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January 10, 2013

Ms. Dilan Roe, P.E.
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **Fuel Leak Case #RO0000346**
Site Address: 3519 Castro Valley Boulevard, Castro Valley, CA

Dear Ms. Roe:

SOMA's "Draft Corrective Action Workplan for Soil Gas Study, Excavation Design and Implementation Activities" for the subject property has been uploaded to the State GeoTracker database and Alameda County's FTP site for your review.

Thank you for your time in reviewing our report. If you have any questions or comments, please call me at (925) 734-6400.

Sincerely,

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist

Enclosure

cc: Mr. Mirazim Shakoori w/enclosure
Mr. Matt Herrick – Broadbent & Associates, Inc. w/enclosure

Draft Corrective Action Workplan for Soil Gas Study, Excavation Design and Implementation Activities

3519 Castro Valley Boulevard
Castro Valley, California

January 10, 2013

Project 2760

Prepared for

Mr. Mirazim Shakoori
3519 Castro Valley Boulevard
Castro Valley, California

SOMA ENVIRONMENTAL ENGINEERING, INC.
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PERJURY STATEMENT

Site Location: 3519 Castro Valley Boulevard, Castro Valley, CA

"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".

Mirazim Shakoori
4313 Mansfield Drive
Danville, California 94506
Responsible Party

CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf Mr. Mirazim Shakoori, for property located at 3519 Castro Valley Boulevard, Castro Valley, California. This report was prepared in response to correspondence received from Alameda County Environmental Health dated October 25, 2012 and January 3, 2013.

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. Mirazim Shakoori, for property located at 3519 Castro Valley Boulevard, Castro Valley, California. This report was prepared in compliance with Alameda County Environmental Health (ACEH) correspondence dated October 25, 2012 and January 3, 2013. This report is a companion document to SOMA's March 11, 2011 document entitled "Feasibility Study/Corrective Action Plan and Proposed Pilot Testing" and SOMA's September 22, 2011 document entitled "Observation Wells Installation, Pilot Testing, and Feasibility Study Report". This workplan discusses a detailed implementation of selected remedial soil excavation and conducting soil gas study at the site.

The site is located on the corner of Redwood Road and Castro Valley Boulevard (Figure 1). Prior to 1989, the site was a Mobil gasoline service station. In 1989, British Petroleum (BP) purchased and operated the station until ownership was transferred to Mr. Mirazim Shakoori in 1993. The station was operated under the Chevron brand until recently, and now operates as a Shell gasoline service station. Site features, including former and current USTs and former dispenser island, are shown in Figure 2.

In 1984, three single-walled fiberglass underground storage tanks (USTs) with capacities of 6,000 gallons, 8,000 gallons, and 10,000 gallons, were installed in the southeastern portion of the site. In 1988, a 1,000 gallon Waste oil tank (WOT) was installed to replace the previous 380-gallon WOT. Holes were observed in the 380-gallon WOT. As a result, confirmation soil samples were collected from the bottom of the excavation and the analytical results confirmed contamination. Subsequently, groundwater monitoring wells were installed at the site and the site has been monitored since 1992. The other three USTs were removed and replaced in September 2003 with two new double-walled, fiberglass USTs with capacities of 12,000 gallons and 20,000 gallons. In addition, the dispensers, product lines, and vent lines were removed and replaced.

Petroleum hydrocarbon contamination has been detected in soils beneath the site and in groundwater beneath the site and in the downgradient areas and is related to a historical unauthorized release. A concise background of soil and groundwater investigations performed in connection with this case and an assessment of the residual impacts of chemicals of concern (COCs) for the site and the surrounding area are summarized in Appendix A.

If approved by ACEH, SOMA proposes implementing soil gas study adjacent to the southern property boundary to the west and east of and beneath the station building to establish whether vapor intrusion is a complete exposure pathway. Furthermore, this report presents SOMA's workplan for the approved remedial soil excavation to remove the impacted soil in the smear zone and portion of the

saturated zone in three areas: in the vicinity of the former underground storage tank (UST) pit and dispenser islands.

2. SITE OVERVIEW

The following summarizes historical site findings and interprets all data obtained to date including soil and groundwater chemical plume stability, extent, and impact of site's contamination on public health and the environment.

2.1 Site Geology and Hydrogeology

The site is underlain with interbedded silty clay, sandy silt/silty sand, clayey sand, and clayey silt. Locations of geological cross-sections are shown in Figure 3. As shown in cross sections A-A', B-B', and B-A' (Figures 4, 5, and 6), an unconsolidated sequence of permeable and relatively impermeable sediments underlies the site. Borehole logs for TWB-1 through TWB-5 and SOMA-4 demonstrate that these unconsolidated sequences continue off-site to the south, with no obvious changes in lithology.

Depth to first-encountered groundwater has been recorded at approximately 12 feet bgs in the Shallow WBZ and between 18 and 31 feet bgs in the Semi-Confined WBZ, with groundwater later stabilizing to between 8.39 and 10.6 feet bgs (Shallow WBZ) and to between 6.5 and 11.50 feet bgs (Semi-Confined WBZ, except in DP-4 and DP-6, which stabilized only to 28 feet bgs and 19.79 feet bgs, respectively). Sometimes the Shallow WBZ was not encountered during drilling, suggesting an element of discontinuity for that zone. For example, borings SB-6 (SOMA-6) and SB-9 (SOMA-9) were left open for 7 days but no water accumulated in these boreholes, suggesting that the Shallow WBZ is discontinuous in their vicinity.

The Shallow WBZ is composed of silty sand, sand, and clayey sand. Preferential flow (stream) channels have also been observed south (downgradient) of the Xtra Oil station across Redwood Road.

The Semi-Confined WBZ appears to be continuous and extends off-site to the southeast. Below the Semi-Confined WBZ is a fairly homogenous silty clay unit that extends to 30 feet bgs, the greatest depths explored on-site during historical investigations. During historical soil and groundwater investigations, groundwater was observed in all explored areas of the Semi-Confined WBZ.

Groundwater monitoring wells have been installed at the site to monitor the encountered Shallow and Semi-Confined WBZs. The following wells are screened within the Shallow WBZ: SOMA-2, SOMA-3, SOMA-5, SOMA-7, SOMA-8 and the two recently installed observation wells OB-1 and OB-2. The table below summarizes well construction details.

Well ID	Total Depth (feet)	Screen Interval (feet bgs)
SOMA-2	15	10 to 15
SOMA-3	15	10 to 15
SOMA-5	15	5 to 15
SOMA-7	15	5 to 15
SOMA-8	15	5 to 15
OB-1	16	5 to 16
OB-2	17	5 to 17

The following wells are screened within the Semi-Confined WBZ: ESE-1R, ESE-2R, ESE-5R, MW-6R, MW-7R, SOMA-1, and SOMA-4. The table below summarizes the well construction details.

Well ID	Previous TD (feet)	Previous Screen Interval (feet bgs)	Current Total Depth (feet)	Current Screen Interval (feet bgs)
ESE-1R	30	10 to 30	25	18 to 25
ESE-2R	30	10 to 30	28	22 to 28
ESE-5R	24	9 to 24	24	18 to 24
MW-6R	30	18 to 30	28	22 to 28
MW-7R	30	18 to 30	30	24 to 30
SOMA-1	NA	NA	30	22 to 30
SOMA-4	NA	NA	23	16 to 23

During the most recent groundwater monitoring event (July 2012), depth to groundwater in the Shallow WBZ ranged between 7.96 and 10.45, and in the Semi-Confined WBZ between 8.85 and 11.25 feet bgs. Groundwater in the Shallow WBZ flows south to southeasterly and groundwater in the Semi-Confined WBZ flows southwesterly across the site.

2.2 Identification of Chemicals of Concern

Previously identified site-specific COCs include TPH-g, TPH-d, BTEX and MtBE. COCs have been detected in soil and groundwater beneath the site, including recently at concentrations that exceed CRWQCB ESLs established for groundwater that is a current or potential source of drinking water (May 2008 Revision). Table 1, Table 2 and Table 2a summarize detected soil and groundwater concentrations compared to respective ESLs. Soil and groundwater samples collected at this site have historically demonstrated concentrations

moderately above listed ESLs. There has been no historical or current observation of free product in groundwater wells at the site.

2.3 Identification of Exposure Pathways and Potential Receptors

The site is located in an area of mixed commercial and residential properties. Currently, on-site are single-story building houses, the station office and a food mini-mart. A commercial bank building abuts the site on the east and commercial buildings of various uses located behind the station building on the south. Residential properties are mainly located beyond, upgradient of the site to the north, northwest and east.

Based on data obtained from the sensitive receptor survey, as well as low to non detectable concentrations in the most downgradient site wells there is no immediate threat from exposure to site groundwater contaminants for individuals living or working in the vicinity of this site.

COCs detected in groundwater within the Shallow WBZ can volatilize and travel by diffusion toward the land surface and possibly entering on-site as well as nearby commercial buildings and residential properties. These exposure points, may cause adverse health effects to workers in commercial buildings and residents living nearby. Current and future on-site workers, and workers of the downgradient commercial buildings adjacent to the site have been identified as potential receptors for vapor intrusion concerns.

The results of the proposed soil gas study will be utilized to determine the completeness of the vapor intrusion exposure pathway for the on-site and off-site workers.

2.4 Extent of Soil and Groundwater Contamination

2.4.1 Lateral and Vertical Extent of Soil Contamination

Based on investigations conducted at the site from 2008 to 2011, residual soil impact (TPH-g) exists between 9 and 10 feet bgs in the western portion of the site to the south of former pump islands (980 mg/kg). High TPH-g levels have also been observed in the northeastern portion of the site at 720 mg/kg. Historical sampling along the western property boundary exhibited TPH-g at 230 mg/kg between 7.5 and 8 feet bgs. The Environmental Screening Level (ESL) for TPH-g has been established at 83 mg/kg for shallow or deep soils where groundwater is a current or potential drinking water source.

During the recent observation wells installation (June 2011), the highest TPH-g concentrations were detected adjacent to the western boundary of former UST cavity at 120 mg/kg. Figure 7 shows contour map of TPH-g concentrations in soil

from 0 to 15 feet bgs. Soil analytical data, which includes concentrations for COCs, are presented in Table 1.

At the present time the soil impact is shallow and extends from 4 to approximately 14 feet (or slightly below groundwater surface). Historically, groundwater has fluctuated between 7.33 and 12.02 feet bgs in shallow WBZ, creating a smear zone where residual contamination is located. The smear zone is defined as an area where free product occurred in the soil and was then smeared across the soil when the water table fluctuated between historical high and low water table elevations.

2.4.2 Lateral and Vertical Extent of Contamination in Groundwater

Based on existing analytical data derived from the recent groundwater monitoring event (July 2012) and the well installation and replacement (August 2010), the Shallow WBZ appears to be the most impacted along the southern portion of the site.

Shallow WBZ: Observed concentrations in Shallow WBZ are elevated near former waste oil UST and UST pit, and the former pump island located in the western portion of the site. During the most recent groundwater monitoring event, the highest TPH-g, benzene, MtBE, and TBA were detected along the western boundary of former UST cavity at 46,000 µg/L, 580 µg/L, and 94 µg/L, and 44 µg/L respectively. The ESLs for TPH-g, benzene, and TBA in groundwater are 100 µg/L, 1.0 µg/L, and 12 µg/L, respectively. MtBE concentrations above ESL (5 µg/L) was also observed in southwestern portion of the site near former WOT. Figures 8 and 9 show the most recent (July 2012) contour maps of TPH-g and benzene concentrations in the Shallow WBZ.

3. PROPOSED SOIL GAS STUDY

If approved by ACEH, SOMA will implement soil gas study adjacent to the southern property boundary to the west and east of and beneath the station building to establish whether vapor intrusion is a complete exposure pathway. Several on-site and off-site buildings exist near the southern property boundary: the station building located on-site, an off-site strip mall building located immediately downgradient behind the station building, and a commercial building, currently occupied by “Fremont Bank” located immediately to the east of the site parcel. Based on the known site contamination and the proximity of these structures to the site’s contamination, four soil gas sampling boreholes advanced utilizing a direct push technology (DPT) and three sub-slab sampling probes are proposed as part of this soil gas study. Locations of boreholes and probes are shown on Figure 10.

Sections below describe the installation and sampling procedures for these two proposed soil gas sampling techniques.

3.1 Soil Vapor Sampling Utilizing Direct Push

Since precipitation increases the moisture content of subsurface soil which reduces subsurface vapor flow, prior to site mobilization, SOMA will confirm that no significant precipitation (recordable by National Geographic and Atmospheric Organization) has occurred near the site within the previous five days prior to soil gas sampling.

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

Prior to initiating field activities, SOMA will obtain all required drilling permits from Alameda County Department of Public Works.

SOMA will prepare a site-specific Health and Safety Plan (HASP). 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. The HASP will be reviewed and signed by field staff and contractors prior to beginning field operations.

SOMA will visit the site and mark boring locations using chalk-based white paint and then contact Underground Service Alert (USA) to verify that drilling areas are clear of underground utilities. Following USA clearance, SOMA will retain a private utility locator to survey proposed drilling areas and locate any additional subsurface conduits.

3.1.2 Soil Vapor Study

SOMA proposes advancing four soil vapor sampling boreholes (SV-1 through SV-4) adjacent to the on- and off- site buildings, for evaluation of vapor intrusion into the convenient store structure. According to the Leaking Underground Storage Tank Guidance, September 2012, "samples should initially be collected from 5 feet bgs or 5 feet below existing or future building foundations." During the most recent groundwater monitoring event (July 2012), depth to groundwater in the Shallow WBZ ranged between 7.96 and 10.45. Since all the adjacent site buildings are single story, which do not typically have substantial building

foundations, SOMA proposes collecting all soil gas samples between 4.5 and 5 feet bgs at each proposed boring location. Shallower samples are more prone to infiltration of surface air and sample variability. If the vapor concentration at 5 feet exceeds screening levels in the Case Closure Policy, a vertical profile of the soil vapor at shallower depths may be appropriate. Based on previous site drilling, lean clays and sandy lean clays are expected to be encountered at the proposed sampling depth.

Soil vapor sampling using Geoprobe will entail drawing a soil vapor sample from the subsurface and into the sampling manifold. The samples will be collected according to established guidelines and general field procedures, as outlined in Appendix B.

Prior to beginning drilling activities at the site, SOMA will confirm that no significant precipitation has occurred near the sampling location within the previous five days.

A Geoprobe rod will be hydraulically advanced to approximately 5 feet bgs, to the target vapor sampling depth. The lead drill rod will be fitted with a sampling adaptor known as a Post-Run Tubing (PRT) adaptor. Approximately 5 to 10 feet of 1/4-inch- or 1/8-inch-diameter nylaflow sampling tube will be connected into the sampling port at the end of the rod. The sampling tube will then be capped with a vapor-tight valve. Once the target sampling depth is reached, the probe will be retracted 6 inches and allowed to equilibrate for approximately 20 to 30 minutes. Sampling diagram is included in Figure 11.

Hydrated bentonite will be placed around the drill rod to inhibit surface air migration down the outer portion of the drill rod. SOMA will utilize a pre-tested laboratory manifold set-up (Appendix B); which allows automatic leak checking of the canister sample train. An average vapor flow rate through the sampling tube will be set at 167 mL/min. A pre- and post-sample vacuum reading will be recorded for each sample Summa canister. The initial vacuum of the canister should be greater than 25 inches of Hg; if the canister vacuum is less than 25 inches Hg, the canister will not be used during the field test. Once the sampling train is assembled, all connections between the Summa canisters and valve on the downhole side of the regulator will be leak tested for 10 minutes by opening and closing the purge canister valve to place a test vacuum on the assembly. The sampling train will be pretested prior to mobilizing to the field. When the sampler opens and then closes the purge can, a vacuum is created within the canister lines and fittings. When this vacuum is maintained the train can be considered leak free. In addition, because there is only one connection (probe tubing to sample train) the potential for leaks is greatly reduced.

The sampling manifold will be pressure tested and approximately three volumes of gas will be purged from the manifold and boring prior to sampling. Any further work will be terminated if gauge vacuum cannot be maintained for 10 minutes. If

gauge vacuum is maintained for 10 minutes and it has been at least 20-30 minutes since the drill rod was sealed at the surface with bentonite, the purge canister valve and the valve on the downhole side of the regulator will be open to begin purging ambient air from the sampling apparatus and borehole. The time of purging will be recorded on field logs and incorporated in the investigation report. The purge canister valve will be closed when three volumes of air have been purged from the sample apparatus and borehole.

Adequacy of purging will be determined based on the inches of pressure drop on the purge canister as well as the time required for purging based on the anticipated purged volume. The volume of air sampled is a linear function of the canister vacuum pressure drop, and will be calculated accordingly based on the initial vacuum reading. The purge volume or “dead space volume” will be estimated based on a summation of the volume of the sample container (i.e., glass bulbs), internal volume of tubing used, and annular space around the probe tip.

Pressure drops along with sample collection times at each location will be recorded on field logs during sample collection.

All samples collected from a depth of 5 feet or shallower should have a leach check compound (tracer) applied at the surface to verify that there is a good annular seal. Leakage during soil gas sampling may dilute samples with ambient air and produce results that underestimate actual site concentrations or contaminate the sample with external contaminants. A leak test will be conducted to determine whether leakage is present (i.e., the leak check compound (IPA) is detected and confirmed in the test sample after its application). During sampling, isopropyl alcohol (2-propanol) will be used as a tracer to test for leaks. This will be accomplished by placing gauze soaked with isopropyl alcohol along the drill rod, and around valves, joints, and pressure regulators. The gauze with isopropyl alcohol will be remoistened every 5 minutes.

At least one sample per laboratory per day will be field duplicated. Each duplicate sample will be collected from areas of concern in a separate sample container, at the same location and depth and immediately after the original sample. The sampler will change to a new pair of gloves prior to assembling the sampling train and collection of each of the vapor samples to limit potential cross-contamination. Any reusable parts will be field decontaminated. The general procedure for decontaminating sampling equipment is as follows: clean equipment with a brush using a non-phosphate detergent solution, rinse equipment with control water (i.e., water having a known chemistry), use deionized/distilled water rinse to finish decontamination.

Upon collection of proposed samples, the drilling rod will be removed along with the sampling apparatus and the boring will be backfilled with Portland cement mixed at 6 gallons of water per 94-pound bag of cement.

3.1.3 Borehole Abandonment and Waste Disposal

Following soil vapor sampling, the borings will be abandoned with a neat cement grout mixture tremmied into place and completed at the surface with materials to match existing grade.

Any waste generated during boring activities will be temporarily stored on-site in separate DOT-rated, 55-gallon steel drum pending characterization, profiling and transport to an approved disposal/recycling facility.

3.2 Sub-Slab Vapor Sampling

As part of the proposed work, SOMA will install three shallow semi-permanent sub-slab vapor sampling probes SSG-1 through SSG-3 using a hammer drill, for evaluation of vapor intrusion concerns into the subject site building. One field day is planned for the installation of proposed sub-slab probes and one additional day for soil-gas sampling and probes decommissioning. Probes will be installed inside the on-site station building, their exact location will be determined in the field based on existing site conditions and with concurrence from the current site owner/operator.

Figure 10 shows the approximate (desirable) boring locations as well as the most recent groundwater concentrations of total petroleum hydrocarbons as gasoline (TPH-g) obtained from monitoring wells. As seen from this Figure 10, the proposed borings will be positioned as close as possible to the residual soil and groundwater contamination plume. The recent iso-concentration maps indicate that the contaminant plume is adjacent to the western and eastern walls of the station building and, to a certain degree, may have migrated under the building. However, no sampling beneath the building has been conducted to date to verify this conclusion.

Although no drilling permits are required for the proposed work, a minimum 72-hour notice will be given to ACEH prior to start of any field work. Before initiating field activities, SOMA will prepare a site-specific Health and Safety Plan (HASP). The HASP will be reviewed and signed by field staff and contractors prior to beginning field operations. SOMA will contact Underground Service Alert (USA) to ensure that drilling area is clear of underground utilities before the start of field activities. As described before, following USA clearance, SOMA will retain a private utility locator to survey proposed drilling areas and locate any additional subsurface conduits. This utility survey will coincide with the one described in section above. Once utilities have been cleared, SOMA will notify ACEH staff if a significant change to proposed boring location is necessary due to encountered subsurface utilities.

In order to install each sub-slab sampling probe, a shallow outer hole, of larger diameter than the actual probe hole, will be drilled. This outer hole will only

partially penetrate the concrete slab (2-3 inches) and will be advanced utilizing a hammer drill. Then a smaller diameter (approximately 5/16 inch) inner hole will be drilled through the outer hole and into the remainder of the slab and approximately five inches into the base material. Sub-slab thickness will be measured to ensure that the installed tube will "float" in the slab to avoid obstruction of the probe with sub-slab material. Stainless steel tubing (approximately ¼-inch in diameter), or stainless steel ready-made sub-slab sampling train with fittings will be inserted into the hole. Stainless steel is preferred to ensure that construction materials are not a source of VOCs. Sub-slab vapor sampling diagram is illustrated in Figure 11.

Prior to insertion, the stainless steel tube will be equipped with a rubber spacer or fitting (approximately the size of the outer hole). The spacer will minimize cement grout (placed in the outer hole) from excessively leaking into the inner hole. The sampling tube will be installed inside the inner hole so that the lower end of the tube is even with the bottom of the slab and the upper end slightly above the slab. The tube will be cemented in place via quick-drying Portland cement, which expands upon drying. The upper part of the stainless steel tube will be connected with a Swagelok® ferrule compression fitting to a Swagelok® shut off valve (in the off position). A stainless steel or other appropriate cap will be affixed to the end of the installed train. A minimum of 24-hours will be allowed for cement to set and for sub slab vapors to reach equilibrium prior to sampling.

The day of sampling, hydrated granular bentonite will be mounded above the probe location to the bottom of the Swagelok® valve to ensure surface seal. Prior to sampling, a dedicated flow regulator (set between 100-200ml/min) with particulate filter will be fitted via Teflon tubing to the shut off valve. Its other end will be fitted to a "T" fitting. One end of the "T" will be connected to a one (1) liter sampling summa canister. The other end of the "T" will be affixed, along with a digital vacuum gauge, to a 1-liter summa canister utilized for purging.

Prior to sampling, a tightness test will be performed. The sample shut-off valve on the downhole side of the sampling manifold will be in the closed position. A ten-minute minimum vacuum tightness test will be performed on the manifold and connections by opening and closing the 1-liter purge canister valves and applying and monitoring a vacuum on the digital vacuum gauge. After the gauge vacuum is maintained for ten minutes without any significant decrease (less than 0.1 inches of mercury [Hg] for properly connected fittings), purging will begin. If leaks are detected the train will be disassembled and re-assembled and leak tested again. The down hole shut off valve will be opened, followed by the one (1) liter purging summa canister valve. Sub-slab soil vapor sample will be collected in a laboratory provided Summa™ canister and tested by a laboratory certified by the Cal-EPA to perform the required analysis. The purge volume will be verified, and purging will be terminated when approximately 5-inches of Hg vacuum remains in the purging canister.

SOMA will utilize a plastic shroud fitted with weather stripping along its base (to minimize leaks) and an optional bulk head fitting, which will be utilized in sampling the atmosphere inside the shroud. If this particular shroud is not equipped with the bulk head fitting, the sampling tubing will be inserted into an appropriately sized gap in the weather stripping along the base of the shroud. Isopropyl alcohol (IPA) will be utilized as a leak check compound during sampling by applying up to ten drops to cotton gauze placed near the probe location. Sub-slab sampling will begin by opening the summa canister valve. Immediately upon opening the sampling valve, a shroud will be placed over the probe and sampling train, including summa canisters, connections, and the IPA- gauze.

Sampling will continue until the vacuum gauge indicates approximately 5-inches of vacuum is remaining. During sampling, a PID (10.6 eV) will be utilized to monitor the atmosphere inside the shroud to confirm that IPA is present in the atmosphere around the sampling train. PID readings, corrected to parts per million by volume (ppmv) IPA concentrations, will be utilized to evaluate the integrity of the sampling train. Also a grab sample from shroud atmosphere will be collected in a tedlar bag (using appropriate grab air sampler pump) and submitted to laboratory for analysis of IPA only (by TO-15 method), to quantify the severity of the leak and evaluate the significance of IPA detection in collected sub-slab sample, if any. Upon completion of all sampling, the probe, bentonite and grout will be removed and the borehole filled with grout, mixed at a ratio of 6 gallons of water per 94-pound bag of cement. No waste is anticipated to be generated during these boring activities.

In addition to IPA SOMA proposes analyzing atmospheric gases O_2, CO_2, and methane. Reporting limits for O_2, CO_2, and methane will be less than or equal to concentrations of these gases in the atmosphere. Also, SOMA will ensure that laboratory-reporting limits for chemicals of concern are below the RWQCB's Human Health Environmental Screening Levels (ESLs) that address inhalation of contaminants in an indoor setting, set by CRWCB–San Francisco Bay.

Soil vapor analytical results will be utilized to make sure no leaks have occurred during sampling and to evaluate potential risks and hazards associated with vapor intrusion at the site by comparing the obtained results to the established ESLs for vapor intrusion concerns. Detected COCs will be compared to the ESLs for shallow soil gas in a commercial/industrial land use scenario. SOMA's report will include a figure showing sampling locations, tabulated results, Chain-of-Custody Records, certified laboratory analytical results, and SOMA's conclusions and recommendations.

3.3 Laboratory Analyses

Soil vapor samples will be submitted to a California state-certified environmental laboratory for analysis under the appropriate sample handling protocol. The samples will be analyzed for the following:

- EPA Method TO-14A (TO-15): benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX); methyl tertiary-butyl ether (MtBE); and volatile organic compounds (VOCs), and isopropyl alcohol.
- EPA TO-3: TPH-g

In addition to isopropyl alcohol, SOMA recommends analyzing atmospheric gases O_2, CO_2, and methane. The reporting limit for O_2, CO_2, and methane will be less than or equal to concentrations of these gases in the atmosphere. These gases will be analyzed to provide an indication of aerobic/anaerobic sub-surface conditions.

SOMA will ensure that laboratory-reporting limits for chemicals of concern are below shallow soil gas ESLs that address inhalation of contaminants in an indoor setting, set by California Regional Water Quality Control Board–San Francisco Bay.

3.4 Cost Benefit Analysis of ORC Application

Oxygen releasing compounds (ORC) have been utilized following soil remedial excavation in situation where the soil excavation beyond certain depth is too costly or infeasible due to safety and financial reasons. Application of ORC enhances bio-degradation activities in subsurface by releasing oxygen to subsurface environment. During the upcoming soil excavation activities at the site, SOMA will collect confirmation soil samples at the bottom of the excavation pits and send it to a certified laboratory for analysis on a rush basis. If the analytical results indicate that the concentrations of remaining chemicals at the bottom of the excavation pit is above ESL levels and excavation needs to be continued to the deeper levels and groundwater is impeding such excavation advancement, placement of ORC maybe come necessary instead of further excavation. Such decision will be made in the field after reviewing the laboratory results.

3.5 Soil Excavation and Off-Site Disposal

Results of recent investigations conducted at the site indicate that though elevated dissolved phase petroleum hydrocarbons contamination exists at the site, the smear zone still substantially contributes to degradation of groundwater quality. In the Feasibility Study Report dated September 22, 2011, SOMA had evaluated the cost of various feasible remedial options in order to mitigate the residual subsurface contamination. It was determined that excavation may be feasible to address soil contamination in three areas of the site, one in southwestern portion of the site, one at southwestern boundary of former UST cavity, and one northeast of pump islands.

Soil excavation and off-site disposal is a well-proven and readily implementable technology, and a very common method of removing hazardous materials from a site. Contaminated material is removed and transported to permitted off-site treatment and/or disposal facilities. Excavation and off-site disposal is applicable to the complete range of contaminant groups with no particular target group.

Results of this recent investigation indicate that though elevated dissolved contamination exists at the site, the smear zone still substantially contributes to degradation of groundwater quality. It was determined that three excavation areas are required to address site contamination, one near SOMA-7, one near OB-2, and one near historical boring B-3 (northeast of pump islands). The complete removal of the smear zone and the upper portion of the saturated area via excavation will immediately discontinue the mass transfer from soil to groundwater effectively remediating the site. In order to address any post-excavation residual hydrocarbon impact to groundwater beneath the site, as part of the projected excavation cost, a cost of one-time (in open excavation pit) ORC application was included as part of this cost estimate. The estimated cost for remedial excavation was $202,142.50.

It should be noted that excavation is an effective remedial approach for addressing shallow soil contamination at the site, and it will yield fast COC reduction in soils that are contributing to groundwater quality degradation beneath the site. However, due to the fragmented nature of soil contamination (excavation of 3 separate shored areas to address the soil contamination) and logistical issues associated with its implementation, this may not be the most desirable alternative for the property owner (operator) as it will impact business operation resulting in undesirable financial hardships. Table 3 summarizes the projected excavation cost.

4. EXCAVATION DESIGN AND IMPLEMENTATION

The primary objective of this remediation is limited to shallow soil removal; contaminants of concern are PHCs and the medium to be addressed is soil. Figure 12 shows the locations and extent of soil proposed excavation areas. Table 1 illustrates pertinent soil analytical data. Investigation results indicate that residual impact does not extend beyond approximately 12 to 14 feet bgs; therefore, the proposed excavation should not extend beyond 14 bgs.

The proposed excavation entails removal and off-site disposal of approximately 320 cubic yards of impacted soil. During proposed excavation, the western pump island canopy will be reinforced for the duration of excavation activities, and shoring will be installed within excavation pit. Once excavated soil is disposed of off-site and confirmation soil samples are collected, the site will be restored with new fill and resurfaced with concrete. During this excavation, existing groundwater monitoring wells (EW-2 and possibly EW-1) will be destroyed by

excavation. This report details tasks that will be undertaken during the course of proposed remedial excavation.

Below are descriptions of excavation-related activities:

Task 1: Permit Acquisitions, Notifications, Health and Safety Plan Preparation, and Pre-Excavation Activities

Task 2: Waste Profiling

Task 3: Dewatering Activities

Task 4: Well Destruction

Task 5: Western Dispenser Shut Down Procedures

Task 6: Excavation Procedures

Task 7: Excavation Shoring and Canopy Reinforcement

Task 8: Grading and Erosion Control

Task 9: Stockpiling, Dust, and Noise Control

Task 10: Confirmation Soil Sampling

Task 11: Soil Transportation and Disposal

Task 12: Backfilling, Compaction, and Surface Restoration

Task 13: Anticipated Work Schedule

Task 14: Report Preparation

4.1 Permit Acquisitions, Notifications, Health and Safety Plan Preparation, and Pre-Excavation Activities

Before initiating field activities, SOMA will prepare a site-specific Health and Safety Plan (HASP). 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. The HASP establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans. The HASP will be reviewed and signed by field staff and contractors prior to beginning field operations at the site.

Prior to initiating field activities, SOMA will submit an Excavation Plan for Grading Permit to the City of Castro Valley. As-built plans will be reviewed during the permitting process to determine whether any manual excavation is necessary in

the vicinity of utility or fuel lines. SOMA will obtain well destruction permits for wells EW-1 and EW-2. Appropriate notification will be made to Bay Area Air Quality Management District (BAAQMD) and ACEH prior to commencement of all excavation activities and after all site restoration activities are completed. If required by the City of Castro Valley, SOMA will prepare and submit a traffic control plan for approval. Because the proposed excavation abuts the sidewalk area, a temporary sidewalk closure (in the form of an encroachment permit) will be necessary to maintain safe working conditions. SOMA will retain a traffic management company to provide traffic control services for the duration of excavation and soil transportation activities. The CUPA and designated operator will be notified of the work schedule and the designated operator will be available for on-site inspection during the work.

Based on results of multi-phase extraction (MPE) pilot testing (from June 20 to July 1, 2011) a total of 3,083 gallons of groundwater was extracted. Due to the presence of shallow groundwater, and the likely need for dewatering during excavation, SOMA recommends obtaining a temporary discharge permit, which could be utilized for disposal of groundwater generated during dewatering activities. Prior to discharge (to the sanitary sewer), effluent samples will be collected and analyzed for contaminants, as required by the sewer district.

Prior to field activities, SOMA's field crew will mark the proposed excavation area using chalk-based white paint. SOMA will notify Underground Service Alert (USA) verifying that excavation areas are clear of underground utilities and will retain a private utility locator to conduct an extensive survey of proposed areas to locate any additional subsurface conduits. Utility companies will be notified for any utility that may be impacted or located near the excavation work.

If any utility lines cross the proposed excavation area, SOMA will notify ACEH and determine whether any significant changes to the proposed excavation are necessary. SOMA will also take appropriate action during excavation activities to protect or temporarily reroute the lines.

Areas located in concrete will be saw cut. Perimeter temporary fencing will be installed and maintained throughout excavation and backfilling activities. A sign providing emergency contact information will be displayed throughout remedial excavation activities.

Because proposed excavation abuts the sidewalk area, a temporary sidewalk closure will be necessary to maintain safe working conditions. SOMA will retain a traffic management company to provide traffic control services for the duration of excavation and soil transportation activities. A state licensed waste hauler will transport waste to appropriate landfill facility.

4.2 Waste Profiling

Due to limited space and projected ongoing station operation during excavation, stockpiling of excavated materials on-site, pending off-site disposal, will not be feasible. Therefore, SOMA will secure preapproval for soil disposal at a licensed facility prior to excavation, based on existing soil analytical results. If existing data is not sufficient or current enough to secure landfill preapproval, additional shallow soil sampling (utilizing hand auger technique) may be necessary before the start of excavation. SOMA will notify ACEH if such sampling is necessary. Laboratory analytical results from waste profiling along with completed Third Party Authorization and Generator Waste Profiles forms will be submitted to the landfill for preapproval, and will be made part of the remedial excavation report.

4.3 Dewatering Activities

Due to elevated groundwater levels, SOMA proposes conducting excavation activities during the dry season to minimize dewatering cost.

Prior to planned excavation, depth to groundwater in existing monitoring wells will be evaluated. If depth to groundwater is within a few feet of the target excavation depth (14 feet bgs) as anticipated, groundwater within excavation area will be dealt with by extraction directly from the excavation area. Furthermore, overlapping sheeting, which will be used to shore the excavation area, will prevent groundwater from freely entering the excavation, minimizing the need for water extraction and disposal. In order to minimize the impact of the high water table on excavation activities, SOMA also proposes excavating the proposed area in sections. Details of sectional excavation are described below.

Groundwater extracted during excavation activities will be treated utilizing GAC and discharged to the local sewer system under a temporary discharge permit. A temporary treatment unit will be assembled on-site and will consist of a holding tank, transfer pump, GAC, and associated piping. Once excavation is complete, the dewatering well (if installed) will be either retained for use in place of decommissioned monitoring wells or decommissioned according to applicable state and local regulations, and the temporary treatment unit disassembled.

4.4 Well Destruction

Based on projected location of the excavation area, it appears that wells SOMA-7, ESE-5R, OB-1, SOMA-5, ESE-1R, and OB-2 will be destroyed by excavation (see Figure-2). Therefore, before initiating excavation activities, SOMA will apply for appropriate well permits, and follow appropriate HASP procedures outlined above to decommission these wells ahead of time. If approved, well destruction will be conducted during excavation activities. If decommissioning by excavation is not approved, pressure grouting will be utilized to decommission above wells prior to commencement of excavation activities. Type I/II cement grout will be

tremmied into each well, followed by application of 25-psi pressure maintained for five minutes. Once each well is pressure grouted, the well ring will be removed and the location will be completed to grade with a neat cement and bentonite mixture. The top of each location will be finished with concrete to match the existing grade. Decommissioned wells will be allowed to set for at least a week before initiating excavation activities. All appropriate permits and well completion (destruction) records will be included in the excavation report.

4.5 Excavation Procedures

In order to minimize dewatering activities and allow for a more stable excavation pit, SOMA proposes conducting the remedial excavation in sections, beginning with excavating and backfilling in Section 1 located in the western portion of the site, see Figure 12. Within the Section 1 area the shoring will be installed along the southern, western and eastern boundaries of the excavation pit. The maximum excavation depth is anticipated to exceed 10 feet since elevated concentration of TPH-g was reported at 10 feet bgs at SOMA-7. SOMA will utilize mechanical and manual (hand digging) excavation techniques during remedial activities. Once the excavation is completed and confirmation soil samples were collected, the excavation will be started at Section 2 area located immediately in east of the station building. Please note that the confirmation samples will be analyzed on a rush basis (24 hour turn-around time) pending the application of ORC at the bottom of excavation pit. If the analytical results indicate that the remaining petroleum hydrocarbons in soil samples collected from the bottom of the excavation and side walls is below ESLs then no ORC will be applied to the bottom of the excavation pit before backfilling it with pea gravel. Otherwise, the benefit and cost of ORC application will be evaluated before application of ORC.

The maximum excavation depth within Section 2 is anticipated to exceed 11 feet bgs, since elevated concentration of TPH-g was reported in a sample collected from SOMA-5 at 11 feet bgs. Within the Section 2 area the shoring will be installed along the southern, western and eastern boundaries of the excavation pit. SOMA will utilize mechanical and manual (hand digging) excavation techniques during remedial activities.

Section 3 located in northeast of the site will be started following completion of excavation and backfilling of the Section 2. The excavation depth at Section 3 is expected to go beyond 12 feet bgs. The shoring will be installed along the northern and western boundaries only. The maximum soil TPH-g concentration in this section encountered was 720 mg/kg in B-3 at 12 feet bgs.

Once all three sections are backfilled, the shoring is removed, the entire excavation areas will be resurfaced with concrete. Minor settling is anticipated once the shoring is removed; to compensate for any settling, additional fill material will be placed and compacted before concrete placement.

Figure 12 shows excavation sections, although it should be noted that minor layout deviations, based on unforeseen field conditions, are expected.

Below are steps that will be taken prior to conducting field activities and standard procedures to be used during excavation activities. Throughout field activities, SOMA will ensure that all applicable municipal code and best management practices and standards are followed.

- A competent person trained to identify hazardous conditions, with authority to take corrective action, will be in charge of excavation. This person will inspect excavations daily and after every rain event, will ensure that all equipment and materials are in good, working condition;
- Excavated or other materials as required will be retained 2 feet or more from the edge of the excavation. Workers will stay away from any equipment loading or unloading material. Perimeter protection will be provided at all times;
- Stockpiles of topsoil materials will not be placed within a public right of way, will not obstruct drainage ways, will not be subject to erosion, will not endanger other properties, and will not create a public nuisance or safety hazard;
- To ensure a safe working environment, any excavation deeper than 5 feet bgs will be shored to comply with Cal/OSHA requirements;
- Workers will have all appropriate training and wear the required personal protective equipment including hardhats, safety footwear, gloves, eye protection, hearing protection, and fall protection devices, as needed;
- Excavated material and the excavation pit will be monitored by hand-held screening instrumentation, (e.g., photoionization detector [PID]), as well as visual and olfactory indications of soil impact from PHCs (e.g., visible green or gray staining, odor). Observations will be noted on field notes. Excavation activities will be documented by photographs that will be included in the excavation report.

4.6 Excavation Shoring and Canopy Protection

Based on the most recent soil and groundwater investigation, excavated material will predominantly consist of sandy lean clay. Based on preliminary review, a SX-10 shoring or equivalent will be utilized during excavation. Shoring system will remain in place throughout backfilling activities. Calculations for shoring and support system for canopy footing will be submitted to the City of Castro Valley for approval and included in the excavation report. All fueling-related equipment will remain in place throughout excavation activities. ACEH will be notified and appropriate permitting will be obtained if, based on unforeseen conditions, a temporary removal and reconnection of piping and fuel-related equipment is necessary during excavation activities.

4.7 Grading and Erosion Control

The proposed grading is deemed to have no significant environmental impact, as determined pursuant to provisions of the California Environmental Quality Act, since it is not located within 100 feet of the centerline of any watercourse, the waterline of any water body, or the Bay at high tide.

If any storm water catch basins are found in close proximity to excavation, SOMA will implement the following procedures designed to ensure that grading and erosion control practices proposed for the above project comply with best management practices and standards.

A. Any catch basin will be protected by silt fencing or other erosion-sedimentation prevention devices at all times.

B. Erosion control devices will not be moved or modified without approval of the project manager

C. All removable erosion protective devices shall be in place at the beginning and end of each working day at all times.

D. All silt and debris shall be removed from streets and public right of way immediately.

E. All immediate downstream inlets will be protected.

4.8 Stockpiling, Dust and Noise Control

It is anticipated that excavated soil will be immediately loaded onto trucks and routed to the disposal facility. If any soil is not off-hauled from the site the same day, it will be stockpiled and covered at the end of each working day, or immediately in the event of rain, suspicious odors, or if visible dust is being generated from the stockpiles. A PID reading will be taken periodically to ensure stockpiles meet regulations on volatile organic compound emissions. Debris (brick, rubble, etc.) encountered during excavation as well as concrete and/or asphalt cuttings will be separated from the excavated soil and disposed of separately.

Dust control measures during excavation, backfilling, and handling of contaminated soil will consist of spraying the minimum amount of water needed to suppress the dust onto the soil and work area.

Noise generated during excavation will be monitored and modified accordingly, to ensure compliance with the City of Castro Valley Noise Ordinance.

4.9 Confirmation Soil Sampling

When final excavation limits have been reached, soil samples will be collected from the bottom and sidewalls of the excavation for analysis at a state-licensed

off-site laboratory. SOMA will collect confirmation soil samples from the bottom of the excavation (minimum one sample from 20x20 square foot area) for laboratory analysis. Since shoring will be installed to secure the excavation area, collecting sidewall samples may become problematic. However, SOMA's field crew will try to collect some sidewall samples if no safety issues are violated. To a certain extent (limited by installed shoring), confirmation soil samples will be utilized to guide the vertical extent of excavation. Confirmation soil samples will be analyzed within 24 hours to expedite remedial activities and minimize down time. As stated above upon receiving the analytical results SOMA will decide if ORC application is necessary and cost effective.

To minimize volatilization, each soil sample will be collected using a slide hammer and a stainless steel tube. Samples will be sealed, labeled, and placed in a chilled ice chest pending delivery to the off-site laboratory under chain-of-custody protocol. Results of this assessment will be documented in SOMA's remedial excavation report. Confirmation soil samples will be analyzed for the following:

- TPH-g using EPA Method 8260B
- TPH-d using EPA Method 8015B
- TPH-Mo using EPA Method 8015
- BTEX and MtBE using EPA Method 8260B

4.10 Soil Transportation and Disposal

Laboratory analytical results from waste profiling along with completed Third Party Authorization and Generator Waste Profiles forms will be submitted to the landfill for preapproval, and will made part of remedial excavation report.

Because the proposed excavation abuts the sidewalk area, a temporary sidewalk closure will be necessary to maintain safe working conditions. SOMA will retain a traffic management company to provide traffic control services for the duration of excavation and soil transportation activities. A state licensed waste hauler will transport waste to appropriate landfill facility.

All trucks will be loaded with soil, watered, cleaned of all loose debris, and covered with tarps prior to leaving the site. Each truck will follow a preapproved route, which will minimize travel of trucks over city streets. Copies of signed manifests along with weight tickets will be included in the remedial excavation report.

4.11 Backfilling, Compaction, and Surface Restoration

Excavated areas will be backfilled with imported drain rock (pea gravel around utility lines) to sub-base, and then backfilled with 8 to 12 inches of compacted

Class II aggregate base rock (AB) to below the concrete level. A #4 rebar (16" O.C.) will be installed prior to resurfacing the excavated area with concrete. Unless otherwise required by the City of Castro Valley, a 2,500-psi concrete will be installed to restore the excavated area to surface.

4.12 Anticipated Work Schedule

Once all appropriate permitting and notifications, and dewatering activities are in place the actual excavation should take at least 7 working days depending on the weather conditions, sampling turn-around, and inspections scheduling and occurrence.

The anticipated excavation schedule is as follows.

Day 1: Site preparation, fencing installation, utilities evaluation
Day 2: Mobilization, breaking of concrete/asphalt;
Day 3: Shoring installation, excavation of Section 1, collecting confirmation soil samples
Day 4: Backfilling of Section 1 and shoring and excavation of Section 2
Day 5: Backfilling of Section 2 and shoring and excavation of Section 3
Day 6: Form concrete resurfacing slab set rebar
Day 7: Pour concrete and demobilize

Once the concrete has cured, the site fencing and other excavation related equipment will be removed, and the site restored to the pre-excavation condition.

4.13 Report Preparation

Once remedial excavation is complete, SOMA will prepare and submit the remedial excavation report to ACEH for review.

FIGURES

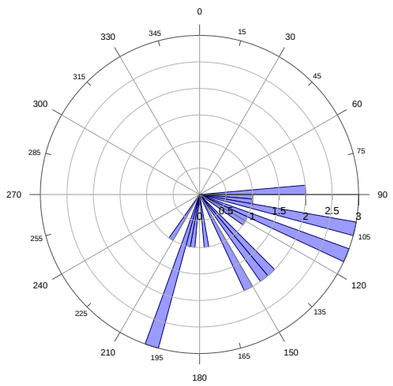
N

approximate scale in feet

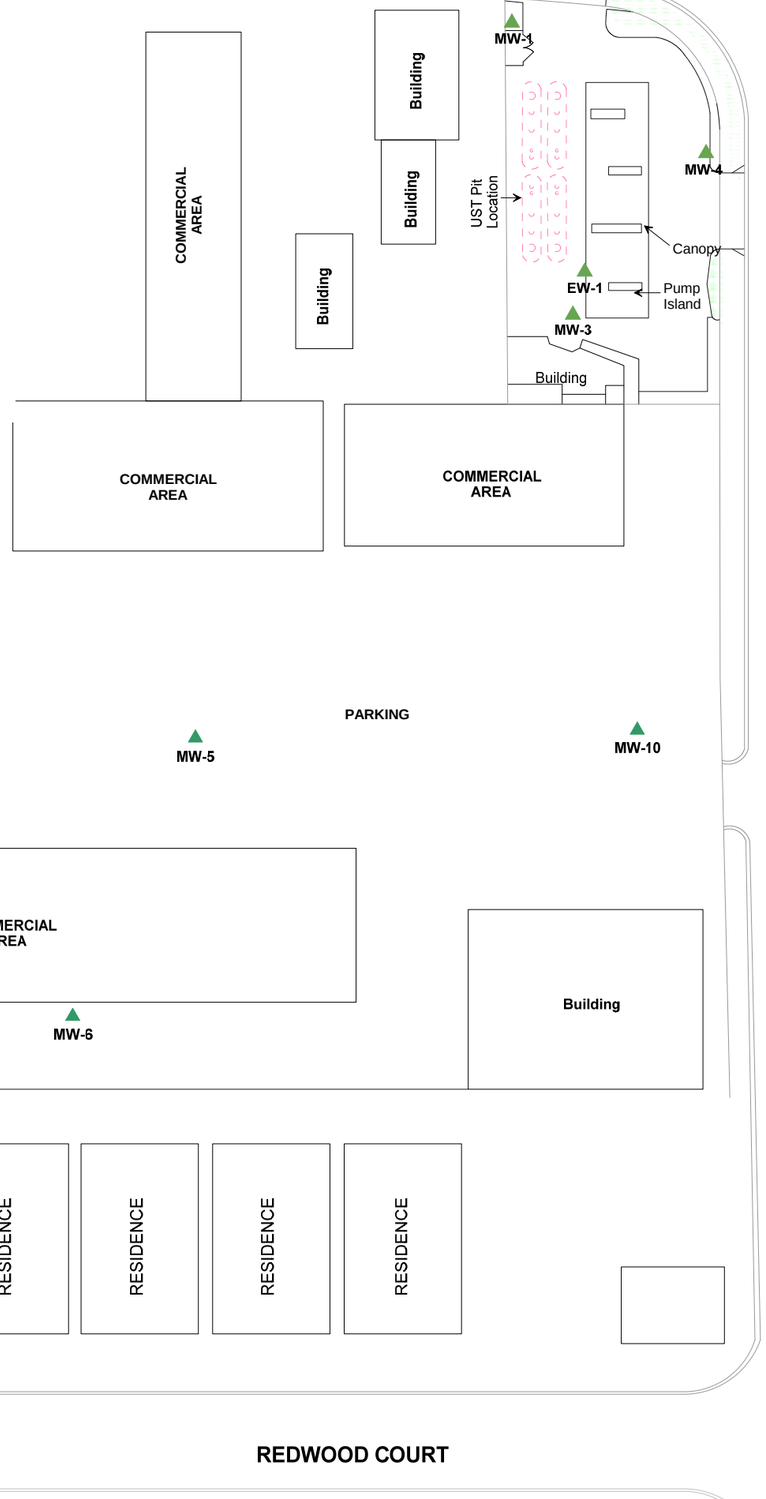
0 60 120

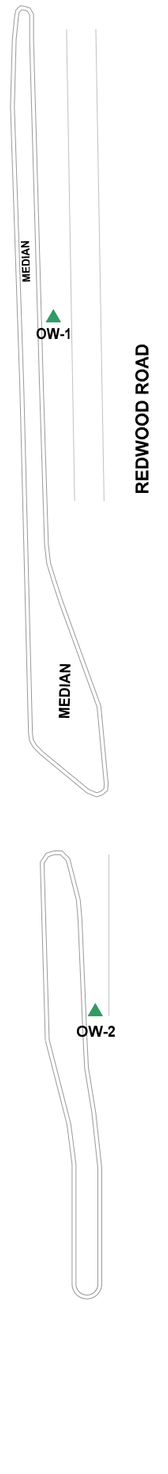
Figure 1: Site vicinity map.

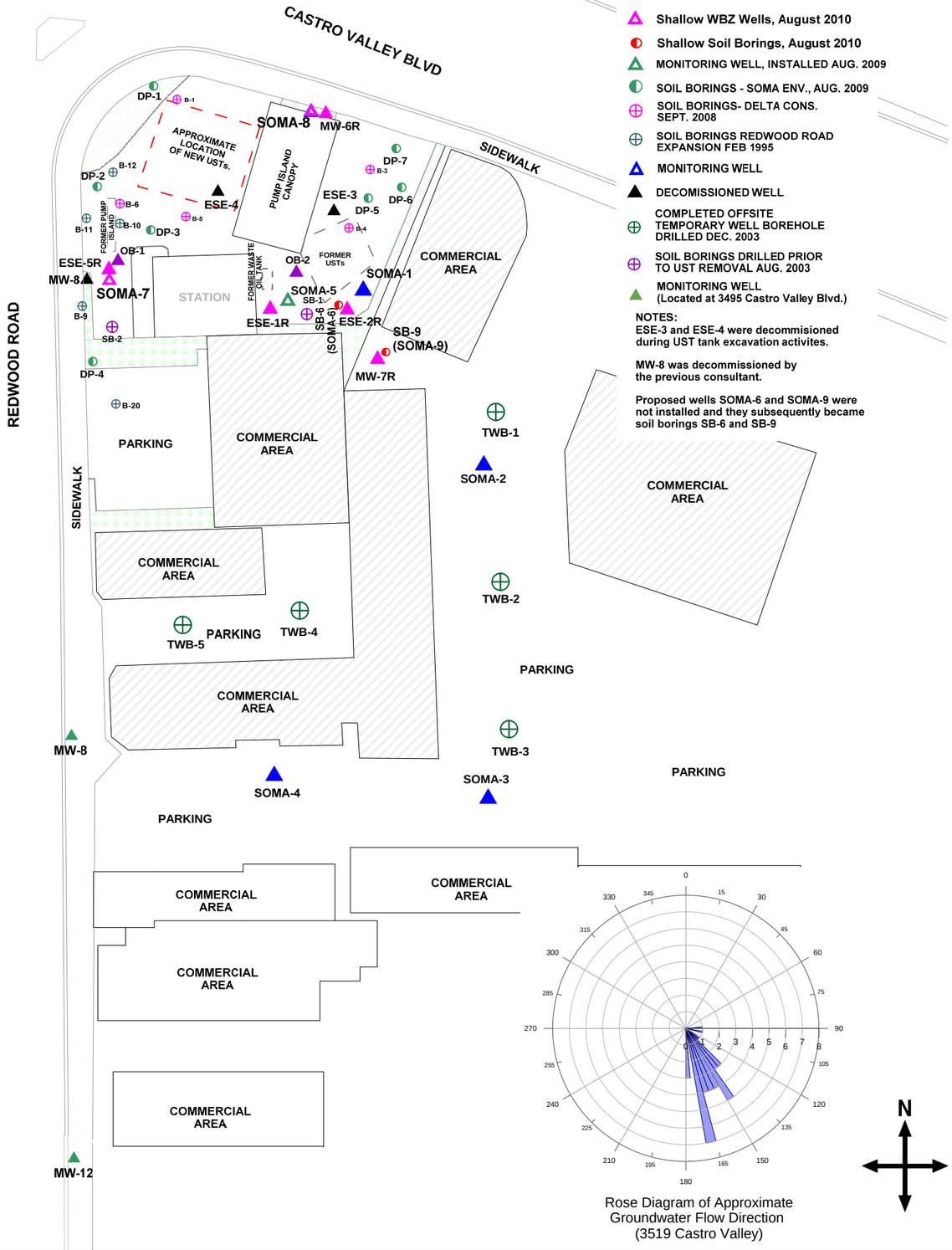
SOMA ENVIRONMENTAL ENGINEERING, INC.



Rose Diagram of Approximate Groundwater Flow Direction (3495 Castro Valley)







- Observation Wells June 2011
- Reconstructed Wells August 2010
- Shallow WBZ Wells, August 2010
- Shallow Soil Borings, August 2010
- MONITORING WELL, INSTALLED AUG. 2009
- SOIL BORINGS - SOMA ENV., AUG. 2009
- SOIL BORINGS- DELTA CONS. SEPT. 2008
- SOIL BORINGS REDWOOD ROAD EXPANSION FEB 1995
- MONITORING WELL
- DECOMMISSIONED WELL
- COMPLETED OFFSITE TEMPORARY WELL BOREHOLE DRILLED DEC. 2003
- SOIL BORINGS DRILLED PRIOR TO UST REMOVAL AUG. 2003
- MONITORING WELL (Located at 3495 Castro Valley Blvd.)

NOTES:
ESE-3 and ESE-4 were decommisioned during UST tank excavation activites.

MW-8 was decommissioned by the previous consultant.

Proposed wells SOMA-6 and SOMA-9 were not installed and they subsequently became soil borings SB-6 and SB-9

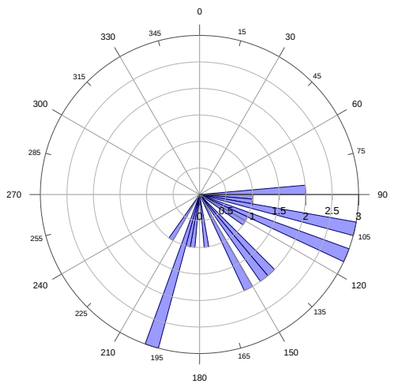
Rose Diagram of Approximate Groundwater Flow Direction (3519 Castro Valley)

N

approximate scale in feet
0 60 120

Figure 2: Site map showing locations of existing monitoring wells, decommissioned wells, offsite temporary well boreholes, monitoring wells installed by SOMA, and monitoring wells located at neighboring service station.

SOMA ENVIRONMENTAL ENGINEERING, INC.



Rose Diagram of Approximate Groundwater Flow Direction (3495 Castro Valley)

N

COMMERCIAL AREA
Building
Building
Building
MW-1
MW-4
UST Pit Location
Canopy
EW-1
Pump Island
MW-3
Building
COMMERCIAL AREA
COMMERCIAL AREA
MEDIAN
OW-1
MEDIAN
PARKING
MW-5
MW-10
COMMERCIAL AREA
Building
MW-6
OW-2
RESIDENCE
RESIDENCE
RESIDENCE
RESIDENCE
RESIDENCE
REDWOOD COURT
MW-7
MW-11

CASTRO VALLEY BLVD
A
SIDEWALK
DP-1
B-1
APPROXIMATE LOCATION OF NEW USTs.
SOMA-8
MW-6R
DP-2
B-12
DP-7
B-3
PUMP ISLAND CANOPY
ESE-4
ESE-3
DP-5
DP-6
B-6
B-5
B-4
B-11
B-10
DP-3
FORMER PUMP ISLAND
OB-1
OB-2
FORMER USTs
ESE-5R
MW-8
SOMA-7
STATION
FORMER WASTE OIL TANK
SOMA-5
SOMA-1
COMMERCIAL AREA
B
B-9
ESE-1R
SB-1
SB-6 (SOMA-6)
ESE-2R
SB-9 (SOMA-9)
SB-2
DP-4
MW-7R
B-20
B'
TWB-1
PARKING
COMMERCIAL AREA
SOMA-2
SIDEWALK
COMMERCIAL AREA
COMMERCIAL AREA
TWB-2
TWB-5
PARKING
TWB-4
PARKING
COMMERCIAL AREA
TWB-3
MW-8
SOMA-4
SOMA-3
A'
PARKING
COMMERCIAL AREA
COMMERCIAL AREA
COMMERCIAL AREA
COMMERCIAL AREA
MW-12

- Observation Wells June 2011
- Reconstructed Wells August 2010
- Shallow WBZ Wells, August 2010
- Shallow Soil Borings, August 2010
- MONITORING WELL, INSTALLED AUG. 2009
- SOIL BORINGS - SOMA ENV., AUG. 2009
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- SOIL BORINGS REDWOOD ROAD EXPANSION FEB 1995
- MONITORING WELL
- DECOMMISSIONED WELL
- COMPLETED OFFSITE TEMPORARY WELL BOREHOLE DRILLED DEC. 2003
- SOIL BORINGS DRILLED PRIOR TO UST REMOVAL AUG. 2003
- MONITORING WELL (Located at 3495 Castro Valley Blvd.)

NOTES:
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MW-8 was decommissioned by the previous consultant.

Proposed wells SOMA-6 and SOMA-9 were not installed and they subsequently became soil borings SB-6 and SB-9

approximate scale in feet
0 60 120

Figure 3: Site Map Showing the Locations of Geological Cross-Sections

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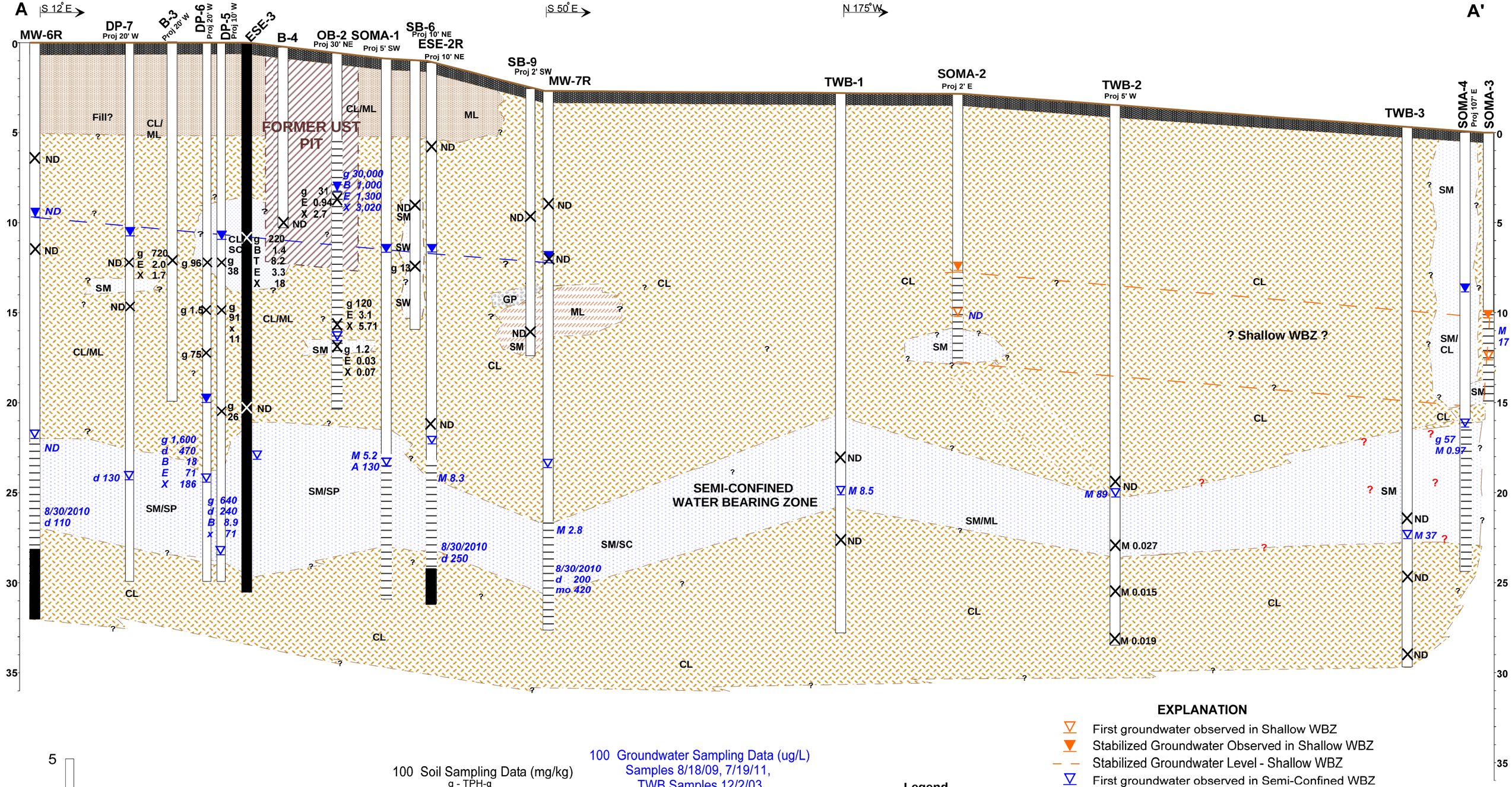

5

0 20

approximate scale in feet

100 Soil Sampling Data (mg/kg)
g - TPH-g
d - TPH-d
B - Benzene
T - Toluene
E - Ethyl Benzene
X - Total Xylenes
M - MtBE

ND - below detection limits

100 Groundwater Sampling Data (ug/L)
Samples 8/18/09, 7/19/11,
TWB Samples 12/2/03

g - TPH-g
d - TPH-d
B - Benzene
T - Toluene
E - Ethyl Benzene
X - Total Xylenes
M - MtBE
A - TBA
ND - below detection limits

Legend

ML Sandy Silt
CL Clay/Silty Clay
SM Silty Sand
SP Sand
SC Clayey Sand

EXPLANATION

- First groundwater observed in Shallow WBZ
- Stabilized Groundwater Observed in Shallow WBZ
- Stabilized Groundwater Level - Shallow WBZ
- First groundwater observed in Semi-Confined WBZ
- Stabilized Groundwater Observed in Semi-Confined WBZ
- Stabilized Groundwater Level - Semi-Confined WBZ
- Screened Interval
- Well Destroyed Dec 2003

Figure 4: Geologic Cross-Section A-A'

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B

B'

S 66° E

SOMA-7
ESE-5R Proj 7' S
OB-1 Proj 9'S
SB-2 Proj 15'N
ESE-1R Proj 20' S
SOMA-5 Proj 20' S
SB-9
MW-7R Proj 21' S
TWB-1
MW-8

PERCHED WBZ?

? Shallow WBZ ?

SEMI-CONFINED WATER BEARING ZONE

SEMI-CONFINED WATER BEARING ZONE

SEMI-CONFINED WATER BEARING ZONE

CL/ML
SM/ML
ML/SM
ML
SM
GP
SP
CL
SM/SC

0
5
10
15
20
25
30
35

100 Soil Sampling Data (mg/kg)
g - TPH-g
d - TPH-d
B - Benzene
T - Toluene
E - Ethyl Benzene
X - Total Xylenes
M - MtBE

ND - below detection limits

100 Groundwater Sampling Data (ug/L)
Samples 7/19/11 and 8/30/10, TWB Samples 12/2/03

g - TPH-g
d - TPH-d
B - Benzene
T - Toluene
E - Ethyl Benzene
X - Total Xylenes
M - MtBE
A - TBA
ND - below detection limits

Legend

ML Sandy Silt
CL Clay/Silty Clay
SM Silty Sand
SP Sand
SC Clayey Sand

EXPLANATION

- First groundwater observed in Shallow WBZ
- Stabilized Groundwater Observed in Shallow WBZ
- Stabilized Groundwater Level - Shallow WBZ
- First groundwater observed in Semi-Confined WBZ
- Stabilized Groundwater Observed in Semi-Confined WBZ
- Stabilized Groundwater Level - Semi-Confined WBZ
- Screened Interval
- Well Destroyed Dec 2003, Bentonite Plug

5
0 20
approximate scale in feet

Figure 5: Geologic Cross-Section B-B'

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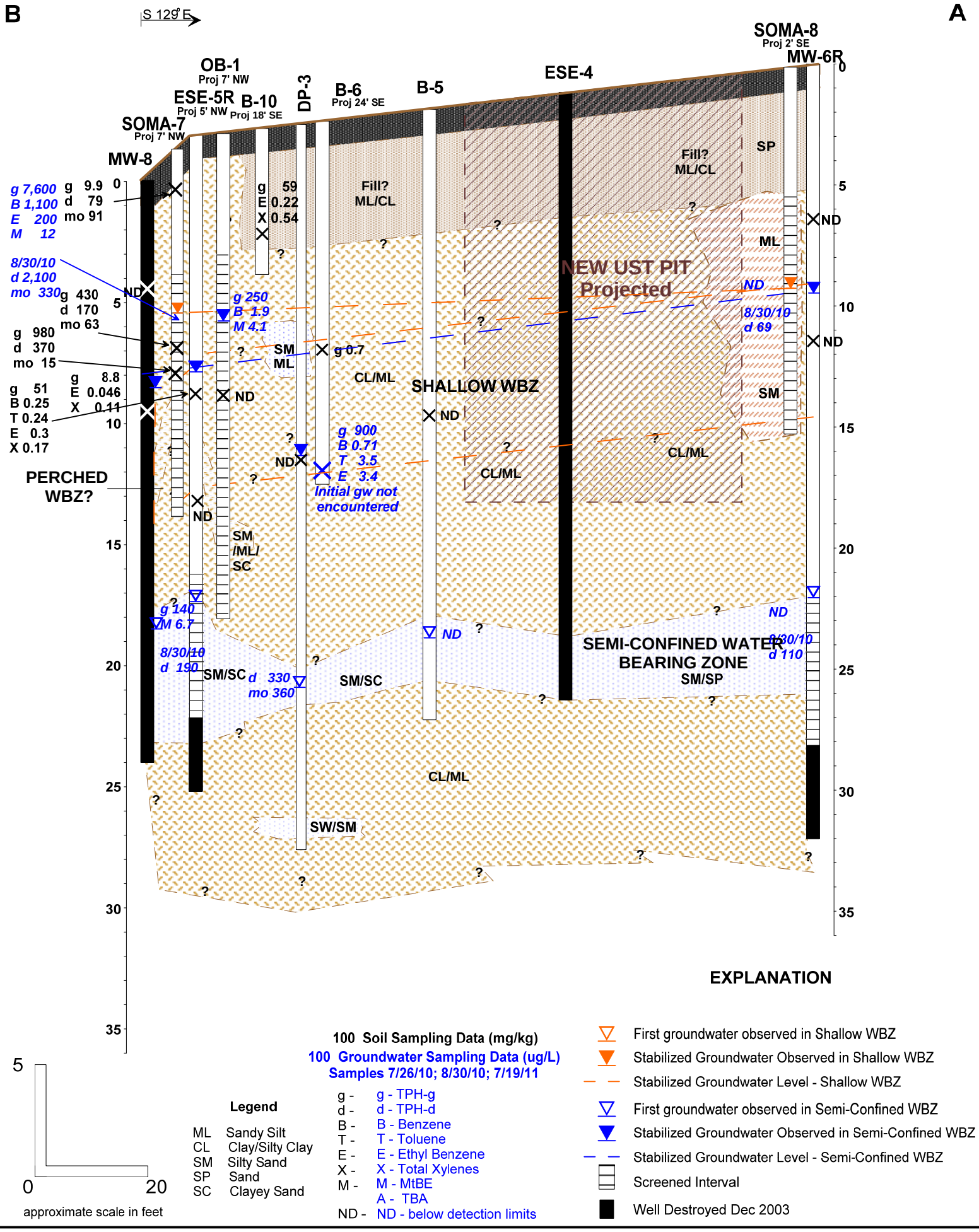

Figure 6: Geologic Cross-Section B-A'

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Figure 7: TPH-g Concentrations in Soil from 0 to 15 bgs

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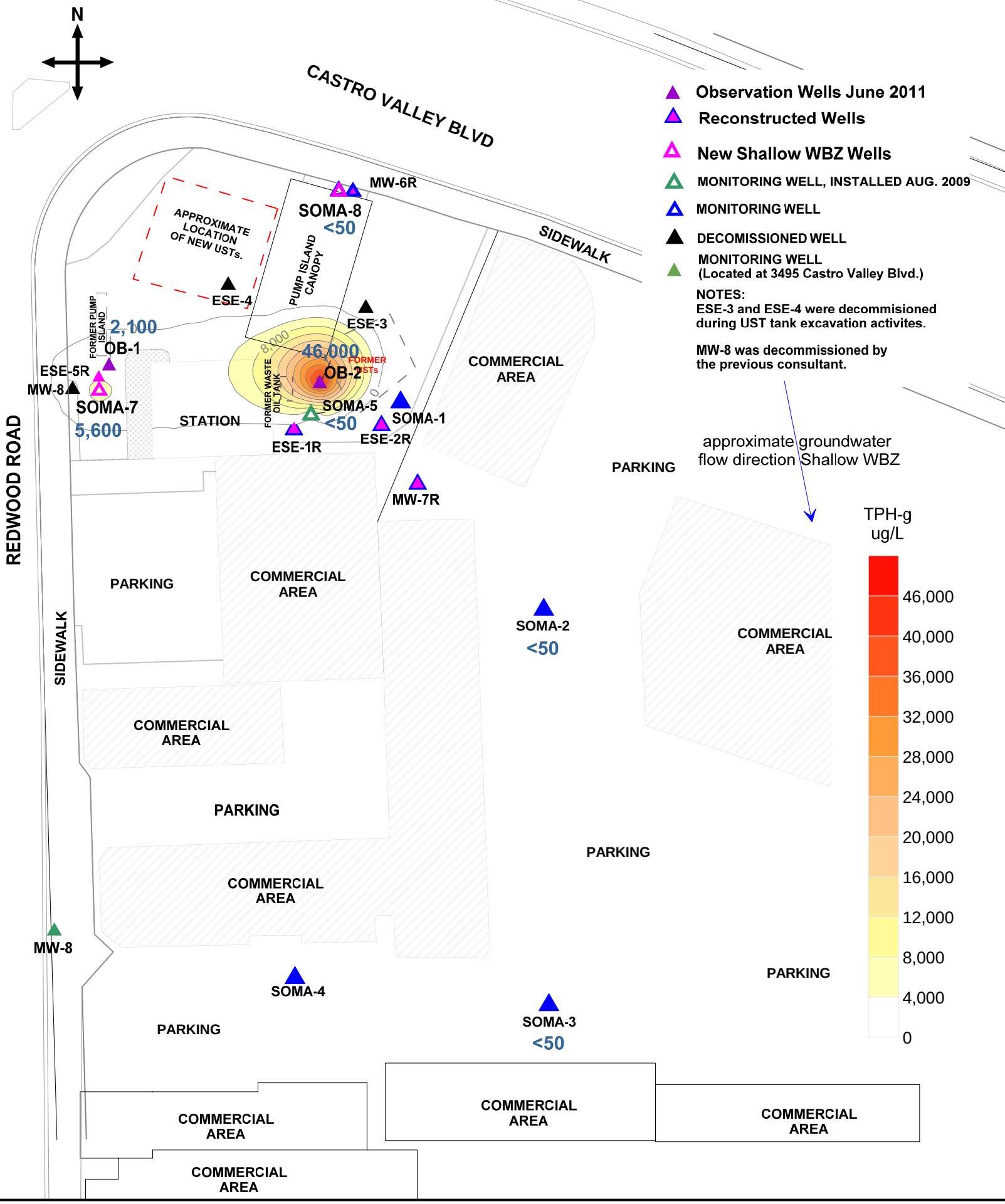


Figure 8: Contour Map of TPH-g Concentrations in Shallow WBZ Wells in Feet. July 10 and 11, 2012

ENVIRONMENTAL ENGINEERING, INC.

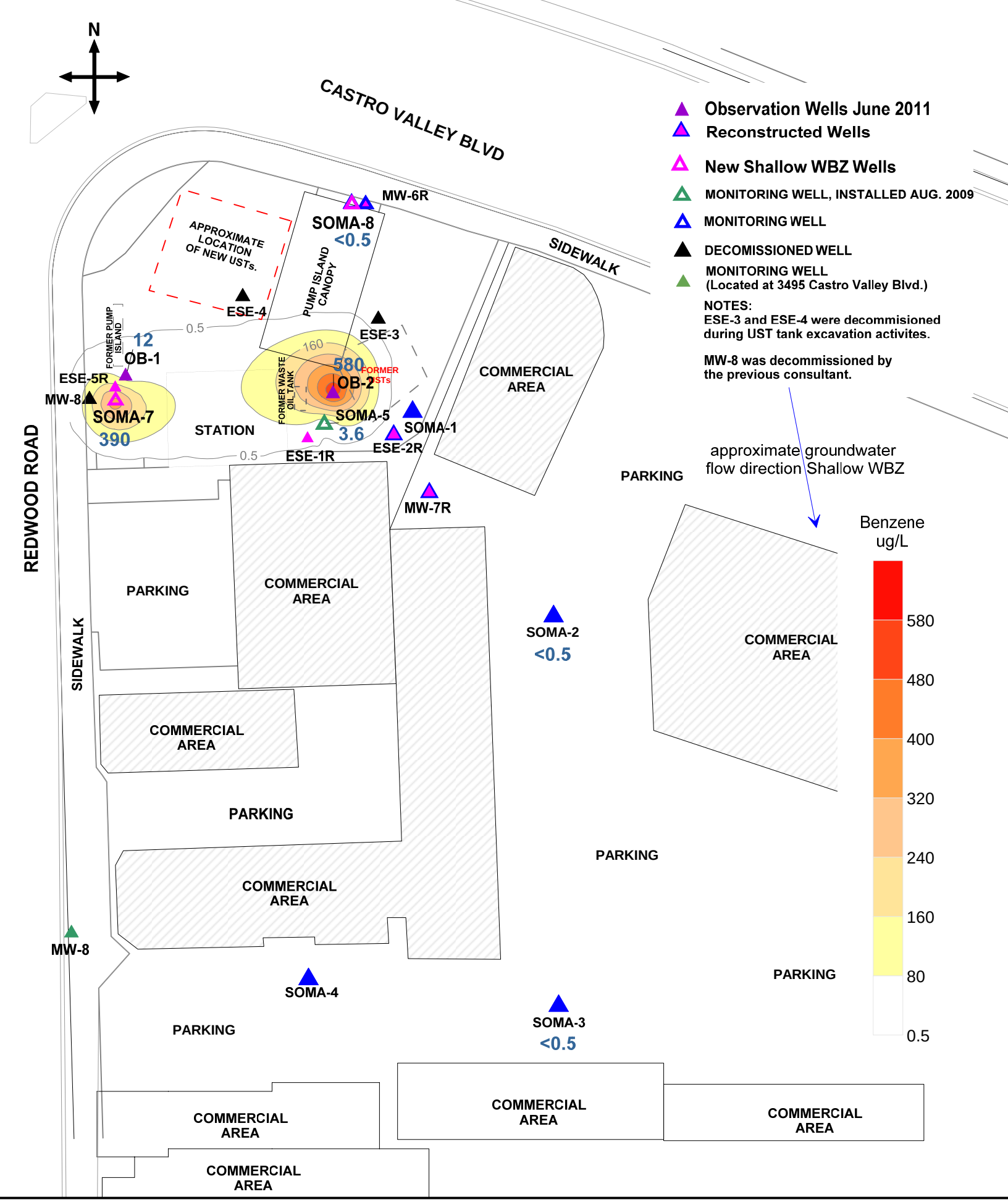
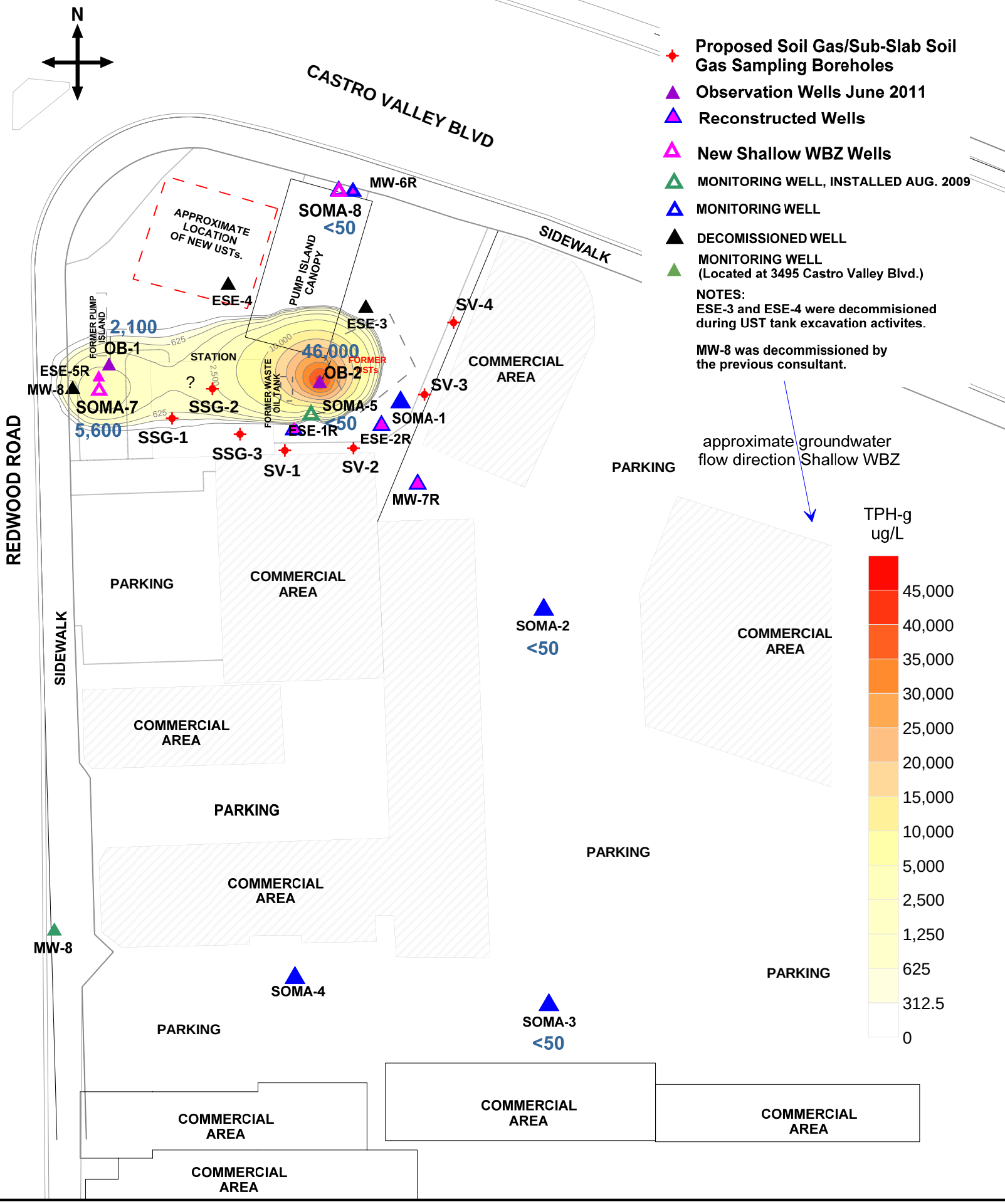


Figure 9: Contour Map of Benzene Concentrations in Shallow WBZ Wells in Feet. July 10 and 11, 2012

ENVIRONMENTAL ENGINEERING, INC.

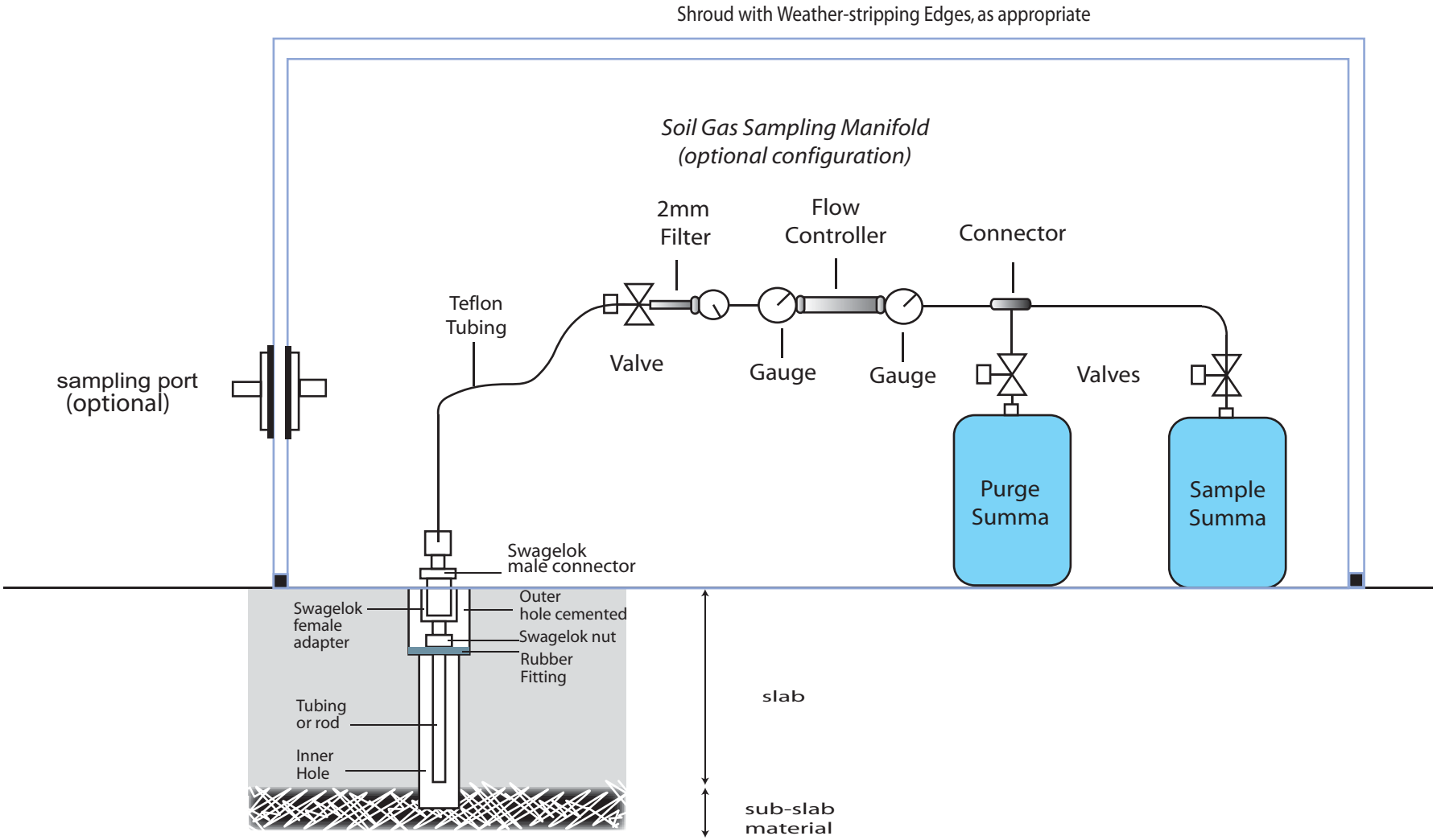


approximate scale in feet

0 40 80

Figure 10: Locations of Soil Gas Sampling Boreholes and Sub-Slab Soil Gas Sampling Probes

ENVIRONMENTAL ENGINEERING, INC.



** Assemble Sampling Apparatus
and Leak Test Prior to Mobilizing to the Field
*** Swagelok Fittings or Equivalent will be
Used on All Connections

not to scale

Figure 11: Generalized Sub-Slab Vapor Probe Installation Schematic

SOMA
ENVIRONMENTAL ENGINEERING, INC.

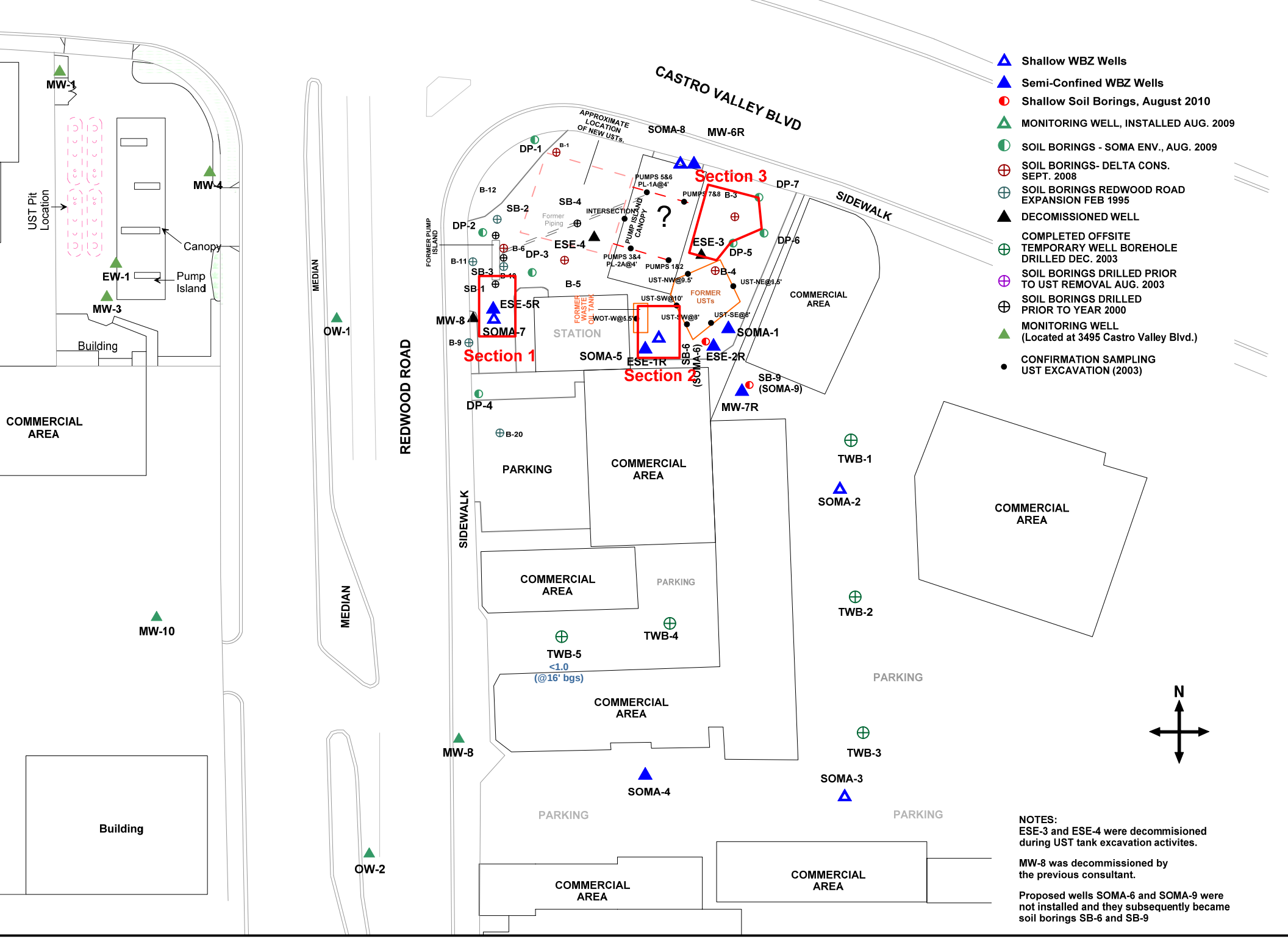


Figure 12: Proposed Excavation Areas

SOMA ENVIRONMENTAL ENGINEERING, INC.

TABLES

Table 1

Historical Soil Analytical Data

3519 Castro Valley Blvd., Castro Valley

Sample ID	Consultant	Sample Depth (feet)	Sample Date	TPH-g (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	TOG (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	Napthalene (mg/kg)	Lead (mg/kg)
WO1	Kaprealian	8.5	9/20/1988	<1.0	NA	NA	<1.0	0.0068	0.0095	<0.005	<0.005	NA	NA	NA
Comp A	Kaprealian	Composite	9/20/1988	<1.0	NA	NA	100	NA	NA	NA	NA	NA	NA	NA
Comp B	Kaprealian	Composite	10/4/1988	<1.0	<10	NA	<50	NA	NA	NA	NA	NA	NA	NA
ESE-1	Alisto	15	9/29/1992	70	<5.0	NA	<50	**0.87**	2	1.2	**5.7**	NA	NA	NA
ESE-1	Alisto	20	9/29/1992	<1.0	<5.0	NA	<50	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
ESE-2	Alisto	10.5	9/28/1992	<1.0	<5.0	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
ESE-2	Alisto	20	9/28/1992	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
ESE-3	Alisto	10.5	9/29/1992	**220**	NA	NA	NA	**1.4**	**8.2**	**3.3**	**18**	NA	NA	NA
ESE-3	Alisto	20	9/29/1992	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
ESE-4	Alisto	6.5	9/28/1992	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
ESE-4	Alisto	10	9/28/1992	24	NA	NA	NA	**0.15**	0.17	0.23	0.82	NA	NA	NA
ESE-5	Alisto	10	9/28/1992	51	NA	NA	NA	**0.25**	0.24	0.3	0.17	NA	NA	NA
ESE-5	Alisto	14	9/28/1992	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
B-9	ACC Env	2	12/5/1994	9.9	NA	NA	NA	0.016	<0.005	0.067	0.23	NA	NA	NA
B-9	ACC Env	4	12/5/1994	1	NA	NA	NA	0.0058	<0.005	0.0065	0.009	NA	NA	NA
B-10	ACC Env	4	12/6/1994	59	NA	NA	NA	<50	<0.005	0.22	0.54	NA	NA	NA
B-11	ACC Env	2	12/6/1994	<10	NA	NA	NA	<50	<0.005	<0.005	<0.005	NA	NA	NA
B-12	ACC Env	4	12/6/1994	<10	NA	NA	NA	<50	<0.005	<0.005	<0.005	NA	NA	NA
B-12	ACC Env	6	12/6/1994	<10	NA	NA	NA	<50	<0.005	<0.005	<0.005	NA	NA	NA
B-20	ACC Env	3	12/8/1994	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
B-20	ACC Env	5	12/8/1994	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
MW-6	Alisto	6 to 6.5	7/18/1995	<2.5	NA	NA	NA	<0.025	<0.025	<0.025	<0.05	NA	NA	NA
MW-6	Alisto	11 to 11.5	7/18/1995	<2.5	NA	NA	NA	<0.025	<0.025	<0.025	<0.05	NA	NA	NA
MW-7	Alisto	6 to 6.5	7/18/1995	<2.5	NA	NA	NA	<0.025	<0.025	<0.025	<0.05	NA	NA	NA
MW-7	Alisto	11 to 11.5	7/18/1995	<2.5	NA	NA	NA	<0.025	<0.025	<0.025	<0.05	NA	NA	NA
MW-8	Alisto	3.5 to 4	7/19/1995	<2.5	NA	NA	NA	<0.025	<0.025	<0.025	<0.050	NA	NA	NA
MW-8	Alisto	7.5 to 8	7/19/1995	8.8	NA	NA	NA	<0.025	<0.025	0.046[E]	0.11[E]	NA	NA	NA
SB-1	Alisto	1.5 to 2	7/19/1995	**140**	NA	NA	NA	<0.1	<0.1	1.4	**4.1**	NA	NA	NA
SB-1	Alisto	3.5 to 4	7/19/1995	**190**	NA	NA	NA	<0.25	0.33	**4.5**	**18**	NA	NA	NA
SB-1	Alisto	7 to 7.5	7/19/1995	**310**	NA	NA	NA	**0.088**	0.088[E]	0.41	2	NA	NA	NA
SB-2	Alisto	1.5 to 2	7/19/1995	<2.5	NA	NA	NA	<0.025	<0.025	<0.025	<0.05	NA	NA	NA
SB-2	Alisto	3.5 to 4	7/19/1995	20	NA	NA	NA	<0.025	<0.025	0.93[E]	0.12[E]	NA	NA	NA
SB-2	Alisto	5.5 to 6	7/19/1995	**140**	NA	NA	NA	<0.25	<0.25	1.2	1.4	NA	NA	NA
SB-2	Alisto	7.5 to 8	7/19/1995	**230**	NA	NA	NA	<0.25	<0.25	**3.9**	**5.1**	NA	NA	NA
SB-3	Alisto	3 to 3.5	3/8/1996	0.17	NA	NA	NA	0.004	0.011	<0.002	<0.002	0.002	NA	NA
SB-3	Alisto	5 to 5.5	3/8/1996	2.9	NA	NA	NA	0.005	0.012	<0.002	<0.002	0.003	NA	NA
SB-3	Alisto	8 to 8.5	3/8/1996	1.2	NA	NA	NA	**0.15**	0.28	<0.020	<0.020	0.059	NA	NA
SB-4	Alisto	2.5 to 3	3/8/1996	0.16	NA	NA	NA	<0.001	0.003	<0.002	<0.002	<0.001	NA	NA
SB-4	Alisto	5 to 5.5	3/8/1996	<0.1	NA	NA	NA	<0.001	0.003	<0.002	<0.002	<0.001	NA	NA

Table 1

Historical Soil Analytical Data

3519 Castro Valley Blvd., Castro Valley

Sample ID	Consultant	Sample Depth (feet)	Sample Date	TPH-g (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	TOG (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	Napthalene (mg/kg)	Lead (mg/kg)
UST-NE	SOMA	9.5	9/4/2003	<0.96	<1.0	NA	NA	<0.0048	<0.0048	<0.0048	<0.0048	**0.059**	NA	NA
UST-NW	SOMA	9.5	9/4/2003	2[H]	<1.0	NA	NA	<0.0047	<0.0047	0.007	<0.0047	**0.069**	NA	NA
UST-SE	SOMA	8	9/4/2003	<1.1	<1.0	NA	NA	<0.0053	<0.0053	<0.0053	<0.0053	<0.021	NA	NA
UST-SW	SOMA	8	9/4/2003	17[H]	36[LY]	NA	NA	<0.0049	0.044[C]	0.28	0.112	**0.071**	NA	NA
UST-SW	SOMA	10	9/4/2003	<1.0	<1.0	NA	NA	<0.0052	<0.0052	<0.0052	<0.0052	**0.075**	NA	NA
WOT-W	SOMA	5.5	9/4/2003	<0.97	<0.99	NA	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.019	NA	6.3
Pumps 1&2	SOMA	2.5	9/11/2003	4.5[HY]	NA	NA	NA	<0.0055	0.0055[C]	0.016	0.0197[C]	<0.022	NA	9.1
Pumps 3&4	SOMA	3	9/11/2003	<1.1	NA	NA	NA	<0.0054	<0.0054	<0.0054	<0.0054	<0.022	NA	6.9
Pumps 5&6	SOMA	3	9/11/2003	<1.1	NA	NA	NA	<0.0054	<0.0054	<0.0054	<0.0054	<0.022	NA	7.6
Pumps 7&8	SOMA	3	9/11/2003	<1.1	NA	NA	NA	<0.0053	<0.0053	<0.0053	<0.0053	<0.021	NA	18
Intersection	SOMA	3	9/11/2003	<1.1	NA	NA	NA	<0.0055	<0.0055	<0.0055	<0.0055	<0.022	NA	7.7
PL1[1]	SOMA	4	9/13/2003	**530[HY]**	NA	NA	NA	<0.011	<0.011	0.34[C]	0.524[C]	<0.043	NA	NA
PL2[2]	SOMA	4	9/13/2003	<1.1	NA	NA	NA	<0.0055	<0.0055	<0.0055	<0.0055	<0.022	NA	NA
SB1- Comp	SOMA	Composite	8/20/2003	<1.0	NA	NA	NA	0.02[C]	<0.0052	0.0098	0.013	**0.23**	NA	7.2
SB2 - Comp	SOMA	Composite	8/20/2003	390	NA	NA	NA	<0.13	<0.13	**2.8**	**9.8**	<0.5	NA	8.2
Comp 1	SOMA	Composite	9/3/2003	8.8	NA	NA	NA	<0.0054	<0.0054	0.032	0.049	<0.018	NA	10
Comp 2	SOMA	Composite	9/4/2003	<0.99	NA	NA	NA	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	NA	4.6
Comp 2R	SOMA	Composite	9/5/2003	21[H]	4.8[HLY]	NA	NA	<0.01	0.024[C]	0.054[C]	0.01[C]	<0.041	NA	5.3
Comp ESE-3WA	SOMA	Composite	10/3/2008	<1.1	NA	NA	NA	<0.0055	<0.0055	<0.0055	0.008	<0.022	NA	4
TWB-1	SOMA	22	12/2/2003	<1.0	NA	NA	NA	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	NA	NA
TWB-1	SOMA	25	12/2/2003	<0.94	NA	NA	NA	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA	NA
TWB-2	SOMA	22	12/2/2003	<1.1	NA	NA	NA	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA	NA
TWB-2	SOMA	24	12/2/2003	<1.0	NA	NA	NA	<0.0048	<0.0048	<0.0048	<0.0048	**0.027**	NA	NA
TWB-2	SOMA	27	12/2/2003	<1.1	NA	NA	NA	<0.0043	<0.0043	<0.0043	<0.0043	0.015	NA	NA
TWB-2	SOMA	29	12/2/2003	<1.0	NA	NA	NA	<0.0047	<0.0047	<0.0047	<0.0047	0.019	NA	NA
TWB-3	SOMA	22	12/2/2003	<0.95	NA	NA	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA	NA
TWB-3	SOMA	25	12/2/2003	<0.95	NA	NA	NA	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	NA	NA
TWB-3	SOMA	29	12/2/2003	<1.0	NA	NA	NA	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA	NA
TWB-4	SOMA	10	12/2/2003	<0.93	NA	NA	NA	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	NA	NA
TWB-4	SOMA	27	12/2/2003	<1.1	NA	NA	NA	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA	NA
TWB-4	SOMA	29	12/2/2003	<0.98	NA	NA	NA	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	NA	NA
TWB-5	SOMA	16	12/2/2003	<1.0	NA	NA	NA	0.018	<0.0045	0.041	0.187	<0.0045	NA	NA
TWB-5	SOMA	18	12/2/2003	<0.93	NA	NA	NA	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	NA	NA
TWB-5	SOMA	29	12/2/2003	<0.97	NA	NA	NA	<0.0045	<0.0045	0.0051	0.018	<0.0045	NA	NA
B-1	Delta	17	8/28/2008	**120**	NA	NA	NA	<0.12	<0.12	<0.12	<0.24	<0.12	NA	NA
B-3	Delta	12	8/28/2008	**720**	NA	NA	NA	<0.5	<0.5	2	1.7	<0.5	NA	NA
B-4	Delta	10	8/28/2008	<0.5	NA	NA	NA	<0.005	<0.005	<0.005	<0.01	<0.005	NA	NA
B-5	Delta	12	8/28/2008	<0.5	NA	NA	NA	<0.005	<0.005	<0.005	<0.01	<0.005	NA	NA
B-6	Delta	9 to 10	8/28/2008	0.7	NA	NA	NA	<0.005	<0.005	<0.005	<0.01	<0.005	NA	NA

Table 1

Historical Soil Analytical Data

3519 Castro Valley Blvd., Castro Valley

Sample ID	Consultant	Sample Depth (feet)	Sample Date	TPH-g (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	TOG (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	Napthalene (mg/kg)	Lead (mg/kg)
DP-1	SOMA	11	8/18/2009	6.1 Y	48 Y	<5.0	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA	NA
DP-1	SOMA	14	8/18/2009	25 Y	35 Y	<5.0	NA	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	NA	NA
DP-1	SOMA	17	8/18/2009	<1.1	1.9 Y	<5.0	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA	NA
DP-2	SOMA	8	8/17/2009	1.4 Y	4.3 Y	<5.0	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA	NA
DP-2	SOMA	12	8/17/2009	1.3 Y	1.6 Y	<5.0	NA	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA	NA
DP-3	SOMA	12	8/17/2009	<1.0	<0.99	<5.0	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA	NA
DP-4	SOMA	6	8/17/2009	<1.1	<1.0	<5.0	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA	NA
DP-4	SOMA	14	8/17/2009	<0.93	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA
DP-5	SOMA	12	8/18/2009	38	16 Y	<5.0	NA	<0.047 a	<0.047 a	0.11 a	1.87 a	<0.047 a	NA	NA
DP-5	SOMA	14	8/18/2009	**91**	51 Y	22	NA	<0.25 b	<0.25 b	2.4 b	**11 b**	<0.25 b	NA	NA
DP-5	SOMA	20	8/18/2009	26	8.1 Y	<5.0	NA	<0.017 c	<0.017 c	<0.017 c	0.051 c	<0.017 c	NA	NA
DP-6	SOMA	12	8/18/2009	**96**	2.6 Y	<5.0	NA	<0.025 f	<0.025 f	0.54 f	0.2 f	<0.025 f	NA	NA
DP-6	SOMA	14	8/18/2009	1.5	3.9 Y	<5.0	NA	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	NA	NA
DP-6	SOMA	17	8/18/2009	75	9.9	<5.0	NA	<0.04 d	<0.04 d	0.22 d	0.84 d	<0.04 d	NA	NA
DP-7	SOMA	12	8/18/2009	<0.97	<1.0	<5.0	NA	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	NA	NA
DP-7	SOMA	14	8/18/2009	<0.94	<0.99	<5.0	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA	NA
SOMA-5	SOMA	11	8/18/2009	**380**	31 Y	<5.0	NA	<0.25 b	<0.25 b	2.0 b	**14.2 b**	<0.25 b	NA	NA
SOMA-5	SOMA	12.5	8/18/2009	28	2.6 Y	<5.0	NA	<0.05 e	<0.05 e	0.4 e	**2.65 e**	<0.05 e	NA	NA
SB-6 (SOMA-6)	SOMA	9	8/9/2010	<1.1	<0.99	<5.0	NA	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	NA
SB-6 (SOMA-6)	SOMA	11.5	8/9/2010	13 Y	5.3 Y	16.0	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA
SOMA-7	SOMA	2.5	8/9/2010	9.9 Y	79	91.0	NA	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA
SOMA-7	SOMA	9	8/9/2010	**430 Y**	**170**	63.0	NA	<0.25	<0.25	<0.25	<0.25	<0.25	**3.7**	NA
SOMA-7	SOMA	10	8/9/2010	**980 Y**	**370 Y**	15.0	NA	<2.5	<2.5	**9**	<2.5	<2.5	**13**	NA
SOMA-8	SOMA	7.5	8/9/2010	<1.0	<1.0	<5.0	NA	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA
SOMA-8	SOMA	12.5	8/9/2010	<1.0	<0.99	<5.0	NA	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA
SB-9 (SOMA-9)	SOMA	7	8/9/2010	<1.0	<1.0	<5.0	NA	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	NA
SB-9 (SOMA-9)	SOMA	13.5	8/9/2010	<1.1	<1.0	<5.0	NA	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA
ESL - Shallow Soil, Commercial				83	83	2500	2500	0.044	2.9	3.3	2.3	0.023	1.3	750
ESL - Deep Soils, Commercial				83	83	5000	5000	0.044	2.9	3.3	2.3	0.023	3.4	750

Observation Well Installation-June 2011

Well	Depth	Date	TPH-g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg) 8260B	Naphthalene (mg/kg)
OB-1	**11**	6/6/2011	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
OB-2	**11**	6/6/2011	31	<0.25	<0.25	0.94	**2.7**	<0.25	**1.7**
OB-2	**15**	6/6/2011	**120**	<0.25	<0.25	**3.1**	**5.71**	<0.25	**3**
OB-2	**16**	6/6/2011	1.2	<0.005	<0.005	0.03	0.0729	0.017	0.014
ESL - Shallow Soil		**83**	**83**	**0.044**	**2.9**	**2.3**	**2.3**	**0.023**	**1.3**
ESL-Deep Soil		**83**	**83**	**0.044**	**2.9**	**3.3**	**2.3**	**0.023**	**3.4**

Well	Depth	Date	2-Butanone (mg/kg)	Isopropyl benzene (mg/kg)	Propylbenzene (mg/kg)	1,3,5-Trimethyl benzene (mg/kg)	1,2,4-Trimethyl benzene (mg/kg)	sec-Butylbenzene (mg/kg)	para-Isopropyl Toluene (mg/kg)	n-Butylbenzene (mg/kg)
OB-1	**11**	6/6/2011	<0.0095	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
OB-2	**11**	6/6/2011	<0.5	0.58	2	3.5	12	0.33	<0.25	1
OB-2	**15**	6/6/2011	<0.5	0.69	2.6	3.5	15	0.51	0.35	1.6
OB-2	**16**	6/6/2011	0.020	<0.005	0.015	0.025	0.11	<0.005	<0.005	0.0073

Notes:

< - not detected above laboratory reporting limits

NA - not analyzed

C - Presence confirmed but RPD between columns exceeds 40%

E - Analyte Amount Exceeds the Calibration Range

H - Heavier hydrocarbons contributed to the quantitation

L - Lighter Hydrocarbons contriuted to quantitiation

Y - Sample exhibits chromatographic pattern that does not resemble standard

1 - located adjacent to pumps 5&6

2 - located adjacent to pumps 3&4

Petroleum Hydrocarbons analyzed by EPA 8015, 8021, and 8260

TOG - Total Oil and Gas

ESL - Environmental Screening Level, California Regional Water Control Board, Interim Final November 2007, revised May 2008

a Dilution factor 9.434

b Dilution factor 50

c Dilution factor 3.311

d Dilution Factor 8.065

e Dilution Factor 10

f Dilution Factor 4.950

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
Semi-Confined WBZ Wells											
ESE-1	10/5/1992	177.69	11.22	166.47	2,100	NA	370	150	17	110	NA
	10/5/1992	177.69	NM	NM	2,300	NA	370	160	16	110	NA
	4/1/1993	177.69	8.79	168.90	5,900	NA	1500	410	110	390	NA
	6/29/1993	177.69	10.34	167.35	7,600	NA	2900	390	130	460	NA
	9/23/1993	177.69	10.91	166.78	2,000	NA	490	40	20	56	600
	9/23/1993	177.69	NM	NM	1,500	NA	420	39	19	56	550
	12/10/1993	177.69	9.93	167.76	1,800	NA	480	42	19	66	921
	12/10/1993	177.69	NM	NM	1,500	NA	380	38	17	55	770
	2/17/1994	177.69	9.64	168.05	1,900	NA	380	48	24	80	585
	2/17/1994	177.69	NM	NM	2,200	NA	430	42	19	65	491
	8/8/1994	177.69	11.72	165.97	2,100	NA	450	46	16	50	760
	10/12/1994	177.69	10.48	167.21	760	NA	240	16	51	39	230
	1/19/1995	177.69	7.77	169.92	840	NA	600	120	22	58	NA
	5/2/1995	177.69	8.69	169.00	2,000	NA	640	67	24	98	NA
	7/28/1995	177.69	10.12	167.57	190	NA	<0.50	<0.50	<0.50	<1.0	NA
	11/17/1995	177.69	10.57	167.12	200	NA	3.4	<1.0	1	<2.0	600
	2/7/1996	177.69	7.41	170.28	750	NA	370	23	21	64	680
	4/23/1996	177.69	9.12	168.57	310	NA	100	<1.0	<1.0	<1.0	1500
	7/9/1996	177.69	10.12	167.57	730	NA	230	74	13	63	750
	10/10/1996	177.69	10.80	166.89	420	NA	26	1.6	7.3	12	430
	1/20/1997	177.69	10.52	167.17	660	NA	290	4.2	13	36	450
	4/25/1997	177.69	9.77	167.92	410	NA	<0.5	<1.0	<1.0	<1.0	580
	7/18/1997	177.69	10.55	167.14	420	NA	<0.5	<1.0	<1.0	<1.0	370
	10/27/1997	177.69	10.36	167.33	300	NA	56	<1.0	6.5	<1.0	220

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-1 cont.	1/22/1998	177.69	7.52	170.17	4,200	NA	440	9	15	17.7	1300
	4/23/1998	177.69	8.80	168.89	15,000	NA	3400	190	910	900	4900
	4/23/1998	177.69	NM	NM	15,000	NA	2800	140	730	730	4400
	7/29/1998	177.69	9.73	167.96	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	177.69	NM	NM	15,000	NA	<2.5	<5.0	<5.0	<5.0	15000
	12/17/1998	177.69	9.51	168.18	2,400	NA	73	1	2.8	4.6	2000
	3/19/1999	177.69	8.65	169.04	4,700	NA	58	<1.0	<1.0	<1.0	4700
	6/23/1999	177.69	10.51	167.18	600	NA	170	<1.0	7.2	5	3900
	9/27/1999	177.69	10.32	167.37	920	NA	200	<25	<25	<25	4900
	12/9/1999	177.69	10.24	167.45	460	NA	130	1.2	5.2	1.5	5100
	3/9/2000	177.69	7.72	169.97	3,000	NA	1300	120	80	140	7300
	6/8/2000	177.69	9.40	168.29	2,900	NA	540	9.7	20	17	5200
	9/18/2000	177.69	10.05	167.64	890	NA	3.4	<0.5	1.4	<0.5	2800
	12/14/2000	177.69	8.20	169.49	1,600	NA	11.1	<0.5	<0.5	<0.5	2730
	3/21/2001	177.69	9.75	167.94	5,700	NA	2.28	<0.5	0.51	<1.5	6810
	6/18/2001	177.69	10.21	167.48	2,000	NA	152	0.669	3.62	2.34	1980
	9/18/2001	177.69	10.30	167.39	2,500	NA	57.1	<5.0	6.25	<15	2090
	12/13/2001	177.69	9.82	167.87	2,800	NA	208	6.05	8.54	9.66	2030
	3/14/2002	177.69	9.10	168.59	1,800	NA	140	6.31	4.5	9.41	1970
	6/19/2002	177.69	9.92	167.77	1,100	NA	220	2.02	4.23	3.8	1280
	9/10/2002	177.69	10.21	167.48	490	NA	39	2.9	<2.0	4.9	670
	12/16/2002	177.69	8.56	169.13	730	NA	140	6	3.2	9.1	670
	3/11/2003	177.69	9.40	168.29	1,700	NA	490	21	22	41	530
	6/17/2003	177.69	9.86	167.83	1,300	NA	140	<10	<10	<10	480
	12/9/2003	177.69	9.32	168.37	1,400	NA	390	12	14	26.1	260
	2/26/2004	177.69	7.71	169.98	3,200	NA	880	50	44	89	200
	5/21/2004	177.69	10.19	167.50	1,500	NA	370	10	14	25.2	140
	8/10/2004	180.24	10.41	169.83	460	NA	390	7	8.1	15.4	110
	10/19/2004	180.24	10.40	169.84	1,600	NA	490	13	12	25.3	110

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-1 cont.	1/14/2005	180.24	8.26	171.98	790 Z	NA	420	26	19	52	91
	4/14/2005	180.24	8.77	171.47	3,020	NA	766	25.6	21.3	25.26	88.2
	7/7/2005	180.24	9.94	170.30	1,940	NA	440	15.5	15.7	21	80.6
	11/15/2005	180.24	10.21	170.03	1,260	NA	259	6.2	8.2	10.81	45.8
	2/8/2006	180.24	9.01	171.23	1,430	NA	332	13.6	18.1	25.03	43
	4/27/2006	180.24	9.14	171.10	1,600	NA	519	23.2	32.4	40.20	63.4
	8/1/2006	180.24	9.92	170.32	1,530	NA	395	11.8	25.4	28.01	40
	10/19/2006	180.24	10.34	169.90	1,230	NA	327	10.2	21.6	21.19	29.6
	1/12/2007	180.24	9.84	170.40	561	NA	153	7.18	14.4	14.95	30.9
	4/17/2007	180.24	9.78	170.46	467	NA	192	7.59	13.8	16.42	30.4
	7/17/2007	180.24	9.82	170.42	755	NA	271	8.6	17.8	22.06	26.7
	10/16/2007	180.24	8.99	171.25	164	NA	80.2	<2.0	5.24	2.47	16.6
	1/17/2008	180.24	9.35	170.89	70	NA	10.8	<2.0	<0.5	<2.0	19.3
	4/17/2008	180.24	9.80	170.44	687	NA	89.7	<2.0	4.01	5.30	8.79
	7/16/2008	180.24	10.17	170.07	1,400	NA	223	3.88	12.6	17.88	18.1
	10/14/2008	180.24	10.86	169.38	540	NA	95	2.7	7.7	18	15
	1/6/2009	180.24	10.10	170.14	500 Y	NA	130	3	8.8	17.1	13
	4/6/2009	180.24	10.05	170.19	910 Y	NA	230	2.4	11	12.1	17
	7/7/2009	180.24	10.42	169.82	850 Y	NA	89	1.9	7.8	15.1	15
	1/27/2010	180.24	7.94	172.30	1,600	NA	250	8.8	30	69	23
	7/26/2010	180.24	9.95	170.29	1,000	NA	96	1.2	4.2	6	17
ESE-1R	8/30/2010	180.20	10.17	170.03	2,100	NA	110	5.2	19	151	15
	11/16/2010	180.20	9.94	170.26	100	NA	5.8	<0.5	1	<0.5	16
	2/15/2011	180.20	10.12	170.08	1,400	NA	96	1.7	14	7.9	22
	7/19/2011	180.20	10.37	169.83	620	NA	30	0.76	4.4	0.96	21
	1/18/2012	180.20	10.78	169.42	1,800 Y	NA	18	<0.19	11	3.53	14
	7/10/2012	**180.20**	**10.87**	**169.33**	**NA**	**1,100 Y**	**16**	**1.1**	**9.8**	**1.70**	**23**

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-2	10/5/1992	178.23	11.68	166.55	300	NA	5.4	16	3.9	45	NA
	4/1/1993	178.23	9.17	169.06	240	NA	27	<0.5	17	2.6	123
	6/29/1993	178.23	10.88	167.35	1,700	NA	260	24	110	23	NA
	6/29/1993	178.23	NM	NM	1,300	NA	240	17	110	25	NA
	9/23/1993	178.23	11.56	166.67	240	NA	3.1	0.5	0.6	2.5	643
	12/10/1993	178.23	10.48	167.75	250	NA	2.4	2.4	1.5	11	940
	2/17/1994	178.23	10.06	168.17	900	NA	<0.5	<0.5	<0.5	<0.5	930
	8/8/1994	178.23	11.11	167.12	750	NA	<0.5	<0.5	<0.5	<0.5	1400
	10/12/1994	178.23	11.31	166.92	1,700	NA	<0.5	<0.5	<0.5	<0.5	3000
	1/19/1995	178.23	8.25	169.98	300	NA	2	0.9	0.7	1	NA
	5/2/1995	178.23	9.21	169.02	1,200	NA	4	<2.5	<2.5	<5	NA
	7/28/1995	178.23	10.64	167.59	2,000	NA	<2.5	<2.5	<2.5	<5	NA
	11/17/1995	178.23	11.13	167.10	3,600	NA	<25	<25	<25	<50	12000
	11/17/1995	178.23	NM	NM	3,400	NA	<25	<25	<25	<50	12000
	2/7/1996	178.23	7.94	170.29	450	NA	<0.5	<1	<1	<1	2300
	4/23/1996	178.23	9.73	168.50	260	NA	0.9	<1	<1	<1	8600
	7/9/1996	178.23	10.70	167.53	780	NA	<2.5	<5	<5	<5	13393
	10/10/1996	178.23	11.39	166.84	2,900	NA	<0.5	<1	<1	<1	12000
	1/20/1997	178.23	9.04	169.19	<250	NA	<2.5	<5	<5	<5	13000
	4/25/1997	178.23	10.31	167.92	2,700	NA	<0.5	<1	<1	<1	15000
	7/18/1997	178.23	11.02	167.21	11,000	NA	<5	<10	<10	<10	11000
	10/27/1997	178.23	10.93	167.30	6,100	NA	<2.5	<5.0	<5.0	<5.0	7100
	10/27/1997	178.23	NM	NM	6,600	NA	<2.5	<5.0	<5.0	<5.0	7400
	1/22/1998	178.23	7.93	170.30	13,000	NA	<0.5	<1	<1	<1	10000
	1/22/1998	178.23	NM	NM	13,000	NA	<0.5	<1	<1	<1	10000
	4/23/1998	178.23	9.34	168.89	19,000	NA	<5	<10	<10	<10	36000

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-2 cont	7/29/1998	178.23	10.29	167.94	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	178.23	NM	NM	19,000	NA	<5	<10	<10	<10	36000
	12/17/1998	178.23	10.20	168.03	12,000	NA	<5	<5	<5	<5	13000
	3/19/1999	178.23	9.02	169.21	18,000	NA	160	<1	<1	<1	18000
	6/23/1999	178.23	9.99	168.24	280	NA	<1	<1	<1	<1	16000
	9/27/1999	178.23	10.69	167.54	<500	NA	<25	<25	<25	<25	12000
	12/9/1999	178.23	11.26	166.97	<50	NA	<0.3	<0.3	<0.3	<0.6	12000
	3/9/2000	178.23	7.95	170.28	<50	NA	1.6	<0.5	<0.5	<0.5	7900
	6/8/2000	178.23	9.66	168.57	1,600	NA	<0.5	0.73	<0.5	2.2	9400
	12/14/2000	178.23	11.15	167.08	6,000	NA	0.75	<0.5	<0.5	<0.5	11200
	3/21/2001	178.23	10.35	167.88	6,900	NA	786	45.7	37.7	71.5	3790
	6/18/2001	178.23	11.24	166.99	6,400	NA	<2.5	<2.5	<2.5	<7.5	9320
	9/18/2001	178.23	11.35	166.88	4,800	NA	<12.5	<12.5	<12.5	<37.5	6960
	12/13/2001	178.23	10.97	167.26	59,000	NA	0.592	<0.5	<0.5	<1	5940
	3/14/2002	178.23	10.13	168.10	4,500	NA	76	<0.5	<0.5	<1	6660
	6/19/2002	178.23	10.91	167.32	250	NA	<12.5	<12.5	<12.5	<25	4900
	9/10/2002	178.23	10.82	167.41	1,500	NA	<5	<5	<5	6.3	3100
	12/16/2002	178.23	7.87	170.36	1,400	NA	<5	<5	<5	<5	2400
	3/11/2003	178.23	10.24	167.99	2,800	NA	<10	<10	<10	<10	4800
	6/17/2003	178.23	10.19	168.04	10,000	NA	<100	<100	<100	<100	4400
	12/9/2003	178.23	9.97	168.26	<50	NA	<0.5	<0.5	<0.5	<0.5	3400
	2/26/2004	178.23	7.89	170.34	<50	NA	<0.5	<0.5	<0.5	<0.5	3000
	5/21/2004	178.23	10.70	167.53	<50	NA	<0.5	<0.5	<0.5	<0.5	1100
	8/10/2004	180.79	10.99	169.80	<50	NA	<0.5	<0.5	<0.5	<0.5	550
	10/19/2004	180.79	10.46	170.33	<50	NA	<0.5	<0.5	<0.5	<0.5	410
	1/14/2005	180.79	8.66	172.13	<50	NA	<8.3	<8.3	<8.3	<8.3	1200
	4/14/2005	180.79	9.38	171.41	<860	NA	<2.15	<2.15	<2.15	<4.30	1020
	7/7/2005	180.79	10.46	170.33	<860	NA	<2.15	<8.60	<2.15	<4.30	378
	11/15/2005	180.79	10.55	170.24	<50	NA	<0.5	<2.0	<0.5	<1.0	210

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-2 cont	2/8/2006	180.79	9.46	171.33	<215	NA	<2.15	<8.6	<2.15	<4.3	419
	4/27/2006	180.79	10.67	170.12	<100	NA	1.71	<4.0	<1.0	<2.0	432
	8/1/2006	180.79	10.29	170.50	<100	NA	2.83	<4.0	<1.0	<2.0	222
	10/19/2006	180.79	10.65	170.14	<50	NA	0.8	<2.0	<0.5	<1.0	221
	1/12/2007	180.79	NM	NM	NA	NA	NA	NA	NA	NA	NA
	4/17/2007	180.79	10.20	170.59	<50	NA	3.17	<2.0	4.49	<2.0	158
	7/17/2007	180.79	10.31	170.48	<50	NA	1.65	<2.0	<0.5	<2.0	105
	10/16/2007	180.79	9.22	171.57	<50	NA	5.67	<2.0	<0.5	<2.0	73.9
	1/17/2008	180.79	9.88	170.91	<50.0	NA	<0.50	<2.0	<0.50	<2.0	80.2
	4/17/2008	180.79	10.29	170.50	<50	NA	<0.5	<2.0	<0.5	<2.0	45
	7/16/2008	180.79	10.64	170.15	<50	NA	<0.5	<2.0	<0.5	<2.0	54
	10/14/2008	180.79	11.41	169.38	<50	NA	<0.5	<0.5	<0.5	<0.5	41
	1/6/2009	180.79	10.60	170.19	<50	NA	<0.5	<0.5	<0.5	<0.5	36
	4/6/2009	180.79	10.62	170.17	<50	NA	<0.5	<0.5	<0.5	<0.5	30
	7/7/2009	180.79	10.92	169.87	<50	NA	2.4	<0.5	<0.5	<0.5	32
	1/27/2010	180.79	8.36	172.43	<50	NA	<0.5	<0.5	<0.5	<0.5	26
	7/26/2010	180.79	10.44	170.35	<50	NA	<0.5	<0.5	<0.5	<0.5	13
ESE-2R	8/30/2010	180.7	10.61	170.09	200	NA	0.93	<0.5	1.3	13.5	16
	11/16/2010	180.7	10.33	170.37	<50	NA	<0.5	<0.5	<0.5	<0.5	18
	2/14/2011	180.70	10.50	170.20	<50	NA	<0.5	<0.5	<0.5	<0.5	12
	7/19/2011	180.70	10.62	170.08	<50	NA	<0.5	<0.5	<0.5	<0.5	8.3
	1/18/2012	180.70	10.92	169.78	<22	NA	<0.33	<0.19	<0.15	<0.20	1.1
	7/10/2012	**180.70**	**11.17**	**169.53**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**5.1**
ESE-3	10/5/1992	178.20	10.58	167.62	430	NA	57	31	3.6	34	NA
	4/1/1993	178.20	8.14	170.06	2,400	NA	460	220	74	210	NA
	6/29/1993	178.20	9.72	168.48	280	NA	56	14	15	13	NA
	9/23/1993	178.20	10.46	167.74	72	NA	13	3.5	1.7	4.1	NA
	12/10/1993	178.20	9.30	168.90	270	NA	71	32	6.1	33	NA

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-3 cont.	2/17/1994	178.20	8.97	169.23	520	NA	140	10	20	33	5.74
	8/8/1994	178.20	10.02	168.18	<50	NA	8.8	1.6	1.6	2.3	<5.0
	10/12/1994	178.20	10.32	167.88	470	NA	190	6.4	15	18	<5.0
	1/19/1995	178.20	7.40	170.80	330	NA	260	27	21	20	NA
	5/2/1995	178.20	8.26	169.94	530	NA	180	30	23	44	NA
	7/28/1995	178.20	9.54	168.66	<50	NA	<0.50	<0.50	<0.50	<1	NA
	11/17/1995	178.20	10.04	168.16	<50	NA	1.7	<0.50	<0.50	<1	<5.0
	2/7/1996	178.20	7.08	171.12	<50	NA	8.6	<1	<1	<1	<10
	4/1/2396	178.20	8.79	169.41	<50	NA	7.6	<1	<1	<1	65
	7/9/1996	178.20	10.09	168.11	<50	NA	12	2.6	2	3.9	26
	10/10/1996	178.20	10.48	167.72	NA	NA	NA	NA	NA	NA	NA
	10/11/1996	178.20	NM	NM	260	NA	140	<1	<1	2.6	<10
	1/20/1997	178.20	8.65	169.55	<50	NA	1.5	1.7	<1	<1	14
	4/25/1997	178.20	10.02	168.18	<50	NA	<0.5	<1	<1	<1	14
	7/18/1997	178.20	10.66	167.54	10,000	NA	1400	1400	300	1280	<250
	10/27/1997	178.20	9.83	168.37	<250	NA	<2.5	<5.0	<5.0	36	<50
	1/22/1998	178.20	7.06	171.14	130	NA	<0.5	<1.0	<1.0	<1.0	120
	4/23/1998	178.20	8.44	169.76	4,800	NA	560	<10	15	<10	4000
	7/29/1998	178.20	9.27	168.93	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	178.20	NM	NM	1,800	NA	6.2	<5.0	<5.0	<5.0	1700
	12/17/1998	178.20	9.15	169.05	600	NA	54	<1.0	2.1	4.9	340/480
	3/19/1999	178.20	8.14	170.06	2,000	NA	260	4.4	13	28	870
	6/23/1999	178.20	9.44	168.76	290	NA	91	<1.0	8.3	16	240
	9/27/1999	178.20	9.69	168.51	130	NA	35	<1.0	2.7	3.8	100
	12/9/1999	178.20	10.99	167.21	380	NA	84	1.7	8.7	6.3	160
	3/9/2000	178.20	7.12	171.08	950	NA	190	4.6	39	62	350
	6/8/2000	178.20	10.92	167.28	300	NA	37	<0.5	2.3	1.3	400
	9/18/2000	178.20	11.12	167.08	920	NA	140	1.3	15	4.8	170
	12/14/2000	178.20	9.70	168.50	320	NA	64	<0.5	6.24	1.76	201

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-3 cont.	3/21/2001	178.20	10.07	168.13	680	NA	80.5	0.546	21.1	18.2	398
	6/18/2001	178.20	11.42	166.78	380	NA	47	<0.5	3.11	<1.5	242
	9/18/2001	178.20	11.55	166.65	340	NA	54.8	<0.5	4.36	<1.5	79.7
	12/13/2001	178.20	10.12	168.08	270	NA	31.4	<0.5	1.31	2.24	129
	3/14/2002	178.20	9.84	168.36	670	NA	89.8	0.769	23.4	30.4	413
	6/19/2002	178.20	10.57	167.63	130	NA	18.6	<0.5	<0.5	<1	166
	9/10/2002	178.20	9.90	168.30	88	NA	12	<0.5	<0.5	<0.5	93
	12/16/2002	178.20	9.23	168.97	290	NA	55	17	3.7	14	78
	3/11/2003	178.20	9.05	169.15	100	NA	3.4	<0.5	0.54	<0.50	140
	6/17/2003	178.20	9.30	168.90	520	NA	17	<5	5.3	<5	130
ESE-4	10/5/1992	177.73	10.33	167.40	98	NA	7.2	1.3	1.1	6.1	NA
	4/1/1993	177.73	7.88	169.85	550	NA	93	20	23	33	NA
	6/29/1993	177.66	8.33	169.33	150	NA	23	0.6	5.4	0.5	54
	9/23/1993	177.66	10.05	167.61	110	NA	14	1.7	3.2	4.6	NA
	12/10/1993	177.66	8.95	168.71	110	NA	21	7.2	4.2	10	28.75
	2/17/1994	177.66	8.65	169.01	210	NA	26	1.2	4.7	11	113
	8/8/1994	177.66	9.76	167.90	76	NA	9.6	<0.5	2	<0.5	62
	10/12/1994	177.66	9.62	168.04	<50	NA	<0.5	<0.5	<0.5	<0.5	44
	1/19/1995	177.66	6.97	170.69	140	NA	56	14	24	23	NA
	5/2/1995	177.66	7.85	169.81	130	NA	21	2.8	8.6	8.2	NA
	7/28/1995	177.66	9.20	168.46	<50	NA	<0.5	<0.5	<0.5	<1	NA
	11/17/1995	177.66	9.68	167.98	<50	NA	<0.5	0.6	<0.5	<1	18
	2/7/1996	177.66	6.59	171.07	100	NA	2.6	<1	1.6	4.1	42
	4/23/1996	177.66	8.30	169.36	160	NA	37	15	16	31	43
	7/9/1996	177.66	9.21	168.45	60	NA	17	1.5	6.8	11.6	27
	10/10/1996	177.66	9.97	167.69	NA	NA	NA	NA	NA	NA	NA
	10/11/1996	177.66	NM	NM	<50	NA	<0.5	<1.0	<1.0	<1.0	18

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-4 cont.	1/20/1997	177.66	7.68	169.98	<50	NA	<0.5	<1.0	<1.0	<1.0	130
	4/25/1997	177.66	9.15	168.51	<250	NA	<2.5	<5.0	<5.0	<5.0	<50
	7/18/1997	177.66	9.71	167.95	<50	NA	15	<10	<10	<10	<100
	10/27/1997	177.66	9.38	168.28	<250	NA	<2.5	<5.0	<5.0	<5.0	<50
	1/22/1998	177.66	6.59	171.07	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/23/1998	177.66	7.90	169.76	<250	NA	<2.5	<5.0	<5.0	<5.0	<50
	7/29/1998	177.66	8.96	168.70	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	177.66	NM	NM	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	12/17/1998	177.66	8.32	169.34	NA	NA	NA	NA	NA	NA	NA
	3/19/1999	177.66	7.71	169.95	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	177.66	8.78	168.88	NA	NA	NA	NA	NA	NA	NA
	9/27/1999	177.66	9.27	168.39	NA	NA	NA	NA	NA	NA	NA
	12/9/1999	177.66	9.21	168.45	NA	NA	NA	NA	NA	NA	NA
	3/9/2000	177.66	6.82	170.84	NA	NA	NA	NA	NA	NA	NA
	6/8/2000	177.66	8.72	168.94	NA	NA	NA	NA	NA	NA	NA
	9/18/2000	177.66	8.72	168.94	NA	NA	NA	NA	NA	NA	NA
	12/14/2000	177.66	8.61	169.05	NA	NA	NA	NA	NA	NA	NA
	3/21/2001	177.66	8.61	169.05	NA	NA	NA	NA	NA	NA	NA
	6/18/2001	177.66	9.24	168.42	NA	NA	NA	NA	NA	NA	NA
	9/18/2001	177.66	9.35	168.31	NA	NA	NA	NA	NA	NA	NA
	12/13/2001	177.66	8.53	169.13	NA	NA	NA	NA	NA	NA	NA
	3/14/2002	177.66	8.44	169.22	NA	NA	NA	NA	NA	NA	NA
	6/19/2002	177.66	10.97	166.69	NA	NA	NA	NA	NA	NA	NA
	9/10/2002	177.66	9.27	168.39	NA	NA	NA	NA	NA	NA	NA
	12/16/2002	177.66	6.90	170.76	NA	NA	NA	NA	NA	NA	NA
	3/11/2003	177.66	8.83	168.83	NA	NA	NA	NA	NA	NA	NA
	6/17/2003	177.66	8.84	168.82	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-5	10/5/1992	176.08	9.22	166.86	1,300	NA	200	3.8	1.2	18	NA
	4/1/1993	176.08	7.02	169.06	13,000	NA	2200	26	730	1000	NA
	4/1/1993	176.08	NM	NM	13,000	NA	2500	25	740	1100	NA
	6/29/1993	176.08	10.21	165.87	7,600	NA	1500	9.3	170	100	NA
	9/23/1993	176.08	10.64	165.44	560	NA	19	1.2	0.9	1.8	NA
	12/10/1993	176.08	9.42	166.66	1,700	NA	300	3	76	110	14.07
	2/7/1994	176.08	9.35	166.73	3,500	NA	640	7.8	90	130	45.13
	8/8/1994	176.08	8.76	167.32	2,600	NA	210	4.6	9.4	4.4	33
	8/8/1994	176.08	NM	NM	2,500	NA	230	4.6	13	4.8	32
	10/12/1994	176.08	8.95	167.13	5,600	NA	560	9.5	75	21	79.2
	10/12/1994	176.08	NM	NM	6,000	NA	550	10	78	22	77
	1/19/1995	176.08	5.40	170.68	1,900	NA	620	<5	95	15	NA
	1/19/1995	176.08	NM	NM	1,600	NA	620	<5	93	17	NA
	5/2/1995	176.08	6.48	169.60	5,700	NA	1100	<10	180	58	NA
	5/2/1995	176.08	NM	NM	5,300	NA	1100	<10	180	58	NA
	7/28/1995	176.08	7.97	168.11	520	NA	15	<0.50	1.7	1.3	NA
	7/28/1995	176.08	NM	NM	460	NA	7.2	<0.50	1.9	1.5	NA
	11/17/1995	176.08	8.39	167.69	850	NA	39	1.8	7.6	2.7	24
	2/7/1996	176.08	4.71	171.37	4,100	NA	670	6	190	140	<50
	4/23/1996	176.08	7.35	168.73	3,000	NA	570	<5	79	100	84
	7/9/1996	176.08	9.40	166.68	620	NA	150	1.7	9.3	6.4	25
	10/10/1996	176.08	9.04	167.04	1,100	NA	29	<5	<5	<5	<50
	10/10/1996	176.08	NM	NM	1,100	NA	31	<5	<5	<5	<50
	1/20/1997	176.08	5.82	170.26	2,100	NA	980	<25	280	80	<250
	1/20/1997	176.08	NM	NM	2,700	NA	910	8.8	280	84	180
	4/25/1997	176.08	7.24	168.84	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-5 cont.	4/28/1997	176.08	NM	NM	<250	NA	7.9	<5.0	<5.0	<5.0	<50
	7/18/1997	176.08	7.86	168.22	1200	NA	<5	<10	<10	<10	<100
	7/18/1997	176.08	NM	NM	630	NA	31	<5.0	<5.0	<5.0	130
	10/27/1997	176.08	7.91	168.17	<250	NA	5.4	<5.0	<5.0	<5.0	<50
	1/22/1998	176.08	4.64	171.44	170	NA	7.7	<1.0	<1.0	<1.0	130
	4/23/1998	176.08	6.31	169.77	720	NA	79	<5.0	9	<5.0	180
	7/29/1998	176.08	7.43	168.65	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	176.08	NM	NM	840	NA	9.8	<1.0	4	<1.0	710
	12/17/1998	176.08	7.05	169.03	NA	NA	NA	NA	NA	NA	NA
	3/19/1999	176.08	5.00	171.08	<250	NA	<5.0	<5.0	<5.0	<5.0	<5.0
	6/23/1999	176.08	7.77	168.31	NA	NA	NA	NA	NA	NA	NA
	9/27/1999	176.08	8.11	167.97	450	NA	10	<5.0	6.3	<5.0	220
	12/9/1999	176.08	7.66	168.42	NA	NA	NA	NA	NA	NA	NA
	3/9/2000	176.08	5.08	171.00	1,700	NA	170	2.5	45	6.4	140
	6/8/2000	176.08	7.36	168.72	NA	NA	NA	NA	NA	NA	NA
	9/18/2000	176.08	7.71	168.37	130	NA	0.65	<0.50	0.71	<0.50	51
	12/14/2000	176.08	2.36	173.72	NA	NA	NA	NA	NA	NA	NA
	3/21/2001	176.08	7.42	168.66	1,000	NA	10.3	<2.5	11	<7.5	70.8
	6/18/2001	176.08	7.92	168.16	NA	NA	NA	NA	NA	NA	NA
	9/18/2001	176.26	8.23	168.03	200	NA	0.868	<0.50	0.55	<1.5	57.5
	12/13/2001	176.26	7.80	168.46	NA	NA	NA	NA	NA	NA	NA
	3/14/2002	176.26	6.55	169.71	1,300	NA	17.1	1.35	15.4	1.42	37.4
	6/19/2002	176.26	7.83	168.43	NA	NA	NA	NA	NA	NA	NA
	9/10/2002	176.26	8.22	168.04	680	NA	9.9	<5.0	<5.0	<5.0	44
	12/16/2002	176.26	6.58	169.68	NA	NA	NA	NA	NA	NA	NA
	3/11/2003	176.26	6.77	169.49	2,100	NA	14	<2.5	15	3	80
	6/17/2003	176.26	6.75	169.51	NA	NA	NA	NA	NA	NA	NA
	9/17/2003	176.26	8.48	167.78	970	NA	10 C	<0.5	<0.5	5.3	34
	12/9/2003	176.26	7.32	168.94	700	NA	6.5	<0.5	3.1	2.7 C	34

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-5 cont.	2/26/2004	176.26	5.21	171.05	2,400 H	NA	41	2.8 C	18	2.4 C	29
	5/21/2004	176.26	7.50	168.76	1,500	NA	2.6 C	<0.5	2.1 C	2.1 C	25
	8/10/2004	178.80	8.28	170.52	680	NA	<0.5	<0.5	<0.5	<0.5	33
	10/19/2004	178.80	8.26	170.54	380	NA	<0.5	<0.5	<0.5	1.4	39
	1/14/2005	178.80	5.16	173.64	2,400	NA	18	1.4	22	2.1	26
	4/14/2005	178.80	6.13	172.67	4,800	NA	7.75	1.26	14.3	<1.0	23.1
	7/7/2005	178.80	7.52	171.28	3,240	NA	0.78	<2.0	1.18	<1.0	36.6
	11/15/2005	178.80	7.85	170.95	1,190	NA	0.51	<2.0	<0.5	<1.0	30
	2/8/2006	178.80	5.83	172.97	2,510	NA	1.91	<2.0	2.82	<1.0	20.7
	4/27/2006	178.80	5.71	173.09	4,700	NA	2.76	<2.0	4.77	<1.0	28.3
	8/1/2006	178.80	7.71	171.09	1,890	NA	0.7	<2.0	0.75	<1.0	24.7
	10/19/2006	178.80	8.00	170.80	474	NA	<0.5	<2.0	3.39	<1.0	29
	1/12/2007	178.80	7.41	171.39	868	NA	2.18	<2.0	2.66	<2.0	16.3
	4/17/2007	178.80	7.51	171.29	1,240	NA	10.2	<2.0	10.4	2.37	17.2
	7/17/2007	178.80	7.47	171.33	836	NA	3.1	<2.0	4.91	2.35	25.8
	10/16/2007	178.80	6.26	172.54	2,120	NA	2.5	<2.0	6.19	2.61	17.5
	1/17/2008	178.80	6.59	172.21	2,730	NA	5.74	<2.0	14.3	<2.0	13.1
	4/17/2008	178.80	6.81	171.99	2,770	NA	4.7	<2.0	15.9	<2.0	<0.5
	7/16/2008	178.80	7.76	171.04	2,160	NA	0.9	<2.0	1.1	<2.0	6.28
	10/14/2008	178.80	8.40	170.40	1,300	NA	<0.5	<0.5	0.6	<0.5	9.9
	1/6/2009	178.80	7.66	171.14	1,100 [Y]	NA	0.61	<0.5	1.6	<0.5	8
	4/6/2009	178.80	7.79	171.01	1,900 [Y]	NA	4.6	<0.5	9.3	0.59	5.3
	7/7/2009	178.80	7.84	170.96	2,700 [Y]	NA	3.0	<0.5	2.3	<0.5	6.6
	1/27/2010	178.80	4.82	173.98	1,300 [Y]	NA	0.76	<0.5	1.0	<0.5	3.5
	7/26/2010	178.80	7.01	171.79	1,800	NA	0.75	<0.5	1.8	<0.5	2
ESE-5R	8/30/2010	178.64	8.97	169.67	75	NA	<0.5	<0.5	<0.5	<0.5	7.3
	11/16/2010	178.64	10.46	168.18	74	NA	<0.5	<0.5	<0.5	<0.5	12
	2/15/2011	178.64	11.19	167.45	140	NA	<0.5	<0.5	<0.5	<0.5	9.6
	7/19/2011	178.64	7.92	170.72	140	NA	<0.5	<0.5	<0.5	<0.5	6.7

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-5R cont	1/18/2012	178.64	8.84	169.80	68 [Y]	NA	<0.33	<0.19	<0.15	<0.2	7.3
	7/11/2012	**178.64**	**8.85**	**169.79**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**6.1**
MW-6	7/28/1995	179.24	10.00	169.24	<50	NA	<0.50	<0.50	<0.50	<1.0	NA
	11/17/1995	179.24	10.44	168.80	<50	NA	<0.50	<0.50	<0.50	<1.0	<5.0
	2/7/1996	179.24	7.68	171.56	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/23/1996	179.24	9.33	169.91	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	7/9/1996	179.24	10.10	169.14	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	10/10/1996	179.24	11.00	168.24	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	1/20/1997	179.24	8.70	170.54	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/25/1997	179.24	10.16	169.08	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	7/18/1997	179.24	10.66	168.58	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	10/27/1997	179.24	10.25	168.99	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	1/22/1998	179.24	7.76	171.48	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/23/1998	179.24	9.10	170.14	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	7/29/1998	179.24	10.40	168.84	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	179.24	NM	NM	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	12/17/1998	179.24	9.40	169.84	NA	NA	NA	NA	NA	NA	NA
	3/19/1999	179.24	9.10	170.14	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	179.24	9.79	169.45	NA	NA	NA	NA	NA	NA	NA
	9/27/1999	179.24	10.10	169.14	NA	NA	NA	NA	NA	NA	NA
	12/9/1999	179.24	9.97	169.27	NA	NA	NA	NA	NA	NA	NA
	3/9/2000	179.24	8.56	170.68	NA	NA	NA	NA	NA	NA	NA
	6/8/2000	179.24	9.11	170.13	NA	NA	NA	NA	NA	NA	NA
	9/18/2000	179.24	9.77	169.47	NA	NA	NA	NA	NA	NA	NA
	12/14/2000	179.24	9.17	170.07	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
MW-6 cont	3/21/2001	179.24	9.82	169.42	NA	NA	NA	NA	NA	NA	NA
	6/18/2001	179.24	10.19	169.05	NA	NA	NA	NA	NA	NA	NA
	9/18/2001	179.24	10.25	168.99	NA	NA	NA	NA	NA	NA	NA
	12/13/2001	179.24	9.75	169.49	NA	NA	NA	NA	NA	NA	NA
	3/14/2002	179.24	9.53	169.71	NA	NA	NA	NA	NA	NA	NA
	6/19/2002	179.24	9.87	169.37	NA	NA	NA	NA	NA	NA	NA
	9/10/2002	179.24	9.49	169.75	NA	NA	NA	NA	NA	NA	NA
	12/16/2002	179.24	8.39	170.85	NA	NA	NA	NA	NA	NA	NA
	3/11/2003	179.24	9.40	169.84	NA	NA	NA	NA	NA	NA	NA
	6/17/2003	179.24	9.71	169.53	NA	NA	NA	NA	NA	NA	NA
	9/17/2003	179.24	10.21	169.03	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
	12/9/2003	179.24	9.66	169.58	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	2/26/2004	179.24	7.83	171.41	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	5/21/2004	179.24	9.75	169.49	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	8/10/2004	181.80	10.28	171.52	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	10/19/2004	181.80	9.91	171.89	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/14/2005	181.80	8.40	173.40	<50	NA	0.6	<0.5	<0.5	<0.5	<0.5
	4/14/2005	181.80	9.04	172.76	<200	NA	<0.5	<0.5	<0.5	<1.0	<0.5
	7/7/2005	181.80	9.94	171.86	<200	NA	<0.5	<2.00	<0.5	<1.00	<0.5
	11/15/2005	181.80	9.98	171.82	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	2/8/2006	181.80	9.91	171.89	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	4/27/2006	181.80	9.54	172.26	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	8/1/2006	181.80	9.61	172.19	<50	NA	<0.5	<2.0	<0.5	<1.0	0.51
	10/19/2006	181.80	10.23	171.57	<50	NA	<0.5	<2.0	<0.5	<1.0	0.63
	1/12/2007	181.80	10.13	171.67	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	4/17/2007	181.80	10.22	171.58	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	7/17/2007	181.80	9.76	172.04	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	10/16/2007	181.80	9.82	171.98	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
MW-6 cont.	1/17/2008	181.80	9.43	172.37	<50	NA	<0.50	<2.0	<0.50	<2.0	<0.5
	4/17/2008	181.80	9.54	172.26	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	7/16/2008	181.80	9.80	172.00	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	10/14/2008	181.80	10.48	171.32	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/6/2009	181.80	10.01	171.79	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	4/6/2009	181.80	10.15	171.65	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/7/2009	181.80	10.28	171.52	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/27/2010	181.80	8.28	173.52	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/26/2010	181.80	9.64	172.16	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
MW-6R	8/30/2010	181.34	9.55	171.79	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/15/2010	181.34	9.32	172.02	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	2/14/2011	181.34	9.79	171.55	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/19/2011	181.34	9.60	171.74	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/18/2012	181.34	10.08	171.26	<22	NA	<0.33	<0.19	<0.15	<0.2	<0.38
	7/10/2012	**181.34**	**10.30**	**171.04**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-7	7/28/1995	176.55	9.25	167.30	<50	NA	0.54	0.54	<0.50	<1.0	NA
	11/17/1995	176.55	9.73	166.82	1100	NA	<10	<10	<10	<20	4000
	2/7/1996	176.55	6.48	170.07	610	NA	<0.50	<1.0	<1.0	<1.0	2500
	2/7/1996	176.55	NM	NM	280	NA	<0.50	<1.0	<1.0	<1.0	2600
	4/23/1996	176.55	8.37	168.18	110	NA	<0.50	<1.0	<1.0	<1.0	3500
	4/23/1996	176.55	NM	NM	230	NA	<0.50	<1.0	<1.0	<1.0	3500
	7/9/1996	176.55	9.24	167.31	230	NA	<0.50	<1.0	<1.0	<1.0	4296
	7/9/1996	176.55	NM	NM	220	NA	<0.50	<1.0	<1.0	<1.0	4400
	10/10/1996	176.55	10.05	166.50	NA	NA	NA	NA	NA	NA	NA
	10/11/1996	176.55	NM	NM	1600	NA	<0.50	<1.0	<1.0	<1.0	3000
	1/20/1997	176.55	7.51	169.04	<50	NA	0.63	<1.0	<1.0	<1.0	2600
	4/25/1997	176.55	8.79	167.76	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
MW-7 cont.	4/28/1997	176.55	NM	NM	1500	NA	<0.50	<1.0	<1.0	<1.0	3600
	4/28/1997	176.55	NM	NM	7700	NA	3500	<25	74	37	<250
	7/18/1997	176.55	9.50	167.05	1400	NA	<0.50	<1.0	<1.0	<1.0	2600
	10/27/1997	176.55	9.19	167.36	420	NA	<0.50	<1.0	<1.0	<1.0	560
	1/22/1998	176.55	6.45	170.10	3100	NA	<0.50	<1.0	<1.0	1.4	2300
	4/23/1998	176.55	8.02	168.53	3800	NA	<0.50	<1.0	<1.0	<1.0	3800
	7/29/1998	176.55	8.88	167.67	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	176.55	NM	NM	500	NA	<2.5	<5.0	<5.0	<5.0	<50
	7/30/1998	176.55	NM	NM	4700	NA	<12	<25	<25	<25	4700
	12/17/1998	176.55	8.62	167.93	NA	NA	NA	NA	NA	NA	NA
	3/19/1999	176.55	7.52	169.03	3800	NA	<1.0	<1.0	<1.0	<1.0	3800
	6/23/1999	176.55	9.63	166.92	NA	NA	NA	NA	NA	NA	NA
	9/27/1999	176.55	9.39	167.16	140	NA	<10	<10	<10	<10	3800
	12/9/1999	176.55	9.94	166.61	NA	NA	NA	NA	NA	NA	NA
	3/9/2000	176.55	6.72	169.83	<50	NA	<0.50	<0.50	<0.50	<0.50	1400
	6/8/2000	176.55	7.38	169.17	NA	NA	NA	NA	NA	NA	NA
	9/18/2000	176.55	9.18	167.37	190	NA	<0.50	<0.50	<0.50	<0.50	580
	12/14/2000	176.55	8.13	168.42	NA	NA	NA	NA	NA	NA	NA
	3/21/2001	176.55	8.98	167.57	1300	NA	<0.50	<0.50	<0.50	<1.5	1460
	6/18/2001	176.55	9.68	166.87	NA	NA	NA	NA	NA	NA	NA
	9/18/2001	176.55	9.80	166.75	<0.50	NA	<0.50	<0.50	<0.50	<1.5	94.9
	12/13/2001	176.55	9.26	167.29	NA	NA	NA	NA	NA	NA	NA
	3/14/2002	176.55	8.69	167.86	800	NA	<0.50	<0.50	<0.50	<1.0	952
	6/19/2002	176.55	9.06	167.49	NA	NA	NA	NA	NA	NA	NA
	9/10/2002	176.55	9.23	167.32	260	NA	<2.0	<2.0	<2.0	<2.0	580
	12/16/2002	176.55	7.77	168.78	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
MW-7 cont.	3/11/2003	176.55	8.30	168.25	620	NA	<2.5	<2.5	<2.5	<2.5	1100
	6/17/2003	176.55	9.51	167.04	NA	NA	NA	NA	NA	NA	NA
	9/17/2003	176.55	9.52	167.03	<50	NA	<0.5	<0.5	<0.5	<0.5	460
	12/9/2003	176.55	8.99	167.56	<50	NA	<0.5	<0.5	<0.5	<0.5	420
	2/26/2004	176.55	6.55	170.00	<50	NA	<0.5	<0.5	<0.5	<0.5	330
	5/21/2004	176.55	8.90	167.65	<50	NA	<0.5	<0.5	<0.5	<0.5	630
	8/10/2004	179.11	9.58	169.53	<50	NA	<0.5	<0.5	<0.5	<0.5	750
	10/19/2004	179.11	9.20	169.91	<50	NA	<0.5	<0.5	<0.5	<0.5	550
	1/14/2005	179.11	7.25	171.86	<50	NA	<2.0	<2.0	<2.0	<2.0	250
	4/14/2005	179.11	7.94	171.17	<200	NA	<0.5	<0.5	<0.5	<1.0	285
	7/7/2005	179.11	9.08	170.03	<400	NA	<1.0	<4.0	<1.0	<2.0	452
	11/15/2005	179.11	9.14	169.97	<50	NA	<0.5	<2.0	<0.5	<1.0	110
	2/8/2006	179.11	7.93	171.18	<50	NA	<0.5	<2.0	<0.5	<1.0	101
	4/27/2006	179.11	8.40	170.71	<50	NA	<0.5	<2.0	<0.5	<1.0	131
	8/1/2006	179.11	8.89	170.22	<50	NA	<0.5	<2.0	<0.5	<1.0	68.6
	10/19/2006	179.11	9.44	169.67	<50	NA	<0.5	<2.0	<0.5	<1.0	65.5
	1/12/2007	179.11	8.91	170.20	<50	NA	<0.5	<2.0	<0.5	<2.0	38
	4/17/2007	179.11	8.58	170.53	<50	NA	<0.5	<2.0	<0.5	<2.0	24.7
	7/17/2007	179.11	9.04	170.07	<50	NA	2.07	<2.0	<0.5	<2.0	29.3
	10/6/2007	179.11	7.88	171.23	<50	NA	0.88	<2.0	<0.5	<2.0	5.26
	1/17/2008	179.11	NM	NM	NA	NA	NA	NA	NA	NA	NA
	4/17/2008	179.11	8.85	170.26	<50	NA	1.87	<2.0	<0.5	<2.0	21.6
	7/16/2008	179.11	9.34	169.77	<50	NA	<0.5	<2.0	<0.5	<2.0	11.4
	10/14/2008	179.11	10.06	169.05	<50	NA	0.78	<0.5	<0.5	<0.5	12
	1/6/2009	179.11	9.12	169.99	<50	NA	<0.5	<0.5	<0.5	<0.5	14
	4/6/2009	179.11	9.28	169.83	<50	NA	<0.5	<0.5	<0.5	<0.5	13
	7/7/2009	179.11	9.59	169.52	<50	NA	<0.5	<0.5	<0.5	<0.5	15
	1/27/2010	179.11	6.98	172.13	<50	NA	<0.5	<0.5	<0.5	<0.5	6.3
	7/26/2010	179.11	9.11	170.00	<50	NA	<0.5	<0.5	<0.5	<0.5	6

Table 2
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TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
MW-7R	8/30/2010	179.14	9.39	169.75	<50	NA	<0.5	<0.5	<0.5	<0.5	24
	11/16/2010	179.14	9.10	170.04	<50	NA	<0.5	<0.5	<0.5	<0.5	4.9
	2/14/2011	179.14	9.26	169.88	<50	NA	<0.5	<0.5	<0.5	<0.5	5.3
	7/19/2011	179.14	9.38	169.76	<50	NA	<0.5	<0.5	<0.5	<0.5	2.8
	1/18/2012	179.14	9.70	169.44	<22	NA	<0.33	<0.19	<0.15	<0.2	0.93
	7/10/2012	**179.14**	**9.92**	**169.22**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**3.4**
MW-8	7/28/1995	176.34	7.80	168.54	1,100	NA	<2.5	<2.5	<2.5	<5.0	NA
	11/17/1995	176.34	8.29	168.05	8,300	NA	75	5.3	670	240	140
	2/7/1996	176.34	4.99	171.35	2,300	NA	33	<10	190	216	<100
	4/23/1996	176.34	6.09	170.25	2,000	NA	390	<10	150	26	<250
QC-2	4/1/1993	NM	NM	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	6/29/1993	NM	NM	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	9/23/1993	NM	NM	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	12/10/1993	NM	NM	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	2/17/1994	NM	NM	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	8/8/1994	NM	NM	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	10/12/1994	NM	NM	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	1/19/1995	NM	NM	NM	<50	NA	<0.5	<0.5	<0.5	<1.0	NA
	5/2/1995	NM	NM	NM	<50	NA	<0.50	<0.50	<0.50	<1.0	NA
	7/28/1995	NM	NM	NM	<50	NA	<0.50	<0.50	<0.50	<1.0	NA
	11/17/1995	NM	NM	NM	<50	NA	<0.50	<0.50	<0.50	<1.0	<5.0
	2/7/1996	NM	NM	NM	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/23/1996	NM	NM	NM	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	7/9/1996	NM	NM	NM	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
SOMA-1	8/10/2004	180.95	11.53	169.42	84	NA	<0.5	<0.5	1.5 C	2.2	2100
	10/19/2004	180.95	10.41	170.54	56	NA	<0.5	<0.5	1.3 C	1.4 C	1600

Table 2
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3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-1 cont.	1/14/2005	180.95	9.68	171.27	58	NA	<3.1	<3.1	<3.1	<3.1	330
	4/14/2005	180.95	9.37	171.58	<2200	NA	<5.5	<5.5	<5.5	<11	668
	7/7/2005	180.95	10.21	170.74	<860	NA	<2.15	<8.6	<2.15	<4.3	591
	11/15/2005	180.95	10.70	170.25	<50	NA	<0.5	<2.0	1.1	<1.0	256
	2/8/2006	180.95	9.30	171.65	127	NA	1.56	<2.0	3.23	3.12	176
	4/27/2006	180.95	9.64	171.31	81.6	NA	1.14	<2.0	2.8	<1.0	189
	8/1/2006	180.95	10.25	170.70	<50	NA	1.07	<2.0	1.46	<1.0	122
	10/19/2006	180.95	10.73	170.22	<50	NA	0.68	<2.0	4.17	<1.0	116
	1/12/2007	180.95	10.38	170.57	<50	NA	<0.5	<2.0	<0.5	<2.0	68.7
	4/17/2007	180.95	10.09	170.86	<50	NA	5.76	<2.0	4.33	2.59	33.4
	7/17/2007	180.95	10.35	170.60	<50	NA	14.8	<2.0	4.63	3.32	39.4
	10/16/2007	180.95	9.71	171.24	<50	NA	5.7	<2.0	<0.5	<2.0	14.2
	1/17/2008	180.95	10.01	170.94	<50	NA	1.02	<2.0	<0.5	<2.0	12.8
	4/17/2008	180.95	10.17	170.78	<50	NA	3.13	<2.0	<0.5	<2.0	12.8
	7/16/2008	180.95	10.63	170.32	<50	NA	10.6	<2.0	<0.5	<2.0	15.8
	10/14/2008	180.95	11.36	169.59	<50	NA	1.1	<0.5	<0.5	<0.5	15
	1/6/2009	180.95	10.81	170.14	<50	NA	0.6	<0.5	<0.5	<0.5	14
	4/6/2009	180.95	10.69	170.26	<50	NA	<0.5	<0.5	<0.5	<0.5	12
	7/7/2009	180.95	11.01	169.94	<50	NA	0.57	<0.5	1.2	0.91	12
	1/27/2010	180.95	8.81	172.14	<50	NA	<0.5	<0.5	<0.5	<0.5	9.9
	7/26/2010	180.95	10.49	170.46	<50	NA	<0.5	<0.5	<0.5	<0.5	5.9
	11/16/2010	180.95	10.49	170.46	<50	NA	<0.5	<0.5	<0.5	<0.5	7.0
	2/15/2011	180.95	10.64	170.31	<50	NA	<0.5	<0.5	<0.5	<0.5	5.3
	7/19/2011	180.95	10.70	170.25	<50	NA	2.3	<0.5	<0.5	<0.5	5.2
	1/18/2012	180.95	10.90	170.05	77 [Y]	NA	<0.33	<0.19	<0.15	<0.2	4.0
	7/10/2012	**180.95**	**11.25**	**169.70**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**3.7**
SOMA-4	8/10/2004	176.94	9.44	167.50	140	NA	0.98	<0.5	7.8	<0.5	11
	10/19/2004	176.94	9.91	167.03	150	NA	<0.5	<0.5	10	<0.5	8.8

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-4 cont	1/14/2005	176.94	8.36	168.58	500	NA	3.7	<0.5	53	<0.5	7.6
	4/14/2005	176.94	7.89	169.05	<200	NA	0.74	<0.5	3.21	<1.0	5.65
	7/7/2005	176.94	11.62	165.32	<200	NA	<0.5	<2.0	0.56	<1.0	7.09
	11/15/2005	176.94	9.33	167.61	<50	NA	<0.5	<2.0	<0.5	<1.0	8.6
	2/8/2006	176.94	9.18	167.76	55.8	NA	<0.5	<2.0	0.85	<1.0	10.4
	4/27/2006	176.94	8.75	168.19	172	NA	1.35	<2.0	8.83	<1.0	11.7
	8/1/2006	176.94	9.52	167.42	<50	NA	0.52	<2.0	1.53	<1.0	14.1
	10/19/2006	176.94	9.51	167.43	<50	NA	<0.5	<2.0	<0.5	<1.0	19.2
	1/12/2007	176.94	8.98	167.96	<50	NA	<0.5	<2.0	<0.5	<2.0	20.4
	4/17/2007	176.94	8.96	167.98	<50	NA	<0.5	<2.0	4.33	<2.0	15.8
	7/17/2007	176.94	9.31	167.63	<50	NA	<0.5	<2.0	4.47	<2.0	13.3
	10/16/2007	176.94	8.96	167.98	<50	NA	<0.5	<2.0	4.5	<2.0	8.57
	1/17/2008	176.94	8.84	168.10	<50	NA	<0.5	<2.0	<0.5	<2.0	8.87
	4/17/2008	176.94	9.44	167.50	<50	NA	<0.5	<2.0	<0.5	<2.0	1.22
	7/16/2008	176.94	9.52	167.42	<50	NA	<0.5	<2.0	<0.5	<2.0	8.58
	10/14/2008	176.94	9.98	166.96	<50	NA	<0.5	<0.5	<0.5	<0.5	9.7
	1/6/2009	176.94	9.29	167.65	<50	NA	<0.5	<0.5	<0.5	<0.5	10
	4/6/2009	176.94	9.31	167.63	<50	NA	<0.5	<0.5	<0.5	<0.5	5.3
	7/7/2009	176.94	9.54	167.40	<50	NA	<0.5	<0.5	<0.5	<0.5	7
	1/27/2010	176.94	7.35	169.59	<50	NA	<0.5	<0.5	<0.5	<0.5	5.1
	7/26/2010	176.94	9.13	167.81	220	NA	<0.5	<0.5	<0.5	<0.5	2.3
	11/15/2010	176.94	8.85	168.09	75	NA	<0.5	<0.5	<0.5	<0.5	2.5
	2/14/2011	176.94	8.92	168.02	<50	NA	<0.5	<0.5	<0.5	<0.5	1.5
	7/19/2011	176.94	9.19	167.75	57	NA	<0.5	<0.5	<0.5	<0.5	0.97
	1/18/2012	176.94	9.61	167.33	<22	NA	<0.33	<0.19	<0.15	<0.2	1.2
	7/10/2012	**176.94**	**9.71**	**167.23**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
Shallow WBZ Wells											
SOMA-2	8/10/2004	178.99	10.69	168.30	<50	NA	<0.5	<0.5	<0.5	<0.5	0.8
	10/19/2004	178.99	10.75	168.24	<50	NA	<0.5	<0.5	<0.5	<0.5	2.4

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-2 cont.	1/14/2005	178.99	9.45	169.54	<50	NA	<0.5	<0.5	<0.5	<0.5	1.1
	4/14/2005	178.99	10.46	168.53	<200	NA	<0.5	<0.5	<0.5	<1.0	<0.5
	7/7/2005	178.99	11.81	167.18	<200	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	11/15/2005	178.99	12.02	166.97	<50	NA	<0.5	<2.0	<0.5	<1.0	1.61
	2/8/2006	178.99	11.88	167.11	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	4/27/2006	178.99	10.95	168.04	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	8/1/2006	178.99	11.85	167.14	<50	NA	<0.5	<2.0	<0.5	<1.0	1.11
	10/19/2006	178.99	10.62	168.37	<50	NA	<0.5	<2.0	<0.5	<1.0	1.36
	1/12/2007	178.99	10.26	168.73	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	4/17/2007	178.99	11.88	167.11	<50	NA	<0.5	<2.0	<0.5	<2.0	0.87
	7/17/2007	178.99	10.84	168.15	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	10/16/2007	178.99	9.69	169.30	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	1/17/2008	178.99	9.62	169.37	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	4/17/2008	178.99	10.06	168.93	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	7/16/2008	178.99	10.63	168.36	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	10/14/2008	178.99	11.26	167.73	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/6/2009	178.99	10.22	168.77	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	4/6/2009	178.99	10.38	168.61	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/7/2009	178.99	10.40	168.59	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/27/2010	178.99	8.19	170.80	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/26/2010	178.99	10.24	168.75	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/15/2010	178.99	10.04	168.95	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	2/14/2011	178.99	9.95	169.04	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/19/2011	178.99	10.20	168.79	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/18/2012	178.99	10.56	168.43	<22	NA	<0.33	<0.19	<0.15	<0.2	<0.38
	7/10/2012	**178.99**	**10.45**	**168.54**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
SOMA-3	8/10/2004	176.81	9.97	166.84	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	10/19/2004	176.81	9.59	167.22	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-3 cont.	1/14/2005	176.81	8.23	168.58	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2005	176.81	8.64	168.17	<200	NA	<0.5	<0.5	<0.5	<1.0	<0.5
	7/7/2005	176.81	9.60	167.21	<200	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	11/15/2005	176.81	10.01	166.80	<50	NA	<0.5	<2.0	<0.5	<1.0	5.1
	2/8/2006	176.81	8.80	168.01	<50	NA	<0.5	<2.0	<0.5	<1.0	7.16
	4/27/2006	176.81	9.00	167.81	<50	NA	<0.5	<2.0	<0.5	<1.0	14.2
	8/1/2006	176.81	9.91	166.90	<50	NA	<0.5	<2.0	<0.5	<1.0	7.29
	10/19/2006	176.81	10.21	166.60	<50	NA	<0.5	<2.0	<0.5	<1.0	41.4
	1/12/2007	176.81	9.73	167.08	<50	NA	<0.5	<2.0	<0.5	<2.0	20.9
	4/17/2007	176.81	9.81	167.00	<50	NA	<0.5	<2.0	<0.5	<2.0	32.1
	7/17/2007	176.81	10.06	166.75	<50	NA	<0.5	<2.0	<0.5	<2.0	23.6
	10/16/2007	176.81	9.54	167.27	<50	NA	<0.5	<2.0	<0.5	<2.0	22.3
	1/17/2008	176.81	9.06	167.75	<50	NA	<0.5	<2.0	<0.5	<2.0	11.1
	4/17/2008	176.81	9.57	167.24	<50	NA	<0.5	<2.0	<0.5	<2.0	23.7
	7/16/2008	176.81	10.25	166.56	<50	NA	<0.5	<2.0	<0.5	<2.0	10.6
	10/14/2008	176.81	10.76	166.05	<50	NA	<0.5	<0.5	<0.5	<0.5	19
	1/6/2009	176.81	9.53	167.28	<50	NA	<0.5	<0.5	<0.5	<0.5	1.1
	4/6/2009	176.81	9.65	167.16	<50	NA	<0.5	<0.5	<0.5	<0.5	5.7
	7/7/2009	176.81	10.19	166.62	<50	NA	<0.5	<0.5	<0.5	<0.5	6
	1/27/2010	176.81	7.80	169.01	<50	NA	<0.5	<0.5	<0.5	<0.5	56
	7/26/2010	176.81	9.67	167.14	<50	NA	<0.5	<0.5	<0.5	<0.5	9.8
	11/15/2010	176.81	9.35	167.46	<50	NA	<0.5	<0.5	<0.5	<0.5	30
	2/14/2011	176.81	10.57	166.24	<50	NA	<0.5	<0.5	<0.5	<0.5	32
	7/19/2011	176.81	9.74	167.07	<50	NA	<0.5	<0.5	<0.5	<0.5	17
	1/18/2012	176.81	10.14	166.67	<22	NA	<0.33	<0.19	<0.15	<0.2	24
	7/10/2012	**176.81**	**9.99**	**166.82**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**1.6**

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-5	1/27/2010	180.31	7.94	172.37	14,000	NA	2,600	1.5	800	914	190
	7/26/2010	180.31	9.99	170.32	14,000	NA	3,300	<20	1,100	1,340	150
	11/15/2010	180.31	10.01	170.30	11,000	NA	2,400	3.3	920	733	130
	2/15/2011	180.31	10.22	170.09	4,900	NA	1,600	<13	430	84	94
pre-MPE	6/16/2011	180.31	NM	NC	6,400	NA	2,500	<20	670	160	150
	7/19/2011	180.31	9.95	170.36	1,300	NA	470	<3.6	<3.6	212	8.8
	1/18/2012	180.31	10.16	170.15	600 [Y]	NA	160	<0.19	27	<0.2	6.5
	7/10/2012	**180.31**	**10.16**	**170.15**	**NA**	**<50**	**3.6**	**<0.5**	**<0.5**	**<0.5**	**4.6**
SOMA-7	8/30/2010	178.54	7.63	170.91	2,900	NA	190	3.7	74	19.80	8.4
	11/16/2010	178.54	7.89	170.65	1,500	NA	190	2.1	41	8.30	5.7
	2/15/2011	178.54	7.33	171.21	1,900	NA	380	4	27	5.50	5.2
pre-MPE	6/16/2011	178.54	NM	NC	1,900	NA	330	4.3	24	5.20	4.7
	7/19/2011	178.54	7.89	170.65	7,600	NA	1,100	15	200	61	12
	1/18/2012	178.54	8.74	169.80	1,300 [Y]	NA	190	2.2	29	5.2	<1.7
	7/11/2012	**178.54**	**8.66**	**169.88**	**NA**	**5,600**	**390**	**5.5**	**45**	**9.1**	**5.2**
SOMA-8	8/30/2010	181.57	9.89	171.68	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/15/2010	181.57	9.37	172.20	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	2/14/2011	181.57	9.89	171.68	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/19/2011	181.57	9.67	171.90	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/18/2012	181.57	10.29	171.28	<22	NA	<0.33	<0.19	<0.15	<0.2	<0.38
	7/10/2012	**181.57**	**10.31**	**171.26**	**NA**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
OB-1 pre-MPE	6/16/2011	178.7	NM	NC	1,900	NA	9.3	<0.5	3.7	5.80	23
	7/19/2011	178.7	7.89	170.81	250	NA	1.9	<0.5	0.63	0.78	4.1
	1/18/2012	178.7	8.72	169.98	2,400 Y	NA	12	<0.19	3.0	6.35	16
	7/11/2012	**178.7**	**7.96**	**170.74**	**NA**	**2,100 Y**	**12**	**0.5**	**0.7**	**2.50**	**18**
OB-2 pre-MPE	6/16/2011	180.23	NM	NC	12,000	NA	870	18	590	1,140	310
	7/19/2011	180.23	9.76	170.47	30,000	NA	1,000	31	1,300	3,020	310
	1/18/2012	180.23	9.92	170.31	22,000 Y	NA	930	13	1,300	2,100	<3.3
	7/11/2012	**180.23**	**10.34**	**169.89**	**NA**	**46,000**	**580**	**11**	**1,300**	**2,130**	**94**
Equipment Blanks											
EB-PMP	1/17/2008	NA	NA	NA	<50		<0.5	<2.0	<0.5	<2.0	<0.5
EB-PRB	1/17/2008	NA	NA	NA	<50		<0.5	<2.0	<0.5	<2.0	<0.5
EB-PMP2	1/17/2008	NA	NA	NA	<50		<0.5	<2.0	<0.5	<2.0	<0.5
EB-PRB2	1/17/2008	NA	NA	NA	<50		<0.5	<2.0	<0.5	<2.0	<0.5

Notes:
< : Not detected above laboratory reporting limit.
1 Top of Casing Elevations were resurveyed by Kier & Wright Engineers Surveyors of Pleasanton, CA on June 21, 2004.

C: Presence confirmed, but RPD between columns exceeds 40%.
H: Heavier hydrocarbons contributed to the quantitation.
NA: Not Applicable/Not Analyzed. Due to construction activities in the Third Quarter 2003, which consisted of the replacement of the USTs and dispensers, wells ESE-1 & ESE-2 were inaccessible. Well ESE-2 also inaccessible during the First Quarter 2007. Well MW-7 had a car parked over it and was inaccessible during the First Quarter 2008 monitoring event
NM: Not Measured
Well ESE-2 was covered over with dirt during the First Quarter 2007 monitoring event.
Well MW-7 had a car parked over it and was inaccessible during the First Quarter 2008 monitoring event.
Equipment Blanks (EB-PRB & EB-PMP) were done to make sure decon efforts were adequate.
Z: Sample exhibits unknown single peak or peaks.
•The Third Quarter 2003 was the first time that SOMA analyzed groundwater samples at the site.

Table 2
Historical Groundwater Elevations & Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	Top of casing elevation [1] (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B

- The Third Quarter 2004 was the first time that SOMA analyzed groundwater samples at wells SOMA-1 to SOMA-4.
- August 2010, reconstruct ESE-1R, ESE-2R, ESE-5R, MW-6R, MW-7R; install SOMA-7, SOMA-8. 8/30/10 investigation sampling
- pre-MPE sampling condcuted on 6/16/2011 prior to start of MPE pilot testing from June 20 to July 1, 2011
- In July 2012, TPH-g was analyzed by method EPA 8015B due to laboratory error instead of EPA 8260B

Table 2a
Historical Groundwater Analytical Data
Gasoline Oxygenates & Lead Scavengers
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
Semi-Confined WBZ Wells								
ESE-1	6/17/2003	<400	<10	<10	18	NA	NA	NA
	9/17/2003	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	290	<1.0	<1.0	9.5	<2,000	<1.0	<1.0
	2/26/2004	410	<0.5	<0.5	9.7	<1000	<0.5	<0.5
	5/21/2004	190	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	8/10/2004	180	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	10/19/2004	270	<0.7	<0.7	4.4	<1400	9.9	<0.7
	1/14/2005	280	<1.3	<1.3	<1.3	<2,500	<1.3	<1.3
	4/14/2005	144	<2.15	<2.15	<8.6	<4300	<2.15	<2.15
	7/7/2005	119	<2.15	<2.15	<8.6	<4300	<2.15	<2.15
	11/15/2005	107	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	2/8/2006	181	<2.15	<2.15	<8.6	<4300	<2.15	<2.15
	4/27/2006	261	<2.15	<2.15	<8.6	<4300	<2.15	<2.15
	8/1/2006	165	<1.0	<1.0	<4.0	<2000	<1.0	<1.0
	10/19/2006	154	<1.0	<1.0	<4.0	<2000	<1.0	<1.0
	1/12/2007	103	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	4/17/2007	80.5	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	7/17/2007	128	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	10/16/2007	98.7	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	1/17/2008	61.5	<0.5	<0.5	2.52	<1000	<0.5	<0.5
	4/17/2008	76.4	<0.5	<0.5	<2.0	<1000	59.2	<0.5
	7/16/2008	179	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	10/14/2008	87	<0.5	<0.5	2.6	<1000	<0.5	<0.5
	1/6/2009	93	<1.0	<1.0	<1.0	<2000	<1.0	<1.0
	4/6/2009	130	<1.0	<1.0	<1.0	<2000	<1.0	<1.0
	7/7/2009	100	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	200	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	110	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
ESE-1R	8/30/2010	83	<0.71	<0.71	3.4	<1,400	<0.71	<0.71
	11/16/2010	64	<0.5	<0.5	0.94	<1,000	<0.5	<0.5
	2/15/2011	130	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	82	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	79	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**110**	**<0.5**	**<0.5**	**1.6**	**<1,000**	**<0.5**	**<0.5**
ESE-2	6/17/2003	<4000	<100	<100	<100	NA	NA	NA
	9/17/2003	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	500	<13	<13	77	<25,000	<13	<13
	2/26/2004	1200	<0.5	<0.5	92	<1,000	<0.5	<0.5
	5/21/2004	2400	<10	<10	25	<20,000	<10	<10
	8/10/2004	2300	<2.5	<2.5	12	<5,000	<2.5	<2.5
	10/19/2004	1800	<3.6	<3.6	8.6	<7100	<3.6	<3.6

Table 2a
Historical Groundwater Analytical Data
Gasoline Oxygenates & Lead Scavengers
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
ESE-2R cont.	1/14/2005	470	<8.3	<8.3	28	<17,000	<8.3	<8.3
	4/14/2005	<10.8	<2.15	<2.15	17.9	<4,300	<2.15	<2.15
	7/7/2005	109	<2.15	<2.15	9.7	<4,300	<2.15	<2.15
	11/15/2005	64.7	<0.5	<0.5	3.43	<1,000	<0.5	<0.5
	2/8/2006	46.4	<2.15	<2.15	11	<4,300	<2.15	<2.15
	4/27/2006	47.7	<1.0	<1.0	8.29	<2,000	<1.0	<1.0
	8/1/2006	20.6	<1.0	<1.0	4.67	<2,000	<1.0	<1.0
	10/19/2006	28.9	<0.5	<0.5	4.55	<1,000	<0.5	<0.5
	1/12/2007	NA	NA	NA	NA	NA	NA	NA
	4/17/2007	60.8	<0.5	<0.5	3.85	<1,000	<0.5	<0.5
	7/17/2007	62.3	<0.5	<0.5	2.95	<1,000	<0.5	<0.5
	10/16/2007	46	<0.5	<0.5	2.21	<1,000	<0.5	<0.5
	1/17/2008	18.8	<0.5	<0.5	3.38	<1,000	<0.5	<0.5
	4/17/2008	18.8	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	9.95	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	0.85	<1,000	<0.5	<0.5
	1/6/2009	27	<0.5	<0.5	0.83	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	18	<0.5	<0.5	0.56	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
ESE-2R	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/16/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
ESE-3	6/17/2003	<200	<5.0	<5.0	<5.0	NA	NA	NA
ESE-5	9/17/2003	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	12/9/2003	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/26/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	5/21/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/10/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	17	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5

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Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
ESE-5 cont.	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	8.7	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	15.4	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	11.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	17.2	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	5.44	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
ESE-5R	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/16/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/15/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/11/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
MW-6	9/17/2003	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	12/9/2003	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/26/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	5/21/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/10/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	<2.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5

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Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-6 contd.	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
MW-6R	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
MW-7	9/17/2003	<10	<0.5	<0.5	9.8	<1,000	<0.5	<0.5
	12/9/2003	<25	<1.3	<1.3	8.1	<2,500	<1.3	<1.3
	2/26/2004	<10	<0.5	<0.5	9.9	<1,000	<0.5	<0.5
	5/21/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/10/2004	<25	<1.3	<1.3	19	<2,500	<1.3	<1.3
	10/19/2004	<100	<5.0	<5.0	11	<10,000	<5.0	<5.0
	1/14/2005	<40	<2.0	<2.0	5.1	<4,000	<2.0	<2.0
	4/14/2005	2.62	<0.5	<0.5	4.57	<1,000	<0.5	<0.5
	7/7/2005	55.6	<1.0	<1.0	10.2	<2,000	<1.0	<1.0
	11/15/2005	10.6	<0.5	<0.5	2.07	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	2.19	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	2.63	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	11.6	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	13.3	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	NA	NA	NA	NA	NA	NA	NA
	4/17/2008	8.63	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
MW-7R	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/16/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**

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Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
SOMA-1	8/10/2004	2300	<6.3	<6.3	53	<13,000	<6.3	<6.3
	10/19/2004	2400	<13	<13	36	<25,000	<13	<13
	1/14/2005	530	<3.1	<3.1	7.1	<6,300	<3.1	<3.1
	4/14/2005	<27.5	<5.5	<5.5	<22	<11,000	<5.5	<5.5
	7/7/2005	2180	<2.15	<2.15	12.9	<4,300	<2.15	<2.15
	11/15/2005	792	<0.5	<0.5	5.01	<1,000	<0.5	<0.5
	2/8/2006	618	<0.5	<0.5	3.67	<1,000	<0.5	<0.5
	4/27/2006	983	<0.5	<0.5	3.48	<1,000	<0.5	<0.5
	8/1/2006	639	<0.5	<0.5	2.27	<1,000	<0.5	<0.5
	10/19/2006	603	<0.5	<0.5	2.25	<1,000	<0.5	<0.5
	1/12/2007	396	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	148	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	555	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	65	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	29.6	<0.5	<0.5	2.06	<1,000	<0.5	<0.5
	4/17/2008	339	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	264	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	250	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	180	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	120	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	250	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	310	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	68	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/16/2010	84	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/15/2011	120	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	130	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	150	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**79**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
SOMA-4	8/10/2004	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	<2.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	3.98	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	6.31	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5

Table 2a
Historical Groundwater Analytical Data
Gasoline Oxygenates & Lead Scavengers
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
SOMA-4 contd	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
Shallow WBZ Wells								
SOMA-2	8/10/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	<2.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	14.6	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	2.58	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
SOMA-3	8/10/2004	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5

Table 2a
Historical Groundwater Analytical Data
Gasoline Oxygenates & Lead Scavengers
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
SOMA-3 cont.	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	<2.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	6.72	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	7.6	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	9.96	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	6.05	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	0.8	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
SOMA-5	1/27/2010	500	<13	<13	<13	<25,000	<13	<13
	7/26/2010	<400	<20	<20	<20	<40,000	<20	<20
	11/15/2010	480	<2.0	<2.0	<2.0	<4,000	<2.0	<2.0
	2/15/2011	390	<13	<13	<13	<25,000	<13	<13
pre-MPE	6/16/2011	450	<20	<20	<20	NA	<20	<20
	7/19/2011	<71	<3.6	<3.6	<3.6	<7,100	<3.6	<3.6
	1/18/2012	11	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
SOMA-7	8/30/2010	<33	<1.7	<1.7	<1.7	<3,300	<1.7	<1.7
	11/16/2010	<25	<1.3	<1.3	<1.3	<2,500	<1.3	<1.3
	2/15/2011	<25	<1.3	<1.3	<1.3	<2,500	<1.3	<1.3
pre-MPE	6/16/2011	<33	<1.7	<1.7	<1.7	NA	<1.7	<1.7
	7/19/2011	<25	<1.3	<1.3	<1.3	<2,500	<1.3	<1.3
	1/18/2012	<6.6	<1.6	<1.7	<1.4	<440	<1.2	<0.86
	7/11/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
SOMA-8	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**

Table 2a
Historical Groundwater Analytical Data
Gasoline Oxygenates & Lead Scavengers
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
OB-1 pre-MPE	6/16/2011	20	<0.5	<0.5	<0.5	NA	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/11/2012	**<10**	**<0.5**	**<0.5**	**<0.5**	**<1,000**	**<0.5**	**<0.5**
OB-2 pre-MPE	6/16/2011	220	<5.0	<5.0	<5.0	NA	<5.0	<5.0
	7/19/2011	260	<10	<10	<10	<20,000	<10	<10
	1/18/2012	94	<3.2	<3.5	<2.8	<880	<2.4	<1.7
	7/11/2012	**44**	**<0.5**	**<0.5**	**20**	**<1,000**	**0.6**	**<0.5**
Equipment Blanks								
EB-PMP	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
EB-PRB	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
EB-PMP2	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
EB-PRB2	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5

Notes:
< : Not detected above laboratory reporting limit.
NA: Not Analyzed.
Well ESE-2 was inaccessible duirng the First Quarter 2007, dirt was covered over well
Well MW-7 had a car parked over it and was inaccessible during the First Quarter 2008 monitoring event.
The Third Quarter 2003 was the first time that SOMA analyzed groundwater samples at the Site.
The Third Quarter 2004 was the first time that SOMA analyzed groundwater samples at wells SOMA-1 to SOMA-4.

Gasoline Oxygenates:
TBA: tertiary butyl alcohol
DIPE: isopropyl ether
ETBE: ethyl tertiary butyl ether
TAME: methyl tertiary amyl ether
Ethanol

Lead Scavengers:
1,2-DCA: 1,2-Dichloroethane
EDB: 1,2-Dibromoethane

August 2010, reconstruct ESE-1R, ESE-2R, ESE-5R, MW-6R, MW-7R; install SOMA-7, SOMA-8. 8/30/10 investigation sampling

Table 3
Estimated Soil Excavation Costs
3519 Castro Valley Blvd., Castro Valley, CA

Excavation Cost Breakdown			
TASK DESCRIPTIONS	**QUANTITY**	**UNIT COST**	**TOTAL COST**
TASK#1			
PERMIT ACQUISITION/ EXCAVATION SCHEDULING			
Engineer/ Geologist, hours	15	$90.00	$1,350.00
Permits Costs (preliminary)	1	$1,000.00	$1,000.00
Well decommissioning permits	6	$304.75	$1,828.50
Storm Water Pollution Prevention and Erosion Control Plan (not included)	-	-	-
Total Task #1			**$2,350.00**
TASK#2			
HEALTH AND SAFETY PLAN PREPARATION			
Engineer/ Geologist, hours	4.0	$90.00	$360.00
Total Task #2			**$360.00**
TASK#3			
SITE/PREPARATION			
Engineer/ Geologist, excavation delineation, USA North utility clearance, hours	8.0	$90.00	$720.00
Perimeter Fence installation	1.0	$850.00	$1,000.00
Total Task#3			**$1,720.00**
TASK#4			
FIELD ACTIVITIES			
Consultant's Labor and Materials:			
Wells Destruction	1	$13,625.00	$13,626.00
Engineer/ Geologist, well destruction, hours	10	$90.00	$900.00
Engineer/ Geologist, project coordination and implementation of field-related activities, sample collection and delivery to the analytical laboratory, results evaluation, hours	100	$90.00	$9,000.00
Travel, utility truck, per day	10	$60.00	$600.00
Toolbox charge, supplies	10	$150.00	$1,500.00
			$25,626.00
Excavation Labor and Materials (does not include replacement of damaged equipment or lines):			
Excavation will include: mobilization, digging, backfilling, haul and dispose of concrete, sawcutting	1	$30,000.00	$30,000.00
Restore concrete over excavated areas			$16,000.00
ORC chemical and its application	1	$18,000.00	$18,000.00
Traffic Control, per day	6	$1,257.50	$7,545.00
Shoring 250 linear foot @ $185/feet		$45,000.00	$45,000.00
Soil Disposal and off-haul (ton)	780	$56.00	$43,680.00
Supply and deliver fill material (ton)	500	$24.00	$12,000.00
Supply and deliver drain rock (ton)	300	$28.00	$8,400.00
Excavation Dewatering, as needed (water disposal)	1	$8,000.00	$8,000.00
Total Task#4			**$188,625.00**

Table 3
Estimated Soil Excavation Costs
3519 Castro Valley Blvd., Castro Valley, CA

TASK#5			
LABORATORY ANALYSIS			
Soil sampling (standard 5 day turnaround)			
TPH-g, TPH-d, BTEX, MtBE (8260B)			
soil samples (preliminary)	20	$161.00	$3,220.00
Sample disposal fee, each sample	20	$5.75	$115.00
waste profile (composite sampling) as per landfill requirements	1	$650.00	$650.00
Sample disposal fee, each sample	20	$5.75	$115.00
Total Task#5			**$4,100.00**
TASK#6			
REPORT PREPARATION			
Geologist, report preparation, hours	40	$90.00	$3,600.00
Principal Professional Engineer, review and approval, ho	2	$145.00	$290.00
CAD Drawings	12	$65.00	$780.00
PDF report uploading, hours	2	$65.00	$97.50
Secretarial and Reproduction, hours	4.0	$55.00	$220.00
Total Task#6			**$4,987.50**
TOTAL COST (Task 1 through 6)			**$202,142.50**

**Excavation areas (tons removed) are preliminary and may increase based on the results of the confirmation samples*
**Only actual tons excavated/imported will billed*
Number of confirmation samples is preliminary and may increase based on the observed field conditions
Normal working conditions without interfering utility lines were assumed

APPENDIX A
Site History

Previous Activities

1984: Three single-walled fiberglass underground storage tanks (USTs) with capacities of 6,000 gallons, 8,000 gallons, and 10,000 gallons, were installed in the southeastern portion of the site. A former dispenser island reportedly existed on the west side of the site; however, there was no available information about the dispenser removal date.

1988: A 1,000-gallon, double-walled, fiberglass waste oil tank (WOT) was installed to replace the previous 380-gallon WOT. In September, Kaprealian Engineering, Inc. removed the original 380-gallon WOT and observed holes in this UST. As a result, confirmation soil samples were collected from the bottom of the excavation. The following analytical soil results were observed: benzene and toluene were detected at 6.8 µg/kg and 9.5 µg/kg, respectively; total petroleum hydrocarbons (TPH) and total oil and grease (TOG) constituents were not detected.

September and October 1992: Environmental Science & Engineering, Inc. (ESE) drilled five soil boreholes and converted them into monitoring wells (ESE-1 through ESE-5). Soil and groundwater samples were collected during well installation. In the soil samples, the maximum level of soil contamination was detected in monitoring well borehole ESE-5 at 220,000 µg/kg TPH as gasoline (TPH-g); 1,400 µg/kg benzene; 8,200 µg/kg toluene; 3,300 µg/kg ethylbenzene; and 18,000 µg/kg xylenes. In the groundwater samples collected from ESE-1, maximum concentrations were TPH-g at 2,300 µg/L; benzene at 370 µg/L; toluene at 160 µg/L; ethylbenzene at 17 µg/L; and xylenes at 110 µg/L.

July 1995: Three additional monitoring wells were installed: two on-site wells, MW-6 and MW-8, and one off-site well, MW-7.

July 1995: Sampling around former pump island (SB-1 and SB-2) revealed detections of TPH-g and BTEX. Soil analytical data is summarized in Table 1.

April 1996: Well MW-8, located on the western margin of the site, was decommissioned to accommodate the road-widening project along Redwood Boulevard.

August 20, 2003: Prior to UST removal, SOMA oversaw drilling of two boreholes by Vironex. The boreholes were drilled in order to characterize the soil for landfill acceptance criteria.

September 2003: Three single-walled, fiberglass USTs, with capacities of 6,000 gallons, 8,000 gallons, and 10,000 gallons, were removed and replaced with two new double-walled, fiberglass USTs with capacities of 12,000 gallons and 20,000

gallons. In addition, the dispensers, product lines, and vent lines were removed and replaced. Soil below 5 feet bgs was disposed of off-site. Shallow soil was used as backfill material for the former UST pit after confirmation.

Third Quarter 2003: Two monitoring wells, ESE-3 and ESE-4, were decommissioned due to construction activities.

Fourth Quarter 2003: In December, SOMA oversaw drilling of off-site temporary well boreholes TWB-1 through TWB-5 to determine the horizontal extent of off-site petroleum hydrocarbon contamination.

June 2004: On June 10, SOMA installed on- and off-site monitoring wells: SOMA-1 in the southeastern section of the site, and SOMA-2 to SOMA-4 south and southeast of the site. Kier and Wright Engineers Surveyors, of Pleasanton, California, surveyed all site wells on June 21.

August 2006: SOMA conducted a sensitive receptor survey and it was concluded that no irrigation or domestic wells, and no sensitive groups or environments, evaluated during this sensitive receptor survey and located within ½-mile radius have the potential to be impacted by the site's contaminants at this time

Third Quarter 1993 to Present: On-going quarterly groundwater monitoring events have been conducted at the site.

September 2008: Shell Oil conducted a Phase II investigation. Elevated TPH-g concentrations 900 µg/L in groundwater and 720 mg/kg in soil were observed in the borings. Based on these elevated readings, Shell Oil filed a UST Unauthorized Release Report with Alameda County Environmental Health on September 24, 2008.

February 2009: Per ACEHD correspondence dated January 8, 2009, SOMA prepared a Site Conceptual Model and workplan to address data gaps at the site. SOMA proposed advancing soil borings to further define the lateral and horizontal extent of COC impact to vadose zone and the WBZ (up to 31 feet bgs). Per the ACEHD correspondence dated March 27, 2009, SOMA submitted a workplan addendum which was approved by the ACEHD on July 10, 2009 which reduced the number of DP borings from 9 to 7 and proposed the advancement of a shallow groundwater monitoring well within the vadose zone (screened across the potentiometric surface) to determine the appropriateness of the screening interval for existing wells at the site.

August 2009: SOMA conducted a soil and groundwater investigation at the site, advancing seven soil borings and installed shallow groundwater monitoring well SOMA-5 to determine if groundwater at the site is confined or semi-confined. TPH-g was elevated in groundwater samples from DP-1 and DP-2 (210 µg/L and 130 µg/L, respectively) along the northwestern portion of the site and in DP-5 and

DP-6 (640 µg/L and 1,600 µg/L, respectively) along the eastern portion of the station (north of the former USTs). TPH-d was elevated in all groundwater samples, with concentrations between 130 µg/L and 980 µg/L (DP-7 and DP-4, respectively). TPH-mo was observed only along the western portion of the site, in DP-2 through DP-4, with concentrations ranging from 360 µg/L to 570 µg/L. Based on elevated TPH concentrations along the northwestern portion of the site it appears that plume commingling might be occurring. It was determined that wells of ESE-1, ESE-2, ESE-5, MW-6 and MW-7 appear to be screened excessively long and are causing cross-contamination.

May 2010: SOMA replaced (reconstructed) ESE-1, ESE-2, ESE-5, MW-6 and MW-7 with wells screened within the confined WBZ and installed two additional groundwater monitoring wells (SOMA-7 and SOMA-9) adjacent to the reconstructed wells (within 5 feet) and completed within the shallow zone. No water was observed in SB-6 and SB-8, therefore the borings were not converted to wells.

September 2010: SOMA submitted a report documenting site well reconstruction and shallow well installation, per workplan submitted in March 2010. Due to their excessively long screening intervals, ESE-1, ESE-2, ESE-5, MW-6 and MW-7 were reconstructed with screening entirely within the Semi-Confined WBZ. To further characterize the Shallow WBZ, SOMA advanced four borings, converting two of those borings into shallow groundwater monitoring wells (SOMA-7 and SOMA-8).

March 2011: SOMA prepared a CAP/Feasibility Study proposing MPE Pilot Testing, Air Sparging, and aquifer testing at the site.

June/July 2011: Under SOMA's oversight, Golden Gate Remediation Technology (GGRT) performed MPE pilot testing between June 20 and July 1, 2011, utilizing SOMA-5, SOMA-7 OB-1 and OB-2. The pilot test was performed using a self-contained mobile treatment system (MTS). Both soil vapor and groundwater were extracted from the subsurface. Due to relatively low water recovery rates observed during pilot testing, MPE configuration rather than dual phase extraction (DPE) was utilized. The estimated total mass of VOCs removed from soil vapor extracted from extraction wells was 7.05 pounds. The calculated average VOC mass removal rate was approximately 2.46 lbs/day.

APPENDIX B
Sampling Guidelines and Field Procedures

Utility Locating

Prior to drilling, boring locations are marked with white paint or other discernible marking and cleared for underground utilities through Underground Service Alert (USA). In addition, the first five feet of each borehole are air-knifed, or carefully advanced with a hand auger if shallow soil samples are necessary, to help evaluate the borehole location for underground structures or utilities.

Borehole Advancement

Pre-cleaned push rods (typically one to two inches in diameter) are advanced using a hydraulic push type rig for the purpose of collecting samples and evaluating subsurface conditions. The drill rod serves as a soil sampler, and an acetate liner is inserted into the annulus of the drill rod prior to advancement. Once the sample is collected, the rods and sampler are retracted and the sample tubes are removed from the sampler head. The sampler head is then cleaned, filled with clean sample tubes, inserted into the borehole and advanced to the next sampling point where the sample collection process is repeated.

Borehole Completion

Upon completion of drilling and sampling, the rods are retracted. Neat cement grout, mixed at a ratio of 6 gallons of water per 94 pounds of Portland cement, is introduced, *via* a tremmie pipe, and pumped to displace standing water in the borehole. Displaced groundwater is collected at the surface into DOT approved 55-gallon steel drums, or an equivalent storage container. In areas where the borehole penetrates asphalt or concrete, the borehole is capped with an equivalent thickness of asphalt or concrete patch to match finished grade.

Equipment Decontamination

Equipment that could potentially contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to drilling and sampling. Drill augers and other large pieces of equipment are decontaminated using high pressure hot water spray. Samplers, groundwater pumps, liners and other equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater are contained in 55-gallon DOT-approved drums, labeled (to identify the contents, generation date and project) and stored on-site pending waste profiling and disposal.

USING A GEOPROBE TO COLLECT SUBSURFACE VAPOR SAMPLES FOR HUMAN HEALTH RISK EVALUATION

- Do not mobilize to sample subsurface vapor if measurable precipitation or site irrigation near the sampling location has occurred within the previous 5 days;

- Drill continuous cores as necessary to identify permeable strata (target vapor sampling locations) then backfill the borings with Portland cement (previous assessment may have provided this data);

- Connect a PRT adaptor to approximately 10 to 15 feet of tubing (assuming the total depth of the boring will be approximately 5 feet below grade), install a vapor tight valve on the other end of the tubing, close the vapor tight valve, and seat the PRT adaptor into the bottom of the lead drill rod;

- Hydraulically push the Geoprobe rod to the target vapor sampling depth then raise the drill rod approximately 6 inches';

- Place hydrated bentonite around the drill rod to inhibit surface air migration down the outer portion of the drill rod (do not simply add water to a pile of bentonite chips or pellets placed around the drill rod);

- Connect a tee fitting to the top of each purge and sample Summa canister and install a pressure gauge on the top of this fitting;

- Connect 1 to 2 feet of tubing to the tee fitting on each purge and sample canister (the consultant may opt to install an optional valve on the downhole side of the tee connected to the purge canister);

- Connect the free ends of each of the above tubes to a separate (third) tee fitting;

- Connect a 100 to 200 milliliter/minute flow regulator to the downhole side of the third tee fitting and connect the laboratory supplied particulate filter to the downhole side of the regulator (if required);

- Connect the vapor-tight valve to the downhole side of the filter (or regulator if the filter was built-in to the regulator);

- Vacuum test the connections between the summa canisters and valve on the downhole side of the regulator for 10 minutes by opening and closing the purge canister valve to place a test vacuum on the assembly (terminate further work if gauge vacuum can not be maintained for 10 minutes);

- If gauge vacuum was maintained for 10 minutes and it has been at least 30 minutes since the drill rod was sealed at the surface with bentonite, then open the purge canister valve and

the valve on the downhole side of the regulator to begin purging ambient air from the sampling apparatus and borehole (record the time purging commenced);

- Close the purge canister valve when three volumes of air have been purged from the sample apparatus and borehole (the consultant must know how to calculate the appropriate purge volume prior to mobilization - the adequacy of purging must be based on the inches of pressure drop on the purge canister gauge and not time);

- Open the sample canister valve to begin sample collection (record the time sample collection begins);

- Drop a few pieces of isopropyl alcohol (leak test compound) moistened gauze down the inside of the drill rod and on the downhole side of the valve on the borehole side of the regulator (tinfoil is useful to hold the gauze in place - be careful not to pour isopropyl alcohol directly on the tubing and sample apparatus connections);

- Remoisten the gauze with isopropyl alcohol every 5 minutes;

- Close the sample canister valve when the sample canister gauge indicates approximately 5 inches Hg of vacuum remain in the canister (e.g., this should take approximately 25 minutes for a 6L Summa canister connected to a 200 milliliters/minute flow regulator);

- Record the time sample collection was stopped and replace the tee fitting on the sample canister with the laboratory supplied brass plug;

- Label the sample and record on the chain of custody the sample name, final vacuum, and the canister and flow controller serial numbers;

- Store the sample in a container that blocks sunlight and do not subject the sample to significant changes in pressure and temperature (avoid airline shipping of sample containers);

- Remove the drilling rod and sampling apparatus and backfill the borehole with Portland cement mixed at 6 gallons of water per 94-pound bag of cement.

FOOTNOTES:

1 - Hard drilling conditions may shear off the PRT fitting during drilling. In these conditions you must install the PRT fitting/valve assembly after reaching the target drilling depth, but before lifting the drilling rod 6 inches.

2 - Isopropyl alcohol moistened gauze must be added to all fitting connections if the reduction in sample canister gauge vacuum indicates sample collection will exceed one hour.

GENERAL NOTES:

Assemble and leak check the sampling apparatus prior to mobilizing to the field.