND	60	ND	240
2-Butanone	ND	60	ND	180
Ethyl Acetate	ND	60	ND	220
Tetrahydrofuran	ND	60	ND	180
Chloroform	ND	60	ND	290
1,1,1-Trichloroethane	ND	60	ND	330
Cyclohexane	4,700	60	16,000	210
Carbon Tetrachloride	ND	60	ND	380
Benzene	1,100	60	3,500	190
1,2-Dichloroethane	ND	60	ND	240
n-Heptane	2,600	60	11,000	250
Trichloroethene	ND	60	ND	320
1,2-Dichloropropane	ND	60	ND	280
Bromodichloromethane	ND	60	ND	400
cis-1,3-Dichloropropene	ND	60	ND	270
4-Methyl-2-Pentanone	ND	60	ND	250

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Field ID:	INF MPE	Diln Fac:	120.0
Lab ID:	267064-002	Batch#:	223542
Matrix:	Air	Sampled:	05/27/15
Units (V):	ppbv	Received:	05/27/15
Units (M):	ug/m3	Analyzed:	05/27/15

Analyte	Result (V)	RL	Result (M)	RL
Toluene	1,700	60	6,600	230
trans-1,3-Dichloropropene	ND	60	ND	270
1,1,2-Trichloroethane	ND	60	ND	330
Tetrachloroethene	ND	60	ND	410
2-Hexanone	ND	60	ND	250
Dibromochloromethane	ND	60	ND	510
1,2-Dibromoethane	ND	60	ND	460
Chlorobenzene	ND	60	ND	280
Ethylbenzene	1,300	60	5,800	260
m,p-Xylenes	3,600	60	15,000	260
o-Xylene	800	60	3,500	260
Styrene	ND	60	ND	260
Bromoform	ND	60	ND	620
1,1,2,2-Tetrachloroethane	ND	60	ND	410
4-Ethyltoluene	150	60	720	290
1,3,5-Trimethylbenzene	180	60	900	290
1,2,4-Trimethylbenzene	300	60	1,500	290
1,3-Dichlorobenzene	ND	60	ND	360
1,4-Dichlorobenzene	ND	60	ND	360
Benzyl chloride	ND	60	ND	310
1,2-Dichlorobenzene	ND	60	ND	360
1,2,4-Trichlorobenzene	ND	60	ND	450
Hexachlorobutadiene	ND	60	ND	640
Naphthalene	ND	240	ND	1,300

Surrogate	%REC	Limits
Bromofluorobenzene	107	80-121

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223542
Units (V):	ppbv	Analyzed:	05/27/15
Diln Fac:	1.000		

Type: BS Lab ID: QC789423

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	7.641	76	70-130
Freon 114	10.00	7.822	78	70-130
Chloromethane	10.00	8.390	84	70-130
Vinyl Chloride	10.00	9.045	90	70-130
1,3-Butadiene	10.00	8.345	83	70-130
Bromomethane	10.00	7.716	77	70-130
Chloroethane	10.00	8.802	88	70-130
Trichlorofluoromethane	10.00	7.680	77	70-130
Acrolein	10.00	8.356	84	70-130
1,1-Dichloroethene	10.00	9.142	91	70-130
Freon 113	10.00	8.038	80	70-130
Acetone	10.00	8.137	81	70-130
Carbon Disulfide	10.00	8.058	81	70-130
Methylene Chloride	10.00	8.541	85	70-130
trans-1,2-Dichloroethene	10.00	9.224	92	70-130
MTBE	10.00	8.729	87	70-130
n-Hexane	10.00	8.226	82	70-130
1,1-Dichloroethane	10.00	9.064	91	70-130
Vinyl Acetate	10.00	9.107	91	70-130
cis-1,2-Dichloroethene	10.00	9.239	92	70-130
2-Butanone	10.00	7.786	78	70-130
Ethyl Acetate	10.00	8.568	86	70-130
Tetrahydrofuran	10.00	11.54	115	70-130
Chloroform	10.00	8.067	81	70-130
1,1,1-Trichloroethane	10.00	9.754	98	70-130
Cyclohexane	10.00	10.76	108	70-130
Carbon Tetrachloride	10.00	8.436	84	70-130
Benzene	10.00	9.906	99	70-130
1,2-Dichloroethane	10.00	11.07	111	70-130
n-Heptane	10.00	10.48	105	70-130
Trichloroethene	10.00	9.002	90	70-130
1,2-Dichloropropane	10.00	11.18	112	70-130
Bromodichloromethane	10.00	9.988	100	70-130
cis-1,3-Dichloropropene	10.00	10.41	104	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223542
Units (V):	ppbv	Analyzed:	05/27/15
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
4-Methyl-2-Pentanone	10.00	11.61	116	70-130
Toluene	10.00	9.300	93	70-130
trans-1,3-Dichloropropene	10.00	10.23	102	70-130
1,1,2-Trichloroethane	10.00	10.38	104	70-130
Tetrachloroethene	10.00	9.441	94	70-130
2-Hexanone	10.00	10.96	110	70-130
Dibromochloromethane	10.00	8.791	88	70-130
1,2-Dibromoethane	10.00	9.817	98	70-130
Chlorobenzene	10.00	8.999	90	70-130
Ethylbenzene	10.00	8.425	84	70-130
m,p-Xylenes	20.00	17.14	86	70-130
o-Xylene	10.00	8.777	88	70-130
Styrene	10.00	8.087	81	70-130
Bromoform	10.00	7.027	70	70-130
1,1,2,2-Tetrachloroethane	10.00	9.945	99	70-130
4-Ethyltoluene	10.00	8.916	89	70-130
1,3,5-Trimethylbenzene	10.00	9.021	90	70-130
1,2,4-Trimethylbenzene	10.00	9.858	99	70-130
1,3-Dichlorobenzene	10.00	8.723	87	70-130
1,4-Dichlorobenzene	10.00	8.498	85	70-130
Benzyl chloride	10.00	7.760	78	70-130
1,2-Dichlorobenzene	10.00	8.888	89	70-130
1,2,4-Trichlorobenzene	10.00	10.23	102	70-130
Hexachlorobutadiene	10.00	9.586	96	70-130
Naphthalene	10.00	9.924	99	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	94	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223542
Units (V):	ppbv	Analyzed:	05/27/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC789424

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	8.062	81	70-130	5	25
Freon 114	10.00	8.255	83	70-130	5	25
Chloromethane	10.00	8.482	85	70-130	1	25
Vinyl Chloride	10.00	9.343	93	70-130	3	25
1,3-Butadiene	10.00	8.434	84	70-130	1	25
Bromomethane	10.00	8.008	80	70-130	4	25
Chloroethane	10.00	9.196	92	70-130	4	25
Trichlorofluoromethane	10.00	7.922	79	70-130	3	25
Acrolein	10.00	8.462	85	70-130	1	25
1,1-Dichloroethene	10.00	9.446	94	70-130	3	25
Freon 113	10.00	8.172	82	70-130	2	25
Acetone	10.00	8.422	84	70-130	3	25
Carbon Disulfide	10.00	8.141	81	70-130	1	25
Methylene Chloride	10.00	8.899	89	70-130	4	25
trans-1,2-Dichloroethene	10.00	9.326	93	70-130	1	25
MTBE	10.00	9.121	91	70-130	4	25
n-Hexane	10.00	8.455	85	70-130	3	25
1,1-Dichloroethane	10.00	9.542	95	70-130	5	25
Vinyl Acetate	10.00	9.139	91	70-130	0	25
cis-1,2-Dichloroethene	10.00	9.474	95	70-130	3	25
2-Butanone	10.00	7.903	79	70-130	1	25
Ethyl Acetate	10.00	8.860	89	70-130	3	25
Tetrahydrofuran	10.00	12.12	121	70-130	5	25
Chloroform	10.00	8.312	83	70-130	3	25
1,1,1-Trichloroethane	10.00	10.04	100	70-130	3	25
Cyclohexane	10.00	10.72	107	70-130	0	25
Carbon Tetrachloride	10.00	8.365	84	70-130	1	25
Benzene	10.00	10.11	101	70-130	2	25
1,2-Dichloroethane	10.00	10.92	109	70-130	1	25
n-Heptane	10.00	10.35	103	70-130	1	25
Trichloroethene	10.00	8.938	89	70-130	1	25
1,2-Dichloropropane	10.00	11.18	112	70-130	0	25
Bromodichloromethane	10.00	9.725	97	70-130	3	25
cis-1,3-Dichloropropene	10.00	10.52	105	70-130	1	25

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223542
Units (V):	ppbv	Analyzed:	05/27/15
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
4-Methyl-2-Pentanone	10.00	11.87	119	70-130	2	25
Toluene	10.00	9.597	96	70-130	3	25
trans-1,3-Dichloropropene	10.00	10.31	103	70-130	1	25
1,1,2-Trichloroethane	10.00	10.38	104	70-130	0	25
Tetrachloroethene	10.00	9.728	97	70-130	3	25
2-Hexanone	10.00	11.13	111	70-130	2	25
Dibromochloromethane	10.00	8.957	90	70-130	2	25
1,2-Dibromoethane	10.00	9.931	99	70-130	1	25
Chlorobenzene	10.00	8.966	90	70-130	0	25
Ethylbenzene	10.00	8.821	88	70-130	5	25
m,p-Xylenes	20.00	17.78	89	70-130	4	25
o-Xylene	10.00	9.080	91	70-130	3	25
Styrene	10.00	8.498	85	70-130	5	25
Bromoform	10.00	7.259	73	70-130	3	25
1,1,2,2-Tetrachloroethane	10.00	10.22	102	70-130	3	25
4-Ethyltoluene	10.00	9.383	94	70-130	5	25
1,3,5-Trimethylbenzene	10.00	9.570	96	70-130	6	25
1,2,4-Trimethylbenzene	10.00	10.32	103	70-130	5	25
1,3-Dichlorobenzene	10.00	9.245	92	70-130	6	25
1,4-Dichlorobenzene	10.00	8.842	88	70-130	4	25
Benzyl chloride	10.00	8.140	81	70-130	5	25
1,2-Dichlorobenzene	10.00	9.102	91	70-130	2	25
1,2,4-Trichlorobenzene	10.00	10.21	102	70-130	0	25
Hexachlorobutadiene	10.00	9.404	94	70-130	2	25
Naphthalene	10.00	10.33	103	70-130	4	25

Surrogate	%REC	Limits
Bromofluorobenzene	99	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC789425	Diln Fac:	1.000
Matrix:	Air	Batch#:	223542
Units (V):	ppbv	Analyzed:	05/27/15

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

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC789425	Diln Fac:	1.000
Matrix:	Air	Batch#:	223542
Units (V):	ppbv	Analyzed:	05/27/15

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

Surrogate	%REC	Limits
Bromofluorobenzene	93	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223596
Units (V):	ppbv	Analyzed:	05/28/15
Diln Fac:	1.000		

Type: BS Lab ID: QC789650

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	7.965	80	70-130
Freon 114	10.00	8.126	81	70-130
Chloromethane	10.00	8.598	86	70-130
Vinyl Chloride	10.00	9.274	93	70-130
1,3-Butadiene	10.00	8.371	84	70-130
Bromomethane	10.00	7.868	79	70-130
Chloroethane	10.00	8.982	90	70-130
Trichlorofluoromethane	10.00	7.853	79	70-130
Acrolein	10.00	8.316	83	70-130
1,1-Dichloroethene	10.00	9.492	95	70-130
Freon 113	10.00	8.132	81	70-130
Acetone	10.00	8.326	83	70-130
Carbon Disulfide	10.00	7.997	80	70-130
Methylene Chloride	10.00	8.802	88	70-130
trans-1,2-Dichloroethene	10.00	8.908	89	70-130
MTBE	10.00	8.839	88	70-130
n-Hexane	10.00	8.059	81	70-130
1,1-Dichloroethane	10.00	9.236	92	70-130
Vinyl Acetate	10.00	9.020	90	70-130
cis-1,2-Dichloroethene	10.00	9.210	92	70-130
2-Butanone	10.00	7.734	77	70-130
Ethyl Acetate	10.00	7.994	80	70-130
Tetrahydrofuran	10.00	11.64	116	70-130
Chloroform	10.00	8.226	82	70-130
1,1,1-Trichloroethane	10.00	10.06	101	70-130
Cyclohexane	10.00	10.89	109	70-130
Carbon Tetrachloride	10.00	8.135	81	70-130
Benzene	10.00	10.07	101	70-130
1,2-Dichloroethane	10.00	11.32	113	70-130
n-Heptane	10.00	10.58	106	70-130
Trichloroethene	10.00	8.964	90	70-130
1,2-Dichloropropane	10.00	11.12	111	70-130
Bromodichloromethane	10.00	10.29	103	70-130
cis-1,3-Dichloropropene	10.00	10.32	103	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223596
Units (V):	ppbv	Analyzed:	05/28/15
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
4-Methyl-2-Pentanone	10.00	11.06	111	70-130
Toluene	10.00	9.110	91	70-130
trans-1,3-Dichloropropene	10.00	9.940	99	70-130
1,1,2-Trichloroethane	10.00	9.763	98	70-130
Tetrachloroethene	10.00	8.808	88	70-130
2-Hexanone	10.00	10.14	101	70-130
Dibromochloromethane	10.00	8.965	90	70-130
1,2-Dibromoethane	10.00	9.234	92	70-130
Chlorobenzene	10.00	8.861	89	70-130
Ethylbenzene	10.00	9.019	90	70-130
m,p-Xylenes	20.00	18.75	94	70-130
o-Xylene	10.00	9.170	92	70-130
Styrene	10.00	8.907	89	70-130
Bromoform	10.00	7.763	78	70-130
1,1,2,2-Tetrachloroethane	10.00	9.663	97	70-130
4-Ethyltoluene	10.00	9.519	95	70-130
1,3,5-Trimethylbenzene	10.00	9.557	96	70-130
1,2,4-Trimethylbenzene	10.00	10.15	102	70-130
1,3-Dichlorobenzene	10.00	9.478	95	70-130
1,4-Dichlorobenzene	10.00	9.358	94	70-130
Benzyl chloride	10.00	9.302	93	70-130
1,2-Dichlorobenzene	10.00	9.632	96	70-130
1,2,4-Trichlorobenzene	10.00	11.01	110	70-130
Hexachlorobutadiene	10.00	10.55	106	70-130
Naphthalene	10.00	10.97	110	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	102	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223596
Units (V):	ppbv	Analyzed:	05/28/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC789651

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	7.939	79	70-130	0	25
Freon 114	10.00	8.084	81	70-130	1	25
Chloromethane	10.00	8.366	84	70-130	3	25
Vinyl Chloride	10.00	9.147	91	70-130	1	25
1,3-Butadiene	10.00	8.288	83	70-130	1	25
Bromomethane	10.00	7.840	78	70-130	0	25
Chloroethane	10.00	8.885	89	70-130	1	25
Trichlorofluoromethane	10.00	7.891	79	70-130	0	25
Acrolein	10.00	8.124	81	70-130	2	25
1,1-Dichloroethene	10.00	9.341	93	70-130	2	25
Freon 113	10.00	8.307	83	70-130	2	25
Acetone	10.00	8.320	83	70-130	0	25
Carbon Disulfide	10.00	7.997	80	70-130	0	25
Methylene Chloride	10.00	8.796	88	70-130	0	25
trans-1,2-Dichloroethene	10.00	8.924	89	70-130	0	25
MTBE	10.00	8.684	87	70-130	2	25
n-Hexane	10.00	8.014	80	70-130	1	25
1,1-Dichloroethane	10.00	9.154	92	70-130	1	25
Vinyl Acetate	10.00	8.986	90	70-130	0	25
cis-1,2-Dichloroethene	10.00	9.065	91	70-130	2	25
2-Butanone	10.00	7.715	77	70-130	0	25
Ethyl Acetate	10.00	7.930	79	70-130	1	25
Tetrahydrofuran	10.00	11.78	118	70-130	1	25
Chloroform	10.00	8.105	81	70-130	1	25
1,1,1-Trichloroethane	10.00	9.964	100	70-130	1	25
Cyclohexane	10.00	10.65	107	70-130	2	25
Carbon Tetrachloride	10.00	8.089	81	70-130	1	25
Benzene	10.00	9.915	99	70-130	2	25
1,2-Dichloroethane	10.00	11.06	111	70-130	2	25
n-Heptane	10.00	10.62	106	70-130	0	25
Trichloroethene	10.00	8.930	89	70-130	0	25
1,2-Dichloropropane	10.00	10.98	110	70-130	1	25
Bromodichloromethane	10.00	9.998	100	70-130	3	25
cis-1,3-Dichloropropene	10.00	10.12	101	70-130	2	25

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	223596
Units (V):	ppbv	Analyzed:	05/28/15
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
4-Methyl-2-Pentanone	10.00	11.16	112	70-130	1	25
Toluene	10.00	8.771	88	70-130	4	25
trans-1,3-Dichloropropene	10.00	9.829	98	70-130	1	25
1,1,2-Trichloroethane	10.00	9.113	91	70-130	7	25
Tetrachloroethene	10.00	8.624	86	70-130	2	25
2-Hexanone	10.00	9.883	99	70-130	3	25
Dibromochloromethane	10.00	8.608	86	70-130	4	25
1,2-Dibromoethane	10.00	8.833	88	70-130	4	25
Chlorobenzene	10.00	8.522	85	70-130	4	25
Ethylbenzene	10.00	8.654	87	70-130	4	25
m,p-Xylenes	20.00	17.94	90	70-130	4	25
o-Xylene	10.00	8.879	89	70-130	3	25
Styrene	10.00	8.566	86	70-130	4	25
Bromoform	10.00	7.593	76	70-130	2	25
1,1,2,2-Tetrachloroethane	10.00	9.320	93	70-130	4	25
4-Ethyltoluene	10.00	9.198	92	70-130	3	25
1,3,5-Trimethylbenzene	10.00	9.470	95	70-130	1	25
1,2,4-Trimethylbenzene	10.00	9.917	99	70-130	2	25
1,3-Dichlorobenzene	10.00	9.239	92	70-130	3	25
1,4-Dichlorobenzene	10.00	9.040	90	70-130	3	25
Benzyl chloride	10.00	9.045	90	70-130	3	25
1,2-Dichlorobenzene	10.00	9.320	93	70-130	3	25
1,2,4-Trichlorobenzene	10.00	10.91	109	70-130	1	25
Hexachlorobutadiene	10.00	10.07	101	70-130	5	25
Naphthalene	10.00	10.85	109	70-130	1	25

Surrogate	%REC	Limits
Bromofluorobenzene	99	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC789652	Diln Fac:	1.000
Matrix:	Air	Batch#:	223596
Units (V):	ppbv	Analyzed:	05/28/15

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

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC789652	Diln Fac:	1.000
Matrix:	Air	Batch#:	223596
Units (V):	ppbv	Analyzed:	05/28/15

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

Surrogate	%REC	Limits
Bromofluorobenzene	95	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Aromatic / Petroleum Hydrocarbons in Air

Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Batch#:	223545
Matrix:	Air	Sampled:	05/27/15
Units (V):	ppbv	Received:	05/27/15
Units (M):	ug/m3	Analyzed:	05/27/15

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln Fac
EFF MPE	SAMPLE	267064-001	180	50	5.6	720	200	23	1.000
INF MPE	SAMPLE	267064-002	77,000	1,000	110	310,000	4,100	460	20.00
	BLANK	QC789435	ND	50	5.6	ND	200	23	1.000

ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Aromatic / Petroleum Hydrocarbons in Air

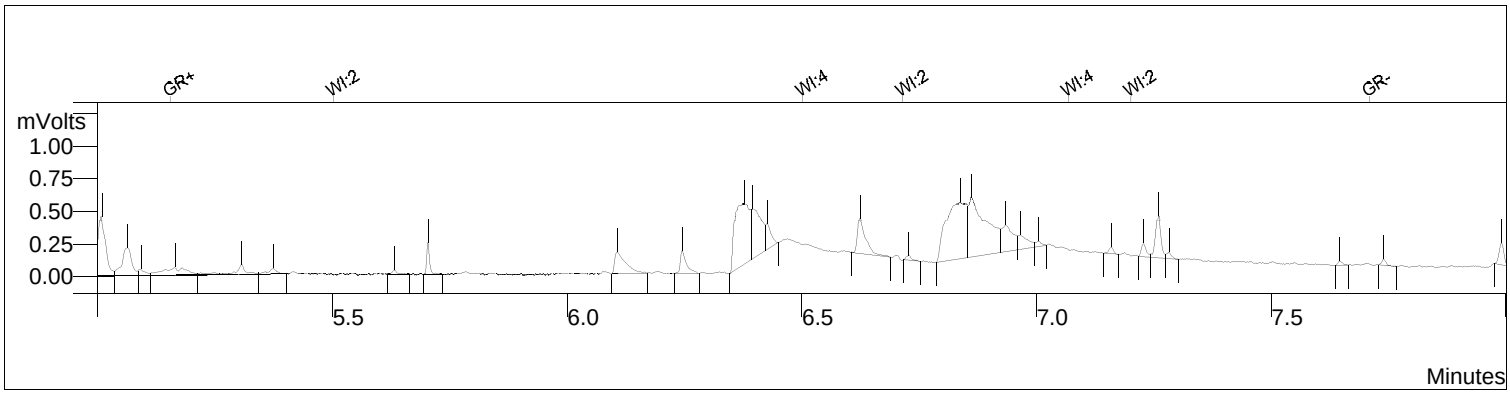
Lab #:	267064	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	5085	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Diln Fac:	1.000
Matrix:	Air	Batch#:	223545
Units (V):	ppbv	Analyzed:	05/27/15

Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim
BS	QC789433	42.00	54.62	130	70-130		
BSD	QC789434	42.00	44.74	107	70-130	20	25

RPD= Relative Percent Difference
Result V= Result in volume units

GRO by TO-3

Sample ID:	sample001,223545		
Data File:	c:\varianws\data\052715\147_007.run		
Sample List:	c:\varianws\052715b.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	05/27/2015 15:51:15		
Calculation Date:	05/27/2015 16:03:18		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	1x		
Multiplier:	1.000	Divisor:	1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	6548	176.259
		Totals	**6548**	**176.259**

Integration Parameters

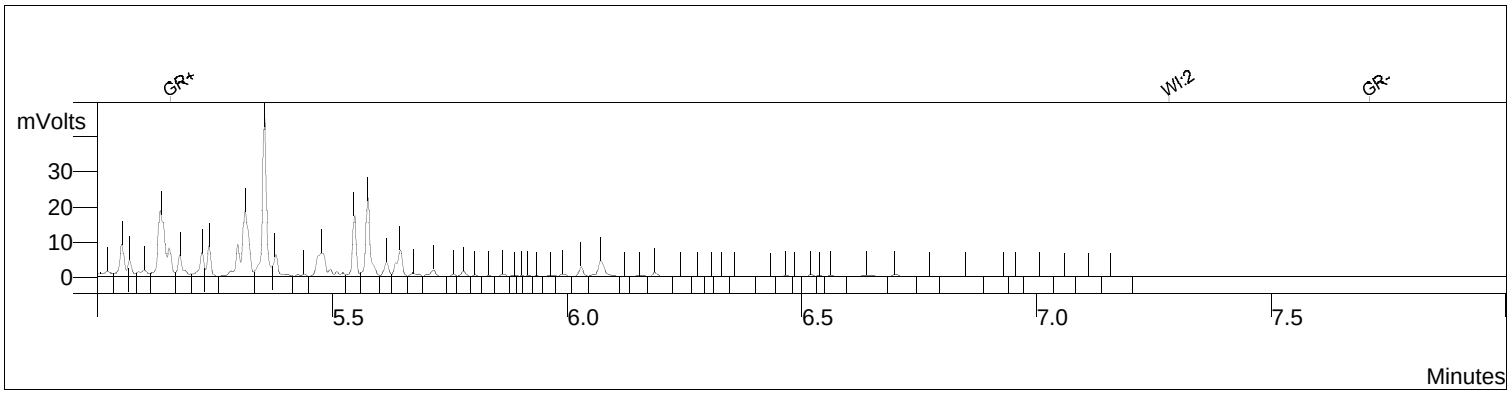
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	5

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
5.503	WI 2.0 sec
6.502	WI 4.0 sec
6.715	WI 2.0 sec
7.067	WI 4.0 sec
7.200	WI 2.0 sec
7.708	GR off

GRO by TO-3

Sample ID:	267064-002,223545		
Data File:	c:\varianws\data\052715\147_010.run		
Sample List:	c:\varianws\052715b.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	05/27/2015 16:52:48		
Calculation Date:	05/27/2015 17:04:50		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	20x,c00116		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	142299	3830.370
		Totals	**142299**	**3830.370**

Integration Parameters

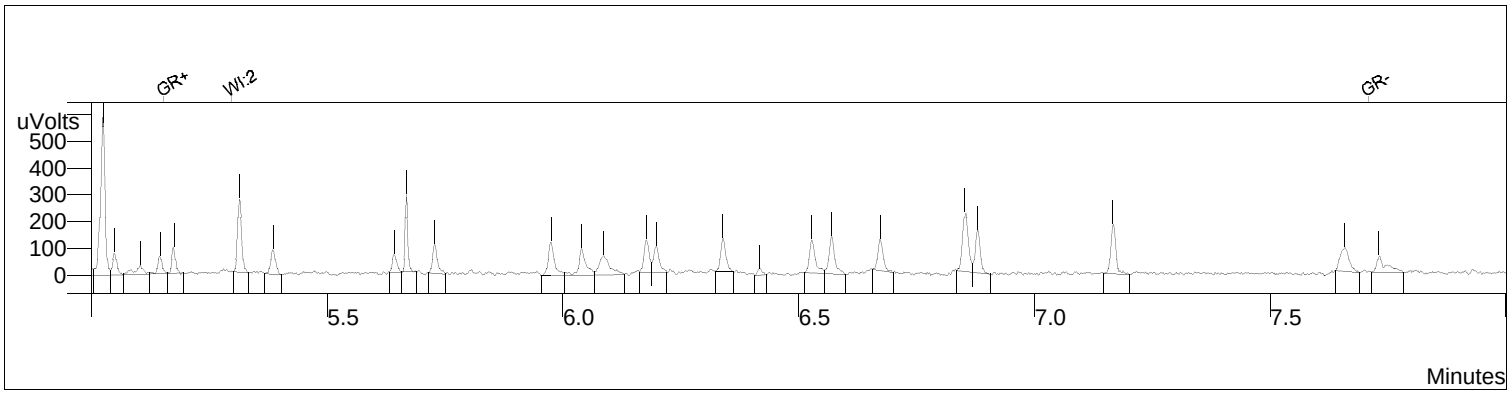
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	5

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
7.281	WI 2.0 sec
7.708	GR off

GRO by TO-3

Sample ID:	ccv/bs,qc789433		
Data File:	c:\varianws\data\052715\147_001.run		
Sample List:	c:\varianws\052715.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	05/27/2015 11:24:44		
Calculation Date:	05/27/2015 11:36:46		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	223545,s27345,1x		
Multiplier:	1.000	Divisor:	1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	2029	54.623
		Totals	**2029**	**54.623**

Integration Parameters

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

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
5.297	WI 2.0 sec
7.708	GR off

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

Laboratory Job Number 267491
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	Project : 5086
6620 Owens Dr.	Location : 2844 Mountain Blvd, Oakland
Pleasanton, CA 94588	Level : II

Sample ID	Lab ID
EFFLUENT	267491-001
INFLUENT	267491-002

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

Signature: Tracy Babjar Date: 06/25/2015

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**267491**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**5086**
Location:	**2844 Mountain Blvd, Oakland**
Request Date:	**06/15/15**
Samples Received:	**06/15/15**

This data package contains sample and QC results for two water samples, requested for the above referenced project on 06/15/15. The samples were received cold and intact.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):
High response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 06/23/15 14:03; affected data was qualified with "b". EFFLUENT (lab # 267491-001) and INFLUENT (lab # 267491-002) were analyzed with more than 1 mL of headspace in the VOA vial. No other analytical problems were encountered.

CHAIN OF CUSTODY

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

LOGIN # 207491

Project No: 5086

Project Name: 2844 Mountain Blvd., Oakland

Turnaround Time: Standard

Sampler: Davoud Bazrpash

Report To: Joyce Bobek

Company : SOMA Environmental

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	Analyses: TPH-g, BTEX, MtBE 8260B	Analyses: Gasoline Oxygenates 8260B	Analyses: TPH-d 8015
	EFFLUENT	6/15/15 2130		*		3 VOAs, 2-500 mL Ambers	*			*	*	*	*
	GAC			*		3 VOAs, 2-500 mL Ambers	*			*	*	*	*
	INFLUENT	6/15/15 2125		*		3 VOAs, 2-500 mL Ambers	*			*	*	*	*

Notes: **EDF OUTPUT REQUIRED**
GasOx: DIPE, ETBE, TAME, TBA

BLUE ICE

RELINQUISHED BY:	RECEIVED BY:
DB DATE/TIME	6/15/15 1455 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 267491 Date Received 6/15/15 Number of coolers 1
Client SOMA Environmental Project 2841 Montain Blvd., Oakland

Date Opened 6/15 By (print) SL (sign)
Date Logged in 6/15 By (print) (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
   Shipping info
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many Name Date
2B. Were custody seals intact upon arrival? YES NO N/A
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

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

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

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

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

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

8. Were Method 5035 sampling containers present? YES (NO)
   If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? (YES) NO N/A
21. Was the client contacted concerning this sample delivery? YES (NO)
   If YES, Who was called? By Date:

COMMENTS

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 267491

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

Client : SOMA Environmental Engineering Inc.
Project : 5086
Location : 2844 Mountain Blvd, Oakland

Client Sample ID : EFFLUENT Laboratory Sample ID : 267491-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
tert-Butyl Alcohol (TBA)	1,600		25	ug/L	As Recd	2.500	EPA 8260B	EPA 5030B
MTBE	5.9		1.3	ug/L	As Recd	2.500	EPA 8260B	EPA 5030B

Client Sample ID : INFLUENT Laboratory Sample ID : 267491-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	4,200		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Gasoline C7-C12	2,500		250	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
tert-Butyl Alcohol (TBA)	2,100		50	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	44		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
MTBE	350		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
Benzene	3.7		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
Toluene	56		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
Ethylbenzene	28		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
m,p-Xylenes	150		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
o-Xylene	52		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5086	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/15/15
Units:	ug/L	Received:	06/15/15
Diln Fac:	1.000	Prepared:	06/17/15
Batch#:	224206	Analyzed:	06/18/15

Field ID: EFFLUENT
Type: SAMPLE
Lab ID: 267491-001

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	97	67-136

Field ID: INFLUENT
Type: SAMPLE
Lab ID: 267491-002

Analyte	Result	RL
Diesel C10-C24	4,200	50

Surrogate	%REC	Limits
o-Terphenyl	76	67-136

Type: BLANK
Lab ID: QC792091

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	99	67-136

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5086	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	224206
Units:	ug/L	Prepared:	06/17/15
Diln Fac:	1.000	Analyzed:	06/18/15

Type: BS Cleanup Method: EPA 3630C
Lab ID: QC792092

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,689	68	60-121

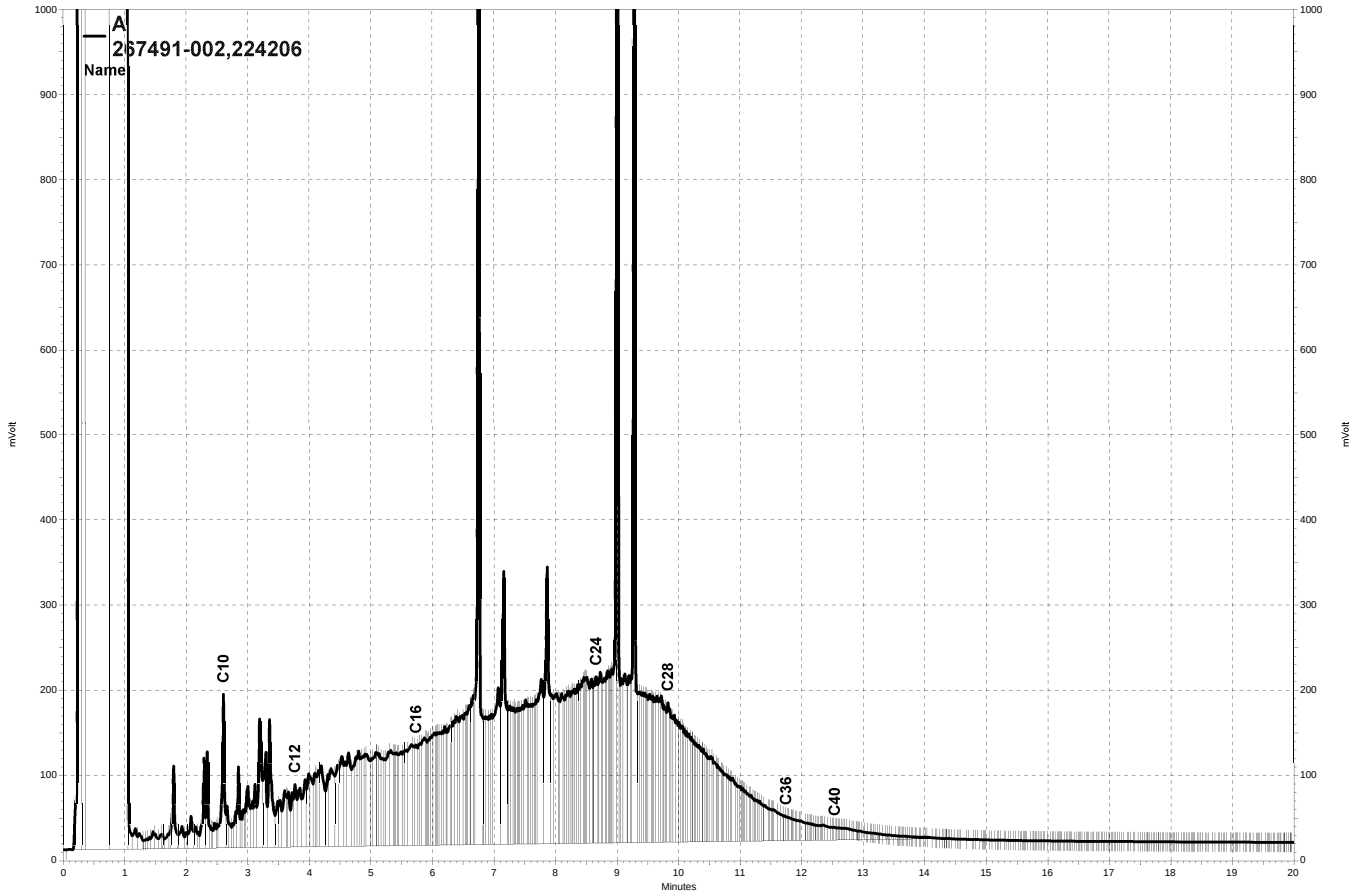
Surrogate	%REC	Limits
o-Terphenyl	85	67-136

Type: BSD Cleanup Method: EPA 3630C
Lab ID: QC792093

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,553	62	60-121	8	32

Surrogate	%REC	Limits
o-Terphenyl	76	67-136

RPD= Relative Percent Difference



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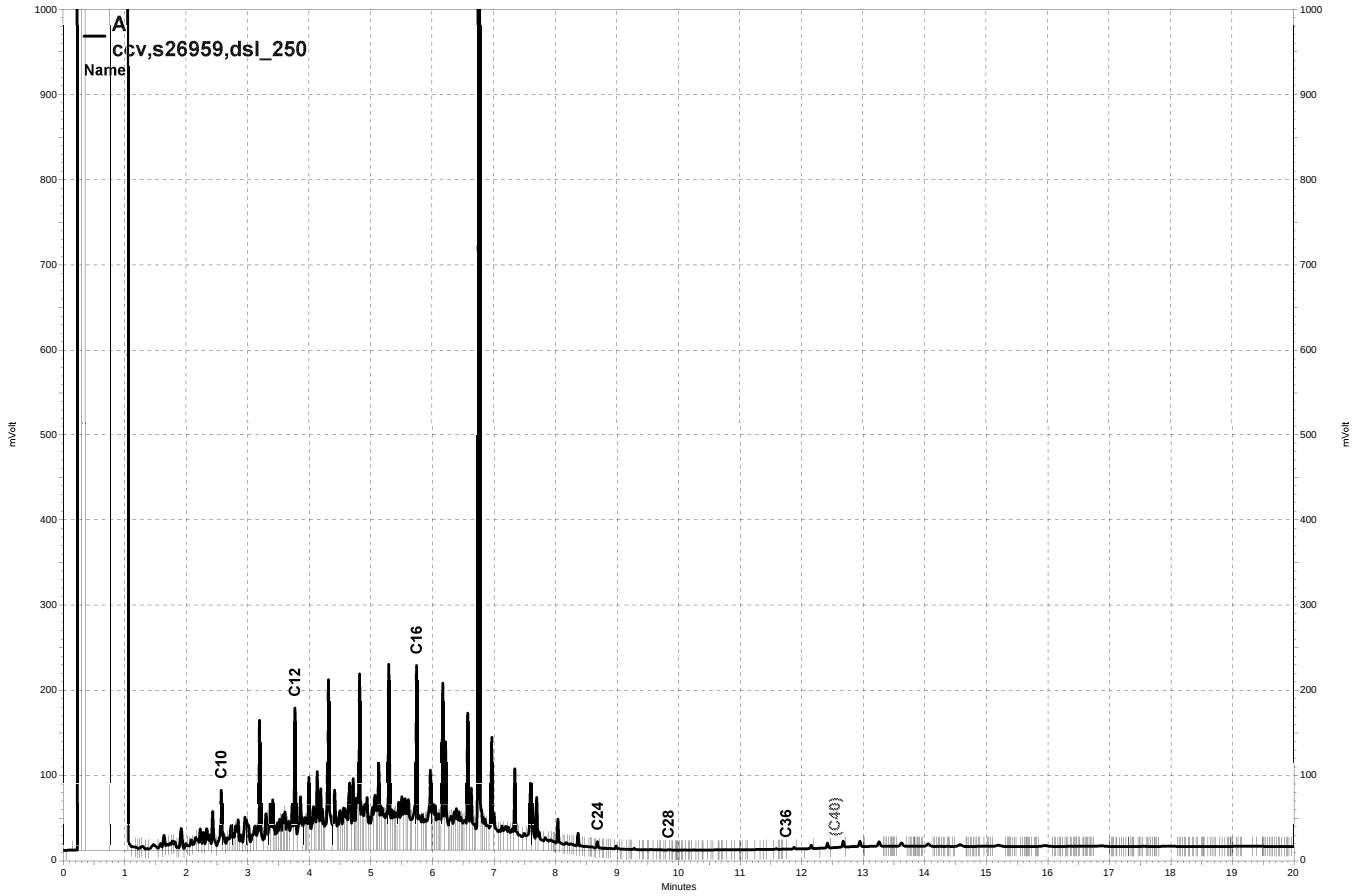

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Field ID:	EFFLUENT	Diln Fac:	2.500
Lab ID:	267491-001	Sampled:	06/15/15
Matrix:	Water	Received:	06/15/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Gasoline C7-C12	ND	130	224418	06/23/15
tert-Butyl Alcohol (TBA)	1,600	25	224431	06/24/15
Isopropyl Ether (DIPE)	ND	1.3	224418	06/23/15
Ethyl tert-Butyl Ether (ETBE)	ND	1.3	224418	06/23/15
Methyl tert-Amyl Ether (TAME)	ND	1.3	224418	06/23/15
Ethanol	ND	2,500	224418	06/23/15
MTBE	5.9	1.3	224418	06/23/15
1,2-Dichloroethane	ND	1.3	224418	06/23/15
Benzene	ND	1.3	224418	06/23/15
Toluene	ND	1.3	224418	06/23/15
1,2-Dibromoethane	ND	1.3	224418	06/23/15
Ethylbenzene	ND	1.3	224418	06/23/15
m,p-Xylenes	ND	1.3	224418	06/23/15
o-Xylene	ND	1.3	224418	06/23/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	100	80-128	224418	06/23/15
1,2-Dichloroethane-d4	107	75-139	224418	06/23/15
Toluene-d8	101	80-120	224418	06/23/15
Bromofluorobenzene	113	80-120	224418	06/23/15

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Field ID:	INFLUENT	Diln Fac:	5.000
Lab ID:	267491-002	Sampled:	06/15/15
Matrix:	Water	Received:	06/15/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Gasoline C7-C12	2,500	250	224418	06/23/15
tert-Butyl Alcohol (TBA)	2,100	50	224431	06/24/15
Isopropyl Ether (DIPE)	ND	2.5	224418	06/23/15
Ethyl tert-Butyl Ether (ETBE)	ND	2.5	224418	06/23/15
Methyl tert-Amyl Ether (TAME)	44	2.5	224418	06/23/15
Ethanol	ND	5,000	224418	06/23/15
MTBE	350	2.5	224418	06/23/15
1,2-Dichloroethane	ND	2.5	224418	06/23/15
Benzene	3.7	2.5	224418	06/23/15
Toluene	56	2.5	224418	06/23/15
1,2-Dibromoethane	ND	2.5	224418	06/23/15
Ethylbenzene	28	2.5	224418	06/23/15
m,p-Xylenes	150	2.5	224418	06/23/15
o-Xylene	52	2.5	224418	06/23/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	98	80-128	224418	06/23/15
1,2-Dichloroethane-d4	106	75-139	224418	06/23/15
Toluene-d8	101	80-120	224418	06/23/15
Bromofluorobenzene	103	80-120	224418	06/23/15

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	224418
Units:	ug/L	Analyzed:	06/23/15
Diln Fac:	1.000		

Type: BS Lab ID: QC792968

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	86.20 b	138	32-155
Isopropyl Ether (DIPE)	12.50	11.49	92	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.94	95	62-120
Methyl tert-Amyl Ether (TAME)	12.50	12.33	99	69-120
MTBE	12.50	13.04	104	65-120
1,2-Dichloroethane	12.50	14.05	112	74-133
Benzene	12.50	12.95	104	80-123
Toluene	12.50	13.41	107	80-121
1,2-Dibromoethane	12.50	13.58	109	80-120
Ethylbenzene	12.50	14.04	112	80-123
m,p-Xylenes	25.00	28.23	113	80-126
o-Xylene	12.50	13.79	110	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	110	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-120

Type: BSD Lab ID: QC792969

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	88.66 b	142	32-155	3	33
Isopropyl Ether (DIPE)	12.50	11.62	93	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.31	98	62-120	3	20
Methyl tert-Amyl Ether (TAME)	12.50	12.74	102	69-120	3	20
MTBE	12.50	13.49	108	65-120	3	22
1,2-Dichloroethane	12.50	14.09	113	74-133	0	20
Benzene	12.50	13.13	105	80-123	1	20
Toluene	12.50	13.37	107	80-121	0	20
1,2-Dibromoethane	12.50	14.37	115	80-120	6	20
Ethylbenzene	12.50	13.95	112	80-123	1	21
m,p-Xylenes	25.00	28.16	113	80-126	0	21
o-Xylene	12.50	13.89	111	80-126	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	224418
Units:	ug/L	Analyzed:	06/23/15
Diln Fac:	1.000		

Type: BS Lab ID: QC792970

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,100	110	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	105	80-120

Type: BSD Lab ID: QC792971

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,051	105	76-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-128
1,2-Dichloroethane-d4	103	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	106	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC792972	Batch#:	224418
Matrix:	Water	Analyzed:	06/23/15
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

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	114	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	224431
Units:	ug/L	Analyzed:	06/24/15
Diln Fac:	1.000		

Type: BS Lab ID: QC793011

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	95.98	77	32-155
Isopropyl Ether (DIPE)	25.00	22.35	89	57-128
Ethyl tert-Butyl Ether (ETBE)	25.00	22.53	90	62-120
Methyl tert-Amyl Ether (TAME)	25.00	20.90	84	69-120
MTBE	25.00	22.72	91	65-120
1,2-Dichloroethane	25.00	23.77	95	74-133
Benzene	25.00	25.82	103	80-123
Toluene	25.00	26.69	107	80-121
1,2-Dibromoethane	25.00	22.88	92	80-120
Ethylbenzene	25.00	27.09	108	80-123
m,p-Xylenes	50.00	55.33	111	80-126
o-Xylene	25.00	26.35	105	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	104	80-120

Type: BSD Lab ID: QC793012

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	94.11	75	32-155	2	33
Isopropyl Ether (DIPE)	25.00	21.43	86	57-128	4	20
Ethyl tert-Butyl Ether (ETBE)	25.00	22.17	89	62-120	2	20
Methyl tert-Amyl Ether (TAME)	25.00	20.50	82	69-120	2	20
MTBE	25.00	22.44	90	65-120	1	22
1,2-Dichloroethane	25.00	22.60	90	74-133	5	20
Benzene	25.00	24.40	98	80-123	6	20
Toluene	25.00	25.02	100	80-121	6	20
1,2-Dibromoethane	25.00	22.30	89	80-120	3	20
Ethylbenzene	25.00	25.52	102	80-123	6	21
m,p-Xylenes	50.00	51.74	103	80-126	7	21
o-Xylene	25.00	24.88	100	80-126	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	104	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267491	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC793013	Batch#:	224431
Matrix:	Water	Analyzed:	06/24/15
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

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	108	80-120

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

Data File: \\gcmsserver\DD\chem\MSVOA10.i\062315.b\JFN17TVH.D

Date : 23-JUN-2015 19:17

Client ID: DYNA P&T

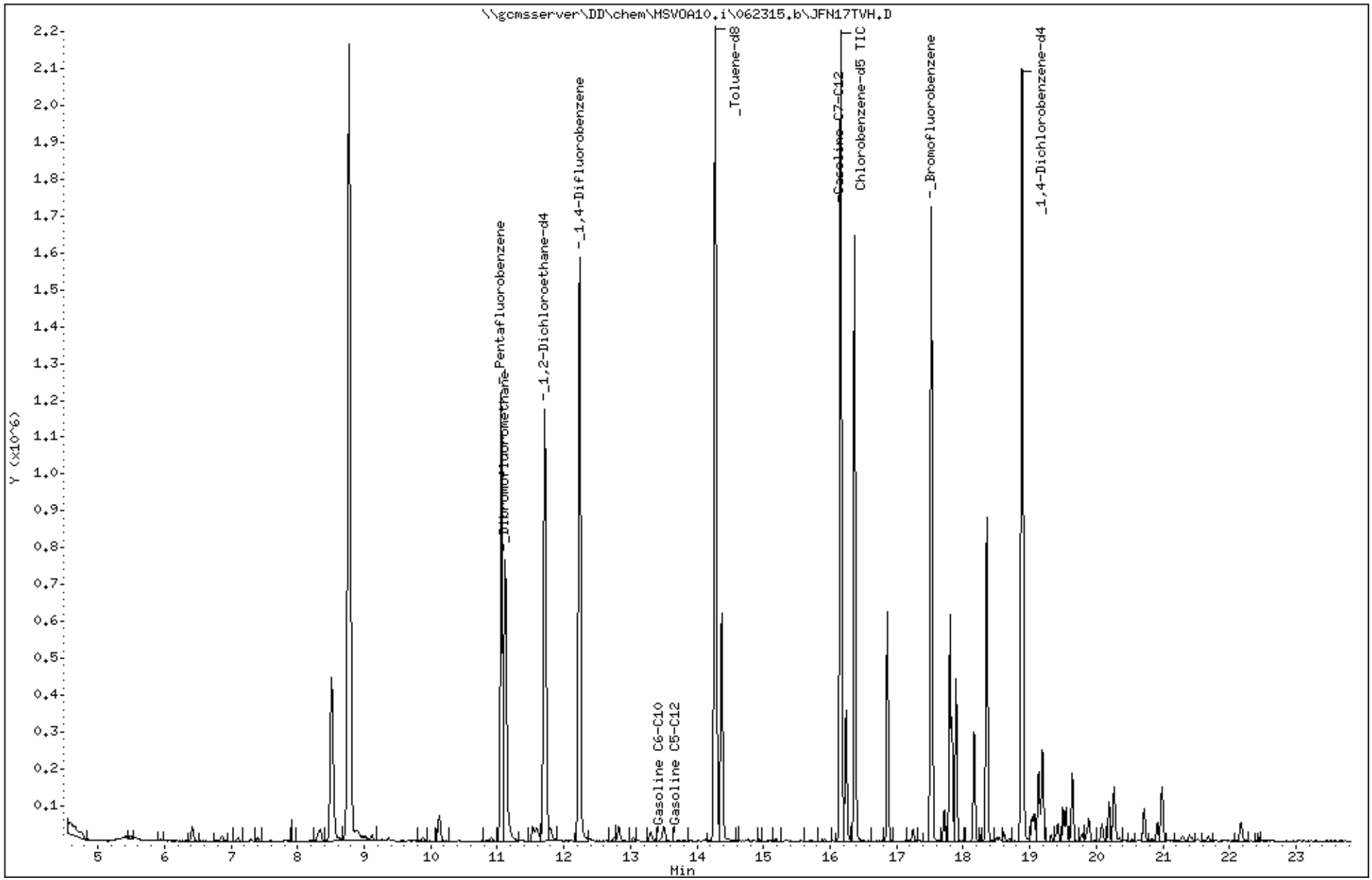
Instrument: MSVOA10.i

Sample Info: s,267491-002

Operator: VOA

Column phase:

Column diameter: 2.00



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Date : 23-JUN-2015 15:06

Client ID: DYNA P&T

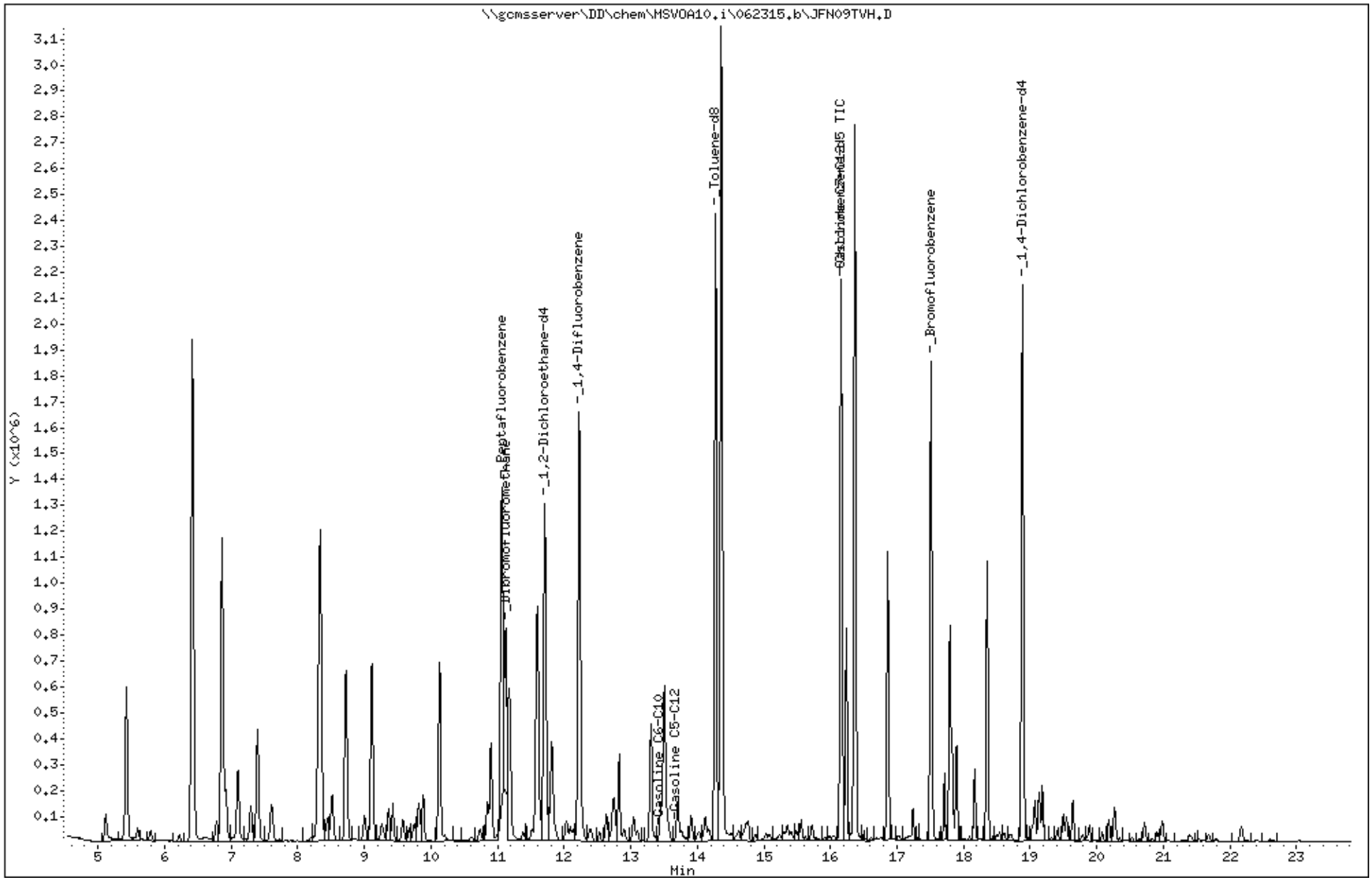
Instrument: MSVOA10.i

Sample Info: ccv/bs,qc792717,224356,S27090,,.005/100,

Operator: VOA

Column phase:

Column diameter: 2.00



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

Laboratory Job Number 267663
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.
6620 Owens Dr.
Pleasanton, CA 94588

Project : 5086
Location : 2844 Mountain Blvd, Oakland
Level : II

Sample ID	Lab ID
RS-3	267663-001
RS-4	267663-002
MW-1	267663-003
MW-2	267663-004
MW-3	267663-005

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

Signature: Tracy Babjar Date: 06/29/2015

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**267663**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**5086**
Location:	**2844 Mountain Blvd, Oakland**
Request Date:	**06/22/15**
Samples Received:	**06/22/15**

This data package contains sample and QC results for five water samples, requested for the above referenced project on 06/22/15. The samples were received cold and intact. This report was reprocess to include diesel on and not motor oil on 06/26/15.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

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

High response was observed for gasoline C7-C12 in the CCV analyzed 06/22/15 19:43; this analyte was not detected at or above the RL in the associated samples, and affected data was qualified with "b". High response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 06/22/15 18:41; this analyte was not detected at or above the RL in the associated samples, and affected data was qualified with "b". High surrogate recoveries were observed for bromofluorobenzene in a number of samples. No other analytical problems were encountered.

CHAIN OF CUSTODY

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

LOGIN # 2676663

Project No: ~~5081~~ 5086 TB for LW 6-22-15

Project Name: 2844 Mountain Blvd., Oakland

Turnaround Time: ~~Standard~~ 2-day Rush

Sampler: Lizzie Hightower

Report To: Joyce Bobek

Company : SOMA Environmental

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	Analyses: TPH-g, BTEX, MtBE 8260B	Analyses: Gasoline Oxygenates 8260B	Analyses: TPH-d 8015
	RS-3	6/22/15 11:03		*		3 VOAs, 2-500 mL Ambers	*			*	*	*	*
	RS-4	12:55		*		3 VOAs, 2-500 mL Ambers	*			*	*	*	*
	MW-1	12:06		*		3 VOAs, 2-500 mL Ambers	*			*	*	*	*
	MW-2	12:40		*		3 VOAs, 2-500 mL Ambers	*			*	*	*	*
	MW-3	11:30		*		3 VOAs, 2-500 mL Ambers	*			*	*	*	*

Notes: **EDF OUTPUT REQUIRED**
GasOx: DIPE, ETBE, TAME, TBA

on Blue Ice

RELINQUISHED BY:

6/22/15 14:11 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

6/22/15 1411 DATE/TIME

DATE/TIME

DATE/TIME

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 267663 Date Received 6/22/15 Number of coolers 1
Client SOMA Project 5081

Date Opened 6/22 By (print) FBJ (sign)
Date Logged in 6/22 By (print) FBJ (sign)

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

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? YES NO
4. Were custody papers filled out properly (ink, signed, etc)? YES NO
5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO
6. Indicate the packing in cooler: (if other, describe)

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

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

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

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

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

8. Were Method 5035 sampling containers present? YES (NO)
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? (YES) NO N/A
17. Did you document your preservative check? (YES) NO N/A
18. Did you change the hold time in LIMS for unpreserved VOAs? (YES) NO N/A
19. Did you change the hold time in LIMS for preserved terracores? (YES) NO N/A
20. Are bubbles > 6mm absent in VOA samples? (YES) NO N/A
21. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? L. Bejar By Lizzie Date: 6/22/15

COMMENTS
change to PO # 5086

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 267663

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

Client : SOMA Environmental Engineering Inc.
Project : 5086
Location : 2844 Mountain Blvd, Oakland

Client Sample ID : RS-3 Laboratory Sample ID : 267663-001

No Detections

Client Sample ID : RS-4 Laboratory Sample ID : 267663-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	770		50		ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
tert-Butyl Alcohol (TBA)	7,900		1,000	170	ug/L	As Recd	100.0	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	500		13		ug/L	As Recd	25.00	EPA 8260B	EPA 5030B
MTBE	5,900		50		ug/L	As Recd	100.0	EPA 8260B	EPA 5030B

Client Sample ID : MW-1 Laboratory Sample ID : 267663-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	2,600		50		ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
tert-Butyl Alcohol (TBA)	17,000		1,000	170	ug/L	As Recd	100.0	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	450		13		ug/L	As Recd	25.00	EPA 8260B	EPA 5030B
MTBE	4,800		50		ug/L	As Recd	100.0	EPA 8260B	EPA 5030B

Client Sample ID : MW-2 Laboratory Sample ID : 267663-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	3,300		50		ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
tert-Butyl Alcohol (TBA)	18,000		830	140	ug/L	As Recd	83.33	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	460		20		ug/L	As Recd	40.00	EPA 8260B	EPA 5030B
MTBE	3,400		42		ug/L	As Recd	83.33	EPA 8260B	EPA 5030B

Client Sample ID : MW-3 Laboratory Sample ID : 267663-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	650	Y	51		ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
tert-Butyl Alcohol (TBA)	17	J,b	20	2.7	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	6.3		1.0		ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
MTBE	190		1.0		ug/L	As Recd	2.000	EPA 8260B	EPA 5030B

J = Estimated value
Y = Sample exhibits chromatographic pattern which does not resemble standard
b = See narrative

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5086	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/22/15
Units:	ug/L	Received:	06/22/15
Diln Fac:	1.000		

Field ID:	RS-3	Batch#:	224364
Type:	SAMPLE	Prepared:	06/22/15
Lab ID:	267663-001	Analyzed:	06/23/15

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	96	67-136

Field ID:	RS-4	Batch#:	224364
Type:	SAMPLE	Prepared:	06/22/15
Lab ID:	267663-002	Analyzed:	06/23/15

Analyte	Result	RL
Diesel C10-C24	770	50

Surrogate	%REC	Limits
o-Terphenyl	96	67-136

Field ID:	MW-1	Batch#:	224364
Type:	SAMPLE	Prepared:	06/22/15
Lab ID:	267663-003	Analyzed:	06/23/15

Analyte	Result	RL
Diesel C10-C24	2,600	50

Surrogate	%REC	Limits
o-Terphenyl	92	67-136

Field ID:	MW-2	Batch#:	224364
Type:	SAMPLE	Prepared:	06/22/15
Lab ID:	267663-004	Analyzed:	06/24/15

Analyte	Result	RL
Diesel C10-C24	3,300	50

Surrogate	%REC	Limits
o-Terphenyl	101	67-136

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5086	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/22/15
Units:	ug/L	Received:	06/22/15
Diln Fac:	1.000		

Field ID:	MW-3	Batch#:	224411
Type:	SAMPLE	Prepared:	06/23/15
Lab ID:	267663-005	Analyzed:	06/24/15

Analyte	Result	RL
Diesel C10-C24	650 Y	51

Surrogate	%REC	Limits
o-Terphenyl	100	67-136

Type:	BLANK	Prepared:	06/22/15
Lab ID:	QC792748	Analyzed:	06/23/15
Batch#:	224364		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	108	67-136

Type:	BLANK	Prepared:	06/23/15
Lab ID:	QC792937	Analyzed:	06/24/15
Batch#:	224411		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	91	67-136

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

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5086	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	224364
Units:	ug/L	Prepared:	06/22/15
Diln Fac:	1.000	Analyzed:	06/23/15

Type: BS Lab ID: QC792749

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,358	94	60-121

Surrogate	%REC	Limits
o-Terphenyl	100	67-136

Type: BSD Lab ID: QC792750

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,497	100	60-121	6	32

Surrogate	%REC	Limits
o-Terphenyl	105	67-136

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5086	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC792938	Batch#:	224411
Matrix:	Water	Prepared:	06/23/15
Units:	ug/L	Analyzed:	06/24/15

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,118	85	60-121

Surrogate	%REC	Limits
o-Terphenyl	100	67-136

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5086	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	224411
MSS Lab ID:	267675-001	Sampled:	06/22/15
Matrix:	Water	Received:	06/22/15
Units:	ug/L	Prepared:	06/23/15
Diln Fac:	1.000	Analyzed:	06/24/15

Type: MS Lab ID: QC792939

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	26.83	2,500	2,569	102	55-122

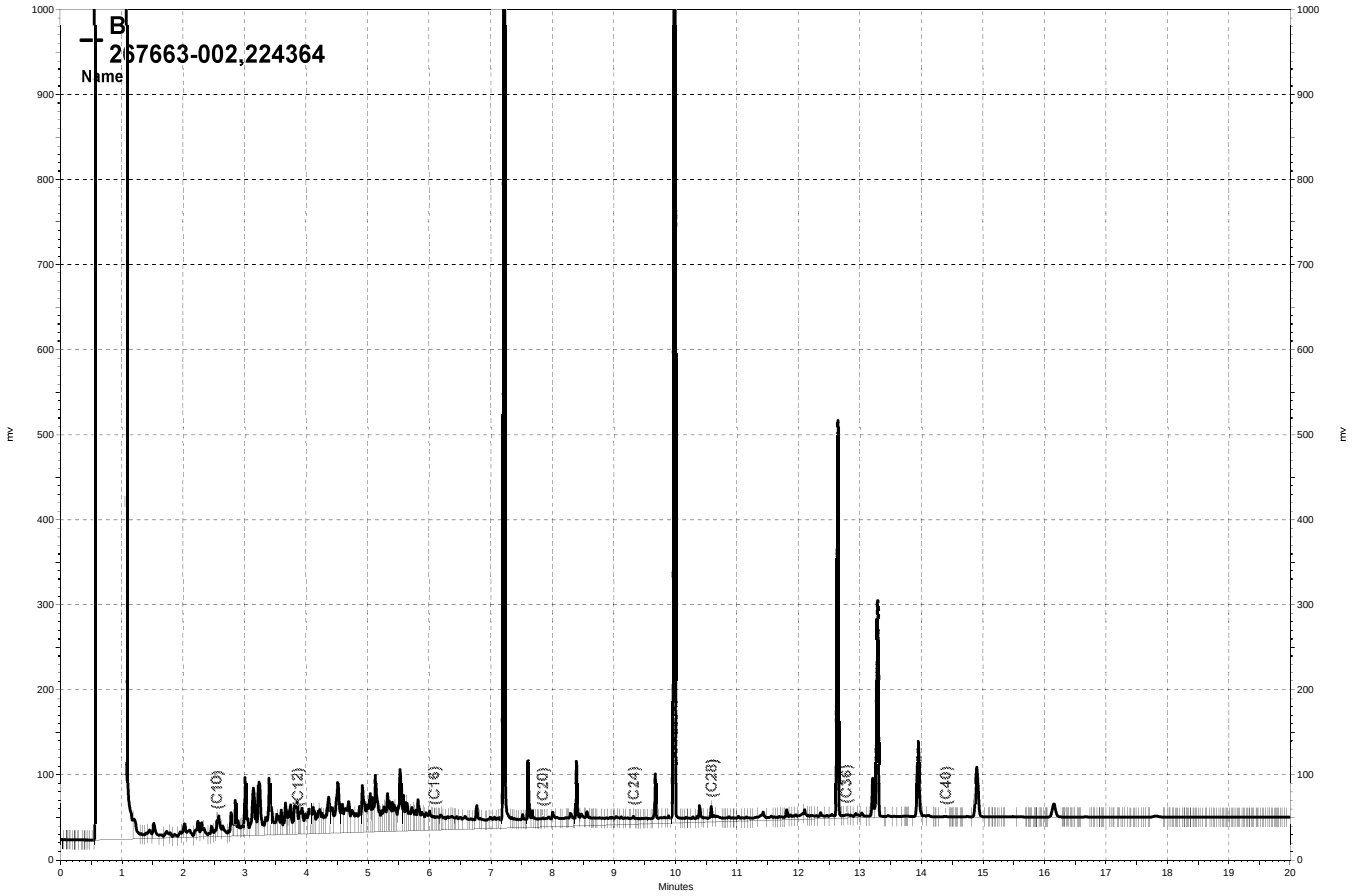
Surrogate	%REC	Limits
o-Terphenyl	106	67-136

Type: MSD Lab ID: QC792940

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,551	2,804	109	55-122	7	53

Surrogate	%REC	Limits
o-Terphenyl	111	67-136

RPD= Relative Percent Difference



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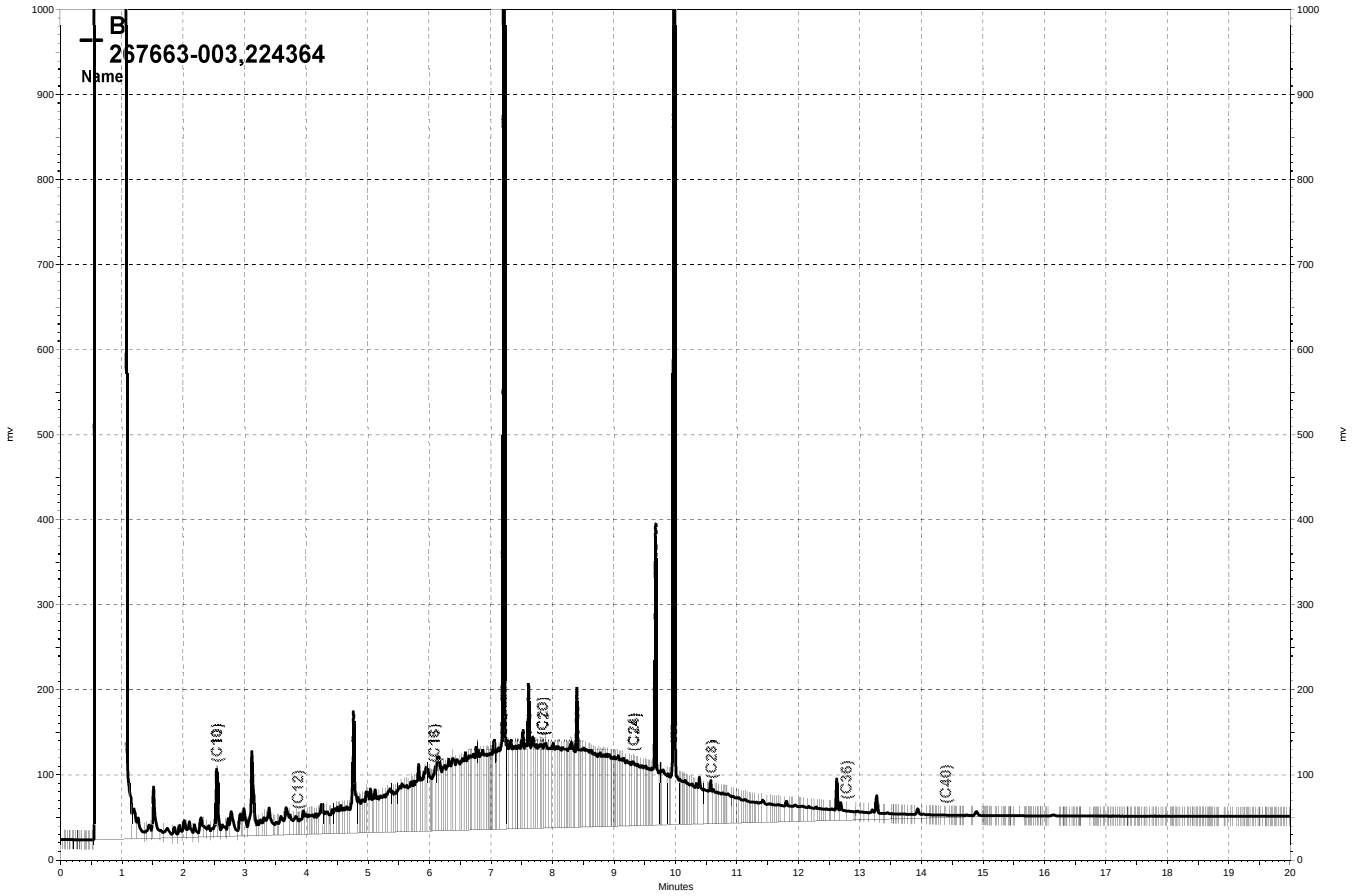

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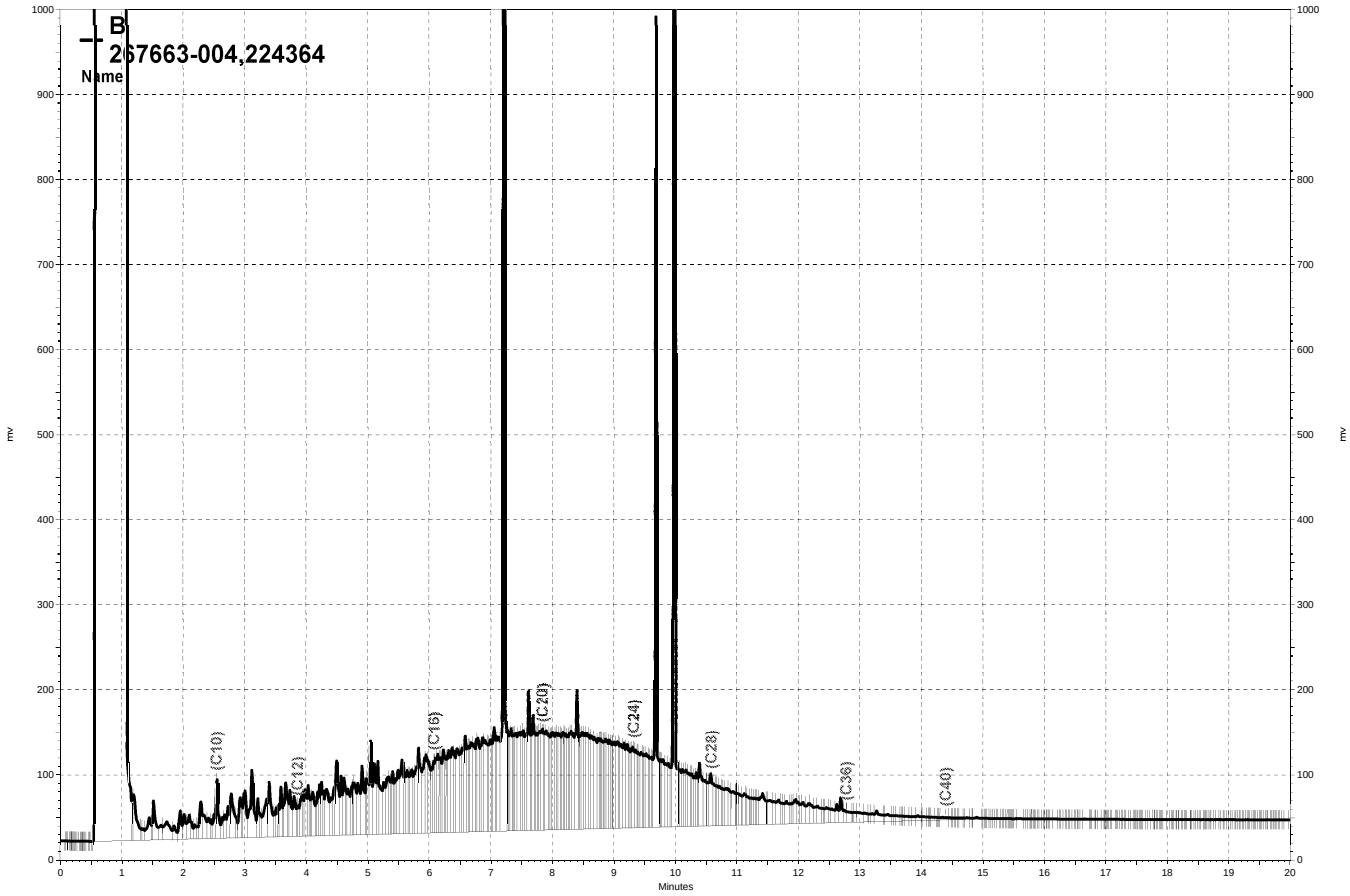

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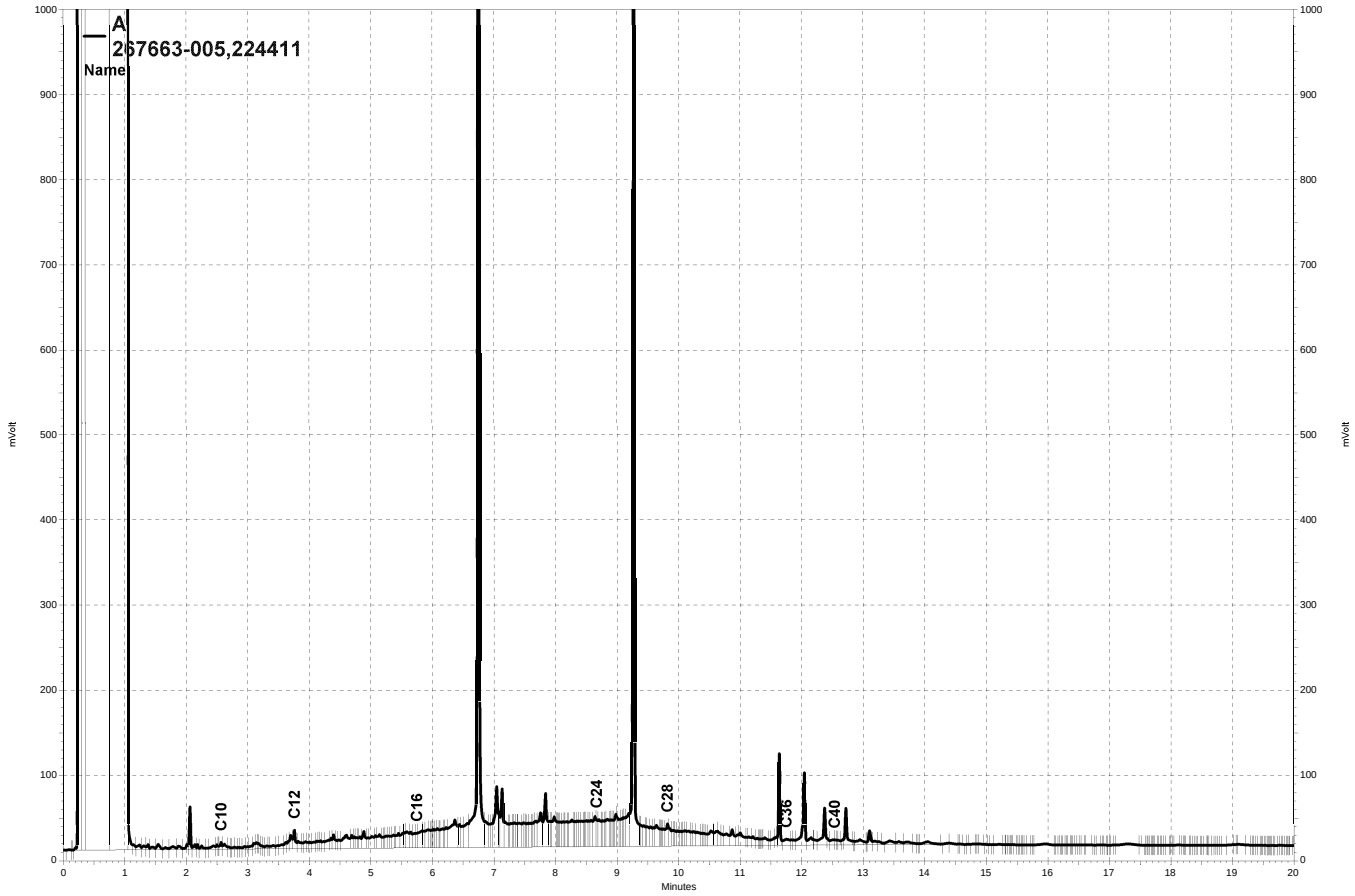

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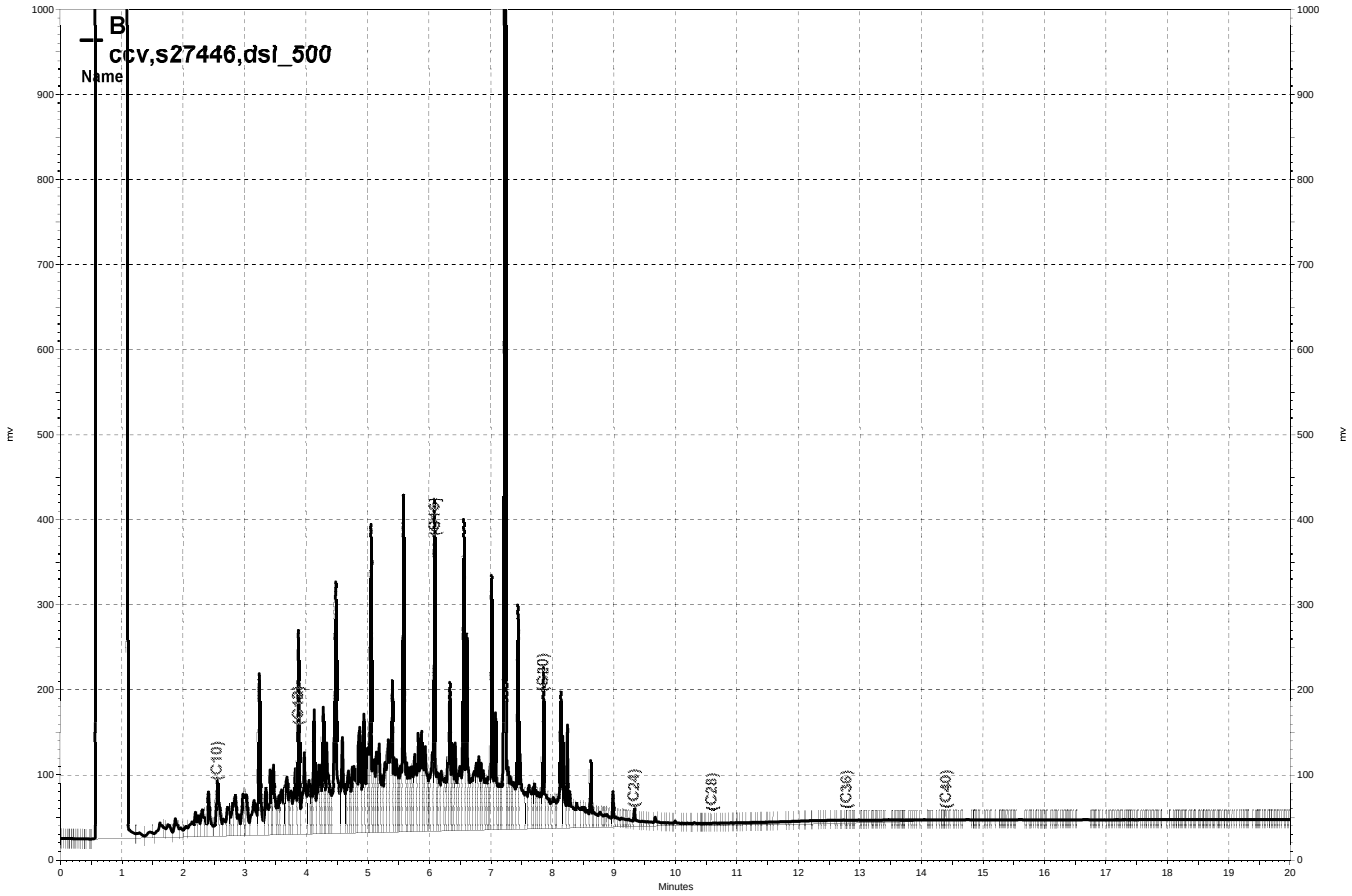

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Field ID:	RS-3	Batch#:	224356
Lab ID:	267663-001	Sampled:	06/22/15
Matrix:	Water	Received:	06/22/15
Units:	ug/L	Analyzed:	06/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND b	50	
tert-Butyl Alcohol (TBA)	ND	10	1.3
Isopropyl Ether (DIPE)	ND	0.50	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	
Methyl tert-Amyl Ether (TAME)	ND	0.50	
MTBE	ND	0.50	
Benzene	ND	0.50	
Toluene	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylenes	ND	0.50	
o-Xylene	ND	0.50	

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	113	75-139
Toluene-d8	104	80-120
Bromofluorobenzene	124 *	80-120

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Field ID:	RS-4	Sampled:	06/22/15
Lab ID:	267663-002	Received:	06/22/15
Matrix:	Water	Analyzed:	06/23/15
Units:	ug/L		

Analyte	Result	RL	MDL	Diln Fac	Batch#
Gasoline C7-C12	ND b	1,300		25.00	224356
tert-Butyl Alcohol (TBA)	7,900	1,000	170	100.0	224394
Isopropyl Ether (DIPE)	ND	13		25.00	224356
Ethyl tert-Butyl Ether (ETBE)	ND	13		25.00	224356
Methyl tert-Amyl Ether (TAME)	500	13		25.00	224356
MTBE	5,900	50		100.0	224394
Benzene	ND	13		25.00	224356
Toluene	ND	13		25.00	224356
Ethylbenzene	ND	13		25.00	224356
m,p-Xylenes	ND	13		25.00	224356
o-Xylene	ND	13		25.00	224356

Surrogate	%REC	Limits	Diln Fac	Batch#
Dibromofluoromethane	106	80-128	25.00	224356
1,2-Dichloroethane-d4	111	75-139	25.00	224356
Toluene-d8	104	80-120	25.00	224356
Bromofluorobenzene	121 *	80-120	25.00	224356

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Field ID:	MW-1	Sampled:	06/22/15
Lab ID:	267663-003	Received:	06/22/15
Matrix:	Water	Analyzed:	06/23/15
Units:	ug/L		

Analyte	Result	RL	MDL	Diln Fac	Batch#
Gasoline C7-C12	ND b	1,300		25.00	224356
tert-Butyl Alcohol (TBA)	17,000	1,000	170	100.0	224394
Isopropyl Ether (DIPE)	ND	13		25.00	224356
Ethyl tert-Butyl Ether (ETBE)	ND	13		25.00	224356
Methyl tert-Amyl Ether (TAME)	450	13		25.00	224356
MTBE	4,800	50		100.0	224394
Benzene	ND	13		25.00	224356
Toluene	ND	13		25.00	224356
Ethylbenzene	ND	13		25.00	224356
m,p-Xylenes	ND	13		25.00	224356
o-Xylene	ND	13		25.00	224356

Surrogate	%REC	Limits	Diln Fac	Batch#
Dibromofluoromethane	107	80-128	25.00	224356
1,2-Dichloroethane-d4	115	75-139	25.00	224356
Toluene-d8	105	80-120	25.00	224356
Bromofluorobenzene	122 *	80-120	25.00	224356

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Field ID:	MW-2	Sampled:	06/22/15
Lab ID:	267663-004	Received:	06/22/15
Matrix:	Water	Analyzed:	06/23/15
Units:	ug/L		

Analyte	Result	RL	MDL	Diln Fac	Batch#
Gasoline C7-C12	ND b	2,000		40.00	224356
tert-Butyl Alcohol (TBA)	18,000	830	140	83.33	224394
Isopropyl Ether (DIPE)	ND	20		40.00	224356
Ethyl tert-Butyl Ether (ETBE)	ND	20		40.00	224356
Methyl tert-Amyl Ether (TAME)	460	20		40.00	224356
MTBE	3,400	42		83.33	224394
Benzene	ND	20		40.00	224356
Toluene	ND	20		40.00	224356
Ethylbenzene	ND	20		40.00	224356
m,p-Xylenes	ND	20		40.00	224356
o-Xylene	ND	20		40.00	224356

Surrogate	%REC	Limits	Diln Fac	Batch#
Dibromofluoromethane	105	80-128	40.00	224356
1,2-Dichloroethane-d4	114	75-139	40.00	224356
Toluene-d8	103	80-120	40.00	224356
Bromofluorobenzene	122 *	80-120	40.00	224356

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	224356
Lab ID:	267663-005	Sampled:	06/22/15
Matrix:	Water	Received:	06/22/15
Units:	ug/L	Analyzed:	06/23/15
Diln Fac:	2.000		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND b	100	
tert-Butyl Alcohol (TBA)	17 J b	20	2.7
Isopropyl Ether (DIPE)	ND	1.0	
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	
Methyl tert-Amyl Ether (TAME)	6.3	1.0	
MTBE	190	1.0	
Benzene	ND	1.0	
Toluene	ND	1.0	
Ethylbenzene	ND	1.0	
m,p-Xylenes	ND	1.0	
o-Xylene	ND	1.0	

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	104	80-120
Bromofluorobenzene	123 *	80-120

*= Value outside of QC limits; see narrative
J= Estimated value
b= See narrative
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	224356
Units:	ug/L	Analyzed:	06/22/15
Diln Fac:	1.000		

Type: BS Lab ID: QC792714

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	85.39 b	137	32-155
Isopropyl Ether (DIPE)	12.50	12.10	97	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.98	104	62-120
Methyl tert-Amyl Ether (TAME)	12.50	13.19	106	69-120
MTBE	12.50	13.78	110	65-120
Benzene	12.50	13.56	108	80-123
Toluene	12.50	13.89	111	80-121
Ethylbenzene	12.50	14.45	116	80-123
m,p-Xylenes	25.00	29.40	118	80-126
o-Xylene	12.50	14.47	116	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-120

Type: BSD Lab ID: QC792715

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	88.06 b	141	32-155	3	33
Isopropyl Ether (DIPE)	12.50	11.34	91	57-128	7	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.04	96	62-120	8	20
Methyl tert-Amyl Ether (TAME)	12.50	12.61	101	69-120	5	20
MTBE	12.50	13.13	105	65-120	5	22
Benzene	12.50	13.01	104	80-123	4	20
Toluene	12.50	13.26	106	80-121	5	20
Ethylbenzene	12.50	14.04	112	80-123	3	21
m,p-Xylenes	25.00	28.68	115	80-126	2	21
o-Xylene	12.50	14.13	113	80-126	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	103	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-120

b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC792716	Batch#:	224356
Matrix:	Water	Analyzed:	06/22/15
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND b	50	
tert-Butyl Alcohol (TBA)	ND	10	1.3
Isopropyl Ether (DIPE)	ND	0.50	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	
Methyl tert-Amyl Ether (TAME)	ND	0.50	
MTBE	ND	0.50	
Benzene	ND	0.50	
Toluene	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylenes	ND	0.50	
o-Xylene	ND	0.50	

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	108	80-120
Bromofluorobenzene	117	80-120

b= See narrative
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	224356
Units:	ug/L	Analyzed:	06/22/15
Diln Fac:	1.000		

Type: BS Lab ID: QC792717

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	500.0	581.3 b	116	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	110	80-120

Type: BSD Lab ID: QC792718

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	500.0	532.4 b	106	76-120	9	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-128
1,2-Dichloroethane-d4	103	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	109	80-120

b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	224394
Units:	ug/L	Analyzed:	06/23/15
Diln Fac:	1.000		

Type: BS Lab ID: QC792858

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	94.73	76	32-155
Isopropyl Ether (DIPE)	25.00	23.22	93	57-128
Ethyl tert-Butyl Ether (ETBE)	25.00	23.56	94	62-120
Methyl tert-Amyl Ether (TAME)	25.00	22.57	90	69-120
MTBE	25.00	23.84	95	65-120
Benzene	25.00	27.54	110	80-123
Toluene	25.00	28.40	114	80-121
Ethylbenzene	25.00	29.04	116	80-123
m,p-Xylenes	50.00	58.81	118	80-126
o-Xylene	25.00	28.00	112	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-120

Type: BSD Lab ID: QC792859

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	105.3	84	32-155	11	33
Isopropyl Ether (DIPE)	25.00	23.36	93	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	23.90	96	62-120	1	20
Methyl tert-Amyl Ether (TAME)	25.00	22.97	92	69-120	2	20
MTBE	25.00	24.65	99	65-120	3	22
Benzene	25.00	27.11	108	80-123	2	20
Toluene	25.00	28.13	113	80-121	1	20
Ethylbenzene	25.00	28.56	114	80-123	2	21
m,p-Xylenes	50.00	58.44	117	80-126	1	21
o-Xylene	25.00	27.64	111	80-126	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	267663	Location:	2844 Mountain Blvd, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC792860	Batch#:	224394
Matrix:	Water	Analyzed:	06/23/15
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	NA		
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.50	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	
Methyl tert-Amyl Ether (TAME)	ND	0.50	
MTBE	ND	0.50	
Benzene	ND	0.50	
Toluene	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylenes	ND	0.50	
o-Xylene	ND	0.50	

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	107	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit