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Nicole M. Arceneaux
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6912
nicole.arceneaux@chevron.com

March 6, 2014

Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **76 Service Station #1156 (Chevron Site #351645)**
4276 MacArthur Boulevard, Oakland, California

ACEH Fuel Leak Case No. RO0000409
RWQCB Case No. 01-2474
GeoTracker Global ID T0600102279

I have reviewed the attached Remedial Technology Screening and Work Plan for Site Assessment dated March 5, 2013.

I agree with the conclusions and recommendations presented in the referenced document. The information in this document is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by AECOM, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13257(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Nicole Arceneaux
Project Manager

Attachment: *Remedial Technology Screening and Work Plan for Site Assessment*

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_REPORT FILE

SUCCESS

Your GEO_REPORT file has been successfully submitted!

Submittal Type:	GEO_REPORT
Report Title:	Remedial Technology Screening and Workplan for Site Assessment
Report Type:	Other Workplan
Report Date:	3/6/2014
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Facility Name:	UNOCAL #1156
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Prepared for:
EMC
San Ramon, California

Prepared by:
AECOM
Camarillo, California
March 5, 2014

Remedial Technology Screening and Work Plan for Site Assessment

76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

ACEH Case No. RO409
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AECOM

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Remedial Technology Screening and Work Plan for Site Assessment

76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

ACEH Case No. RO409
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Prepared by:

Bryan Elder, PE #C81253
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
BRYAN K. ELDER
81253
CIVIL
STATE OF CALIFORNIA

3-6-14

PROFESSIONAL GEOLOGIST
DANA W. FILES
No. 8410
Exp. 7/2014
STATE OF CALIFORNIA

3-6-14

Reviewed by:

Brenda Evans

Brenda Evans
Senior Project Manager

Dana Files, PG #8410
Project Geologist

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1.0 Introduction

On behalf of Chevron Environmental Management Company's (EMC's) affiliate, Union Oil of California ("Union Oil"), AECOM is pleased to submit this Remedial Technology Screening and Work Plan for Site Assessment for 76 Service Station No. 1156 (351645), located at 4276 MacArthur Boulevard, Oakland, California (Figures 1 and 2). AECOM has prepared this work plan in association with Alameda County Environmental Health (ACEH) Case No. RO409.

1.1 Objectives

On November 21, 2013, the ACEH issued a directives letter (**Appendix A**) as a result of their review of AECOM's October 29, 2013, *Report on Vapor Intrusion Investigation and Risk Assessment for the Oakland Veterinary Hospital*" and October 22, 2013, *Third Quarter 2013 Semiannual Groundwater Monitoring and Sampling Report*. In their November 21 letter, the ACEH directed EMC to prepare a work plan for paired sub-slab and indoor air sampling at the adjacent Oakland Veterinary Hospital, which was submitted to ACEH on January 7, 2014. ACEH also directed EMC to "submit a work plan to conduct interim remediation or pilot testing" to "address the elevated concentrations of petroleum hydrocarbons detected in soil vapor in the northwestern portion of the site adjacent to the Oakland Veterinary Hospital."

On December 18, 2013, EMC and AECOM met with ACEH to discuss the directive to prepare a work plan for interim remediation or pilot testing. As a result of that meeting, ACEH issued an email on December 18, 2013 (**Appendix A**), identifying a revised scope for the work plan as follows:

- "The Work Plan will include a screening of remedial technologies applicable to the area of potential vapor intrusion along the northwestern property boundary.
- The Work Plan will propose site characterization activities focused on evaluation of remedial technologies. A remedial technology is to be selected following the focused data collection.
- The Work Plan will also address data gaps associated with the detections of petroleum hydrocarbons in well MW-11A and shallow groundwater between monitoring well MW-11A and the former tank pit."

The objectives of this *Remedial Technology Screening and Work Plan for Site Assessment* are to address the ACEH directives outlined above and to address the data gaps previously identified at the site, collectively summarized below:

- Perform a screening of feasible remedial technologies for mitigating off-site contaminant migration along the northwestern property boundary and minimizing the potential of vapor intrusion into the adjacent veterinary hospital.
- The vertical extent of groundwater impacts on-site has not been sufficiently assessed to determine the presence of light non-aqueous phase liquid (LNAPL) or dissolved-phase hydrocarbon concentrations above 10 feet below ground surface (bgs).

The proposed scope of work will focus on soil boring and monitoring well installation for on-site hydrocarbon delineation (LNAPL detection) and additional remedial technology screening.

1.2 Rationale for the Proposed Scope of Work

Site assessment activities performed by AECOM in 2013 determined that groundwater beneath the site is generally unconfined with depth to water ranging from 5.07 to 7.65 feet below top of well casing, negating previous assumptions that groundwater was confined to an aquifer greater than 20 feet below ground surface (bgs) (AECOM 2013a; Delta Environmental 2010). Groundwater results for the third quarter 2013 and first quarter 2014 groundwater monitoring event indicate that a strong downward vertical component to groundwater impacts exists from 10 feet bgs to 25 feet bgs at various locations on-site.

The current scope of work includes the installation of two groundwater monitoring wells to complete the vertical delineation of groundwater impacts on-site in the areas of previously determined highest groundwater impacts, and further investigate the impacts observed in the vicinity of the new USTs (southern corner of the property). In addition, the proposed wells will be screened across the water table to determine the presence of LNAPL. In the event that LNAPL is present, additional assessment will likely be warranted to delineate the LNAPL plume, as well as to characterize and determine the source of the LNAPL.

The completion of the proposed monitoring wells will allow for potential further field evaluation of the feasibility of remedial technologies appropriate for existing site conditions. Following well installation, soil and groundwater data will be reviewed and any additional field screening of remedial technologies will be proposed under a separate work plan.

2.0 Site Description and Background

2.1 Site Location and Description

The site is located in an urbanized area of Oakland, California, at the base of the San Leandro Hills. The station site is located at the northern corner of the intersection of MacArthur Boulevard and High Street (Figures 1 and 2). The station building is situated in the northern portion of the site. An automotive service bay is present in the northern portion of the building and a convenience store is located in the southern portion. Two dispenser islands are located on the southern portion of the site, one parallel to MacArthur Boulevard and one parallel to High Street.

The site area consists of mixed commercial and residential development. The Oakland Veterinary Hospital borders the site to the northwest, beyond which is a pharmacy/drug store. Single-family dwellings border the station site to the northeast. An apartment building and commercial businesses (dry cleaners [pick up and drop off only], tax service, pizza place, and sandwich shop) are present across High Street to the southeast. A vacant lot is located south of the station site at the southern corner of the MacArthur Boulevard and High Street intersection. A vacant lot is also located across MacArthur Boulevard to the southwest of the site.

Based on site survey data, well box surface elevations at the site range from 179.42 feet above mean sea level (amsl) at MW-4B to 173.12 feet amsl at MW-9B (Morrow Surveying 2013). Observations during the area reconnaissance on March 15, 2012, further revealed that the elevation at the northeastern site boundary is noticeably higher than at MW-4B. Additionally, the elevation at MW-5 (off-site) is 169.67 feet amsl. MW-5 is located in the street in front of the Oakland Veterinary Hospital (adjacent to the northwest of the site). To summarize, an approximately 7 percent downward surface slope exists from the eastern corner to the western corner of the site.

2.2 History

A review of historical aerial photographs, city directories, and Sanborn fire insurance maps indicate that the site has been in use as a gasoline service station since at least 1950. The 1950 Sanborn map indicates that MacArthur Boulevard was formerly known as Hopkins Boulevard. Aerial photographs and Sanborn maps indicate that the station underwent a complete remodel in 1965/1966. Earlier Sanborn maps indicate that dwellings were formerly present on-site. Copies of the Sanborn maps were previously provided with the *Revised Work Plan for Vapor Intrusion Investigation and Risk Assessment*, dated August 27, 2012 (AECOM 2012).

A site map with historical sampling locations is provided as Figure 2. Historical information provided in previously prepared reports is summarized below (Miller Brooks Environmental 2004; ATC Associates, Inc. 2005; Delta 2007a, 2007b, 2008a, 2009, 2010; AECOM 2013b).

Historical information provided in previously prepared reports indicates investigative activities have been conducted at the site from 1997 through 2013. The investigations have included the drilling of numerous soil borings, installation of 18 groundwater monitoring wells, six of which (MW-1 through MW-4, MW-6, and MW-8) have been abandoned, and several soil vapor assessments.

In March 2013, AECOM installed six discreetly screened monitoring wells on-site near existing monitoring wells MW-1B, MW-2B, and MW-3B. Three wells (MW-9A, MW-10A, and MW-11A) were screened from 10 to 15 feet bgs. The remaining three wells (MW-9B, MW-10B, and MW-11B) were screened from 15 to 20 feet bgs. The intent of these six well installations was to determine the presence of perched water and (if present) to evaluate the vertical distribution of dissolved-phase petroleum hydrocarbons. Following this investigation, it was concluded that a continuous, unconfined aquifer exists beneath the site. Additionally, the selected screen intervals became submerged following well installation and, therefore, the presence of LNAPL could not be determined. Based on the vertical distribution of hydrocarbons, it was determined that, a significant vertical impediment to contaminant transport is present beneath the site, presumably due to the fine-grained soil type of the subsurface from grade to approximately 20 feet bgs (AECOM 2013b).

In March 2013, two soil vapor monitoring wells (SV-1 and SV-2) were installed off-site to a depth of approximately 5 feet bgs, approximately 2 feet east of the adjacent Oakland Veterinary Hospital building. Soil samples were collected at approximately 5 feet bgs and did not indicate appreciable petroleum hydrocarbon impacts (2.5 milligrams per kilogram [mg/kg] of total petroleum hydrocarbons (TPH) as gasoline (TPHg) at SV-1 and non-detect for all other analytes in both samples). In April 2013, soil gas sampling of the two newly installed soil vapor monitoring wells and six existing vapor wells (SVW-1 and SVW-6) was attempted. Due to water in the vapor wells SV-1 and SVW-4, soil gas samples could not be collected. Based on the results of the remaining six wells (SV-2, SVW-1, SVW-2, SVW-3, SVW-5, and SVW-6), soil gas concentrations of TPHg and benzene were detected as high as 260,000,000 micrograms per cubic meter (µg/m^3) (SVW-6) and 1,400,000 µg/m^3 (SVW-6), respectively. Elevated soil gas concentrations for TPHg and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were also observed in samples collected from SV-2, SVW-2, SVW-3, and SVW-5. Other constituents of concern, such as methyl tertiary butyl ether (MTBE) and naphthalene, were not detected in any soil gas samples (AECOM 2013c).

Soil gas sampling of off-site wells SV-1 and SV-2 was conducted again in August 2013. Soil gas concentrations of TPHg and benzene were detected as high as 190,000,000 µg/m^3 (SV-1) and 500,000 µg/m^3 (SV-1), respectively. MTBE and naphthalene were not detected in any soil gas samples (AECOM 2013d). At the request of ACEH (ACEH 2013), a work plan to conduct sub-slab vapor, indoor air, and outdoor air sampling at the adjacent Oakland Veterinary Hospital was submitted to ACEH on January 7, 2014 (AECOM 2014). ACEH approved the work plan (with additional directives) in a letter dated January 27, 2014. Implementation of that work plan is on hold until an access agreement is obtained.

2.3 Geology/Hydrogeology

AECOM reviewed boring logs prepared by other consultants during previously completed subsurface investigations (Delta 2007a, 2007b, 2008a, 2009, 2010). The boring logs indicate that soil types encountered beneath the site consist of unconsolidated deposits of sand and silt in a clay matrix, with some intermixed fine-to-medium-grained gravel. Clay is predominant in the upper lithology with sandy/silty clay and clayey sand units, between approximately 1 to 15 feet bgs. The clay unit is underlain by clay interbedded with sandy clay, clayey sand, silty sands, and some gravelly, sandy clay units, observed to the maximum depth explored (50.5 feet bgs).

According to an aquifer study performed by Delta in 2008 (Delta 2008b), the site is located on the eastern edge of the East Bay Plain sub-basin of the Santa Clara Valley Groundwater Basin. The East Bay Plain is bounded by San Pablo Bay to the north and by Franciscan Basement rock to the east, and extends beneath the San Francisco Bay to the west. The Niles Cone Groundwater Basin is located to the south.

Groundwater in the East Bay Plain sub-basin is both unconfined and confined. The shallow aquifer system consists of the Newark aquifer (30 to 130 feet bgs) and Centerville aquifer (extends to 220 feet bgs) (WRIR 2003). The lower aquifer system consists of the Freemont aquifer (240 to 400 feet bgs) and Deep aquifer (500 to 650 feet bgs). Depth to groundwater in the upper aquifer system ranges from 5 to 40 feet bgs. Groundwater in both aquifers generally flows in a western direction from the mountain front to the San Francisco Bay (WRIR 2003); however, pumping in the northern portion of the sub-basin has drawn groundwater in from the south.

Based on a review of existing boring logs and groundwater monitoring data tables (attached to the Conceptual Site Model provided in **Appendix B**), previous consultants presumed that discontinuous confined and/or unconfined water-bearing zones existed within the stratified clay matrices. (Delta 2007b, 2008a, 2009a, 2009b, 2010; Conestoga-Rovers & Associates 2011). Soil boring logs indicated groundwater first encountered between 4 feet bgs (SB-1) and 42 feet bgs (SB-11). During monitoring well installations in 1999, groundwater was typically encountered at a depth of 23.5 feet bgs (MW-1, MW-2, MW-3, and MW-4). During well installations in 2001, groundwater was encountered at 6 and 5.5 feet bgs in MW-5 and MW-6, respectively. Additionally, groundwater was encountered at 15 feet bgs in MW-7 during installation in 2001. Groundwater was encountered at approximately 23.5 feet bgs in MW-1B, MW-2B, MW-3B, and MW-4B in 2010; however, significant moisture content was noted at 5 feet bgs and deeper.

To investigate the existence of shallow, unconfined water-bearing zones, AECOM installed six discreetly screened monitoring wells in March 2013. Following the well installations, it was concluded that the lithology beneath the site is relatively fine-grained; however, the groundwater is generally unconfined. Based on soil moisture observed in historical soil boring logs, the initial hydrogeologic evaluation (i.e., confined aquifer under hydrostatic pressure) was likely inaccurate. This inaccuracy is further evidenced by shallow monitoring wells (MW-9A/B, MW-10A/B, and MW-11A/B) exhibiting a hydraulic head consistent with those installed to 25 feet bgs, and that recharge occurred after purging during the third quarter 2013 groundwater monitoring event.

Soil observed during installation of these six wells was interpreted to be dry from approximately 11.5 to 16 feet bgs, at which point the soil appeared to be moist. High-plasticity clays were identified as present in most soil borings from grade to total depth (15 to 20 feet bgs), which suggests a misinterpretation of static water during drilling activities. Following a review of historical boring logs, shallow depth to water was verified at several locations (SB-1, SB-4, SB-5, and SB-15), and almost all boring logs indicate high moisture content from approximately 5 feet bgs and deeper.

Cross-sections are provided in Attachment C of the Conceptual Site Model included in **Appendix B**.

During the third quarter 2013 groundwater monitoring event, conducted on July 10, 2013, the static groundwater elevation ranged from 164.75 feet amsl (MW-7) to 172.55 feet amsl (MW-4B) (Figure 3). The depth to water measurements during the third quarter 2013 ranged from 2.32 feet bgs (MW-5) to 7.65 feet bgs (MW-10B). The groundwater flow direction and gradient was interpreted to be to the west-southwest at 0.07 feet per foot (ft/ft), which are consistent with the predominant historical groundwater flow at the site, which has been to the west (with variations to the southwest) at an average gradient of approximately 0.06 ft/ft.

3.0 Remedial Technology Screening

Eight remedial technologies were evaluated for implementation at the site based on the Environmental Protection Agency's (EPA's) guidance document, *How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites* (EPA 2004). These technologies are summarized in the Preliminary Screening of Potential Remedial Approaches table (Table 1). Each remedial approach explicitly addresses on-site petroleum hydrocarbon concentrations; however, their application may also reduce or eliminate off-site migration of impacted groundwater and/or soil vapor. The evaluation is based on the current understanding of the source areas and dissolved-phase petroleum hydrocarbon distribution. The goal for each technology is to achieve a solution to mitigate the risk of vapor intrusion to adjacent properties at the northern property boundary and prevent further off-site migration.

3.1 Soil Excavation and Disposal

Soil excavation allows the physical removal of source material from the soil. This method is extremely effective at removing source material from the unsaturated zone; however, at or below the water table, significant challenges exist. Wet soil is heavier than dry soil; therefore, disposal costs would be significantly higher for saturated zone soil removal. Shallow groundwater, such as that present at the site, also presents a challenge and must be dewatered to retrieve deep soil impacts. Furthermore, groundwater impacts are not typically addressed during excavation activities (aside from dewatering) and can re-contaminate backfill material following the cessation of groundwater pumping.

The site is currently an active fueling station with subsurface piping, USTs, and buildings. Significant challenges, such as safety, accessibility, and financial concerns are associated with excavation of active stations; therefore, excavation is considered infeasible for implementation at this site.

3.2 Soil Vapor Extraction

Soil vapor extraction (SVE) is an in-situ remedial technology designed to reduce volatile organic compounds (VOCs) in the unsaturated (vadose) zone. A vacuum is applied to the soil matrix to create a negative pressure gradient that induces soil vapor flow toward the extraction wells. Extracted vapor can then be treated above grade by thermal or catalytic oxidation, or adsorbed onto activated carbon for disposal. SVE has been more successfully applied to VOCs associated with gasoline, and less successfully to those associated with diesel or motor oil (EPA 2004).

SVE can be limited by several factors. Intrinsic permeability, or the ability of soil to transmit fluids, directly determines the effectiveness of SVE. Intrinsic permeability can vary significantly based on soil type, whereby coarse-grained soils have a higher permeability than fine-grained soils. In addition, soil moisture (typically found higher in fine-grained soils that tend to retain water) can block soil pores, further reducing air flow. The soil types encountered during well installations along the northern property line (MW-1B, MW-9A/B, and MW-10A/B) indicate the presence of fine-grained clay and clayey-silts from grade to approximately 15 feet bgs. Strong heterogeneity has been noted through observations during subsurface assessments conducted across the site. Heterogeneity in the unsaturated zone can contribute to preferential pathways for air flow, limiting the ability to effectively remediate the soil.

SVE treats only the unsaturated zone, so other methods may be required to treat the saturated zone below the water table. Depth to water in the northern portion of the site is approximately 6 to 8 feet bgs; thereby the unsaturated zone available for SVE is significantly limited. Groundwater mounding induced by SVE may also occlude the well screens, reducing or eliminating soil vapor flow.

Based on the fine-grained soil type and shallow depth to water encountered in the northwestern portion of the site, SVE is not recommended as a remedial technology for the site. Current site wells are not suitable for SVE and, as such, additional wells would be required with screens extending into the unsaturated zone. In addition, the footprint required for equipment installation is not readily available on-site and may not be feasible for implementation. Consideration of a passive blower system installed to mitigate shallow vapors that have breached, or nearly breached, the surface near or below the adjacent business will be evaluated following the installation of shallow monitoring wells to be discussed in the subsequent section.

3.3 Bioventing

Bioventing is also an in-situ remedial technology designed to enhance aerobic biodegradation of VOCs in the vadose zone. Bioventing involves either extracting or injecting air into the subsurface to improve oxygen distribution used by indigenous bacteria to biodegrade petroleum hydrocarbons. Bioventing is typically performed at much lower flow rates than SVE but is severely limited by heterogeneous and low-permeability soil types such as clays and silts.

Similar to SVE, bioventing treats only the vadose zone. VOCs adsorbed to soil in the capillary fringe and saturated zone, in addition to the dissolved-phase petroleum hydrocarbons in groundwater, would require an additional treatment technology.

Bioventing will be excluded as a feasible treatment option for soil due to the risk of vapor intrusion and/or off-site vapor migration associated with shallow groundwater.

3.4 Groundwater Extraction and Treatment

Groundwater extraction and treatment (GWET) physically removes impacted groundwater from the subsurface. However, it does not provide a solution for vadose zone remediation or vapor mitigation and would require the use of another technology. In order for GWET to be an effective remedial solution, the physical and chemical properties of the subsurface must allow contaminants to flow to the extraction wells.

GWET can provide plume containment; however, it has difficulty achieving cleanup goals without long-term operation. Heterogeneity in the saturated zone may also lead to ineffective and non-uniform dewatering. Low permeability and perched, or disconnected, water-bearing zones will also render GWET ineffective. This would result in additional extraction wells and would be cost prohibitive. The presence of LNAPL would also present treatment challenges and is currently not known without the installation of wells screened above the saturated zone. Understanding the vertical communication between shallow and deep zones is essential in designing an effective GWET system. In addition, the footprint required for equipment installation is not readily available on-site and may not be feasible for implementation.

3.5 In-situ Bioremediation of Groundwater

Groundwater bioremediation can be conducted by two unique pathways: aerobic and anaerobic biodegradation. Subsurface microbes use organic compounds to produce energy. In a microbial catabolic reaction, an electron donor transfers electrons to an electron acceptor. This transfer of electrons provides energy vital to the microorganism’s growth and function. Organic compounds, such as petroleum hydrocarbons, act as an electron donor and are eventually oxidized to carbon dioxide and water under conditions that are favorable for catabolic reactions. Typical electron acceptors found in groundwater systems include dissolved oxygen, sulfate, nitrate, ferric iron, and carbon dioxide. Under aerobic bioremediation, dissolved oxygen is present in the groundwater to act as the electron acceptor. Aerobic biodegradation reactions occur much faster than reactions involving the other electron acceptors listed above (sulfate, nitrate, ferric iron, carbon dioxide). Although weaker reactivity with these electron acceptors is expected, they provide an alternative degradation pathway for petroleum hydrocarbons in the absence of oxygen (anaerobic conditions).

In-situ bioremediation can be enhanced in several ways. Under aerobic conditions, oxygen can be injected or released in the groundwater either through a network of air/oxygen injection wells, or slow-release oxygen-containing materials placed in groundwater wells. In addition, nutrients can be added to the groundwater to stimulate microbial growth. In unique cases, specialized bacteria can be introduced to the groundwater system to specifically target petroleum hydrocarbons. Anaerobic biodegradation may also be enhanced through similar measures. As an example, sulfate- and nitrate-containing materials may be introduced to the groundwater to stimulate anaerobic bioactivity.

TPHg and BTEX have been found to readily biodegrade under both aerobic and anaerobic conditions. Bioremediation of compounds with more complicated chemical structures (such as MTBE) are limited to the ability of indigenous microorganisms capable of degrading this contaminant at many sites. In these cases, the microbial breakdown of the chemical additives may not be sufficient to prevent MTBE migration off-site and, therefore, would be less likely to achieve successful remediation.

Under the site-specific conditions, enhanced aerobic bioremediation can be effective, but will require evaluation to determine if additional oxygenation or additional nutrients are necessary, and whether they can be adequately distributed in groundwater. Natural attenuation parameters were collected during the first quarter 2014 groundwater monitoring event and are summarized in Table 2. From the results, natural attenuation is occurring unaided in the source zone; however, additional data, including upgradient baseline data, are necessary to understand site conditions and the availability of electron donors.

3.6 Air Sparging with Soil Vapor Extraction

Air sparging (AS) is an in-situ remedial technique that involves the injection of uncontaminated air in the capillary fringe or saturated zone to enhance volatilization of dissolved-phase hydrocarbons. Volatilized hydrocarbons may then migrate to the unsaturated zone where SVE captures the generated vapor-phase hydrocarbons for treatment. In addition to volatilization, AS can aid in replenishing dissolved oxygen concentrations in the source areas, thus stimulating aerobic biodegradation. AS is particularly effective at volatilizing lighter gasoline compounds, including but not limited to BTEX.

Implementation and engineering design procedures of AS/SVE systems would require the installation of several air injection or sparging wells and an air compressor capable of injecting atmospheric air at pressures required by the site geology. With these requirements, AS is a fairly inexpensive technology and under certain site conditions, remediation can be completed in a short timeframe. An advantage to AS technology at this site is that AS is able to directly target soil mass submersed within the saturated zone.

A major disadvantage to this remedial technique is that effectiveness of AS depends heavily on the geological and hydrogeological conditions present (e.g., uniform air distribution in heterogeneous, fine-grained soil). As described in Section 3.2, current site wells are not suitable for SVE and additional wells would need to be installed. Soil permeability limits the radius of influence for each extraction well. Given the low permeability of site soil, the number of extraction wells required may be cost and access prohibitive. Mounding as a result of air injection and SVE in fine-grained soils may diminish extraction rates and poses a risk to vapor migration off-site. In addition, the footprint required for equipment installation is not readily available on-site and may not be feasible for implementation.

3.7 Multiphase Extraction

Multiphase extraction (MPE) is an in-situ remedial technique that involves the extraction of soil vapor, groundwater, and LNAPL (if present) through the use of high-vacuum blowers and/or groundwater pumps. This technique is used to maximize extraction rates of both vapor and liquids simultaneously from extraction wells. If effective, MPE may rapidly remove petroleum-impacted groundwater and LNAPL by dewatering while exposing the vadose, capillary fringe, and upper saturated zones to vapor extraction. MPE is most effective in the remediation of volatile hydrocarbons that are present in soils of moderate-to-low permeability (e.g., silt or silty sands) where target zone dewatering can be accomplished by extracting water at reasonable flow rates. In addition, dewatering the saturated zone allows oxygenation of impacted soils exposed to airflow induced by SVE. This can improve aerobic biodegradation of hydrocarbons below the water table.

MPE is typically applied using liquid ring pumps or positive displacement blowers to apply a high-vacuum on the extraction well. Groundwater pumps can be used in a dual-phase extraction configuration to remove groundwater, or drop tubes (stingers) can be use in a two-phase extraction configuration where the liquids and vapors are removed simultaneously by the vacuum pump. Extracted hydrocarbon vapors are typically destroyed in thermal or catalytic oxidizers.

MPE could be considered a viable technology for remediating vadose and saturated zone soil in the capillary fringe; however, the success of MPE hinges on the ability to effectively dewater the fine-grained soils encountered on-site and achieve uniform air flow. Based on the heterogeneity and fine-grained nature of the soil encountered at the depths of highest petroleum impacts, MPE is likely not a feasible technology.

3.8 Monitored Natural Attenuation

Natural attenuation refers to a variety of physical, chemical, and/or biological processes that reduce the mass, toxicity, mobility, volume, and/or concentration of contaminants in soil and/or groundwater (EPA 2004). Evaluation of the performance of natural attenuation strategies relies upon monitoring networks that can quantify changes in chemical concentration and/or mass and related geochemistry and hydrology that influence, or are products of, attenuation processes. This remedial approach is often referred to as monitored natural attenuation (MNA) (API 2007).

MNA is a non-intrusive remedial approach that depends upon natural processes to degrade and dissipate petroleum constituents in soil and groundwater. Processes involved in natural attenuation of petroleum products include aerobic and anaerobic biodegradation, dispersion/dilution, volatilization, and adsorption. Petroleum hydrocarbon constituents are generally biodegradable as long as indigenous microorganisms have an adequate supply of electron acceptors and nutrients; and toxic substances do not inhibit biological activity.

MNA may be an acceptable long-term option where data can establish that it is occurring. It is often applied following active remediation when the majority of the source has been removed, or for sites where it can achieve cleanup goals as effectively as other technologies. Given a reasonable timeframe for natural attenuation, the costs may be lower than active remediation.

Analysis for MNA parameters was conducted during groundwater monitoring activities conducted in January 2014. Results are presented in Table 2. MNA parameters typically include analysis for electron acceptors (sulfate and nitrate) and metabolites of carbon dioxide and ferric iron (methane and ferrous iron). Dissolved oxygen concentrations are measured in the field semi-annually.

4.0 Proposed Scope of Work

The proposed investigation will consist of installing two individual groundwater monitoring wells for the purpose of determining the presence of LNAPL on-site, and for further screening of remedial technologies discussed in the previous section. The locations of the proposed well installations are shown on Figure 2. These locations were selected based on their proximity to existing monitoring wells with discreet screen intervals, and their location in areas of limited assessment data.

Additional information regarding the scope of work is provided in the subsections below. AECOM will commence work upon receipt of regulatory acceptance of this work plan, the availability of subcontractors, and securing appropriate permits. A report will be prepared and submitted upon completion of the investigation.

4.1 Pre-Field Activities

Prior to drilling and installing monitoring wells on-site, AECOM will mark and identify the proposed boring locations and request an underground utility line clearance at least 48 hours in advance of any subsurface activities. In addition, AECOM will contract with a private utility line locating service to establish that there are no obstructions near the proposed boring areas.

AECOM will obtain necessary well permits from the appropriate Alameda County and City of Oakland agencies. AECOM will comply with the terms specified in the permits and will provide a minimum 72-hour notification to the agencies prior to mobilization. AECOM will contract with and schedule a State of California C-57-licensed drilling contractor to advance the boreholes and install the monitoring wells.

4.2 Field Activities

Field activities will be performed under the supervision of a State of California Professional Engineer or Geologist. At the commencement of field activities, AECOM will perform the following tasks:

- Conduct a tailgate safety meeting at the site.
- Review the contents of the Health and Safety Plan with all AECOM and subcontracted workers, and review the requirements mandated by the Chevron Operational Excellence and Safety Program.
- Set up and demarcate an Exclusion Zone around the work area for each boring location to preclude access by anyone whose entry is unauthorized.
- Keep written documentation of field conditions during sampling and drilling. This documentation will include, but not be limited to, weather conditions (e.g., temperature, wind direction, degree of cloud cover); and surface soil conditions (e.g., presence of standing water). AECOM will maintain field records of activities, conditions, and sampling processes, including names of field personnel, dates, and times.

4.2.1 Soil Borings and Soil Sampling

AECOM will supervise a hollow-stem auger drill rig to advance and sample two soil borings (MW-10S and MW-11S [described below]) that will be converted into two groundwater monitoring wells (Figure 2). Each boring will be advanced from the surface to a maximum of 10 feet bgs. Each boring location will be cleared by triple hand-augering to approximately 8 feet bgs around the proposed location. The soil cuttings will be continuously logged consistent with the USCS system.

Soil samples will be labeled in accordance with EMC sample naming standards, which include the field point name (e.g., MW-10S), the matrix sampled (e.g., S for soil), whether the sample is a duplicate (e.g., Y or N), the depth in feet (e.g., 15), and the date (YYYYMMDD). For example, a non-duplicate soil sample collected from boring MW-10S at 5 feet bgs on January 30, 2014, would be labeled MW10S-S-N-5-20140130. If refusal is encountered in the boring and the boring is relocated to avoid the subsurface obstruction, the relocated boring will be identified with the original boring number using the letter suffix “R” (e.g., MW-10SR).

Soil samples for laboratory analyses will be collected at a minimum of 5-foot intervals, and will be biased toward the highest probable degree of contamination based on field screening results. The 5-foot soil sample will be collected from the hand auger cuttings and placed into glass jars. The 10-foot soil sample will be collected with a California-modified split-spoon sampler driven into undisturbed soil ahead of the lead hollow-stem auger. The split-spoon sampler will be equipped with 6-inch-long, pre-cleaned brass or stainless steel sampling sleeve to collect the soil sample.

The soil samples will be labeled, and placed in a cooler with ice. Standard operating procedures (SOPs) for soil sampling methods are provided in **Appendix C**. The remaining soil will be used for field headspace volatile analysis with a photoionization detector and lithologic description. For VOCs and TPH volatile fraction analyses, an EnCore® sampler (or pre-weighed laboratory-prepared volatile organic analysis vials and an Easy Draw® syringe) will be used for sample collection and field preservation, consistent with EPA Method 5035 requirements. The sample containers will be sealed, labeled, recorded on a chain-of-custody form, and placed in a cooler with ice pending delivery to the analytical laboratory.

4.2.2 Groundwater Monitoring Well Installation

Following completion of the soil sampling, soil borings will be completed as groundwater monitoring wells. Each well location will consist of a 2-inch-diameter monitoring well. The wells will be constructed with 2-inch-diameter, 316 stainless steel well casings with 6.5 feet of 0.020-inch slot 316 stainless steel screen. Proposed well screen depths and screened intervals are based on lithology and groundwater elevation data compiled to date.

Wells will be denoted with “S” to indicate a shallow well screen from 3.5 to 10 feet bgs. A 2-inch-diameter end cap will be added to the bottom of each well casing. A sand pack (Monterey #3) will be placed in the annular space from the bottom of the well screen to 6 inches above the top slot of the well screen. The well will be surged during sand emplacement to settle the sand pack and prevent bridging. A 2-foot-long hydrated bentonite seal will be placed in the annular space above the sand pack using bentonite pellets for each well screen. For surface seals, the remaining annular space will be filled with approximately 6 inches of bentonite cement grout. A well construction diagram is included as Figure 3. The SOP for monitoring well installation is included in **Appendix C**. Well construction details may change depending on the lithology and site conditions encountered during installation.

Each monitoring well will be completed with a traffic-rated well box with a locking well cap. The cap will be permanently labeled with the well identification number. The well box will be set in concrete colored to match surrounding conditions.

4.2.3 Groundwater Monitoring Well Development and Survey

The groundwater monitoring well will be developed a minimum of 48 hours after installation to allow the annular seal to adequately set. Prior to development an interface probe will be used to detect the presence of LNAPL. If free product is detected, the well will be developed by bailing. If free product is not detected the well will be developed using a surge block along the entire length of well screen for approximately 10 minutes. The well will then be purged using a stainless steel bailer or Grundfos pump until the water is visibly free of suspended sediments to the extent feasible. Additionally, water quality parameters, including temperature, pH, turbidity, dissolved oxygen, and electrical conductivity, will be periodically collected from the bailer or pump effluent. AECOM's SOP for monitoring well development is included in **Appendix C**.

A licensed land surveyor will survey each monitoring well.

4.2.4 Laboratory Analysis

The soil samples will be analyzed by a State of California-certified laboratory for the following constituents:

- TPH carbon chain (TPHCC) by EPA Method 8015B(M); and
- Full scan VOCs by EPA Method 8260B

In the event that LNAPL is observed during well installation or development, a sample will be collected for characterization. In the absence of LNAPL, groundwater samples will be collected and analyzed during the next routine groundwater monitoring event scheduled for the third quarter 2014.

4.2.5 Investigation-Derived Wastes

Soil cuttings will be stored on-site in Department of Transportation-approved 55-gallon drums. Decontamination water and purge water from well development will also be stored in 55-gallon drums. Following receipt of analytical results, the 55-gallon drums will be removed from the site and transported to an appropriately permitted facility.

5.0 Reporting

Upon completion of field activities, AECOM will prepare a report for submittal to ACEH documenting the findings of the site assessment. The report will include field observations, boring logs, laboratory results, conclusions, and recommendations. Any additional evaluation of remedial technologies will be proposed in a corrective action plan under separate cover. The report will be prepared under the supervision of and signed by a California Professional Geologist or Engineer. AECOM will submit all required electronic files necessary to comply with ACEH and State of California GeoTracker requirements.

6.0 References

ACEH, 2013. Case File Review for Fuel Leak Case No. RO0000409 and GeoTracker Global ID T0600102279, Unocal #1156, 4276 MacArthur Boulevard, Oakland, CA 94619. November 21.

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Delta, 2008a. Draft Corrective Action Plan, 76 Service Station No. 1156, 4276 MacArthur Boulevard, Oakland, California, dated April 24. Prepared for ConocoPhillips Company, 76 Broadway, Sacramento, California. Prepared by Delta Consultants, 11050 White Rock Road, Suite 110, Rancho Cordova, California 95670.

Delta 2008b. Aquifer and Utility Survey, 76 Service Station No. 1156, 4276 MacArthur Boulevard, Oakland, California, dated May 8. Prepared for ConocoPhillips Company, 76 Broadway, Sacramento, California. Prepared by Delta Consultants, 11050 White Rock Road, Suite 110, Rancho Cordova, California 95670.

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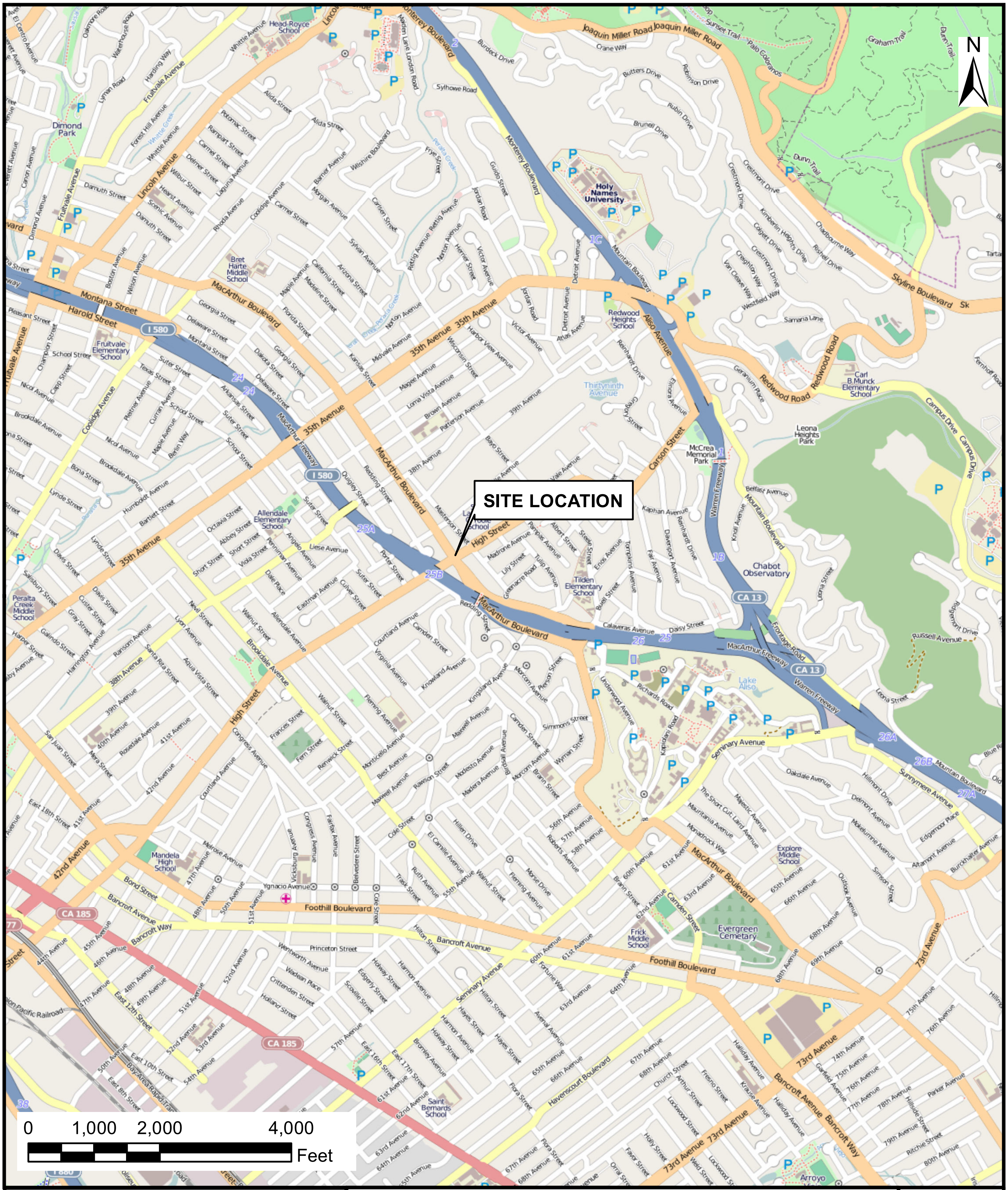
Figures



AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: 805.388.3775
FAX: 805.388.3577
WEB: HTTP://WWW.AECOM.COM

SITE LOCATION MAP

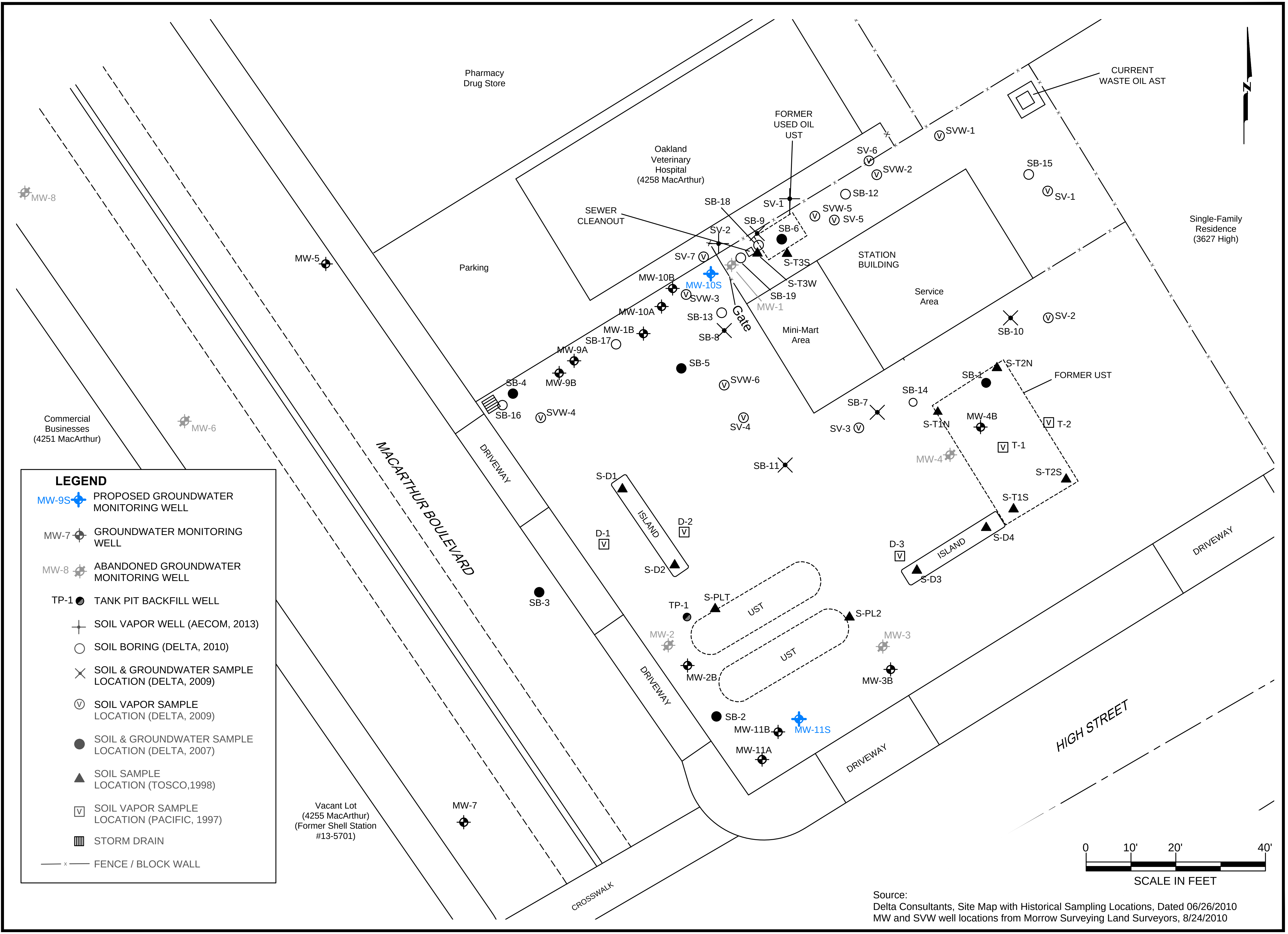
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

DRAWN BY:	DATE:	PROJECT NUMBER:
M. Scop	03/05/2013	60283732

FIGURE NUMBER:
1

SHEET NUMBER:
1 of 1

FILENAME: J:\Client-Projects\76_Products\351645-Oakland\7.0_Deliverables\7.2_CADD-Graphics\2014 Site Assessment WP\Figure 2 Site Plan-historical samples1-20140228.dwg



LEGEND

- MW-9S ✛ PROPOSED GROUNDWATER MONITORING WELL
- MW-7 ⊕ GROUNDWATER MONITORING WELL
- MW-8 ⊕ ABANDONED GROUNDWATER MONITORING WELL
- TP-1 ◐ TANK PIT BACKFILL WELL
- ┼ SOIL VAPOR WELL (AECOM, 2013)
- ○ SOIL BORING (DELTA, 2010)
- ✕ SOIL & GROUNDWATER SAMPLE LOCATION (DELTA, 2009)
- Ⓥ SOIL VAPOR SAMPLE LOCATION (DELTA, 2009)
- ● SOIL & GROUNDWATER SAMPLE LOCATION (DELTA, 2007)
- ▲ SOIL SAMPLE LOCATION (TOSCO,1998)
- 🅅 SOIL VAPOR SAMPLE LOCATION (PACIFIC, 1997)
- ▥ STORM DRAIN
- —x— FENCE / BLOCK WALL

0 10' 20' 40'

SCALE IN FEET

Source:
Delta Consultants, Site Map with Historical Sampling Locations, Dated 06/26/2010
MW and SVW well locations from Morrow Surveying Land Surveyors, 8/24/2010

NO.:	DESCRIPTION:	DATE:	BY:
	REVISIONS		

DESIGNED BY: B. Elder
DRAWN BY: B. Elder
CHECKED BY: B. Evans
APPROVED BY: B. Evans

AECOM

AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

SITE PLAN WITH PROPOSED WELL LOCATIONS

Chevron Site #351645 (76 Service Station #1156)
4276 MacArthur Boulevard
Oakland, California

PROJECT NUMBER: 60314377
DATE: 02/28/2014
SCALE: 1" = 30'

FIGURE NUMBER:
2

SHEET NUMBER:
X

AECOM

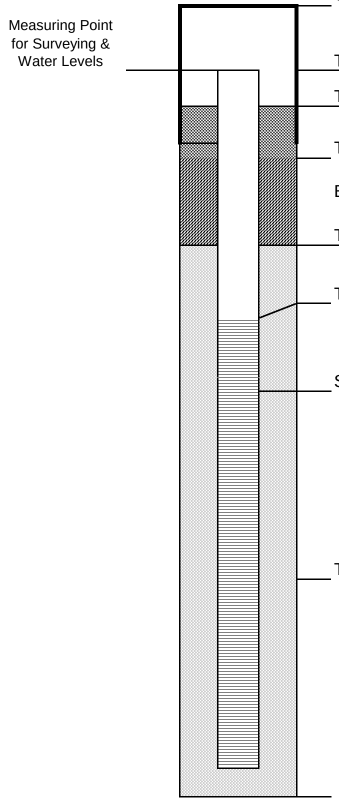
Client: EMC
Project Number: 60314377
Site Location: 4276 MacArthur Boulevard, Oakland, CA
Well Location: NA Coords: NA
Method: Hollow-Stem Auger

WELL ID: MW-10S & MW-11S

Date Installed: TBD
Inspector: NA
Contractor: TBD

FIGURE 3 - PROPOSED MONITORING WELL CONSTRUCTION DIAGRAM

Depth from G.S. (feet)



Ground Surface (G.S.)		0 ft
Top of Riser Pipe		~0.25 ft
Top of Concrete		~0.50 ft
Top of Bentonite		1 ft
Bentonite Seal Thickness	2 ft	
Top of Sand		3 ft
Top of Screen		3.5 ft
Screen:		
Length	6.5 ft	
Inside Diameter (ID)	2 in.	
Slot Size	0.020 in.	
Type of Material	Stainless Steel	
Type/Size of Sand:	Monterey No.3	
		10 ft
Bottom of Borehole		11 ft

Borehole Diameter: 8 in

Length	3.5 ft
Inside Diameter (ID)	2 in.
Type of Material	Stainless Steel

NOT TO SCALE

Tables

Table 1
Preliminary Screening of Potential Remedial Approaches
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

REMEDIAL ACTION	METHOD DESCRIPTION	SITE SPECIFIC IMPLEMENTATION	PROTECTION OF HUMAN HEALTH AND ENVIRONMENT	FURTHER EVALUATION?
Soil Excavation and Disposal (soil only)	Physically removes source material from soil.	Soil excavation and disposal was implemented previously when the USTs were replaced. Remaining source material is located beneath existing underground and aboveground structures, which would limit the extent of excavation pits.	Effectively removes source material within low permeability soils and limits potential groundwater impacts.	No - Onsite operations and site features make excavation infeasible for implementation. Site has already been excavated to the practical extent possible.
Bioventing (soil only)	Injects air into vadose zone to stimulate biodegradation.	Multiple new wells would be required screened exclusively in the vadose zone, works best in homogenous permeable soils. Requires installation of injection system.	Biodegradation decreases contaminant concentrations, but may temporarily increase soil vapor concentrations/ risk of vapor intrusion.	No - The risk of soil vapor intrusion and/or offsite vapor migration due to shallow groundwater depth is too high.
Soil Vapor Extraction (soil only)	Removes VOCs from soil in the vadose zone by applying a vacuum to the subsurface.	Multiple new wells would be required screened into the vadose zone, works best in homogenous permeable soils. Requires installation of extraction and treatment system.	Effectively removes source material within higher permeability soils and limits potential for vapor intrusion.	Yes - Wells screened into vadose zone necessary to determine feasibility.
Groundwater Extraction and Treatment (goundwater only)	Physically removes impacted groundwater.	Requires installation of extraction pumps and treatment system; has difficulty achieving clean-up goals without long-term operation.	Provides plume containment but constituent removal is limited in complex geology and diffusion-limiting environments.	Yes - Effectiveness is limited by geology.
In Situ Enhanced Bioremediation (groundwater only)	Enhances natural aerobic or anaerobic biodegradation by adding oxygen and/or nutrients.	Installation may require special permits. Groundwater movement at the site may not be enough to support dispersion and diffusion. Contaminant oxygen demand is limited by diffusion of mass into groundwater, but is feasible.	Parameters such as zone of influence, contaminant concentration and geology can hinder effectiveness. Limited by mass diffusion rates into groundwater.	Yes - Effectiveness can be limited by geology. May enhance MNA processes.
Air Sparging (groundwater only)	Strips VOCs from water, transferring to vapor phase for extraction and can enhance bio-degradation by injecting air and providing oxygen source.	Requires design and installation of air injection wells and system. Remediation of contaminants is limited by channeled flow, diffusion and ability to inject air at reasonable injection pressures. May be less effective at stripping MTBE and TBA.	Vapor recovery and injection potential need to be evaluated. Can be limited by mass diffusion in soils not intersected by air flow channels.	Yes - Effectiveness can be limited by geology. May enhance MNA processes. Requires evaluation of SVE effectiveness.
Multi-phase Extraction (soil and groundwater)	Groundwater is extracted to expose impacted soil for vapor extraction. Can be accomplished using high vacuums and/or active pumping.	Requires effective dewatering of submersed soils to expose soil containing contaminant. Installation of extraction and treatment system is necessary.	Provides aggressive contaminant removal but can be inhibited by preferential pathways and high water production rates.	Yes - Effectiveness can be limited by geology. Requires evaluation of SVE and GWET effectiveness.
Monitored Natural Attenuation (soil and groundwater)	Passive approach which monitors natural processes that degrade chemical constituents in soil and groundwater.	Historical groundwater concentration trends suggest natural attenuation already occurs at the site.	Concentrations of contaminants above MCLs are limited to the stabilized plume, but should eventually be reduced by natural degradation.	Yes

Table 2
First Quarter 2014 MNA Analytical Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Nitrate (mg/L)	Sulfate (mg/L)	Dissolved Methane (mg/L)	Ferrous Iron (Fe II) (mg/L)	Dissolved Manganese (mg/L)
MW-1B	1/16/2014	7.2	19	0.013	ND<0.1	0.12
MW-2B	1/16/2014	ND<0.44	7.9	0.0021	ND<0.1	0.26
MW-3B	1/16/2014	ND<0.44	1.0	12	5.2	3.3
MW-4B	1/16/2014	12	28	0.0079	ND<0.1	0.07
MW-5	1/16/2014	4.5	27	0.0027	ND<0.1	0.0052
MW-7	1/16/2014	ND<0.44	4.1	0.081	2.2	0.3
MW-9A	1/16/2014	ND<0.44	8.6	2.5	2.4	1.5
MW-9B	1/16/2014	4.7	18	0.0017	ND<0.1	0.63
MW-10A	1/16/2014	ND<0.44	ND<1.0	1.7	5.8	1.1
MW-10B	1/16/2014	ND<0.44	ND<1.0	0.63	7.3	5.4
MW-11A	1/16/2014	ND<0.44	ND<1.0	2.3	7.9	3.7
MW-11B	1/16/2014	ND<0.44	5.2	0.31	6.6	1.1

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

ID = Identification

mg/L = Milligrams per liter

Appendix A

ACEH Email and Letter Communications

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

November 21, 2013

Nicole Arceneaux
Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
(*Sent via E-mail to:*
nicole.arceneaux@Chevron.com)

Ed Ralston
Phillips 66 Company
76 Broadway
Sacramento, CA 95818
(*Sent via E-mail to: Ed.C.Ralston@p66.com*)

Rajan Goswamy
4276 MacArthur Boulevard
Oakland, CA 94619
(Sent via E-mail to: rajgoswamy@sbcglobal.net)

Carole Quick and Lorraine Mudget
10214 SW Stuart Court
Portland, OR 97224-4304

Subject: Case File Review for Fuel Leak Case No. RO0000409 and GeoTracker Global ID T0600102279, Unocal #1156, 4276 MacArthur Boulevard, Oakland, CA 94619

Dear Ms. Arceneaux, Mr. Hetrick, Ms. Quick, Ms. Mudget, and Mr. Goswamy:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the documents entitled, "*Report on Vapor Intrusion Investigation and Risk Assessment for the Oakland Veterinary Hospital Located at 4258 MacArthur Boulevard, Oakland, CA*," dated October 29, 2013 (Vapor Intrusion Report) and "Third Quarter 2013 Semiannual Groundwater Monitoring and Sampling Report" dated October 22, 2013 (Groundwater Monitoring Report). The Vapor Intrusion Report presents results from sampling of two existing soil vapor probes that were installed adjacent to the Oakland Veterinary Hospital. Soil vapor samples collected from the two probes on August 6, 2013 contained up to 190,000,000 micrograms per cubic meter ($\mu g/m^3$) Total Petroleum Hydrocarbons as gasoline and 500,000 $\mu g/m^3$ benzene. Vapor intrusion modeling indicated that the concentrations of petroleum hydrocarbons in soil vapor result in a potential excess lifetime cancer risk of 7.5E-05 and a noncancer hazard index of 1.4+E01. Based on these results, the Vapor Intrusion Report indicates that further evaluation is necessary to determine whether there is an unacceptable risk/hazard posed to occupants of the Oakland Veterinary Hospital. Paired sub-slab and indoor air sampling in the Oakland Veterinary Hospital is recommended. We concur that further evaluation is required and request that you submit a Work Plan **no later than January 7, 2014** to conduct further evaluation of the vapor intrusion pathway.

To help address the elevated concentrations of petroleum hydrocarbons detected in soil vapor in the northwestern portion of the site adjacent to the Oakland Veterinary Hospital, we request that you also propose interim remediation or pilot testing in this area. Please submit a Work Plan to conduct interim remediation or pilot testing **no later than January 21, 2014**. If you would like to discuss a scope of work for the interim remediation or pilot testing prior to Work Plan preparation, please contact me to arrange a meeting.

The Groundwater Monitoring Report recommends additional groundwater monitoring in January 2014 with collection of additional natural attenuation parameters. We have no objection to the collection of the proposed additional parameters. Please present results from the groundwater sampling in the Semi-Annual Groundwater Monitoring Report requested below.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Jerry Wickham), and to the State Water Resources Control Board's GeoTracker website according to the following schedule and file-naming convention:

- **January 7, 2014** – Vapor Intrusion Work Plan
  File to be named: WP_R_yyyy-mm-dd RO409

- **January 21, 2014** – Interim Remediation or Pilot Test Work Plan
  File to be named: WP_R_yyyy-mm-dd RO409

- **March 30, 2014** – Semi-Annual Groundwater Monitoring Report
  File to be named: GWM_R_yyyy-mm-dd RO409

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm. If your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 2032 (*Sent via E-mail to: lgriffin@oaklandnet.com*)

Maureen Dorsey, Oakland Veterinary Clinic, 4258 MacArthur Boulevard, Oakland, CA 94619

Brenda Evans, AECOM, 1220 Avenida Acaso, Camarillo, CA 93012 (*Sent via E-mail to:* *brenda.evans@aecom.com*)
Perry Pineda, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810-1039 (*Sent via (Sent via E-mail to:* *perry.pineda@shell.com*)

Peter Schaefer, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A
Emeryville, CA 94608 (*Sent via E-mail to:* *pschaefer@craworld.com*)

Jerry Wickham, ACEH (*Sent via E-mail to:* *jerry.wickham@acgov.org*)

GeoTracker, e-File

Evans, Brenda

From: Wickham, Jerry, Env. Health [jerry.wickham@acgov.org]
Sent: Wednesday, December 18, 2013 4:07 PM
To: Arceneaux, Nicole Marie; Evans, Brenda
Cc: Van Den Berg, Harry
Subject: RO409 Meeting results

Thank you all for coming in to meet on this case today. Based on discussions during our meeting today, the schedule for submittal of an Interim Remediation or Pilot Test Work Plan is extended from January 21, 2014 to March 7, 2014, Furthermore, the scope of the work plan will be revised as follows;

- The Work Plan will include a screening of remedial technologies applicable to the area of potential vapor intrusion along the northwestern property boundary.
- The Work Plan will propose site characterization activities focused on evaluation of remedial technologies. A remedial technology is to be selected following the focused data collection.
- The Work Plan will also address data gaps associated with the detections of petroleum hydrocarbons in well MW-11A and shallow groundwater between monitoring well MW-11A and the former tank pit.

Let me know if you have any questions.

Regards,
Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
phone: 510-567-6791
jerry.wickham@acgov.org

Appendix B

Conceptual Site Model

Environment

Prepared for:
Chevron EMC
San Ramon, CA

Prepared by:
AECOM
Camarillo, CA
November 11, 2013

Conceptual Site Model

Former Unocal Station No. 1156
(Chevron Facility 351645)
4276 MacArthur Boulevard
Oakland, California

ACEH Case No. RO409
RWQCB Case No. 01-2474

AECOM Environment

Prepared for:
Chevron EMC
San Ramon, CA

Prepared by:
AECOM
Camarillo, CA
November 11, 2013

Conceptual Site Model

Former Unocal Station No. 1156
(Chevron Facility 351645)
4276 MacArthur Boulevard
Oakland, California

ACEH Case No. RO409
RWQCB Case No. 01-2474

Prepared by:

BRYAN K. ELDER
81253

Bryan Elder, PE (C 81253)
Project Engineer

Reviewed by:

Brenda Evans

Brenda Evans
Senior Project Manager

Sara Arav-Piper
Senior Geologist

Contents

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List of Attachments

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C – Cross-sections

D – Historical Data Tables

E – Hydrographs

1.0 Site Background, Context, and History

1.1 Site Description and Vicinity

The Site is a 76 Service Station located at the north corner of the intersection between MacArthur Boulevard and High Street within the City of Oakland (Attachment A – Figure 1). The station building is situated in the north portion of the Site. An automotive service bay is present in the north portion of the building and a mini-mart/cashier area is located in the south portion. Two dispenser islands are located on the south portion of the Site – one parallel to MacArthur Boulevard and one parallel to High Street. Previously prepared environmental documents (e.g., Delta 2010 and 2010b) indicate that two 10,000-gallon gasoline underground storage tanks (USTs) are located in the southwestern portion of the Site (Figure 2).

There are currently 10 groundwater monitoring wells (MW-1B through MW-4B, MW-9A, MW-9B, MW-10A, MW-10B, MW-11A and MW-11B) and one tank backfill well (TP-1) located onsite. Two groundwater monitoring wells (MW-5 and MW-7) are located on MacArthur Boulevard.

The Site area consists of mixed commercial and residential development, with the following adjacent property uses (see Figure 2):

- Northwest – The Oakland Veterinary Hospital (4258 MacArthur Boulevard) abuts the Site to the northwest, beyond which is a pharmacy/drug store.
- North and northeast – Single-family dwellings (4257 Masterson Street and 3627 High Street) abut the Site to the north and northeast.
- East and southeast – High Street borders the Site to the southeast, beyond which are a post office, apartment building (3618 to 3622 High Street), and commercial businesses (4300 to 4312 MacArthur Boulevard). Based on a review of the State Water Resources Control Board GeoTracker database, a leaking underground storage tank (LUST) site was formerly located at 4300 MacArthur Boulevard – Chevron gasoline service station #93676 (, Case No. 01-0371 which was closed in 1999.
- South – A vacant lot is located south of the Site, beyond the intersection of MacArthur Boulevard and High Street. The GeoTracker database indicates that an open LUST case is located in this area; the former Robert’s Tires facility, 4311-4333 MacArthur Boulevard (Case No. 01-3601).
- Southwest and west – MacArthur Boulevard borders the Site to the southwest, beyond which are a vacant lot and commercial businesses. The GeoTracker database indicates that Shell gasoline service station #13-5701 (4255 MacArthur Boulevard) was formerly located at the vacant lot. There is an open LUST case (Case No. 01-1366) associated with the former Shell station.

Site and neighboring property uses are not expected to change significantly in the near future. The vacant lots are not expected to be redeveloped without resolution of the open LUST cases.

Drinking water for the city of Oakland is provided by East Bay Municipal Utility District (EBMUD). Information provided on the EBMUD website (EBMUD 2012) indicates that their water supply begins at the Mokelumne River watershed in the Sierra Nevada and extends 90 miles to the East Bay.

1.2 Regional Setting

1.2.1 Geography, Topography, and Site Elevation

Based on a review of boring logs prepared by previous consultants (Delta 2007b, 2008a, 2009a, 2009b, 2010a, 2010b), the Site geology consists of unconsolidated deposits of sand and silt in a clay matrix, with some intermixed fine-to-medium-grained gravel. Clay is predominant in the upper lithology with sandy/silty clay and clayey sand units, between approximately 1 to 15 feet below grade surface (bgs). The clay is underlain by clay interbedded with sandy clay, clayey sand, silty sands, and some gravelly sandy clay observed to the maximum depth explored (50.5 feet bgs). Recent soil borings advanced onsite have indicated the presence of high-plasticity, fatty clays from 1 to 20 feet bgs. Available boring logs are provided as Attachment B and cross-sections prepared by Delta are provided as Attachment C.

The Site is located in a highly urbanized area of Oakland at the base of the San Leandro Hills. Based on site survey data (Morrow Surveying 2013 – Figure 4), surface elevations at the Site range from 179.42 feet above mean sea level (amsl) at MW-4B to 173.99 feet amsl at MW-2B. Observations during the area reconnaissance on March 15, 2012, further revealed that the elevation at the northeast boundary of the Site is noticeably higher than at MW-4B. Additionally, the elevation at MW-5 is 169.67 feet amsl. MW-5 is located in the street in front of the Oakland Veterinary Hospital (adjacent to the northwest portion of the Site). To summarize, the southwest portion of the Site is at least 8 feet lower in elevation than the northeast portion, and the west corner is approximately 4 feet lower in elevation than the south corner.

1.2.2 Hydrogeology

1.2.2.1 Regional Hydrogeology

According to an aquifer study performed by Delta in 2008 (Delta 2008b), the Site is located on the eastern edge of the East Bay Plain subbasin of the Santa Clara Valley Groundwater Basin. The East Bay Plain is bounded by San Pablo Bay to the north and by Franciscan Basement rock to the east, and extends beneath the San Francisco Bay to the west. The Niles Cone Groundwater Basin is located to the south.

Groundwater in the East Bay Plain subbasin is both unconfined and confined. The shallow aquifer system consists of the Newark aquifer (30 to 130 feet bgs) and Centerville aquifer (extends to 220 feet bgs) (WRIR 2003). The lower aquifer system consists of the Freemont aquifer (240 to 400 feet bgs) and Deep aquifer (500 to 650 feet bgs). Depth to groundwater in the upper aquifer system ranges from 5 to 40 feet bgs. Groundwater in both aquifers generally flows in a western direction from the mountain front to the San Francisco Bay (WRIR 02-4259); however, pumping in the northern portion of the subbasin has drawn groundwater in from the south.

1.2.2.2 Site Hydrogeology

Based on a review of boring logs and groundwater monitoring data tables (Attachments B and D) prepared by previous consultants (Delta 2007b, 2008a, 2009a, 2009b, 2010a, 2010b; CRA 2011), it was determined that discontinuous confined and/or unconfined water bearing zones may exist within the stratified clay matrices. Soil boring logs reported groundwater being encountered first between 4 (SB-1) and 42 (SB-11) feet bgs. During monitoring well installations in 1999, groundwater was typically encountered at a depth of 23.5 feet bgs (MW-1, MW-2, MW-3, MW-4). During well installations in 2001, groundwater was encountered at 6 and 5.5 feet in MW-5 and MW-6, respectively. Additionally, groundwater was encountered at 15 feet bgs in MW-7 during installation in 2001. Groundwater was encountered at approximately 23.5 feet bgs in borings MW-1B, MW-2B, MW-3B, and MW-4B in 2010; however, significant moisture content was noted at 5 feet bgs and deeper.

To investigate the existence of shallow, unconfined water-bearing zones, AECOM installed six discreetly screened monitoring wells in March 2013. Following the well installations, it was concluded that the lithology beneath the Site is relatively fine-grained; however, the groundwater is generally unconfined. Based on soil moisture observed in historical soil boring logs, the initial hydrogeologic evaluation (i.e., confined aquifer under hydrostatic pressure) was likely inaccurate. This is further evidenced by shallow monitoring wells (MW-9A/B, MW-10A/B, and MW-11A/B) exhibiting a hydraulic head consistent with those installed to 25 feet bgs, and that recharge (although slow) did occur after purging during the most recent monitoring event.

Soils observed during installation of these six wells were interpreted to be dry from approximately 11.5 to 16 feet bgs, at which point the soil appeared to be moist. High plasticity clays were identified as present in most borings from grade to total depth (15 to 20 feet bgs), which suggests a misinterpretation of static water during drilling activities. Following a review of historical boring logs, shallow depth to water was verified at several locations (SB-1, SB-4, SB-5, and SB-15), and almost all boring logs indicate high moisture content from approximately 5 feet bgs and deeper.

Cross-sections are provided in Attachment C.

During the most recent groundwater monitoring event, conducted on July 10, 2013 (third quarter), the static groundwater elevation ranged from 164.75 feet (MW-7) to 172.55 feet amsl (MW-4B) (Figure 3). The depth to water measurements during the third quarter 2013 ranged from 2.32 feet bgs (MW-5) to 7.65 feet bgs (MW-10B). As stated above, the southwest portion of the Site is at least 8 feet lower in surface elevation than the northeast portion; and the west corner is approximately 4 feet lower in surface elevation than the south corner. The groundwater flow direction and gradient was interpreted to be to the west-southwest at 0.07 foot per foot (ft/ft). This is consistent with the predominant historical groundwater flow at the Site, which has been to the west (with variations to the southwest) at an average gradient of approximately 0.06 ft/ft.

1.2.3 Surface Water Drainage / Distance to Closest Surface Water Body

Surface water drainage at the Site is directed downslope toward MacArthur Boulevard. Based on a review of Google Earth images on the internet and the United States Geological Survey (USGS) 7.5-minute topographic map (Oakland East quadrangle) dated 1980, the nearest surface water bodies are the Thirtyninth Avenue Reservoir, located approximately 0.6 mile to the northeast (topographically upgradient), and Peralta Creek, located approximately 0.6 mile to the northwest (topographically cross-gradient).

1.3 Release History

1.3.1 First Release

Soil contamination was identified during the removal of the USTs and waste oil tank (WOT) in 1998. No releases or leaks were documented prior to tank removals.

1.3.2 Any Subsequent Release(s)

No subsequent releases onsite have been documented.

1.4 Summary of Previous Site Investigations and Remedial Activities

1.4.1 Previous Site Investigations

A Site map with historical sampling locations is included as Figure 2. Historical information provided in previously prepared reports (Miller Brooks Environmental [MBE], 2004; ATC, 2005a; Delta, 2007b, 2008a, 2009a, 2009b, 2010a, 2010b) is described in the paragraphs below.

As reported by Delta (Delta 2010b), in 1997, Pacific Environmental Group Inc. advanced five soil vapor probes (D-1, D-2, D-3, T-1, T-2) in the vicinity of the USTs and dispenser islands to depths ranging from 3 to 15 feet bgs. Soil vapor concentrations of total petroleum hydrocarbons as gasoline (TPHg), benzene, and methyl tert butyl ether (MTBE) were reported at up to 4,700 micrograms per liter (µg/L), 70 µg/L, and 140 µg/L, respectively.

In 1998, Tosco Marketing Company (Tosco, now ConocoPhillips) removed one 280-gallon WOT, and removed and replaced two 10,000-gallon gasoline USTs, associated piping, and fuel dispensers. Laboratory analyses of soil samples collected at 6 feet bgs from the sidewall at each end of the gasoline UST excavations revealed concentrations of total purgeable petroleum hydrocarbons as gasoline (TPPHg) of up to 1,200 milligrams per kilogram (mg/kg). TPPHg was not detected at or above laboratory method detection limits in soil samples collected adjacent to dispensers D1 (S-D1 at 2 feet bgs) and D4 (S-D4 at 3 feet bgs), but was detected in soil samples collected adjacent to dispensers D2 (S-D2 at 3 feet bgs) and D3 (S-D3 at 3 feet bgs), and within the former product line trenching at concentrations up to 590 mg/kg. Laboratory analyses of soil samples from the bottom, and western and southern limits of the WOT excavation detected TPPHg (6.5 feet bgs) up to 130 mg/kg; total extractable petroleum hydrocarbons as diesel (TEPHd) up to 78,000 mg/kg; benzene up to 0.55 mg/kg; and total recoverable petroleum hydrocarbons (TRPH) up to 8,400 mg/kg. Following the over-excavation of approximately 4.6 tons of soil from the WOT excavation, samples collected from the excavation (6 feet bgs) revealed concentrations of TEPHd at 560 mg/kg, TPPHg at 81 mg/kg, benzene at 0.64 mg/kg, and TRPH at 360 mg/kg. Analytical data from a groundwater sample collected from the gasoline UST excavation (7.5 feet bgs) reported TPPHg at 41,000 µg/L, toluene at 400 µg/L, ethyl-benzene at 770 µg/L, and xylenes at 8,900 µg/L. Benzene was reported to be below the laboratory's indicated reporting limit in the groundwater sample collected for analysis. Available historical soil and groundwater analytical data are provided in Attachment D.

In 1999, Environmental Resolutions Inc. (ERI) conducted a soil and groundwater assessment which included the installation of four onsite groundwater monitoring wells (MW-1 through MW-4). Analytical data from the soil samples collected from the borings at a depth of 10.5 feet bgs reported TPPHg at 6,800 mg/kg, benzene at 2.6 mg/kg, and MTBE at 0.71 mg/kg. The soil sample collected from MW-1, near the former WOT, was also analyzed for total petroleum hydrocarbons as diesel (TPHd) and TPPH. Analytical data from this soil sample reported TEPHd at 140 mg/kg and TRPH at 73 mg/kg. A soil sampled collected from MW-4 at 20.5 feet bgs did not contain TPHg, benzene, or MTBE at or above the laboratory detection limit. The groundwater sample collected from MW-1, near the former WOT, was analyzed for TEPHd, TRPH, TPPHg, benzene, toluene, ethylbenzene and xylenes (BTEX), and MTBE. Analytical data from this water sample reported TEPHd at 16,000 µg/L, TPPHg at 120,000 µg/L, benzene at 11,000 µg/L, toluene 27,000 µg/L, ethylbenzene at 3,300 µg/L, and xylenes at 18,000 µg/L. MTBE was at or below laboratory detection limits in MW-1. However, MTBE was detected in the groundwater sample from MW-2 at a concentration that varied from 4,500 µg/L (U.S. Environmental Protection Agency [EPA] Method 8021B) to 11,000 µg/L (EPA Method 8260B). Analytical data from an additional soil sample collected at a depth of 20.5 feet bgs from the MW-4 boring reported TPPHg, benzene, and MTBE below the laboratory's indicated reporting limits. Available historical soil and groundwater analytical data are provided in Attachment D.

In July 1999, following well installations, quarterly groundwater monitoring and sampling activities commenced, and are currently ongoing on a semi-annual basis.

In July 2001, ERI installed a backfill well (TP-1) in the new UST pit at the south corner of the Site (ERI, 2002). The well was constructed by installing a 3-inch, closed-bottom, slotted PVC casing within a 4-inch, open-bottom, slotted PVC casing to a depth of approximately 13 feet bgs. According to ERI, Tosco initiated regular purging of groundwater from the backfill of the UST cavity. Onyx Industrial Services purged the well by inserting a hose into TP-1 and applying a vacuum provided by a 5,000-gallon capacity vacuum truck.

In August 2001, ERI installed three offsite monitoring wells (MW-5 though MW-7; see Figure 2 [ERI, 2002]). Analytical data from soil samples collected from these well borings indicated TPHg and MTBE below the laboratory’s indicated reporting limits. Analytical data reported benzene in one soil sample collected from MW-7 (10 feet bgs) at a concentration of 0.18 mg/kg (see historical data tables in Attachment D).

Between July 31 and December 23, 2004, approximately 476,015 gallons of hydrocarbon-impacted groundwater was extracted from TP-1, MW-1, and MW-7 (MBEI, 2005a). Of this amount, approximately 1,590 gallons was removed from MW-7 in June and July 2004. Extracted groundwater was transported by Onyx to the Tosco Refinery in Rodeo, California for treatment and disposal. For 2004, Miller Brooks Environmental, Inc. estimated that approximately 5.91 pounds of TPHg, 0.60 pounds of benzene, and 0.23 pounds of MTBE were removed based on the extraction of 48,070 gallons from TP-1 (MBEI, 2005a).

In January 2005, MBEI submitted a corrective action plan (CAP) to the regulatory agency proposing ozone microsparging as a remedial technology (MBEI, 2005a).

In January 2005, ATC Associates (ATC) resumed consultant responsibilities from MBEI c (MBEI, 2005b). In May 2005, ATC submitted a work plan for additional onsite and offsite assessment (ATC, 2005b). In this work plan, ATC suggested that groundwater existed under confining conditions and that previous well installations allowed artificial saturation of the vadose zone due to the relatively long screen of those wells. ATC proposed to install two new wells in the vicinity of MW-2 and MW-7 with shorter screen intervals to determine the presence of a confined aquifer condition. In addition, ATC proposed four additional wells to delineate the benzene and MTBE plume in the cross-, up-, and down- gradient directions.

In 2007, following review of the CAP and work plan, Alameda County Health Care Services Agency, Environmental Health Services (ACEH) requested additional site characterization to determine the vertical and horizontal extent of soil and groundwater impacts onsite and near the former WOT (ACEH, 2007a).

In September 2005 Delta Consultants (Delta) resumed consultant responsibilities, and in March 2007, submitted a work plan proposing four soil borings and one monitoring well to delineate the horizontal and vertical extent of petroleum hydrocarbon impacts to the soil and groundwater in the vicinity, and downgradient of the former WOT and fuel dispensers along the southwestern edge of the Site (Delta, 2007a).

In correspondence from the ACEH in April 2007, the workplan was approved under the condition that two additional soil borings be advanced to 35 feet bgs in the area of the former USTs and to the southwest of the current USTs (ACEH, 2007b).

In October and November 2007, Delta advanced six onsite soil borings (SB-1 through SB-6) and installed additional offsite monitoring well MW-8 (Delta, 2007b). Based on assessment findings, Delta concluded that groundwater at the Site was under confined/partially-confined conditions. In addition, Delta suggested that the former UST pit was acting as a groundwater basin, and that shallow groundwater detected in this area (SB-1) was perched in the fill material above the lean clay below. Based on the analytical data collected during Delta's 2007 investigation, the soil and groundwater beneath the Site were reported to not be significantly impacted by total oil and grease (TOG), volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs), indicating that the former WOT had not significantly impacted soil and groundwater quality beneath the Site. However, due to insufficient water volume, groundwater samples from soil borings SB-5 and SB-6 in the vicinity of and downgradient of the former WOT were not collected.

Following the investigation, Delta reported that the soil appeared to be impacted to depths ranging from approximately 12 feet bgs in boring SB-2 and to 17 feet bgs in boring SB-5. Additionally, the soil did not appear to be significantly impacted in the vicinity of borings SB-3, SB-4, and MW-8, indicating that the extent of the petroleum hydrocarbon impact to the soil was predominantly located onsite in the vicinity of the former USTs, the current USTs, and down gradient of the station building. Delta reported that groundwater appeared to be impacted across the Site with the highest concentration of TPPH found in boring SB-1 at a depth of approximately 16 feet bgs, beneath the former UST location. However, based on the quarterly groundwater data obtained from MW-4 (down gradient of the former USTs), with the exception of MTBE, the petroleum hydrocarbon impact to the groundwater was significantly lower than that found in the groundwater beneath the former USTs.

In April 2008, Delta submitted a draft CAP to ACEH (Delta, 2008a) recommending ozone/oxygen injection as the best-available and most cost-effective approach to corrective action. Delta proposed to install an injection well in the vicinity of MW-1 for pilot-testing the technology prior to full-scale implementation. In a directive from ACEH in June 2008, additional remedial alternatives were required to be evaluated in the CAP, in addition to a more detailed description of the confined aquifer condition beneath the Site (ACEH, 2008a). Delta submitted a revised CAP in July 2008, which included a comparison of ozone/oxygen injection, groundwater extraction, and soil vapor extraction (Delta, 2008b). In addition, Delta concluded that a "confining bed" existed from ground surface to depths ranging from 13 feet to 20 feet bgs made up predominantly of clay. According to Delta's lithologic interpretation, the transition between this clay interval and the underlying clayey sand unit was generally where first groundwater has been encountered during historical assessments and, therefore, was proof of a confined condition.

In a letter dated September 24, 2008, the ACEH rejected the revised CAP submitted by Delta in July and requested a work plan outlining each proposed step of investigation, evaluation and reporting with definite timeframes up to implementation of remediation (ACEH, 2008b). In addition, ACEH requested a detailed evaluation of how the proposed technology selected in the CAP (ozone/oxygen injection) would effectively cleanup residual hydrocarbons above the confined layer.

In December 2008, Delta submitted an assessment work plan to advance three exploratory borings and one monitoring well down gradient of the former UST basin and in the vicinity of monitoring well MW-1 (Delta, 2008c). In addition, Delta proposed to install an additional seven shallow soil borings to be used for the purpose of soil vapor monitoring and evaluation of potential vapor intrusion. In January 2008, ACEH rejected Delta's work plan citing that it did not meet ACEH's previous directives (ACEH, 2009a). Delta revised the work plan to include the advancement of five cone penetration test (CPT) soil borings to a minimum depth of approximately 45 feet bgs and seven soil vapor boring locations (Delta, 2009a). ACEH approved the work plan in May 2009 (ACEH, 2009b).

In July 2009, Delta advanced five CPT/direct push borings (SB-7 through SB-11) near the southeast, southwest, and northwest perimeter of the station building (Delta, 2009b). In addition, seven temporary soil vapor sampling points (SV-1 through SV-7) were installed around the station building and northwest Site boundary.

During borehole clearance for boring SB-10, shallow groundwater was found to exist at approximately 3.5-4 feet bgs. During the clearing of SB-11, geo-fabric material was encountered at approximately 2.1 feet bgs. Concrete and visibly contaminated soil was also found in the vicinity at approximately 3 feet bgs. In addition, boring SB-8 was terminated at approximately 8.5 feet bgs due to an obstruction preventing further advancement.

Subsurface geology was reported to consist of clay from the surface to 25 feet bgs. Below this clay unit was another clay unit that contained discontinuous stringers or small deposits of sandy clay and clayey sand to the maximum depth explored of 44 feet bgs. The discontinuity of sandy clay/clayey sand stringers, or deposits, was demonstrated in the boring logs of SB-7, SB-9, and SB-11, which showed first water being encountered at depths of 23.5 feet bgs, 26 feet bgs, and 42 feet bgs, respectively.

Results of the UVOST analyses of borings SB-7, SB-9, and SB-11 indicated low levels of petroleum hydrocarbons from approximately 5 feet bgs to 17 feet bgs. Analyses of soil samples extracted from direct push borings and the soil vapor points indicated petroleum hydrocarbon impact from 4.5 feet bgs to approximately 18.5 feet bgs. Hydrocarbon concentrations decreased rapidly with depth within the clay soil column.

Groundwater samples were collected from SB-7, SB-9, and SB-11. SB-7 had the highest concentrations of petroleum hydrocarbons. SB-9 and SB-11 had much lower concentrations of petroleum hydrocarbons. This appeared to indicate that there was no preferred pathway between the former UST pit and MW-1. The soil vapor points that were sampled contained very high concentrations of petroleum hydrocarbons. Of the seven soil vapor points installed, only SV-2, SV-4, SV-6, and SV-7 had extractable soil vapors – TPHg up to 82,000,000 micrograms per cubic meter (µg/m3) (SV-7); benzene up to 120,000 µg/m3 (SV-7); toluene at 370 µg/m3 (SV-2); ethylbenzene up to 32,000 µg/m3 (SV-7); m,p-xylenes up to 6,200 µg/m3 (SV-4); and o-xylenes at 140 µg/m3 (SV-2). MTBE was not detected in the soil vapor samples.

Delta's analysis of the data gathered indicated that the highest concentration of petroleum hydrocarbons in groundwater occurred in the vicinity of SB-7, SB-9, and SB-11. Though concentrations of petroleum hydrocarbons exist in the clay soil, Delta reported that little could be done to eliminate or reduce these concentrations due to the tight structure of the clay, with the exception of site excavation. Delta further recommended that a magnesium sulfate feasibility test for MW-1 and MW-3 be conducted to evaluate enhanced natural attenuation under anaerobic conditions.

With the concurrence of ACEH, offsite wells MW-6 and MW-8 were abandoned due to historical non-detectable hydrocarbon concentrations.

Through an agency directive dated October 15, 2009, ACEH reviewed Delta's 2009 site assessment report and determined that vertical and horizontal delineation had not been achieved (ACEH, 2009c). Furthermore, ACEH requested Delta investigate black product that was found during soil boring advancement at SB-8 at approximately 5 feet bgs. In March 2010, Delta submitted a work plan for additional site assessment to include the installation of an offsite temporary soil vapor point, and four onsite semi-permanent soil vapor wells (Delta, 2010a). In addition, Delta proposed to advance six onsite soil borings to be completed as monitoring wells and decommission the current four onsite monitoring wells. The new monitoring wells would be discreetly screened from 20-25 feet bgs. ACEH approved the work plan in April 2010 (ACEH, 2010).

In November 10, 2009, Delta indicated that during a site visit on November 10, 2009, a “previously unidentified underground concrete vault was observed in the northwest corner of the Site, in proximity to MW-1.” The “vault” was reported to be of unknown depth and filled with sand. Delta probed the sand with a 2-foot-long field instrument and was “unable to locate the bottom o f the vault.” A “faint hydrocarbon odor” was reported to have been “noted” upon removal of the instrument.

In August and September 2010, Delta conducted additional assessment of the horizontal and vertical potential for petroleum hydrocarbon migration in the soil, groundwater and soil gas (Delta 2010b). The activities included soil vapor point sampling, soil vapor well installation and sampling, monitoring well abandonment and reinstallation, soil and groundwater borings, and assessment of the unidentified underground vault/utility. The investigations were conducted to determine if a pathway existed between the former gasoline UST pit and MW-1, to adjust the effective screen interval of the onsite monitoring wells, and to assess the soil vapor intrusion risk to the Oakland Veterinary Hospital, located adjacent to the northwest of the station.

Delta used ground-penetrating radar (GPR) to attempt to identify utility lines running to and from this “vault”. A line running from the restroom area of the building to the “vault” was identified, but no line running from the “vault” to the sewer main approximately 6 feet to the north could be identified. Delta reported that the only way to positively identify the nature of this structure would be to open the “cleanout” lid, but that it was highly likely that the structure would be destroyed or badly damaged in the process due to age and deterioration.

A total of eight soil borings (SB-12 through SB-19) were sited along the northwest, northeast, and southeast portions of the station building; six soil vapor wells were installed along the northwest portion of the station; and the four onsite monitoring wells (MW-1 through MW-4) were abandoned and reinstalled with different screen intervals (MW-1B through MW-4B).

Groundwater samples were collected from SB-15, SB-16, SB-17, SB-18, and SB-19. SB-18, located between the unknown vault location and the former waste oil UST on the northwest side of the station building had the highest concentrations of petroleum hydrocarbons. SB-15, located near the current waste oil AST, on the northeast side of the station building, had the lowest concentrations.

Of the six vapor wells installed, extractable soil vapor samples were collected from only five – SVW-1, SVW-2, SVW-3, SVW-5, and SVW-6. The soil vapor wells that were sampled contained very high concentrations of petroleum hydrocarbons – TPHg up to 420,000,000 µg/m3 at SVW-6, benzene up to 1,100,000 µg/m3 at SVW-3, toluene up to 19,000 µg/m3 at SVW-2, ethylbenzene up to 610,000 µg/m3 at SVW-3, and total xylenes up to 820,000 µg/m3 at SVW-3. MTBE was not detected in the soil vapor analyses, though reporting limits were higher than Environmental Screening Level (ESL) values in many cases.

Following a site reconnaissance conducted by AECOM in November 2012, AECOM supervised Cruz Brothers Locating Inc., who removed the lid from the “unknown vault” and determined it to be a sewer cleanout by snaking the subsurface piping with a transmitter sonde (AECOM, 2013).

In March 2013, AECOM installed six, discreetly screened monitoring wells onsite near existing monitoring wells MW-1B, MW-2B, and MW-3B. Three wells (MW-9A, MW-10A, and MW-11A) were screened from 10 to 15 feet bgs. The remaining three wells (MW-9B, MW-10B, and MW-11B) were screened from 15 to 20 feet bgs. The intent of these well installations was to determine the presence of perched water and (if present), to evaluate the vertical distribution of dissolved-phase hydrocarbons. Following this investigation, it was concluded that a continuous, unconfined aquifer exists beneath the Site. In addition, due to the fine-grained soil type of the subsurface, a significant vertical impediment to contaminant transport is present based on the vertical distribution of hydrocarbons (AECOM, 2013a).

Two soil vapor monitoring wells (SV-1 and SV-2) were installed to approximately 5 feet bgs in March 2013. Boring samples were collected at approximately 5 feet bgs, which did not indicate appreciable petroleum impacts (2.5 mg/kg TPHg at SV-1; non-detect for all other analytes in both samples). In April 2013, soil gas sampling of the two newly installed soil vapor monitoring wells, and six existing vapor wells (SVW-1 and SVW-6) was attempted. Due to water in the vapor wells, samples at SV-1 and SVW-4 could not be collected. Soil gas concentrations of TPH-g and benzene were detected as high as 260,000,000 µg/m3 (SVW-6) and 1,400,000 µg/m3 (SVW-6), respectively. Elevated soil gas concentrations for TPH-g and BTEX were also observed in samples collected from SV-2, SVW-2, SVW-3, and SVW-5. MTBE and naphthalene were not detected in any soil gas samples (AECOM, 2013b).

Soil gas sampling of offsite wells SV-1 and SV-2 was conducted again in August 2013. Soil gas concentrations of TPH-g and benzene were detected as high as 190,000,000 µg/m3 (SV-1) and 500,000 µg/m3 (SV-1), respectively. MTBE and naphthalene were not detected in any soil gas samples (AECOM, 2013c).

1.4.2 First Remediation

Approximately 1,350 tons of soil were excavated and removed during the UST removal in 1998 (Delta 2009a). In addition, approximately 4.6 tons of soil were over-excavated and removed during the WOT removal, also in 1998.

1.4.3 Any Subsequent Remediation(s)

A UST pit backfill well (TP-1) was installed in July 2001 and monthly purging of groundwater from the excavation was initiated (Delta 2009a). Bi-weekly groundwater purging was conducted from July 2001 to December 2004 at TP-1 and MW-1. In addition, biweekly purging of MW-7 was conducted in June 2004. Approximately 1,600 gallons of groundwater were removed from MW-7. In total, approximately 476,015 gallons of groundwater were removed through December 2004 from the Site (Delta 2009b).

1.5 Offsite Sources

Two gasoline service stations were formerly located adjacent to the Site (Figure 2). The southwest former Shell Station No. 13-5701, located at 4255 MacArthur Boulevard, operated from at least 1965 (from aerial photographs) to 2003 when the final USTs were removed (Cambria 2005). The Shell station previously operated three USTs and three dispenser islands. The former Shell station has an active LUST case since 1985 with ACEH and the San Francisco Regional Water Quality Control Board (RWQCB).

To the southeast, former Chevron Station No. 9-3676 operated from at least 1965 (from aerial photographs) to approximately 1988 when a leak was reported to RWQCB during the UST excavations (GeoTracker). The station was no longer visible in aerial photographs taken in 1993. Previous operations for the station (i.e., number of USTs and dispenser islands) are unknown. The former Chevron station has a closed LUST case with Alameda County and the RWQCB as of 1999.

2.0 Source

2.1 Ongoing

Migration of residual impacts in the shallow (i.e. <20 feet bgs) saturated zone is the likely source contributing to groundwater contamination, aside from unknown upgradient sources. However, clay matrices layered beneath the Site have impeded significant vertical transport as identified by relatively low benzene and MTBE concentrations in groundwater wells screened from 20 to 25 feet (MW-1B through 4B). In addition, benzene and MTBE concentrations in offsite wells have significantly declined from historical maximums indicating a shrinking plume. Known offsite releases (LUFT cases) have been reported downgradient from the Site.

2.2 Contained / Stable

Based on declining concentrations of dissolved hydrocarbons in offsite, downgradient wells MW-5 and MW-7, the plume is stable and shrinking (see Attachment E – Hydrographs). Onsite, deep-screened (20-25 feet bgs) well concentrations (MW-1B, MW-2B, MW-3B, and MW-4B), also exhibit stable to decreasing trends (see Hydrographs in Appendix E). In addition, benzene concentrations in soil below 20 feet bgs have not been detected above the EPA Residential Screening Level in any boring installed on- or off-site. Shallow-screened wells (MW-9A/B, MW-10A/B, and MW-11A/B) indicate a dissolved-phase source of benzene and MTBE, however, vertical and horizontal migration is strongly impeded due to the fine-grained soil type from grade to approximately 20 feet bgs. This is further evidenced by groundwater trends in deep-screened wells and offsite, downgradient wells (MW-5 and MW-7).

2.3 Remedial Measures

As stated in section 1.4.2, approximately 1,350 tons of soil were excavated and removed during the gasoline UST removal activities in 1998 (Delta 2009a). In addition, approximately 4.6 tons of soil were over-excavated and removed during the WOT removal.

Over-purging events were conducted at as many as three wells from 2001 to 2004 (MW-1, TP-1, and MW-7). Approximately 476,015 gallons of water were removed during that period. From available historical data, 1,590 gallons were extracted from MW-7 with the remainder being extracted from TP-1 and MW-1.

2.4 Release Mechanism

The location and vertical extent of contaminated soil and groundwater indicate onsite releases occurred at the subsurface dispenser/product piping, WOT, and USTs.

Additionally, an “unidentified underground concrete vault” was previously investigated by Delta in 2009 and 2010, during which it was described to appear to be a “sewer cleanout”. Delta reported that they were “unable to open and better identify the structure” based on “the age and deterioration of the cleanout cap”. To further assess the structure, Delta employed GPR to identify utility lines running to and from this “cleanout”. A line running from the restroom area of the building to the “cleanout” was identified, but no other lines were identified. No details regarding the materials, size, etc., for the cleanout, were provided in Delta’s reports, except that the “vault” appeared to be filled with sand, and the bottom could not be determined beyond 2 feet bgs.

Based on a site reconnaissance conducted by AECOM on November 16, 2012, the “unknown vault” appeared to be a sewer cleanout for the station restroom. The location of the unknown vault is between the station’s restroom facility and the sewer “lateral”, which extends from the manhole along

MacArthur Boulevard. Previous investigations determined via ground penetrating radar (GPR) that a subsurface line from the cleanout terminates near the station restroom, but a line from the cleanout to the main sewer line could not be confirmed in past investigations.

AECOM supervised Cruz Brothers Locating, Inc. (Cruz Bros.) who removed the lid from the “unknown vault” which was a sewer cleanout. Cruz Bros. ran a transmitter sonde down the pipe, which allows the aboveground equipment to get a very accurate depth and location signal. The piping ran perpendicular to MacArthur Boulevard for approximately 15 feet at a depth of approximately 4 feet 9 inches bgs and continued towards MacArthur Boulevard before the piping turned to the northwest. This section of the sewer line could only be approximately located by GPR since the line was too small and the bend was too sharp for the sonde or a sewer camera to travel through. The manhole near MacArthur Boulevard was then accessed and the sonde was pushed up the line to trace the entire line as shown on Figure 2. This investigation indicated that the Site and the Oakland Veterinary Hospital are serviced by one main sewer line located approximately on the property boundary, with multiple lines connecting into it via multiple cleanouts for access and servicing various facilities in the two buildings.

A second cleanout lid is located up against the station building behind the restroom. That lid houses the pressure relief valve for the station hydraulic lifts. No hydraulic oil was noticed in the relief valve vault. It was noted during the investigation that the station and neighboring veterinary hospital utility cover/grates do not necessarily identify what utility is contained within. Water utility vaults contained sewer cleanouts in multiple places and cleanout vaults do not always indicate a cleanout.

Based on the above findings, the structure previously referred to as an “unknown vault” is a sewer cleanout and is, therefore, not considered a potential source of elevated petroleum hydrocarbons detected in soil, soil vapor, and groundwater in the area of former monitoring well MW-1.

3.0 Media of Concern

Media of concern include groundwater, soil, and soil vapor (potentially indoor air concentrations offsite).

4.0 Contaminant(s) of Concern

4.1 Contaminant Name(s)

Contaminants of concern are related to gasoline, diesel, and motor oil (e.g., TPHg, BTEX, MTBE) releases.

4.2 Analytical Results

4.2.1 Soil

Soil boring samples collected from 1997 to date indicate that soil contamination is largely confined to the upper 15 feet of the unsaturated zone. Maximum benzene concentrations of 7.8 mg/kg were observed in soil boring SB-2 at 8.5 feet bgs in 2007. Maximum MTBE concentrations of 1.2 mg/kg were collected from the same boring at 12 feet bgs. Table 4-1 (below) summarizes maximum observed soil concentrations for constituents of concern.

Table 4-1 Maximum Historical Soil Concentrations for Constituents of Concern

Constituent	Boring ID	Date	Depth [ft bgs]	Concentration [mg/kg]
Benzene	SB-2	2007	8.5	7.8
Toluene	SB-2	2007	8.5	51
Ethylbenzene	B1/MW-1	1999	10.5	110
Total Xylenes	B1/MW-1	1999	10.5	470
MTBE	MW-11B	2013	19	7.9

4.2.2 Current Groundwater

Groundwater monitoring from 1999 to 2010 included monitoring of MW-1, MW-2, MW-3, and MW-4. These wells were screened from 5 to 25 feet bgs. In 2010, these wells were abandoned and replaced with monitoring wells screened from 20 to 25 feet bgs located near the former well locations. Differences in groundwater concentrations at the same well locations (but different screen intervals) indicate significant impediments to vertical contaminant transport. Current maximum groundwater concentrations are summarized in Table 4-2 for shallow-, middle-, and deep-screened monitoring wells.

Table 4-2 Current Maximum Groundwater Concentrations

Constituent	Screen Zone	Screen Interval [feet bgs]	Well ID	Date	Concentration [µg/L]
TPHg	Shallow	10-15	MW-11A	7/10/2013	45,000
	Middle	15-20	MW-10B	7/10/2013	4,100
	Deep	20-25	MW-3B	7/10/2013	2,800
TPHd	Shallow	10-15	MW-10A	7/10/2013	1,300
	Middle	15-20	MW-10B	7/10/2013	170
	Deep	20-25	MW-3B	7/10/2013	350
Benzene	Shallow	10-15	MW-11A	7/10/2013	8,600
	Middle	15-20	MW-11B	7/10/2013	1,300
	Deep	20-25	MW-3B	7/10/2013	190
Toluene	Shallow	10-15	MW-10A	7/10/2013	76
	Middle	15-20	MW-11B	7/10/2013	52
	Deep	20-25	MW-3B	7/10/2013	60
Ethylbenzene	Shallow	10-15	MW-11A	7/10/2013	940
	Middle	15-20	MW-10B	7/10/2013	130
	Deep	20-25	MW-3B	7/10/2013	530
Total Xylenes	Shallow	10-15	MW-11A	7/10/2013	7,600
	Middle	15-20	MW-11B	7/10/2013	300
	Deep	20-25	MW-3B	7/10/2013	82
MTBE	Shallow	10-15	MW-11A	7/10/2013	3,600
	Middle	15-20	MW-11B	7/10/2013	490
	Deep	20-25	MW-3B	7/10/2013	14

4.2.3 Historical Groundwater

In comparison to current concentrations, maximum groundwater concentrations prior to well abandonments in 2010 are provided in Table 4-3.

Table 4-3 Historical Maximum Groundwater Concentrations

Constituent	Well ID	Date	Concentration [µg/L]
TPHg	MW-1	8/2/2010	71,000
TPHd	MW-1	8/2/2010	3,900
Benzene	MW-1	8/2/2010	7,000
Toluene	MW-1	8/2/2010	11,000
Ethylbenzene	MW-1	8/2/2010	3,300
Total Xylenes	MW-1	8/2/2010	10,000
MTBE	MW-7	8/2/2010	770

Temporary monitoring wells were installed in soil borings SB-15 through SB-19 in June 2010. The wells were allowed to accumulate groundwater overnight before grab samples were collected. Table 4-4 provides a summary of the results obtained.

Table 4-4 Temporary Monitoring Well Groundwater Concentrations (June 2010)

Boring	Screen Interval [ft bgs]	Dissolved-Phase Concentration				
		TPHg [µg/L]	TPHd [µg/L]	TPHmo [µg/L]	Benzene [µg/L]	MTBE [µg/L]
SB-12	20-25	Dry				
SB-14	19-24	Dry				
SB-15	19-24	ND<50	54	ND<200	ND<0.50	29
SB-16	20-25	ND<50	150	ND<200	140	460
SB-17	14-19	260	260	ND<290	8.7	82
SB-18	15-20	1,900	720	480	94	180
SB-19	15-20	1,100	230	230	8.6	93
Notes: TPHmo = Total Petroleum Hydrocarbons as motor oil.						

4.2.4 Soil Vapor

Soil vapor samples have been collected onsite and offsite near the northwestern portion of the Site for vapor intrusion risk assessment. Table 4-5 presents the maximum observed concentrations from samples collected to date.

Table 4-5 Maximum Soil Vapor Concentrations

Constituent	Boring ID	Date	Depth [ft bgs]	Concentration [µg/m3]
TPH-g	SVW-6	4/8/2013	5	260,000,000
Benzene	SVW-6	9/8/2010	5	1,400,000
Toluene	SVW-2	9/8/2010	5	19,000
Ethylbenzene	SVW-6	4/8/2013	5	700,000
Total Xylenes	SVW-3	9/8/2010	5	820,000
MTBE	SVW-6	9/8/2010	5	ND<37,000

Soil gas samples collected in April and August 2013 were also analyzed for air-phase hydrocarbon fractions. In all samples analyzed, the most significant fractions were observed in the C5-C8 carbon chain length categories, indicative of gasoline-range hydrocarbons (AECOM, 2013b, 2013c).

4.3 Monitoring Results

A summary of results of contaminant of concern monitoring are presented in the above Tables 4-1 through 4-5. Additional historical monitoring results are presented in Attachment D.

5.0 Plume Delineation and Stability

The vertical/horizontal extent and stability of impacts for impacted media are discussed below.

5.1 Vertical

5.1.1 Soil

Soil impacts have been vertically delineated at the Site to a maximum depth of 50 feet bgs. A review of historical soil data indicates that, in soil samples collected from greater than 20 feet bgs, no compounds of concern have been detected that exceed the residential ESLs for deep soils for non-drinking water sources (San Francisco RWQCB 2008).

5.1.2 Groundwater

Recent well installations indicate that a strong impediment to vertical transport exists in the shallow subsurface, evidenced by significantly declining dissolved-phase concentrations with depth. Highest groundwater concentrations remain in the 10-15 foot bgs interval. Groundwater impacts shallower than 10 feet are unknown; however, they are expected to be similar to those in the 10-15 foot bgs interval, based on similar soil types and soil concentrations.

5.1.3 Vapor

Soil vapor samples have been collected to a maximum depth of 5 feet bgs onsite, and offsite near the northwestern portion of the Site. Because vapor samples have only been collected at each location at discrete screen intervals, vertical delineation of soil gas is unknown. With current depth to groundwater at approximately 5 feet bgs, soil gas samples collected deeper than 5 feet would be irrelevant. Soil gas samples collected shallower than 5 feet (3.5 feet bgs) have been collected in previous investigations, and are in line with other results (Delta, 2009b). Therefore, the vertical extents of soil vapor at the Site and the adjacent Oakland Veterinary Hospital have been delineated to the extent necessary.

5.2 Horizontal

5.2.1 Soil

Soil contamination is confined to the Site, in the vicinity of the former USTs, WOT, and product lines. In the northern portion of the Site, soil contamination is distributed laterally downgradient to the west from the former WOT. This trend is evident from approximately surface to 20 feet bgs. Horizontal distribution of soil impacts downgradient of the WOT, USTs, and dispensers may be a result of shallow groundwater conditions.

5.2.2 Groundwater

Groundwater impacts have been identified in the ten onsite wells, in addition to offsite, downgradient wells MW-5 and MW-7. Two main sources of groundwater contamination are known to have existed onsite (former WOT and USTs) and were located approximately 50 to 60 feet cross-gradient from each other. Future assessment may be necessary to determine if there is a connection between impacts observed in wells found downgradient from these former sources (i.e., one plume or multiple plumes).

5.2.3 Vapor

Soil vapor concentrations have been measured on- and off-site along the northern Site boundary to identify vapor intrusion risk to the adjacent commercial building. The concentrations are highest near the former WOT location (see Table 4-5, above). TPH-g and benzene soil gas concentrations have been measured onsite as high as 260,000,000 µg/m3 (SVW-6) and 1,400,000 µg/m3 (SVW-6), respectively. TPH-g and benzene soil gas concentrations have been measured along the northwest property line as high as 190,000,000 µg/m3 (SV-1 [installed in 2013]) and 1,200,000 µg/m3 (SVW-3), respectively.

5.3 Plume Stability

5.3.1 Soil

The vertical extent of soil contamination is confined to the unsaturated/partially saturated shallow zone. Additional assessment is required to determine the stability and extent of horizontal soil impacts in the unsaturated zone(s).

5.3.2 Groundwater

Groundwater concentration data from monitoring wells MW-1B through MW-4B suggest a stable to shrinking plume. Concentrations in downgradient, offsite wells MW-5 and MW-7 have declined from historic highs for TPHg, benzene, and MTBE. Additional assessment may be necessary to demonstrate the extent of cross-gradient (northwest and southeast) groundwater concentrations. In addition, assessment to determine whether onsite impacts between sources located in the north and south regions of the Site are connected may be necessary. Although groundwater concentrations in shallow zones (MW-9A/B, MW-10A/B, MW-11A/B) are relatively high compared to the deep zone (MW-1B through MW-4B), the clay lithology presents a transport impediment to migration. Since downgradient well MW-7 continues to decline, residual impacts in these zones do not appear to be migrating significantly offsite.

5.3.3 Vapor

The stability of the soil vapor plume cannot be determined as horizontal groundwater impacts have not been fully delineated.

6.0 Pathways and Receptors

6.1 Potential Receptors

In 2001 a GeoTracker database search was performed by Environmental Resolutions, Inc. (MBE 2004). Four public water supply wells owned by the East Bay Regional Park District (Park District) were identified within a ½-mile radius of the Site. Representatives from the Park District reported having no knowledge or records of any wells under their ownership or oversight located in this area and indicated that the wells may have belonged to the EBMUD. EBMUD was contacted and reported no knowledge or records of any wells under their ownership or oversight located in the area.

Also in 2001 a Department of Water Resources (DWR) database search was performed by Environmental Resolutions, Inc. (MBE 2004). Four water supply wells belonging to Mills College were identified within a ½-mile radius search area. A representative from Mills College indicated that all wells associated with Mills College had been destroyed and Mills College was now connected to a municipal water supply. The DWR search also indicated a well was located at 3397 Arkansas Street, approximately 880 feet outside of the search area. No other wells, surface water bodies, or potentially sensitive environmental habitats were reported to have been identified during ERI's field receptor search.

In 2006, a well survey, which included a visit to the DWR office in Sacramento, was performed to examine well log records and identify domestic wells within the survey area (Delta 2007a). The DWR survey identified two potential receptors within 1 mile of the Site – one irrigation well located 0.9 mile northwest of the Site, and one domestic/irrigation well located 1.0 mile northeast of the Site. Two additional potential receptors were reported to have been identified, although the specific addresses could not be verified.

The adjacent Oakland Veterinary Hospital has been identified as a potential "receptor" due to elevated soil vapor concentrations detected along the northwest property boundary of the Site. Conservative vapor intrusion modeling performed in August 2013 indicates that the cumulative potential excess lifetime cancer risk (ELCR) and hazard index (HI) associated with the detected concentrations of constituents of potential concern (COPCs) in the soil vapor samples (SV-1 and SV-2) collected from the OVH property are within USEPA's target risk level, but are above USEPA and CalEPA's target HI level. Additional assessment has been proposed (AECOM 2013) and approved by the ACEH (2013) to further determine soil vapor impacts associated with the Oakland Veterinary Hospital.

Based on the information above, no other potential receptors have been identified.

6.2 Potential Exposure Pathways

As shown on Figure 5, potential exposure pathways were evaluated. The exposure pathways determination was based on the information obtained to date.

Additional assessment has been proposed (AECOM 2012) and approved by the ACEH (2012) to further determine soil vapor impacts associated with the Site, and the potential for soil vapor intrusion to the adjacent Oakland Veterinary Hospital.

7.0 Data Gap Analysis

Based on a review of the data collected to date, the following data gaps have been identified:

- Vertical and horizontal distribution of dissolved-phase hydrocarbons in groundwater shallower than 10 feet bgs is unknown.
- No groundwater data has been collected in the central portion of the Site (downgradient of the station building) to determine the connectivity of contaminant plumes between former sources near the northern and southern property boundaries.
- Cross-gradient groundwater impacts (southeast and northwest) have not been fully delineated offsite.
- Not enough data has been collected (from monitoring wells MW-9A/B, MW-10A/B, and MW-11A/B) to demonstrate stability of shallow groundwater concentrations.
- No geochemical data has been collected to determine if the potential exists for natural attenuation of petroleum hydrocarbons in groundwater.
- Vapor intrusion impacts at the adjacent Oakland Veterinary Hospital are undetermined.

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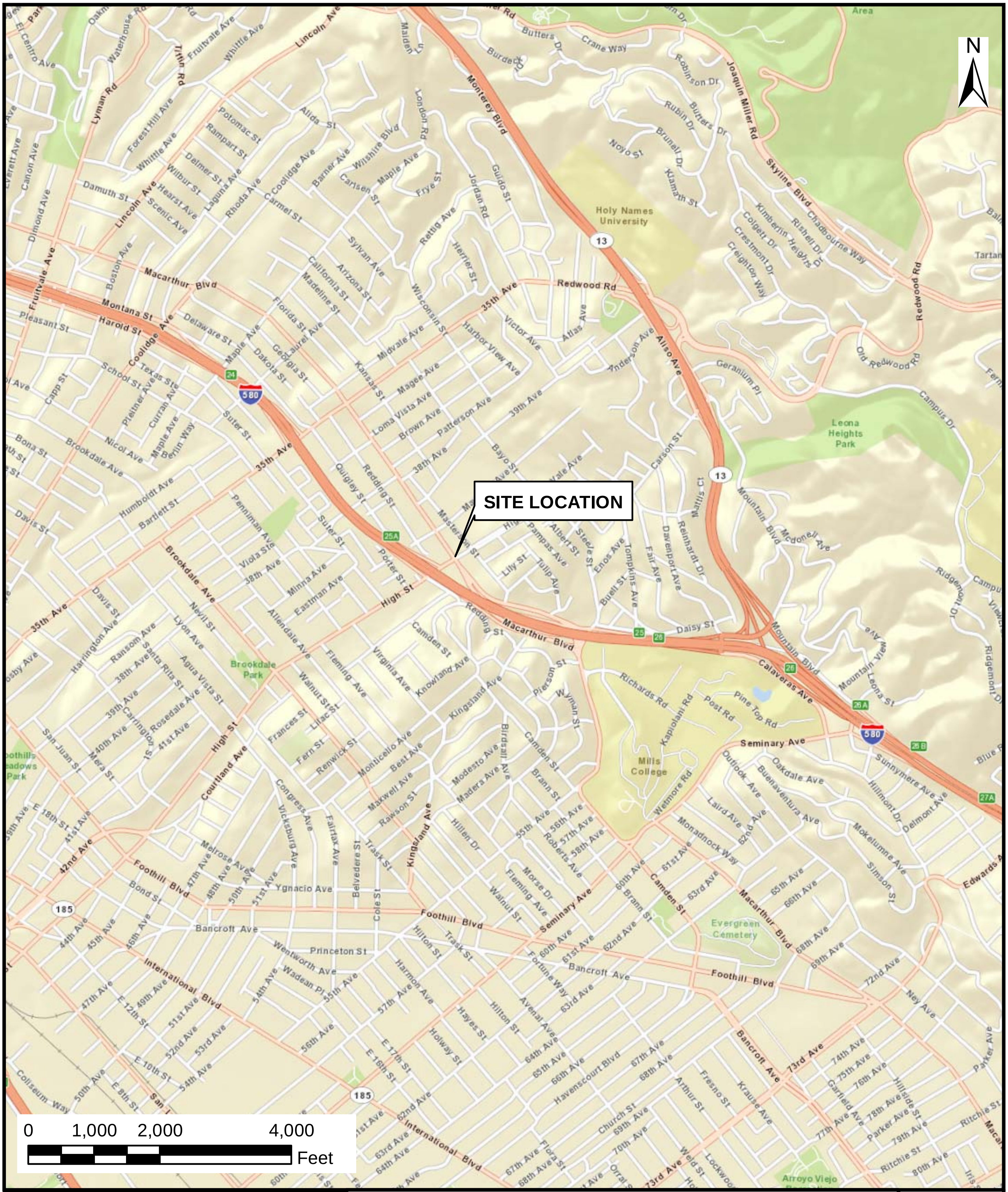
Attachment A

Figures

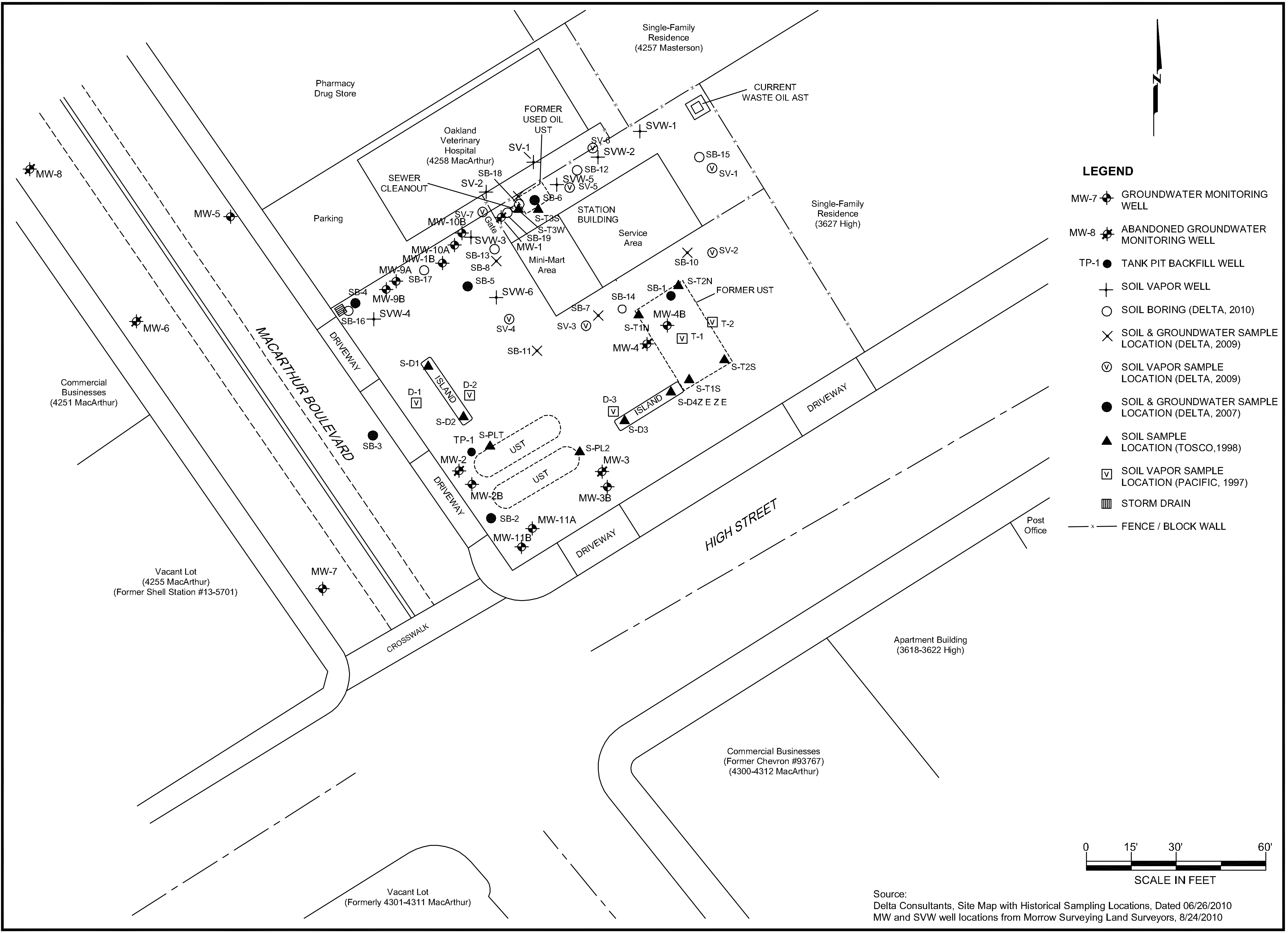


AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: 805.388.3775
FAX: 805.388.3577
WEB: HTTP://WWW.AECOM.COM

SITE LOCATION MAP

76 Service Station #1156 (Chevron Site #351645)
4276 MacArthur Boulevard
Oakland, California

DRAWN BY:	DATE:	PROJECT NUMBER:	FIGURE NUMBER:	SHEET NUMBER:
M. Scop	5/2/2012	60249149	1	1 of 1



Source:
Delta Consultants, Site Map with Historical Sampling Locations, Dated 06/26/2010
MW and SVW well locations from Morrow Surveying Land Surveyors, 8/24/2010

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REVISIONS		
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:	X
DRAWN BY:	M. Scop
CHECKED BY:	X
APPROVED BY:	B. Evans

AECOM

AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

SITE PLAN

Chevron Site #351645 (76 Service Station #1156)
4276 MacArthur Boulevard
Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	11/8/2013	60264254 - A50

FIGURE NUMBER:

2

SHEET NUMBER:

X

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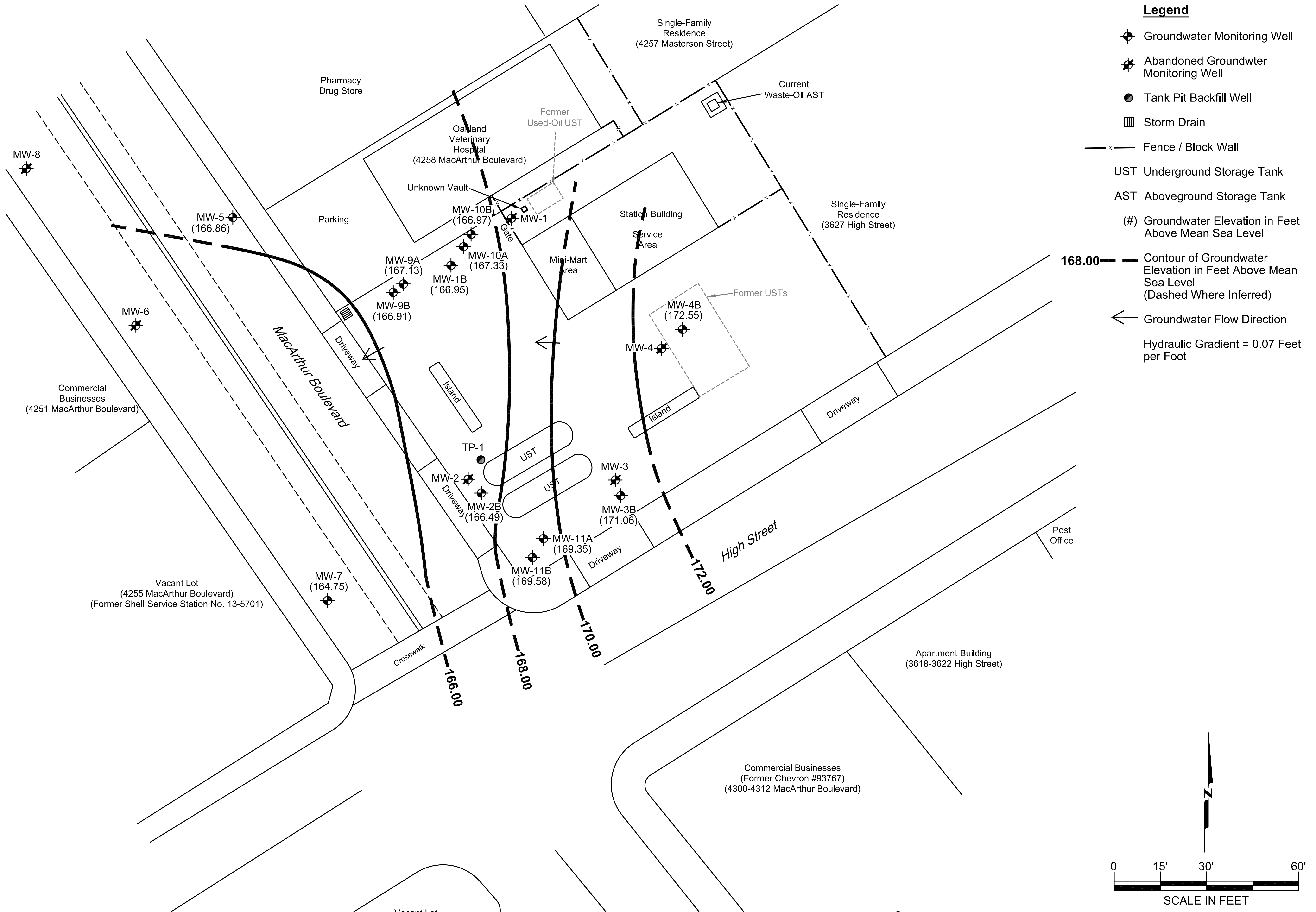


Source:
Delta Consultants, Site Map with Historical Sampling Locations, Dated 06/26/2010
MW well locations from Morrow Surveying Land Surveyors, 8/24/2010

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY: T. Quiroz
DRAWN BY: T. Quiroz
CHECKED BY: D. Files
APPROVED BY: B. Evans

AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

Third Quarter 2013
Groundwater Elevation Contour Map
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	07/27/2013	60283732

FIGURE NUMBER:
3

SHEET NUMBER:
1 of 1

Monitoring Well Exhibit

Prepared For:

AECOM

BASIS OF COORDINATES:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 3 COORDINATES FROM GPS OBSERVATIONS USING UNIVERSITY OF CALIFORNIA BAY AREA DEFORMATION CORS STATION OBSERVATION FILES AND BASED ON THE CALIFORNIA SPATIAL REFERENCE CENTER DATUM, REFERENCE EPOCH 2000.35.
COORDINATE DATUM IS NAD 83(CORS)
DATUM ELLIPSOID IS GRS80
REFERENCE GEOID IS GEOID99
VERTICAL DATUM IS NAVD 88 FROM GPS OBSERVATIONS

CORS STATION USED WAS DIAB AND MOLA.

*Note: MW-1,2,3,4,6,and 8 have been abandoned. MW-1,2,3,and 4 have been replaced by MW-1B,2B,3B,and 4B as of 8-24-10. MAM

DESC.	NORTHING	EASTING	LATITUDE	LONGITUDE	EL. PVC	EL. BOX
WELLS SURVEYED FOR DELTA IN 2008 AND 2010:						
MW-1B	2113738.0	6071926.4	37.7877602	-122.1948610	174.05	174.58
MW-2B	2113664.1	6071936.3	37.7875576	-122.1948223	173.55	173.99
MW-3B	2113663.2	6071981.6	37.7875574	-122.1946655	177.77	178.37
MW-4B	2113717.2	6072001.6	37.7877067	-122.1945995	179.07	179.42
MW-5	2113753.6	6071855.6	37.7877993	-122.1951072	169.18	169.67
MW-7	2113629.1	6071886.3	37.7874591	-122.1949929	172.11	172.39
SVW-1	2113782.1	6071992.4	37.7878845	-122.1946353		
SVW-2	2113773.4	6071978.4	37.7878600	-122.1946833		
SVW-3	2113746.7	6071936.0	37.7877844	-122.1948285		
SVW-4	2113719.2	6071903.5	37.7877075	-122.1949393		
SVW-5	2113764.2	6071964.7	37.7878341	-122.1947304		
SVW-6	2113726.5	6071944.4	37.7877295	-122.1947980		
WELLS SURVEYED FOR AECOM ON 4-8-13:						
MW-9A	2113731.9	6071911.0	37.7877426	-122.1949142	173.01	173.36
MW-9B	2113729.2	6071907.6	37.7877351	-122.1949255	172.78	173.12
MW-10A	2113744.1	6071930.5	37.7877770	-122.1948474	174.48	174.85
MW-10B	2113748.1	6071932.9	37.7877881	-122.1948392	174.62	174.98
MW-11A	2113649.2	6071956.5	37.7875179	-122.1947515	175.37	175.85
MW-11B	2113643.1	6071952.9	37.7875008	-122.1947635	174.65	175.37
SV-1	2113771.8	6071956.9	37.7878544	-122.1947577		175.71
SV-2	2113761.8	6071941.0	37.7878262	-122.1948120		175.85

Figure 4

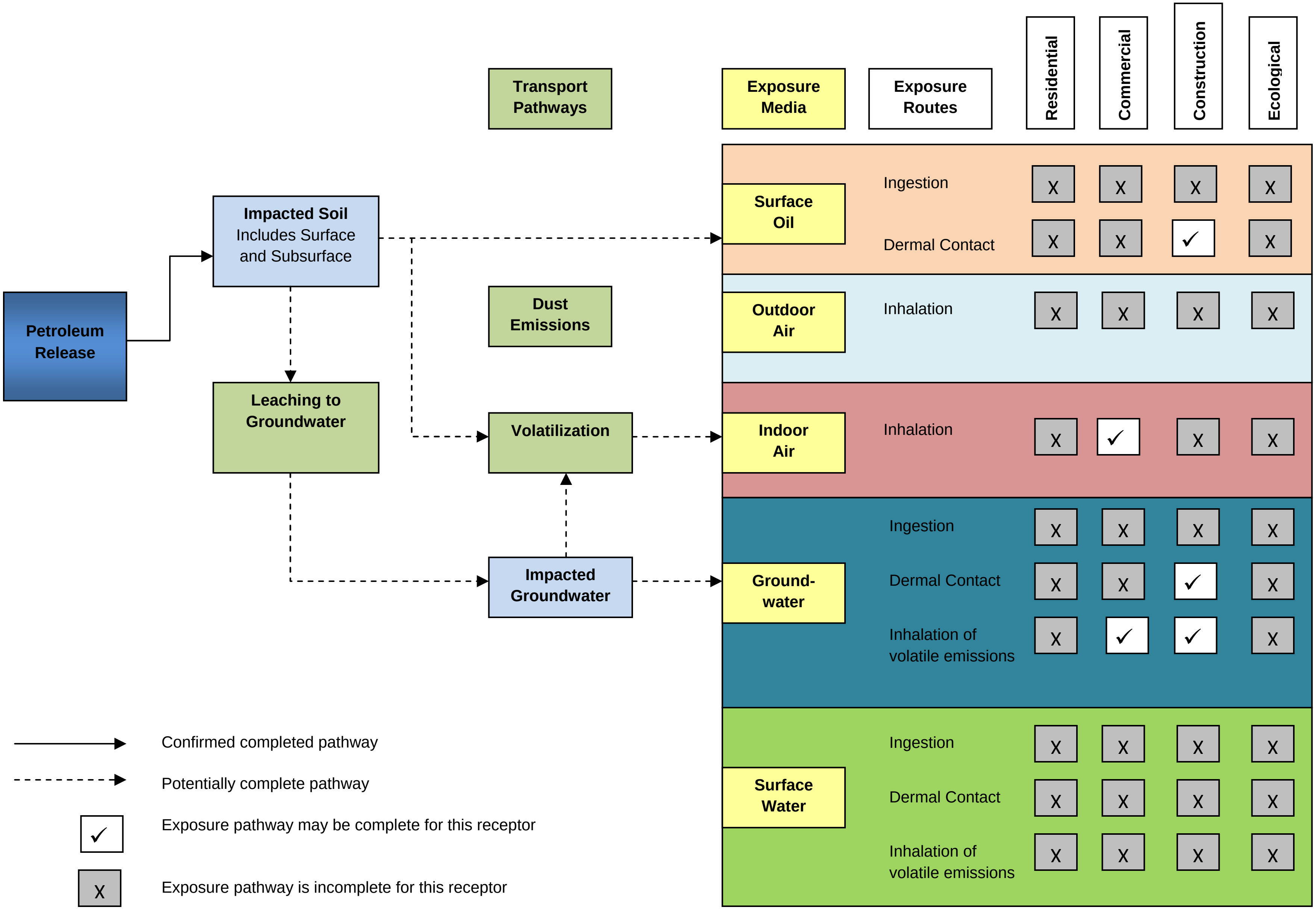
76 Service Station # 1156
4276 MacArthur Blvd.
Oakland
Alameda County
California

Morrow Surveying
LAND SURVEYORS

1255 Starboard Drive
West Sacramento
California 95691
(916) 372-8124
mark@morrowsurveying.com

Date: April, 2013
Field: 4-8-13 RL
Scale: 1” = 30’
Revised:
Field Book: 1152
Dwg. 1856-046 MAM
Reference Dwg. 1275-106 MAM

Figure 5 – Conceptual Site Model Transport and Exposure Pathways



Exposure Media	Exposure Routes	Residential	Commercial	Construction	Ecological
Surface Oil	Ingestion	X	X	X	X
	Dermal Contact	X	X	✓	X
Outdoor Air	Inhalation	X	X	X	X
Indoor Air	Inhalation	X	✓	X	X
Ground-water	Ingestion	X	X	X	X
	Dermal Contact	X	X	✓	X
	Inhalation of volatile emissions	X	✓	✓	X
Surface Water	Ingestion	X	X	X	X
	Dermal Contact	X	X	X	X
	Inhalation of volatile emissions	X	X	X	X

→ Confirmed completed pathway

⇢ Potentially complete pathway

✓ Exposure pathway may be complete for this receptor

X Exposure pathway is incomplete for this receptor

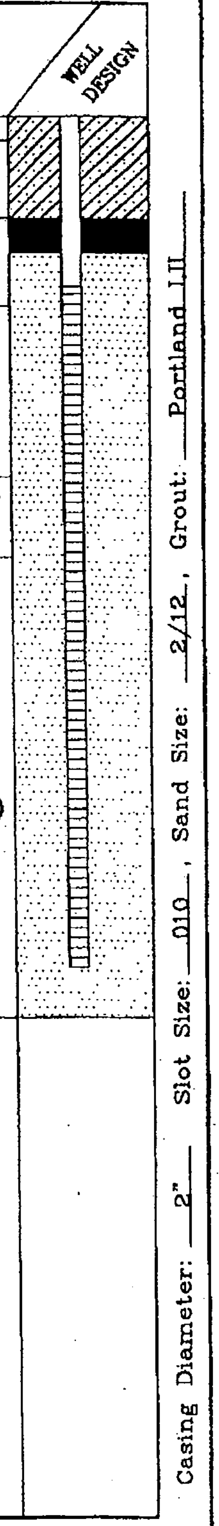
Attachment B

Boring Logs

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: B1/MW1 Plate: APPENDIX
Site: Tosco 76 Service Station 11. Date: 7/16/99
Drill Contractor: Woodward Drlling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: 10 Feet North of Northwestern Corner of Station Registration: R.G. 4412
Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	USCS	GEOLOGIC DESCRIPTION
				2 1/2" asphalt
			CH	Clay, grayish green, very moist, high plasticity
			SP	Sand, fine-grained, grayish green, moist, no plasticity, black staining
5	39	253		
			CH	Clay, grayish green, very moist, high plasticity
10	27	87		
			ML	Silty sand, fine-grained sand, black, very moist, no plasticity, (65% silt, 35% sand)
			CL	Clay, with some sand, medium-grained, light olive brown, medium plasticity, wet
15	36	222		
20	37	22		sandy clay, strong brown, (40% sand, 60% clay)
		▼		yellow orange, high plasticity, very moist
25	33	9		
				Total depth at 26.5 feet. Groundwater encountered at 23'7".



Delta

Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: HAS
Sampling Method: Split Spoon
Casing Type: Sch 40
Slot Size: 0.02
Gravel Pack: 2/12

Client: COP
Location: Oakland
Date Drilled: 8/17/2010
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 25'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **MW-1B**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill	Well Completion Casing	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
										Airknife to 5' Brown and grayish-sgrren clay
						1				
						2				
						3				
						4				
				299	MW-1B -5	5	▨	▨	CL	Greenish-gray sandy lean clay with gravel, 15% sand, 15%, gravel, strong odor, damp
						6		▨		
						7				
						8				
						9				
				173	MW-1B -10	10	▨	▨	CL	Black lean clay with sand, mottled with granular black organic material, 20% sand, strong odor, moist
						11		▨		
						12				
						13				
						14				
				952	MW-1B -15	15	▨	▨	CL	Brown sandy clay, fine-course sand, 35% sand, strong odor, damp
						16		▨		
						17				
						18				
						19				
				19	MW-1B -20	20	▨	▨	CL	Black sandy lean clay with gravel, 30% sand, 10% gravel, strong odor, wet
						21		▨	CL	Brn lean clay with sand, 25% sand, some odor, damp
						22				

Delta
Environmental Consultants, Inc.

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: HAS
Sampling Method: Split Spoon
Casing Type: Sch 40
Slot Size: 0.02
Gravel Pack: 2/12

Client: COP
Location: Oakland
Date Drilled: 8/17/2010
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 25'
▼ First Water Depth: 23.5'
▽ Static Water Depth:

Boring/Well No: **MW-1B**
Page 2 of 2

Elevation:
Northing:
Easting:

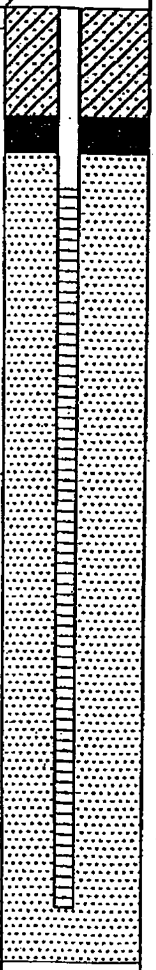
Well Completion Backfill	Well Completion Casing	Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
		▼				23		▨	CL	Brown sandy gravely clay, 25% sand, 10% gravel, saturated, mild odor
				44	MW-1B -25	24	▨	▨ ▨	CL	Brown sandy clay, 15% samp, mild odor, damp
						25				Total Depth = 25'
						26				
						27				
						28				
						29				
						30				
						31				
						32				
						33				
						34				
						35				
						36				
						37				
						38				
						39				
						40				
						41				
						42				
						43				
						44				

ERI ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: B2/MW2 Plate: APPENDIX
Site: Tosco 76 Service Station 1156 Date: 7/16/99
Drill Contractor: Woodward Drilling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: 2 Feet EAst of Southernmost Driveway Along MacArthur Boulevard Registration: R.G. 4412
Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	USCS	GEOLOGIC DESCRIPTION
				4" asphalt
				Clay, dark greenish gray, mottled redish orange, some coarse-grained sand, slightly damp, high plasticity, (35% sand, 65% clay)
5	11	20	CH	
10	18	0		15% fine gravels up to 0.5", 20% sand, medium-grained, damp
				Silty clay, orange brown, mottled green gray, (35% silt, 65% clay), moist, medium plasticity
15	21	130	CL	
20	29	20		gravelly clay, light yellowish brown, (40% fine gravel, 60% clay), medium plasticity, very moist, black staining
		▼	ML	Sandy clay, trace of silt, yellowish brown, wet, medium plasticity, (35% sand, 15% silt, 50% clay)
25	45	18		
				Total depth at 26.5 feet. Groundwater encountered at 23' 6".

WELL DESIGN



Casing Diameter: 2" Slot Size: .010 , Sand Size: 2/12 , Grout: Portland I,II

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: HAS
Sampling Method: Split Spoon
Casing Type: Sch 40
Slot Size: 0.02
Gravel Pack: 2/12

Client: COP
Location: Oakland
Date Drilled: 8/16/2010
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 25'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **MW-2B**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion		Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample		Soil Type	**LITHOLOGY / DESCRIPTION**
Backfill	Casing						Recovery	Interval		
										Airknife to 5'
						1			CL	Brown and greenish lean clay with sand
						2				
						3				
						4				
				181	MW-2B -5	5	▨	▨	CL	Light brown/green mottled lean clay with sand, 15% sand, strong odor, damp
						6		▨		
						7				
						8				
						9				
				0	MW-2B -10	10	▨	▨	CH	Greenish fat clay, dense, damp, odor
						11		▨		
						12				
						13				
						14				
				120	MW-2B -15	15	▨	▨	CL	Green lean clay with sand, 15% med-course sand, damp, odor
						16		▨		
						17				
						18				
						19				
				8	MW-2B -20	20	▨	▨	CL	Dark borwn lean clay with sand, 15% sand, fine-med sand, damp, odor
						21		▨		
						22				

Delta
Environmental Consultants, Inc.

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: HAS
Sampling Method: Split Spoon
Casing Type: Sch 40
Slot Size: 0.02
Gravel Pack: 2/12

Client: COP
Location: Oakland
Date Drilled: 8/16/2010
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 25'
▼ First Water Depth: 23.5'
▽ Static Water Depth:

Boring/Well No: **MW-2B**
Page 2 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill	Well Completion Casing	Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
						23				
								▨	CL	Brown lean clay with sand, 25% sand, some gravel, mild odor
						24		▨	CL	Black/brown mottled clay, damp, mild odor
				190	MW-2B -25		▨	▨		
						25				Total Depth = 25'
						26				
						27				
						28				
						29				
						30				
						31				
						32				
						33				
						34				
						35				
						36				
						37				
						38				
						39				
						40				
						41				
						42				
						43				
						44				

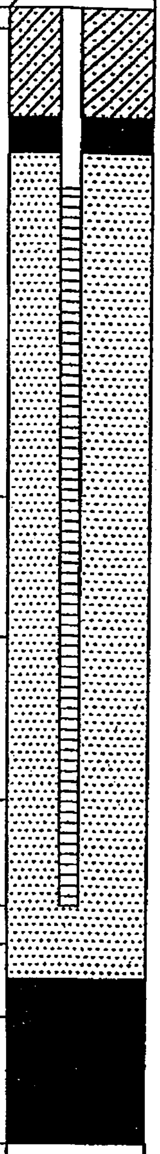
ERI ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: B3/MW3 Plate: APPENDIX
Site: Tosco 76 Service Station 1156 Date: 7/16/99
Drill Contractor: Woodward Drilling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: Approximately 15' South West of Southern-most Dispenser Island Parallel to High Street Registration: R.G. 4412
Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	USCS	GEOLOGIC DESCRIPTION
				4 1/2" asphalt
				Clay, dark yellowish brown, mottled, trace of medium-grained sand, slightly damp, high plasticity, (15% sand, 85% clay)
5	18	235		brown, mottled gray, dry
			CH	
10	33	265		staining, trace of coarse gravel and rootlets (15% gravel, 85% clay), slightly damp
		▽		
				Sandy clay, greenish gray, mottled, orange, some medium-grained sand, slight plasticity, caliche present, (35% sand, 65% clay)
15	25	81		
			CL	
				Clay, strong brown, slight mottling, trace of medium-grained sand, 20% sand, high plasticity, black staining, 80% clay
20	36	9	CH	
				Gravel, yellowish brown, wet
		▼	GW	
25	25	0	CH	Clay, trace of medium-grained sand, yellowish brown, very moist, high plasticity, (15% sand)
			GW	Gravel, orange, slight plasticity, wet
				Clay, yellowish brown, moist, high plasticity
30	22	0	CH	

Total depth at 31.5 feet.
Groundwater encountered at 23.3 feet.
Static groundwater at 12 feet.

WELL DESIGN



Casing Diameter: 2" Slot Size: .010 , Sand Size: 2/12 , Grout: Portland I II

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: HAS
Sampling Method: Split Spoon
Casing Type: Sch 40
Slot Size: 0.02
Gravel Pack: 2/12

Client: COP
Location: Oakland
Date Drilled: 8/16/2010
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 25'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **MW-3B**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill	Well Completion Casing	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
										Airknife to 5'
						1			CL	Brown lean clay with sand, some gravel, no odor
						2				
						3				
						4				
				6	MW-3B -5	5	▨	▨	CL	Light brown/greenish mottled clay, moist, slight odor
						6		▨		
						7				
						8				
						9				
				36	MW-3B -10	10	▨	▨	CH	Light brown/green/black mottled lean clay with sand, 15% fine sand, damp, mild odor
						11		▨		
						12				
						13				
						14				
				790	MW-3B -15	15	▨	▨	CL	Light brown/green mottled lean clay with sand, 20% fine-med sand, damp, strong odor
						16		▨		
						17				
						18				
						19				
				9	MW-3B -20	20	▨	▨	CH	Light brown fat clay, damp, mild odor
						21		▨	CL	Dark brown lean clay with sand, 15% fine sand, damp, mild odor
						22				

Delta
Environmental Consultants, Inc.

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Meth HAS
Sampling Method: Split Spoon
Casing Type: Sch 40
Slot Size: 0.02
Gravel Pack: 2/12

Client: COP
Location: Oakland
Date Drilled: 8/16/2010
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 25'
▼ First Water Depth: 23.5'
▽ Static Water Depth:

Boring/Well No: **MW-3B**
Page 2 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill	Well Completion Casing	Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
						23				
						24		▨		Light brown lean clay with sand, 30% fine-med
				15	MW-3B -25	25	▨	▨	CL	sand, moist, very slight odor Total Depth = 25'
						26				
						27				
						28				
						29				
						30				
						31				
						32				
						33				
						34				
						35				
						36				
						37				
						38				
						39				
						40				
						41				
						42				
						43				
						44				

ERI ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: B4/MW4 Plate: APPENDIX

Site: Tosco 76 Service Station 1156 Date: 7/16/99

Drill Contractor: Woodward Drilling

Sample Method: Split Spoon

Geologist: MARK S. DOCKUM

Drill Rig: B57

Bore Hole Diameter: 8"

Signature: Mark S Dockum

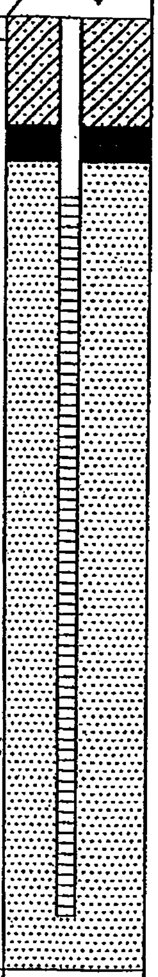
Location: 18 Feet North of Southernmost Dispenser Island Parallel High Street

Registration: R.G. 4412

Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	USCS	GEOLOGIC DESCRIPTION
				4 1/2" asphalt
				Clay, greenish gray, mottled, orange slightly damp, high plasticity
5	17	309		
10	22	253	CH	trace of medium-grained sand, slightly moist
15	19	4		moist
20	28	4		brownish yellow, black staining, 20% gravel, 20% medium-grained sand, moist
		▼		brown, mottled, olive yellow, moist, black staining
25	36	0		

Total depth at 26.5 feet.
Groundwater encountered at 23.6 feet.



Casing Diameter: 2", Slot Size: .010, Sand Size: 2/12, Grout: Portland I,II

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: HAS
Sampling Method: Split Spoon
Casing Type: Sch 40
Slot Size: 0.02
Gravel Pack: 2/12

Client: COP
Location: Oakland
Date Drilled: 8/13/2010
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 25'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **MW-4B**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill	Well Completion Casing	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
										Airknife to 5'
									GC	Brown clayey gravel with sand,
						1				
						2				
						3				
						4			GW	Well graded gravel with sand, cobbles up to 4"
				2.1	MW-4B -5	5	▨	▨	SW-SM	Greenish gray well graded sand with silt and gravel, 60% sand, 20% gravel, no odor
						6		▨		
						7				
						8				
						9				
				1401	MW-4B -10	10	▨	▨	SW-SM	Black well graded sand with silt, 60% fine sand, strong odor
						11		▨		
						12				
						13				
						14				
				19.5	MW-4B -15	15	▨	▨	CL	Brown/green mottled lean clay with sand, 15% fine sand, some odor
						16		▨		
						17				
						18				
						19				
					MW-4B -20	20	▨	▨	CL	Brown/black mottled sandy lean clay, 30% fine-med sand, some odor
						21		▨		
						22				

Delta
Environmental Consultants, Inc.

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Methc HAS
Sampling Method: Split Spoon
Casing Type: Sch 40
Slot Size: 0.02
Gravel Pack: 2/12
Client: COP
Location: Oakland
Date Drilled: 8/16/2010
Hole Diameter: 8"
Hole Depth: 25'
Well Diameter: 2"
Well Depth: 25'
▼ First Water Depth: 23.5'
▽ Static Water Depth:
Elevation:
Northing:
Easting:

Boring/Well No: **MW-4B**
Page 2 of 2

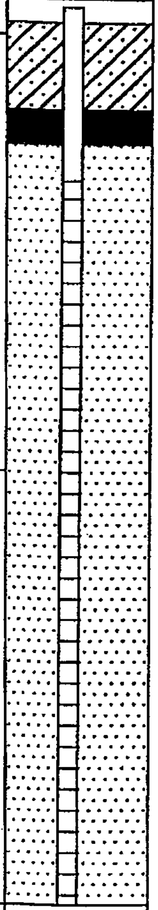
Well Completion		Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample		Soil Type	**LITHOLOGY / DESCRIPTION**
Backfill	Casing						Recovery	Interval		
						23				
						24		▨		
				19	MW-4B -25	25	▨	▨	CL	Brown lean clay, 10% fine-med sand, some odor Total Depth = 25'
						26				
						27				
						28				
						29				
						30				
						31				
						32				
						33				
						34				
						35				
						36				
						37				
						38				
						39				
						40				
						41				
						42				
						43				
						44				

ERI ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: MW5 Plate: Attachment
Site: Tosco 76 Service Station 1156 Date: 8/29/01
Drill Contractor: Woodward Drilling Company, Inc.
Sample Method: Split Spoon Geologist: JOHN B. BOBBITT
Drill Rig: BK-81 Bore Hole Diameter: 8" Signature: JBBobbitt
Location: Eastern side of MacArthur Boulevard approximately 40 feet north of site Registration: R.G. 4313
Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6" Concrete	
5	23	8.3 ∇			CL	CLAY WITH SAND AND TRACE OF GRAVEL: greenish gray, moist, high plasticity, fine-grained sand, fine-grained poorly-sorted subangular gravel.	
10	27	7.7				SANDY CLAY: orange brown, moist, low plasticity, fine-grained sand.	
15	57	11.2				SANDY SILT: orange brown, moist, low plasticity, fine-grained sand.	
20	30				ML		
	38	7.7				light brown, wet.	
25							

Boring Terminated at 25 feet.
Boring converted to groundwater monitoring well.
Groundwater encountered at 6 feet.

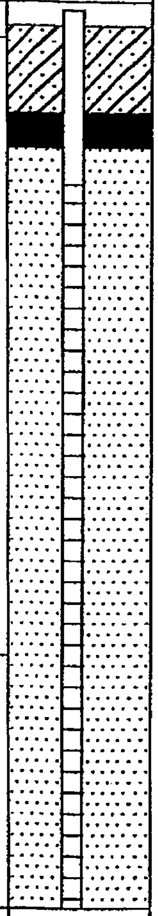


Casing Diameter: 2", Slot Size: 0.020, Sand Size: #3, Grout: Portland Cement

ERI ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: MW6 Plate: Attachment
Site: Tosco 76 Service Station 1156 Date: 8/29/01
Drill Contractor: Woodward Drilling Company, Inc.
Sample Method: Split Spoon Geologist: JOHN B. BOBBITT
Drill Rig: BK-81 Bore Hole Diameter: 8" Signature:
Location: Western side of MacArthur Boulevard approx. 30 feet north of Shell station Registration: R.G. 4313
Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6" Concrete	
5	24	10.6 ∇				CLAYEY SILT: greenish gray, very moist, medium plasticity.	
10	19	10.0			ML	light brown, trace of fine-grained sub-angular sand (approx. 5%).	
15	24	6.0				CLAYEY SILT WITH SAND: light brown, fine-grained sub-angular sand (approx. 15%).	
20	48	7.7			SM	SAND WITH SILT: orange brown, wet, medium-grained well-sorted well-rounded sand.	
25	50/5"						



Boring terminated at 25 feet.
Boring converted to groundwater monitoring well.
Groundwater encountered at 5.5 feet.

Casing Diameter: 2" Slot Size: 0.020 , Sand Size: #3 , Grout: Portland Cement

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: MW7 Plate: Attachment

Site: Tosco 76 Service Station 1156 Date: 8/29/01

Drill Contractor: Woodward Drilling Company, Inc.

Sample Method: Split Spoon Geologist: JOHN B. BOBBITT

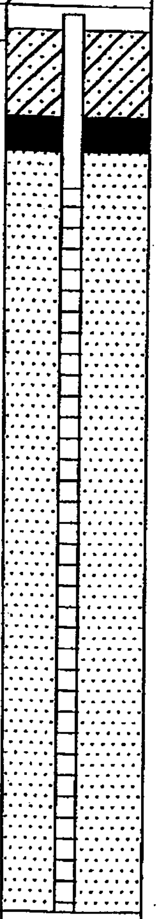
Drill Rig: BK-81 Bore Hole Diameter: 8" Signature:

Location: Western side of MacArthur Boulevard approx. 40 feet north of High Street Registration: R.G. 4313

Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION
						6" Concrete
5	50/5"	25	■	▨		SANDY SILT: brown with bluish green mottling, moist, low plasticity, 40% fine-grained sand.
10	36	236	■	▨		
				▨	ML	
15	35	8.9 ∇	■	▨		light brown, wet.
20	25	57	■	▨		
	50/5"	19.3	■	▨		reddish brown, 30% medium-grained sand.
25						Boring terminated at 25 feet. Boring converted to groundwater monitoring well. Groundwater encountered at 15 feet.

WELL DESIGN



Casing Diameter: 2", Slot Size: 0.020, Sand Size: #3, Grout: Portland Cement

FN: 2235B007

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Split Spoon**
Casing Type: **Schedule 40 PVC**
Slot Size: **0.010"**
Gravel Pack: **#2/12**

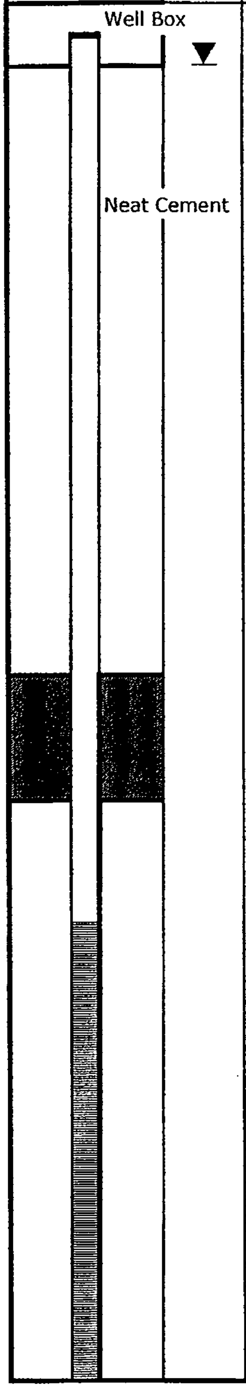
Client: **ConocoPhillips**
Location: **4276 MacArthur Boulevard**
Oakland, CA
Hole Diameter: **8"**
Hole Depth: **25'**
Well Diameter: **2"**
Well Depth: **25'**
First Water Depth: **23'**

Well No: **MW-8**
Date Drilled: **10/30/07**
Page **1** of **2**

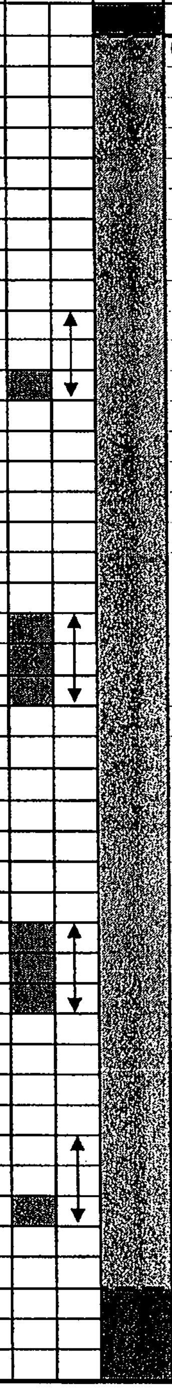
▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion (Backfill, Casing) / Static Water Level



Sample (Recovery, Interval) / Soil Type



Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	LITHOLOGY / DESCRIPTION
				Concrete = 6"
				CL **Silty clay;** black and brown; medium soft; medium to high plasticity; low toughness; trace orange mottling; moist; (0,0,100)
			1	
		Air-Knife	2	
			3	
			4	
moist	0.1	@ 5 9:46	5	CL **Lean clay**; black; medium stiff; medium plasticity and toughness; some fine sand; some fine to medium sub round gravel; moist; no odor; (15,20,65)
			6	
			7	
			8	
			9	
moist	0.2	@ 10* 9:51	10	Tan; some orange mottling; trace roots; some black staining; slight odor; (5,15,80)
			11	
			12	
			13	
			14	
moist	0.2	@ 15* 9:56	15	CL **Sandy clay**; tan; orange mottling; trace roots; trace black staining; medium stiff; medium plasticity and toughness; sand fine grain; moist; no odor; (0,40,60)
			16	
			17	
			18	
moist	0.2	@ 20* 10:P37	19	Soft; medium to high plasticity; low toughness; (0,30,70)
			20	
			21	**SC**
			22	

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Split Spoon**
Casing Type: **Schdule 40 PVC**
Slot Size: **0.010"**
Gravel Pack: **#2/12**

Client: **ConocoPhillips**
Location: **4276 MacArthur Boulevard**
Oakland, CA
Hole Diameter: **8"**
Hole Depth: **25'**
Well Diameter: **2"**
Well Depth: **25'**
First Water Depth: **23'**

Well No: **MW-8**
Date Drilled: **10/30/07**
Page **2** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion Backfill	Well Completion Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
	▨	▽				23			▨	
	▨					24	▨	↕	▨	SC **Clayey sand;** tan; orange mottling; medium grain; poorly graded; loose; wet; no odor (0,65,35)
						25				
						26				**Total Depth = 25 feet bgs**
						27				
						28				
						29				
						30				
						31				
						32				
						33				
						34				
						35				
						36				
						37				
						38				
						39				
						40				
						41				
						42				
						43				
						44				

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: 4"
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **4'**

Boring No: **SB-1**
Date Drilled: **11/6/07**
Page **1** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion: Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Air-Knife			**Asphalt - 6"**
					1		**Fill;** tan, with medium gravel; surrounded; no plasticity; high toughness; soft; moist; (45,5,50)
					2		**Fill;** some clay; brown; gravel medium to coarse; sub rounded; some fine sand; moist
					3		
	▽				4		@ 4' large rocks; subround; wet; trace fine sand and clay; (90,5,5)
		wet	6.2		5		
					6	CL	**Lean clay;** olive green; some fine to medium sand; some orange mottling; medium stiff; medium plasticity and toughness; wet; strong odor (0,30,70)
		wet	326	@ 7* 8:39	7		
					8		
		wet	165	@ 8.5 8.42	9		Some black specs
		wet	221	@ 10 8:45	10		Some black and red staining
					11		
		wet	140	@ 12* 8:48	12		Sand fine to medium grain (0,40,60)
					13	SC	**Poorly graded sand with clay;** brown; some olive green mottling and gray staining; sand fine to medium grain; soft; loose; wet; strong odor (0,70,30)
		wet	118	@ 13.5 8:50	14		
		wet	133	@ 15 8:52	15		
					16		Red brown with orange and olive green mottling; medium stiff; (0,50,50)
		wet	419	@ 17 8:56	17	CL	**Lean clay;** some fine to medium sand; red brown with orange mottling and black specs; medium plasticity and toughness; medium stiff; wet; strong odor; (0,35,65)
					18		
		wet	1056	@ 18.5* 8:58	19		
		wet	148	@ 20 9:02	20		Stiff; trace medium gravel; sand medium grain; (5,35,60)
					21		
		wet	152	@ 22 9:04	22		Some black staining

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: 4"
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **4'**

Boring No: **SB-1**
Date Drilled: **11/6/07**
Page **2** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion: Backfill	Well Completion: Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement						23		(5,40,55)
			wet	61.1				
						24		A lot of black specs, very stiff; sand medium to coarse; low plasticity; high toughness; odor; (5,40,55)
			wet	78.1	@ 25 9:13	25		
						26		Tan; some black specs; trace orange mottling; coarse sand; trace fine gravel; sub angular; very stiff; (5,35,60)
			wet	41.2	@ 27 9:15	27		Red brown with orange mottling; soft; no plasticity; sand fine to medium; crumbles easily; (5,40,55)
			wet	53.9		28		
						29		No orange mottling; medium stiff; low plasticity; (0,40,60)
			wet	76.8		30		Stiff; red brown; some tan mottling; a lot of black specs; sand fine grain; trace coarse sand; (0,35,65)
						31		
			wet	38.3		32		Medium stiff; red brown with black specs; medium plasticity and toughness
						33		
			wet	65.8	@ 33.5* 9:32	34	SC	**Poorly graded sand with clay**; trace fine gravel; sand medium to coarse; red brown and orange; dark red staining; hard but crumbles easily; some black specs; gravel sub angular; wet; odor; (5,65,30)
						35		
						36		
						37		**TD = 35 feet bgs**
						38		
						39		
						40		
						41		
						42		
						43		
						44		

Delta Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **22'**

Boring No: **SB-2**
Date Drilled: **11/5/07**
Page **1** of **2**

∇ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement							**Asphalt - 2"**
				Air-Knife	1 2 3 4	CL	**Lean clay with gravel;** tan; low to medium plasticity; high toughness; stiff; moist; gravel fine to medium; (30,0,70)
		moist	932.0	@ 5 8:43	5 6		Tan with olive green mottling; medium plasticity and toughness; some silt; trace fine sand; moist; strong odor; (0,10,90)
		moist	1599	@ 7 8:45	7 8		Red brown specs; some roots; medium stiff; trace fine gravel; (5,25,70)
		moist	1307	@ 8.5* 8:47	9		(5,40,55)
		moist	1528	@ 10 8:49	10 11	SC	**Clayey sand;** tan and olive green; some red brown mottling; red specs; sand fine to medium medium stiff; crumbles easily; no plasticity; gravel fine grain; moist; strong odor; (15,50,35) Loose; some black specs; red brown and tan
		moist	1335	@ 12* 8:51	12 13	CL	**Lean clay;** red brown; some olive green mottling; stiff; silty; some fine sand; some black specs; low plasticity; high toughness; moist; strong odor; (0,35,65)
		moist	1227	@ 13.5 8:53	14		Sand fine to medium; trace fine gravel; red brown and tan; some olive green; (5,25,70)
		moist	762	@ 15 8:55	15 16		Medium stiff; medium plasticity and toughness; red brown; some olive green; some black specs; (0,35,65)
		moist	308	@ 17 8:57	17 18		Red brown; some pink staining; olive green mottling; crumbles easily; some fine gravel; (10,35,55)
		moist	182	@ 18.5 8:59	19		Red brown; doesn't crumble easily; some fine sand; odor; (0,40,60)
		moist	124	@ 20* 9:04	20 21		Medium soft; medium sand; trace fine gravel; some black specs; low plasticity; high toughness; (10,40,50)
	∇	wet	228	@ 22 9:06	22	SC	**Clayey sand;** red brown with orange mottling;

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Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **22'**

Boring No: **SB-2**
Date Drilled: **11/5/07**
Page **2** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion Backfill	Well Completion Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement						23				black specs; silty; sand fine to medium; fine gravel loose; slightly cemented; wet; odor; (15,50,35)
			wet	55.1		24				Cemented; very stiff; sand medium grain; red brown; some orange mottling; (5,55,40)
			wet	51.2	@ 25* 9:30	25				
						26			CL	**Lean clay;** red brown and tan with orange mottling; some black specs; medium stiff; medium plasticity and toughness; sand fine grain; wet; odor; (0,40,60)
			wet	14.6		27				
						28				
			wet	21.1		29				Red brown with tan mottling
			wet	13.7		30				Black specs; stiff; trace fine gravel; low plasticity; high toughness; (5,35,60)
						31				
			wet	2.3		32				Some pink staining Medium soft; (5,40,55)
						33				
			wet	11.1		34				Red brown with black specs; very stiff; some fine sand; slight odor; (0,30,70)
						35				Medium stiff; (0,20,80)
						36				
						37				**TD = 35 feet bgs**
						38				
						39				
						40				
						41				
						42				
						43				
						44				

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **21'**

Boring No: **SB-3**
Date Drilled: **11/2/07**
Page **1** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion Backfill	Well Completion Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement										**Concrete - 6"**
					Air-Knife	1 2			CL	**Silty clay;** tannish brown; medium plasticity; medium soft; low to medium toughness; moist; (0,0,100)
						3 4				@ 3' lean clay; stiff; medium plasticity; high toughness; moist; (0,0,100)
			moist	1.1	@ 5 8:54	5 6				Some black streaks; tan; some red brown specs; some medium sand; no odor; (0,15,85)
			moist	0.7	@ 7* 8:57	7 8				Some gray streaks; (0,20,80)
			moist	0.4	@ 8.5 9:00	9				Some black specs; some white caliche; trace fine gravel; sand medium to coarse; (5,25,70)
			moist	0.6	@ 10 9:02	10 11				Tan with red brown mottling
			miost	0.8	@ 12 9:04	12 13				Red brown with tan; black specs; trace fine gravel; (10,25,65)
			moist	0.6	@ 13.5 9:07	14				A lot of black specs; crumbles easily
			moist	0.6	@ 15* 9:09	15 16				Very stiff; low plasticity
			moist	0.8	@ 17 9:11	17 18				More sand; some silt; (5,35,60) **Silty lean clay;** red brown with tan mottling; soft; some black specs; (0,35,65)
			moist	2.6	@ 18.5 9:15	19				Trace fine gravel; meidum soft; medium palsticity; crumbles easily; silty; (5,40,565)
			wet	36.1	@ 20* 9:21	20				
		▽				21			SC	**Clayey sand;** poorly graded with fine gravel; sand fine to medium; red brown with tan mottling; soft; loose; trace black specs; wet; slight odor; (5,55,40)
			wet	8.8		22				

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **21'**

Boring No: **SB-3**
Date Drilled: **11/2/07**
Page **2** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion Backfill	Well Completion Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement						23				Breaks easily
			wet	3.7		24				Sand mostly medium grain; trace fine sand; red brown
			wet	1.8	@ 25* 9:48	25				**CL** **Lean clay with sand;** fine to medium; red brown and tan with orange mottling; some red specs; stiff; low plasticity; high toughness; wet; no odor; (0,35,65)
						26				
			wet	1.7		27				
			wet	0.7		28				Some black specs; red brown and some tan; medium stiff; trace fine gravel; (5,40,55)
						29				Stiff; sand fine grain; tan with red brown mottling; (0,30,70)
			wet	0.5		30				
						31				Tan; some red brown mottling; trace medium sand; very stiff; wet; (0,30,70)
			wet	1.1		32				Trace gravel; sand medium to fine grain; wet; (5,30,65)
			wet	1.8		33				
						34				A lot of black specs; red brown with tan mottling; sand fine grain; some medium grain; (0,25,75)
						35				
						36				
						37				**TD = 35 feet bgs**
						38				
						39				
						40				
						41				
						42				
						43				
						44				

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **17.5'**

Boring No: **SB-4**
Date Drilled: **10/30/07**
Page **1** of **2**

▽ = First Water

▼ = Static Groundwater

* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	LITHOLOGY / DESCRIPTION
Neat Cement				Air-Knife		**Asphalt - 6"**
					1	**CL** **Lean clay;** tan to olive green; medium plasticity; medium toughness; stiff; moist; some black staining; (0,0,100)
					2	
					3	
					4	
		moist	7.5	@ 5 3:30	5	Very stiff; high toughness; some red specs; trace medium sand; odor; (0,5,95)
					6	
		moist	27.5	@ 8* 3:32	7	
					8	
		moist	25.3	@ 9 3:35	9	Orange mottling
		moist	11.5	@ 11 3:37	10	Tan some gray staining; stiff
					11	
		miost	6.5	@ 13.5* 3:39	12	Tan and red brown; some medium sand; slight odor; (0,25,75)
					13	
		moist	5.5	@ 14 3:40	14	Trace fine gravel; (5,30,65)
		moist	0.8	@ 16* 3:43	15	**SC** **Clayey sand;** red brown and tan; slightly cemented but crumbles easily; soft; no plasticity; high toughness; sand medium grain; moist; slight odor; (5,60,30)
					16	
	▽	wet	0.7		17	
					18	Low plasticity; sand fine to medium; wet; (0,60,40)
		wet	1		19	Trace gray staining
		wet	1.1		20	
		wet	0.3		21	No plasticity; (0,65,35)
					22	

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **17.5'**

Boring No: **SB-4**
Date Drilled: **10/30/07**
Page **2** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion Backfill	Well Completion Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement						23				**CL** **Lean clay;** tan to red brown; medium soft; medium plasticity and toughness; some fine sand; moist; no odor; (0,15,85)
			wet	0.6		24				
			wet	0.6		25				With fine to medium sand; some black specs; (0,25,75)
						26				
			moist	0.4	@ 27* 4:15	27				Olive green and tan; stiff; (0,0,100)
						28				
			moist	0.4		29				
						30				
						31				No Recovery
			moist	0.5		32				Very stiff; trace fine gravel; some medium sand; low plasticity; high toughness; tan to red brown; (5,20,70)
						33				
			moist	0.4		34				
						35				(10,30,60)
						36				
						37				**TD = 35 feet bgs**
						38				
						39				
						40				
						41				
						42				
						43				
						44				

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **18'**

Boring No: **SB-5**
Date Drilled: **11/1/07**
Page **1** of **2**

Elevation	Northing	Easting

∇ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Well Completion Backfill	Well Completion Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement										**Asphalt - 5"**
					Air-Knife	1 2 3 4			CL	**Lean clay;** olive green; medium stiff; medium plasticity and toughness; some medium sand and trace fine gravel; some gray staining; moist; strong odor; (10,25,65)
			moist	468	@ 5 11:11	5 6				Trace white caliche; very stiff; low plasticity; high touchness; with medium to coarse sand; trace fine gravel; (10,30,60)
			moist	688	@ 7* 11:19	7 8				Tan and olive green; some red brown mottling; some medium sand; (0,20,80)
			moist	638	@ 8.5 11:20	9				Low to medium plasticity
			moist	573	@ 10 11:22	10 11				(0.25,75)
			miost	623	@ 12* 11:25	12 13				Trace fine gravel; low plasticity; meidum soft; (5,25,70)
			moist	570	@ 13.5 11:27	14				Crumbles easily; (5,35,60)
			moist	532	@ 15 11:30	15 16				Red brown with olive green mottling; stiff; (0,35,65)
		∇	moist	157	@ 17* 11:32	17 18				
			wet	100		19			SC	**Clayey sand;** red brown and olive; trace gravel; green; poorly graded; loose; soft; crumbles easily; medium sand; fine gravel; wet; odor; (10,50,40)
			wet	53.6	@ 20 11:41	20 21				Red brown; soft; sand fine grain; trace fine gravel; black specs; medium plasticity and toughness; wet; odor; (5,50,45)
			wet	57	@ 22* 11:44	22				

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **18'**

Boring No: **SB-5**
Date Drilled: **11/1/07**
Page **2** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion Backfill	Well Completion Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement						23			CL	**Lean clay;** tan with red brown mottling; black specs; fine sand; medium soft; medium plasticity and toughness; wet; odor; (0,30,70)
			wet	51.8		24				
			moist	7.3		25				Some fine to medium sand; moist; slight odor
						26				
			moist	8.6		27				Stiff; (0,15,85) Tan and red brown with some olive green mottling
						28				
			moist	11.4		29				Medium stiff; (0,35,65)
			wet	16.8	@ 30* 12:07	30			SC	**Clayey sand;** red brown; some black specs; trace fine gravel; sand medium grain; soft; loose; no plasticity; wet; slight odor; (10,50,40)
						31				
			wet	14.1		32				Some olive green mottling; medium stiff
						33				
			moist	13.5		34			CL	**Lean clay;** light tan to olive green; stiff; some coarse sand; trace black specs; low to medium plasticity; high toughness; moist; odor; (0,15,85)
						35				
						36				
						37				**TD = 35 feet bgs**
						38				
						39				
						40				
						41				
						42				
						43				
						44				

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **17'**

Boring No: **SB-6**
Date Drilled: **10/31/07**
Page **1** of **2**

▽ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Elevation	Northing	Easting

Well Completion: Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement							**Asphalt - 3"**
					1	CL	**Lean clay;** olive green; medium stiff; medium plasticity and toughness; some tan coloring; some medium sand; medium to coarse gravel; moist; slight odor; (15,25,60)
				Air-Knife	2		
					3		
					4		
		moist	253	@ 5* 1:02	5		Strong odor
					6		
		moist	47.4	@ 7 1:05	7		Stiff; sand fine to medium grain; (0,20,80)
					8		
		moist	96.9	@ 8.5* 1:07	9		Tan with olive green mottling; (0,25,75)
		moist	33.8	@ 10 1:09	10		Red brown and tan with olive green mottling; (0,30,70)
					11		
		moist	12.7	@ 12* 1:11	12		Low plasticity; high toughness; medium stiff; odor; (0,40,60)
					13	SC	**Clayey sand;** red brown and tan; black specs; medium soft; slightly cemented but crumbles easily; poorly graded; no plasticity; high toughness; sand fine to medium; moist; odor; (0,55,45)
		moist	20.6	@ 13.5 1:14	14		
		moist	21	@ 15* 1:16	15		Red brown with black specs; (0,70,35)
					16		
	▽	wet	4.1	@ 17* 1:19	17		Olive green and tan; some gray staining; loose; sand medium to coarse; wet; (0,65,35)
					18	CL	**Lean clay with sand;** red brown with black specs; sand fine grain; medium stiff; medium plasticity and toughness; wet; odor; (0,40,60)
		wet	15		19		
		wet	3.4		20		
					21		Moist; slight odor; (0,30,70)
		moist	1.8		22		With fine to medium gravel; coarse sand; low

Delta
Consultants

Project No: **C101156151**
Logged By: **Tabbitha Croy**
Driller: **Gregg Drilling & Testing**
Drilling Method: **HSA**
Sampling Method: **Continuous**
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd**
Oakland, CA
Hole Diameter: **4"**
Hole Depth: **35'**
Well Diameter: NA
Well Depth: NA
First Water Depth: **17'**

Boring No: **SB-6**
Date Drilled: **10/31/07**
Page **2** of **2**

Elevation	Northing	Easting

∇ = First Water
▼ = Static Groundwater
* = Selected for lab analysis

Well Completion Backfill	Well Completion Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement						23				plasticity; high toughness; moist; (15,35,50)
			moist	1.8	@ 24.5 1:30	24				
			moist	1.4		25				Red brown to tan; ;some medium sand; trace fine gravel; stiff; low plasticity; high toughness; moist; no odor; (5,30,65)
						26				
			moist	1.1		27				Tan; some red brown speca; medium plasticity; (0,10,90)
						28				
			moist	0.8		29				Some black specs; medium soft; no plasticity; fine to medium red brown sand; high toughness; (0,25,75)
			moist	0.6	@ 30.5* 1:43	30				
						31				Dark brown and tan; stiff; some black staining; no odor; (0,40,60)
			moist	0.5		32				
						33				Olive green and tan; fine to medium sand; trace fine gravel; very stiff; some black specs but no staining; (5,25,70)
			moist	0.9		34				
						35				(0,20,80)
						36				
						37				**TD = 35 feet bgs**
						38				
						39				
						40				
						41				
						42				
						43				
						44				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth: 30'
First Water Depth: 23.5
Static Water Depth: 6.21
Well Depth: N/A

Boring No: SB-7
Date Drilled: 07/09/09
Page **1** of **2**

∇ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Air-Knife				CL	**Lean Clay with Sand;** light olive green to dark brown, stiff, medium plastic, hydrocarbon odor present.
					1				
		Moist			2				
					3				
			3.9 ppm		4				
					5			CL	**Lean Clay with Sand;** olive green-brown, moist, medium stiff, fine to medium grained sand, strong hydrocarbon odor, visible contamination, low to medium plastic.
	▼				6				
					7				
			405 ppm		8		☒		
					9			CL	**Lean Clay with Sand;** same as above
					10				
					11				
			6.5 ppm		12			CL	**Lean Clay with Sand;** same as above, with increased stiffness; visible contamination, and strong petroleum hydrocarbon odor.
					13				
		Moist			14				
					15				
			64.1 ppm		16		☒		
					17			CL	**Lean Clay with Sand;** brown to red brown, fine to coarse grained sand, low plasticity increased sand content, increasing moisture, slight hydrocarbon odor, stiff.
					18				
					19				
			6.7 ppm		20				
					21			CL	**Lean Clay with Sand**; same as above with increasing sand content; very stiff to hard.
					22				

Delta
Consultants

Project No: C101156
Client: **ConocoPhillips**
Logged By: S. Meninger/ C. Morgai
Location: **4276 MacArthur Blvd.**
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Hole Diameter: 3"
Sampling Method: Continuous
Hole Depth: 30.0'
Casing Type: N/A
First Water Depth: 23.5
Slot Size: N/A
Static Water Depth: 6.5'
Gravel Pack: N/A
Well Depth: N/A

Boring No: SB-7
Date Drilled: 07/09/09
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement	▽	Moist			23		☒	CL SC	**Lean Clay with Sand;** same as above; very strong hydrocarbon odor. **Clayey Sand;** brown, medium to coarse grained sand with clay, medium dense to dense, moist to wet, some olive green smearing.
			0.5 ppm		24				
		Wet			25				
					26			SM	**Silty Sand;** brown, wet, medium to coarse grained, strong hydrocarbon odor.
		Moist			27			CL	**Lean Clay with Sand;** brown, low to medium plastic, stiff, hydrocarbon odor.
					28				
					29			SP	**Poorly Graded Sand;** light brown.
					30				**Total Depth of Boring = 30' bgs.**
					31				Soil Sample SB-7@ 7.5-8' collected at 15:05 7/9/2009.
					32				Soil Sample SB-7@ 15.5-16' collected at 15:10 7/9/2009.
					33				Soil Sample SB-7 @ 23-23.5' collected at 15:15 7/9/2009.
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth: 8.5'
First Water Depth: N/A
Static Water Depth: N/A
Well Depth: N/A

Boring No: SB-8
Date Drilled: 07/10/09
Page **1** of **1**

∇ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Air-Knife & Hand Augered				CL	**Lean Clay with Sand;** thumb to fist sized gravel, with non-native pumice fill and black fines; high petroleum hydrocarbon odor.
					1				
					2				
		Moist			3				
					4				
					5			GP	**Gravel with Sand**; gray, fine to medium grained with presence of possible compressed asphalt; visible black product; very moist.
					6				
		Very Moist	1453 ppm		7		☒		
					8				
					9				**Total Depth of Boring = 8.5' bgs.** *Note that boring was terminated at 8.5' bgs due to drilling conditions. At 7'bgs drillers indicated a slight resistance was felt on the rig. A sudden push through and drop was then recorded while advancing from 8.0-8.5' bgs, at which point a vibrating feel in the rod was felt.* Soil sample SB-8 @ 7-7.5' collected at 13:21 7/10/2009.
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth: 26.5'
First Water Depth: 26'
Static Water Depth: 24
Well Depth: N/A

Boring No: SB-9
Date Drilled: 07/08/09
Page **1** of **2**

▽ = First Water

▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Air-Knife & Hand Augered				CL	**Lean clay with sand;** light olive green to bronw, medium plastidty, thick.
					1				
					2				
					3				
					4				
					5				
					6			CL	**Lean clay with sand;** same as above with gravel; visible contamination, and mild petroleum hydrocarbon odors.
					7				
			3.6 ppm		8				
					9				
					10				
					11				
			2.5 ppm		12			CL	**Lean clay with sand;** brown to orange brown, dry, medium plasticity, firm.
					13				
					14				
					15				
					16			CL	**Same as above.**
					17				
					18				
					19				
					20			CL	**Same as above.**
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: 4276 MacArthur Blvd.
Oakland, CA
Hole Diameter: 3"
Hole Depth: 26'
First Water Depth: 26'
Static Water Depth: 24'
Well Depth: 26'

Boring No: SB-9
Date Drilled: 07/08/09
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23			CL	**Same as above**, with increased sands.
	▼				24				
					25				
	▽				26		☒		
					27				**Total Depth of Boring = 26' bgs.**
					28				Soil Sample SB-9@26' collected @ 18:40 07/08/09.
					29				
					30				
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth: 23'
First Water Depth: 16
Static Water Depth: 6.21
Well Depth: N/A

Boring No: SB-10
Date Drilled: 07/08/09
Page **1** of **2**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement	Moisture Content	Moist		Air-Knife & Hand Augered				CL	**Lean clay with sand;** oilve green to brown, medium plastic, medium stiff, mild hydrocarbon odor; possible fill material.
					1				
					2				
					3				
					4				
		Wet- Perched water in former UST pit.			5			GP	**Gravel with Sand;** gray, fine to medium gravel with fine to medium grained sand, loose, wet, fill material from former UST pit, no odor.
					6				
					7				
			1.8 ppm		8				
					9				
					10			SP	**Poorly Graded Sand with Gravel;** gray to dark gray, fine to medium grained sand, loose, wet, very strong hydrocarbon odor.
					11				
		Moist	899 ppm		12		☒	CL	**Lean Clay with Sand;** Olive green to brown, medium stiff, low to medium plastic, moist, slight hydrocarbon odor, visible contamination, ...
					13				
					14				
					15				
	▽		7.6 ppm		16				
		Moist			17			SC	**Clayey Sand;** Dark gray, loose, wet, fine to medium grained sand, very strong hydrocarbon odor, visible contamination, trace fine gravel.
			545 ppm		18		☒		
					19				
			6.6 ppm		20			CL	**Lean Clay with Sand;** brown with olive green mottling, stiff, low to medium plastic, fine to coarse grained sand, slight odor, trace fine gravel.
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: 4276 MacArthur Blvd.
Oakland, California
Hole Diameter: 3"
Hole Depth: 28'
First Water Depth: 16'
Static Water Depth:28'
Well Depth: N/A

Boring No: SB-10
Date Drilled:
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement	▼	moist	1.1 ppm		23		☒	CL	**Same as above**, with increased sands.
					24				
					25				
					26				
					27				**Total Depth of Boring =**
					28				Soil Sample SB-10@ 12-12.5' collected at 7:55 07/10/09.
					29				Soil Sample SB-10@ 18-18.5' collected at 8:00 07/10/09.
					30				Soil Sample SB-10@ 22.5-23' collected at 8:05 07/10/09.
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth: 44'
First Water Depth: 42'
Static Water Depth:N/A
Well Depth: N/A

Boring No: SB-11
Date Drilled: 07/10/09
Page **1** of **2**

∇ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample		Soil Type	LITHOLOGY / DESCRIPTION
Backfill						Recovery	Analyzed		
Neat Cement				Air-Knife & Hand Augered				CL	**Lean clay with sand;** light olive green to brown, medium stiff to stiff, low to medium plasticity.
					1				
					2				
					3				
					4				
					5				
					6			CL	**Lean clay with sand;** olive green, gray, brown; fine to medium coarse grained sand; trace fine to medium grained gravel; low plasticity; moist; strong hydrocarbon odor.
					7				
			405 ppm		8		☒		
					9			CL	**Lean clay with sand;** entirely green in color, very stiff to hard.
			6.8 ppm		10				
					11				
			16.7 ppm		12			CL	**Lean clay with sand;** brown and olive green, moist, very stiff to hard, very strong hydrocarbon odor, low to medium plastic.
					13				
					14				
					15				
			108 ppm		16		☒	CL	**Lean clay with sand;** decreasing sand content, medium to high plasticity, increasing moisture, slight hydrocarbon odor, very stiff to hard, trace fine gravel, visible contamination. *Driller reports very hard direct pushing.
					17				
					18				
					19				
			12.1 ppm		20			CL	**Lean clay with sand;** brown with green mottling, medium plastic, trace fine gravel, slight odor, increasing mositure.
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: S. Meninger/ C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Macrocore
Sampling Method: Continuous
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter: 3"
Hole Depth: 44'
First Water Depth: 42'
Static Water Depth: N/A
Well Depth: N/A

Boring No: SB-11
Date Drilled: 07/10/09
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement		Wet	5.8 ppm		23			CL	**Poorly graded sand;** brown, wet, no odor. Wetness in small portion-Not first water.
					24				
					25			CL	**Same as above;** less visible contamination, increasing sand content.
					26				
					27				
			6.7 ppm		28			CL	**Lean clay with sand;** brownand olive green, increasing moisture, less visible contamination.
					29				
					30				
					31				
			6.8 ppm		32			CL	**Same as above;** increasing sand content, visible contamination, red brown.
					33				
					34				
					35				
			5.7 ppm		36			CL	**Same as above;** increasing moisture conent.
					37				
					38				
					39				
					40				
			7.5 ppm		41		☒	CL	**Same as above;** wet.
		▽			42				
					43				
					44				**Total Depth of Boring = 44' bgs.** SB-11 samples collected at 10:50, 10:55 & 11:00

Delta

Consultants

Project No: C101156
Logged By: A.Buehler
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter:
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-12
Date Drilled: 06/14/10
Page **1** of **3**

∇ = First Water

▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Hand Augered	1				
					2				
					3				
					4				
					5	▨	▨		
			5.2	SB-12 @ 12 9:44	6	▨		CL	Sandy lean clay with gravel; brown with visible green contamination; moist.
					7	▨			
					8	▨			
					9				
			30.1	SB-12 @ 10 9:58	10	▨	▨	CL	Sandy lean clay clay; light brown; wet.
					11	▨			
					12	▨			
					13	▨			
					14				
			NA	SB-12 @ 15 10:25	15	▨	▨	CL	Same as above. Saturated.
					16	▨			
					17	▨			
					18	▨			
					19				
			64.7	SB-12 @ 20 10:36	20	▨	▨	CL	Sandy lean clay; brown; moist.
					21	▨			
					22	▨			

Delta
Consultants

Project No: C101156
Logged By: A. Buehler
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter:
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-12
Date Drilled:
Page **2** of 3

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement					23	▨			
					24				
					25	▨	▨		
			10.2	SB-12 @ 26 10:45	26	▨		CL	Same as above, very stiff with large gravel
					27	▨			
					28	▨			
					29				
			NA	SB-12 @ 30 10:47	30	▨	▨	CL	Same as above; damp.
					31	▨			
					32	▨			
					33	▨			
					34				
			3.5	SB-12 @ 35 10:58	35	▨	▨	CL	Same as above.
					36	▨			
					37	▨			
					38	▨			
					39				
					40				No recovery.
			5.6	SB-12 @ 41 11:42	41	▨	▨	CL	Sandy clay; <10% sands; brown; moist; slight odor.
					42	▨			
					43	▨			
					44				

Delta
Consultants

Project No: C101156
Logged By: A. Buehler
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter:
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-12
Date Drilled:
Page 3 of 3

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement			NA	SB-12 @ 45 11:45	45	▨	▨	CL	Same as above with 20% gravel; 10% sand; damp.
					46	▨			Sandy clay; light brown; 20% sand, no odor.
					47	▨			
					48	▨			
					49	▨	▨	CL	Same as above, with 15% gravel and 15% sand.
			3.3	SB-12 @ 50 11:54	50				**Boring terminated at 50 feet bgs.**
					51				
					52				
					53				
					54				
					55				
					56				
					57				
					58				
					59				
					60				
					61				
					62				
					63				
					64				
					65				
					66				

Delta
Consultants

Project No: C101156
Logged By: A.Buehler
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter:
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-13
Date Drilled: 06/18/10
Page **1** of **1**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample		Soil Type	**LITHOLOGY / DESCRIPTION**
Backfill						Recovery	Analyzed		
Neat Cement				Hand Augered	1				
					2				
					3				
					4				
				SB-13 @ 6 8:45	5	▨	▨		Black, sandy, granular, tar-like material, very strong odor
					6				**Boring terminated at 6 feet bgs due to refusal.**
					7				
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter: 3"
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-14
Date Drilled: 06/17/10
Page **1** of **3**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Hand Augered	0			CL	Clay; green, visible contamination; with some tan, black and white gravel.
					1				
					2				
					3				
					4				
					5				
					6				
					7				
			3335	SB-14 @ 8 11:50	8	▨	▨	CL	Lean Clay with sand; gray with visible green contamination, strong odor; moist.
					9	▨			
			5553	SB-14 @ 10 11:50	10	▨			
					11	▨			
					12				
					13				
					14				
			107.5	SB-14 @15 11:54	15	▨	▨	CL	Same as above, with small coarse grained white and tan gravel at 16.5 to 18 feet bgs; moist.
					16	▨			
					17	▨			
					18				
					19	▨			
			11.2	SB-14 @ 20 12:01	20	▨	▨	CL	Same as above, with increased fines at 21 feet bgs.
	▽				21	▨			Same as above, with continued increased fines; gravel also present.
					22	▨		GC	Clayey Gravel with sand, thumb-sized white

Delta
Consultants

Project No: C101156
Logged By: C.Morgan
Driller: **Gregg Drilling**
Drilling Method:
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter:
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-14
Date Drilled: 06/17/10
Page **2** of 3

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement					23	▨			rock present; less odor then at previous depths.
					24	▨			
					25				
			11.9	SB-14 @ 26 12:07	26	▨	▨	CH	Sandy fat clay with gravel; gray, tan, moist.
					27	▨			
					28	▨			
					29	▨			
			NA	SB-14 @ 30 12:07	30	▨	▨	CH	Same as above.
					31				
					32				
					33	▨			
					34	▨			
			10.5	SB-14 @ 35 12:16	35	▨	▨	CL	Lean clay; light brown to tan; some small grained gravel; firm; slight odor; moist.
					36	▨			
					37	▨			
					38	▨			
					39	▨			
			18.5	SB-14 @ 40 12:22	40	▨	▨	CL	Same as above, with increased moisture and softness.
					41	▨			
					42	▨			
					43	▨			
					44	▨			

Delta
Consultants

Project No: C101156
Logged By: C.Morgan
Driller: **Gregg Drilling**
Drilling Method:
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter:
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-14
Date Drilled: 06/17/10
Page 3 of 3

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement	▽		14.5	SB-14 @45 12:28	45	▨	▨	CL	*Possible second water bearing zone.* Sandy lean clay with silt to 48 feet bgs, then clay with sand and gravel to bottom of boring.
					46	▨			
					47	▨			
					48	▨			
					49	▨			
			10.6	SB-14 @ 50 12:28	50	▨	▨		
									Boring terminated at 50.5 feet bgs.
					51				
					52				
					53				
					54				
					55				
					56				
					57				
					58				
					59				
					60				
					61				
					62				
					63				
					64				
					65				
					66				

Delta
Consultants

Project No: C101156
Logged By: C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: 4276 MacArthur Blvd.
Oakland, CA
Hole Diameter: 3"
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-15
Date Drilled: 06/17/10
Page **1** of **2**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Hand Augered	0–5				Sandy gravel; brown.
			14.8	SB-15 @ 5 2:01	5	▨	▨	CH	Tight fat clay, with fine grained sand; at approx 8 feet bgs, color had orange mottling, otherwise constant lithology to 11.5 feet.
			24.4	SB-15 @ 10 2:01	10	▨	▨		
			6.3	SB-15 @ 15 2:04	15	▨	▨	CH	Same as above to 16 feet bgs.
					16	▨		CL	Sandy lean clay; fine grained; increased moisture.
	▽				17.5	▨		GC	Sandy gravel with clay from 17.5 to 18 feet; moist-saturated.
			12.3	SB-15 @ 21 2:10	21	▨	▨	GC	Same as above, with thumb-sized, angular to subangular gravel.
					22	▨			

Delta
Consultants

Project No: C101156
Logged By: C.Morgan
Driller: **Gregg Drilling**
Drilling Method:
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, CA
Hole Diameter:
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-15
Date Drilled: 06/17/10
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement					23	▨			
					24	▨			
					25				
					26				
			10.9	SB-15 @ 26.5 2:18	27	▨	▨	GC	Same as above.
					28	▨		CL	Sandy lean clay with with gravel, fine grained sands and gravel, more saturated (saturation due to sluff during drilling)
					29	▨			
			5.2	SB-15 @ 30 2:18	30	▨	▨		
					31	▨			
					32				
					33	▨			
					34	▨			
			10.7	SB-15 @ 35 2:24	35	▨	▨	CL	Same as above, moist.
					36	▨			
					37	▨			
					38				
					39				
			2.6	SB-15 @ 40 2:40	40	▨	▨	CL	Same as above.
					41				**Boring teminated at 41 ft due to refusal.**
					42				
					43				
					44				

Delta
Consultants

Project No: C101156
Logged By: A. Buehler
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method: Direct Push
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 Mac Arthur Blvd.**
Oakland, CA
Hole Diameter: 3"
Hole Depth: 5.5'
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-16
Date Drilled: 6/17/10
Page **1** of

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement				Air-Knife	1				
					2				
					3				
					4				
			53.4		5				
					6				
					7				
		moist		SB-16 @ 8' 12:46	8	▨	▨	CL	Lean clay; brown with green mottling, 5% sand, moist, strong odor.
					9	▨			
		moist	90.1	SB-16 @ 10' 10:49	10	▨	▨		
					11				
		moist			12	▨		CL	Lean clay; light brown, <5% fine grained sand, very dense/firm, moist, strong odor.
					13	▨			
					14	▨			
			13.7	SB-16 @ 15' 12:55	15	▨	▨	CL	Same as above, with light brown and orange mottling to 16 feet bgs.
					16				
					17				
					18	▨		CL	Same as above to 21 feet bgs.
					19	▨			
			12.0	SB-16 @ 20' 1:00	20	▨	▨	GC	Clayey gravel with sand, bown, wet
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: A. Buehler
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method: Direct Push
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 Mac Arthur Blvd.**
Oakland, CA
Hole Diameter: 3"
Hole Depth: 5.5'
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-16
Date Drilled: 6/17/10
Page 2 of **3**

▽ = First Water

▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement					23	▨		CL	Sandy Lean clay, brown, 15% sand, damp
					24	▨			
			9.3	SB-16 @ 25' 1:10	25	▨	▨	CL	Sandy lean clay; brown, wet. At 25' bgs, clay contains more gravels, and is more firm, damp.
					26	▨			
					27	▨			
					28	▨			
					29	▨			
			12.3	SB-16 @ 30' 1:10	30	▨	▨		
					31				
					32				
					33				
					34	▨	▨	CL	Sandy lean clay with gravel; brown and some orange mottling; <5% gravel and <15% sand, damp.
			7.7	SB-16 @ 34' 1:25	35	▨			
					36	▨			
					37	▨			
					38				
					39	▨		CL	Same as above.
			12.2	B-16 @ 40' 1:37	40	▨	▨		
					41	▨			
					42	▨			
					43	▨			
					44	▨			

Delta
Consultants

Project No: C101156
Logged By: A. Buehler
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method: Direct Push
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 Mac Arthur Blvd.**
Oakland, CA
Hole Diameter: 3"
Hole Depth: 5.5'
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-16
Date Drilled: 6/17/10
Page 3 of **3**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement			11.5		45				
				SB-16 @ 46' 1:46	46	▨	▨	CL	Clay; brown with <5% coarse grained sand very dense; moist.
					47	▨			
					48	▨		CL	Clay; tan with orange mottling <10% sand with some gravel; moist; very dense/firm.
			8.3	SB-16 @ 50' 1:48	49	▨	▨		
					50				Boring Terminated @ 50' bgs.
					51				
					52				
					53				
					54				
					55				
					56				
					57				
					58				
					59				
					60				
					61				
					62				
					63				
					64				
					65				
					66				

Delta
Consultants

Project No: C101156
Logged By: C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method: Direct Push
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 Mac Arthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-17
Date Drilled: 06/16/10
Page **1** of **3**

▽ = First Water

▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Hand Augered	1				
					2				
					3				
					4				
			259.0	SB-17 @ 5 10:25	5	▨	▨	CL	Sandy lean clay; gray with visible green contamination; trace ammount of wood chips and coarse grained sand, pea to thumb sized gravel from 6-8 feet bgs.
					6	▨			
					7	▨			
					8	▨		CL	Same as above, however sand becomes fine grained. Clay has more tan and orange coloring with hints of green contamination. Strong petroleum hydrocarbon odor.
					9	▨			
			239.0	SB-17 @ 10 10:28	10	▨	▨		
					11	▨			
					12				
					13	▨		CL	Sandy lean clay with gravel, pea to thumb sized gravel, green and gray, moist, strong hydrocarbon odor.
					14	▨			
			19.4	SB-17 @ 15 10:30	15	▨	▨	CL	Lean Clay with sand; tan, orange and some white and red mottling; more firm, and more coarse grained sand; moist.
					16	▨			
					17	▨			
					18	▨		CL	Sandy lean clay with gravel, green, and white trace roots; rounded to subrounded, thumb sized gravel, very moist.
			79.4	SB-17 @ 20 10:11	19	▨	▨		
	▽				20	▨			
					21	▨		CL	Same as above, however sandy clay becomes orange to tan; still very moist.
					22	▨			

Delta
Consultants

Project No: C101156
Logged By: C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method: Direct Push
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 Mac Arthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-17
Date Drilled: 06/16/10
Page 2 of **3**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement					23	▨		CL	Same as above, with increased firmness.
					24	▨			
			NA	SB-17 @ 25 10:17	25	▨	▨		
					26	▨			
					27	▨			
					28	▨			
					29	▨			
			12.5	SB-17 @ 30 10:20	30	▨	▨	CL	Same as above.
					31				
					32	▨			
					33	▨			
					34	▨			
			3.8	SB-17 @ 35 10:24	35	▨	▨	CL	Same as above.
					36	▨			
					37	▨			
					38	▨			
					39	▨			
			10.5	SB-17 @ 40 10:44	40	▨	▨	CL	Same as above.
					41	▨			
					42	▨			
					43	▨			
					44	▨			

Delta
Consultants

Project No: C101156
Logged By: C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method: Direct Push
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 Mac Arthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-17
Date Drilled: 06/16/10
Page 3 of **3**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement					45	▨			
					46	▨			
			36	SB-17 @ 47 11:02	47	▨	▨	CL	same as above.
					48	▨			
					49	▨			
			9.2	SB-17 @ 50 11:03	50	▨	▨		
					51				**Boring terminated at 50.5 feet bgs.**
					52				
					53				
					54				
					55				
					56				
					57				
					58				
					59				
					60				
					61				
					62				
					63				
					64				
					65				
					66				

Delta
Consultants

Project No: C101156
Logged By: C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, California
Hole Diameter:
Hole Depth:
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-18
Date Drilled: 06/14/10
Page **1** of **1**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement				Hand Augered	1 2 3 4 5				
					6 7				
			12.5	SB-18 @ 7.5 3:05	8 9	▨	▨	CL	Fat clay, gray and green, some thumb sized white gravel/rock, moist.
			25.1	SB-18 @ 10 3:13	10 11	▨	▨		
					12 13 14				
			476.0	SB-18 @ 15 3:19	15	▨	▨	SM	Fine grained silty sand; black, saturated, very strong odor
					16 17	▨		CH	Fat clay with sand, tan and gray, visible contamination.
					18 19	▨			Clay with silt and sand; tan to gray; increased moisture; fine grained sand more abundant in bottom of sample with tan and orange coloring.
			11.1	SB-18 @ 20 3:26	20	▨	▨	CL	
									Boring terminated at 20 feet bgs.
					21 22				

Delta
Consultants

Project No: C101156
Logged By: C. Morgan
Driller: **Gregg Drilling**
Drilling Method: Sonic
Sampling Method:
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **4276 MacArthur Blvd.**
Oakland, California
Hole Diameter: 3"
Hole Depth: 20'
First Water Depth:
Static Water Depth:
Well Depth:

Boring No: SB-19
Date Drilled: 06/15/10
Page **1** of **1**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Boring Completion Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Analyzed	Soil Type	**LITHOLOGY / DESCRIPTION**
Neat Cement				Hand Augered	1				
					2				
					3				
					4				
					5				
					6				
					7	▨	▨		
			33.7	SB-19 @ 7.5 2:30	8	▨		CL	Lean clay; gray with visible green contamination, some gravel.
					9	▨			
			26.9	SB-19 @ 10 2:30	10	▨	▨	CL	Same as above.
					11	▨			
					12				
					13				
					14	▨			
			55.3	SB-19 @15 2:30	15	▨	▨	CL	Sandy lean clay; light brown to tan; some green contamination present; very firm; moist.
					16	▨			
					17	▨			
					18	▨			
			58.4	SB-19 @20 2:52	19	▨	▨	CH	Fat clay with gravel; gray and some orange increased moisture; slight odor.
					20				**Boring terminated at 20 feet bgs.**
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
▼ First Water Depth: **N/A**
▽ Static Water Depth: **N/A**

Boring: SV-1
Page 1 of 1

Location Map

Well Completion Backfill	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
Asphalt								**SM**	**Sand with Gravel (SM)** - Possible fill material, brown to red brown, moist, medium dense to dense, medium to coarse sand
Bent. Grout		Moist			1				
					2				
Bent. Chips					3			**SM**	**Silty Sand (SM)** - Light brown, moist, medium dense, fine to coarse grained sand
#2/12 Sand		Moist			4				
				SV-1-S	5	▨	▨		Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-1-S collected at 10:15 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3' - 4'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
▼ First Water Depth: **N/A**
▽ Static Water Depth: **N/A**

Boring: SV-2
Page 1 of **1**

Location Map

Well Completion Backfill	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
Asphalt									
Bent. Grout		Moist			1				
					2			**SM**	**Silty Sand with Gravel (SM)** - Brown, moist, medium dense, no odor, fine to coarse sand, well graded fine to medium grained gravel
Bent. Chips		Moist			3				
#2/12 Sand				**SV-2-S**	4	▨	▨		
									Boring Terminated at 4' bgs.
					5				Groundwater Not Enountered
					6				Soil Sample SV-2-S collected at 14:05 7/7/2009
					7				
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
▼ First Water Depth: **N/A**
▽ Static Water Depth: **N/A**

Boring: SV-3
Page 1 of 1

Location Map

Well Completion Backfill	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt								SM	**Silty Sand with Gravel (SM)** - Dark brown, medium dense, moist, no odor, fine to medium grained sand, possible fill material
Bent. Grout		Moist	17.2		1				
					2				
Bent. Chips					3			CL	**Lean Clay with Sand (CL)** - Dark brown, moist, medium plastic, stiff, hydrocarbon odor, lenses of olive green
#2/12 Sand		Moist	78.9		4				
				SV-3-S	5	▨	▨		Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-3-S collected at 13:25 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
▼ First Water Depth: **N/A**
▽ Static Water Depth: **N/A**

Boring: SV-4
Page 1 of 1

Location Map

Well Completion						Sample			
Backfill	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Recovery	Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
Asphalt									
Bent. Grout		Moist	14.8		1			**CL**	**Lean Clay (CL)** - Dark brown with black mottling, moist, stiff, medium plastic
					2				
Bent. Chips					3			**CL**	**Sandy Lean Clay (CL)** - Dark olive green to black, moist, medium stiff, medium plastic, slight hydrocarbon odor
#2/12 Sand		Moist	21.6		4				**Clayey Silt (ML)** - light brown with black mottling, moist, very dense, non-plastic
				SV-4-S	5	▨	▨	**ML**	Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-4-S collected at 12:40 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
▼ First Water Depth: **N/A**
▽ Static Water Depth: **N/A**

Boring: SV-5
Page 1 of 1

Location Map

Well Completion Backfill	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt								GW	**Well-Graded Gravel with Sand (GW)** - light brown, dense, medium grained, moist, possible fill material
Bent. Grout		Moist	27.3		1 2				
Bent. Chips					3			CL	**Lean Clay (CL)** - Gray/black to olive green, moist, medium stiff, medium, plastic, hydrocarbon odor
#2/12 Sand		Moist	237	SV-5-S	4	▨	▨		
					5				Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-5-S collected at 11:00 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
▼ First Water Depth: **N/A**
▽ Static Water Depth: **N/A**

Boring: SV-6
Page 1 of 1

Location Map

Well Completion Backfill	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Asphalt								GW	**Well-Graded Gravel with Sand (GW)** - light brown, dense, medium grained, dry to moist, possible fill material
Bent. Grout		Moist			1				
					2				
Bent. Chips					3			CL	**Lean Clay with Sand (CL)** - light olive green, moist, soft to stiff, low plastic, strong hydrocarbon odor
#2/12 Sand		Moist			4				
				SV-6-S	5	▨	▨		Boring Terminated at 5' bgs. Groundwater Not Enountered
					6				
					7				Soil Sample SV-6-S collected at 9:45 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta

Consultants

Project No: **C101156203**
Logged By: **S. Meninger/C. Morgan**
Driller: **Gregg**
Drilling Method: **Hand Auger**
Sampling Method: **Hand Drive**
Casing Type: **N/A**
Slot Size: **N/A**
Gravel Pack: **3.5' - 5'**

Client: **ConocoPhillips**
Location: **Oakland, CA**
Date Drilled: **7/7/2009**
Hole Diameter: **3.5"**
Hole Depth: **5'**
Well Diameter: **N/A**
Well Depth: **N/A**
▼ First Water Depth: **N/A**
▽ Static Water Depth: **N/A**

Boring: SV-7
Page 1 of 1

Location Map

Well Completion Backfill	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
Asphalt									
Bent. Grout		Moist	25.9		1			**SM**	**Gravelly Sand with Clay (SM)** - Brown to black, moist, medium dense to dense, medium grained gravel, possible fill material
					2				
Bent. Chips					3				
#2/12 Sand		Moist	54.5		4			**CL**	**Lean Clay (CL)** - Blue-gray to light olive green, moist, stiff, medium plastic, slight hydrocarbon odor
				SV-7-S	5	▨	▨		Boring Terminated at 5' bgs.
					6				Groundwater Not Enountered
					7				Soil Sample SV-7-S collected at 11:30 7/7/2009
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: Hand Auger
Sampling Method:
Casing Type: 1/4" Tubing
Slot Size:
Gravel Pack: #30

Client: COP
Location: Oakland
Date Drilled: 8/9/2010
Hole Diameter: 36"
Hole Depth: 5'
Well Diameter: 1/4"
Well Depth: 5'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **SVW-1**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion		Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample		Soil Type	**LITHOLOGY / DESCRIPTION**
Backfill	Casing						Recovery	Interval		
See Construction Detail						1				
						2			CL	Brown lean clay with sand and gravel, moist
						3				
						4				
									CH	Green/gray fat clay
						5				
										Total Depth = 5'
						6				
						7				
						8				
						9				
						10				
						11				
						12				
						13				
						14				
						15				
						16				
						17				
						18				
						19				
						20				
						21				
						22				

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: Hand Auger
Sampling Method:
Casing Type: 1/4" Tubing
Slot Size:
Gravel Pack: #30

Client: COP
Location: Oakland
Date Drilled: 8/9/2010
Hole Diameter: 36"
Hole Depth: 5'
Well Diameter: 1/4"
Well Depth: 5'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **SVW-2**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion		Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample		Soil Type	**LITHOLOGY / DESCRIPTION**
Backfill	Casing						Recovery	Interval		
See Construction Detail						1				
						2			CL	Brown/green lean clay with sand and gravel, 20% sand, some gravel, cobbles, moist
						3				
						4				
						5			CH	Green/gray clay
						6				Total Depth = 5'
						7				
						8				
						9				
						10				
						11				
						12				
						13				
						14				
						15				
						16				
						17				
						18				
						19				
						20				
						21				
						22				

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: Hand Auger
Sampling Method:
Casing Type: 1/4" Tubing
Slot Size:
Gravel Pack: #30

Client: COP
Location: Oakland
Date Drilled: 8/9/2010
Hole Diameter: 36"
Hole Depth: 5'
Well Diameter: 1/4"
Well Depth: 5'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **SVW-3**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill Casing	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
See Construction Detail					1			CL	Brown/green lean clay with sand and gravel, strong odor
					2				
					3				
					4			CH	Gray/green clay, strong odor
					5				Total Depth = 5'
					6				
					7				
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: Hand Auger
Sampling Method:
Casing Type: 1/4" Tubing
Slot Size:
Gravel Pack: #30

Client: COP
Location: Oakland
Date Drilled: 8/10/2010
Hole Diameter: 36"
Hole Depth: 5'
Well Diameter: 1/4"
Well Depth: 5'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **SVW-4**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill Casing	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
See Construction Detail					1			CL	Dark brown/greenish lean clay with sand, strong odor
					2				
					3				
					4			CH	Green/brown clay, stong odor
					5				Total Depth = 5'
					6				
					7				
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: Hand Auger
Sampling Method:
Casing Type: 1/4" Tubing
Slot Size:
Gravel Pack: #30

Client: COP
Location: Oakland
Date Drilled: 8/9/2010
Hole Diameter: 36"
Hole Depth: 5'
Well Diameter: 1/4"
Well Depth: 5'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **SVW-5**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill Casing	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
See Construction Detail					1			CL	Green/gray/black lean clay with sand, some gravel, wood debris, strong odor
					2				
					3				
					4			CH	Greenish gray clay, strong odor
					5				Total Depth = 5'
					6				
					7				
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta
Consultants

Project No: C101156
Logged By: Alan Buehler
Driller: Gregg Drilling
Drilling Method: Hand Auger
Sampling Method:
Casing Type: 1/4" Tubing
Slot Size:
Gravel Pack: #30

Client: COP
Location: Oakland
Date Drilled: 8/9/2010
Hole Diameter: 36"
Hole Depth: 5'
Well Diameter: 1/4"
Well Depth: 5'
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **SVW-6**
Page 1 of 2

Elevation:
Northing:
Easting:

Well Completion Backfill Casing	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	**LITHOLOGY / DESCRIPTION**
See Construction Detail					1				
					2			CL	Green/gray lean clay with sand, some gravel, some odor, asphault debris
					3				
					4				
								CH	Green/brown clay, strong odor
					5				Total Depth = 5'
					6				
					7				
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

AECOM

AECOM
10461 Old Placerville Road
Sacramento, CA 95827
(916) 361-6400
www.aecom.com

Boring No. SV-1

Client: Chevron EMC
Project Number: 60264254.A10
Site Description/Location: 4276 MacArthur Boulevard, Oakland, CA
Coordinates: 2113771.8 N 6071956.9 E *Elevation:* 175.71 FT *Datum:* NAD 83
Drilling Equipment/Method: Hand Auger/Manual
Sample Type(s): Grab *Boring Diameter:* 2.5 IN.

Project Manager: J Harms
Sheet: 1 *of* 1
Well Installed: Yes
Ambient PID: ppm

Approved By: R Perez
Logged By: J Harms
Date/Time Started: 03-14-13
Depth of Boring: 5.5 ft bgs
Drilling Contractor: Confluence Env.
Backfill: Grout/Bentonite
Date/Time Finished: 03-14-13
Water Level: Not Encountered

Depth (ft)	Sample ID	Sample Time	Sample Depth (ft)	Recovery (ft)	Blow Counts	PID Reading (ppm)	USCS	Graphic Log	Soil Boundary (ft bgs)	Visual Description Soil Type (USCS Class) - [gr%,sd%,st%,cl%]	Elevation (ft amsl)
									0.3	CONCRETE.	
										LEAN CLAY (CL) - [0,0,15,85] olive gray (5Y 4/2); dry; very stiff; medium plasticity; few silt; brown mottling; hydrocarbon odor.	175
						2.4					
										@1.5 feet bgs transition in color to olive gray (5Y 5/2); slight hydrocarbon odor.	
						0.7	CL				
						4.4				@3 feet bgs trace sand (5%) and few silt (10%); transition in color to pale yellow (5Y 7/4); no hydrocarbon odor.	
									3.5		
										LEAN CLAY WITH SAND (CL) - [0,20,5,75] pale olive (5Y 6/3); moist; firm; low plasticity; fine sand; trace silt.	
						26.7	CL				
									4.5		
										SILT WITH SAND (ML) - [5,25,45,25] grayish yellow (5GY 7/2); moist; firm; non-plastic; subangular, poorly graded fine sand; fine subangular gravel (max 0.25"); 45% silt, hydrocarbon odor.	
5	SV-1-5	0930	⬇			33.9	ML				
									5.5		

Geologist terminated boring due to target depth achieved.

Notes:

⬇ Hand Auger

AECOM

AECOM
10461 Old Placerville Road
Sacramento, CA 95827
(916) 361-6400
www.aecom.com

Client: Chevron EMC

Project Number: 60264254.A10

Boring No. SV-2

Site Description/Location: 4276 MacArthur Boulevard, Oakland, CA

Project Manager: J Harms

Coordinates: 2113761.8 N 6071941 E *Elevation:* 175.85 FT *Datum:* NAD 83

Sheet: 1 *of* 1

Drilling Equipment/Method: Hand Auger/Manual

Well Installed: Yes

Sample Type(s): Grab *Boring Diameter:* 2.5 IN.

Ambient PID: ppm

Approved By: R Perez

Logged By: J Harms

Date/Time Started: 03-14-13

Depth of Boring: 5.5 ft bgs

Drilling Contractor: Confluence Env.

Backfill: Grout/Bentonite

Date/Time Finished: 03-14-13

Water Level: Not Encountered

Depth (ft)	Sample ID	Sample Time	Sample Depth (ft)	Recovery (ft)	Blow Counts	PID Reading (ppm)	USCS	Graphic Log	Soil Boundary (ft bgs)	Visual Description Soil Type (USCS Class) - [gr%,sd%,st%,cl%]	Elevation (ft amsl)
									0.5	CONCRETE.	
										SILTY SAND (SM) - [0,75,25,0] brown (10YR 4/3); dry; loose; poorly graded fine to medium sand; few silt (25%), no odor.	175
						0					
										@1.5 feet bgs trace clay (5%); moist; firm.	
						0	SM				
						0			3.0	LEAN CLAY (CL) - [0,0,15,85] olive gray (5Y 5/2); dry; firm; medium plasticity; little silt (15%), no odor.	
						0	CL				
5	SV-2-5	1030	⬇			0					
									5.5		

Geologist terminated boring due to target depth achieved.

Notes:

⬇ Hand Auger

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Client: Chevron Enviornmental Management Company
Project Number: 60287515
Site Description/Location: 351645 Oakland, Oakland, California
Coordinates: Not Surveyed *Elevation:* *Datum:*
Drilling Equipment/Method: /Hollow Stem Auger *Weather:* 60* Clear
Sample Type(s): Split Spoon *Boring Diameter:* 8 IN.

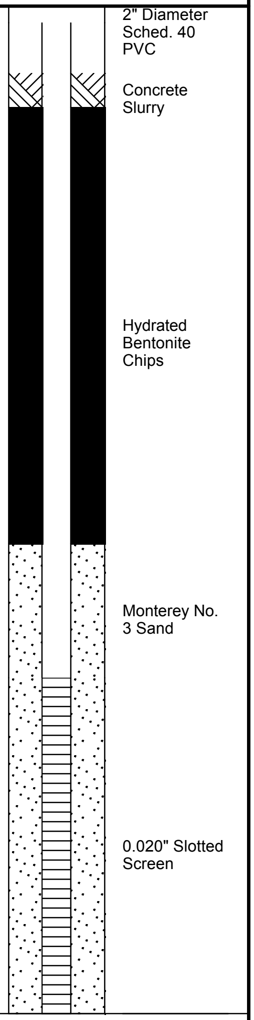
Boring No. MW-9A

Ambient PID Reading: 0.0
Sheet: 1 *of* 1
Monitoring Well Installed: Yes
Screened Interval: 10-15 ft.

Approved By:
Logged By: J.Harms
Date/Time Started: 03-18-13 / 13:05
Depth of Boring: 15 FT BGS
Drilling Contractor: ABC
Backfill: grout
Date/Time Finished: 03-18-13 / 13:20
Water Level: Not Encountered

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.
							■	(0-5") ASPHALT
						CL	▨	(5"- 2.5') LEAN CLAY, Dark Gray (5Y 3/1), medium-plastic, 90% clay, 5% silt, 5% fine-grained gravel, stiff, dry, Hydrocarbon odor
					242	CH	▨	(2.5-6') FAT CLAY, Olive Gray (5Y4/2), high-plastic, 90% clay, 5% silt, 5% fine-grained gravel, very stiff, dry, Hydrocarbon odor
5	5.0, 5.0Dup	☒			3770			
						CL	▨	(6-9') LEAN CLAY, Olive Gray (5Y4/2), medium-plastic, 80% clay, 10% silt, 10% fine-grained gravel, very stiff, dry, Hydrocarbon odor
	8.5	☒	8 9 11, 11	2	1005			
						CH	▨	(9-12.5') FAT CLAY, Olive Gray (5Y4/2), high-plastic, 80% clay, 10% silt, 10% fine-grained gravel, very stiff, dry, Hydrocarbon odor
10			9 12 13	1.5				
			13 14 15	1.5				, Dark Reddish Gray (4/2) / Olive Yellow (5Y 6/6), mottled
					1347	CL	▨	(12.5- 15') LEAN CLAY, Dark Reddish Gray (4/2) / Olive Yellow (5Y 6/6) mottled, medium-plastic, 70% clay, 10% silt, 15% fine-grained gravel, 5% fine to coarse-grained sand, very stiff, dry, Iron staining starts at 13 Feet
15	14	☒	8 10 12, 14	1	237			

Well Diagram



Notes: Continuous Split Spoon from 8 Feet

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(805) 388-3775
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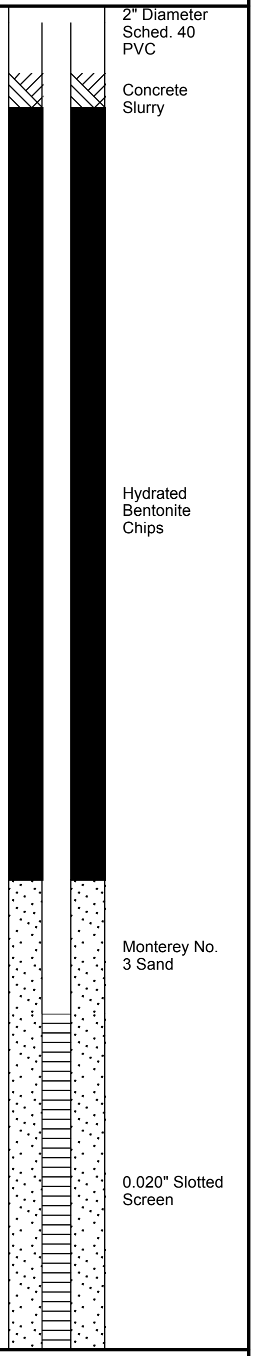
Boring No. MW-9B

Client: Chevron Enviornmental Management Company
Project Number: 60287515
Site Description/Location: 351645 Oakland, Oakland, California
Coordinates: Not Surveyed *Elevation:* *Datum:*
Drilling Equipment/Method: /Hollow Stem Auger *Weather:* 60* Clear
Sample Type(s): Split Spoon *Boring Diameter:* 8 IN.
Ambient PID Reading: 0.0
Sheet: 1 *of* 1
Monitoring Well Installed: Yes
Screened Interval: 15-20 ft.
Approved By:
Logged By: J.Harms
Date/Time Started: 03-15-13 / 13:20
Depth of Boring: 20 FT BGS
Drilling Contractor: ABC
Backfill: grout
Date/Time Finished: 03-15-13 / 14:00
Water Level: Not Encountered

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.
								(0-6") ASPHALT
						CL		(6"-2.5') LEAN CLAY, very dark gray (5Y 3/1), medium-plastic, 90% clay, 5% silt, 5% gravel, medium dense, dry, Hydrocarbon odor (stronger at 4')
5	5.0				3247 2416	CH		(2.5-7.0') FAT CLAY, olive gray (5Y 4/2), high-plastic, 90% clay, 5% silt, 5% gravel, stiff, dry, Hydrocarbon odor
10	9.0		6 8 9, 11 6 8 12	2 1.5	41.2 573	CL		(7.0-12') LEAN CLAY WITH SILT, SAND, AND LITTLE GRAVEL, olive gray (5Y 4/2), medium-plastic, 80% clay, 10% silt, 10% fine-grained gravel, very stiff, dry, Mn nodules, fine sand laminations
			6 8 9, 11			CL		(12-13.5') LEAN CLAY, Dark Reddish Gray (4/2) / Olive Yellow (5Y 6/6) mottled, medium-plastic , 80% clay, 10% silt, 10% fine to coarse-grained gravel, very stiff, dry, Iron staining at 12 feet, odor decreasing at 13 feet , brownish yellow (10YR 6/6)
15	14.0			1.5 2	7.9 128	ML		(13.5-15') SILT WITH SAND, olive (5Y 5/3) mottled, low-plastic, 60% silt, 30% fine-grained sand, 10% clay, dense, dry
			6 8 9 6 9 9	1.5		SM		(15-18') SILTY SAND WITH GRAVEL, light brown (7.5YR 6/4), 40% fine to medium-grained sand, 40% silt, 20% fine to coarse-grained gravel (max size 0.5 inches), medium dense, moist
20	19.0		6 8 10,12	2	0.7	ML		(18-20') SILT WITH SAND AND GRAVEL, red brown (5YR 4/4), low-plastic, 50% silt, 20% fine to medium-grained sand, 20% fine-coarse grained gravel (max size 0.5 inches), 10% clay, medium dense, moist, slight odor at 18.5-18.8 feet in layer of coarse gravel

Well Diagram



Notes: Continuous Split Spoon from 8 Feet

AECOM Environment
1220 Avenida Acaso
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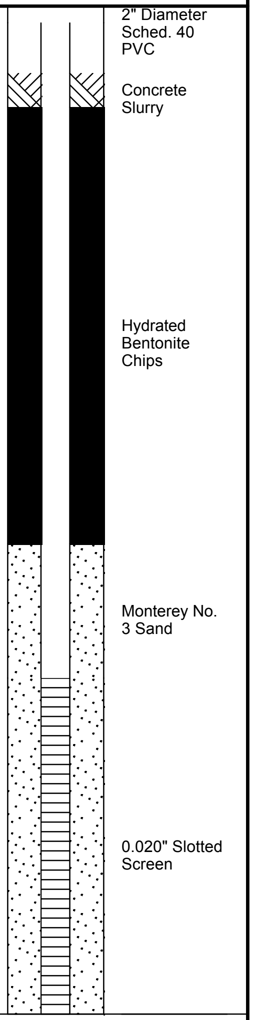
Boring No. MW-10A

Client: Chevron Enviornmental Management Company			
Project Number: 60287515			
Site Description/Location: 351645 Oakland, Oakland, California			*Ambient PID Reading:* 0.0
Coordinates: Not Surveyed	*Elevation:*	*Datum:*	*Sheet:* 1 *of* 1
Drilling Equipment/Method: /Hollow Stem Auger	*Weather:*60* Clear		*Monitoring Well Installed:* Yes
Sample Type(s): Split Spoon	*Boring Diameter:* 8 IN.		*Screened Interval:* 10-15 ft.
Approved By:	*Logged By:* J.Harms	*Date/Time Started:* 03-18-13 / 10:40	*Depth of Boring:* 15 FT BGS
Drilling Contractor: ABC	*Backfill:* grout	*Date/Time Finished:* 03-18-13 / 11:00	*Water Level:* Not Encountered

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.
								(0-2")ASPHALT
						ML		(2"-2.0')SILT WITH CLAY AND GRAVEL, red brown (5YR 5/4), 70% silt, 20% fine-grained gravel (max sixe 0.25 inches), 10% clay, medium dense, dry, Hydrocarbon odor
					346	CL		(2-3') CLAY WITH LITTLE GRAVEL, black (7.5 YR 2.5/1), medium-plastic, 80% clay, 10% silt, 10% fine-grained gravel, subangular, medium dense, dry
						CH		(3-8.5') FAT CLAY WITH TRACE OF SAND AND SILT, gray (2.5Y 5/1), high-plastic, 90% clay, 5% fine-grained sand, 5% silt, stiff, dry
5	5.0			1	657			-(increasing silt and sand @ 4')
			6 8 9, 10					, medium-plastic, 80% clay, 10% fine-grained sand, 10% silt @ 7.5'
	9.0			2	325	CL		(8.5-13') LEAN CLAY WITH SAND, olive (5 Y 5/3), medium-plastic, 70% clay, 20% fine-grained sand, 10% silt, stiff, dry, Iron staining from 12 to 15 feet
10								
			9 11 12	1.5				
			8 11 13	1.5	1011			
						ML		(13-14') SILT WITH SAND AND GRAVEL, olive (5 Y 5/3), 70% silt, 20% fine to medium-grained sand, 5% clay, 5% gravel, stiff, dry-(13.8 - 14 feet decreased silt increase from fine to medium grained sand)
	14.0		9 10 11, 12	2	3222			-(moist at 14')
15								

Well Diagram



Notes: Continuous Split Spoon from 8 Feet

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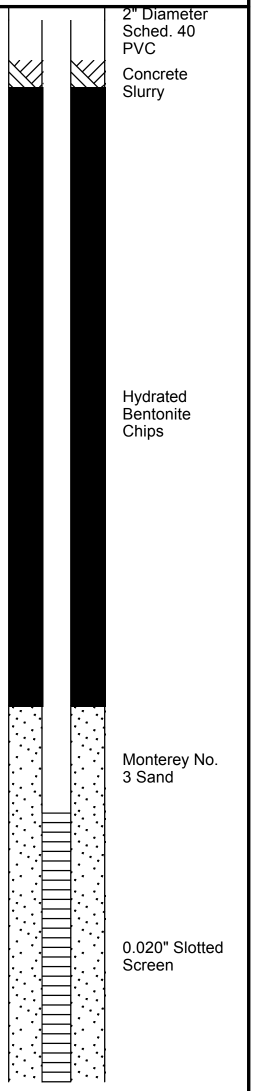
Boring No. MW-10B

Client: Chevron Enviornmental Management Company
Project Number: 60287515
Site Description/Location: 351645 Oakland, Oakland, California
Coordinates: Not Surveyed *Elevation:* *Datum:*
Drilling Equipment/Method: /Hollow Stem Auger *Weather:* 60* Clear
Sample Type(s): Split Spoon *Boring Diameter:* 8 IN.
Ambient PID Reading: 0.0
Sheet: 1 *of* 1
Monitoring Well Installed: Yes
Screened Interval: 15-20 ft.
Approved By:
Logged By: J.Harms
Date/Time Started: 03-18-13 / 08:50
Depth of Boring: 22 FT BGS
Drilling Contractor: ABC
Backfill: grout
Date/Time Finished: 03-18-13 / 09:45
Water Level: 19 FT BGS

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.
								(0-2") ASPHALT
						ML		(2"-2') LEAN CLAY WITH SAND AND GRAVEL, reddish brown (5 YR 5/4), low plastic, 70% clay, 20% fine to medium-grained sand, 10% fine-grained gravel (max size 0.25 inches), medium dense, dry
5	5.0	☒			593	CL		(2-5') LEAN CLAY, olive gray (5Y 5/2), medium-plastic, 90% clay, 10% silt, stiff, dry, hydrocarbon odor at 4 feet
	9.0	☒	6 8 9, 11	2	255	CH		(5-11.5') FAT CLAY, olive gray (5Y 5/2), medium-plastic, 90% clay, 10% silt, stiff, dry, hydrocarbon odor
10			9 12 14	1.5				, increase in silt, odor decreased at 10 feet to 12 feet
			9 12 14	1.5		CL		(11.5-13') LEAN CLAY WITH SILT, light yellowish brown (10YR 6/4), mottled at 7 feet, low-plastic, 80% clay, 20% silt, very stiff, dry
		☒	9 11 12, 14	1.5		CL		(13-16') LEAN CLAY WITH SAND, light yellowish brown (10YR 6/4), low plastic, 70% clay, 20% fine to coarse-grained sand, 10% fine-grained gravel, very stiff, dry
15	15.0		9 11 15	2				, (Iron staining and deposits at 15 to 20 feet)
			8 9 13	1.5		ML		(16-16.5') SILT WITH CLAY, brown (10YR 4/3), 80% silt, 15% sand, 5% clay, medium dense, moist
						SM		(16.5-16.8') SILTY SAND, brown (10YR 4/3), 75% fine-grained sand, 20% silt, 5% clay, medium dense, moist
						SW		(16.8-17') WELL GRADED SAND, brownish yellow (10YR 6/6), 80% fine to medium-grained sand, 10% silt, 10% fine-grained gravel (max size 0.25 inches), medium dense, moist, odor decreases
		☒	10 11 13,17			CL		(17-18.8') LEAN CLAY WITH SILT AND GRAVEL, brownish yellow (10YR 6/6), low-plastic, 70% clay, 10% silt, 10% fine to medium-grained sand, 10% fine-grained gravel, very stiff, dry-(clay, odor decreases 18.5 - 18.8 feet)
20	20.0			2	7.7	SM		(18.8-20')SILTY SAND WITH GRAVEL, dark gray (10YR 4/1), 50%fine to coarse-grained sand, 40% silt, 10% fine-grained gravel (max size 0.25 inches), medium dense, wet-(coarse gravel 19 -20 feet)

Well Diagram



Notes: GW at 19Ft, Cont. SS after 8 Ft

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Client: Chevron Enviornmental Management Company
Project Number: 60287515
Site Description/Location: 351645 Oakland, Oakland, California
Coordinates: Not Surveyed *Elevation:* *Datum:*
Drilling Equipment/Method: /Hollow Stem Auger *Weather:* 60* Clear
Sample Type(s): Split Spoon *Boring Diameter:* 8 IN.

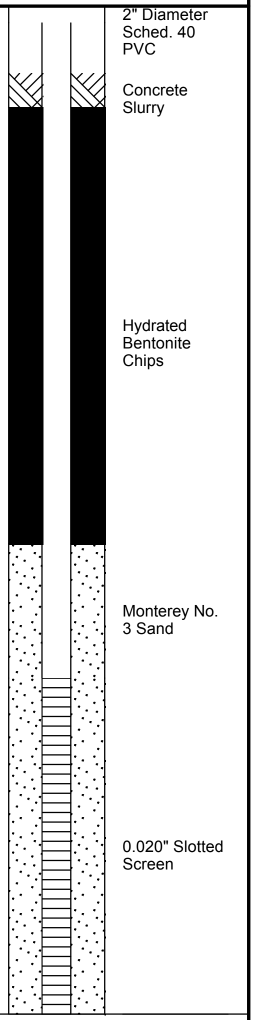
Boring No. MW-11A

Ambient PID Reading: 0.0
Sheet: 1 *of* 1
Monitoring Well Installed: Yes
Screened Interval: 10-15 ft.

Approved By:
Logged By: J.Harms
Date/Time Started: 03-19-13 / 10:15
Depth of Boring: 15 FT BGS
Drilling Contractor: ABC / Kenny
Backfill: grout
Date/Time Finished: 03-19-13 / 10:35
Water Level: Not Encountered

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.
								(0-10") ASPHALT AND BASE
						ML		(10"-10')SILT WITH SAND AND GRAVEL, dark yellowish brown (10YR 4/6), low-plastic, 60% silt, 20% fine to medium-grained sand, 10% clay, 10% fine to coarse-grained gravel (max size 3 inches), medium dense, dry, Hydrocarbon odor-(large cobbles at 2-2.5 feet)
					4.3			
								-(gray staining at 4.5 feet)
5	5.0				1380			
			6 8 10, 14					
	9.0			2	4557			
10			6 8 10	1.5		CL		(10-11.5') LEAN CLAY, dark yellowish brown (10YR 4/6), medium-plastic, 70% clay, 15% silt, 10% fine-grained sand, 5% fine-grained subangular gravel, very stiff, dry
						SM		(11.5-12.5') SILTY SAND, olive (5Y 5/3), 60% fine to coarse-grained sand, 30% silt, 10% fine-grained gravel, medium dense, wet, Hydrocarbon odor
			4 6 13	1.5	2530	CH		(12.5-15')FAT CLAY, dark reddish gray (5YR 4/2)/ olive yellow (5Y 6/6), mottled, high-plastic, 80% clay, 20% silt, 20% fine-grained sand, very stiff, dry, odor decreases, (Fe and Mn staining and nodules)
	14		6 8 8, 13	2	116			
15								

Well Diagram



Notes: Continuous Split Spoon from 8 Feet

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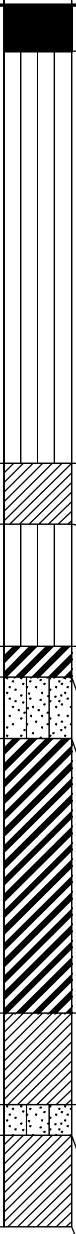
Client: Chevron Enviornmental Management Company
Project Number: 60287515
Site Description/Location: 351645 Oakland, Oakland, California
Coordinates: Not Surveyed *Elevation:* *Datum:*
Drilling Equipment/Method: /Hollow Stem Auger *Weather:* 60* Clear
Sample Type(s): Split Spoon *Boring Diameter:* 8 IN.

Boring No. MW-11B

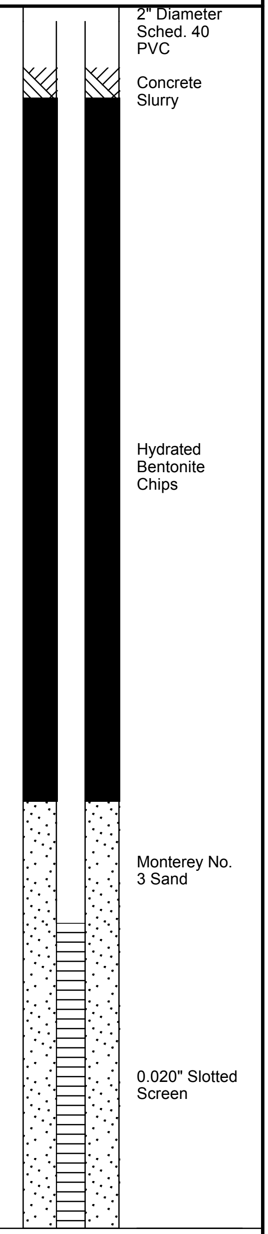
Ambient PID Reading: 0.0
Sheet: 1 *of* 1
Monitoring Well Installed: Yes
Screened Interval: 15-20 ft.

Approved By:
Logged By: J.Harms
Date/Time Started: 03-19-13 / 08:05
Depth of Boring: 20 FT BGS
Drilling Contractor: ABC / Kenny
Backfill: grout
Date/Time Finished: 03-19-13 / 09:00
Water Level: Not Encountered



DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.
								(0-9") ASPHALT AND BASE
						ML		(0.9"-7.5') SILT WITH SAND AND GRAVEL, dark yellowish brown (10YR 4/6), low-plastic, 60% silt, 20% fine to medium grained sand, 10% clay, 10% fine-grained gravel (max size .25 inches), medium dense, dry, no odor
					5.1			
	5.0				2.6			-(decreased gravel, fine-grained sand at 3 feet)
5								
					0.0	CL		(7.5-8.5') LEAN CLAY WITH SILT, brown (10YR 5/3), medium-plastic, 70% clay, 20% silt, 10% fine-grained sand, medium dense, dry, no odor
			6 8 10, 12		202			
						ML		(8.5-10.5')SILT WITH SAND, brown (10YR 5/3), 60% silt, 25% fine to medium-grained sand, 10% clay, 5% fine-grained gravel, medium dense, dry, odor/gray hydrocarbon staining
10	10, Dup			2	1047			
						CH		(10.5-11') FAT CLAY, brown (7.5YR 5/4), high-plastic, 70% clay,10% silt, 10% fine to medium-grained sand, 10% fine to coarse-grained gravel (max size 0.5 inches), stiff, dry, hydrocarbon odor
			6 6 8	1.5	3519	SM		
						CH		(11-12') SILTY SAND, olive gray (5Y 5/2), 60% fine to medium-grained sand, 20% silt, 20% fine to coarse-grained gravel (max size 0.5 inches), medium dense, dry, hydrocarbon odor
			6 8 10	1.5	3991			
								(12-16.5') FAT CLAY, brownish yellow (10YR 6/6), high-plastic, 80% clay, 10% fine-grained sand, 10% silt, very stiff, dry, hydrocarbon odor, iron staining
	14.0		8, 8 10 12	2	842			
								-(odor decreases at 14.5 feet)
15			8 10 10	1.5	32.2			
								, (70% clay, 10% silt, 20% fine to medium-grained sand) at 16 Feet
			8 8 8	1.5		CL		(16.5-18') LEAN CLAY WITH SAND, brownish yellow (10YR 6/6), medium-plastic, 70% clay, 20% fine to medium-grained sand, 5% silt, 5% fine-grained gravel (max size 0.25 inches), stiff, dry
						SM		(18-18.5') SILTY SAND, brownish yellow (10YR 6/6), 60% fine to coarse-grained sand, 20% silt, 10% fine-grained subangular gravel (max size 0.25 inches), medium dense, moist, hydrocarbon odor
						CL		
	19.0		6 8 10, 11	2	5.1			(18.5-20') LEAN CLAY WITH SAND, brownish yellow (10YR 6/6), low-plastic, 70% clay, 20% fine to medium-grained sand, 5% silt, 5% fine-grained gravel (max size 0.25 inches), stiff, moist, decreased hydrocarbon odor
20								

Well Diagram

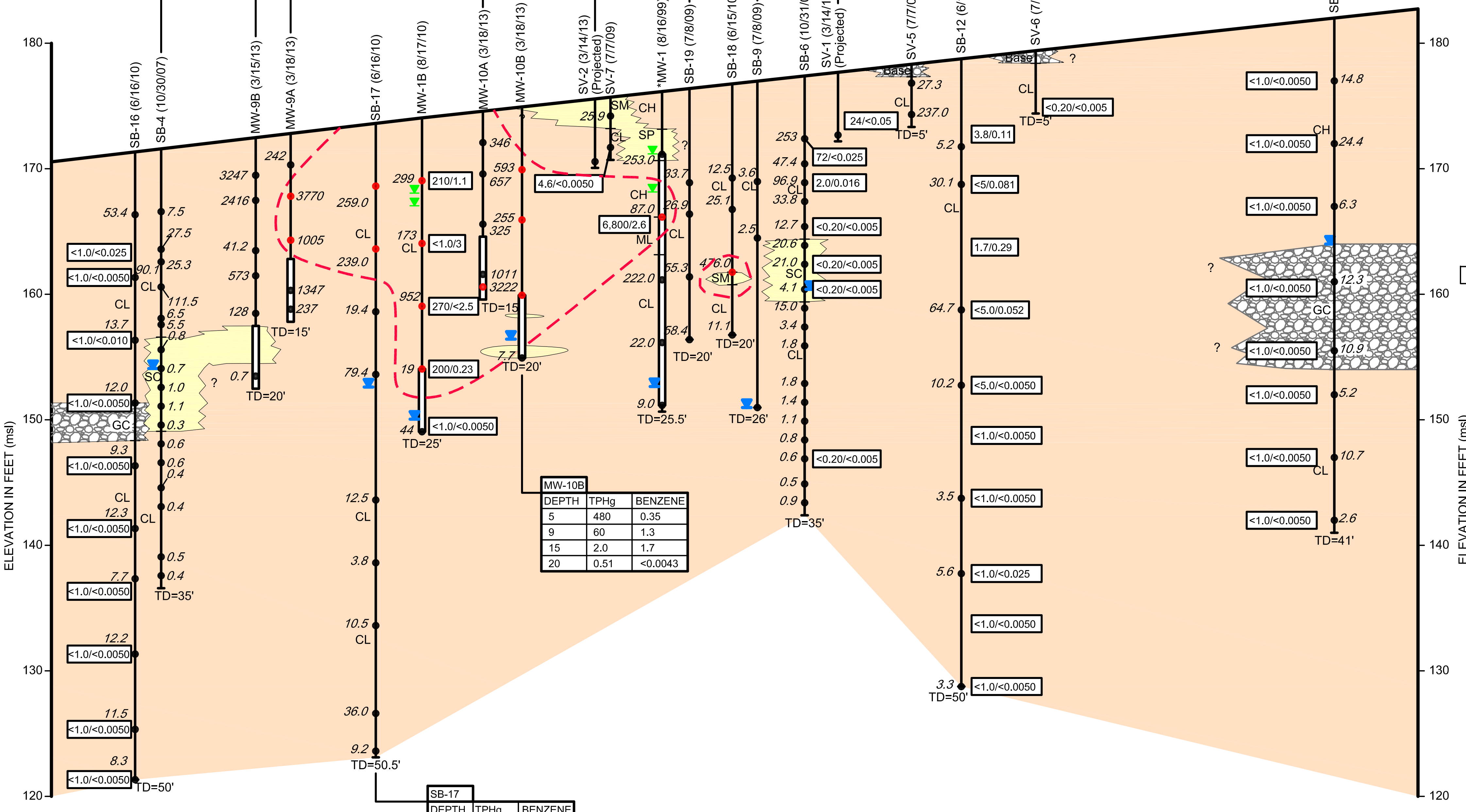


Notes: Continuous Split Spoon from 8 Feet

Attachment C

Cross Sections

FILENAME: J:\Client-Projects\76_Products\351645-Oakland\7.0_Deliverables\7.2_CADD-Graphics\cross section\cross section\cross section_rev12062013.dwg



SB-4

DEPTH	TPHg	BENZENE
8	0.96	<0.005
11	<0.20	<0.005
16	<0.20	<0.005
27	<0.20	<0.005

MW-9B

DEPTH	TPHg	BENZENE
5	1.7	0.013
9	0.36	<0.0050
14	<0.19	<0.0048
19	<0.17	<0.0043

MW-9A

DEPTH	TPHg	BENZENE
5	760	1.0
5	720	0.85
8.5	280	2.0
14	1.6	0.18

MW-10A

DEPTH	TPHg	BENZENE
5	59	0.22
9	41	1.0
14	100	<0.0044

SB-19

DEPTH	TPHg	BENZENE
7.5	1.5	<0.050
10	1.6	<0.050
15	<1.0	<0.0050
20	<1.0	<0.0050

SV-2

DEPTH	TPHg	BENZENE
5	<1.0	<0.005

SB-9

DEPTH	TPHg	BENZENE
15.5	<0.20	<0.005
26	<0.20	<0.005

SB-18

DEPTH	TPHg	BENZENE
7.5	<1.0	<0.0050
10	2.6	<0.0050
15	<1.0	5
20	<1.0	<0.0050

SV-1

DEPTH	TPHg	BENZENE
5	2.5	<0.005

MW-10B

DEPTH	TPHg	BENZENE
5	480	0.35
9	60	1.3
15	2.0	1.7
20	0.51	<0.0043

SB-17

DEPTH	TPHg	BENZENE
5	530	<0.0050
10	130	0.021
15	<1.0	<0.0050
20	9.8	11
30	<1.0	<0.0050
35	<1.0	<0.0050
40	<1.0	<0.0050
47	17	0.088
50	<1.0	<0.0050

LEGEND

SB-15 (6/18/10) WELL ID (DATE DRILLED)

14.8 ● PHOTOIONIZATION DETECTOR (PID) READING ONLY (parts per millon)

● TPHg CONCENTRATION ≥ 100 mg/kg AND/OR BENZENE CONCENTRATION > 1.1 mg/kg

▯ SCREEN INTERVAL

▼ GROUNDWATER ENCOUNTERED DURING DRILLING

▼ HISTORIC HIGH/LOW GROUNDWATER LEVEL

TD=41' TOTAL DEPTH (below ground surface)

* ABANDONED

TPH-g / B

BENZENE

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

ALL CONCENTRATION IN MILLIGRAMS PER KILOGRAM

– – EXTENT OF TPH OVER 100 mg/kg BENZENE OVER 1.1 mg/kg

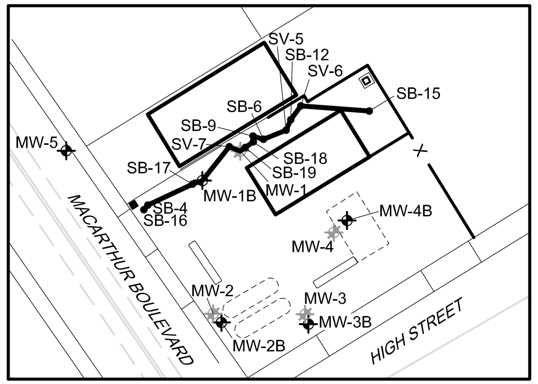
▨ GRAVELS (GW, GC)

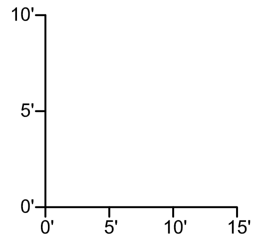
🟨 SAND (SC, SM, SP)

🟧 FINES (CL, CH, ML)

NOTE

ELEVATION APPROXIMATE, ELEVATION WAS DETERMINED BY USING THE MW-5, MW-2 MIDPOINT; MW-1, MW-1B EXACT ELEVATIONS; AND CHANGE IN ELEVATION BASED ON GOOGLE EARTH ELEVATIONS.





REVISIONS

NO.:	DESCRIPTION:	DATE:	BY:
1	MW-9A, MW-9B, MW-10A, MW-10B	12/06/2013	NOP

DESIGNED BY: E. Nelson
DRAWN BY: M. Scop
CHECKED BY: E. Nelson
APPROVED BY: B. Evans

AECOM

AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577

CROSS SECTION

Chevron Site #351645 (76 Service Station #1156)
4276 MacArthur Boulevard
Oakland, California

SCALE: AS NOTED
DATE: 4/27/2012
PROJECT NUMBER: 60249149 - A50

FIGURE NUMBER: X

SHEET NUMBER: X

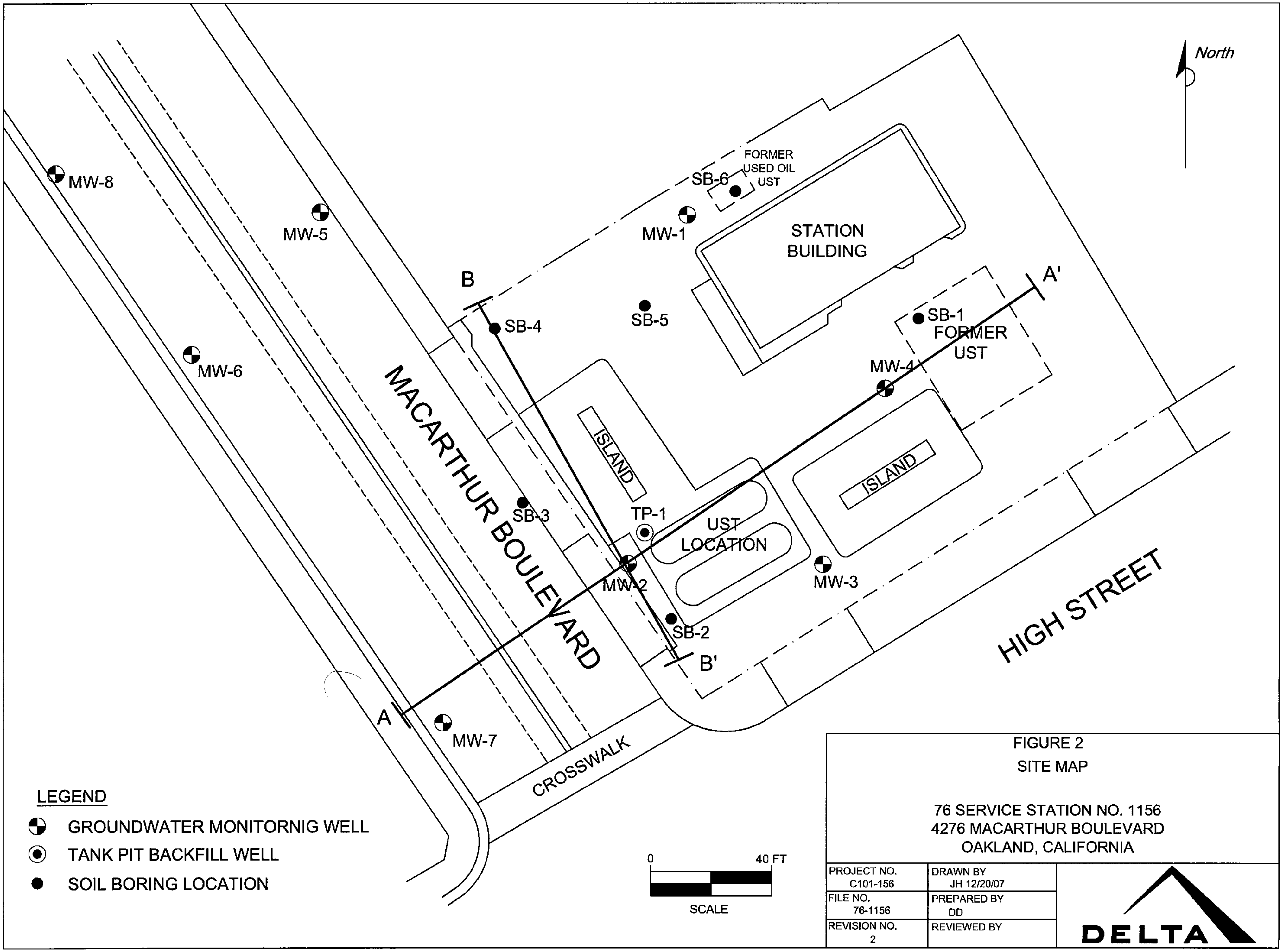
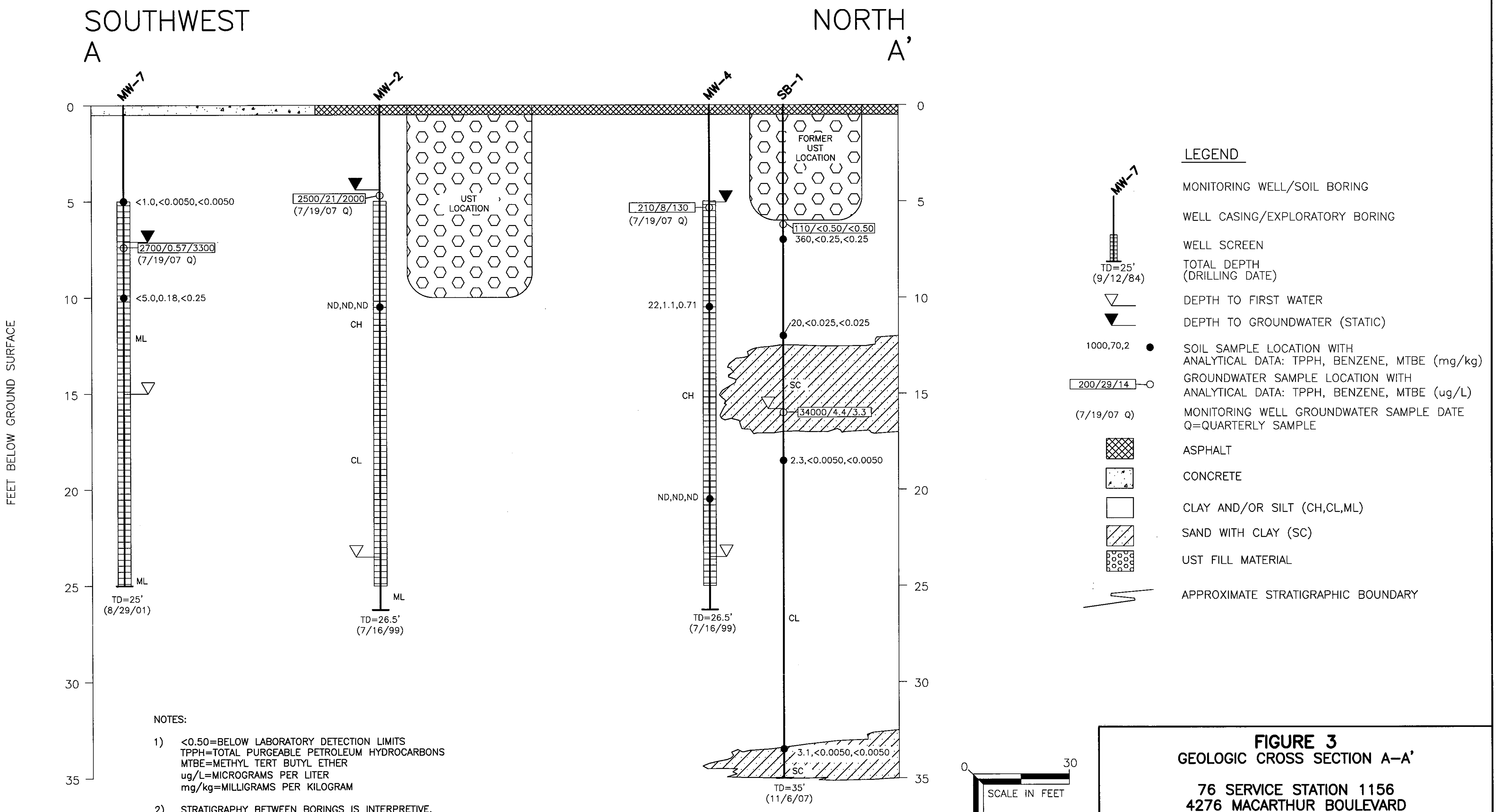


FIGURE 2
SITE MAP

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101-156	DRAWN BY JH 12/20/07
FILE NO. 76-1156	PREPARED BY DD
REVISION NO. 2	REVIEWED BY

DELTA



NOTES:

1) <0.50=BELOW LABORATORY DETECTION LIMITS
TPPH=TOTAL PURGEABLE PETROLEUM HYDROCARBONS
MTBE=METHYL TERT BUTYL ETHER
ug/L=MICROGRAMS PER LITER
mg/kg=MILLIGRAMS PER KILOGRAM

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

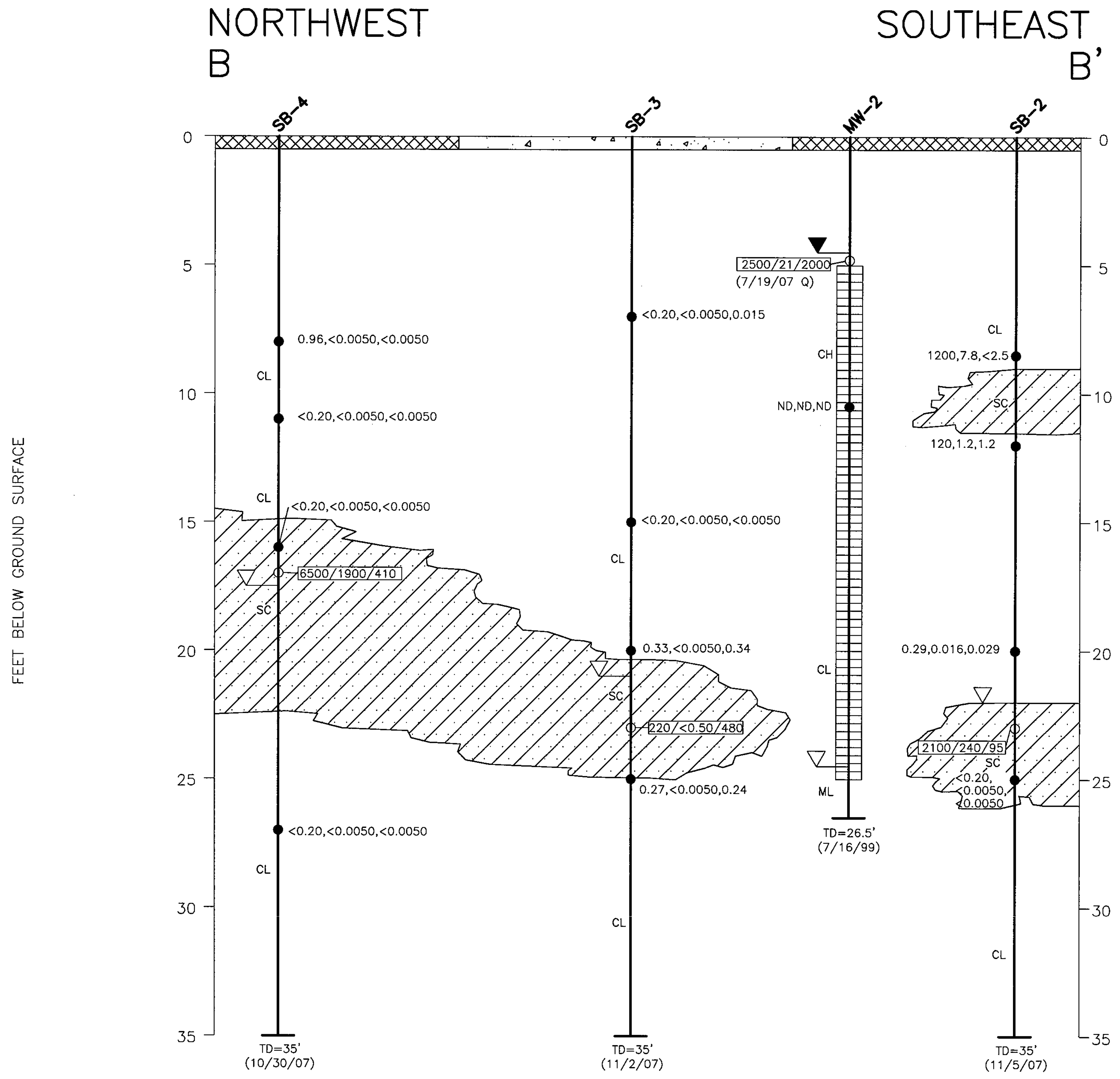
3) GROUNDWATER SAMPLES FROM BORINGS WERE COLLECTED ON THE DRILLING DATE.

4) DEPTH TO FIRST WATER IN WELLS WAS MEASURED ON THE DRILLING DATE. DEPTH TO STATIC WATER IN WELLS MEASURED DURING MOST RECENT QUARTERLY SAMPLING EVENT.

FIGURE 3
GEOLOGIC CROSS SECTION A–A'

76 SERVICE STATION 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
C101156	MH	JH	
DATE	REVIEWED BY	FILE NAME	DELTA
12/26/07		1156–CrosA	



LEGEND

MW-2	MONITORING WELL/SOIL BORING
	WELL CASING/EXPLORATORY BORING
	WELL SCREEN
TD=25' (9/12/84)	TOTAL DEPTH (DRILLING DATE)
▽	DEPTH TO FIRST WATER
▼	DEPTH TO GROUNDWATER (STATIC)
1000,70,2 ●	SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPPH, BENZENE, MTBE (mg/kg)
200/29/14 ○	GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPPH, BENZENE, MTBE (ug/L)
(7/19/07 Q)	MONITORING WELL GROUNDWATER SAMPLE DATE Q=QUARTERLY SAMPLE
▩	ASPHALT
░	CONCRETE
☐	CLAY AND/OR SILT (CH,CL,ML)
▨	SAND WITH CLAY (SC)
⚡	APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

1) <0.50=BELOW LABORATORY REPORTING LIMITS
TPPH=TOTAL PURGEABLE PETROLEUM HYDROCARBONS
MTBE=METHYL TERT BUTYL ETHER
ug/L=MICROGRAMS PER LITER
mg/kg=MILLIGRAMS PER KILOGRAM

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FROM BORINGS WERE COLLECTED ON THE DRILLING DATE.

4) DEPTH TO FIRST WATER IN WELLS WAS MEASURED ON THE DRILLING DATE. DEPTH TO STATIC WATER IN WELLS MEASURED DURING MOST RECENT QUARTERLY SAMPLING EVENT.

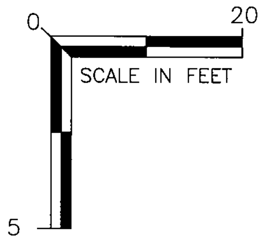


FIGURE 4
GEOLOGIC CROSS SECTION B-B'

76 SERVICE STATION 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C101156	MH	JH
DATE	REVIEWED BY	FILE NAME
12/26/07		1156-CrosB

DELTA

Attachment D

Historical Data Tables

TABLE 1

Soil Analytical Results - 1998 through 2009

76 Service Station No. 1156

4276 MacArthur Boulevard, Oakland, California

	Sample ID	Date	Sample Depth (feet)	TPH-G (mg/kg)	TPH-D (mg/kg)	Total Oil & Grease (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)
Soil																		
Environmental Resolutions, Inc.	S-6-T1N	3/23/98	6	**1,200**	--	--	**0.90**	ND	**14**	**100**	--	--	--	--	--	--	--	--
	S-9.5-T1S	3/23/98	9.5	**590**	--	--	**1.5**	ND	**5.6**	**33**	--	--	--	--	--	--	--	--
	S-7-T2S	3/23/98	7	**670**	--	--	**1.0**	**0.74**	**6.8**	**51**	--	--	--	--	--	--	--	--
	S-6-T2N	3/23/98	6	**83**	--	--	ND	ND	**0.15**	**0.41**	--	--	--	--	--	--	--	--
	~~S-6.5-T35*~~	~~3/23/98~~	~~6.5~~	~~130~~	~~78,000~~	~~--~~	~~0.55~~	~~1.3~~	~~1.2~~	~~11~~	--	--	--	--	--	--	--	--
	S-2-D1	4/9/98	2	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	S-3-D2	4/9/98	3	**16**	--	--	ND	ND	ND	**0.13**	--	--	--	--	--	--	--	--
	S-3-D3	4/9/98	3	**590**	--	--	**1.6**	**15**	**18**	**99**	--	--	--	--	--	--	--	--
	S-3-D4	4/9/98	3	ND	--	--	ND	ND	ND	**0.07**	--	--	--	--	--	--	--	--
	S-3-PL1	4/9/98	3	**160**	--	--	ND	ND	ND	**8.4**	--	--	--	--	--	--	--	--
	S-3.5-PL2	4/9/98	3.5	**63**	--	--	ND	ND	ND	**0.45**	--	--	--	--	--	--	--	--
	S-4.5-T3W	4/9/98	4.5	**5.0**	**2.3**	--	ND	**0.066**	ND	**0.011**	--	--	--	--	--	--	--	--
	S-3-T3S	4/9/98	3	**1.6**	ND	--	**0.043**	**ND**	**0.0091**	ND	--	--	--	--	--	--	--	--
	S-6-T3S	4/9/98	6	**81**	**560**	--	**0.64**	**1.4**	**1.1**	**5.9**	--	--	--	--	--	--	--	--
	S-10.5-B1 (MW-1)	7/16/99	10.5	**6,800**	--	--	**2.6**	**25**	**110**	**470**	ND	--	--	--	--	--	--	--
	S-10.5-B2 (MW-2)	7/16/99	10.5	ND	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
	S-10.5-B3 (MW-3)	7/16/99	10.5	**16**	--	--	**0.32**	**0.43**	**0.28**	**1.8**	**0.60**	--	--	--	--	--	--	--
	S-10.5-B4 (MW-4)	7/16/99	10.5	**22**	--	--	**1.1**	**0.32**	**0.46**	**1.3**	**0.71**	--	--	--	--	--	--	--
	S-20.5-B4 (MW-4)	7/16/99	20.5	ND	--	--	ND	ND	**0.0069**	ND	ND	--	--	--	--	--	--	--
	S-5-MW5	8/29/01	5	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
	S-5-MW6	8/29/01	5	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
	S-5-MW7	8/29/01	5	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
	S-10-MW7	8/29/01	10	<5.0	--	--	**0.18**	<0.025	**0.085**	**0.234**	<0.25	--	--	--	--	--	--	--
Delta Consultants	MW-8-10	10/30/07	10	<0.20	--	**220**	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	MW-8-15	10/30/07	15	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	MW-8-20	10/30/07	20	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-1-7	11/6/07	7	**360**	--	<50	<0.25	<0.25	**4.2**	**17**	<0.25	--	--	--	--	--	--	--
	SB-1-12	11/6/07	12	**20**	--	<50	<0.025	<0.025	**1.7**	**2.2**	<0.025	--	--	--	--	--	--	--
	SB-1-18.5	11/6/07	8.5	**2.3**	--	<50	<0.005	<0.005	**0.067**	**0.30**	<0.005	--	--	--	--	--	--	--
	SB-1-33.5	11/6/07	33.5	**3.1**	--	<50	<0.005	**0.012**	**0.26**	**0.14**	<0.005	--	--	--	--	--	--	--
	SB-2-8.5	11/5/07	8.5	**1,200**	--	<50	**7.8**	**51**	**24**	**120**	<2.5	--	--	--	--	--	--	--
	SB-2-12	11/5/07	12	**120**	--	<50	**1.2**	<0.25	**2.3**	**12**	**1.2**	--	--	--	--	--	--	--
	SB-2-20	11/5/07	20	**0.29**	--	<50	**0.016**	**0.011**	**0.0079**	**0.029**	**0.029**	--	--	--	--	--	--	--
	SB-2-25	11/5/07	25	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-3-7	11/2/07	7	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	**0.015**	--	--	--	--	--	--	--
	SB-3-15	11/2/07	15	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-3-20	11/2/07	20	**0.33**	--	<50	<0.005	<0.005	<0.005	<0.01	**0.34**	--	--	--	--	--	--	--
	SB-3-25	11/2/07	25	**0.27**	--	<50	<0.005	<0.005	<0.005	<0.01	**0.24**	--	--	--	--	--	--	--
	SB-4-8	10/30/07	8	**0.96**	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-4-11	10/30/07	11	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-4-16	10/30/07	16	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-4-27	10/30/07	27	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-5-7	11/1/07	7	**150**	--	<50	**0.28**	**0.31**	**1.7**	**8.6**	<0.12	--	--	--	--	--	--	--
	SB-5-12	11/1/07	12	**6.0**	--	<50	<0.025	<0.025	<0.025	<0.05	<0.025	--	--	--	--	--	--	--
	SB-5-17	11/1/07	17	**1,700**	--	<50	**3.0**	**13**	**28**	**99**	<1.0	--	--	--	--	--	--	--
	SB-5-22	11/1/07	22	<0.20	--	<50	**0.009**	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-5-30	11/1/07	30	<0.20	--	<50	**0.0087**	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-6-5	10/31/07	5	**72**	--	<50	<0.025	<0.025	**0.047**	<0.01	<0.025	--	--	--	--	--	--	--
	SB-6-8.5	10/31/07	8.5	**2.0**	--	<50	**0.016**	<0.005	**0.016**	<0.01	**0.016**	--	--	--	--	--	--	--
	SB-6-12	10/31/07	12	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	**0.016**	--	--	--	--	--	--	--
	SB-6-15	10/31/07	15	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	**0.029**	--	--	--	--	--	--	--
	SB-6-17	10/31/07	17	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--
	SB-6-30.5	10/31/07	30.5	<0.20	--	<50	<0.005	<0.005	<0.005	<0.01	<0.005	--	--	--	--	--	--	--

TABLE 1
Soil Analytical Results - 1998 through 2009
76 Service Station No. 1156
4276 MacArthur Boulevard, Oakland, California

	Sample ID	Date	Sample Depth (feet)	TPH-G (mg/kg)	TPH-D (mg/kg)	Total Oil & Grease (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)
Soil																		
Delta Consultants	SV-1-S	7/7/09	4.5	<0.20	--	--	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SV-2-S	7/7/09	3	<0.20	--	--	<0.005	<0.005	<0.005	<0.01	<0.005	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SV-3-S	7/7/09	4.5	**17**	--	--	<0.025	<0.025	<0.025	**0.15**	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.005	<5.0
	SV-4-S	7/7/09	4.5	**0.23**	--	--	**0.027**	<0.005	<0.005	<0.01	**0.02**	**0.16**	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SV-5-S	7/7/09	4.5	**24**	--	--	<0.05	<0.05	<0.05	**0.15**	<0.05	<0.5	<0.50	<0.50	<0.50	<0.50	<0.005	<10
	SV-6-S	7/7/09	4.5	<0.20	--	--	<0.005	<0.005	<0.005	<0.01	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SV-7-S	7/7/09	4.5	**4.6**	--	--	<0.005	<0.005	<0.005	<1.0	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SB-7 @ 7.5-8	7/9/09	7.5-8	**260**	--	--	<0.50	<0.50	**5.7**	**32**	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.005	<100
	SB-7 @ 15.5-16	7/9/09	15.5-16	**1.3**	--	--	**0.008**	<0.005	<0.005	**0.023**	**0.0085**	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SB-7 @ 23-23.5	7/9/09	23-23.5	<0.20	--	--	<0.005	<0.005	<0.005	<0.01	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SB-8 @ 7.0-7.5	7/10/09	7.0-7.5	**760**	--	--	<0.50	<0.50	**7.7**	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.005	<250
	SB-9 @ 15.5-16	7/8/09	15.5-16	<0.20	--	--	<0.005	<0.005	<0.005	<0.01	**0.019**	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SB-9 @ 26	7/8/09	26	<0.20	--	--	<0.005	<0.005	<0.005	<0.01	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SB-10 @ 12-12.5	7/10/09	12-12.5	**400**	--	--	<0.50	<0.50	**6.1**	**46**	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.005	<100
	SB-10 @ 18-18.5	7/10/09	18-18.5	**290**	--	--	<0.50	<0.50	**5**	**34**	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.005	<100
	SB-10 @ 22.5-23	7/10/09	22.5-23	**0.78**	--	--	<0.005	<0.005	<0.005	**0.056**	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SB-11 @ 7.5-8	7/10/09	7.5-8	**41**	--	--	<0.05	<0.50	**0.5**	**0.77**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.005	<10
	SB-11 @ 15.5-16	7/10/09	15.5-16	**200**	--	--	**0.26**	**0.0094**	<0.005	**0.015**	<0.005	<0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0
	SB-11 @ 41-41.5	7/10/09	41-41.5	<0.20	--	--	<0.005	<0.005	<0.005	<0.01	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0

TPH-G = total purgeable petroleum hydrocarbons as gasoline by EPA Method 8260B
TPH-D = total purgeable petroleum hydrocarbons as diesel by EPA Method 8015M
TOG = total oil and grease by EPA Method 1664
BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
DIPE = di-isopropyl ether by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B
Ethanol was analyzed by EPA Method 8260B
mg/kg = milligrams per kilogram
ND = not detected above the laboratory detection limit
Bold = detected compound concentration
EPA = US Environmental Protection Agency
* = Overexcavated on April 9, 1989

Table 2a

Soil Analytical Results - August 2010

76 Service Station No. 1156
4276 MacArthur Boulevard
Oakland, California

Boring	Depth (ft)	Date	TPHg (8015M) (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	Ethanol (mg/kg)
SB-12	6	6/15/2010	**3.8**	<2.0	**28**	**0.11**	<0.0050	**0.37**	**0.44**	<0.0050	<0.0050	<0.0050	<0.0050	**0.11**	<0.0050	<0.0050	<1.0
	10	6/15/2010	<5	<2.0	<10	**0.081**	<0.0050	**0.43**	**0.5**	<0.0050	<0.0050	<0.0050	<0.0050	**0.091**	<0.0050	<0.0050	<1.0
	15	6/15/2010	**1.7**	<100	**830**	**0.29**	<0.0050	**0.45**	**0.58**	<0.0050	<0.0050	<0.0050	<0.0050	**0.062**	<0.0050	<0.0050	<1.0
	20	6/15/2010	<5.0	<2.0	**11**	**0.052**	<0.0050	**0.41**	**0.72**	<0.0050	<0.0050	<0.0050	<0.0050	**0.05**	<0.0050	<0.0050	<1.0
	26	6/15/2010	<5.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	30	6/15/2010	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	35	6/15/2010	<1.0	<2.0	<10	<0.0050	<0.0050	**0.0068**	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	41	6/15/2010	<1.0	<2.0	**12**	<0.025	<0.025	<0.025	<0.050	<0.025	<0.025	<0.025	<0.025	<0.25	<0.025	<0.025	<5.0
	45	6/15/2010	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	50	6/15/2010	<1.0	<2.0	**24**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
SB-13	6	6/18/10	**680**	**76**	<100	<0.50	<0.50	**4.4**	<1.0	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<100
SB-14	8	6/17/10	**9.9**	<2.0	<10	**0.073**	**0.26**	**1.7**	**8**	**0.0088**	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	10	6/17/10	35	<2.0	<10	**0.28**	**0.21**	**1.7**	**7.9**	**0.033**	<0.0050	<0.0050	<0.0050	**0.093**	<0.0050	<0.0050	<1.0
	15	6/17/10	<1.0	<10	**100**	**0.097**	<0.0050	**0.031**	**0.051**	**0.031**	<0.0050	<0.0050	<0.0050	**0.081**	<0.0050	<0.0050	<1.0
	20	6/17/10	<1.0	<2.0	**17**	**0.0064**	**0.0099**	**0.05**	**0.24**	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	26	6/17/10	<1.0	<2.0	**31**	**0.0076**	**0.012**	**0.085**	**0.36**	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	30	6/17/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	35	6/17/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	40	6/17/10	<1.0	<2.0	**19**	<0.0050	<0.0050	**0.014**	**0.079**	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	45	6/17/10	**6.8**	<2.0	**20**	**0.018**	<0.0050	**0.27**	**1**	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	50	6/17/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
SB-15	5	6/18/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	10	6/18/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	15	6/18/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	21.5	6/18/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	26.5	6/18/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	30	6/18/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	35	6/18/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	40	6/18/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
SB-16	8	6/16/10	<1.0	<2.0	<10	<0.025	<0.025	<0.025	<0.050	<0.025	<0.025	<0.025	<0.025	<0.25	<0.025	<0.025	<5.0
	10	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	15	6/16/10	<1.0	<99	<500	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	<2.0
	20	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	25	6/16/10	<1.0	<2.0	**30**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	30	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	**0.041**	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	35	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	40	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	46	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	50	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
SB-17	5	6/16/10	**530**	<2.0	**40**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	10	6/16/10	**130**	<2.0	<10	**0.021**	<0.0050	0.0081	<0.010	**0.024**	<0.0050	<0.0050	<0.0050	**0.17**	<0.0050	<0.0050	<1.0
	15	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	**0.13**	<0.0050	<0.0050	<1.0
	20	6/16/10	**9.8**	<2.0	**130**	**0.11**	**0.0093**	**0.5**	**0.058**	**0.011**	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	25	6/16/10	<1.0	<20	<100	<0.0050	<0.0050	**0.031**	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	30	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	35	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	40	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	47	6/16/10	**17**	<2.0	<10	**0.088**	<0.050	**0.49**	<0.10	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<10
	50	6/16/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0

Table 2a

Soil Analytical Results - August 2010

76 Service Station No. 1156
4276 MacArthur Boulevard
Oakland, California

Boring	Depth (ft)	Date	TPHg (8015M) (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	Ethanol (mg/kg)
SB-18	7.5	6/15/10	<1.0	<200	<1000	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	10	6/15/10	**2.6**	<2.0	<10	<0.0050	<0.050	**0.081**	<0.10	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<10
	15	6/15/10	<1.0	**6.7**	<10	**5**	**25**	**51**	**210**	<0.25	<0.25	<0.25	<0.25	<2.5	<0.25	<0.25	<50
	20	6/15/10	<1.0	<2.0	<10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
SB-19	7.5	6/15/10	**1.5**	<2.0	<10	<0.050	<0.050	<0.050	<0.10	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<10
	10	6/15/10	**1.6**	<2.0	<10	<0.050	<0.050	<0.050	<0.10	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<10
	15	6/15/10	<1.0	<2.0	**39**	<0.0050	<0.0050	<0.0050	<0.010	**0.017**	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	20	6/15/10	<1.0	<2.0	**11**	<0.0050	<0.0050	<0.0050	<0.010	**0.013**	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
MW-1B	5	8/17/2010	**210**	**31**	--	**1.1**	**0.054**	**4.5**	**0.48**	<0.0050	<0.0050	**0.031**	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	10	8/17/2010	<1.0	**2.7**	--	**3**	**9.8**	**57**	**220**	**0.3**	<2.5	<2.5	<2.5	<25	<2.5	<2.5	<500
	15	8/17/2010	**270**	**110**	--	<2.5	**6.2**	**38**	**150**	<2.5	<2.5	<2.5	<2.5	<25	<2.5	<2.5	<500
	20	8/17/2010	**200**	<200	--	**0.23**	**0.15**	**2.4**	**0.88**	**0.061**	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	<2.0
	25	8/17/2010	<1.0	<2.0	--	<0.0050	**0.0085**	**0.012**	**0.056**	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
MW-2B	5	8/16/2010	<1.0	<200	--	**0.009**	<0.0050	**0.011**	**0.12**	**0.03**	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	10	8/16/2010	**54**	<2.0	--	<0.0050	**0.02**	**0.28**	**0.84**	**0.0085**	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	15	8/16/2010	**55**	<200	--	<0.0050	<0.0050	**0.32**	**0.69**	**0.25**	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	20	8/16/2010	**4.4**	<1200	--	**0.076**	**0.18**	**1.1**	**3.3**	**0.099**	<0.025	<0.025	<0.025	<0.25	<0.025	<0.025	<5
	25	8/16/2010	<1.0	**2**	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
MW-3B	5	8/16/2010	<1.0	<20	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	10	8/16/2010	**1.3**	<20	--	**0.018**	**0.075**	**0.1**	**0.54**	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	15	8/16/2010	**310**	**150**	--	<5	**20**	**33**	**180**	<5	<5	<5	<5	<50	<5	<5	<1000
	20	8/16/2010	<1.0	<20	--	<0.12	**0.46**	**0.38**	**2**	<0.12	<0.12	<0.12	<0.12	<1.2	<0.12	<0.12	<25
	25	8/16/2010	**4.6**	<2.0	--	<0.0050	**0.042**	**0.061**	**0.37**	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
MW-4B	5	8/13/2010	<1.0	<20	--	<0.0050	<0.0050	**0.025**	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<1.0
	10	8/13/2010	**15**	**27**	<10	<0.025	<0.025	**0.43**	**0.15**	<0.025	<0.025	<0.025	<0.025	<0.25	<0.025	<0.025	<5
	15	8/13/2010	**840**	**15**	--	<0.50	**0.89**	**41**	**170**	<0.50	<0.50	<0.50	<0.50	<5	<0.50	<0.50	100
	20	8/13/2010	**1.1**	<2.0	--	<0.50	<0.50	**0.76**	**4.3**	<0.50	<0.50	<0.50	<0.50	<5	<0.50	<0.50	100
	25	8/13/2010	**150**	**4.4**	--	<0.12	<0.12	**0.39**	**2.4**	<0.12	<0.12	<0.12	<0.12	<1.2	<0.12	<0.12	<25

TPHg = total petroleum hydrocarbons as gaoline TPHd = total petroleum hydrocarbons as diesel TPHmo = total petroleum hydrocarbons as motor oil EDB = ethylene dibromide 1,2-DCA = 1,2 dichloroethane
MTBE = mety; tert butyl ether TAME = tert amyl methyl ether TBA = tert butyl alcohol DIPE = diisopropyl ether ETBE = ethyl tert butyl ether ug/L = micrograms per liter bold = above laboratory reporting limits

Table 2b

Additional Soil Analytical Results - August 2010

76 Service Station No. 1156
4276 MacArthur Boulevard
Oakland, California

Boring	Depth (ft)	Date	TPHln mg/kg	TPHag mg/kg	TPHss mg/kg	TPHhn mg/kg	TPHg (8260B) mg/kg	TPHjf4 mg/kg	TPHjf5 mg/kg	TPHjf8 mg/kg	TPHk mg/kg	TPHfo mg/kg	TPHco mg/kg	TPHwd40 mg/kg	TOG mg/kg
SB-13	6	6/18/10	<200	<200	<100	<50	<100	<20	<20	<20	<20	<20	<100	<20	**140**
SB-18	15	6/14/10	<20	<20	<10	<5	<10	<20	<20	<20	<20	<20	<10	<20	<50
MW-4B	10	8/13/10	--	--	--	--	--	--	--	--	--	--	--	--	<50

TPHln = total petroleum hydrocarbons as light naptha TPHag = TPH as aviation gas TPHss = TPH as stoddard solvent TPHhn = TPH as heavy naptha TPHg = TPH as gasoline TPHjf4 = TPH as JP4 jet fuel
TPHjf5 = TPH as JP5 jet fuel TPHjf8 = TPH as JP8 jet fuel TPHk = TPH as kerosene TPHfo = TPH as fuel oil TPHco = TPH as crude oil TPHwd40 = TPH as WD-40 TOG = total oil and grease

Table 3
Laboratory Anaytical Results for Soil
76 Service Station #1156
(Chevron Site #351645)
4276 MacArthur Boulevard
Oakland, California

BORING LOCATION	SAMPLE ID *(ft.)*	SAMPLE DEPTH *(ft.)*	DATE	TPH-g *(mg/kg)*	B *(mg/kg)*	T *(mg/kg)*	E *(mg/kg)*	X *(mg/kg)*	MTBE *(mg/kg)*	TBA *(mg/kg)*	ETHANOL *(mg/kg)*	DIPE *(mg/kg)*	ETBE *(mg/kg)*	TAME *(mg/kg)*
MW-9A	MW-9A-S-N-5.0	5.0	3/18/2013	760	1.0	0.32	12	1.1	<0.12	<1.2	<25	<0.12	<0.12	<0.12
	MW-9A-S-Y-5.0	5.0	3/18/2013	720	0.85	<0.12	10	8.2	<0.12	<1.2	<23	<0.12	<0.12	<0.12
	MW-9A-S-N-8.5	8.5	3/18/2013	280	2.0	0.15	2.5	4.8	<0.10	<1.0	<21	<0.10	<0.10	<0.10
	MW-9A-S-N-14.0	14.0	3/18/2013	1.6	0.18	<0.0044	0.054	<0.0089	<0.0044	0.26	<0.89	<0.0044	<0.0044	<0.0044
MW-9B	MW-9B-S-N-5.0	5.0	3/18/2013	1.7	0.013	<0.0050	0.10	0.026	<0.0050	<0.050	<0.99	<0.0050	<0.0050	<0.0050
	MW-9B-S-N-9.0	9.0	3/18/2013	0.36	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	<0.050	<0.99	<0.0050	<0.0050	<0.0050
	MW-9B-S-N-14.0	14.0	3/18/2013	<0.19	<0.0048	<0.0048	<0.0048	<0.0097	<0.0048	0.092	<0.97	<0.0048	<0.0048	<0.0048
	MW-9B-S-N-19.0	19.0	3/18/2013	<0.17	<0.0043	<0.0043	<0.0043	<0.0086	<0.0043	<0.043	<0.86	<0.0043	<0.0043	<0.0043
MW-10A	MW-10A-S-N-5.0	5.0	3/18/2013	59	0.22	<0.0045	0.030	<0.0090	0.013	<0.045	<0.90	<0.0045	<0.0045	<0.0045
	MW-10A-S-N-9.0	9.0	3/18/2013	41	1.0	0.093	0.21	0.68	0.018	<0.040	<0.81	<0.0040	<0.0040	<0.0040
	MW-10A-S-N-14.0	14.0	3/18/2013	100	<0.0044	0.42	<0.0044	<0.0089	0.018	<0.044	<0.89	<0.0044	<0.0044	<0.0044
MW-10B	MW-10B-S-N-5.0	5.0	3/18/2013	480	0.35	<0.0043	6.4	8.1	<0.0043	<0.043	<0.86	<0.0043	<0.0043	<0.0043
	MW-10B-S-N-9.0	9.0	3/18/2013	60	1.3	0.034	0.34	4.4	<0.0040	<0.040	<0.79	<0.0040	<0.0040	<0.0040
	MW-10B-S-N-15.0	15.0	3/18/2013	2.0	1.7	0.029	0.053	0.13	0.0054	<0.0043	<0.86	<0.0043	<0.0043	<0.0043
	MW-10B-S-N-20.0	20.0	3/18/2013	0.51	<0.0043	<0.0043	<0.0043	<0.0086	<0.0043	<0.043	<0.86	<0.0043	<0.0043	<0.0043
MW-11A	MW-11A-S-N-5.0	5.0	3/19/2013	680	1.6	0.38	34	59	<0.10	<1.0	<21	<0.10	<0.10	<0.10
	MW-11A-S-N-9.0	9.0	3/19/2013	1,200	6.5	29	19	97	0.32	<0.99	<20	<0.099	<0.099	<0.099
	MW-11A-S-N-14.0	14.0	3/19/2013	0.36	<0.0043	<0.0043	<0.0043	<0.0043	0.0087	0.22	<0.87	<0.0043	<0.0043	<0.0043
MW-11B	MW-11B-S-N-5.0	5.0	3/19/2013	<0.17	<0.0043	<0.0043	<0.0043	<0.0087	<0.0043	<0.043	<0.87	<0.0043	<0.0043	<0.0043
	MW-11B-S-N-10.0	10.0	3/19/2013	14	0.30	0.0082	0.18	0.22	0.12	0.30	<0.84	<0.0042	<0.0042	<0.0042
	MW-11B-S-Y-10.0	10.0	3/19/2013	31	0.22	0.0070	0.16	0.22	0.10	0.28	<0.79	<0.0040	<0.0040	<0.0040
	MW-11B-S-N-14.0	14.0	3/19/2013	13	0.89	0.13	0.17	0.71	0.19	0.59	<0.99	<0.0050	<0.0050	<0.0050
	MW-11B-S-N-19.0	19.0	3/19/2013	0.23	<0.0043	<0.0043	<0.0043	<0.0087	7.9	<0.043	<0.87	<0.0043	<0.0043	<0.0043

EXPLANATIONS:

(ft.) = Feet
(mg/kg) = Milligrams per kilogram
<# = Analyte not detected at or above indicated laboratory practical quantitation limit.

TPH-g = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes

MTBE = Methyl tertiary-butyl ether
TBA = Tertiary-butyl alcohol
DIPE = Diisopropyl ether
ETBE = Ethyl tertiary-butyl ether
TAME = Tertiary-amyl methyl ether

Table 4
Laboratory Anaytical Results for Soil - Purgeable Aromatics and Total Petroleum Hydrocarbons
76 Service Station #1156
(Chevron Site #351645)
4276 MacArthur Boulevard
Oakland, California

BORING LOCATION	SAMPLE ID *(ft.)*	SAMPLE DEPTH *(ft.)*	DATE	TPH C8 - C9 *(mg/kg)*	TPH C10 - C11 *(mg/kg)*	TPH C12 - C14 *(mg/kg)*	TPH C15 - C16 *(mg/kg)*	TPH C17 - C18 *(mg/kg)*	TPH C19 - C20 *(mg/kg)*	TPH C21 - C22 *(mg/kg)*	TPH C23 - C28 *(mg/kg)*	TPH C29 - C32 *(mg/kg)*	TPH C33 - C36 *(mg/kg)*	TPH C37 - C40 *(mg/kg)*	TPH C41 - C43 *(mg/kg)*	TPH C44+ *(mg/kg)*	TPH (Total) *(mg/kg)*
MW-9A	MW-9A-S-N-5.0	5.0	3/18/2013	<1.0	<1.0	4.3	4.3	1.5	2.0	2.2	11	14	7.3	<1.0	<1.0	<1.0	47
	MW-9A-S-Y-5.0	5.0	3/18/2013	<1.0	1.9	5.0	4.7	1.8	2.3	2.7	18	20	11	<1.0	<1.0	<1.0	67
	MW-9A-S-N-8.5	8.5	3/18/2013	<1.0	1.4	2.6	2.9	1.4	1.8	2.4	11	6.2	3.2	<1.0	<1.0	<1.0	33
	MW-9A-S-N-14.0	14.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
MW-9B	MW-9B-S-N-5.0	5.0	3/18/2013	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	1.9	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-9B-S-N-9.0	9.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-9B-S-N-14.0	14.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-9B-S-N-19.0	19.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
MW-10A	MW-10A-S-N-5.0	5.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-10A-S-N-9.0	9.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-10A-S-N-14.0	14.0	3/18/2013	<1.0	2.8	3.3	<1.0	<1.0	<1.0	<1.0	2.5	<1.0	<1.0	<1.0	<1.0	<1.0	11
MW-10B	MW-10B-S-N-5.0	5.0	3/18/2013	<1.0	1.2	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-10B-S-N-9.0	9.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-10B-S-N-15.0	15.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-10B-S-N-20.0	20.0	3/18/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
MW-11A	MW-11A-S-N-5.0	5.0	3/19/2013	<1.0	12	38	46	6.7	6.3	6.3	25	21	12	<1.0	<1.0	<1.0	170
	MW-11A-S-N-9.0	9.0	3/19/2013	<1.0	1.3	2.6	3.5	1.5	2.2	1.9	7.4	3.5	<1.0	<1.0	<1.0	<1.0	24
	MW-11A-S-N-14.0	14.0	3/19/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11B	MW-11B-S-N-5.0	5.0	3/19/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-11B-S-N-10.0	10.0	3/19/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-11B-S-Y-10.0	10.0	3/19/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-11B-S-N-14.0	14.0	3/19/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10
	MW-11B-S-N-19.0	19.0	3/19/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10

EXPLANATIONS:

(ft.) = Feet
mg/kg = Milligrams per kilogram
<# = Analyte not detected at or above indicated laboratory practical quantitation limit.

Table 5
Historical Groundwater Monitoring Data and Analytical Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-1	7/20/1999	174.86	7.50	0	167.36	--	16,000	120,000	--	11,000	27,000	3,300	18,000	
	9/28/1999	174.86	8.75	0	166.11	--	2,410	6,020	--	1,030	1,040	68.5	412	
	1/7/2000	174.86	9.05	0.02	165.82	--	7,870	72,700	--	7,410	13,900	2,070	9,620	GWE corrected
	3/31/2000	174.86	7.18	0	167.68	--	3,600	92,000	--	10,000	23,000	3,200	14,000	
	7/14/2000	174.86	7.68	0	167.18	--	8,580	108,000	--	8,250	18,700	3,750	17,800	
	10/3/2000	174.86	7.99	0	166.87	--	9,260	96,000	--	8,760	20,000	3,350	15,600	
	1/3/2001	174.86	9.18	0	165.68	--	11,000	37,000	--	5,800	13,000	1,700	8,100	
	4/4/2001	174.86	8.05	0	166.81	--	14,000	86,900	--	7,780	18,500	2,470	11,800	
	7/17/2001	174.86	7.01	0	167.85	--	2,200	79,000	--	5,600	11,000	2,800	12,000	
	10/3/2001	177.54	7.89	0	169.65	--	--	99,000	--	8,200	18,000	3,000	16,000	
	10/5/2001	177.54	7.91	0	169.63	--	13,000	--	--	--	--	--	--	
	1/28/2002	177.54	5.98	0	171.56	--	4,400	110,000	--	8,900	19,000	2,600	12,000	
	4/25/2002	177.54	6.19	0	171.35	--	9,000	93,000	--	8,100	18,000	3,000	15,000	
	7/18/2002	177.54	6.99	0	170.55	--	9,200	69,000	--	5,400	10,000	2,100	10,000	
	10/7/2002	177.54	7.73	0	169.81	--	3,400	82,000	--	9,200	20,000	2,600	13,000	
	1/6/2003	177.54	5.48	0	172.06	--	5,100	82,000	--	6,500	18,000	2,700	11,000	
	4/7/2003	177.54	6.30	0	171.24	--	2,800	74,000	--	7,000	15,000	2,400	11,000	
	7/7/2003	177.54	6.47	0	171.07	--	7,000	60,000	--	6,400	11,000	2,600	11,000	
	10/9/2003	177.54	7.85	0	169.69	--	4,300	91,000	81,000	8,100	17,000	3,200	14,000	Sampled for TPH-G by 8015M on 11/14/2003
	1/14/2004	177.54	6.69	0	170.85	--	6,200	98,000	--	8,000	21,000	2,600	15,000	
	4/28/2004	177.54	6.43	0	171.11	--	--	93,000	--	9,000	20,000	1,300	10,000	
	7/12/2004	177.54	7.44	0	170.10	--	270	57,000	--	6,900	7,200	1,600	580	
	10/25/2004	177.54	7.54	0	170.00	--	5,100	66,000	--	7,300	19,000	2,700	14,000	
	1/17/2005	177.54	5.79	0	171.75	--	6,400	86,000	--	8,600	21,000	3,200	15,000	
	4/6/2005	177.54	4.93	0	172.61	--	2,800	85,000	--	8,400	20,000	3,200	16,000	
	7/8/2005	177.54	5.35	0	172.19	--	6,400	69,000	--	7,100	17,000	2,700	14,000	
	10/7/2005	177.54	5.96	0	171.58	--	5,500	68,000	--	5,900	8,300	1,800	8,300	
	1/27/2006	177.54	5.08	0	172.46	--	9,000	94,000	--	7,400	19,000	3,700	14,000	
	4/28/2006	177.54	4.85	0	172.69	--	9,200	74,000	--	6,400	13,000	2,300	10,000	
	7/28/2006	177.54	5.32	0	172.22	--	5,100	74,000	--	6,600	12,000	3,100	13,000	
	10/27/2006	177.54	6.13	0	171.41	--	4,600	100,000	--	8,300	20,000	3,600	16,000	
	1/10/2007	177.54	5.47	0	172.07	--	12,000	84,000	--	7,100	15,000	2,600	13,000	
	4/13/2007	177.54	5.60	0	171.94	--	8,400	27,000	--	5,600	840	2,300	3,200	
	7/19/2007	177.54	5.69	0	171.85	--	10,000	83,000	--	6,000	15,000	2,600	13,000	
	10/8/2007	177.54	--	--	--	--	--	--	--	--	--	--	--	Gate locked; no key available
	1/9/2008	177.54	5.15	0	172.39	--	12,000	40,000	--	6,000	4,800	2,600	5,100	Gauged on 1/18/2008
	4/4/2008	177.54	5.25	0	172.29	--	15,000	71,000	--	6,800	12,000	3,300	13,000	
	7/3/2008	177.54	6.00	0	171.54	--	9,300	92,000	--	7,000	16,000	3,500	15,000	
	10/3/2008	177.54	7.16	0	170.38	--	4,400	69,000	--	7,200	18,000	3,500	14,000	
	1/22/2009	177.54	6.61	0	170.93	--	8,000	45,000	--	410	720	2,400	9,600	
	4/13/2009	177.54	5.11	0	172.43	--	4,800	5,400	--	300	640	300	940	
	7/23/2009	177.54	6.04	0	171.50	--	2,800	85,000	--	5,800	15,000	3,500	13,000	
	2/1/2010	177.54	4.86	0	172.68	ND<5,000	3,900	74,000	--	7,000	11,000	3,100	10,000	
	8/2/2010	177.54	5.68	0	171.86	ND<5,000	3,900	71,000	--	7,000	11,000	3,300	10,000	
	8/24/2010	ABANDONED												
MW-1B	11/1/2010	174.05	7.15	0	166.90	ND<5,000	ND<50	99	--	3.0	0.30	ND<0.30	ND<0.60	
	1/31/2011	174.05	6.62	0	167.43	ND<5,000	ND<50	170	--	6.7	0.64	0.33	ND<0.60	

Table 5
Historical Groundwater Monitoring Data and Analytical Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-1B cont.	4/26/2011	174.05	6.14	0	167.91	ND<5,000	ND<50	220	--	7.3	0.55	0.32	0.69	
	7/25/2011	174.05	6.69	0	167.36	ND<5,000	ND<40	140	--	7.8	0.35	ND<0.30	ND<0.60	
	10/7/2011	174.06	6.86	0	167.20	ND<5,000	ND<40	120	--	5.7	ND<0.30	ND<0.30	ND<0.60	
	1/23/2012	174.06	6.96	0	167.10	ND<5,000	ND<40	89	--	3.6	ND<0.30	ND<0.30	ND<0.60	
	4/6/2012	174.06	5.89	0	168.17	ND<5,000	ND<40	110	--	4.5	ND<0.30	ND<0.30	ND<0.60	
	7/24/2012	174.06	6.98	0	167.08	ND<5,000	ND<40	130	--	6.2	ND<0.30	ND<0.30	ND<0.60	
	2/8/2013	174.06	6.65	0	167.41	ND<5,000	ND<40	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/10/2013	**174.06**	**7.11**	**0**	**166.95**	**ND<5,000**	**ND<40**	**ND<50**	**--**	**ND<0.30**	**ND<0.30**	**ND<0.30**	**0.61**	
MW-2	7/20/1999	173.01	5.40	--	167.61	--	--	ND	--	ND	ND	ND	ND	
	9/28/1999	173.01	5.60	0	167.41	--	--	1,390	--	124	ND	62.9	43.1	
	1/7/2000	173.01	5.92	0	167.09	--	--	1,450	--	99	ND	23.8	16	
	3/31/2000	173.01	5.23	0	167.78	--	--	ND	--	42	ND	ND	ND	
	7/14/2000	173.01	5.52	0	167.49	--	--	ND	--	44.7	ND	ND	ND	
	10/3/2000	173.01	6.04	0	166.97	--	--	ND	--	56.7	ND	ND	ND	
	1/3/2001	173.01	6.42	0	166.59	--	--	ND	--	ND	ND	ND	ND	
	4/4/2001	173.01	6.14	0	166.87	--	--	ND	--	ND	ND	ND	ND	
	7/17/2001	173.01	5.30	0	167.71	--	--	ND	--	ND	ND	ND	ND	
	10/3/2001	173.50	7.38	0	166.12	--	--	ND<250	--	2.7	ND<2.5	ND<2.5	ND<2.5	
	1/28/2002	173.50	5.68	0	167.82	--	--	ND<250	--	2.5	4.4	2.8	7.4	
	4/25/2002	173.50	5.82	0	167.68	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	7/18/2002	173.50	6.90	0	166.60	--	--	ND<500	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	
	10/7/2002	173.50	7.54	0	165.96	--	--	4,300	--	ND<10	27	21	75	
	1/6/2003	173.50	6.79	0	166.71	--	--	5,900	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	
	4/7/2003	173.50	6.49	0	167.01	--	--	1,500	--	ND<10	14	11	38	
	7/7/2003	173.50	6.72	0	166.78	--	--	ND<2,500	--	ND<25	ND<25	ND<25	ND<25	
	10/9/2003	173.50	7.16	0	166.34	--	--	3,500	ND<5,000	ND<50	ND<50	ND<50	ND<100	Sampled for TPH-G by 8015M on 11/14/2003
	1/14/2004	173.50	5.53	0	167.97	--	--	3,200	--	ND<25	ND<25	ND<25	ND<25	
	4/28/2004	173.50	5.21	0	168.29	--	--	22,000	--	ND<3	9.2	ND<3	ND<6	
	7/12/2004	173.50	5.83	0	167.67	--	--	1,700	--	3.8	18	2.6	16	
	10/25/2004	173.50	6.89	0	166.61	--	--	3,400	--	ND<25	ND<25	ND<25	ND<25	
	1/17/2005	173.50	5.70	0	167.80	--	--	1,700	--	ND<10	ND<10	ND<10	ND<10	
	4/6/2005	173.50	4.50	0	169.00	--	--	3,000	--	ND<20	ND<20	ND<20	ND<20	
	7/8/2005	173.50	4.69	0	168.81	--	--	ND<2,000	--	ND<20	ND<20	ND<20	ND<20	
	10/7/2005	173.50	4.61	0	168.89	--	--	7,500	--	6.7	6.6	ND<3.0	ND<6.0	
	1/27/2006	173.50	4.10	0	169.40	--	--	2,500	--	1.0	2.6	ND<0.30	ND<0.60	
	4/28/2006	173.50	3.75	0	169.75	--	--	3,100	--	9.4	3.6	0.94	3.4	
	7/28/2006	173.50	4.34	0	169.16	--	--	3,000	--	2.0	ND<1.5	ND<1.5	ND<3.0	
	10/27/2006	173.50	5.62	0	167.88	--	--	1,800	--	1.5	ND<1.5	ND<1.5	ND<3.0	
	1/10/2007	173.50	4.02	0	169.48	--	--	2,100	--	1.1	ND<0.60	ND<0.60	ND<1.2	
	4/13/2007	173.50	4.03	0	169.47	--	--	3,300	--	12	1.6	0.46	1.1	
	7/19/2007	173.50	4.41	0	169.09	--	--	2,500	--	21	0.64	5.1	1.5	
	10/8/2007	173.50	4.93	0	168.57	--	--	3,400	--	38	1.6	13	2.1	
	1/9/2008	173.50	3.03	0	170.47	--	--	1,700	--	6.2	2.5	0.61	0.91	Gauged on 1/18/2008
	4/4/2008	173.50	3.52	0	169.98	--	--	1,400	--	15	2.1	0.76	ND<0.60	
	7/3/2008	173.50	4.70	0	168.80	--	--	1,100	--	14	1.1	2.0	1.2	
	10/3/2008	173.50	5.57	0	167.93	--	ND<50	740	--	14	ND<0.30	4.5	6.9	
	1/22/2009	173.50	5.03	0	168.47	--	ND<50	640	--	4.6	ND<0.30	ND<0.30	ND<0.60	

Table 5
Historical Groundwater Monitoring Data and Analytical Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-2 cont.	4/13/2009	173.50	3.73	0	169.77	--	ND<50	940	--	7.1	ND<0.30	ND<0.30	ND<0.60	
	7/23/2009	173.50	4.39	0	169.11	--	230	700	--	12	6.0	5.4	13	
	2/1/2010	173.50	4.33	0	169.17	--	140	860	--	17	13	0.83	2.4	
	8/2/2010	173.50	5.16	0	168.34	--	210	1,200	--	9.5	32	1.4	2.4	
	8/24/2010							ABANDONED						
MW-2B	11/1/2010	173.55	11.27	0	162.28	--	57	550	--	7.8	2.7	2.1	0.99	
	1/31/2011	173.55	7.79	0	165.76	--	ND<50	420	--	1.7	0.47	0.59	ND<0.60	
	4/26/2011	173.55	9.09	0	164.46	--	ND<50	390	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/25/2011	173.55	3.91	0	169.64	--	ND<40	210	--	1.7	ND<0.30	ND<0.30	ND<0.60	
	10/7/2011	173.55	4.50	0	169.05	--	52	110	--	1.0	ND<0.30	ND<0.30	ND<0.60	
	1/23/2012	173.55	6.96	0	166.59	--	ND<40	110	--	0.73	ND<0.30	ND<0.30	ND<0.60	
	4/6/2012	173.55	5.67	0	167.88	--	ND<40	120	--	0.36	ND<0.30	ND<0.30	ND<0.60	
	7/24/2012	173.55	5.33	0	168.22	--	ND<40	73	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	2/8/2013	173.55	4.58	0	168.97	--	ND<40	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/10/2013	**173.55**	**7.06**	**0**	**166.49**	**--**	**ND<40**	**ND<50**	**--**	**ND<0.30**	**ND<0.30**	**ND<0.30**	**ND<0.60**	
MW-3	7/20/1999	178.44	8.50	--	169.94	--	--	1,000	--	76	52	79	76	
	9/28/1999	178.44	8.31	0	170.13	--	--	1,860	--	174	95.4	71.8	135	
	1/7/2000	178.44	8.56	0	169.88	--	--	28,400	--	2,450	3,090	1,560	3,910	
	3/31/2000	178.44	8.42	0	170.02	--	--	26,000	--	1,300	2,900	2,600	3,500	
	7/14/2000	178.44	8.61	0	169.83	--	--	24,500	--	1,850	2,630	2,750	3,900	
	10/3/2000	178.44	9.14	0	169.30	--	--	22,000	--	1,910	2,020	2,400	2,680	
	1/3/2001	178.44	9.06	0	169.38	--	--	14,000	--	1,600	1,100	2,300	1,400	
	4/4/2001	178.44	8.98	0	169.46	--	--	19,600	--	1,150	1,470	2,100	1,820	
	7/17/2001	178.44	7.46	0	170.98	--	--	26,000	--	1,500	2,100	2,100	3,400	
	10/3/2001	178.13	9.81	0	168.32	--	--	22,000	--	830	1,900	1,700	3,000	
	1/28/2002	178.13	7.39	0	170.74	--	--	30,000	--	880	2,600	1,800	4,300	
	4/25/2002	178.13	7.86	0	170.27	--	--	18,000	--	500	2,000	1,300	3,800	
	7/18/2002	178.13	8.83	0	169.30	--	--	37,000	--	1,800	3,800	2,200	8,000	
	10/7/2002	178.13	9.71	0	168.42	--	--	26,000	--	600	2,000	1,800	6,400	
	1/6/2003	178.13	7.40	0	170.73	--	--	27,000	--	800	2,100	2,000	6,400	
	4/7/2003	178.13	8.17	0	169.96	--	--	28,000	--	660	2,200	1,900	6,300	
	7/7/2003	178.13	8.35	0	169.78	--	--	33,000	--	1,200	2,500	2,700	8,300	
	10/9/2003	178.13	9.39	0	168.74	--	--	3,800	6,000	120	260	390	1,200	Sampled for TPH-G by 8015M on 11/14/2003
	1/14/2004	178.13	6.86	0	171.27	--	--	5,100	--	120	240	310	720	
	4/28/2004	178.13	6.63	0	171.50	--	--	7,300	--	250	440	580	1300	
	7/12/2004	178.13	7.41	0	170.72	--	--	5,500	--	350	310	120	350	
	10/25/2004	178.13	8.81	0	169.32	--	--	3,300	--	96	140	270	490	
	1/17/2005	178.13	6.37	0	171.76	--	--	3,400	--	150	270	360	750	
	4/6/2005	178.13	4.69	0	173.44	--	--	14,000	--	420	1,300	1,000	3,100	
	7/8/2005	178.13	5.23	0	172.90	--	--	5,000	--	180	290	500	800	
	10/7/2005	178.13	6.35	0	171.78	--	--	6,800	--	270	120	ND<0.30	210	
	1/27/2006	178.13	5.24	0	172.89	--	--	3,200	--	120	140	270	460	
	4/28/2006	178.13	5.01	0	173.12	--	--	4,500	--	130	250	380	670	
	7/28/2006	178.13	6.21	0	171.92	--	--	4,700	--	160	240	510	730	
	10/27/2006	178.13	6.93	0	171.20	--	--	3,700	--	150	160	460	530	
	1/10/2007	178.13	5.93	0	172.20	--	--	4,800	--	180	160	550	600	

Table 5
Historical Groundwater Monitoring Data and Analytical Results
76 Service Station No. 1156 (351645)
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WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-3 cont.	4/13/2007	178.13	6.10	0	172.03	--	--	5,100	--	180	240	550	710	
	7/19/2007	178.13	6.51	0	171.62	--	--	2,000	--	110	64	220	190	
	10/8/2007	178.13	7.05	0	171.08	--	--	2,100	--	72	65	180	290	
	1/9/2008	178.13	3.65	0	174.48	--	--	4,200	--	200	160	510	580	Gauged on 1/18/2008
	4/4/2008	178.13	5.69	0	172.44	--	--	7,500	--	270	390	810	1,200	
	7/3/2008	178.13	7.28	0	170.85	--	--	2,300	--	99	66	210	220	
	10/3/2008	178.13	8.40	0	169.73	--	1,200	12,000	--	740	620	1,500	2,700	
	1/22/2009	178.13	7.68	0	170.45	--	270	2,000	--	120	79	290	290	
	4/13/2009	178.13	6.28	0	171.85	--	150	3,600	--	110	150	180	510	
	7/23/2009	178.13	7.20	0	170.93	--	310	3,400	--	180	150	360	650	
	2/1/2010	178.13	5.29	0	172.84	--	390	6,500	--	180	92	300	250	
	8/2/2010	178.13	6.83	0	171.30	--	540	8,600	--	140	110	320	1,000	
	8/24/2010							ABANDONED						
MW-3B	11/1/2010	177.77	6.82	0	170.95	--	58	990	--	31	32	47	50	
	1/31/2011	177.77	5.30	0	172.47	--	65	2,800	--	32	20	39	47	
	4/26/2011	177.77	4.64	0	173.13	--	93	2,800	--	36	55	80	82	
	7/25/2011	177.77	5.53	0	172.24	--	100	1,700	--	28	33	80	73	
	10/7/2011	177.77	6.08	0	171.69	--	81	1,700	--	32	20	88	47	
	1/23/2012	177.77	6.90	0	170.87	--	120	1,800	--	39	17	75	20	
	4/6/2012	177.77	4.23	0	173.54	--	ND<40	1,200	--	36	25	80	41	
	7/24/2012	177.77	6.42	0	171.35	--	190	1,500	--	66	10	76	39	
	2/8/2013	177.77	5.60	0	172.17	--	ND<40	4,400	--	170	93	450	150	
	7/10/2013	**177.77**	**6.71**	**0**	**171.06**	**--**	**350**	**2,800**	**--**	**190**	**60**	**530**	**82**	
MW-4	7/20/1999	179.10	7.40	--	171.70	--	--	69	--	2.7	0.77	ND	7.1	
	9/28/1999	179.10	7.19	0	171.91	--	--	4,050	--	1,250	72	51.3	133	
	1/7/2000	179.10	8.98	0	170.12	--	--	7,010	--	2,260	167	271	276	
	3/31/2000	179.10	7.26	0	171.84	--	--	5,500	--	1,800	230	330	400	
	7/14/2000	179.10	7.67	0	171.43	--	--	7,940	--	2,810	332	450	247	
	10/3/2000	179.10	8.12	0	170.98	--	--	11,400	--	3,110	437	519	816	
	1/3/2001	179.10	9.10	0	170.00	--	--	8,600	--	2,500	340	480	960	
	4/4/2001	179.10	8.63	0	170.47	--	--	9,950	--	2,380	126	416	725	
	7/17/2001	179.10	6.49	0	172.61	--	--	10,000	--	2,300	110	410	800	
	10/3/2001	178.96	7.01	0	171.95	--	--	7,800	--	2,100	85	380	390	
	1/28/2002	178.96	6.21	0	172.75	--	--	12,000	--	2,100	130	350	670	
	4/25/2002	178.96	5.49	0	173.47	--	--	3,300	--	1,300	42	270	250	
	7/18/2002	178.96	8.28	0	170.68	--	--	4,800	--	1,300	71	290	220	
	10/7/2002	178.96	7.49	0	171.47	--	--	5,100	--	1,400	110	330	380	
	1/6/2003	178.96	6.36	0	172.60	--	--	5,600	--	1,100	57	260	320	
	4/7/2003	178.96	6.24	0	172.72	--	--	5,100	--	1,100	55	190	370	
	7/7/2003	178.96	6.43	0	172.53	--	--	3,000	--	920	28	170	330	
	10/9/2003	178.96	7.97	0	170.99	--	--	530	700	100	2.2	5.4	14	Sampled for TPH-G by 8015M on 11/14/2003
	1/14/2004	178.96	6.30	0	172.66	--	--	530	--	88	4.1	9.9	11	
	4/28/2004	178.96	5.68	0	173.28	--	--	1,200	--	200	5.3	21	13	
	7/12/2004	178.96	6.48	0	172.48	--	--	3,600	--	1,000	14	260	72	
	10/25/2004	178.96	6.85	0	172.11	--	--	490	--	34	ND<2.5	ND<2.5	ND<2.5	
	1/17/2005	178.96	4.56	0	174.40	--	--	620	--	100	2.6	15	8.0	

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WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-4 cont.	4/6/2005	178.96	2.90	0	176.06	--	--	630	--	81	9.6	16	41	
	7/8/2005	178.96	3.74	0	175.22	--	--	980	--	170	24	44	140	
	10/7/2005	178.96	4.24	0	174.72	--	--	4,900	--	1,100	11	110	110	
	1/27/2006	178.96	3.65	0	175.31	--	--	2,800	--	580	20	130	230	
	4/28/2006	178.96	3.94	0	175.02	--	--	710	--	110	2.4	21	22	
	7/28/2006	178.96	4.63	0	174.33	--	--	550	--	120	2.1	12	19	
	10/27/2006	178.96	5.19	0	173.77	--	--	260	--	37	2.0	1.9	6.7	
	1/10/2007	178.96	4.82	0	174.14	--	--	270	--	29	0.72	1.8	2.7	
	4/13/2007	178.96	4.25	0	174.71	--	--	390	--	53	1.2	3.1	4.1	
	7/19/2007	178.96	5.35	0	173.61	--	--	210	--	8.0	1.0	1.4	4.5	
	10/8/2007	178.96	5.48	0	173.48	--	--	290	--	17	2.3	3.8	14	
	1/9/2008	178.96	3.40	0	175.56	--	--	770	--	190	5.9	21	40	Gauged on 1/18/2008
	4/4/2008	178.96	4.20	0	174.76	--	--	180	--	11	2.0	0.67	2.9	
	7/3/2008	178.96	5.89	0	173.07	--	--	140	--	4.5	1.3	ND<0.30	ND<0.60	
	10/3/2008	178.96	7.34	0	171.62	--	96	430	--	29	3.4	9.6	20	
	1/22/2009	178.96	6.75	0	172.21	--	ND<50	190	--	25	1.7	0.87	1.5	
	4/13/2009	178.96	4.74	0	174.22	--	110	290	--	17	2.1	4.4	12	
	7/23/2009	178.96	6.01	0	172.95	--	85	360	--	33	2.3	5.4	18	
	2/1/2010	178.96	6.42	0	172.54	--	80	490	--	35	3.1	2.7	5.5	
	8/2/2010	178.96	5.92	0	173.04	--	120	470	--	17	3.4	2.5	12	
	8/24/2010							ABANDONED						
MW-4B	11/1/2010	179.07	7.20	0	171.87	--	ND<50	230	--	ND<0.30	2.1	1.3	43	
	1/31/2011	179.07	4.49	0	174.58	--	ND<50	68	--	ND<0.30	ND<0.30	ND<0.30	2.0	
	4/26/2011	179.07	4.32	0	174.75	--	ND<50	52	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/25/2011	179.07	5.52	0	173.55	--	ND<40	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	10/7/2011	179.07	6.04	0	173.03	--	ND<40	ND<50	--	ND<0.30	0.46	ND<0.30	ND<0.60	
	1/23/2012	179.07	6.58	0	172.49	--	ND<40	ND<50	--	ND<0.30	0.36	0.87	ND<0.60	
	4/6/2012	179.07	4.41	0	174.66	--	ND<40	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/24/2012	179.07	6.20	0	172.87	--	ND<40	75	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	2/8/2013	179.07	5.37	0	173.70	--	ND<40	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/10/2013	**179.07**	**6.52**	**0**	**172.55**	**--**	**ND<40**	**ND<50**	**--**	**ND<0.30**	**ND<0.30**	**ND<0.30**	**ND<0.60**	
MW-5	10/3/2001	169.18	2.81	0	166.37	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	1/28/2002	169.18	1.88	0	167.30	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	4/25/2002	169.18	1.99	0	167.19	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	7/18/2002	169.18	2.49	0	166.69	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	10/7/2002	169.18	2.80	0	166.38	--	--	140	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	1/6/2003	169.18	1.86	0	167.32	--	ND<50	120	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	4/7/2003	169.18	2.15	0	167.03	--	--	220	--	0.53	ND<0.50	ND<0.50	ND<0.50	
	7/7/2003	169.18	2.26	0	166.92	--	--	120	--	ND<1.2	ND<1.2	ND<1.2	ND<1.2	
	10/9/2003	169.18	2.72	0	166.46	--	--	560	210	ND<1.0	ND<1.0	ND<1.0	ND<2.0	Sampled for TPH-G by 8015M on 11/14/2003
	1/14/2004	169.18	2.00	0	167.18	--	--	560	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5	
	4/28/2004	169.18	2.01	0	167.17	--	--	760	--	ND<0.3	1.8	ND<0.3	ND<0.6	
	7/12/2004	169.18	2.56	0	166.62	--	--	96	--	1.8	3.3	0.54	3.6	
	10/25/2004	169.18	2.43	0	166.75	--	--	1,100	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	
	1/17/2005	169.18	1.49	0	167.69	--	--	720	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	
	4/6/2005	169.18	0.95	0	168.23	--	--	830	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	

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WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-5 cont.	7/8/2005	169.18	1.49	0	167.69	--	--	ND<500	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	
	10/7/2005	169.18	1.92	0	167.26	--	--	540	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	1/27/2006	169.18	2.03	0	167.15	--	--	490	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/28/2006	169.18	1.02	0	168.16	--	--	430	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/28/2006	169.18	1.57	0	167.61	--	--	480	--	0.34	ND<0.30	ND<0.30	ND<0.60	
	10/27/2006	169.18	2.20	0	166.98	--	--	420	--	0.34	ND<0.30	ND<0.30	ND<0.60	
	1/10/2007	169.18	1.57	0	167.61	--	--	390	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/13/2007	169.18	1.89	0	167.29	--	--	170	--	3.8	5.9	1.5	3.8	
	7/19/2007	169.18	1.92	0	167.26	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	10/8/2007	169.18	2.28	0	166.90	--	--	200	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	1/9/2008	169.18	1.09	0	168.09	--	--	150	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	Gauged on 1/18/2008
	4/4/2008	169.18	1.72	0	167.46	--	--	210	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/3/2008	169.18	2.27	0	166.91	--	--	260	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	10/3/2008	169.18	2.80	0	166.38	--	60	200	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	1/22/2009	169.18	2.45	0	166.73	--	ND<50	130	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/13/2009	169.18	1.81	0	167.37	--	ND<50	190	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/23/2009	169.18	2.33	0	166.85	--	ND<50	210	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	2/1/2010	169.18	1.32	0	167.86	--	ND<50	170	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	8/2/2010	169.18	2.20	0	166.98	--	ND<50	64	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	11/1/2010	169.18	3.92	0	165.26	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
	1/31/2011	169.18	1.63	0	167.55	--	ND<50	160	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/26/2011	169.18	1.32	0	167.86	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
	7/25/2011	169.18	1.79	0	167.39	--	ND<40	140	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	10/7/2011	169.18	2.18	0	167.00	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
	1/23/2012	169.18	1.98	0	167.20	--	ND<40	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/6/2012	169.18	1.18	0	168.00	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
	7/24/2012	169.18	1.90	0	167.28	--	ND<40	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	2/8/2013	169.18	1.88	0	167.30	--	ND<40	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/10/2013	**169.18**	**2.32**	**0**	**166.86**	**--**	**ND<40**	**ND<50**	**--**	**ND<0.30**	**ND<0.30**	**ND<0.30**	**ND<0.60**	
MW-6	10/3/2001	169.04	2.87	0	166.17	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	1/28/2002	169.04	1.82	0	167.22	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	4/25/2002	169.04	2.01	0	167.03	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	7/18/2002	169.04	2.44	0	166.60	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	10/7/2002	169.04	2.72	0	166.32	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	1/6/2003	169.04	1.90	0	167.14	--	--	ND<50	--	0.62	1.2	1.2	3.5	
	4/7/2003	169.04	2.02	0	167.02	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	7/7/2003	169.04	2.21	0	166.83	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	10/9/2003	169.04	2.71	0	166.33	--	--	ND<50	ND<50	0.95	3.0	1.4	5.5	Sampled for TPH-G by 8015M on 11/14/2003
	1/14/2004	169.04	2.00	0	167.04	--	--	ND<50	--	ND<0.50	0.57	ND<0.50	0.64	
	4/28/2004	169.04	2.18	0	166.86	--	--	ND<50	--	0.39	0.78	ND<0.3	ND<0.6	
	7/12/2004	169.04	2.69	0	166.35	--	--	ND<50	--	ND<0.3	ND<0.3	ND<0.3	ND<0.6	
	10/25/2004	169.04	2.46	0	166.58	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	1/17/2005	169.04	1.54	0	167.50	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	4/6/2005	169.04	1.15	0	167.89	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	7/8/2005	169.04	1.05	0	167.99	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	10/7/2005	169.04	1.90	0	167.14	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	1/27/2006	169.04	1.32	0	167.72	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	

Table 5
Historical Groundwater Monitoring Data and Analytical Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-6 cont.	4/28/2006	169.04	0.00	0	169.04	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/28/2006	169.04	1.68	0	167.36	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	10/27/2006	169.04	1.98	0	167.06	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	1/10/2007	169.04	1.60	0	167.44	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/13/2007	169.04	2.01	0	167.03	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/19/2007	169.04	1.96	0	167.08	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	10/8/2007	169.04	2.35	0	166.69	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	1/9/2008	169.04	1.10	0	167.94	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	Gauged on 1/18/2008
	4/4/2008	169.04	1.60	0	167.44	--	--	ND<50	--	ND<0.30	0.40	ND<0.30	0.71	
	7/3/2008	169.04	2.19	0	166.85	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	10/3/2008	169.04	2.78	0	166.26	--	ND<50	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	1/22/2009	169.04	2.35	0	166.69	--	ND<50	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/13/2009	169.04	1.81	0	167.23	--	ND<50	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/23/2009	169.04	--	--	--	--	--	--	--	--	--	--	--	Paved over
	2/1/2010	169.04	--	--	--	--	--	--	--	--	--	--	--	Paved over
	8/2/2010	169.04	--	--	--	--	--	--	--	--	--	--	--	Paved over
	8/24/2010							ABANDONED						
MW-7	10/3/2001	171.64	7.62	0	164.02	--	--	10,000	--	210	ND<50	ND<50	800	
	1/28/2002	171.64	7.21	0	164.43	--	--	ND<1,000	--	ND<10	ND<10	ND<10	ND<10	
	4/25/2002	171.64	7.25	0	164.39	--	--	ND<5,000	--	660	ND<50	ND<50	ND<50	
	7/18/2002	171.64	8.12	0	163.52	--	--	ND<5,000	--	130	ND<50	ND<50	ND<50	
	10/7/2002	171.64	7.71	0	163.93	--	--	18,000	--	ND<50	ND<50	ND<50	ND<50	
	1/6/2003	171.64	7.63	0	164.01	--	ND<50	410	--	0.61	1.0	0.89	2.9	
	4/7/2003	171.64	7.58	0	164.06	--	--	13,000	--	ND<20	ND<20	ND<20	ND<20	
	7/7/2003	171.64	7.56	0	164.08	--	--	990	--	8.2	ND<0.50	1.2	ND<0.50	
	10/9/2003	171.64	7.72	0	163.92	--	--	6,800	ND<13,000	ND<130	ND<130	ND<130	ND<250	Sampled for TPH-G by 8015M on 11/14/2003
	1/14/2004	171.64	6.97	0	164.67	--	--	19,000	--	ND<100	ND<100	ND<100	ND<100	
	4/28/2004	171.64	8.70	0	162.94	--	--	19,000	--	ND<3	ND<3	ND<3	ND<6	
	7/12/2004	171.64	9.44	0	162.20	--	--	12,000	--	28	14	330	200	
	10/25/2004	171.64	7.23	0	164.41	--	--	28,000	--	ND<250	ND<250	ND<250	ND<250	
	1/17/2005	171.64	6.30	0	165.34	--	--	15,000	--	ND<100	ND<100	ND<100	ND<100	
	4/6/2005	171.64	5.96	0	165.68	--	--	13,000	--	ND<100	ND<100	ND<100	ND<100	
	7/8/2005	171.64	6.45	0	165.19	--	--	ND<10,000	--	ND<100	ND<100	ND<100	ND<100	
	10/7/2005	171.64	6.78	0	164.86	--	--	13,000	--	ND<3.0	ND<3.0	ND<3.0	ND<6.0	
	1/27/2006	171.64	5.82	0	165.82	--	--	8,200	--	0.64	1.6	ND<0.30	ND<0.60	
	4/28/2006	171.64	5.57	0	166.07	--	--	6,900	--	0.88	1.5	0.34	1.0	
	7/28/2006	171.64	6.67	0	164.97	--	--	5,400	--	5.2	ND<3.0	ND<3.0	ND<6.0	
	10/27/2006	171.64	6.93	0	164.71	--	--	4,500	--	ND<1.5	ND<1.5	ND<1.5	ND<3.0	
	1/10/2007	171.64	6.41	0	165.23	--	12,000	4,000	--	ND<1.2	ND<1.2	ND<1.2	ND<2.4	
	4/13/2007	171.64	--	--	--	--	--	--	--	--	--	--	--	Paved over
	7/19/2007	171.64	7.10	0	164.54	--	--	2,700	--	0.57	ND<0.30	ND<0.30	ND<0.60	
	10/8/2007	171.64	7.42	0	164.22	--	--	1,600	--	0.47	0.49	ND<0.30	ND<0.60	
	1/9/2008	171.64	5.98	0	165.66	--	--	1,500	--	0.45	0.49	ND<0.30	ND<0.60	Gauged on 1/18/2008
	4/4/2008	171.64	6.80	0	164.84	--	--	1,800	--	0.72	0.58	ND<0.30	ND<0.60	
	7/3/2008	171.64	7.31	0	164.33	--	--	1,600	--	0.45	ND<0.30	ND<0.30	ND<0.60	
	10/3/2008	171.64	7.79	0	163.85	--	ND<50	1,300	--	0.53	0.59	ND<0.30	ND<0.60	
	1/22/2009	171.64	7.26	0	164.38	--	ND<50	890	--	0.43	0.49	ND<0.30	ND<0.60	

Table 5
Historical Groundwater Monitoring Data and Analytical Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-7 cont.	4/13/2009	171.64	6.83	0	164.81	--	ND<50	1,100	--	0.46	0.30	ND<0.30	ND<0.60	
	7/23/2009	171.64	7.32	0	164.32	--	ND<50	920	--	ND<0.30	0.73	ND<0.30	ND<0.60	
	2/1/2010	171.64	6.21	0	165.43	--	53	1,000	--	5.6	4.0	1.2	2.0	
	8/2/2010	171.64	7.08	0	164.56	--	ND<50	880	--	ND<0.30	0.62	ND<0.30	ND<0.60	
	11/1/2010	172.11	6.97	0	165.14	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
	1/31/2011	172.11	6.58	0	165.53	--	ND<50	730	--	0.31	0.59	ND<0.30	ND<0.60	
	4/26/2011	172.11	5.21	0	166.90	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
	7/25/2011	172.11	6.89	0	165.22	--	ND<40	610	--	2.5	ND<0.30	ND<0.30	ND<0.60	
	10/7/2011	172.11	7.15	0	164.96	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
	1/23/2012	172.11	6.92	0	165.19	--	ND<40	300	--	ND<0.30	0.55	ND<0.30	ND<0.60	
	4/6/2012	172.11	6.01	0	166.10	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
	7/24/2012	172.11	7.25	0	164.86	--	ND<40	270	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	2/8/2013	172.11	6.90	0	165.21	--	ND<40	240	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/10/2013	**172.11**	**7.36**	**0**	**164.75**	**--**	**ND<40**	**340**	**--**	**0.75**	**ND<0.30**	**0.46**	**0.69**	
MW-8	1/18/2008	167.97	0.43	0	167.54	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/4/2008	167.97	0.55	0	167.42	--	--	ND<50	--	0.76	1.6	0.72	2.3	
	7/3/2008	167.97	0.91	0	167.06	--	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	10/3/2008	167.97	1.71	0	166.26	--	ND<50	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	1/22/2009	167.97	1.59	0	166.38	--	64	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	4/13/2009	167.97	0.08	0	167.89	--	ND<50	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	7/23/2009	167.97	1.10	0	166.87	--	ND<50	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	2/1/2010	167.97	0.65	0	167.32	--	ND<50	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	
	8/2/2010	167.97	--	--	--	--	--	--	--	--	--	--	--	Paved over
	8/24/2010						ABANDONED							
MW-9A	**7/10/2013**	**173.01**	**5.88**	**0**	**167.13**	**--**	**220**	**4,600**	**--**	**1,100**	**14**	**220**	**140**	
MW-9B	**7/10/2013**	**172.78**	**5.87**	**0**	**166.91**	**--**	**ND<40**	**ND<50**	**--**	**ND<0.30**	**ND<0.30**	**ND<0.30**	**ND<0.60**	
MW-10A	**7/10/2013**	**174.48**	**7.15**	**0**	**167.33**	**--**	**1,300**	**23,000**	**--**	**6,600**	**76**	**750**	**1,900**	
MW-10B	**7/10/2013**	**174.62**	**7.65**	**0**	**166.97**	**--**	**170**	**4,100**	**--**	**1,100**	**34**	**130**	**140**	
MW-11A	**7/10/2013**	**175.37**	**6.02**	**0**	**169.35**	**--**	**730**	**45,000**	**--**	**8,600**	**5,900**	**940**	**7,600**	
MW-11B	**7/10/2013**	**174.65**	**5.07**	**0**	**169.58**	**--**	**ND<40**	**3,800**	**--**	**1,300**	**52**	**41**	**300**	

Table 5
Historical Groundwater Monitoring Data and Analytical Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE SAMPLED	TOC* (ft)	DTW (ft)	LNAPL (ft)	GWE* (ft)	OIL AND GREASE (µg/L)	TPH-DRO WITH SGC (µg/L)	TPH-GRO (µg/L)	TPH-GRO (GC/MS) (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments

NOTES:

* TOC and GWE are in feet above mean sea level
TOC = top of casing
DTW = Depth to water below TOC
LNAPL = Liquid non-aqueous phase liquid
GWE = Groundwater elevation
ND<# = Analyte not detected at or above indicated practical quantitation limit
-- = Not available/not sampled
µg/L = Micrograms per liter
GC/MS = Gas chromatograph/mass spectrometer
ID = Identification

TPH-DRO = Total petroleum hydrocarbons-diesel range organics
SGC = Silica gel cleanup
TPH-GRO = Total petroleum hydrocarbons-gasoline range organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-1	7/20/1999	ND	--	--	--	--	--	--	--	--	--	--
	9/28/1999	321	333	ND	--	--	--	--	--	ND	ND	ND
	1/7/2000	ND	--	--	--	--	--	--	--	--	--	--
	3/31/2000	ND	--	--	--	--	--	--	--	--	--	--
	7/14/2000	ND	--	--	--	--	--	--	--	--	--	--
	10/3/2000	ND	--	--	--	--	--	--	--	--	--	--
	1/3/2001	2,200	--	--	--	--	--	--	--	--	--	--
	4/4/2001	ND	481	ND	--	ND	ND	--	ND	ND	ND	ND
	7/17/2001	ND	230	ND	--	ND	ND	--	ND	ND	ND	ND
	10/3/2001	ND<2,500	--	--	--	--	--	--	--	--	--	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	3,000	440	--	--	--	--	--	--	--	--	--
	4/25/2002	810	670	--	--	--	--	--	--	--	--	--
	7/18/2002	ND<500	620	ND<100	--	ND<2,500,000	ND<10	--	ND<10	ND<10	ND<10	ND<10
	10/7/2002	1,300	760	ND<10,000	--	ND<50,000,00	ND<200	--	ND<200	ND<200	ND<200	ND<200
	1/6/2003	ND<1,000	790	ND<20,000	--	ND<100,000,00	ND<400	--	ND<400	ND<400	ND<400	ND<400
	4/7/2003	1,000	800	ND<10,000	--	ND<50,000,00	ND<200	--	ND<200	ND<200	ND<200	ND<200
	7/7/2003	600	530	ND<25,000	ND<120000	--	ND<500	--	ND<500	ND<500	ND<500	ND<500
	10/9/2003	--	660	ND<2,0000	--	ND<100,000	ND<400	--	ND<400	ND<400	ND<400	ND<400
	1/14/2004	ND<1,300	ND<800	ND<40,000	--	ND<200,000	ND<800	--	ND<800	ND<800	ND<800	ND<800
	4/28/2004	1,400	560	800	--	ND<1,000	ND<50	--	ND<50	ND<1	ND<1	ND<1
	7/12/2004	490	440	1,100	--	ND<20,000	ND<10	--	ND<10	ND<20	ND<20	ND<20
	10/25/2004	ND<1,300	330	ND<2,000	--	ND<20,000	ND<200	--	ND<200	ND<400	ND<200	ND<200
	1/17/2005	ND<1,300	570	3,100	--	ND<20,000	ND<200	--	ND<200	ND<400	ND<200	ND<200
	4/6/2005	ND<1,300	580	1,500	--	ND<10,000	ND<100	--	ND<100	ND<100	ND<100	ND<100
	7/8/2005	ND<1,300	290	ND<1,300	--	ND<13,000	ND<130	--	3.8	ND<130	ND<130	ND<130
	10/7/2005	330	250	680	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/27/2006	450	360	ND<500	--	ND<12,000	ND<25	--	ND<25	ND<25	ND<25	ND<25
	4/28/2006	460	280	ND<500	--	ND<12,000	ND<25	--	ND<25	ND<25	ND<25	ND<25
	7/28/2006	330	220	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/27/2006	280	250	ND<2,500	--	ND<62,000	ND<120	--	ND<120	ND<120	ND<120	ND<120
	1/10/2007	350	260	ND<1,000	--	ND<25,000	ND<50	--	ND<50	ND<50	ND<50	ND<50

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-1 cont.	4/13/2007	270	220	730	--	ND<250	ND<0.50	--	0.68	ND<0.50	ND<0.50	ND<0.50
	7/19/2007	1,000	200	ND<1,000	--	ND<25,000	ND<50	--	ND<50	ND<50	ND<50	ND<50
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	840	170	ND<250	--	ND<6,200	ND<12	--	ND<12	ND<12	ND<12	ND<12
	4/4/2008	--	160	770	--	ND<5,000	ND<10	--	ND<10	ND<10	ND<10	ND<10
	7/3/2008	--	110	ND<250	--	ND<6,200	ND<12	--	ND<12	ND<12	ND<12	ND<12
	10/3/2008	--	180	ND<200	--	ND<5,000	ND<10	--	ND<10	ND<10	ND<10	ND<10
	1/22/2009	--	160	ND<500	--	ND<12,000	ND<25	--	ND<25	ND<25	ND<25	ND<25
	4/13/2009	--	150	280	--	ND<1,200	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	7/23/2009	--	140	ND<2,000	--	ND<50,000	ND<100	--	ND<100	ND<100	ND<100	ND<100
	2/1/2010	--	ND<50	--	--	--	--	--	--	--	--	--
	8/2/2010	--	ND<10	--	--	--	ND<10	ND<10	ND<10	--	--	--
	8/24/2010	--	--	--	--	--	--	--	--	--	--	--
MW-1B	11/1/2010	--	30	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/31/2011	--	46	28	--	ND<250	ND<0.50	--	0.76	ND<0.50	ND<0.50	ND<0.50
	4/26/2011	--	44	33	--	ND<250	ND<0.50	--	0.82	ND<0.50	ND<0.50	ND<0.50
	7/25/2011	--	47	28	--	ND<250	ND<0.50	--	0.75	ND<0.50	ND<0.50	ND<0.50
	10/7/2011	--	41	30	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/23/2012	--	32	23	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/6/2012	--	55	18	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/24/2012	--	46	27	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/8/2013	--	28	ND<10	ND<250	--	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/10/2013	**--**	**12**	**ND<10**	**ND<250**	**--**	**ND<0.50**	**--**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**
MW-2	7/20/1999	4,500	11,000	--	--	--	--	--	--	--	--	--
	9/28/1999	5,280	6,150	ND	--	--	--	--	--	ND	ND	ND
	1/7/2000	33,100	--	--	--	--	--	--	--	--	--	--
	3/31/2000	17,000	--	--	--	--	--	--	--	--	--	--
	7/14/2000	66,500	--	--	--	--	--	--	--	--	--	--
	10/3/2000	57,500	--	--	--	--	--	--	--	--	--	--
	1/3/2001	49,000	--	--	--	--	--	--	--	--	--	--

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-2 cont.	4/4/2001	38,700	37,800	ND	--	ND	ND	--	ND	ND	ND	ND
	7/17/2001	65,000	56,000	ND	--	ND	ND	--	ND	ND	ND	ND
	10/3/2001	14,000	18,000	--	--	--	--	--	--	--	--	--
	1/28/2002	11,000	10,000	--	--	--	--	--	--	--	--	--
	4/25/2002	8,400	8,100	--	--	--	--	--	--	--	--	--
	7/18/2002	4,300	8,800	ND<1,000	--	ND<25,000,000	ND<100	--	ND<100	ND<100	ND<100	ND<100
	10/7/2002	7,100	5,900	ND<20,000	--	ND<100,000,00	ND<400	--	ND<400	ND<400	ND<400	ND<400
	1/6/2003	31,000	35,000	ND<50,000	--	ND<250,000,00	ND<1,000	--	ND<1,000	ND<1,000	ND<1,000	ND<1,000
	4/7/2003	2,000	1,500	ND<2,000	--	ND<10,000,000	ND<40	--	ND<40	ND<40	ND<40	ND<40
	7/7/2003	5,500	8,300	ND<5,000	--	ND<25,000,000	ND<100	--	ND<100	ND<100	ND<100	ND<100
	10/9/2003	--	8,500	ND<10,000	--	ND<50,000	ND<200	--	ND<200	ND<200	ND<200	ND<200
	1/14/2004	2,600	3,200	ND<2,500	--	ND<13,000	ND<50	--	ND<50	ND<50	ND<50	ND<50
	4/28/2004	35,000	22,000	13,000	--	ND<1,000	ND<0.5	--	ND<0.5	ND<1	ND<1	11
	7/12/2004	3,000	3,000	110	--	ND<4,000	ND<3	--	ND<3	ND<5	ND<5	ND<5
	10/25/2004	1,800	1,600	1,100	--	ND<1,300	ND<13	--	ND<13	ND<25	ND<13	ND<13
	1/17/2005	1,600	1,500	1,200	--	ND<1,300	ND<13	--	ND<13	ND<25	ND<13	ND<13
	4/6/2005	2,500	3,200	2,800	--	ND<2,500	ND<25	--	ND<25	ND<25	ND<25	ND<25
	7/8/2005	2,900	3,100	4,300	--	ND<2,500	ND<25	--	ND<25	ND<25	ND<25	ND<25
	10/7/2005	5,900	5,200	8,700	--	ND<250	ND<0.50	--	1.4	ND<0.50	ND<0.50	ND<0.50
	1/27/2006	2,600	2,800	5,200	--	ND<12,000	ND<25	--	ND<25	ND<25	ND<25	ND<25
	4/28/2006	3,700	3,600	6,700	--	ND<250	ND<0.50	--	1.4	ND<0.50	ND<0.50	1.6
	7/28/2006	3,000	2,900	5,100	--	ND<6,200	ND<12	--	ND<12	ND<12	ND<12	ND<12
	10/27/2006	1,600	1,300	6,600	--	ND<1,200	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	1/10/2007	2,300	2,000	6,000	--	ND<1,200	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	4/13/2007	3,600	3,200	7,400	--	ND<6,200	ND<12	--	ND<12	ND<12	ND<12	ND<12
	7/19/2007	2,000	2,000	6,200	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	10/8/2007	5,000	4,000	20,000	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/9/2008	2,100	2,200	9,900	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/4/2008	--	2,100	5,800	--	ND<1,200	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	7/3/2008	--	1,400	8,300	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/3/2008	--	750	5,900	--	ND<1,200	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	1/22/2009	--	850	7,400	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-2 cont.	4/13/2009	--	990	5,500	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	7/23/2009	--	390	5,000	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	2/1/2010	--	290	--	--	--	--	--	--	--	--	--
	8/2/2010	--	140	--	--	--	ND<1.0	ND<1.0	ND<1.0	--	--	--
	8/24/2010	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	250	2,000	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/31/2011	--	310	1,300	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/26/2011	--	240	770	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/25/2011	--	170	1,100	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/7/2011	--	100	840	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/23/2012	--	95	370	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/6/2012	--	140	310	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/24/2012	--	53	270	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/8/2013	--	1.2	ND<10	ND<250	--	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/10/2013	**--**	**0.86**	**ND<10**	**ND<250**	**--**	**ND<0.50**	**--**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**
MW-3	7/20/1999	330	--	--	--	--	--	--	--	--	--	--
	9/28/1999	443	288	ND	--	--	--	--	--	ND	ND	8.80
	1/7/2000	1,940	--	--	--	--	--	--	--	--	--	--
	3/31/2000	2,800	--	--	--	--	--	--	--	--	--	--
	7/14/2000	548	--	--	--	--	--	--	--	--	--	--
	10/3/2000	965	--	--	--	--	--	--	--	--	--	--
	1/3/2001	3,300	--	--	--	--	--	--	--	--	--	--
	4/4/2001	1,050	450	ND	--	ND	ND	--	ND	ND	ND	ND
	7/17/2001	ND	350	ND	--	ND	ND	--	ND	ND	ND	ND
	10/3/2001	ND<1000	--	--	--	--	--	--	--	--	--	--
	1/28/2002	3,200	210	--	--	--	--	--	--	--	--	--
	4/25/2002	500	260	--	--	--	--	--	--	--	--	--
	7/18/2002	ND<250	270	ND<50	--	ND<1,200,000	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	10/7/2002	ND<120	ND<200	ND<10,000	--	ND<50,000,00	ND<200	--	ND<200	ND<200	ND<200	ND<200
	1/6/2003	440	110	ND<4,000	--	23,000,000	ND<80	--	ND<80	ND<80	ND<80	ND<80

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-3 cont.	4/7/2003	440	100	ND<4,000	--	ND<20,000,00	ND<80	--	ND<80	ND<80	ND<80	ND<80
	7/7/2003	280	100	ND<2,000	--	ND<10,000,00	ND<40	--	ND<40	ND<40	ND<40	ND<40
	10/9/2003	--	190	ND<1,000	--	ND<5,000	ND<20	--	ND<20	ND<20	ND<20	ND<20
	1/14/2004	190	230	ND<1,000	--	ND<5,000	ND<20	--	ND<20	ND<20	ND<20	ND<20
	4/28/2004	740	240	ND<12	--	ND<1,000	ND<3	--	ND<3	ND<1	ND<1	ND<1
	7/12/2004	180	100	350	--	ND<20,000	ND<10	--	ND<10	ND<20	ND<20	ND<20
	10/25/2004	94	260	39	--	ND<250	ND<2.5	--	ND<2.5	ND<5.0	ND<2.5	ND<2.5
	1/17/2005	55	200	120	--	ND<250	ND<2.5	--	ND<2.5	ND<5.0	ND<2.5	ND<2.5
	4/6/2005	ND<250	200	150	--	ND<1,000	ND<10	--	ND<10	ND<10	ND<10	ND<10
	7/8/2005	ND<250	150	64	--	ND<250	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	10/7/2005	260	180	ND<200	--	ND<5,000	ND<10	--	ND<10	ND<10	ND<10	ND<10
	1/27/2006	280	250	ND<10	--	ND<250	ND<0.50	--	1.5	ND<0.50	ND<0.50	ND<0.50
	4/28/2006	230	180	190	--	ND<250	ND<0.50	--	0.63	ND<0.50	ND<0.50	ND<0.50
	7/28/2006	250	150	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/27/2006	250	140	ND<10	--	ND<250	ND<0.50	--	1.3	ND<0.50	ND<0.50	ND<0.50
	1/10/2007	230	150	66	--	ND<250	ND<0.50	--	1.4	ND<0.50	ND<0.50	ND<0.50
	4/13/2007	230	160	ND<10	--	ND<250	ND<0.50	--	1.2	ND<0.50	ND<0.50	ND<0.50
	7/19/2007	190	180	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/8/2007	180	120	ND<20	--	ND<500	ND<1.0	--	1.1	ND<1.0	ND<1.0	ND<1.0
	1/9/2008	290	120	ND<20	--	ND<500	ND<1.0	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	4/4/2008	--	120	ND<50	--	ND<1,200	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	7/3/2008	--	190	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/3/2008	--	71	ND<100	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	1/22/2009	--	130	ND<20	--	ND<500	ND<1.0	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	4/13/2009	--	120	ND<10	--	ND<250	ND<0.50	--	1.0	ND<0.50	ND<0.50	ND<0.50
	7/23/2009	--	120	ND<100	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	2/1/2010	--	97	--	--	--	--	--	--	--	--	--
	8/2/2010	--	89	--	--	--	ND<0.50	--	ND<0.50	--	--	--
	8/24/2010	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	46	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/31/2011	--	73	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-3B cont.	4/26/2011	--	52	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/25/2011	--	62	47	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/7/2011	--	61	64	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/23/2012	--	56	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/6/2012	--	68	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/24/2012	--	54	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/8/2013	--	20	ND<10	ND<250	--	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/10/2013	**--**	**14**	**ND<100**	**ND<2,500**	**--**	**ND<5.0**	**--**	**ND<5.0**	**ND<5.0**	**ND<5.0**	**ND<5.0**
MW-4	7/20/1999	100	--	--	--	--	--	--	--	--	--	--
	9/28/1999	416	459	ND	--	--	--	--	--	ND	ND	ND
	1/7/2000	764	--	--	--	--	--	--	--	--	--	--
	3/31/2000	1,000	--	--	--	--	--	--	--	--	--	--
	7/14/2000	1,530	--	--	--	--	--	--	--	--	--	--
	10/3/2000	1,040	--	--	--	--	--	--	--	--	--	--
	1/3/2001	850	--	--	--	--	--	--	--	--	--	--
	4/4/2001	1,140	819	ND	--	ND	ND	--	ND	ND	ND	ND
	7/17/2001	1,200	900	ND	--	ND	ND	--	ND	ND	ND	ND
	10/3/2001	580	820	--	--	--	--	--	--	--	--	--
	1/28/2002	1,100	500	--	--	--	--	--	--	--	--	--
	4/25/2002	680	600	--	--	--	--	--	--	--	--	--
	7/18/2002	530	760	ND<100	--	ND<2,500,000	ND<10	--	49	ND<10	ND<10	ND<10
	10/7/2002	650	540	ND<10,000	--	ND<50,000,000	ND<200	--	ND<200	ND<200	ND<200	ND<200
	1/6/2003	370	520	ND<1,000	--	ND<5,000,000	ND<20	--	ND<20	ND<20	ND<20	ND<20
	4/7/2003	550	420	ND<1,000	--	ND<5,000,000	ND<20	--	ND<20	ND<20	ND<20	ND<20
	7/7/2003	480	450	ND<1,000	--	ND<5,000,000	ND<20	--	ND<20	ND<20	ND<20	ND<20
	10/9/2003	--	270	ND<200	--	ND<1,000	ND<4.0	--	ND<4.0	ND<4.0	ND<4.0	ND<4.0
	1/14/2004	150	180	ND<200	--	ND<1,000	ND<4.0	--	6.5	ND<4.0	ND<4.0	ND<4.0
	4/28/2004	490	310	150	--	ND<1,000	ND<0.5	--	ND<0.5	ND<1	ND<1	ND<1
	7/12/2004	710	470	210	--	ND<4,000	ND<3	--	14	ND<5	ND<5	ND<5
	10/25/2004	200	170	38	--	ND<100	ND<1.0	--	2.0	ND<2.0	ND<1.0	ND<1.0
	1/17/2005	240	200	110	--	ND<100	ND<1.0	--	3.6	ND<2.0	ND<1.0	ND<1.0

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-4 cont.	4/6/2005	ND<25	26	ND<25	--	73,000	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	7/8/2005	ND<25	64	29	--	ND<50	ND<0.50	--	1.2	ND<0.50	ND<0.50	ND<0.50
	10/7/2005	370	310	210	--	ND<250	ND<0.50	--	26	ND<0.50	ND<0.50	ND<0.50
	1/27/2006	320	240	280	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	4/28/2006	140	140	130	--	ND<250	ND<0.50	--	0.97	ND<0.50	ND<0.50	ND<0.50
	7/28/2006	170	150	64	--	ND<250	ND<0.50	--	5.8	ND<0.50	ND<0.50	ND<0.50
	10/27/2006	130	130	54	--	ND<250	ND<0.50	--	1.5	ND<0.50	ND<0.50	ND<0.50
	1/10/2007	160	150	33	--	310	ND<0.50	--	1.9	ND<0.50	ND<0.50	ND<0.50
	4/13/2007	210	160	82	--	ND<250	ND<0.50	--	0.77	ND<0.50	ND<0.50	ND<0.50
	7/19/2007	120	130	13	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/8/2007	160	150	ND<20	--	ND<500	ND<1.0	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	1/9/2008	210	220	ND<20	--	ND<500	ND<1.0	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	4/4/2008	--	110	27	--	ND<250	ND<0.50	--	1.0	ND<0.50	ND<0.50	ND<0.50
	7/3/2008	--	100	27	--	ND<250	ND<0.50	--	1.4	ND<0.50	ND<0.50	ND<0.50
	10/3/2008	--	100	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/22/2009	--	96	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/13/2009	--	88	39	--	ND<250	ND<0.50	--	1.4	ND<0.50	ND<0.50	ND<0.50
	7/23/2009	--	92	42	--	ND<250	ND<0.50	--	1.5	ND<0.50	ND<0.50	ND<0.50
	2/1/2010	--	51	--	--	--	--	--	--	--	--	--
	8/2/2010	--	48	--	--	--	ND<0.50	ND<1.0	1.4	--	--	--
	8/24/2010	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	20	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/31/2011	--	30	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/26/2011	--	26	25	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/25/2011	--	28	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/7/2011	--	25	25	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/23/2012	--	17	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/6/2012	--	21	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/24/2012	--	24	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/8/2013	--	2.8	ND<10	ND<250	--	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/10/2013	**--**	**0.64**	**ND<10**	**ND<250**	**--**	**ND<0.50**	**--**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-5	10/3/2001	1,800	2,100	--	--	--	--	--	--	--	--	--
	1/28/2002	650	550	--	--	--	--	--	--	--	--	--
	4/25/2002	2,200	2,400	--	--	--	--	--	--	--	--	--
	7/18/2002	530	690	ND<20	--	ND<500,000	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	10/7/2002	300	330	ND<100	--	ND<500,000	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	1/6/2003	410	350	ND<100	--	ND<500,000	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	4/7/2003	450	420	ND<500	--	ND<2,500,000	ND<10	--	ND<10	ND<10	ND<10	ND<10
	7/7/2003	220	200	ND<200	--	ND<1,000,000	ND<4.0	--	ND<4.0	ND<4.0	ND<4.0	ND<4.0
	10/9/2003	--	290	ND<200	--	ND<1,000	ND<4.0	--	ND<4.0	ND<4.0	ND<4.0	ND<4.0
	1/14/2004	670	760	ND<2,000	--	ND<10,000	ND<40	--	ND<40	ND<40	ND<40	ND<40
	4/28/2004	1,200	790	ND<12	--	ND<1,000	ND<0.5	--	1.8	ND<1	ND<1	ND<1
	7/12/2004	2.8	ND<0.5	ND<12	--	ND<800	ND<0.5	--	0.76	ND<1	ND<1	ND<1
	10/25/2004	780	1,100	ND<500	--	ND<5,000	ND<50	--	ND<50	ND<100	ND<50	ND<50
	1/17/2005	530	550	100	--	ND<250	ND<2.5	--	ND<2.5	ND<5.0	ND<2.5	ND<2.5
	4/6/2005	600	760	7.6	--	ND<50	ND<0.50	--	1.4	ND<0.50	ND<0.50	ND<0.50
	7/8/2005	570	630	180	--	ND<500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	10/7/2005	530	490	ND<10	--	ND<250	ND<0.50	--	1.0	ND<0.50	ND<0.50	ND<0.50
	1/27/2006	580	610	1,000	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	4/28/2006	590	520	130	--	ND<250	ND<0.50	--	0.95	ND<0.50	ND<0.50	ND<0.50
	7/28/2006	440	420	ND<100	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	10/27/2006	460	390	43	--	ND<250	ND<0.50	--	1.5	ND<0.50	ND<0.50	ND<0.50
	1/10/2007	430	420	28	--	ND<250	ND<0.50	--	1.7	ND<0.50	ND<0.50	ND<0.50
	4/13/2007	160	120	ND<10	--	ND<250	ND<0.50	--	0.84	ND<0.50	ND<0.50	ND<0.50
	7/19/2007	19	23	ND<10	--	ND<250	ND<0.50	--	ND<5.0	ND<0.50	ND<0.50	ND<0.50
	10/8/2007	310	280	ND<10	--	ND<250	ND<0.50	--	1.3	ND<0.50	ND<0.50	ND<0.50
	1/9/2008	170	170	ND<10	--	ND<250	ND<0.50	--	1.2	ND<0.50	ND<0.50	ND<0.50
	4/4/2008	--	260	ND<10	--	ND<250	ND<0.50	--	1.4	ND<0.50	ND<0.50	ND<0.50
	7/3/2008	--	360	ND<10	--	ND<250	ND<0.50	--	1.5	ND<0.50	ND<0.50	ND<0.50
	10/3/2008	--	240	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/22/2009	--	170	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/13/2009	--	190	ND<10	--	ND<250	ND<0.50	--	1.2	ND<0.50	ND<0.50	ND<0.50

Table 6

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4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (μg/L)	MTBE (8260B) (μg/L)	TBA (μg/L)	ETHANOL (8260B) (μg/L)	ETHANOL (8015B) (μg/L)	EDB (μg/L)	EDB (504) (μg/L)	1,2-EDC (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)
MW-5 cont.	7/23/2009	--	210	ND<10	--	ND<250	ND<0.50	--	1.8	ND<0.50	ND<0.50	ND<0.50
	2/1/2010	--	120	--	--	--	--	--	--	--	--	--
	8/2/2010	--	42	--	--	--	ND<0.50	--	ND<0.50	--	--	--
	11/1/2010	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	130	ND<10	--	ND<250	ND<0.50	--	1.6	ND<0.50	ND<0.50	ND<0.50
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	130	ND<10	--	ND<250	ND<0.50	--	1.6	ND<0.50	ND<0.50	ND<0.50
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	52	22	--	ND<250	ND<0.50	--	0.92	ND<0.50	ND<0.50	ND<0.50
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	81	20	--	ND<250	ND<0.50	--	1.4	ND<0.50	ND<0.50	ND<0.50
	2/8/2013	--	21	ND<10	ND<250	--	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/10/2013	**--**	**4.7**	**ND<10**	**ND<250**	**--**	**ND<0.50**	**--**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**
MW-6	10/3/2001	200	270	--	--	--	--	--	--	--	--	--
	1/28/2002	ND<2.5	--	--	--	--	--	--	--	--	--	--
	4/25/2002	ND<2.5	--	--	--	--	--	--	--	--	--	--
	7/18/2002	ND<2.5	ND<2.0	ND<20	--	ND<500,000	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	10/7/2002	ND<2.5	ND<2.0	ND<100	--	ND<500,000	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	1/6/2003	ND<2.0	ND<2.0	ND<100	--	ND<500,000	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	4/7/2003	46	46	ND<100	--	ND<500,000	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/7/2003	ND<2.0	ND<2.0	ND<100	--	ND<500,000	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	10/9/2003	--	ND<2.0	ND<100	--	ND<500	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	1/14/2004	ND<5.0	ND<2.0	ND<100	--	ND<500	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	4/28/2004	ND<1	ND<0.5	ND<12	--	ND<1,000	ND<0.5	--	ND<0.5	ND<1	ND<1	ND<1
	7/12/2004	6.4	ND<0.5	ND<12	--	ND<800	ND<0.5	--	ND<0.5	ND<1	ND<1	ND<1
	10/25/2004	ND<5.0	0.57	ND<5.0	--	ND<50	ND<0.50	--	ND<0.50	ND<1.0	ND<0.50	ND<0.50
	1/17/2005	ND<5.0	ND<0.50	ND<5.0	--	ND<50	ND<0.50	--	ND<0.50	ND<1.0	ND<0.50	ND<0.50
	4/6/2005	ND<5.0	ND<0.50	ND<5.0	--	ND<50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/8/2005	ND<5.0	ND<0.50	ND<5.0	--	ND<50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/7/2005	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/27/2006	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 6

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76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-6 cont.	4/28/2006	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/28/2006	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/27/2006	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/10/2007	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/13/2007	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/19/2007	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/8/2007	ND<1.0	0.80	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/9/2008	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/4/2008	--	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/3/2008	--	1.4	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/3/2008	--	1.8	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/22/2009	--	1.2	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/13/2009	--	0.72	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--
	8/24/2010	--	--	--	--	--	--	--	--	--	--	--
MW-7	10/3/2001	35,000	40,000	--	--	--	--	--	--	--	--	--
	1/28/2002	42,000	38,000	--	--	--	--	--	--	--	--	--
	4/25/2002	42,000	45,000	--	--	--	--	--	--	--	--	--
	7/18/2002	51,000	53,000	33,000	--	ND<5,000,000	ND<20	--	ND<20	ND<20	ND<20	ND<20
	10/7/2002	33,000	38,000	26,000	--	D<100,000,00	ND<400	--	ND<400	ND<400	ND<400	ND<400
	1/6/2003	3,900	3,100	ND<10,000	--	ND<50,000,00	ND<200	--	ND<200	ND<200	ND<200	ND<200
	4/7/2003	32,000	28,000	ND<40,000	--	D<200,000,00	ND<800	--	ND<800	ND<800	ND<800	ND<800
	7/7/2003	36,000	45,000	27,000	--	D<100,000,00	ND<400	--	ND<400	ND<400	ND<400	ND<400
	10/9/2003	--	20,000	ND<25,000	--	ND<130,000	ND<500	--	ND<500	ND<500	ND<500	ND<500
	1/14/2004	20,000	25,000	ND<40,000	--	ND<200,000	ND<800	--	ND<800	ND<800	ND<800	ND<800
	4/28/2004	30,000	21,000	9,200	--	ND<1,000	ND<0.5	--	6.8	ND<1	ND<1	12
	7/12/2004	12,000	11,000	4,600	--	ND<8,000	ND<5	--	5.1	ND<10	ND<10	ND<10
	10/25/2004	13,000	14,000	3,900	--	ND<5,000	ND<50	--	ND<50	ND<100	ND<50	ND<50
	1/17/2005	17,000	16,000	4,200	--	ND<5,000	ND<50	--	ND<50	ND<100	ND<50	ND<50

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Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-7 cont.	4/6/2005	14,000	17,000	4,200	--	ND<10,000	ND<0.50	--	6.4	ND<0.50	ND<0.50	9.3
	7/8/2005	8,600	11,000	4,300	--	ND<5,000	ND<50	--	ND<50	ND<50	ND<50	ND<50
	10/7/2005	9,400	9,800	1,100	--	ND<12,000	ND<25	--	ND<25	ND<25	ND<25	ND<25
	1/27/2006	9,900	7,900	1,600	--	ND<25,000	ND<50	--	ND<50	ND<50	ND<50	ND<50
	4/28/2006	9,600	11,000	2,900	--	ND<250	ND<0.50	--	3.4	ND<0.50	ND<0.50	6.3
	7/28/2006	5,000	5,300	1,300	--	ND<6,200	ND<12	--	ND<12	ND<12	ND<12	ND<12
	10/27/2006	4,700	3,700	1,700	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	1/10/2007	4,400	4,400	1,300	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	2,700	3,300	ND<100	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	10/8/2007	2,500	2,200	ND<500	--	ND<12,000	ND<25	--	ND<25	ND<25	ND<25	ND<25
	1/9/2008	1,900	1,900	2,700	--	ND<250	ND<0.50	--	1.2	ND<0.50	ND<0.50	1.1
	4/4/2008	--	2,700	1,400	--	ND<6,200	ND<12	--	ND<12	ND<12	ND<12	ND<12
	7/3/2008	--	2,300	940	--	ND<250	ND<0.50	--	2.2	ND<0.50	ND<0.50	1.2
	10/3/2008	--	1,800	540	--	ND<1,200	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	1/22/2009	--	1,300	370	--	ND<1,200	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	4/13/2009	--	1,200	420	--	ND<5,000	ND<10	--	ND<10	ND<10	ND<10	ND<10
	7/23/2009	--	900	370	--	ND<2,500	ND<5.0	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	2/1/2010	--	720	--	--	--	--	--	--	--	--	--
	8/2/2010	--	770	--	--	--	ND<0.50	--	1.9	--	--	--
	11/1/2010	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	600	160	--	ND<250	ND<0.50	--	1.3	ND<0.50	ND<0.50	ND<0.50
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	620	220	--	ND<250	ND<0.50	--	1.6	ND<0.50	ND<0.50	ND<0.50
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	390	190	--	ND<250	ND<0.50	--	1.2	ND<0.50	ND<0.50	ND<0.50
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	300	160	--	ND<250	ND<0.50	--	1.5	ND<0.50	ND<0.50	ND<0.50
	2/8/2013	--	610	ND<50	ND<1,200	--	ND<2.5	--	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	7/10/2013	**--**	**450**	**44**	**ND<250**	**--**	**ND<0.50**	**--**	**1.2**	**ND<0.50**	**ND<0.50**	**ND<0.50**
MW-8	1/18/2008	ND<1.0	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 6

Historical Groundwater Analytical Results - Oxygenate Compounds
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)	TBA (µg/L)	ETHANOL (8260B) (µg/L)	ETHANOL (8015B) (µg/L)	EDB (µg/L)	EDB (504) (µg/L)	1,2-EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-8 cont.	4/4/2008	--	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/3/2008	--	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/3/2008	--	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	1/22/2009	--	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	4/13/2009	--	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/23/2009	--	ND<0.50	ND<10	--	ND<250	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/1/2010	--	ND<0.50	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--
	8/24/2010	--	--	--	--	--	--	--	--	--	--	--
MW-9A	**7/10/2013**	**--**	**4.4**	**1,700**	**ND<250**	**--**	**ND<0.50**	**--**	**16**	**ND<0.50**	**ND<0.50**	**ND<0.50**
MW-9B	**7/10/2013**	**--**	**18**	**ND<10**	**ND<250**	**--**	**ND<0.50**	**--**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**
MW-10A	**7/10/2013**	**--**	**310**	**1,500**	**ND<2,500**	**--**	**ND<5.0**	**--**	**ND<5.0**	**ND<5.0**	**ND<5.0**	**ND<5.0**
MW-10B	**7/10/2013**	**--**	**110**	**370**	**ND<250**	**--**	**ND<0.50**	**--**	**3.5**	**ND<0.50**	**ND<0.50**	**ND<0.50**
MW-11A	**7/10/2013**	**--**	**3,600**	**4,900**	**ND<6,200**	**--**	**ND<12**	**--**	**ND<12**	**ND<12**	**ND<12**	**ND<12**
MW-11B	**7/10/2013**	**--**	**490**	**1,500**	**ND<1,200**	**--**	**ND<2.5**	**--**	**57**	**ND<2.5**	**ND<2.5**	**ND<2.5**

NOTES:

Oxygenate compounds analyzed by U.S. EPA Method 8260B
ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not available
ID = Identification
MTBE = Methyl t-butyl ether
TBA = t-butyl alcohol
EDB = 1,2-dibromoethane

µg/L = Micrograms per liter
DIPE = Diisopropyl ether
ETBE = Ethyl t-butyl ether
TAME = t-amyl methyl ether
1,2-EDC = 1,2-dichloroethane

Table 7a
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaph-thylene (µg/L)	Bromo-dichloro-methane (µg/L)	Bromo-form (µg/L)	Bromo-methane (µg/L)	Carbon Tetra-chloride (µg/L)	Chloro-benzene (µg/L)	Chloro-ethane (µg/L)	Chloroform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	1,2-Dichloro-benzene (µg/L)	1,3-Dichloro-benzene (µg/L)
MW-1	7/20/1999	--	--	--	--	--	12	--	--	--	--	3.9	--
	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	1/7/2000	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	--	--	--	--	--	--	--	--	--	--	6.2	--
	7/14/2000	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2000	--	--	--	--	--	--	--	--	--	--	--	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	5.6	--	--	--	--	4.6	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	18	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	5.9	1.1	--	--	--	5.8	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	ND<120	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	ND<2	ND<10	ND<10	ND<20	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<2	ND<2
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	ND<0.50	ND<2.0	ND<1.0	ND<0.50	12	1.0	ND<0.50	ND<1.0	ND<0.50	9.0	ND<0.50
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	ND<50	ND<50	ND<100	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	ND<12	ND<12	ND<25	ND<12	ND<12	ND<12	ND<12	ND<12	ND<12	ND<12	ND<12
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7a
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaph-thylene (µg/L)	Bromo-dichloro-methane (µg/L)	Bromo-form (µg/L)	Bromo-methane (µg/L)	Carbon Tetra-chloride (µg/L)	Chloro-benzene (µg/L)	Chloro-ethane (µg/L)	Chloroform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	1,2-Dichloro-benzene (µg/L)	1,3-Dichloro-benzene (µg/L)
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--

Table 7a
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaph-thylene (µg/L)	Bromo-dichloro-methane (µg/L)	Bromo-form (µg/L)	Bromo-methane (µg/L)	Carbon Tetra-chloride (µg/L)	Chloro-benzene (µg/L)	Chloro-ethane (µg/L)	Chloroform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	1,2-Dichloro-benzene (µg/L)	1,3-Dichloro-benzene (µg/L)
MW-2 cont.	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7a
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaph-thylene (μg/L)	Bromo-dichloro-methane (μg/L)	Bromo-form (μg/L)	Bromo-methane (μg/L)	Carbon Tetra-chloride (μg/L)	Chloro-benzene (μg/L)	Chloro-ethane (μg/L)	Chloroform (μg/L)	Chloro-methane (μg/L)	Dibromo-chloro-methane (μg/L)	1,2-Dichloro-benzene (μg/L)	1,3-Dichloro-benzene (μg/L)
MW-3 cont.	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7a
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaph-thylene (µg/L)	Bromo-dichloro-methane (µg/L)	Bromo-form (µg/L)	Bromo-methane (µg/L)	Carbon Tetra-chloride (µg/L)	Chloro-benzene (µg/L)	Chloro-ethane (µg/L)	Chloroform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	1,2-Dichloro-benzene (µg/L)	1,3-Dichloro-benzene (µg/L)
MW-4 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	ND<0.50	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7a
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaph-thylene (µg/L)	Bromo-dichloro-methane (µg/L)	Bromo-form (µg/L)	Bromo-methane (µg/L)	Carbon Tetra-chloride (µg/L)	Chloro-benzene (µg/L)	Chloro-ethane (µg/L)	Chloroform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	1,2-Dichloro-benzene (µg/L)	1,3-Dichloro-benzene (µg/L)
MW-5 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7a
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaph-thylene (µg/L)	Bromo-dichloro-methane (µg/L)	Bromo-form (µg/L)	Bromo-methane (µg/L)	Carbon Tetra-chloride (µg/L)	Chloro-benzene (µg/L)	Chloro-ethane (µg/L)	Chloroform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	1,2-Dichloro-benzene (µg/L)	1,3-Dichloro-benzene (µg/L)
MW-6 cont.	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	ND<50	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
MW-7 cont.	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--

Table 7a
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaph-thylene (µg/L)	Bromo-dichloro-methane (µg/L)	Bromo-form (µg/L)	Bromo-methane (µg/L)	Carbon Tetra-chloride (µg/L)	Chloro-benzene (µg/L)	Chloro-ethane (µg/L)	Chloroform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	1,2-Dichloro-benzene (µg/L)	1,3-Dichloro-benzene (µg/L)
MW-7 cont.	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled

µg/L = Micrograms per liter

ID = Identification

Table 7b
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,4-Dichloro-benzene (µg/L)	Dichloro-difluoro-methane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	trans-1,2-Dichloro-ethene (µg/L)	1,2-Dichloro-propane (µg/L)	cis-1,3-Dichloro-propene (µg/L)	trans-1,3-Dichloro-propene (µg/L)	Hexa-chloro-butadiene (µg/L)	Methylene chloride (µg/L)	Naph-thalene (µg/L)
MW-1	7/20/1999	--	--	2.0	--	3.6	--	0.92	--	--	--	--	600
	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	534
	1/7/2000	--	--	--	--	--	--	--	--	--	--	--	1,050
	3/31/2000	--	--	--	--	--	--	--	--	--	--	--	140
	7/14/2000	--	--	--	--	--	--	--	--	--	--	--	690
	10/3/2000	--	--	--	--	--	--	--	--	--	--	--	361
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	400
	4/4/2001	--	--	--	--	3.4	--	--	--	--	--	--	490
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	740
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	1.3	--	--	--	1.3	--	--	--	--	--	--	910
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	ND<120	--	--	--	--	--	--	850
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	ND<2	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<2	ND<20	450
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	1.2	ND<1.0	1.3	ND<0.50	3.1	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<20	ND<5.0	250
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<1.0	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	--	ND<100	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	ND<12	ND<12	ND<12	ND<12	ND<12	ND<12	ND<12	ND<12	ND<12	--	ND<25	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7b
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,4-Dichloro-benzene (µg/L)	Dichloro-difluoro-methane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	trans-1,2-Dichloro-ethene (µg/L)	1,2-Dichloro-propane (µg/L)	cis-1,3-Dichloro-propene (µg/L)	trans-1,3-Dichloro-propene (µg/L)	Hexa-chloro-butadiene (µg/L)	Methylene chloride (µg/L)	Naph-thalene (µg/L)
MW-1 cont.	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7b
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,4-Dichloro-benzene (µg/L)	Dichloro-difluoro-methane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	trans-1,2-Dichloro-ethene (µg/L)	1,2-Dichloro-propane (µg/L)	cis-1,3-Dichloro-propene (µg/L)	trans-1,3-Dichloro-propene (µg/L)	Hexa-chloro-butadiene (µg/L)	Methylene chloride (µg/L)	Naph-thalene (µg/L)
MW-2 cont.	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7b
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,4-Dichloro-benzene (µg/L)	Dichloro-difluoro-methane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	trans-1,2-Dichloro-ethene (µg/L)	1,2-Dichloro-propane (µg/L)	cis-1,3-Dichloro-propene (µg/L)	trans-1,3-Dichloro-propene (µg/L)	Hexa-chloro-butadiene (µg/L)	Methylene chloride (µg/L)	Naph-thalene (µg/L)
MW-3 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7b
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,4-Dichloro-benzene (µg/L)	Dichloro-difluoro-methane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	trans-1,2-Dichloro-ethene (µg/L)	1,2-Dichloro-propane (µg/L)	cis-1,3-Dichloro-propene (µg/L)	trans-1,3-Dichloro-propene (µg/L)	Hexa-chloro-butadiene (µg/L)	Methylene chloride (µg/L)	Naph-thalene (µg/L)
MW-4 cont.	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	ND<0.50	--	--	--	--	--	--	ND<10
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7b
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,4-Dichloro-benzene (µg/L)	Dichloro-difluoro-methane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	trans-1,2-Dichloro-ethene (µg/L)	1,2-Dichloro-propane (µg/L)	cis-1,3-Dichloro-propene (µg/L)	trans-1,3-Dichloro-propene (µg/L)	Hexa-chloro-butadiene (µg/L)	Methylene chloride (µg/L)	Naph-thalene (µg/L)
MW-5 cont.	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7b
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,4-Dichloro-benzene (μg/L)	Dichloro-difluoro-methane (μg/L)	1,1-Dichloro-ethane (μg/L)	1,1-Dichloro-ethene (μg/L)	cis-1,2-Dichloro-ethene (μg/L)	trans-1,2-Dichloro-ethene (μg/L)	1,2-Dichloro-propane (μg/L)	cis-1,3-Dichloro-propene (μg/L)	trans-1,3-Dichloro-propene (μg/L)	Hexa-chloro-butadiene (μg/L)	Methylene chloride (μg/L)	Naph-thalene (μg/L)
MW-6 cont.	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	ND<50	--	--	--	--	--	--	ND<10
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7b
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,4-Dichloro-benzene (µg/L)	Dichloro-difluoro-methane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	trans-1,2-Dichloro-ethene (µg/L)	1,2-Dichloro-propane (µg/L)	cis-1,3-Dichloro-propene (µg/L)	trans-1,3-Dichloro-propene (µg/L)	Hexa-chloro-butadiene (µg/L)	Methylene chloride (µg/L)	Naph-thalene (µg/L)
MW-7 cont.	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:
ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled
µg/L = Micrograms per liter
ID = Identification

Table 7c
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	n-Propyl-benzene (µg/L)	1,1,2,2-Tetrachloro-ethane (µg/L)	Tetrachloro-ethene (PCE) (µg/L)	Trichloro-trifluoro-ethane (µg/L)	1,2,4-Trichloro-benzene (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	Trichloro-ethene (TCE) (µg/L)	Trichloro-fluoro-methane (µg/L)	1,2,4-Trimethyl-benzene (µg/L)	1,3,5-Trimethyl-benzene (µg/L)	Vinyl chloride (µg/L)
MW-1	7/20/1999	--	--	--	--	--	--	--	--	--	--	--	--
	9/28/1999	--	--	--	--	--	--	--	--	--	1240	318	--
	1/7/2000	371	--	--	--	--	--	--	--	--	2210	597	--
	3/31/2000	--	--	--	--	--	--	--	--	--	--	--	--
	7/14/2000	--	--	334	--	--	--	--	--	--	--	--	--
	10/3/2000	--	--	--	--	--	--	--	--	--	--	--	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	ND<0.60	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	ND<120	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	ND<10	ND<10	ND<10	ND<2	ND<10	ND<10	ND<10	ND<10	--	--	ND<10
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	ND<0.50	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	0.73	ND<1.0	--	--	ND<0.50
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	ND<0.50
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	ND<50	ND<50	ND<50	--	ND<50	ND<50	ND<50	ND<50	--	--	ND<50
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	ND<12	ND<12	ND<12	--	ND<12	ND<12	ND<12	ND<12	--	--	ND<12
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7c
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	n-Propyl-benzene (μg/L)	1,1,2,2-Tetrachloro-ethane (μg/L)	Tetrachloro-ethene (PCE) (μg/L)	Trichloro-trifluoro-ethane (μg/L)	1,2,4-Trichloro-benzene (μg/L)	1,1,1-Trichloro-ethane (μg/L)	1,1,2-Trichloro-ethane (μg/L)	Trichloro-ethene (TCE) (μg/L)	Trichloro-fluoro-methane (μg/L)	1,2,4-Trimethyl-benzene (μg/L)	1,3,5-Trimethyl-benzene (μg/L)	Vinyl chloride (μg/L)
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--

Table 7c
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	n-Propyl-benzene (µg/L)	1,1,2,2-Tetrachloro-ethane (µg/L)	Tetrachloro-ethene (PCE) (µg/L)	Trichloro-trifluoro-ethane (µg/L)	1,2,4-Trichloro-benzene (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	Trichloro-ethene (TCE) (µg/L)	Trichloro-fluoro-methane (µg/L)	1,2,4-Trimethyl-benzene (µg/L)	1,3,5-Trimethyl-benzene (µg/L)	Vinyl chloride (µg/L)
MW-2 cont.	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7c
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	n-Propylbenzene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (PCE) (µg/L)	Trichlorotrifluoroethane (µg/L)	1,2,4-Trichlorobenzene (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (TCE) (µg/L)	Trichlorofluoromethane (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Vinyl chloride (µg/L)
MW-3 cont.	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7c
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	n-Propyl-benzene (µg/L)	1,1,2,2-Tetrachloro-ethane (µg/L)	Tetrachloro-ethene (PCE) (µg/L)	Trichloro-trifluoro-ethane (µg/L)	1,2,4-Trichloro-benzene (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	Trichloro-ethene (TCE) (µg/L)	Trichloro-fluoro-methane (µg/L)	1,2,4-Trimethyl-benzene (µg/L)	1,3,5-Trimethyl-benzene (µg/L)	Vinyl chloride (µg/L)
MW-4 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	ND<0.50	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7c
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	n-Propyl-benzene (µg/L)	1,1,2,2-Tetrachloro-ethane (µg/L)	Tetrachloro-ethene (PCE) (µg/L)	Trichloro-trifluoro-ethane (µg/L)	1,2,4-Trichloro-benzene (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	Trichloro-ethene (TCE) (µg/L)	Trichloro-fluoro-methane (µg/L)	1,2,4-Trimethyl-benzene (µg/L)	1,3,5-Trimethyl-benzene (µg/L)	Vinyl chloride (µg/L)
MW-5 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7c
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	n-Propyl-benzene (µg/L)	1,1,2,2-Tetrachloro-ethane (µg/L)	Tetrachloro-ethene (PCE) (µg/L)	Trichloro-trifluoro-ethane (µg/L)	1,2,4-Trichloro-benzene (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	Trichloro-ethene (TCE) (µg/L)	Trichloro-fluoro-methane (µg/L)	1,2,4-Trimethyl-benzene (µg/L)	1,3,5-Trimethyl-benzene (µg/L)	Vinyl chloride (µg/L)
MW-6 cont.	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	ND<50	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--

Table 7c
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	n-Propyl-benzene (µg/L)	1,1,2,2-Tetrachloro-ethane (µg/L)	Tetrachloro-ethene (PCE) (µg/L)	Trichloro-trifluoro-ethane (µg/L)	1,2,4-Trichloro-benzene (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	Trichloro-ethene (TCE) (µg/L)	Trichloro-fluoro-methane (µg/L)	1,2,4-Trimethyl-benzene (µg/L)	1,3,5-Trimethyl-benzene (µg/L)	Vinyl chloride (µg/L)
MW-7 cont.	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled

µg/L = Micrograms per liter

ID = Identification

Table 7d
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
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Oakland, California

WELL ID	DATE	Acenaphthene (µg/L)	Acenaphthylene (svoc) (µg/L)	Anthracene (µg/L)	Benzo[a]anthracene (µg/L)	Benzo[a]pyrene (µg/L)	Benzo[b]fluoranthene (µg/L)	Benzo[g,h,I]perylene (µg/L)	Benzo[k]fluoranthene (µg/L)	Benzoic Acid (µg/L)	Benzyl Alcohol (µg/L)	Bis(2-chloroethoxy) methane (µg/L)	Bis(2-chloroethyl) ether (µg/L)
MW-1	7/20/1999	--	--	--	--	--	--	--	--	--	--	--	--
	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	1/7/2000	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	--	--	--	--	--	--	--	--	--	--	--	--
	7/14/2000	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2000	--	--	--	--	--	--	--	--	--	--	--	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	ND<2	--	ND<2	ND<2	ND<2	ND<2	ND<2	ND<2	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<50	ND<10	ND<10	ND<10
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<11	ND<2.2	ND<2.2	ND<2.2
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<100	ND<20	ND<20	ND<20
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7d
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acenaphthene (µg/L)	Acenaphthylene (svoc) (µg/L)	Anthracene (µg/L)	Benzo[a]anthracene (µg/L)	Benzo[a]pyrene (µg/L)	Benzo[b]fluoranthene (µg/L)	Benzo[g,h,I]perylene (µg/L)	Benzo[k]fluoranthene (µg/L)	Benzoic Acid (µg/L)	Benzyl Alcohol (µg/L)	Bis(2-chloroethoxy) methane (µg/L)	Bis(2-chloroethyl) ether (µg/L)
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--

Table 7d
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4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acena-phthene (µg/L)	Acena-phthylene (svoc) (µg/L)	Anthra-cene (µg/L)	Benzo[a]-anthracene (µg/L)	Benzo[a]-pyrene (µg/L)	Benzo[b]-fluor-anthene (µg/L)	Benzo-[g,h,l]-perylene (µg/L)	Benzo[k]-fluor-anthene (µg/L)	Benzoic Acid (µg/L)	Benzyl Alcohol (µg/L)	Bis(2-chloro-ethoxy) methane (µg/L)	Bis(2-chloro-ethyl) ether (µg/L)
MW-2 cont.	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7d
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acena-phthene (µg/L)	Acena-phthylene (svoc) (µg/L)	Anthra-cene (µg/L)	Benzo[a]-anthracene (µg/L)	Benzo[a]-pyrene (µg/L)	Benzo[b]-fluor-anthene (µg/L)	Benzo-[g,h,I]-perylene (µg/L)	Benzo[k]-fluor-anthene (µg/L)	Benzoic Acid (µg/L)	Benzyl Alcohol (µg/L)	Bis(2-chloro-ethoxy) methane (µg/L)	Bis(2-chloro-ethyl) ether (µg/L)
MW-3 cont.	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7d
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acena-phthene (µg/L)	Acena-phthylene (svoc) (µg/L)	Anthra-cene (µg/L)	Benzo[a]-anthracene (µg/L)	Benzo[a]-pyrene (µg/L)	Benzo[b]-fluor-anthene (µg/L)	Benzo-[g,h,I]-perylene (µg/L)	Benzo[k]-fluor-anthene (µg/L)	Benzoic Acid (µg/L)	Benzyl Alcohol (µg/L)	Bis(2-chloro-ethoxy) methane (µg/L)	Bis(2-chloro-ethyl) ether (µg/L)
MW-4 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7d
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acena-phthene (µg/L)	Acena-phthylene (svoc) (µg/L)	Anthra-cene (µg/L)	Benzo[a]-anthracene (µg/L)	Benzo[a]-pyrene (µg/L)	Benzo[b]-fluor-anthene (µg/L)	Benzo-[g,h,I]-perylene (µg/L)	Benzo[k]-fluor-anthene (µg/L)	Benzoic Acid (µg/L)	Benzyl Alcohol (µg/L)	Bis(2-chloro-ethoxy) methane (µg/L)	Bis(2-chloro-ethyl) ether (µg/L)
MW-5 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7d
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acena-phthene (µg/L)	Acena-phthylene (svoc) (µg/L)	Anthra-cene (µg/L)	Benzo[a]-anthracene (µg/L)	Benzo[a]-pyrene (µg/L)	Benzo[b]-fluor-anthene (µg/L)	Benzo-[g,h,I]-perylene (µg/L)	Benzo[k]-fluor-anthene (µg/L)	Benzoic Acid (µg/L)	Benzyl Alcohol (µg/L)	Bis(2-chloro-ethoxy) methane (µg/L)	Bis(2-chloro-ethyl) ether (µg/L)
MW-6 cont.	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
MW-7 cont.	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--

Table 7d
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Acena-phthene (µg/L)	Acena-phthylene (svoc) (µg/L)	Anthra-cene (µg/L)	Benzo[a]-anthracene (µg/L)	Benzo[a]-pyrene (µg/L)	Benzo[b]-fluor-anthene (µg/L)	Benzo-[g,h,I]-perylene (µg/L)	Benzo[k]-fluor-anthene (µg/L)	Benzoic Acid (µg/L)	Benzyl Alcohol (µg/L)	Bis(2-chloro-ethoxy) methane (µg/L)	Bis(2-chloro-ethyl) ether (µg/L)
MW-7 cont.	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled

µg/L = Micrograms per liter

ID = Identification

Table 7e
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Bis(2-chloro-isopropyl)-ether (µg/L)	Bis(2-ethyl-hexyl) phthalate (µg/L)	4-Bromo-pheny phe-nyl ether (µg/L)	Butyl-benzyl phthalate (µg/L)	4-Chloro-3-methyl-phenol (µg/L)	4-Chloro-aniline (µg/L)	2-Chloro-naphtha-lene (µg/L)	2-Chloro-phenol (µg/L)	4-Chloro-phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Dibenzo-[a,h]-anthracene (µg/L)	Dibenzo-furan (µg/L)
MW-1	7/20/1999	--	--	--	--	--	--	--	--	--	--	--	--
	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	1/7/2000	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	--	10	--	--	--	--	--	--	--	--	--	--
	7/14/2000	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2000	--	51.6	--	--	--	--	--	--	--	--	--	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	55	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	400	--	--	--	--	--	--	--	--	--	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	120	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	70	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	ND<5	--	--	--	--	--	--	--	ND<2	ND<3	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	ND<10	33	ND<10	ND<10	ND<25	ND<10	ND<10	ND<10	ND<10	ND<10	ND<15	ND<10
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	ND<2.2	ND<4.4	ND<2.2	ND<2.2	ND<5.5	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<3.3	ND<2.2
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	ND<20	ND<40	ND<20	ND<20	ND<50	ND<20	ND<20	ND<20	ND<20	ND<20	ND<30	ND<20
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7e
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Bis(2-chloro-isopropyl)-ether (µg/L)	Bis(2-ethyl-hexyl) phthalate (µg/L)	4-Bromo-pheny phe-nyl ether (µg/L)	Butyl-benzyl phthalate (µg/L)	4-Chloro-3-methyl-phenol (µg/L)	4-Chloro-aniline (µg/L)	2-Chloro-naphtha-lene (µg/L)	2-Chloro-phenol (µg/L)	4-Chloro-phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Dibenzo-[a,h]-anthracene (µg/L)	Dibenzo-furan (µg/L)
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--

Table 7e
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Bis(2-chloro-isopropyl)-ether (µg/L)	Bis(2-ethyl-hexyl) phthalate (µg/L)	4-Bromo-pheny phenyl ether (µg/L)	Butyl-benzyl phthalate (µg/L)	4-Chloro-3-methyl-phenol (µg/L)	4-Chloro-aniline (µg/L)	2-Chloro-naphthalene (µg/L)	2-Chloro-phenol (µg/L)	4-Chloro-phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Dibenzo-[a,h]-anthracene (µg/L)	Dibenzo-furan (µg/L)
MW-2 cont.	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7e
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76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Bis(2-chloro-isopropyl)-ether (µg/L)	Bis(2-ethyl-hexyl) phthalate (µg/L)	4-Bromo-pheny phenyl ether (µg/L)	Butyl-benzyl phthalate (µg/L)	4-Chloro-3-methyl-phenol (µg/L)	4-Chloro-aniline (µg/L)	2-Chloro-naphthalene (µg/L)	2-Chloro-phenol (µg/L)	4-Chloro-phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Dibenzo-[a,h]-anthracene (µg/L)	Dibenzo-furan (µg/L)
MW-3 cont.	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

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Oakland, California

WELL ID	DATE	Bis(2-chloro-isopropyl)-ether (µg/L)	Bis(2-ethyl-hexyl) phthalate (µg/L)	4-Bromo-pheny phe-nyl ether (µg/L)	Butyl-benzyl phthalate (µg/L)	4-Chloro-3-methyl-phenol (µg/L)	4-Chloro-aniline (µg/L)	2-Chloro-naphtha-lene (µg/L)	2-Chloro-phenol (µg/L)	4-Chloro-phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Dibenzo-[a,h]-anthracene (µg/L)	Dibenzo-furan (µg/L)
MW-4 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	ND<5.0	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

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WELL ID	DATE	Bis(2-chloro-isopropyl)-ether (µg/L)	Bis(2-ethyl-hexyl) phthalate (µg/L)	4-Bromo-pheny phe-nyl ether (µg/L)	Butyl-benzyl phthalate (µg/L)	4-Chloro-3-methyl-phenol (µg/L)	4-Chloro-aniline (µg/L)	2-Chloro-naphtha-lene (µg/L)	2-Chloro-phenol (µg/L)	4-Chloro-phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Dibenzo-[a,h]-anthracene (µg/L)	Dibenzo-furan (µg/L)
MW-5 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7e
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Bis(2-chloroisopropyl)-ether (µg/L)	Bis(2-ethylhexyl) phthalate (µg/L)	4-Bromo-pheny phenyl ether (µg/L)	Butylbenzyl phthalate (µg/L)	4-Chloro-3-methylphenol (µg/L)	4-Chloroaniline (µg/L)	2-Chloronaphthalene (µg/L)	2-Chlorophenol (µg/L)	4-Chlorophenyl phenyl ether (µg/L)	Chrysene (µg/L)	Dibenzo[a,h]anthracene (µg/L)	Dibenzofuran (µg/L)
MW-6 cont.	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	ND<5.0	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--

Table 7e
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Bis(2-chloro-isopropyl)-ether (µg/L)	Bis(2-ethyl-hexyl) phthalate (µg/L)	4-Bromo-pheny phe-nyl ether (µg/L)	Butyl-benzyl phthalate (µg/L)	4-Chloro-3-methyl-phenol (µg/L)	4-Chloro-aniline (µg/L)	2-Chloro-naphtha-lene (µg/L)	2-Chloro-phenol (µg/L)	4-Chloro-phenyl phenyl ether (µg/L)	Chrysene (µg/L)	Dibenzo-[a,h]-anthracene (µg/L)	Dibenzo-furan (µg/L)
MW-7 cont.	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled
µg/L = Micrograms per liter
ID = Identification

Table 7f
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,2-Dichloro-benzene (svoc) (μg/L)	1,3-Dichloro-benzene (svoc) (μg/L)	1,4-Dichloro-benzene (svoc) (μg/L)	3,3-Dichloro-benzidine (μg/L)	2,4-Dichloro-phenol (μg/L)	Diethyl phthalate (μg/L)	2,4-Dimethyl-phenol (μg/L)	Dimethyl phthalate (μg/L)	Di-n-butyl phthalate (μg/L)	2,4-Dinitro-phenol (μg/L)	2,4-Dinitro-toluene (μg/L)	2,6-Dinitro-toluene (μg/L)
MW-1	7/20/1999	--	--	--	--	--	--	--	--	--	--	--	--
	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	1/7/2000	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	--	--	--	--	--	--	--	--	--	--	--	--
	7/14/2000	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2000	--	--	--	--	--	--	--	--	--	--	--	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	ND<10	ND<10	ND<10	ND<50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<50	ND<10	ND<10
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	ND<2.2	ND<2.2	ND<2.2	ND<11	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<11	ND<2.2	ND<2.2
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	ND<20	ND<20	ND<20	ND<100	ND<20	ND<20	ND<20	ND<20	ND<20	ND<100	ND<20	ND<20
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7f
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,2-Dichloro-benzene (svoc) (µg/L)	1,3-Dichloro-benzene (svoc) (µg/L)	1,4-Dichloro-benzene (svoc) (µg/L)	3,3-Dichloro-benzidine (µg/L)	2,4-Dichloro-phenol (µg/L)	Diethyl phthalate (µg/L)	2,4-Dimethyl-phenol (µg/L)	Dimethyl phthalate (µg/L)	Di-n-butyl phthalate (µg/L)	2,4-Dinitro-phenol (µg/L)	2,4-Dinitro-toluene (µg/L)	2,6-Dinitro-toluene (µg/L)
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--

Table 7f
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,2-Dichloro-benzene (svoc) (µg/L)	1,3-Dichloro-benzene (svoc) (µg/L)	1,4-Dichloro-benzene (svoc) (µg/L)	3,3-Dichloro-benzidine (µg/L)	2,4-Dichloro-phenol (µg/L)	Diethyl phthalate (µg/L)	2,4-Dimethyl-phenol (µg/L)	Dimethyl phthalate (µg/L)	Di-n-butyl phthalate (µg/L)	2,4-Dinitro-phenol (µg/L)	2,4-Dinitro-toluene (µg/L)	2,6-Dinitro-toluene (µg/L)
MW-2 cont.	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

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4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,2-Dichloro-benzene (svoc) (µg/L)	1,3-Dichloro-benzene (svoc) (µg/L)	1,4-Dichloro-benzene (svoc) (µg/L)	3,3-Dichloro-benzidine (µg/L)	2,4-Dichloro-phenol (µg/L)	Diethyl phthalate (µg/L)	2,4-Dimethyl-phenol (µg/L)	Dimethyl phthalate (µg/L)	Di-n-butyl phthalate (µg/L)	2,4-Dinitro-phenol (µg/L)	2,4-Dinitro-toluene (µg/L)	2,6-Dinitro-toluene (µg/L)
MW-3 cont.	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7f
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,2-Dichloro-benzene (svoc) (μg/L)	1,3-Dichloro-benzene (svoc) (μg/L)	1,4-Dichloro-benzene (svoc) (μg/L)	3,3-Dichloro-benzidine (μg/L)	2,4-Dichloro-phenol (μg/L)	Diethyl phthalate (μg/L)	2,4-Dimethyl-phenol (μg/L)	Dimethyl phthalate (μg/L)	Di-n-butyl phthalate (μg/L)	2,4-Dinitro-phenol (μg/L)	2,4-Dinitro-toluene (μg/L)	2,6-Dinitro-toluene (μg/L)
MW-4 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7f
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,2-Dichloro-benzene (svoc) (µg/L)	1,3-Dichloro-benzene (svoc) (µg/L)	1,4-Dichloro-benzene (svoc) (µg/L)	3,3-Dichloro-benzidine (µg/L)	2,4-Dichloro-phenol (µg/L)	Diethyl phthalate (µg/L)	2,4-Dimethyl-phenol (µg/L)	Dimethyl phthalate (µg/L)	Di-n-butyl phthalate (µg/L)	2,4-Dinitro-phenol (µg/L)	2,4-Dinitro-toluene (µg/L)	2,6-Dinitro-toluene (µg/L)
MW-5 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7f
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,2-Dichloro-benzene (svoc) (µg/L)	1,3-Dichloro-benzene (svoc) (µg/L)	1,4-Dichloro-benzene (svoc) (µg/L)	3,3-Dichloro-benzidine (µg/L)	2,4-Dichloro-phenol (µg/L)	Diethyl phthalate (µg/L)	2,4-Dimethyl-phenol (µg/L)	Dimethyl phthalate (µg/L)	Di-n-butyl phthalate (µg/L)	2,4-Dinitro-phenol (µg/L)	2,4-Dinitro-toluene (µg/L)	2,6-Dinitro-toluene (µg/L)
MW-6 cont.	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--

Table 7f
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	1,2-Dichloro-benzene (svoc) (µg/L)	1,3-Dichloro-benzene (svoc) (µg/L)	1,4-Dichloro-benzene (svoc) (µg/L)	3,3-Dichloro-benzidine (µg/L)	2,4-Dichloro-phenol (µg/L)	Diethyl phthalate (µg/L)	2,4-Dimethyl-phenol (µg/L)	Dimethyl phthalate (µg/L)	Di-n-butyl phthalate (µg/L)	2,4-Dinitro-phenol (µg/L)	2,4-Dinitro-toluene (µg/L)	2,6-Dinitro-toluene (µg/L)
MW-7 cont.	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled

µg/L = Micrograms per liter

ID = Identification

Table 7g
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Di-n-octyl phthalate (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Hexachlorobenzene (µg/L)	Hexachlorobutadiene (svoc) (µg/L)	Hexachloro cyclopentadiene (µg/L)	Hexachloro-ethane (µg/L)	Indeno-[1,2,3-c,d] pyrene (µg/L)	Isophorone (µg/L)	2-Methyl-4,6-dinitrophenol (µg/L)	2-Methylnaphthalene (µg/L)	2-Methylphenol (µg/L)
MW-1	7/20/1999	--	--	--	--	--	--	--	--	--	--	240	--
	9/28/1999	--	--	--	--	--	--	--	--	--	--	87.4	26.4
	1/7/2000	--	--	--	--	--	--	--	--	--	--	315	--
	3/31/2000	--	--	--	--	--	--	--	--	--	--	73	31
	7/14/2000	--	--	--	--	--	--	--	--	--	--	300	--
	10/3/2000	--	--	--	--	--	--	--	--	--	--	98.1	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	180	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	78	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	290	47
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	420	13
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	260	ND<5.0
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	ND<2	ND<2	--	--	--	--	ND<2	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	ND<10	ND<10	ND<10	ND<10	ND<5.0	ND<10	ND<10	ND<10	ND<10	--	280	ND<10
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<1.1	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<11	230	29
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<100	270	ND<20
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7g
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Di-n-octyl phthalate (µg/L)	Fluoran-thene (µg/L)	Fluorene (µg/L)	Hexa-chloro-benzene (µg/L)	Hexachloro-butadiene (svoc) (µg/L)	Hexachloro cyclopenta-diene (µg/L)	Hexachloro -ethane (µg/L)	Indeno-[1,2,3-c,d] pyrene (µg/L)	Isophorone (µg/L)	2-Methyl-4,6-dinitro-phenol (µg/L)	2-Methyl-naphtha-lene (µg/L)	2-Methyl-phenol (µg/L)
MW-1 cont.	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7g
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Di-n-octyl phthalate (µg/L)	Fluoran-thene (µg/L)	Fluorene (µg/L)	Hexa-chloro-benzene (µg/L)	Hexachloro-butadiene (svoc) (µg/L)	Hexachloro cyclopenta-diene (µg/L)	Hexachloro -ethane (µg/L)	Indeno-[1,2,3-c,d] pyrene (µg/L)	Isophorone (µg/L)	2-Methyl-4,6-dinitro-phenol (µg/L)	2-Methyl-naphtha-lene (µg/L)	2-Methyl-phenol (µg/L)
MW-2 cont.	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7g
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Di-n-octyl phthalate (µg/L)	Fluoran-thene (µg/L)	Fluorene (µg/L)	Hexa-chloro-benzene (µg/L)	Hexachloro-butadiene (svoc) (µg/L)	Hexachloro cyclopenta-diene (µg/L)	Hexachloro -ethane (µg/L)	Indeno-[1,2,3-c,d] pyrene (µg/L)	Isophorone (µg/L)	2-Methyl-4,6-dinitro-phenol (µg/L)	2-Methyl-naphtha-lene (µg/L)	2-Methyl-phenol (µg/L)
MW-3 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7g
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Di-n-octyl phthalate (µg/L)	Fluoran-thene (µg/L)	Fluorene (µg/L)	Hexa-chloro-benzene (µg/L)	Hexachloro-butadiene (svoc) (µg/L)	Hexachloro cyclopenta-diene (µg/L)	Hexachloro -ethane (µg/L)	Indeno-[1,2,3-c,d] pyrene (µg/L)	Isophorone (µg/L)	2-Methyl-4,6-dinitro-phenol (µg/L)	2-Methyl-naphtha-lene (µg/L)	2-Methyl-phenol (µg/L)
MW-4 cont.	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	ND<5.0	ND<5.0
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7g
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Di-n-octyl phthalate (μg/L)	Fluoran-thene (μg/L)	Fluorene (μg/L)	Hexa-chloro-benzene (μg/L)	Hexachloro-butadiene (svoc) (μg/L)	Hexachloro cyclopenta-diene (μg/L)	Hexachloro -ethane (μg/L)	Indeno-[1,2,3-c,d] pyrene (μg/L)	Isophorone (μg/L)	2-Methyl-4,6-dinitro-phenol (μg/L)	2-Methyl-naphtha-lene (μg/L)	2-Methyl-phenol (μg/L)
MW-5 cont.	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7g
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
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WELL ID	DATE	Di-n-octyl phthalate (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Hexachlorobenzene (µg/L)	Hexachlorobutadiene (svoc) (µg/L)	Hexachloro cyclopentadiene (µg/L)	Hexachloro -ethane (µg/L)	Indeno-[1,2,3-c,d] pyrene (µg/L)	Isophorone (µg/L)	2-Methyl-4,6-dinitrophenol (µg/L)	2-Methylnaphthalene (µg/L)	2-Methylphenol (µg/L)
MW-6 cont.	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	ND<5.0	ND<5.0
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7g
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Di-n-octyl phthalate (μg/L)	Fluoran-thene (μg/L)	Fluorene (μg/L)	Hexa-chloro-benzene (μg/L)	Hexachloro-butadiene (svoc) (μg/L)	Hexachloro cyclopenta-diene (μg/L)	Hexachloro -ethane (μg/L)	Indeno-[1,2,3-c,d] pyrene (μg/L)	Isophorone (μg/L)	2-Methyl-4,6-dinitro-phenol (μg/L)	2-Methyl-naphtha-lene (μg/L)	2-Methyl-phenol (μg/L)
MW-7 cont.	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled
μg/L = Micrograms per liter
ID = Identification

Table 7h
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	4-Methyl-phenol (µg/L)	Naphtha-lene (svoc) (µg/L)	2-Nitro-aniline (µg/L)	3-Nitro-aniline (µg/L)	4-Nitro-aniline (µg/L)	Nitro-benzene (µg/L)	2-Nitro-phenol (µg/L)	4-Nitro-phenol (µg/L)	N-nitrosodi-n-propyl-amine (µg/L)	N-Nitro-sodiphenyl-amine (µg/L)	Penta-chloro-phenol (µg/L)	Phen-anthrene (µg/L)
MW-1	7/20/1999	27	--	--	--	--	--	--	--	--	--	--	--
	9/28/1999	35.6	--	--	--	--	--	--	--	--	--	--	--
	1/7/2000	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	18	--	--	--	--	--	--	--	--	--	--	--
	7/14/2000	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2000	28.9	--	--	--	--	--	--	--	--	--	--	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	25	--	--	--	--	--	--	--	--	--	--	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	25	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	22	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	ND<2
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	660	ND<10	ND<10	ND<25	ND<10	ND<10	ND<10	ND<10	ND<10	ND<50	ND<10
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	770	ND<2.2	ND<2.2	ND<5.5	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<11	ND<2.2
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	750	ND<20	ND<20	ND<50	ND<20	ND<20	ND<20	ND<20	ND<20	ND<100	ND<20
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7h
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	4-Methyl-phenol (µg/L)	Naphtha-lene (svoc) (µg/L)	2-Nitro-aniline (µg/L)	3-Nitro-aniline (µg/L)	4-Nitro-aniline (µg/L)	Nitro-benzene (µg/L)	2-Nitro-phenol (µg/L)	4-Nitro-phenol (µg/L)	N-nitrosodi-n-propyl-amine (µg/L)	N-Nitro-sodiphenyl-amine (µg/L)	Penta-chloro-phenol (µg/L)	Phen-anthrene (µg/L)
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--

Table 7h
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	4-Methyl-phenol (µg/L)	Naphtha-lene (svoc) (µg/L)	2-Nitro-aniline (µg/L)	3-Nitro-aniline (µg/L)	4-Nitro-aniline (µg/L)	Nitro-benzene (µg/L)	2-Nitro-phenol (µg/L)	4-Nitro-phenol (µg/L)	N-nitrosodi-n-propyl-amine (µg/L)	N-Nitro-sodiphenyl-amine (µg/L)	Penta-chloro-phenol (µg/L)	Phen-anthrene (µg/L)
MW-2 cont.	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7h
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	4-Methyl-phenol (µg/L)	Naphtha-lene (svoc) (µg/L)	2-Nitro-aniline (µg/L)	3-Nitro-aniline (µg/L)	4-Nitro-aniline (µg/L)	Nitro-benzene (µg/L)	2-Nitro-phenol (µg/L)	4-Nitro-phenol (µg/L)	N-nitrosodi-n-propyl-amine (µg/L)	N-Nitro-sodiphenyl-amine (µg/L)	Penta-chloro-phenol (µg/L)	Phen-anthrene (µg/L)
MW-3 cont.	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7h
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	4-Methylphenol (µg/L)	Naphthalene (svoc) (µg/L)	2-Nitroaniline (µg/L)	3-Nitroaniline (µg/L)	4-Nitroaniline (µg/L)	Nitrobenzene (µg/L)	2-Nitrophenol (µg/L)	4-Nitrophenol (µg/L)	N-nitrosodi-n-propylamine (µg/L)	N-Nitrosodiphenylamine (µg/L)	Pentachlorophenol (µg/L)	Phenanthrene (µg/L)
MW-4 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	ND<5.0	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7h
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	4-Methyl-phenol (µg/L)	Naphtha-lene (svoc) (µg/L)	2-Nitro-aniline (µg/L)	3-Nitro-aniline (µg/L)	4-Nitro-aniline (µg/L)	Nitro-benzene (µg/L)	2-Nitro-phenol (µg/L)	4-Nitro-phenol (µg/L)	N-nitrosodi-n-propyl-amine (µg/L)	N-Nitro-sodiphenyl-amine (µg/L)	Penta-chloro-phenol (µg/L)	Phen-anthrene (µg/L)
MW-5 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7h
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	4-Methyl-phenol (µg/L)	Naphtha-lene (svoc) (µg/L)	2-Nitro-aniline (µg/L)	3-Nitro-aniline (µg/L)	4-Nitro-aniline (µg/L)	Nitro-benzene (µg/L)	2-Nitro-phenol (µg/L)	4-Nitro-phenol (µg/L)	N-nitrosodi-n-propyl-amine (µg/L)	N-Nitro-sodiphenyl-amine (µg/L)	Penta-chloro-phenol (µg/L)	Phen-anthrene (µg/L)
MW-6 cont.	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	ND<5.0	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--

Table 7h
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	4-Methyl-phenol (µg/L)	Naphtha-lene (svoc) (µg/L)	2-Nitro-aniline (µg/L)	3-Nitro-aniline (µg/L)	4-Nitro-aniline (µg/L)	Nitro-benzene (µg/L)	2-Nitro-phenol (µg/L)	4-Nitro-phenol (µg/L)	N-nitrosodi-n-propyl-amine (µg/L)	N-Nitro-sodiphenyl-amine (µg/L)	Penta-chloro-phenol (µg/L)	Phen-anthrene (µg/L)
MW-7 cont.	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	--	--	--	--	--	--	--
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled

µg/L = Micrograms per liter

ID = Identification

Table 7i
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
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Oakland, California

WELL ID	DATE	Phenol (µg/L)	Pyrene (µg/L)	1,2,4-Trichloro-benzene (svoc) (µg/L)	2,4,6-Trichloro-phenol (µg/L)	2,4,5-Trichloro-phenol (µg/L)	Carbon (organic, total) (µg/L)	Chromium VI (µg/L)	Chromium (total) (µg/L)	Iron Ferrous (µg/L)	Manganese (dissolved) (µg/L)	Manganese (total) (µg/L)	Molyb-denum (total) (µg/L)
MW-1	7/20/1999	--	--	--	--	--	--	--	--	--	--	--	--
	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	1/7/2000	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	--	--	--	--	--	--	--	--	--	--	--	--
	7/14/2000	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2000	--	--	--	--	--	--	--	--	--	--	--	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	ND<2	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	ND<10	ND<10	ND<10	ND<25	ND<25	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	ND<2.2	ND<2.2	ND<2.2	ND<5.5	ND<5.5	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	ND<20	ND<20	ND<20	ND<50	ND<50	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	26	ND<2.0	ND<3.0	280	160	200	8.6
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7i
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Phenol (µg/L)	Pyrene (µg/L)	1,2,4-Trichloro-benzene (svoc) (µg/L)	2,4,6-Trichloro-phenol (µg/L)	2,4,5-Trichloro-phenol (µg/L)	Carbon (organic, total) (µg/L)	Chromium VI (µg/L)	Chromium (total) (µg/L)	Iron Ferrous (µg/L)	Manganese (dissolved) (µg/L)	Manganese (total) (µg/L)	Molyb-denum (total) (µg/L)
MW-1 cont.	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7i
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Phenol (µg/L)	Pyrene (µg/L)	1,2,4-Trichloro-benzene (svoc) (µg/L)	2,4,6-Trichloro-phenol (µg/L)	2,4,5-Trichloro-phenol (µg/L)	Carbon (organic, total) (µg/L)	Chromium VI (µg/L)	Chromium (total) (µg/L)	Iron Ferrous (µg/L)	Manganese (dissolved) (µg/L)	Manganese (total) (µg/L)	Molyb-denum (total) (µg/L)
MW-2 cont.	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	4.4	ND<2.0	9.3	740	110	230	1.1
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7i
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Phenol (µg/L)	Pyrene (µg/L)	1,2,4-Trichloro-benzene (svoc) (µg/L)	2,4,6-Trichloro-phenol (µg/L)	2,4,5-Trichloro-phenol (µg/L)	Carbon (organic, total) (µg/L)	Chromium VI (µg/L)	Chromium (total) (µg/L)	Iron Ferrous (µg/L)	Manganese (dissolved) (µg/L)	Manganese (total) (µg/L)	Molyb-denum (total) (µg/L)
MW-3 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	3.0	ND<2.0	14	1,800	2,800	2,500	4.7
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7i
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Phenol (µg/L)	Pyrene (µg/L)	1,2,4-Trichloro-benzene (svoc) (µg/L)	2,4,6-Trichloro-phenol (µg/L)	2,4,5-Trichloro-phenol (µg/L)	Carbon (organic, total) (µg/L)	Chromium VI (µg/L)	Chromium (total) (µg/L)	Iron Ferrous (µg/L)	Manganese (dissolved) (µg/L)	Manganese (total) (µg/L)	Molyb-denum (total) (µg/L)
MW-4 cont.	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	1.9	ND<2.0	8.1	1,500	2,000	3,500	7.2
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7i
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Phenol (µg/L)	Pyrene (µg/L)	1,2,4-Trichloro-benzene (svoc) (µg/L)	2,4,6-Trichloro-phenol (µg/L)	2,4,5-Trichloro-phenol (µg/L)	Carbon (organic, total) (µg/L)	Chromium VI (µg/L)	Chromium (total) (µg/L)	Iron Ferrous (µg/L)	Manganese (dissolved) (µg/L)	Manganese (total) (µg/L)	Molyb-denum (total) (µg/L)
MW-5 cont.	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	1.4	ND<2.0	19	ND<500	1.4	650	1.2
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--

Table 7i
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Phenol (µg/L)	Pyrene (µg/L)	1,2,4-Trichloro-benzene (svoc) (µg/L)	2,4,6-Trichloro-phenol (µg/L)	2,4,5-Trichloro-phenol (µg/L)	Carbon (organic, total) (µg/L)	Chromium VI (µg/L)	Chromium (total) (µg/L)	Iron Ferrous (µg/L)	Manganese (dissolved) (µg/L)	Manganese (total) (µg/L)	Molyb-denum (total) (µg/L)
MW-6 cont.	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	1.4	ND<2.0	32	ND<500	14	530	2.6
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	2.3	ND<2.0	100	3,200	960	2,300	1.1
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7i
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Phenol (µg/L)	Pyrene (µg/L)	1,2,4-Trichloro-benzene (svoc) (µg/L)	2,4,6-Trichloro-phenol (µg/L)	2,4,5-Trichloro-phenol (µg/L)	Carbon (organic, total) (µg/L)	Chromium VI (µg/L)	Chromium (total) (µg/L)	Iron Ferrous (µg/L)	Manganese (dissolved) (µg/L)	Manganese (total) (µg/L)	Molyb-denum (total) (µg/L)
MW-7 cont.	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	--	--	--	--	--	0.48	ND<2.0	3.3	130	ND<1.0	47	1.2
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:
ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled
µg/L = Micrograms per liter
ID = Identification

Table 7j
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Molyb-denum (dissolved) (µg/L)	Selenium (total) (µg/L)	Selenium (dissolved) (µg/L)	Vanadium (total) (µg/L)	Vanadium (dissolved) (µg/L)	Bromate (µg/L)	Bromide (µg/L)	Chloride (µg/L)	Nitrogen as Nitrate (µg/L)	Sulfate (µg/L)	Alkalinity (total) (µg/L)	Specific Con-ductance (µg/L)
MW-1	7/20/1999	--	--	--	--	--	--	--	--	--	--	--	--
	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	1/7/2000	--	--	--	--	--	--	--	--	--	--	--	--
	3/31/2000	--	--	--	--	--	--	--	--	--	--	--	--
	7/14/2000	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2000	--	--	--	--	--	--	--	--	--	--	--	--
	1/3/2001	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	10/5/2001	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/2002	--	--	--	--	--	--	--	--	--	--	--	--
	4/25/2002	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	7.5	ND<2.0	ND<2.0	ND<3.0	ND<3.0	ND<25	0.77	23	ND<0.44	ND<1.0	390	750
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--

Table 7j
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Molybdenum (dissolved) (µg/L)	Selenium (total) (µg/L)	Selenium (dissolved) (µg/L)	Vanadium (total) (µg/L)	Vanadium (dissolved) (µg/L)	Bromate (µg/L)	Bromide (µg/L)	Chloride (µg/L)	Nitrogen as Nitrate (µg/L)	Sulfate (µg/L)	Alkalinity (total) (µg/L)	Specific Conductance (µg/L)
MW-1B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	ND<1.0	ND<2.0	ND<2.0	31	12	ND<25	0.40	25	0.85	14	350	688

Table 7j
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Molyb-denum (dissolved) (µg/L)	Selenium (total) (µg/L)	Selenium (dissolved) (µg/L)	Vanadium (total) (µg/L)	Vanadium (dissolved) (µg/L)	Bromate (µg/L)	Bromide (µg/L)	Chloride (µg/L)	Nitrogen as Nitrate (µg/L)	Sulfate (µg/L)	Alkalinity (total) (µg/L)	Specific Con-ductance (µg/L)
MW-2	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7j
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Molyb-denum (dissolved) (µg/L)	Selenium (total) (µg/L)	Selenium (dissolved) (µg/L)	Vanadium (total) (µg/L)	Vanadium (dissolved) (µg/L)	Bromate (µg/L)	Bromide (µg/L)	Chloride (µg/L)	Nitrogen as Nitrate (µg/L)	Sulfate (µg/L)	Alkalinity (total) (µg/L)	Specific Con-ductance (µg/L)
MW-3	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	3.7	ND<2.0	ND<2.0	22	ND<3.0	ND<25	0.41	30	2.9	16	360	681
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	9/28/1999	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7j
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76 Service Station No. 1156 (351645)
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Oakland, California

WELL ID	DATE	Molyb-denum (dissolved) (µg/L)	Selenium (total) (µg/L)	Selenium (dissolved) (µg/L)	Vanadium (total) (µg/L)	Vanadium (dissolved) (µg/L)	Bromate (µg/L)	Bromide (µg/L)	Chloride (µg/L)	Nitrogen as Nitrate (µg/L)	Sulfate (µg/L)	Alkalinity (total) (µg/L)	Specific Con-ductance (µg/L)
MW-4	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	6.4	ND<2.0	ND<2.0	13	3.4	ND<25	0.40	37	4.4	23	320	704
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	11/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--

Table 7j
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Molyb-denum (dissolved) (µg/L)	Selenium (total) (µg/L)	Selenium (dissolved) (µg/L)	Vanadium (total) (µg/L)	Vanadium (dissolved) (µg/L)	Bromate (µg/L)	Bromide (µg/L)	Chloride (µg/L)	Nitrogen as Nitrate (µg/L)	Sulfate (µg/L)	Alkalinity (total) (µg/L)	Specific Con-ductance (µg/L)
MW-5 cont.	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	1.5	ND<2.0	ND<2.0	59	6.1	ND<25	0.71	68	5.7	26	350	860
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--

Table 7j
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Molyb-denum (dissolved) (µg/L)	Selenium (total) (µg/L)	Selenium (dissolved) (µg/L)	Vanadium (total) (µg/L)	Vanadium (dissolved) (µg/L)	Bromate (µg/L)	Bromide (µg/L)	Chloride (µg/L)	Nitrogen as Nitrate (µg/L)	Sulfate (µg/L)	Alkalinity (total) (µg/L)	Specific Con-ductance (µg/L)
MW-6 cont.	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	2.9	ND<2.0	ND<2.0	80	5.2	ND<25	0.58	72	8.9	37	280	754
MW-7	7/18/2002	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2003	--	--	--	--	--	--	--	--	--	--	--	--
	1/14/2004	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2004	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2004	--	--	--	--	--	--	--	--	--	--	--	--
	10/25/2004	--	--	--	--	--	--	--	--	--	--	--	--
	1/17/2005	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2005	--	--	--	--	--	--	--	--	--	--	--	--
	7/8/2005	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2005	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2006	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
	1/10/2007	--	--	--	--	--	--	--	--	--	--	--	--
	7/19/2007	--	--	--	--	--	--	--	--	--	--	--	--
	10/8/2007	--	--	--	--	--	--	--	--	--	--	--	--
	1/9/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	1.3	ND<2.0	ND<2.0	190	5.6	ND<25	0.50	37	ND<0.44	9.3	430	848
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--
	8/2/2010	--	--	--	--	--	--	--	--	--	--	--	--
	1/31/2011	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2011	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/2011	--	--	--	--	--	--	--	--	--	--	--	--
	10/7/2011	--	--	--	--	--	--	--	--	--	--	--	--
	1/23/2012	--	--	--	--	--	--	--	--	--	--	--	--
	4/6/2012	--	--	--	--	--	--	--	--	--	--	--	--
	7/24/2012	--	--	--	--	--	--	--	--	--	--	--	--

Table 7j
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
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Oakland, California

WELL ID	DATE	Molyb-denum (dissolved) (µg/L)	Selenium (total) (µg/L)	Selenium (dissolved) (µg/L)	Vanadium (total) (µg/L)	Vanadium (dissolved) (µg/L)	Bromate (µg/L)	Bromide (µg/L)	Chloride (µg/L)	Nitrogen as Nitrate (µg/L)	Sulfate (µg/L)	Alkalinity (total) (µg/L)	Specific Con-ductance (µg/L)
MW-7 cont.	2/8/2013	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1/18/2008	--	--	--	--	--	--	--	--	--	--	--	--
	4/4/2008	--	--	--	--	--	--	--	--	--	--	--	--
	7/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	10/3/2008	--	--	--	--	--	--	--	--	--	--	--	--
	1/22/2009	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2009	1.2	ND<2.0	ND<2.0	12	4.5	ND<25	ND<0.10	81	19	40	210	690
	7/23/2009	--	--	--	--	--	--	--	--	--	--	--	--
	2/1/2010	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

ND<# = Analyte not detected at or above indicated practical quantitation limit

-- = Not sampled
µg/L = Micrograms per liter
ID = Identification

Table 7k
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Pre-purge Dissolved Oxygen (mg/L)	Post-purge Dissolved Oxygen (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-1	7/20/1999	--	--	--	--
	9/28/1999	--	--	--	--
	1/7/2000	--	--	--	--
	3/31/2000	--	--	--	--
	7/14/2000	--	--	--	--
	10/3/2000	--	--	--	--
	1/3/2001	--	--	--	--
	4/4/2001	--	--	--	--
	7/17/2001	--	--	--	--
	10/5/2001	--	--	--	--
	1/28/2002	--	--	--	--
	4/25/2002	--	--	--	--
	7/18/2002	--	--	--	--
	10/7/2002	--	--	--	--
	1/6/2003	--	--	--	--
	4/7/2003	--	--	--	--
	7/7/2003	--	--	--	--
	10/9/2003	--	--	--	--
	1/14/2004	--	--	--	--
	4/28/2004	--	--	--	--
	7/12/2004	--	--	--	--
	10/25/2004	--	--	--	--
	1/17/2005	--	--	--	--
	4/6/2005	--	--	--	--
	7/8/2005	--	--	--	--
	10/7/2005	--	--	--	--
	1/27/2006	--	--	--	--
	4/28/2006	--	--	--	--
	7/28/2006	--	--	--	--
	10/27/2006	--	--	--	--
	1/10/2007	--	--	--	--
	4/13/2007	--	--	--	--
	7/19/2007	--	--	--	--
	1/9/2008	--	--	--	--
	4/4/2008	--	--	--	--
	7/3/2008	--	--	--	--
	10/3/2008	--	--	--	--
	1/22/2009	--	--	--	--
	4/13/2009	0.75	--	-102	--
	7/23/2009	2.47	--	-23	--
	2/1/2010	1.18	0.81	-98	-108

Table 7k
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Pre-purge Dissolved Oxygen (mg/L)	Post-purge Dissolved Oxygen (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-1 cont.	8/2/2010	0.72	0.59	-82	-97
MW-1B	11/1/2010	2.80	0.93	121	111
	1/31/2011	2.57	1.32	152	159
	4/26/2011	3.05	1.90	173	182
	7/25/2011	--	--	--	--
	10/7/2011	--	--	--	--
	1/23/2012	1.63	0.67	84	80
	7/24/2012	1.36	0.70	74	95
	2/8/2013	1.8	1.7	52	61
	7/10/2013	**2.0**	**1.8**	**55**	**58**
MW-2	9/28/1999	--	--	--	--
	4/4/2001	--	--	--	--
	7/17/2001	--	--	--	--
	7/18/2002	--	--	--	--
	10/7/2002	--	--	--	--
	1/6/2003	--	--	--	--
	4/7/2003	--	--	--	--
	7/7/2003	--	--	--	--
	10/9/2003	--	--	--	--
	1/14/2004	--	--	--	--
	4/28/2004	--	--	--	--
	7/12/2004	--	--	--	--
	10/25/2004	--	--	--	--
	1/17/2005	--	--	--	--
	4/6/2005	--	--	--	--
	7/8/2005	--	--	--	--
	10/7/2005	--	--	--	--
	1/27/2006	--	--	--	--
	4/28/2006	--	--	--	--
	7/28/2006	--	--	--	--
	10/27/2006	--	--	--	--
	1/10/2007	--	--	--	--
	4/13/2007	--	--	--	--
	7/19/2007	--	--	--	--
	10/8/2007	--	--	--	--
	1/9/2008	--	--	--	--
	4/4/2008	--	--	--	--
	7/3/2008	--	--	--	--
	10/3/2008	--	--	--	--

Table 7k
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
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Oakland, California

WELL ID	DATE	Pre-purge Dissolved Oxygen (mg/L)	Post-purge Dissolved Oxygen (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-2 cont.	1/22/2009	--	--	--	--
	4/13/2009	0.65	0.49	-27	-15
	7/23/2009	2.57	7.09	56	14
	2/1/2010	2.13	1.51	3	-14
	8/2/2010	0.97	0.62	-7	-12
MW-2B	11/1/2010	1.30	1.06	113	115
	1/31/2011	1.25	0.89	159	159
	4/26/2011	4.27	2.42	173	180
	7/25/2011	--	--	--	--
	10/7/2011	--	--	--	--
	1/23/2012	0.98	--	108	--
	7/24/2012	0.67	1.10	69	67
	2/8/2013	1.9	1.7	79	86
	7/10/2013	**1.7**	**1.5**	**54**	**60**
MW-3	9/28/1999	--	--	--	--
	4/4/2001	--	--	--	--
	7/17/2001	--	--	--	--
	7/18/2002	--	--	--	--
	10/7/2002	--	--	--	--
	1/6/2003	--	--	--	--
	4/7/2003	--	--	--	--
	7/7/2003	--	--	--	--
	10/9/2003	--	--	--	--
	1/14/2004	--	--	--	--
	4/28/2004	--	--	--	--
	7/12/2004	--	--	--	--
	10/25/2004	--	--	--	--
	1/17/2005	--	--	--	--
	4/6/2005	--	--	--	--
	7/8/2005	--	--	--	--
	10/7/2005	--	--	--	--
	1/27/2006	--	--	--	--
	4/28/2006	--	--	--	--
	7/28/2006	--	--	--	--
	10/27/2006	--	--	--	--
	1/10/2007	--	--	--	--
	4/13/2007	--	--	--	--
	7/19/2007	--	--	--	--
	10/8/2007	--	--	--	--

Table 7k
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
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WELL ID	DATE	Pre-purge Dissolved Oxygen (mg/L)	Post-purge Dissolved Oxygen (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-3 cont.	1/9/2008	--	--	--	--
	4/4/2008	--	--	--	--
	7/3/2008	--	--	--	--
	10/3/2008	--	--	--	--
	1/22/2009	--	--	--	--
	4/13/2009	0.64	0.38	-89	-82
	7/23/2009	5.14	6.14	-22	-56
	2/1/2010	2.12	0.79	-63	-89
	8/2/2010	0.81	0.62	-77	-59
MW-3B	11/1/2010	1.89	0.60	125	117
	1/31/2011	0.88	0.66	161	100
	4/26/2011	1.44	0.92	169	115
	7/25/2011	--	--	--	--
	10/7/2011	--	--	--	--
	1/23/2012	0.83	0.31	84	-9
	7/24/2012	0.64	0.49	-14	-53
	2/8/2013	1.4	1.2	-36	-47
	7/10/2013	**1.7**	**1.4**	**-29**	**-32**
MW-4	9/28/1999	--	--	--	--
	4/4/2001	--	--	--	--
	7/17/2001	--	--	--	--
	7/18/2002	--	--	--	--
	10/7/2002	--	--	--	--
	1/6/2003	--	--	--	--
	4/7/2003	--	--	--	--
	7/7/2003	--	--	--	--
	10/9/2003	--	--	--	--
	1/14/2004	--	--	--	--
	4/28/2004	--	--	--	--
	7/12/2004	--	--	--	--
	10/25/2004	--	--	--	--
	1/17/2005	--	--	--	--
	4/6/2005	--	--	--	--
	7/8/2005	--	--	--	--
	10/7/2005	--	--	--	--
	1/27/2006	--	--	--	--
	4/28/2006	--	--	--	--
	7/28/2006	--	--	--	--
	10/27/2006	--	--	--	--

Table 7k
Historical Groundwater Analytical Results - Additional Analytes
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WELL ID	DATE	Pre-purge Dissolved Oxygen (mg/L)	Post-purge Dissolved Oxygen (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-4 cont.	1/10/2007	--	--	--	--
	4/13/2007	--	--	--	--
	7/19/2007	--	--	--	--
	10/8/2007	--	--	--	--
	1/9/2008	--	--	--	--
	4/4/2008	--	--	--	--
	7/3/2008	--	--	--	--
	10/3/2008	--	--	--	--
	1/22/2009	--	--	--	--
	4/13/2009	0.51	1.35	-67	-46
	7/23/2009	2.10	7.23	-28	-48
	2/1/2010	1.67	0.90	-76	-70
	8/2/2010	0.74	0.57	-94	-64
MW-4B	11/1/2010	1.31	0.63	77	83
	1/31/2011	3.13	1.72	151	145
	4/26/2011	4.19	1.97	234	221
	7/25/2011	--	--	--	--
	10/7/2011	--	--	--	--
	1/23/2012	2.18	3.96	161	124
	7/24/2012	1.37	0.91	2	8
	2/8/2013	2.2	2.1	86	95
	7/10/2013	**2.4**	**2.2**	**24**	**27**
MW-5	7/18/2002	--	--	--	--
	10/7/2002	--	--	--	--
	1/6/2003	--	--	--	--
	4/7/2003	--	--	--	--
	7/7/2003	--	--	--	--
	10/9/2003	--	--	--	--
	1/14/2004	--	--	--	--
	4/28/2004	--	--	--	--
	7/12/2004	--	--	--	--
	10/25/2004	--	--	--	--
	1/17/2005	--	--	--	--
	4/6/2005	--	--	--	--
	7/8/2005	--	--	--	--
	10/7/2005	--	--	--	--
	1/27/2006	--	--	--	--
	4/28/2006	--	--	--	--
	7/28/2006	--	--	--	--

Table 7k
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WELL ID	DATE	Pre-purge Dissolved Oxygen (mg/L)	Post-purge Dissolved Oxygen (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-5 cont.	10/27/2006	--	--	--	--
	1/10/2007	--	--	--	--
	4/13/2007	--	--	--	--
	7/19/2007	--	--	--	--
	10/8/2007	--	--	--	--
	1/9/2008	--	--	--	--
	4/4/2008	--	--	--	--
	7/3/2008	--	--	--	--
	10/3/2008	--	--	--	--
	1/22/2009	--	--	--	--
	4/13/2009	1.80	0.95	-21	-12
	7/23/2009	1.54	2.08	136	144
	2/1/2010	1.82	1.84	21	23
	8/2/2010	1.78	1.36	171	44
	1/31/2011	1.17	1.00	154	155
	4/26/2011	--	--	--	--
	7/25/2011	--	--	--	--
	10/7/2011	--	--	--	--
	1/23/2012	1.15	0.56	98	84
	7/24/2012	2.74	0.79	40	42
	2/8/2013	2.3	2.1	62	71
	7/10/2013	**2.4**	**2.2**	**34**	**37**
MW-6	7/18/2002	--	--	--	--
	10/7/2002	--	--	--	--
	1/6/2003	--	--	--	--
	4/7/2003	--	--	--	--
	7/7/2003	--	--	--	--
	10/9/2003	--	--	--	--
	1/14/2004	--	--	--	--
	4/28/2004	--	--	--	--
	7/12/2004	--	--	--	--
	10/25/2004	--	--	--	--
	1/17/2005	--	--	--	--
	4/6/2005	--	--	--	--
	7/8/2005	--	--	--	--
	10/7/2005	--	--	--	--
	1/27/2006	--	--	--	--
	4/28/2006	--	--	--	--
	7/28/2006	--	--	--	--
	10/27/2006	--	--	--	--

Table 7k
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WELL ID	DATE	Pre-purge Dissolved Oxygen (mg/L)	Post-purge Dissolved Oxygen (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-6 cont.	1/10/2007	--	--	--	--
	4/13/2007	--	--	--	--
	7/19/2007	--	--	--	--
	10/8/2007	--	--	--	--
	1/9/2008	--	--	--	--
	4/4/2008	--	--	--	--
	7/3/2008	--	--	--	--
	10/3/2008	--	--	--	--
	1/22/2009	--	--	--	--
	4/13/2009	0.80	0.54	-40	-32
MW-7	7/18/2002	--	--	--	--
	10/7/2002	--	--	--	--
	1/6/2003	--	--	--	--
	4/7/2003	--	--	--	--
	7/7/2003	--	--	--	--
	10/9/2003	--	--	--	--
	1/14/2004	--	--	--	--
	4/28/2004	--	--	--	--
	7/12/2004	--	--	--	--
	10/25/2004	--	--	--	--
	1/17/2005	--	--	--	--
	4/6/2005	--	--	--	--
	7/8/2005	--	--	--	--
	10/7/2005	--	--	--	--
	1/27/2006	--	--	--	--
	4/28/2006	--	--	--	--
	7/28/2006	--	--	--	--
	10/27/2006	--	--	--	--
	1/10/2007	--	--	--	--
	7/19/2007	--	--	--	--
	10/8/2007	--	--	--	--
	1/9/2008	--	--	--	--
	4/4/2008	--	--	--	--
	7/3/2008	--	--	--	--
	10/3/2008	--	--	--	--
	1/22/2009	--	--	--	--
	4/13/2009	0.80	1.27	-21	-13
	7/23/2009	1.35	0.76	165	165
	2/1/2010	1.86	0.97	-33	-12
	8/2/2010	1.24	0.74	133	41

Table 7k
Historical Groundwater Analytical Results - Additional Analytes
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

WELL ID	DATE	Pre-purge Dissolved Oxygen (mg/L)	Post-purge Dissolved Oxygen (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)
MW-7 cont.	1/31/2011	1.22	0.92	156	163
	4/26/2011	--	--	--	--
	7/25/2011	--	--	--	--
	10/7/2011	--	--	--	--
	1/23/2012	3.15	0.55	113	106
	7/24/2012	3.14	1.57	-108	-76
	2/8/2013	2.4	2.3	56	67
	7/10/2013	**2.1**	**1.9**	**52**	**56**
MW-8	1/18/2008	--	--	--	--
	4/4/2008	--	--	--	--
	7/3/2008	--	--	--	--
	10/3/2008	--	--	--	--
	1/22/2009	--	--	--	--
	4/13/2009	2.56	1.11	-70	-48
	7/23/2009	4.57	8.40	196	185
	2/1/2010	3.17	2.94	-17	-16
MW-9A	**7/10/2013**	**1.4**	**1.1**	**59**	**58**
MW-9B	**7/10/2013**	**1.3**	**1.1**	**71**	**74**
MW-10A	**7/10/2013**	**1.9**	**1.5**	**81**	**84**
MW-10B	**7/10/2013**	**1.9**	**1.7**	**76**	**79**
MW-11A	**7/10/2013**	**1.6**	**1.4**	**43**	**49**
MW-11B	**7/10/2013**	**1.3**	**1.1**	**73**	**74**

NOTES:

ORP = Oxygen reduction potential
-- = Not monitored
mg/L = Milligrams per liter
mV = Millivolts
ID = Identification

Table 8
Grab Groundwater Analytical Results - July 2009
76 Service Station No. 1156
4276 MacArthur Boulevard, Oakland, California

Sample ID	Date	Time	TPH-G (μg/L)	TPH-D (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl-benzene (μg/L)	Total Xylenes (μg/L)	MTBE (μg/L)	TBA (μg/L)	ETBE (μg/L)	TAME (μg/L)	DIPE (μg/L)	1,2-DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)
Groundwater																
SB-7	7/9/09	15:25	**7,900**	**1,400**	**16**	**6.8**	**270**	**1,400**	**21**	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<250
SB-9	7/8/09	18:58	**630**	**350**	**62**	**3.9**	**3.8**	**29**	**50**	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<250
SB-11	7/10/09	11:55	**310**	**230**	**27**	**1.4**	**9.7**	**7.1**	**25**	**79**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<250
1156-CompB	7/10/09	13:45	**73**	--	ND<0.50	ND<0.50	**0.87**	**4.7**	ND<0.50	ND<10	**0.87**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<250

TPH-G = total petroleum hydrocarbons as gasoline by EPA Method 8260B
TPH-D total petroleum hydrocarbons as diesel by EPA Method 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
DIPE = di-isopropyl ether by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B
Ethanol was analyzed by EPA Method 8260B
μg/L = micrograms per liter
ND = not detected above the laboratory detection limit
Bold = detected compound concentration
EPA = US Environmental Protection Agency

Table 9

Discrete Groundwater Analytical Results - June 2010

76 Service Station No. 1156
4276 MacArthur Boulevard
Oakland, California

Boring	Depth	Date	TPHg ug/L	TPHd ug/L	TPHmo ug/L	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Total Xylenes ug/L	MTBE ug/L	EDB ug/L	1,2-DCA ug/L	TAME ug/L	TBA ug/L	DIPE ug/L	ETBE ug/L	Ethanol ug/L
SB-15	19-24	6/18/2010	<50	**54**	<200	<0.50	<0.50	<0.50	<1.0	**29**	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<250
SB-16	20-25	6/17/2010	<50	**150**	<200	**140**	**7.5**	**14**	**7.8**	**460**	<0.50	**23**	<0.50	**730**	<0.50	<0.50	<250
SB-17	14-19	6/17/2010	**260**	**260**	<290	**8.7**	**0.51**	**6.6**	**1.6**	**82**	<0.50	**14**	<0.50	**640**	<0.50	<0.50	<250
SB-18	15-20	6/16/2010	**1900**	**720**	**480**	**94**	**4.1**	**4.8**	**12**	**180**	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<250
SB-19	15-20	6/16/2010	**1100**	**230**	**230**	**8.6**	**1.2**	**4.3**	**9.5**	**93**	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<250

TPHg = total petroleum hydrocarbons as gaoline   TPHd = total petroleum hydrocarbons as diesel   TPHmo = total petroleum hydrocarbons as motor oil   EDB = ethylene dibromide   1,2-DCA = 1,2 dichloroethane
MTBE = mety; tert butyl ether   TAME = tert amyl methyl ether   TBA = tert butyl alcohol   DIPE = diisopropyl ether   ETBE = ethyl tert butyl ether   ug/L = micrograms per liter   bold = above laboratory reporting limits

Table 10
Soil Gas Analytical Results - August 2009 and September 2010
Chevron Site #351645 (76 Station No. 1156)
Oakland, California

Sample ID	Date	Time	Sample Depth (feet)	TPH-G (µg/m^3)	Benzene (µg/m^3)	Toluene (µg/m^3)	Ethyl-benzene (µg/m^3)	m,p-Xylenes (µg/m^3)	o-Xylenes (µg/m^3)	Total Xylenes (µg/m^3)	MTBE (µg/m^3)	TBA (µg/m^3)	ETBE (µg/m^3)	TAME (µg/m^3)	DIPE (µg/m^3)	EDB (µg/m^3)	1,2-DCA (µg/m^3)	Ethanol (µg/m^3)	1,1 DFA (µg/m^3)	IPA (µg/m^3)	Oxygen (% Vol)	Carbon Dioxide (% Vol)	Methane (ppmV)
Soil Gas																							
SV-2	8/11/09	14:43	5	**23**	**350**	**370**	**370**	**380**	**140**	--	<100	<10,000	<100	<100	<100	--	--	--	<10,000	--	**11**	**5.1**	<500
SV-4	8/11/09	13:49	3.5	**67,000,000**	**1,100**	<200	**17,000**	**6,200**	<100	--	<100	<10,000	<100	<100	<100	--	--	--	<10,000	--	**5.2**	**9.5**	**20,000**
SV-6	8/11/09	10:40	5	**3,000,000**	**2,000**	<200	**2,700**	**2,200**	<100	--	<100	<10,000	<100	<100	<100	--	--	--	<10,000	--	**20**	<1.0	<500
SV-7	8/11/09	12:09	3.5	**82,000,000**	**120,000**	<200	**32,000**	**330**	**130**	--	<100	<10,000	<100	<100	<100	--	--	--	<10,000	--	**21**	<1.0	**24,000**
SVW-1	9/8/10	--	4.5	**4,700**	<22	<17	<20	**--**	**--**	<20	<15	<92	<17	<17	<17	<31	<25	<190	--	<56	**11**	**4.4**	**<0.00040**
SVW-2	9/8/10	--	4.5	**78,000,000**	<20,000	**19,000**	**35,000**	**--**	**--**	**99,000**	<15,000	<94,000	<17,000	<17,000	<17,000	<32,000	<25,000	<190,000	--	<51,000	**1.3**	**14**	**8.1**
SVW-3	9/8/10	--	4.5	**250,000,000**	**1,100,000**	<18,000	**610,000**	**--**	**--**	**820,000**	<18,000	<110,000	<20,000	<20,000	<20,000	<37,000	<30,000	<230,000	--	<60,000	**1.1**	**11**	**38**
SVW-4	9/8/10	--	4.5	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
SVW-5	9/8/10	--	4.5	**320,000,000**	**540,000**	<28,000	**23,000**	**--**	**--**	<32,000	<27,000	<170,000	<31,000	<31,000	<31,000	<57,000	<45,000	<350,000	--	<3,700	**1.4**	**13**	**7.5**
SVW-6	9/8/10	--	4.5	**420,000,000**	**1,000,000**	<38,000	**240,000**	**--**	**--**	**170,000**	<37,000	<230,000	<43,000	<43,000	<43,000	<78,000	<62,000	<480,000	--	<130,000	**1.1**	**16**	**27**
Shallow Soil Gas CHHSLs for Residential Land Use				NE	**36.2**	**135,000**	NE	**319,000**	**315,000**	NE	**4,000**	NE	NE	NE	NE	NE	**49.6**	NE	--	--	--	--	--
Shallow Soil Gas CHHSLs for Commercial Land Use				NE	**122**	**378,000**	NE	**887,000**	**879,000**	NE	**13,400**	NE	NE	NE	NE	NE	**167**	NE	--	--	--	--	--
Lowest Residential Shallow Soil Gas ESLs				**10,000**	**84**	**63,000**	**980**	NE	NE	**21,000**	**9,400**	NE	NE	NE	NE	**4.1**	**94**	NE	--	--	--	--	--
Lowest Commercial Shallow Soil Gas ESLs				**29,000**	**280**	**180,000**	**3,300**	NE	NE	**58,000**	**31,000**	NE	NE	NE	NE	**140**	**310**	NE	--	--	--	--	--

TPH-G = total petroleum hydrocarbons as gasoline by EPA Method 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
CHHSLs = California Human Health Screening Levels set by the California EPA (January 2005)
ESLs = Environmental Screening Levels set by the San Francisco Bay Regional Water Quality Control Board (November 2007)

DIPE = di-isopropyl ether by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method TO-15
Ethanol was analyzed by EPA Method TO-15
1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA MethodTO-15
1,1-DFA = 1,1 - Difluoroethane (leak check)
IPA = Isopropyl Alcohol (Leak Detection Compound)

dup = duplicate sample
µg/m^3 = micrograms per cubic meter
ppmV parts per million by volume
% Vol = percent by volume
Bold = Compound concentrations above reporting limit
****** = Sample analyzed by EPA Method TO-15
NE = Not Established
-- = No Sample/No Data

Table 11a
Soil Chemical Analysis Results
Former Unocal #1156 (351645)
4276 MacArthur Blvd, Oakland, California

Sample ID	**Benzene**	**Ethylbenzene**	**Toluene**	**Xylenes (Total)**	**TPH-GRO (C6-C12)**
SV-1-S-N-5-20130314	<0.0050	<0.0050	<0.0050	<0.010	**2.5**
SV-1-S-Y-5-20130314	<0.0050	<0.0050	<0.0050	<0.010	<1.0
SV-2-S-N-5-20130314	<0.0050	<0.0050	<0.0050	<0.010	<1.0
LOQ	0.005	0.005	0.005	0.01	1.0

Notes:

Analyses were conducted by USEPA methods 8260 and 8015B modified.

Non-detected analytes are reported as less than (<) practical quantitation limits.

LOQ = Limit of Quantitation (also called practical quantitation limit or lab reporting limit)

Bold = Analyte detected above LOQ

All results are in milligrams per kilogram (mg/kg)

Table 11b
Soil Geotechnical Analysis Results
Former Unocal #1156 (351645)
4276 MacArthur Blvd, Oakland, California

			Porosity (%)			**Organic Carbon**				**Particle Size Distribution (weight %)**				
Sample ID	**Depth (ft)**	**Dry Bulk Density (g/cc)**	**Total**	**Air-Filled**	**Water Filled**	**Total**	**Fraction**	**Mean Grain Size Description**	**Median Grain Size (mm)**	**Gravel**	**Coarse Sand**	**Medium Sand**	**Fine Sand**	**Silt/Clay**
SV-1-S-N- 5-20130314 (1305472-01)	5	1.47	44.9	22.8	22.1	330	3.30E-04	medium sand	0.634	14.75	9.79	37.23	29.84	8.40
SV-2-S-N- 5-20130314 (1305472-03)	5	1.52	42.5	6.2	36.3	710	7.10E-04	coarse sand	0.362	24.82	2.45	18.89	37.72	16.12

Notes:
% = percent
ft = feet
g/cc = grams per cubic centimeter
mm = millimeters

Table 11c
Soil Vapor Analytical Results and Comparison to CHHSLs and ESLs
Chevron Facility 351645
Former Unocal Station No. 1156
4276 MacArthur Boulevard
Oakland, California

SAMPLE ID	DATE	DEPTH (feet)	TPH-g ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	o-Xylenes ($\mu g/m^3$)	m,p-Xylene ($\mu g/m^3$)	Naphthalene ($\mu g/m^3$)
Screening Levels										
Soil Vapor CHHSLs										
current/future commercial/industrial (AF=0.001) (a)			***NA***	***120***	***380,000***	***1,400***	***13,000***	***880,000***	***890,000***	***110***
future residential (AF=0.001) (b)			***NA***	***85***	***320,000***	***1,100***	***8,600***	***740,000***	***800,000***	***93***
Soil Vapor ESLs										
current/future commercial/industrial (AF=0.001) (c)			***3,066,000***	***423***	***1,314,000***	***4,906***	***47,169***	***438,000***	***438,000***	***361***
future residential (AF=0.001) (d)			***730,000***	***84***	***312,857***	***973***	***9,359***	***104,286***	***104,286***	***72***
Soil Vapor Results										
SV-2-V-N-5-20130408	4/8/2013	5	**6,600,000**	**4,900**	**1,500**	**<1,100**	<910	<1,100	**1,600**	**<5,300**
SVW-1-V-N-5-20130408	4/8/2013	5	1,400	9.8	<6.1	<7.0	<5.8	<7.0	<7.0	<34
SVW-2-V-N-5-20130408	4/8/2013	5	**37,000,000**	**59,000**	<4,500	**12,000**	<4,300	<5,200	**9,400**	<25,000
SVW-3-V-N-5-20130408	4/8/2013	5	**180,000,000**	**1,200,000**	<41,000	**630,000**	<39,000	<47,000	**660,000**	<230,000
SVW-5-V-N-5-20130408	4/8/2013	5	**240,000,000**	**870,000**	<45,000	**160,000**	<43,000	<51,000	100,000	<250,000
SVW-6-V-N-5-20130408	4/8/2013	5	**260,000,000**	**1,400,000**	<39,000	**700,000**	<37,000	<45,000	**580,000**	<220,000

Notes:

Samples could not be collected from SV-1 and SVW-4 due to water in the wells.

Shading indicates an exceedence of the future residential and/or current or future commercial/industrial CHHSL and/or ESL. Detected concentrations are bolded; non-detects are not.

< = Analyte was not detected above indicated laboratory reporting limit. AF = Attenuation Factor.

CalEPA = California Environmental Protection Agency.

CalEPA. 2010. California EPA's Office of Environmental Health Hazard Assessment. Soil Gas Screening Numbers. [http://oehha.ca.gov/risk/chhsltable.html].

CalEPA, 2011 = CalEPA Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October 2011.

CHHSL = California Human Health Screening Levels.

ESL = Environmental Screening Levels.

MTBE = Methyl tert-butyl ether. NA - Not available.

OEHHA - Office of Environmental Health Hazard Assessment.

SF RWQCB, 2013 = California Regional Water Quality Control Board, San Francisco Bay Region. February 2013 update to Environmental Screening Levels. February 8, 2013.

TPH-g = Total Petroleum Hydrocarbons as gasoline.

($\mu g/m^3$) = Micrograms per cubic meter.

(a) CalEPA, 2010. OEHHA Soil Gas Screening Numbers. Updated 9/23/10. Commercial/industrial values for buildings constructed without engineered fill (Table 3). The CHHSLs presented are based on CalEPA's recommended default AF for an existing commercial/industrial building. However, these values are protective of a future commercial/industrial building scenario.

(b) CalEPA, 2010. OEHHA Soil Gas Screening Numbers. Updated 9/23/10. Residential values for buildings constructed with engineererd fill (Table 2).

(c) SF RWQCB, 2013. Commercial/industrial soil vapor ESL (Table E).

(d) SF RWQCB, 2013. Residential indoor Air ESL divided by 0.001, the associated default attenuation factor recommended by CalEPA (2011), Table 2.

Table 11d
Soil Vapor Analytical Results and Comparison to CHHSLs and ESLs - Air Phase Hydrocarbon (APH) Fractions
Chevron Facility 351645
Former Unocal Station No. 1156
4276 MacArthur Boulevard
Oakland, California

SAMPLE ID	DATE	DEPTH *(ft.)*	C5-C6 Aliphatic Hydrocarbons *(μg/m^3)*	>C6-C8 Aliphatic Hydrocarbons *(μg/m^3)*	>C8-C10 Aliphatic Hydrocarbons *(μg/m^3)*	>C10-C12 Aliphatic Hydrocarbons *(μg/m^3)*	>C8-C10 Aromatic Hydrocarbons *(μg/m^3)*	>C10-C12 Aromatic Hydrocarbons *(μg/m^3)*
Screening Levels								
Soil Vapor CHHSLs (a)			***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
Soil Vapor ESLs (b)			***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
Soil Vapor Results								
SV-2-V-N-5-20130408	4/8/2013	5	440,000	3,800,000	260,000	<35,000	<25,000	<28,000
SVW-1-V-N-5-20130408	4/8/2013	5	520	180	<190	<220	<160	<180
SVW-2-V-N-5-20130408	4/8/2013	5	6,700,000	16,000,000	670,000	<170,000	<120,000	<130,000
SVW-3-V-N-5-20130408	4/8/2013	5	39,000,000	66,000,000	<1,300,000	<1,500,000	1,400,000	<1,200,000
SVW-5-V-N-5-20130408	4/8/2013	5	71,000,000	71,000,000	2,200,000	<1,600,000	<1,200,000	<1,300,000
SVW-6-V-N-5-20130408	4/8/2013	5	87,000,000	75,000,000	1,400,000	<1,400,000	1,300,000	<1,100,000

Notes:

< = Analyte was not detected above indicated laboratory reporting limit.

CalEPA. 2010. California EPA's Office of Environmental Health Hazard Assessment. Soil Gas Screening Numbers. [http://oehha.ca.gov/risk/chhsltable.html].

CHHSL = California Human Health Screening Levels.

ESL = Environmental Screening Levels.

NA = Not available.

OEHHA - Office of Environmental Health Hazard Assessment.

(μg/m^3) = Micrograms per cubic meter.

(a) CalEPA, 2010. OEHHA Soil Gas Screening Numbers. Updated 9/23/10.

(b) SF RWQCB, 2013. California Regional Water Quality Control Board, San Francisco Bay Region. February 2013 update to Environmental Screening Levels. February 8, 2013.

Table 12a
Soil Vapor Analytical Results with Comparison to CHHSLs and ESLs - Method TO-15
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard, Oakland, California

Sample Identification	**Date**	**Depth** *(feet)*	**TPH-g** *($\mu g/m^3$)*	**Benzene** *($\mu g/m^3$)*	**Toluene** *($\mu g/m^3$)*	**Ethylbenzene** *($\mu g/m^3$)*	**MTBE** *($\mu g/m^3$)*	**o-Xylenes** *($\mu g/m^3$)*	**m,p-Xylene** *($\mu g/m^3$)*	**Naphthalene** *($\mu g/m^3$)*
Screening Levels										
Soil Vapor CHHSLs										
commercial/industrial (a)			*NA*	*120*	*380,000*	*1,400*	*13,000*	*880,000*	*890,000*	*110*
Soil Vapor ESLs										
commercial/industrial (b)			*1,226,400*	*423*	*1,314,000*	*4,906*	*47,169*	*438,000*	*438,000*	*361*
Soil Vapor Results										
SV-1-V-N-20130806	8/6/2013	5	**190,000,000**	**500,000**	<20,000	**100,000**	<19,000	<23,000	**160,000**	<110,000
SV-2-V-N-5-20130408	4/8/2013	5	**6,600,000**	**4,900**	**1,500**	<1,100	<910	<1,100	**1,600**	<5,300
SV-2-V-N-20130806	8/6/2013	5	**46,000,000**	**7,900**	<9,100	<10,000	<8,700	<10,000	<10,000	<51,000
SV-2-V-Y-20130806	8/6/2013	5	**43,000,000**	**7,900**	<9,300	<11,000	<8,900	<11,000	<11,000	<52,000

Notes:

The Sample Identification number provides the following information: Location Name-Type of Sample (e.g., vapor, water, soil)-Duplicate (yes or no)-Date (yyyymmdd)

Shading indicates an exceedence of the CHHSL and/or ESL. Detected concentrations are bolded - non-detects are not.

<# = Analyte was not detected at or above indicated laboratory reporting limit.

AF = Attenuation Factor.

CalEPA = California Environmental Protection Agency.

CalEPA. 2010 = CalEPA’s Office of Environmental Health Hazard Assessment. Soil Gas Screening Numbers. [http://oehha.ca.gov/risk/chhsltable.html].

CalEPA 2011a = CalEPA Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October 2011.

CHHSL = California Human Health Screening Levels.

ESL = Environmental Screening Levels.

MTBE = Methyl tert-butyl ether.

NA = Not available.

OEHHA = Office of Environmental Health Hazard Assessment.

SFRWQCB 2013 = California Regional Water Quality Control Board, San Francisco Bay Region. May 2013 update to Environmental Screening Levels.

TPH-g = Total petroleum hydrocarbons as gasoline.

($\mu g/m^3$) = Micrograms per cubic meter.

(a) CalEPA. 2010. OEHHA Soil Gas Screening Numbers. Updated 9/23/10. Commercial/industrial values for buildings constructed without engineered fill (Table 3).
The CHHSLs presented are based on CalEPA's recommended default AF for an existing commercial/industrial building (CalEPA 2011a).

(b) Commercial/industrial soil vapor ESL (Table E) from SFRWQCB 2013.

Table 12b
Soil Vapor Analytical Results and Comparison to CHHSLs and ESLs - APH Fractions
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard
Oakland, California

Sample Identification	Date	Depth *(feet)*	C5-C6 Aliphatic Hydrocarbons *(μg/m^3)*	>C6-C8 Aliphatic Hydrocarbons *(μg/m^3)*	>C8-C10 Aliphatic Hydrocarbons *(μg/m^3)*	>C10-C12 Aliphatic Hydrocarbons *(μg/m^3)*	>C8-C10 Aromatic Hydrocarbons *(μg/m^3)*	>C10-C12 Aromatic Hydrocarbons *(μg/m^3)*
Screening Levels								
Soil Vapor CHHSLs [(a)]			*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Soil Vapor ESLs [(b)] *(TPH-g as surrogate)*			*1,226,400*	*1,226,400*	*1,226,400*	*1,226,400*	*1,226,400*	*1,226,400*
Soil Vapor Results								
SV-1-V-N-20130806	8/6/2013	5	**98,000,000**	**88,000,000**	**5,600,000**	**1,400,000**	**900,000**	<580,000
SV-2-V-N-5-20130408	4/8/2013	5	**440,000**	**3,800,000**	**260,000**	<35,000	<25,000	<28,000
SV-2-V-N-20130806	8/6/2013	5	**5,400,000**	**40,000,000**	**4,100,000**	**620,000**	<240,000	<260,000
SV-2-V-Y-20130806	8/6/2013	5	**4,900,000**	**37,000,000**	**4,900,000**	**1,100,000**	<240,000	<270,000

Notes:

The Sample Identification number provides the following information: Location Name-Type of Sample (e.g., vapor, water, soil)-Duplicate (yes or no)-Date (yyyymmdd)

Shading indicates an exceedence of the CHHSL and/or ESL. Detected concentrations are bolded - non-detects are not.

<# = Analyte was not detected at or above indicated laboratory reporting limit.

CalEPA. 2010 = CalEPA's Office of Environmental Health Hazard Assessment (OEHHA). Soil Gas Screening Numbers. [http://oehha.ca.gov/risk/chhsltable.html], accessed 9/26/2013, last updated September 23, 2010.

CHHSL = California Human Health Screening Levels.

ESL = Environmental Screening Levels.

NA = Not available.

OEHHA - Office of Environmental Health Hazard Assessment.

(μg/m^3) = Micrograms per cubic meter.

(a) CalEPA, 2010. OEHHA Soil Gas Screening Numbers. Updated 9/23/10.

(b) SFRWQCB. 2013. California Regional Water Quality Control Board, San Francisco Bay Region. May 2013 update to Environmental Screening Levels. There are no published ESLs for the aliphatic and aromatic carbon ranges. Therefore, the ESL for total petroleum hydrocarbons as gasoline was used as a conservative surrogate to identify ranges for futher evaluation.

Table 12c
Atmospheric Gas Analytical Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard, Oakland, California

Sample Identification	Date	Oxygen *(%)*	Methane *(%)*	Carbon Dioxide *(%)*	Helium *(%)*	Nitrogen *(%)*
SV-1-V-N-20130806	8/6/2013	1.2	5.2	14	<0.13	73
SV-2-V-N-5-20130408	4/8/2013	1.9	0.49	2.7	<0.13	94
SV-2-V-N-20130806	8/6/2013	1.2	1.8	12	<0.12	84
SV-2-V-Y-20130806	8/6/2013	1.2	1.9	13	<0.12	83

Notes:

The Sample Identification number provides the following information: Location Name-Type of Sample (e.g., vapor, water, soil)-Duplicate (yes or n

(%) = Percentage of gas detected in sample canister by modified ASTM D-1946.

<# = Gas not detected at or above indicated laboratory reporting limit.

Table 12d
Summary of Indoor Air Modeling Inputs[8]
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard, Oakland, California

	Current Off-Site Commercial/Industrial Building		
Parameter	**Value**	**Units**	**Reference**
Building			
Building Length, Width and Height	1830 x 915 x 244	cm	Site-specific building parameters (approximately 30 feet x 60 feet) assuming an 8-foot ceiling.
Indoor Air Exchange Rate	1.0	1/hour	Default for a commercial/industrial building [3]
Average Vapor Flow Rate Into Building	--	L/min	Model calculated
Slab or Basement Scenario	Slab-on-Grade	-	Most likely scenario for California
Depth below grade to bottom of enclosed floor space	15	cm	Default for slab-on-grade construction[1]
Soil			
SCS Soil Type	Sandy Clay	-	Site specific[7]
Vadose zone soil dry bulk density	1.5	g/cm^3	Site specific[2]
Vadose zone soil total porosity	0.437	cm^3/cm^3	Site specific[2]
Vadose zone soil water-filled porosity	0.292	cm^3/cm^3	Site specific[2]
Soil Vapor Sample Depth	152.4	cm	Site specific (5 feet)
Soil Temperature	16.7	^oC	Default value for site location [6]
Exposure			
Exposure Duration	25	year	Default assumption for Commercial/Industrial Worker [4]
Exposure Frequency	250	day/year	Default assumption for Commercial/Industrial Worker [4]
Averaging Time - Noncarcinogens	25	year	Default assumption for Commercial/Industrial Worker [4]
Averaging Time - Carcinogens	70	year	Default assumption for Commercial/Industrial Worker [4]
Toxicity Values			
Benzene			
Unit Risk Factor	2.90E-05	$(\mu g/m^3)^{-1}$	CalEPA (2013)
Reference Concentration	6.00E-02	(mg/m^3)	CalEPA (2013)
Ethylbenzene			
Unit Risk Factor	2.50E-06	$(\mu g/m^3)^{-1}$	CalEPA (2013)
Reference Concentration	2.00E+00	(mg/m^3)	CalEPA (2013)
C5-C6, C6-C8, C8-C10, C10-C12 Aliphatics			
Unit Risk Factor	NA	$(\mu g/m^3)^{-1}$	
Reference Concentration	2.00E-01	(mg/m^3)	MassDEP (2002)[5]

Table 12d
Summary of Indoor Air Modeling Inputs[8]
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard, Oakland, California

Notes:

bgs = Below ground surface. cm = Centimeter. Cm^3 = Cubic centimeter. $\mu g/m^3$ = Micrograms per cubic meter. g/cm^3 = Grams per cubic meter.
cm^3/cm^3 = Cubic meter per cubic meter. °C = Degrees Celsius. F = Fahrenheit. L/min = Liter per minute.
CalEPA (2013) = California Environmental Protection Agency. OEHHA Toxicity Criteria Database, 2013.
DTSC/HERO (2011) = Department of Toxic Substances Control/Office of Human and Ecological Risk.
DTSC/HERD = Department of Toxic Substances Control/Human and Ecological Risk Division.
MassDEP = Massachusetts Department of Environmental Protection.
MassDEP. 2002. Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of the MassDEP VPH/EPH Approach. Final Policy. October 31, 2002.
NA = Not available.
OEHHA = Office of Environmental Health Hazard Assessment.
OSWER = Office of Solid Waste and Emergency Response.
USCS = Unified Soil Classification System.
USEPA = United States Environmental Protection Agency.

[1] Johnson & Ettinger (J&E) Model, Version 3.1, Febuary, 2004, adjusted with DTSC/HERD recommended default values.

[2] Based on the site-specific geotechnical testing.

[3] CalEPA. 2011a. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. DTSC, CalEPA. October.

[4] USEPA. 1991. Human Health Evaluation Manual: Supplemental Guidance: Standard Default Exposure Factors. OSWER Directive 9285.6-03, March 25, 1991.

[5] Toxicity criteria chosen for closest aliphatic carbon fraction range based on MassDEP (2002) guidance in Table 4-13 per guidance provided by DTSC/HERO (2011).

[6] User's Guide for JE model (2004), 62 degrees F for Oakland CA.

[7] The top 5 feet of site soil consists primarily of clay with sand and gravel. Therefore, sandy clay was used as the USCS soil categroy that best describes site soil, based on guidance in Table 11 of the JE Model User's Guide.

[8] Inputs not referred to on this table are set at default values.

Table 12e
Summary of Indoor Air Modeling Results
76 Service Station No. 1156 (351645)
4276 MacArthur Boulevard, Oakland, California

COPCs[1]	Maximum Soil Vapor Concentration[2] (ug/m^3)	Location of Maximum Soil Vapor Concentration	Off-site OVH Building	
			ELCR[3]	**HI[3]**
Benzene	500,000	SV-1	7.4E-05	1.2E-01
Ethylbenzene	100,000	SV-1	1.2E-06	6.8E-04
C5-C6 Aliphatics	98,000,000	SV-1	NA	**7.2E+00**
C6-C8 Aliphatics	88,000,000	SV-1	NA	**6.5E+00**
C8-C10 Aliphatics	5,600,000	SV-1	NA	4.1E-01
C10-C12 Aliphatics	1,400,000	SV-1	NA	1.0E-01
		Total ELCR/HI:	**7.5E-05**	**1.4E+01**

Notes:

Shading indicates an ELCR/HQ/HI above USEPA's target risk range of 1x10^{-6} to 1x10^{-4} or target HQ/HI of 1.

[1] COPCs evaluated using indoor air modeling are those detected above the California Human Health Screening Level (CHHSL) or Environmental Screening Level (ESL), as shown on Table 1.

[2] Maximum detected concentrations from off-site soil vapor sampling locations (SV-1 and SV-2).

[3] Estimated using the CalEPA DTSC/HERD version of the Johnson and Ettinger Model Spreadsheets (2004) and model inputs presented in Table 5.

COPC - Compound of potential concern.

DTSC/HERD = Department of Toxic Substances Control/Human and Ecological Risk Division.

ELCR = Potential Excess Lifetime Cancer Risk.

HQ = Hazard Quotient.

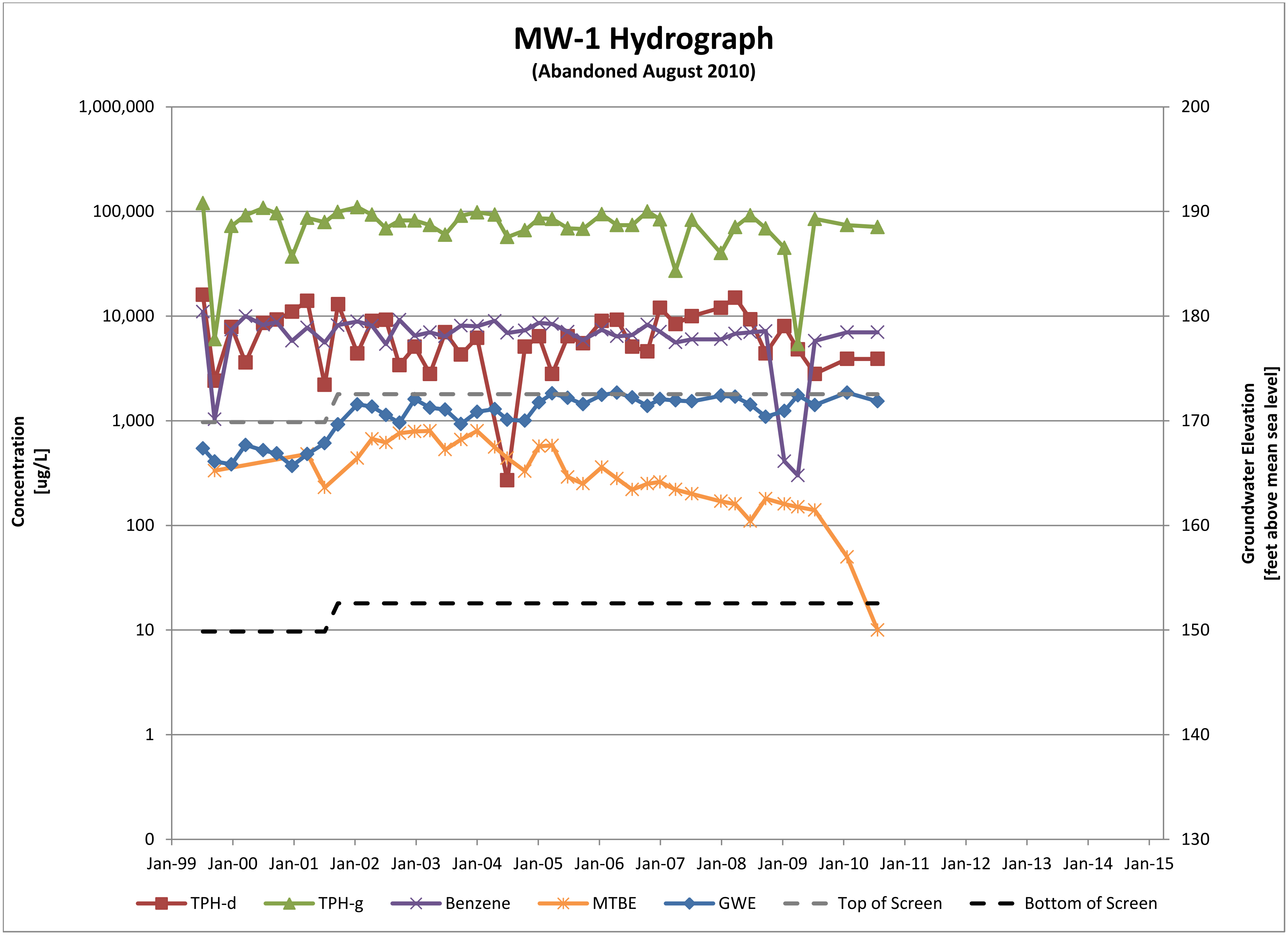
HI = Potential Hazard Index.

NA = Not available; dose-response values not available.

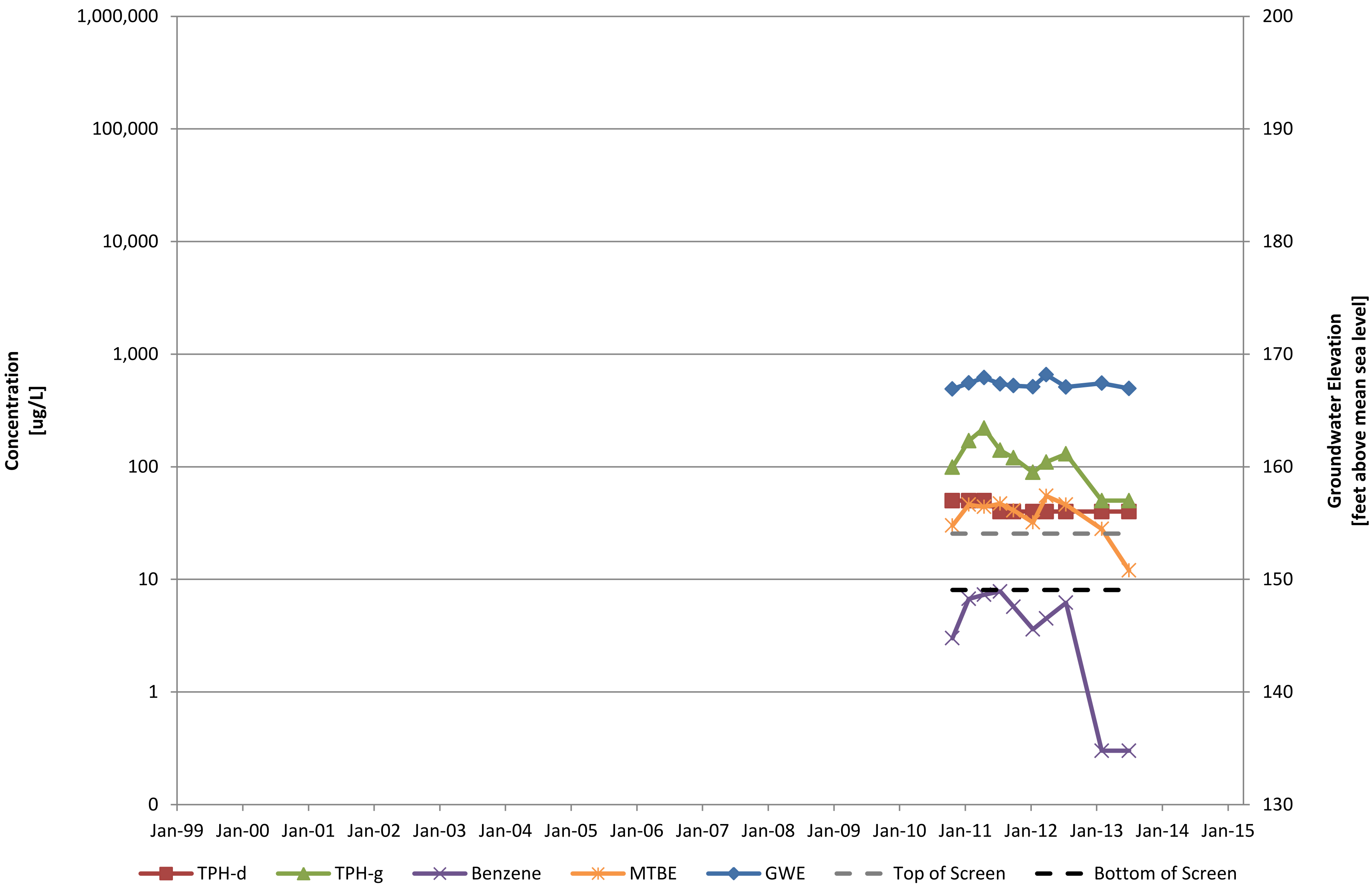
OVH = Oakland Veterinary Hospital.

Attachment E

Hydrographs

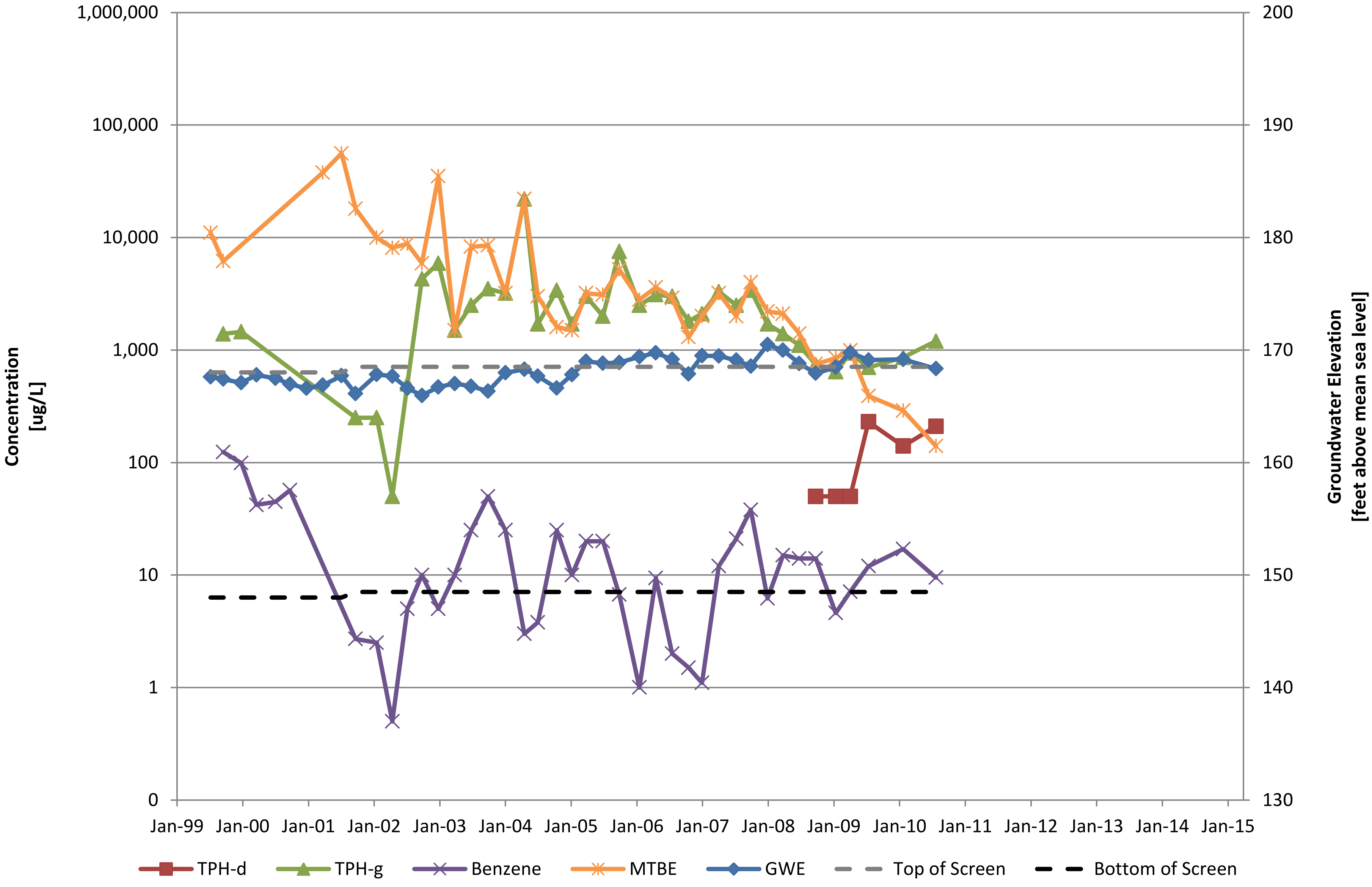

MW-1 Hydrograph
(Abandoned August 2010)
Concentration
[ug/L]
1,000,000
100,000
10,000
1,000
100
10
1
0
Groundwater Elevation
[feet above mean sea level]
200
190
180
170
160
150
140
130
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
TPH-d
TPH-g
Benzene
MTBE
GWE
Top of Screen
Bottom of Screen

MW-1B Hydrograph

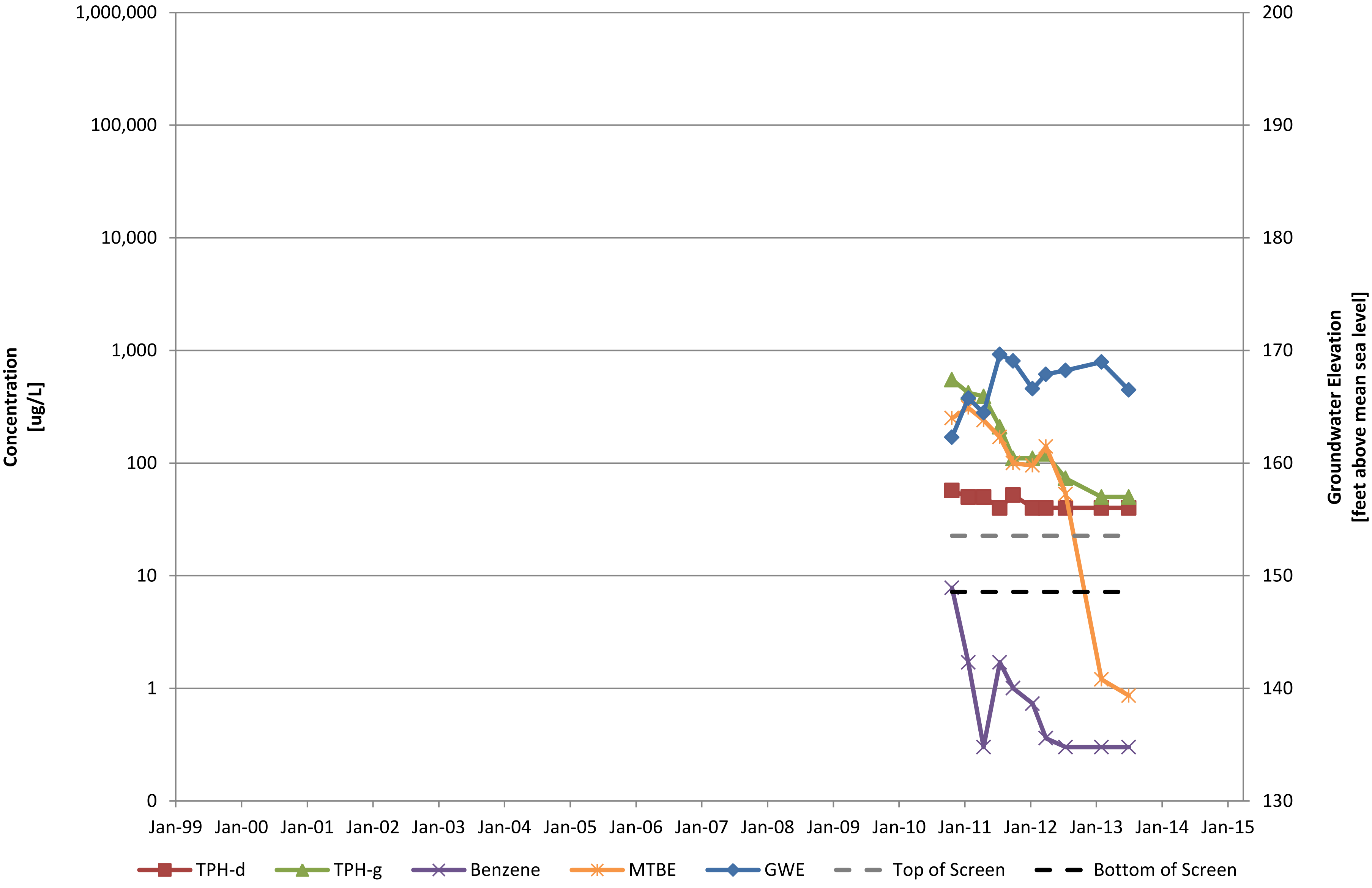


MW-2 Hydrograph

(Abandoned August 2010)

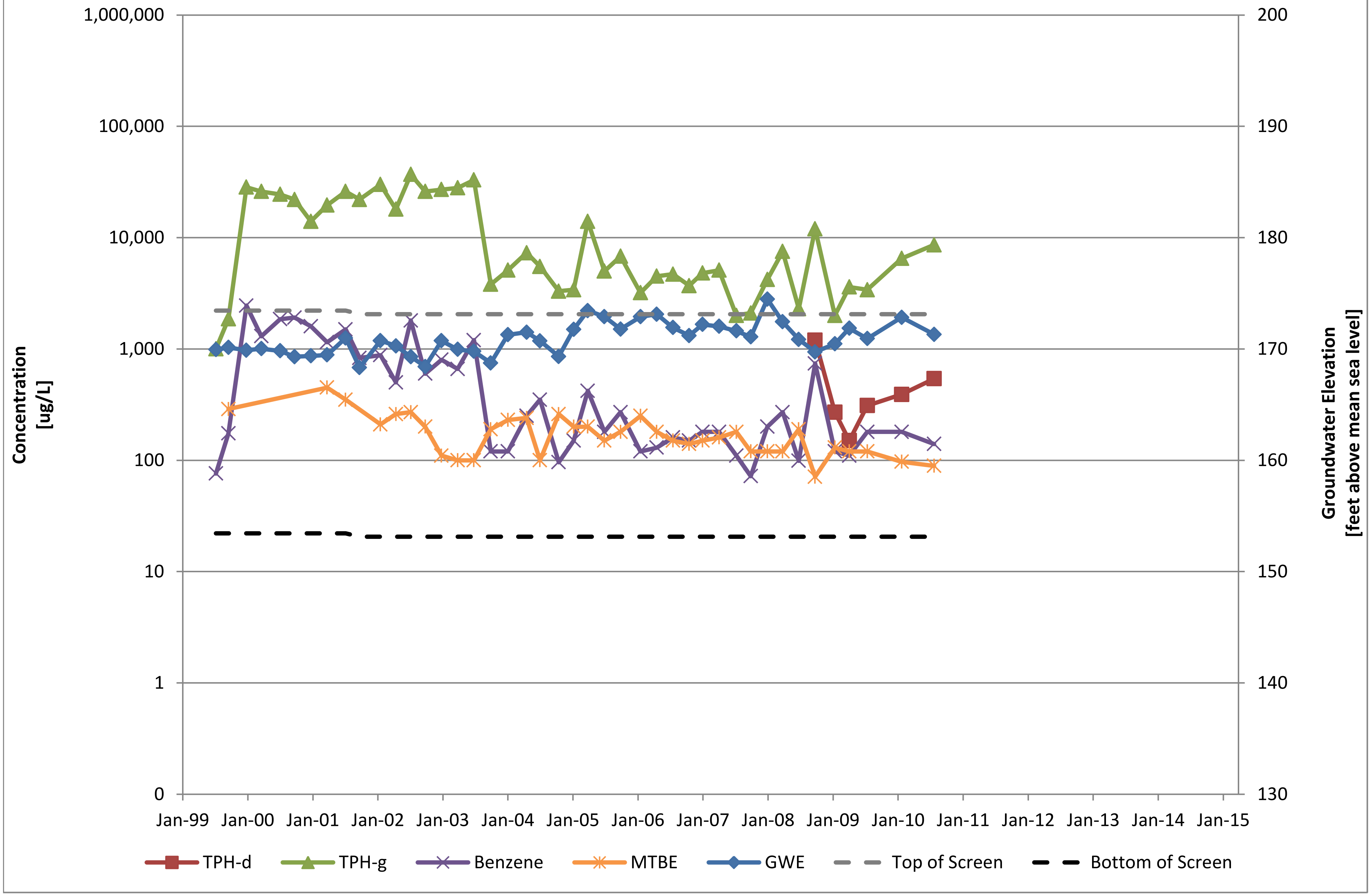


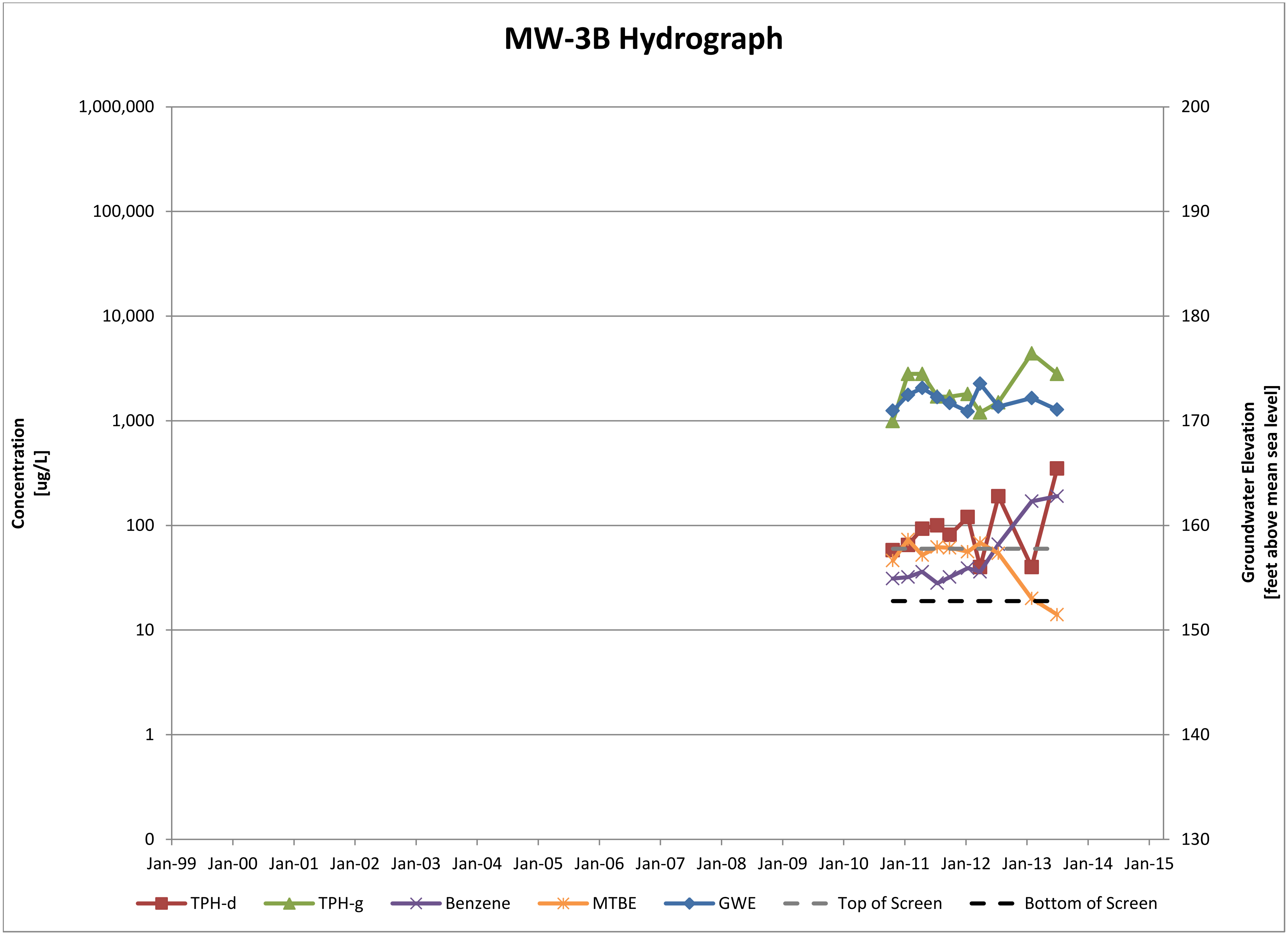
MW-2B Hydrograph



MW-3 Hydrograph

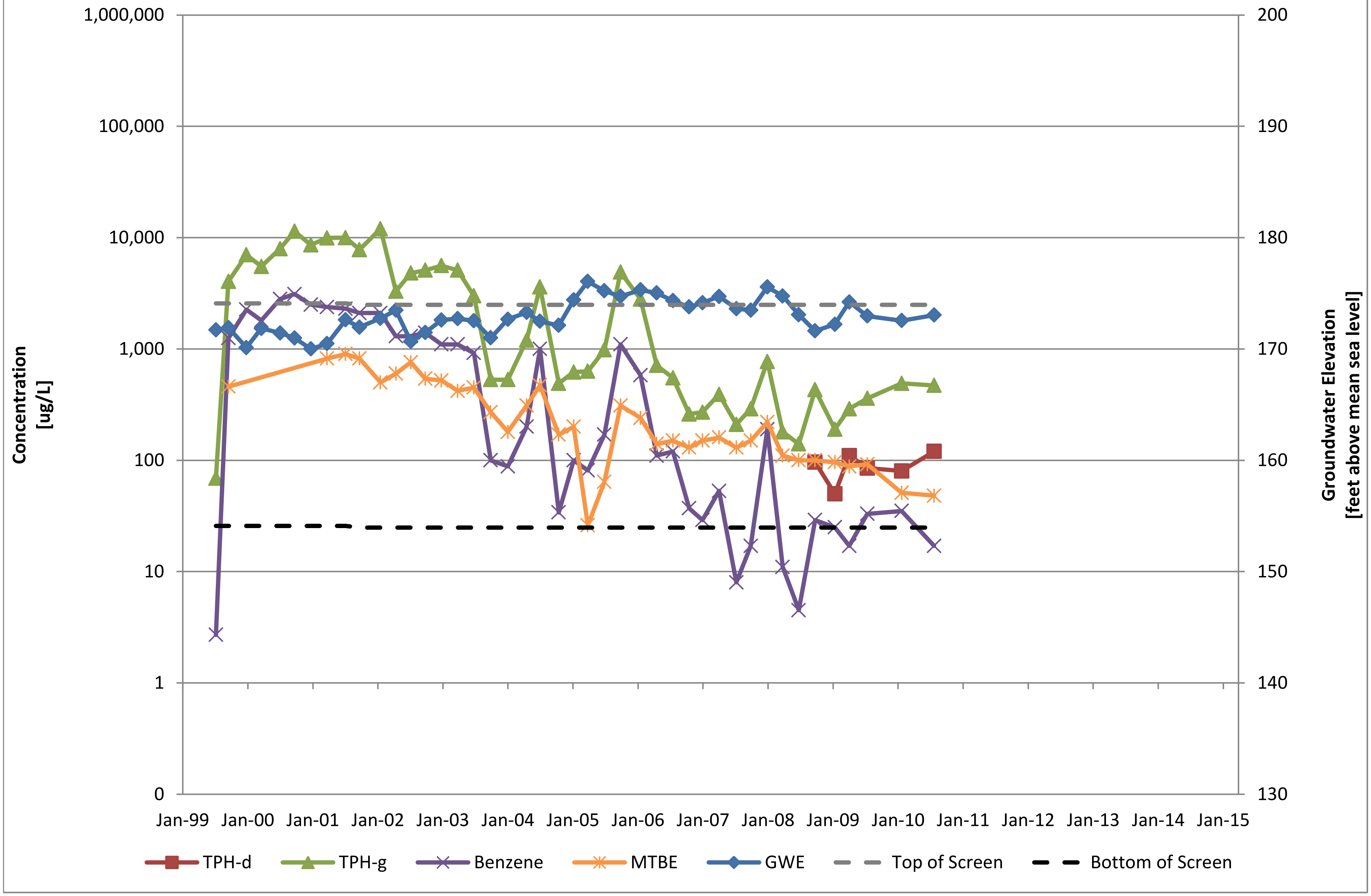
(Abandoned August 2010)



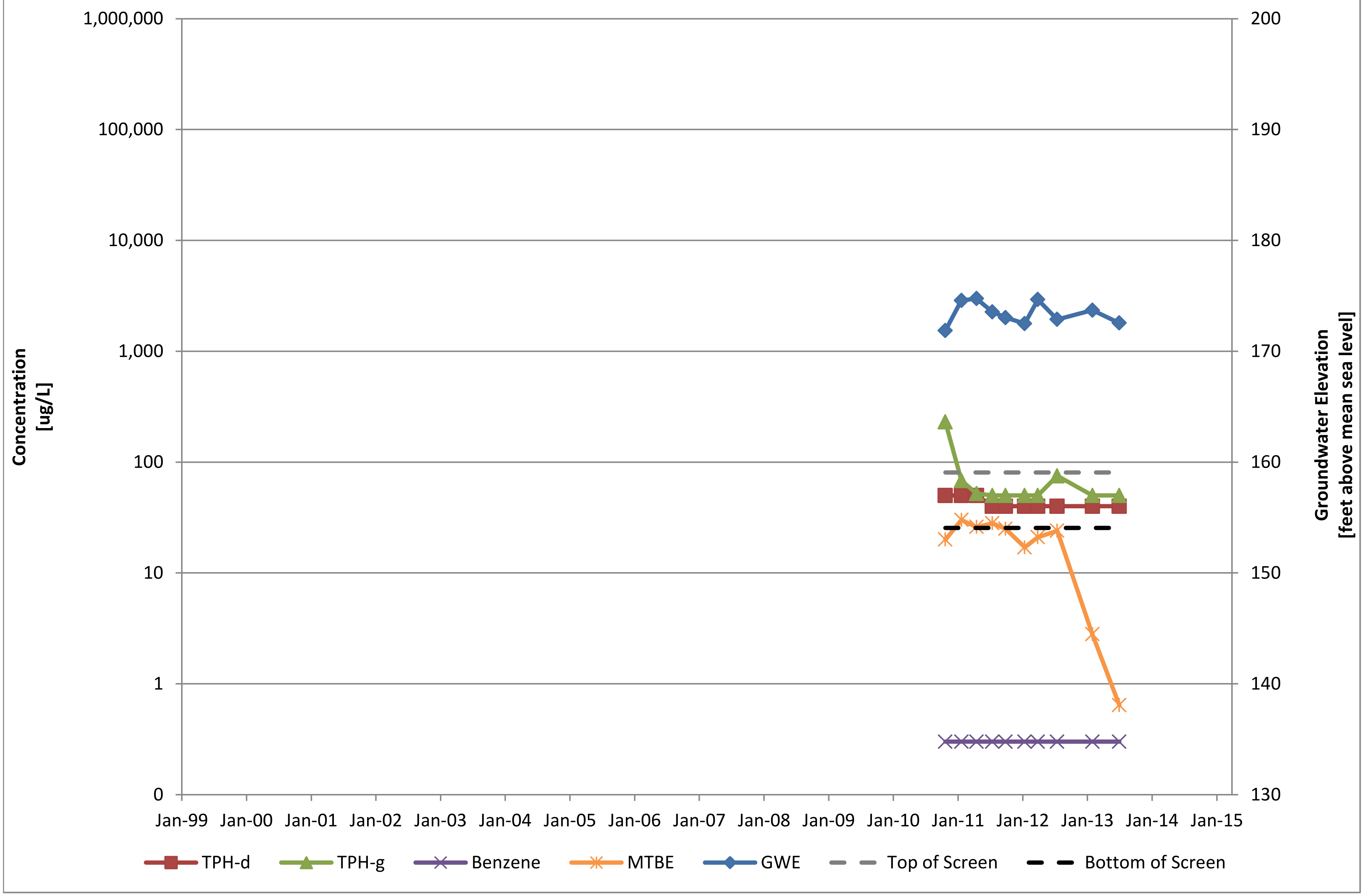

MW-3B Hydrograph
Concentration [ug/L]
1,000,000
100,000
10,000
1,000
100
10
1
0
Groundwater Elevation [feet above mean sea level]
200
190
180
170
160
150
140
130
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
TPH-d
TPH-g
Benzene
MTBE
GWE
Top of Screen
Bottom of Screen

MW-4 Hydrograph

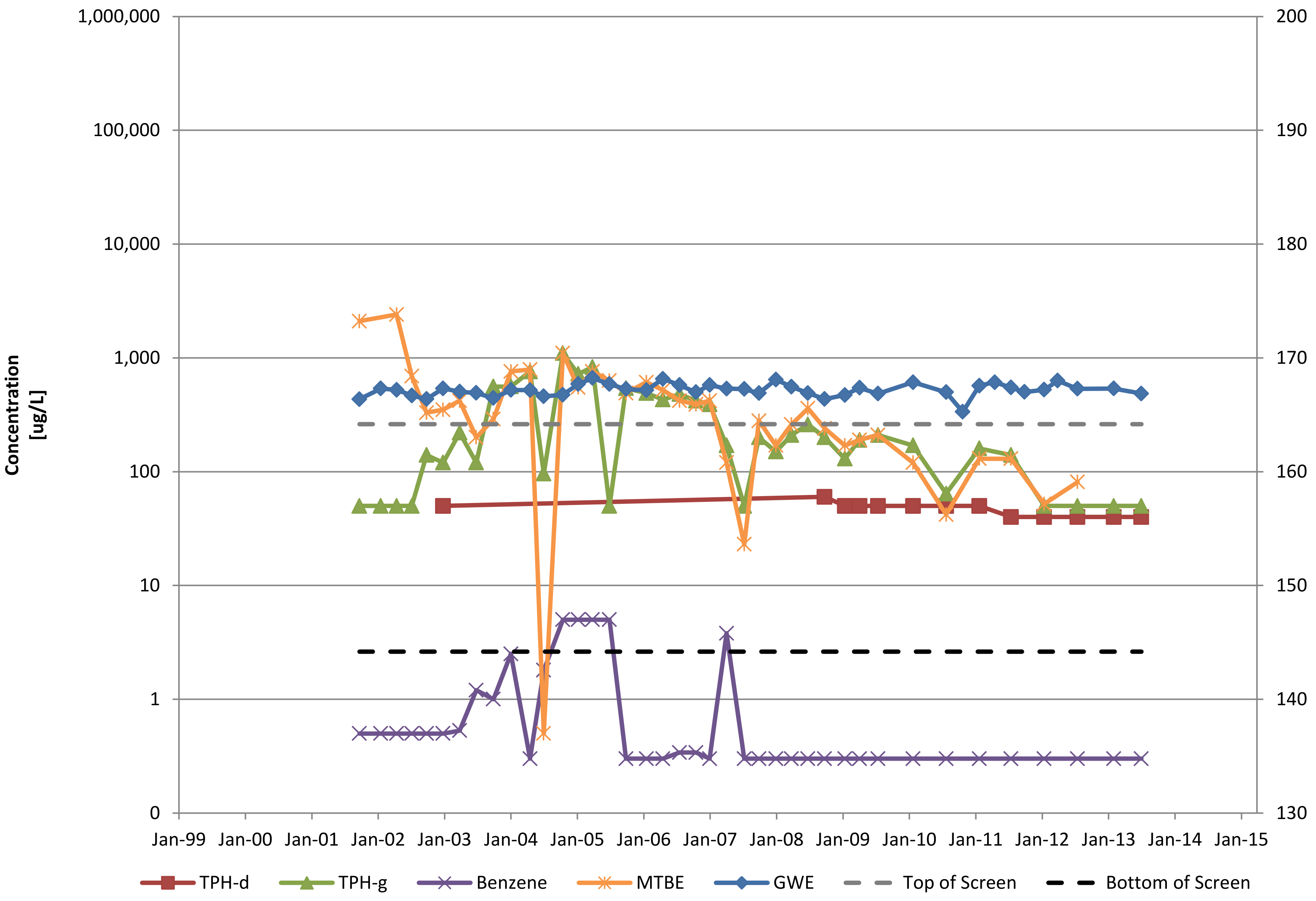
(Abandoned August 2010)

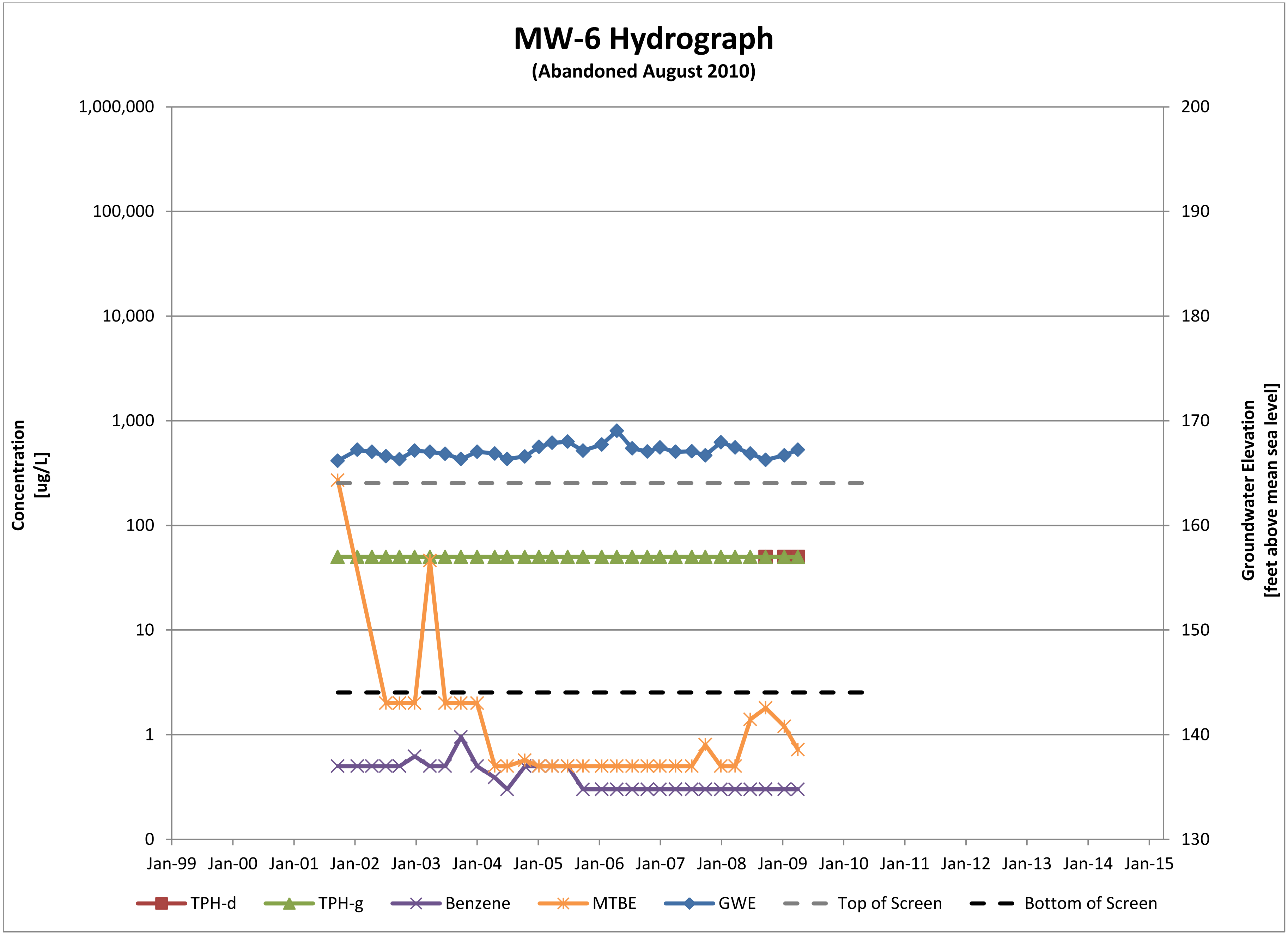


MW-4B Hydrograph

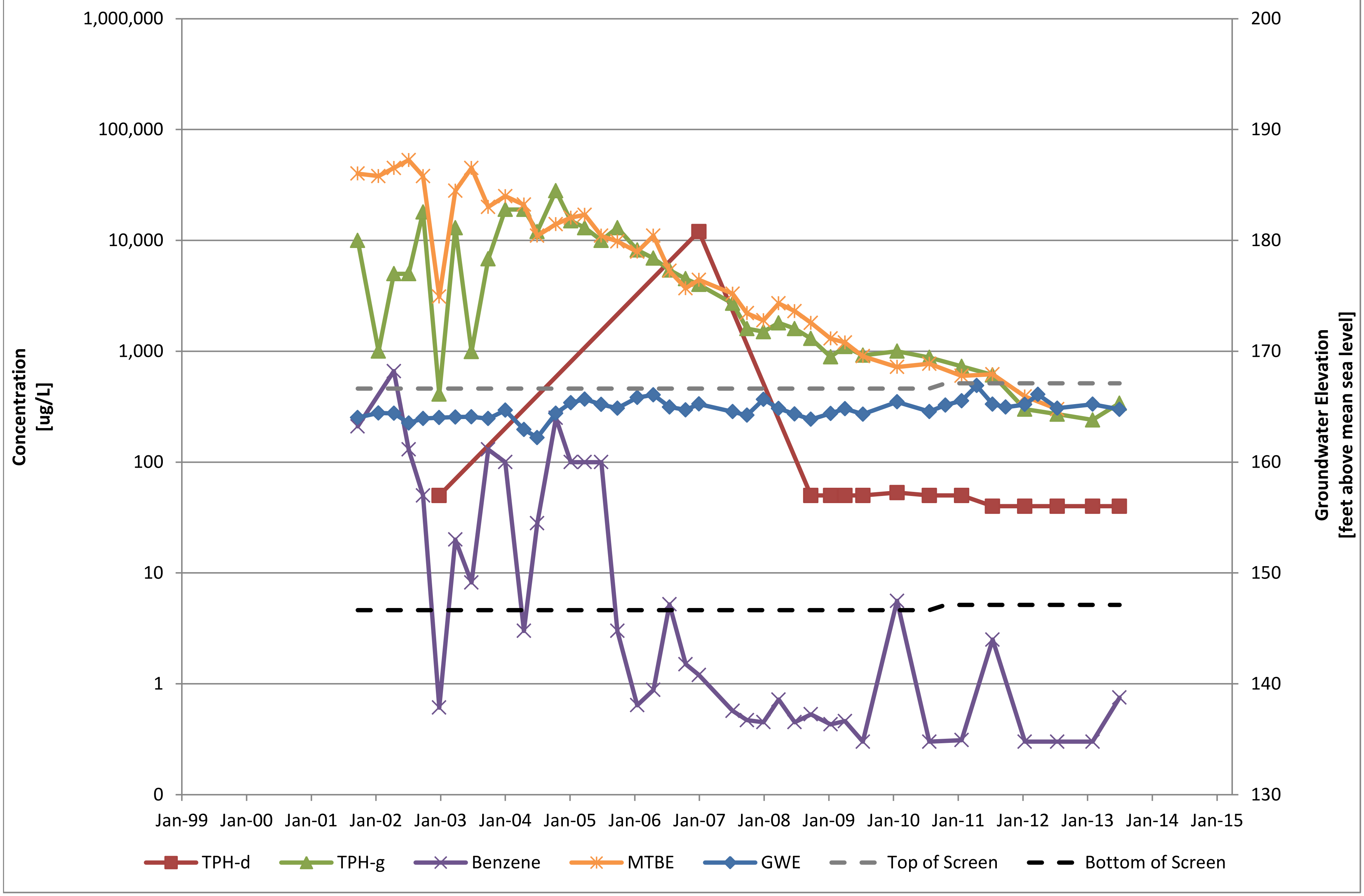


MW-5 Hydrograph



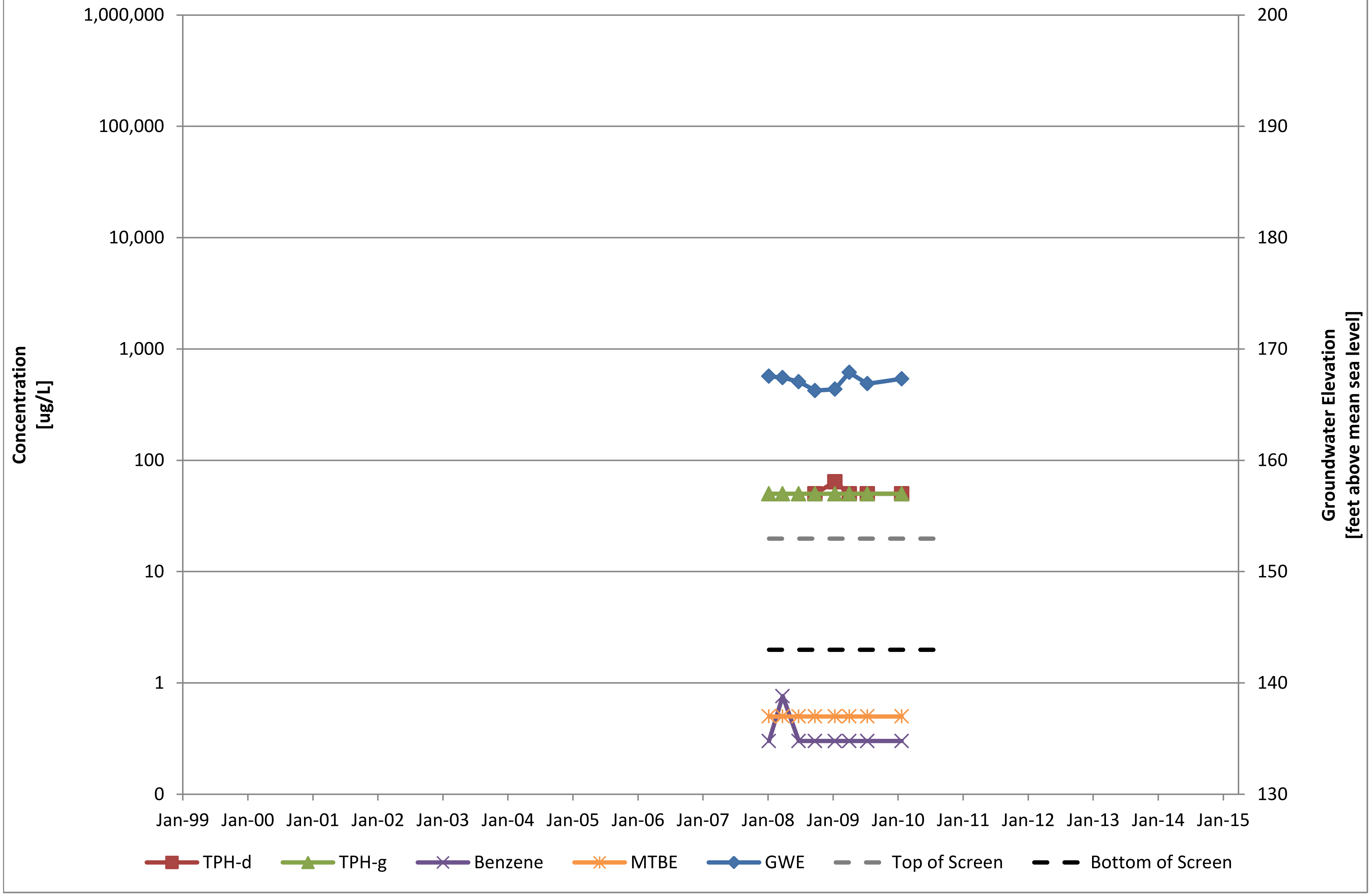

MW-6 Hydrograph
(Abandoned August 2010)
Concentration [ug/L]
1,000,000
100,000
10,000
1,000
100
10
1
0
Groundwater Elevation [feet above mean sea level]
200
190
180
170
160
150
140
130
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
TPH-d
TPH-g
Benzene
MTBE
GWE
Top of Screen
Bottom of Screen

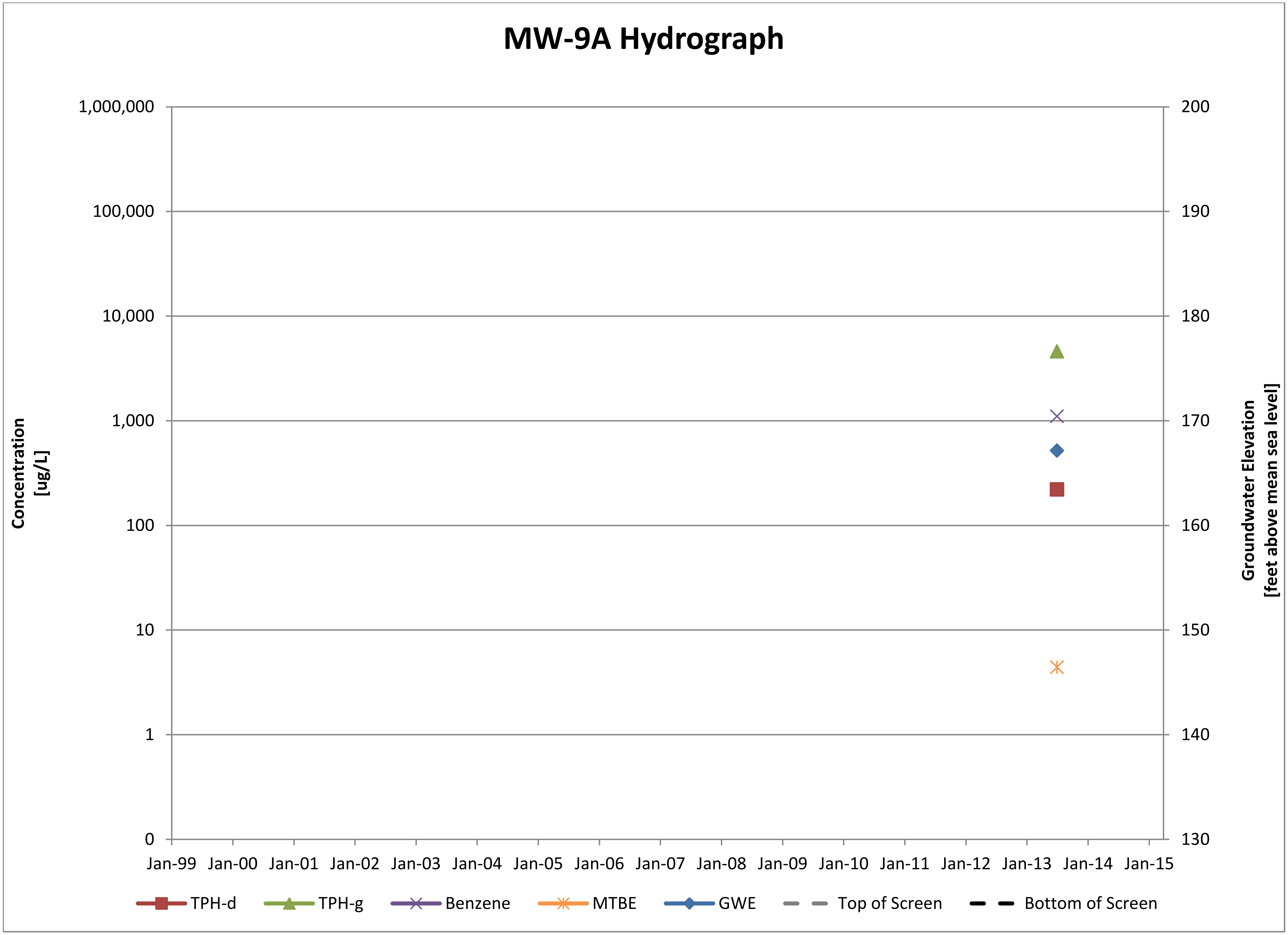
MW-7 Hydrograph



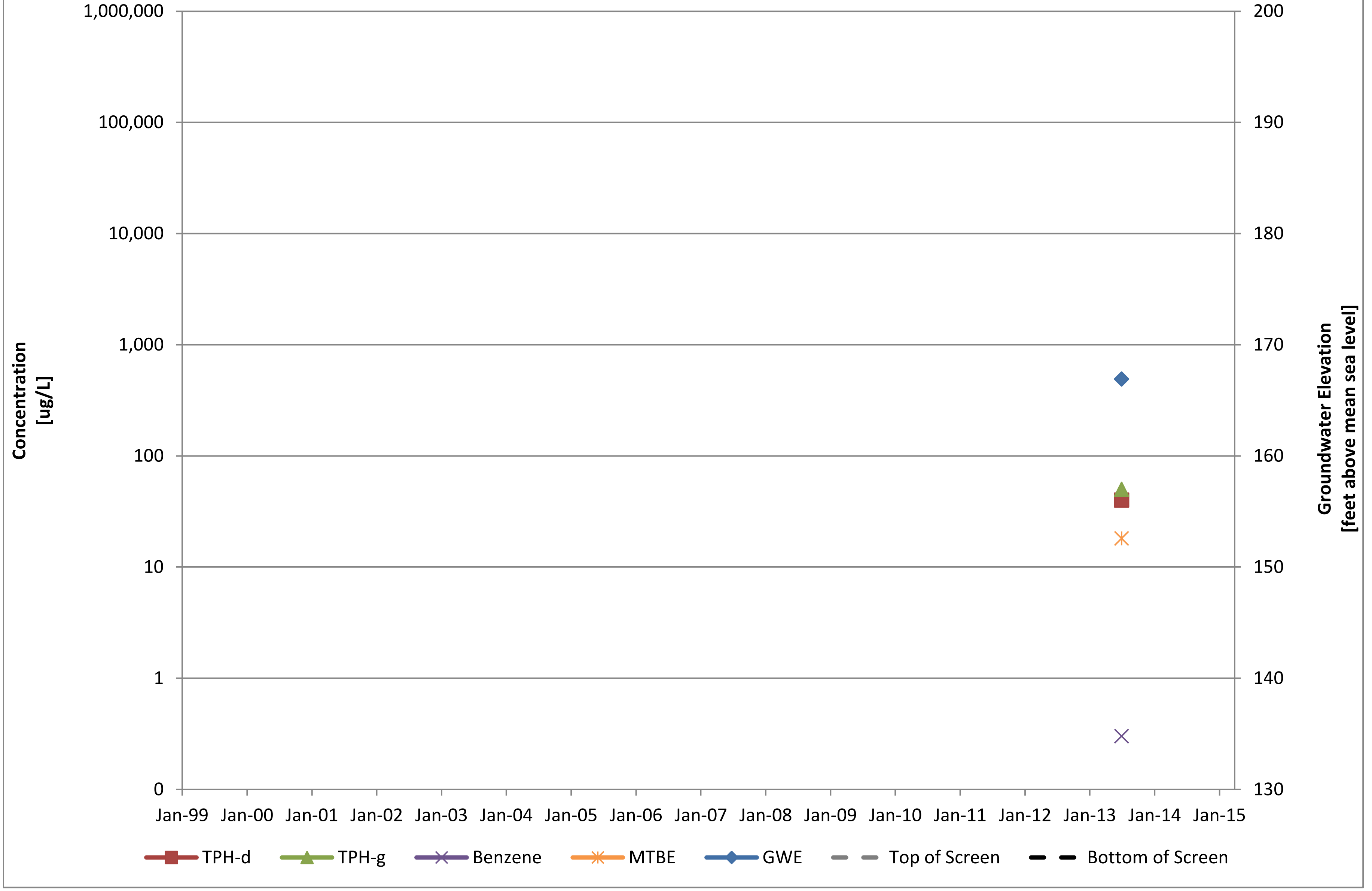
MW-8 Hydrograph

(Abandoned August 2010)

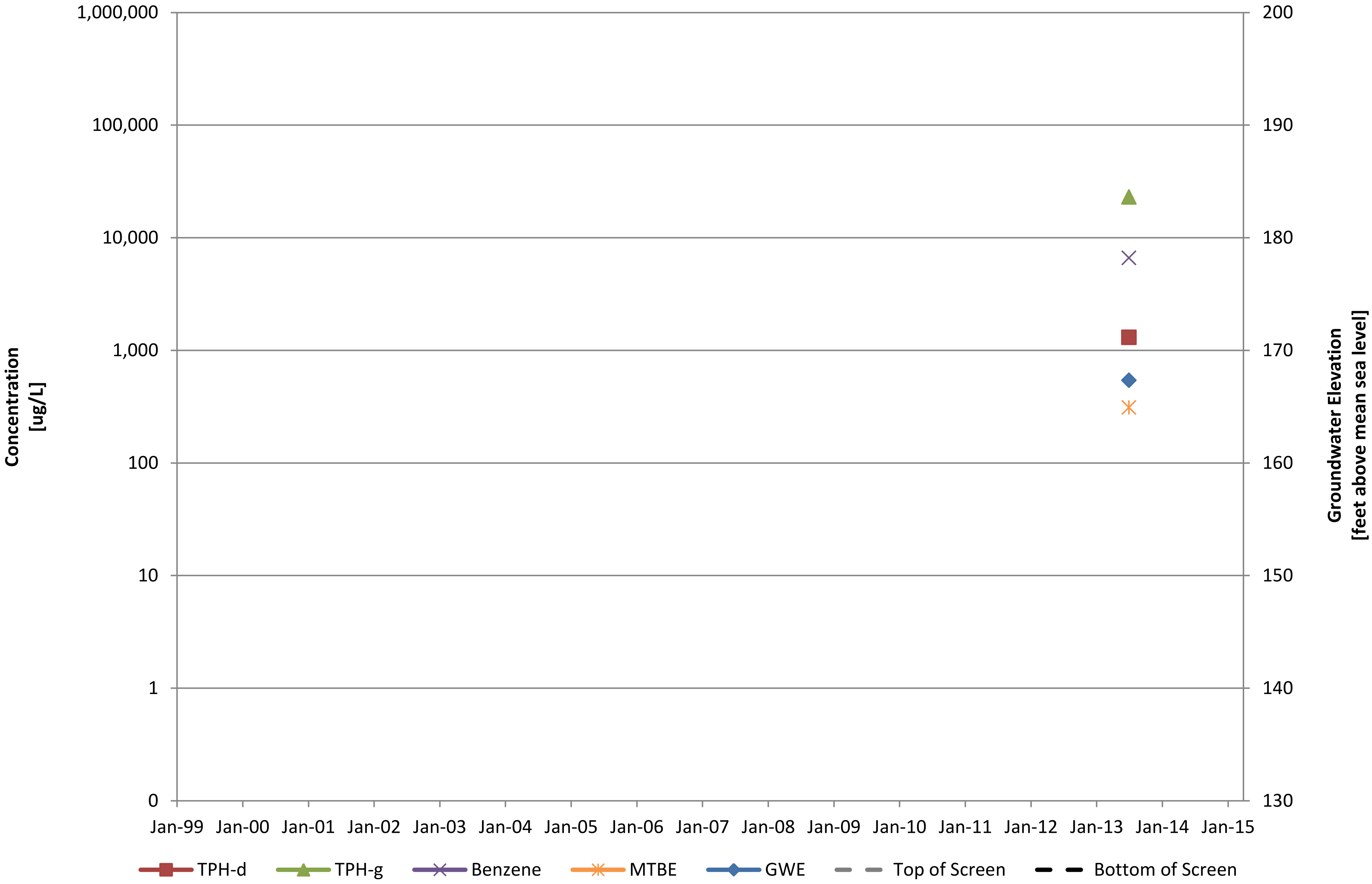


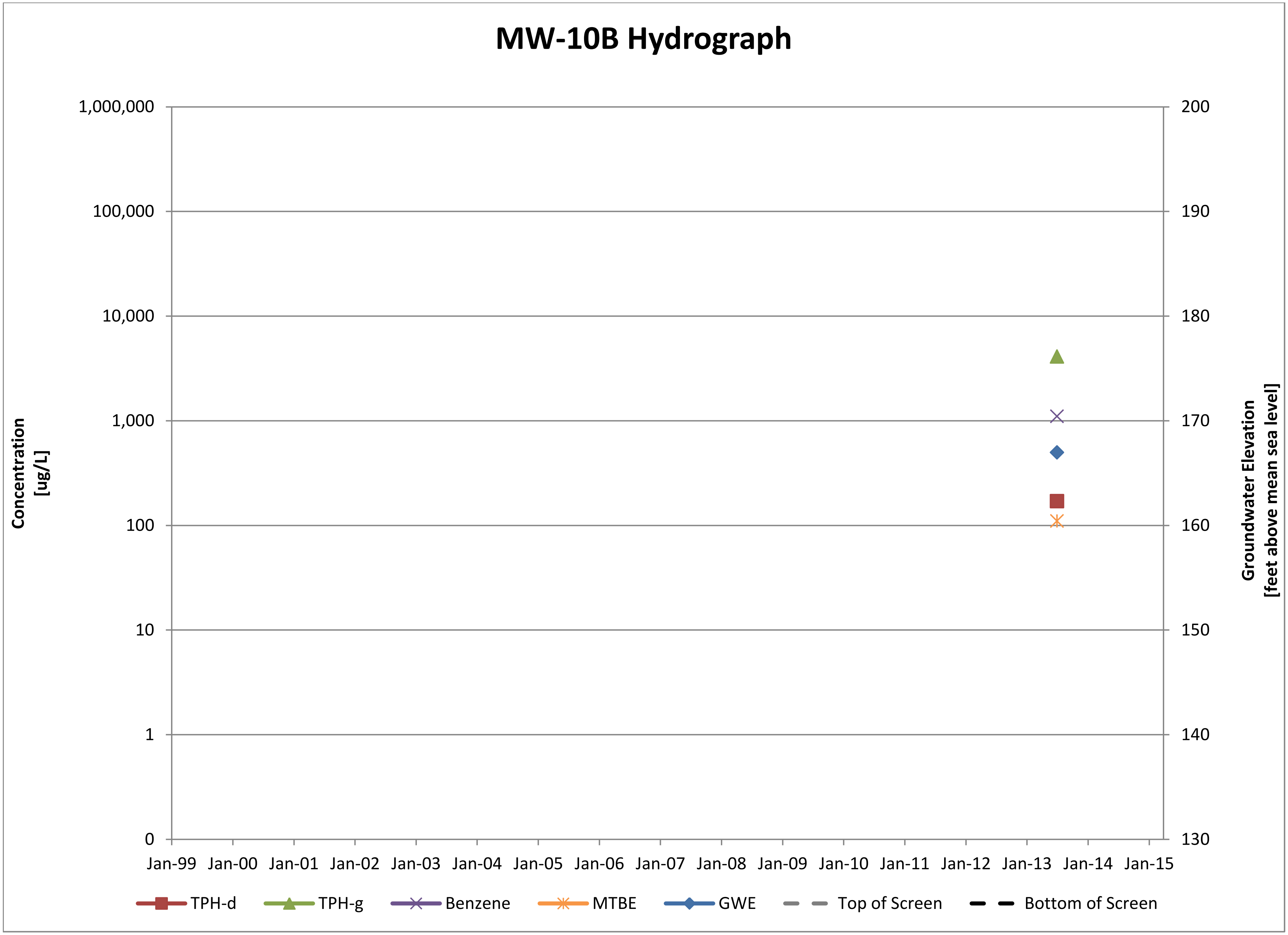

MW-9A Hydrograph
Concentration [ug/L]
1,000,000
100,000
10,000
1,000
100
10
1
0
Groundwater Elevation [feet above mean sea level]
200
190
180
170
160
150
140
130
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
TPH-d
TPH-g
Benzene
MTBE
GWE
Top of Screen
Bottom of Screen

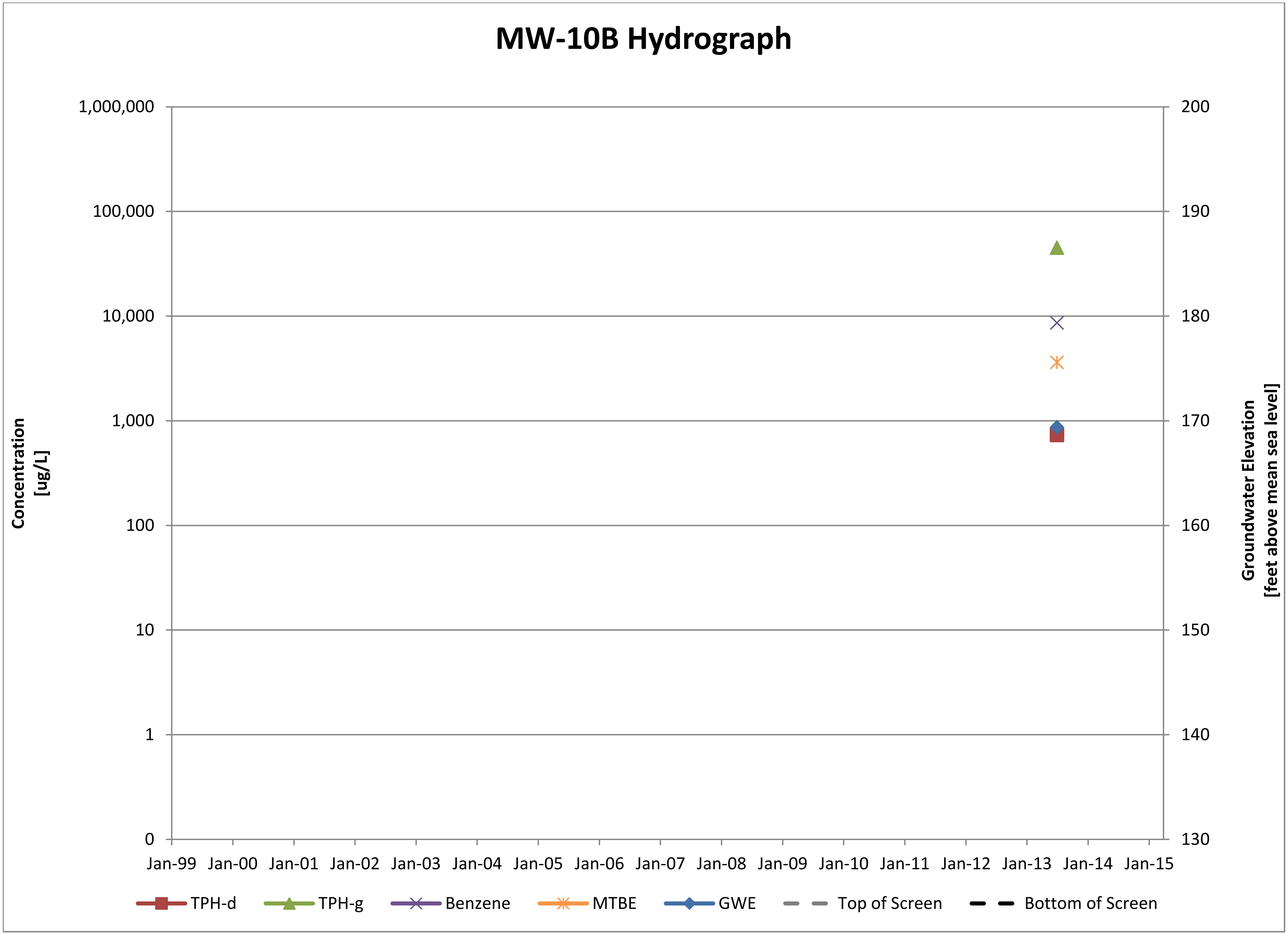
MW-9B Hydrograph

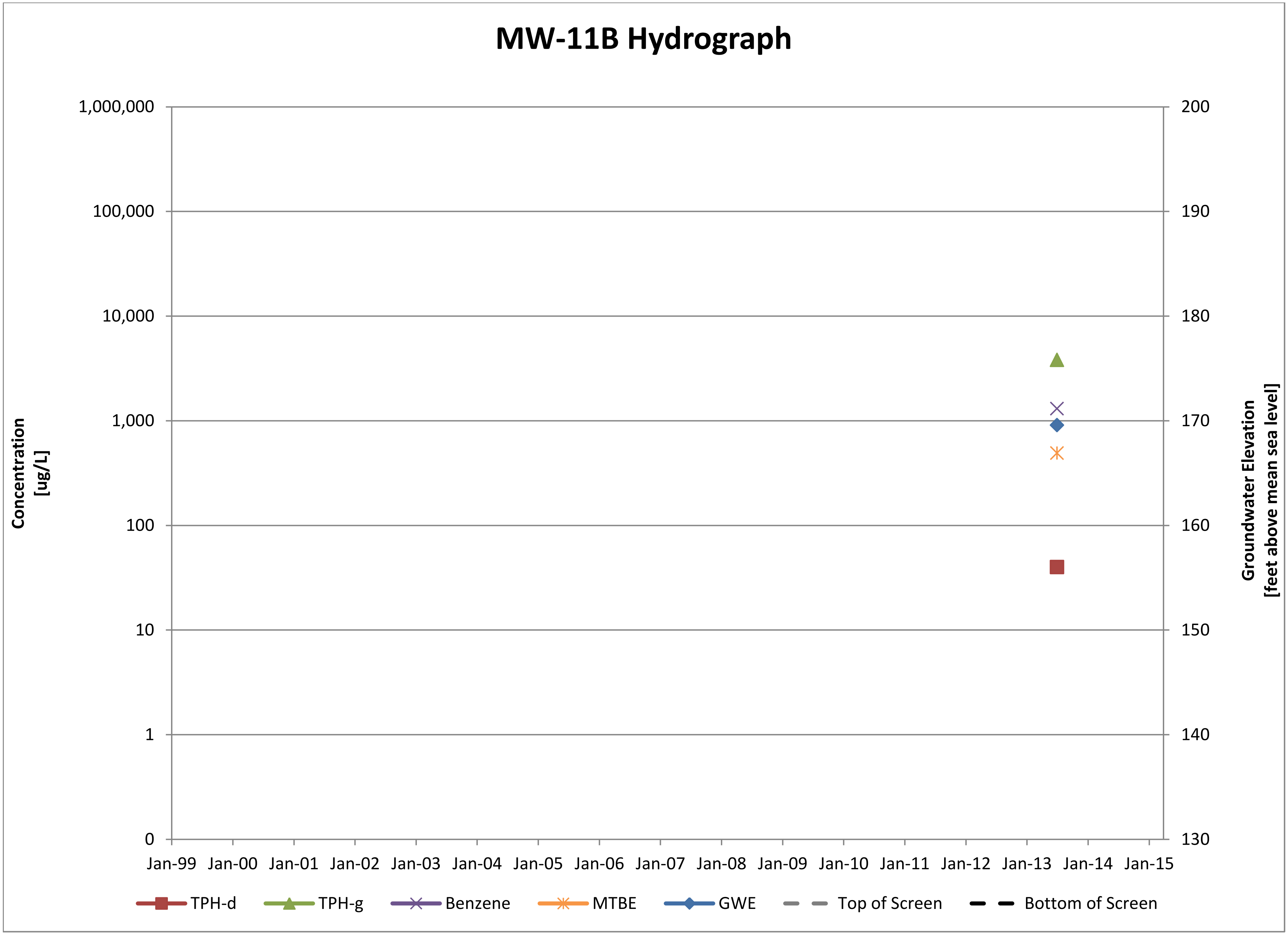


MW-10A Hydrograph




MW-10B Hydrograph
Concentration [ug/L]
1,000,000
100,000
10,000
1,000
100
10
1
0
Groundwater Elevation [feet above mean sea level]
200
190
180
170
160
150
140
130
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
TPH-d
TPH-g
Benzene
MTBE
GWE
Top of Screen
Bottom of Screen


MW-10B Hydrograph
Concentration [ug/L]
1,000,000
100,000
10,000
1,000
100
10
1
0
Groundwater Elevation [feet above mean sea level]
200
190
180
170
160
150
140
130
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
TPH-d
TPH-g
Benzene
MTBE
GWE
Top of Screen
Bottom of Screen


MW-11B Hydrograph
Concentration [ug/L]
1,000,000
100,000
10,000
1,000
100
10
1
0
Groundwater Elevation [feet above mean sea level]
200
190
180
170
160
150
140
130
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
TPH-d
TPH-g
Benzene
MTBE
GWE
Top of Screen
Bottom of Screen

Appendix C

Standard Operating Procedures

SOP NUMBER: 7115

Subsurface Soil Sampling by Split Spoon

Date:	3rd Qtr. 1994
Revision Number:	3
Author:	Charles Martin
Discipline:	Geosciencies

1.0 PURPOSE AND APPLICABILITY

1.1 Purpose and Applicability

This Standard Operating Procedure (SOP) describes the methods used in obtaining subsurface soil samples for physical and/or chemical analysis. Subsurface soil samples are obtained in conjunction with soil boring programs and provide information as to the physical and/or chemical makeup of the subsurface environment.

The purpose of this SOP is to provide a description of a specific method or procedure to be used in the collection of subsurface soil samples. Subsurface soil is defined as unconsolidated material which may consist of one or a mixture of the following materials: sand, gravel, silt, clay, peat (or other organic soils), and fill material. Subsurface soil sampling, conducted in accordance with this SOP will promote consistency in sampling and provide a basis for sample representativeness.

This SOP covers subsurface soil sampling by split-spoon only, as this is the means most often used for obtained samples of unconsolidated deposits. Other types of equipment are available for use in subsurface soil sampling, including thin-wall tube samplers (Shelby tubes), piston samplers, and continuous core barrel samplers. Information on the use of these other sampling devices may be found in several available drilling handbooks and respective state and/or federal agency technical guidance documents. The American Society for Testing and Materials (ASTM) also provides procedures for use of split-spoon and other sampling devices.

Deviations from this SOP to accommodate other regulatory requirements should be reviewed in advance of the field program, should be explained in the project work plan, and must be documented in the field project notebook when they occur.

1.2 General Principles

Split-spoon subsurface soil sampling generally requires use of a drilling rig and typically the hollow-stem auger or other common drilling method to generate a borehole in which to use the split-spoon sampler. The split-spoon sampler is inserted through the augers (or other type of drill casing) then is driven into the subsurface soil with a weighted hammer. The sampler is then retrieved and opened to reveal the recovered soil sample. Soil samples may be collected at a continuous interval or at pre-selected vertically spaced intervals within the borehole.

1.3 Quality Assurance Planning Considerations

Sampling personnel should follow specific quality assurance guidelines as outlined in the site-specific Quality Assurance Project Plan (QAPP). Proper quality assurance requirements should be provided which will allow for collection of representative samples from representative sampling points. Quality assurance requirements outlined in the QAPP typically suggest the collection of a sufficient quantity of field duplicate, field blank, and other samples.

1.4 Health and Safety Considerations

Subsurface soil sampling may involve chemical hazards associated with the types of contaminants potentially encountered and will always involve potential physical hazards associated with use of drilling equipment. When sampling is performed in materials which may contain hazardous constituents, or when the quality assurance objectives of the project require the use of hazardous solvents, adequate Health and Safety measures must be taken to protect sampling personnel. These measures must be addressed in the project Health and Safety Plan (HASP). This plan must be approved by the project Health and Safety Officer before work commences, must be distributed to all personnel performing sampling, and must be adhered to as field activities are performed.

2.0 RESPONSIBILITIES

2.1 Drilling Subcontractor

It will be the responsibility of the drilling subcontractor to provide the necessary materials for obtaining subsurface soil samples. This generally includes one or more split-spoon samplers in good operating condition and sample containers used for stratigraphic characterization samples (sample containers for environmental samples should be provided by the designated analytical laboratory). It is the drilling subcontractor's responsibility to provide and maintain their own boring logs if desired. Equipment decontamination materials should also be supplied by the subcontractor and should meet project specifications.

2.2 Project Geologist/Sampling Engineer

It will be the responsibility of the project geologist/sampling engineer to conduct subsurface soil sampling in a manner which is consistent with this SOP. The project geologist/sampling engineer will observe all activities pertaining to subsurface soil sampling to ensure that the SOP is followed, and to record all pertinent data onto a boring log. It is also the project geologist/sampling engineer's responsibility to indicate the specific targeted sampling depth or sampling interval to the drilling subcontractor. The project geologist/sampling engineer is also responsible for the collection of representative environmental or stratigraphic characterization samples once the sampling device has been retrieved and opened. Additional sample collection responsibilities include labeling, handling, and storage of samples until further chain-of-custody procedures are implemented.

3.0 REQUIRED MATERIALS

In addition to those materials provided by the subcontractor, the project geologist/sampling engineer will require:

- Project Sampling Plan, QAPP, and HASP
- Boring logs
- Teaspoon or spatula (stainless steel is recommended)
- Sample kit (bottles, labels, custody records and tape, cooler)
- Sample collection pen
- Folding rule or tape measure
- Equipment decontamination materials
- Health and safety equipment (as required by HASP)
- Field project notebook/pen

4.0 METHOD

4.1 General Method Description

Split-spoon sampling devices are typically constructed of steel and are most commonly available in lengths of 18 and 24 inches and diameters of 1.5 to 3 inches. The split-spoon consists of a tubular body with two halves that split apart lengthwise, a drive head on the upper end with a ball-check valve for venting, and a hardened steel cutting shoe at the bottom. The soil sample enters the split-spoon through the cutting shoe as the device is driven into the ground. A replaceable plastic or metal basket is often inserted into the shoe to assist with retaining samples. Once the sampler is retrieved, the drive head and cutting shoes are removed and the split-spoon halves are then separated, revealing the sample.

Sample depth intervals are usually defined on a project-specific basis with these requirements specified in the project sampling plan. Sampling intervals typically range from one (1) sample per five (5) feet of drilling to continuous sampling where the entire drilled interval is sampled.

Subsurface soil sampling is usually accomplished as part of a drilling program where a soil boring is advanced with drilling equipment to the designated depth prior to collection of a representative sample. The general procedures outlined briefly in the following section provide requirements for advancing drill casing/augers in preparation for sampling.

4.2 General Procedures - Borehole Preparation

4.2.1 Advancing Casing/Augers

Soil borings that are completed for soil sampling purposes are typically advanced using hollow-stem augers and sometimes drive-and-wash or other casing methods. The casing/augers must be of sufficient diameter to allow for soil sampling at a minimum. The casing/augers will be advanced according to project requirements to the required depth for sampling. If hollow-stem augers are used, a temporary plug shall be used in the lead auger to prevent the auger from becoming filled with drill cuttings while drilling is in progress.

4.2.2 Obstructions

For those borings which encounter obstructions, the casing/augers will be advanced past or through the obstruction if possible. Caution should be exercised when obstructions are encountered and an effort made to identify the obstruction before drilling is continued. If the obstruction is not easily drilled through or removed, the boring should be relocated to an adjacent location.

4.2.3 Use of Added Water

The use of added or recirculated water during drilling is permitted when necessary. Use of extraneous water should be minimized or avoided if possible as it may impact sample quality. Water usage should be documented in the field notebook. Sampling and analysis of added or recirculated water may be required for quality assurance purposes (refer to QAPP). If a well is installed within the completed borehole, removal of the added water may be required.

4.3 Sampling Procedure

4.3.1 Equipment Decontamination

Each split-spoon must be decontaminated prior to its initial use and following collection of each soil sample. Site-specific requirements for equipment decontamination should be outlined within the Project Sampling Plan. Equipment decontamination procedures are also outlined within SOP 7600 - Decontamination of Equipment.

4.3.2 Standard Penetration Test

The drilling subcontractor will lower the split-spoon into the borehole. Samples are generally obtained using the Standard Penetration Test (SPT) in accordance with ASTM standards (ASTM D 1586-84). Following this method, the sampler will be driven using the 140-pound hammer with a vertical free drop of 30 inches using two turns of the rope on the cathead. The number of hammer blows required for every 6 inches of penetration will be recorded on the boring log. Blowcount information is used as an indicator of soil density for geotechnical as well as stratigraphic logging purposes. Once the split-spoon has been driven to its fullest extent, or to refusal, it will be removed from the borehole.

4.3.3 Sample Recovery

The split-spoon will be immediately opened upon removal from the casing/auger. The open sampler shall then be screened for volatile organics with a photoionization device (PID) if required by the Project Sampling Plan. If the Sampling Plan also requires individual soil sample headspace screening for volatile organic compounds, then a small portion of the split-spoon sample shall be removed and properly contained for that purpose.

Sample recovery will be determined by the project geologist/sampling engineer who will examine the soil core once the sampler is opened. The length of sample shall then be measured with a folding rule or tape measure. Any portion of the split-spoon contents which are not considered part of the true sample (i.e., heaved soils) will be discarded. If the sample recovery is considered inadequate for sample characterization or analytical testing purposes, another sample should be collected from the next vertical interval if possible before drilling is reinitiated.

Adequate sample recovery for stratigraphic logging purposes and/or headspace organic vapor testing purposes should be approximately 6 inches. Adequate sample recovery for analytical testing purposes should be a minimum of 12 inches and is somewhat dependent on the type of analytical testing required. In some cases, continuous sampling over a short interval, and compositing of the sample, may be required to satisfy analytical testing requirements. Larger diameter samplers may be used if large volumes of soil are required for analytical testing.

4.3.4 Sample Containment - General

Once retrieved, the sample will be removed from the split-spoon with a teaspoon or spatula and placed into the appropriate sample container. The sample will be split if necessary to meet sampling program requirements. Sample splitting may be necessary to provide individual samples for headspace testing, visual characterization, physical testing, analytical testing, or simply for archiving purposes. In general, most sampling programs are structured around environmental characterization needs; therefore, sample portions required for analytical testing should be collected first. The Project Sampling Plan and QAPP provides specific sample container requirements for each type of sample and should be referred to for guidance.

Once filled, the sample containers should be properly capped, cleaned, and labeled, and chain-of-custody and sample preservation procedures initiated. Sampling equipment should then be properly decontaminated.

4.3.5 Sample Containment - Volatile Organic Analyses

Collection of subsurface soil samples for volatile organic analysis (VOA) is slightly more complex than collection of samples for other routine chemical or physical testing primarily because of the concern for the potential loss of volatiles during the sample collection procedure. To limit the potential for loss of volatiles, the soil sample needs to be obtained as quickly and as directly as possible from the split-spoon. This generally means that the VOA sample is to be collected and placed into the appropriate sample container first. The VOA sample should also be obtained from a discrete portion of the entire sample interval and not composited or homogenized. The remainder of the recovered sample can then be composited, homogenized or split to meet the other testing requirements. The boring log and/or sample logbook should be filled out to indicate actual sample collection depths for both VOA samples and other portions of the sample which may have been composited over a larger vertical interval.

5.0 QUALITY CONTROL

Quality control requirements are dependent on project-specific sampling objectives. The QAPP will provide requirements for sample preservation and holding times, sample container types, sample packaging and shipment, as well as requirements for the collection of various quality assurance samples such as trip blanks, field blanks, equipment blanks, and field duplicate samples.

6.0 DOCUMENTATION

Various forms are required to ensure that adequate documentation is made of sample collection activities. These forms include:

- Boring logs
- Field log books
- Sample collection records
- Chain-of-custody records
- Shipping labels

Boring logs (Figure 1) will provide visual and descriptive information for each sample collected and are often the most critical form of documentation generated during a sampling program. The field log book is kept as a general log of activities. Chain-of-custody forms are transmitted with the samples to the laboratory for sample tracking purposes. Shipping labels are required if sample coolers are to be transported to the laboratory by a third party (courier service). Original copies of these records should be maintained in the appropriate project files.

7.0 REFERENCES

ASTM D 1586-84

Figure 1

R:\pubs\mw97\SOPs\7115\fig-1.doc

Sheet 1 of __

BORING LOG

Project No. ____________ Date – Start ____________ Finish ____________ Boring ____________

Project Name ____________ Drilling Co. ____________

Location ____________ Drilling Method ____________

Total Depth ____________ Inspector ____________ Reviewer ____________

Remarks ____________

Depth Feet	Sample				Graphic Log	Lithologic Description	Equipment Installed
	Type & No.	Blows per 6 in.	Depth Range	Rec.			

SOP NUMBER: 7220

Monitoring Well Construction and Installation

Date: 3rd Qtr., 1995
Revision Number: 4
Author: Charles Martin
Discipline: Geosciences

1.0 PURPOSE AND APPLICABILITY

1.1 Purpose and Applicability

This SOP provides guidance for installing groundwater monitoring wells. Monitoring wells are installed to monitor the depth to groundwater, to measure aquifer properties, and to obtain samples of groundwater for chemical analysis.

This SOP is applicable to installation of single monitoring wells within a borehole. The construction and installation of nested, multilevel or other special well designs is not covered within this SOP as these type of wells are not frequently constructed. This SOP applies to both overburden and bedrock monitoring wells.

Some states and EPA Regions have promulgated comprehensive guidelines for monitoring well construction and for subsurface investigation procedures. Deviations from this SOP to accommodate other regulatory requirements should be reviewed in advance of the field program, should be explained in the project work plan, and must be documented in the field project notebook when they occur.

1.2 General Principles

Monitoring well construction and installation generally involves drilling a borehole using conventional drilling equipment, installing commercially available well construction and filter/sealing materials, and development of the well prior to sampling. This SOP covers well construction and installation methods only. Borehole drilling and well development methods are covered under SOP-7115 (Subsurface Soil Sampling) and SOP-7221 (Monitoring Well Development), respectively.

1.3 Quality Assurance Planning Considerations

Field personnel should follow specific quality assurance guidelines as outlined in the site-specific QAPP.

The following aspects of monitoring well design and installation procedures depend on project-specific objectives which should be addressed in the QAPP and in the project work plan:

- Borehole drilling method and diameter,
- Type of construction materials for well screen, riser, filter pack and seals,
- Diameter of well materials,
- Length of well screen,
- Location, thickness, and composition of annular seals, and
- Well completion and surface protection requirements.

1.4 Health and Safety Considerations

Monitoring well installation may involve chemical hazards associated with materials in the soil or groundwater being investigated; and always involves physical hazards associated with drilling equipment and well construction methods. When wells are to be installed in locations where the aquifer and/or overlying materials may contain chemical hazards, a Health and Safety Plan (HASP) must be prepared and approved by the Health and Safety Officer before field work commences. This plan must be distributed to all field personnel and must be adhered to as field activities are performed.

2.0 RESPONSIBILITIES

2.1 Drilling Subcontractor

It is the responsibility of the drilling subcontractor to provide the necessary equipment for well construction and installation. Well construction materials should be consistent with project requirements.

2.2 Surveying Subcontractor

It is the responsibility of the surveying subcontractor to provide one or more of the following well measurements as specified in the project work plan: ground surface elevation, horizontal well coordinates, top of well casing elevation (i.e., top-of-casing, or measuring point elevation), and/or top of protective casing elevation.

2.3 Project Geologist/Engineer

It is the responsibility of the Project Geologist/Engineer to directly oversee the construction and installation of the monitoring well by the drilling subcontractor to ensure that the well-installation specifications defined in the project work plan are adhered to, and that all pertinent data are recorded on the appropriate forms.

2.4 Project Manager

It is the responsibility of the Project Manager to ensure that each project involving monitoring well installation is properly planned and executed.

3.0 REQUIRED MATERIAL

3.1 Well Construction Materials

Well construction materials are usually provided by the drilling subcontractor and most often consist of commercially available flush-threaded well screen and riser pipe constructed of PVC or stainless steel with a minimum 2-inch inside diameter. The length of the screen and the size of the screen slots should be specified in the project work plan.

3.2 Well Completion Materials

Well completion materials include silica sand, bentonite, cement, protective casings and locks. Completion materials are generally provided by the drilling subcontractor.

3.3 Other required materials include the following:

- Potable water supply
- Fiberglass or steel measuring tape
- Water level indicator
- Well construction diagrams (Figure 1)
- Waterproof marker or paint (to label wells)
- Health and Safety supplies

- Equipment decontamination materials
- Field project notebook/pen

4.0 METHOD

4.1 General Preparation

4.1.1 Borehole Preparation

Standard drilling methods should be used to achieve the desired drilling/well installation depths specified in the project work plan. Soil sampling, if conducted, should be conducted in accordance with ENSR SOP-7115 (Subsurface Soil Sampling).

The diameter of the borehole must be a minimum of 2 inches greater than the outside diameter of the well screen or riser pipe used to construct the well. This is necessary so that sufficient annular space is available to install filter packs, bentonite seals, and grout seals. Bedrock wells may require reaming after coring in order to provide a large enough borehole diameter for well installation.

Rotary drilling methods requiring bentonite-based drilling fluids, if selected, should be used with caution to drill boreholes that will be used for monitoring well installation. The bentonite mud builds up on the borehole walls as a filter cake and permeates the adjacent formation, potentially reducing the permeability of the material adjacent to the well screen.

If water or other drilling fluids have been introduced into the boring during drilling or well installation, samples of these fluids should be obtained and analyzed for chemical constituents that may be of interest at the site. In addition, an attempt should be made to recover the quantity of fluid or water that was introduced, either by flushing the borehole prior to well installation and/or by overpumping the well during development.

4.1.2 Well Material Decontamination

Although new well materials (well screen and riser pipe) generally arrive at the site boxed and sealed within plastic bags, it is sometimes necessary to decontaminate the materials prior to their use. Well materials should be inspected by the project geologist/engineer upon delivery to check cleanliness. If the well materials appear dirty, or if local or regional regulatory guidance requires decontamination, then well material decontamination should be performed by the drilling subcontractor in accordance with ENSR SOP-7600 (Decontamination of Equipment).

4.2 Well Construction Procedure

4.2.1 Depth Measurement

Once the target drilling depth has been reached, the drilling subcontractor will measure the total open depth of the borehole with a weighted, calibrated tape measure. Adjustments of borehole depth can be made at this time by drilling further or installing a small amount of sand filter material to achieve the desired depth. If drilling fluids were used during the drilling process, the borehole should be flushed at this time using potable water. The water table depth may also be checked with a water level indicator if this measurement cannot be obtained with the calibrated tape.

4.2.2 Centralizers

In order to install a well which is centered within the borehole, it is recommended that centralizers be used. Centralizers are especially helpful for deep well installations where it may be difficult to position the well by hand. Centralizers may not be necessary on shallow water table well installations where the well completion depth is within 25 feet of the ground surface.

4.2.3 Well Construction

The well screen and riser pipe generally are assembled by hand as they are lowered into the borehole. Before the well screen is inserted into the borehole, the full length of the slotted portion of the well screen as well as the unslotted portion of the bottom of the screen should be measured with the measuring tape. These measurements should be recorded on the well construction diagram.

After the above measurement has been taken, the drilling subcontractor may begin assembling the well. As the assembled well is lowered, care should be taken to ensure that it is centered in the hole if centralizers are not used. The well should be temporarily capped before filter sand and other annular materials are installed.

4.2.4 Filter Sand Installation

The drilling subcontractor should fill the annular space surrounding the screened section of the monitoring well to at least 1 foot above the top of the screen with an appropriately graded, clean sand or fine gravel. In general, the filter pack should not extend more than 3 feet above the top of the screen to limit the thickness of the monitoring zone. If coarse filter materials are used, an additional 1-foot thick layer of fine sand should be placed immediately above the filter pack to prevent the infiltration of sealing components (bentonite or grout) into the filter pack. As the filter pack is placed, a weighted tape should be lowered in the annular space to verify the depth to the top of the layer. Depending upon depth, some time may be required for these materials to settle. If necessary, to eliminate possible bridging or creation of voids, placement of the sand pack may require the use of a tremie pipe. Tremie pipe sandpack installations are generally suggested for deep water table wells and for wells which are screened some distance beneath the water table.

4.2.5 Bentonite Seal Installation

A minimum 2-foot thick layer of bentonite pellets or slurry seal will be installed by the drilling subcontractor immediately above the well screen filter pack in all monitoring wells. The purpose of the seal is to provide a barrier to vertical flow of water in the annular space between the borehole and the well casing. Bentonite is used because it swells significantly upon contact with water. Pellets generally can be installed in shallow boreholes by pouring them very slowly from the surface. If they are poured too quickly, they may bridge at some shallow, undesired depth. As an option, powdered bentonite may be mixed with water into a very thick slurry and a tremie pipe used to inject the seal to the desired depth.

4.2.6 Annular Grout Seal Installation

This grout seal should consist of a bentonite/cement mix with a ratio of bentonite to cement of between 1:5 and 1:20. The grout ratio should be chosen based on site conditions with a higher percentage of bentonite generally used for formations with higher porosity. A mud balance should be used if a specific mud density is required at a particular site. Grout slurry should be pumped into the annular space using a side-discharging tremie pipe located about 2 feet above the sand pack. Side discharge will help preserve the integrity of the sand pack.

In situations where the monitoring well screen straddles the water table, the seal will be in the unsaturated zone and pure bentonites (pellets or powder) will not work effectively as seals without hydration. Dry bentonite may be used if sufficient time to hydrate the seal is allowed. Seal hydration requires the periodic addition of clean water. Optionally, seals in this situation may be a cement/bentonite mixture containing up to 10 percent bentonite by weight. This type of mixture shall be tremied to the desired depth in the borehole.

The borehole annulus will be grouted with seal materials to within 3 feet of the ground surface. Drill cuttings, even those known not to be contaminated, will not be used as backfill material.

4.2.7 Well Completion

The drilling subcontractor will cut the top of the well to the desired height and install a vented (if possible), locking cap. The upper portion of the well casing can optionally be drilled to allow venting. Well casings are usually cut to be a certain height above ground surface (typically 2.5 to 3 feet) or are cut to be flush with the ground surface.

4.2.8 Protective Casing/Concrete Pad Installation

The drilling subcontractor will install a steel guard pipe on the well as a protective casing. The borehole around the guard pipe will be dug out to an approximate 2 to 3-foot radius to a minimum depth of 1 foot at the center and 6 inches at the edges. After installing the protective casing, the excavation will be filled with a concrete/sand mix. The surface of the concrete pad will be sloped so that drainage occurs away from the well. Flush-mount protective casings may not require an extensive concrete pad and should be completed such that they are slightly mounded above the surrounding surface to prevent surface water from running over or ponding on top of the casing. It should be noted, however, that in areas subject to snowfall, flush-mount casings may have to be installed so that they are entirely flush with the ground surface as they may be damaged by snow plows.

Above-ground protective casings should also be vented or should have non-air tight caps. Road box installations should not be vented. Installation of additional guard pipes may be necessary around above-ground well completions in traffic areas. Protective casings should be lockable to prevent unauthorized access.

4.2.9 Well Numbering

The project geologist/engineer will number each well casing with an indelible marker or paint to identify the well. This is particularly important with nested or paired wells to distinguish between shallow and deep wells. The well should be labeled on both the outside of the protective casing and inside beneath the protective casing lid.

4.2.10 Measuring Point Identification

The project geologist/engineer will mark the measuring point from which water level measurements will be made at a specific location along the upper edge of the well casing. PVC wells can easily be notched with a pocket knife or saw. Stainless steel wells (or PVC wells) can be marked with a waterproof marker on the outside of the well casing with an arrow pointing to the measuring point location. The measuring point is the point which will require surveying during the well elevation survey task.

4.2.11 Well Measurements

Upon completion, the following well measurements should be taken by the project geologist/engineer and recorded on the well construction diagram (Figure 1):

- Depth to static water level if water level has stabilized,
- Total length of well measured from top-of-well casing,
- Height of well casing above ground surface,
- Height of protective casing above ground surface,
- Depth of bottom of protective casing below ground surface (may be estimated).

Well screen filter pack, bentonite seal and annular seal thicknesses and depths should also be recorded on the well construction diagram.

4.2.12 Disposal of Drilling Wastes

Drill cuttings and other investigation-derived wastes such as drilling mud or well development/purge water must be properly contained and disposed of. Site-specific requirements for collection and removal of these waste materials should be outlined within the project work plan. Containment of these materials should be performed by the drilling subcontractor.

4.2.13 Well Development

At some point after installation of a well and prior to use of the well for water-level measurements or collection of water quality samples, development of the well shall be undertaken in accordance with ENSR SOP-7221 (Monitoring Well Development). Well development may be performed by the drilling subcontractor if contracted to do so, or by the project geologist/engineer or other project staff.

4.2.14 Well Elevation Survey

At the completion of the well installation program, all monitoring wells are usually surveyed to provide, at a minimum, the top-of-casing measuring point elevation for water level monitoring purposes. Other surveyed points which may be required by the project work plan include: ground surface elevation, top of protective casing elevation, and well coordinate position. Well elevation surveys are usually conducted by a surveying subcontractor.

5.0 QUALITY CONTROL

Certain quality control measures should be taken to ensure proper well completion.

5.1 The borehole will be checked for total open depth, and extended by further drilling or shortened by backfilling, if necessary, before any well construction materials are placed.

5.2 Water level and non-aqueous phase liquid (NAPL) presence will be checked during well installation to ensure that the positions of well screen, sand pack, and seal, relative to water level, conform to project requirements.

5.3 The depth to the top of each layer of packing (i.e., sand, bentonite, grout, etc.) will be verified and adjusted if necessary to conform to project requirements before the next layer is placed.

5.4 If water or other drilling fluids have been introduced into the boring during drilling or well installation, samples of these fluids may be required for analysis of chemical constituents of interest at the site.

6.0 DOCUMENTATION

All well construction data will be recorded on the Monitoring Well Construction Detail form (Figure 1). All wells will be referenced onto the appropriate site map. A field notebook and/or boring log will be used as additional means of recording data. In no case will the notebook or boring log take the place of the well construction diagram.

7.0 TRAINING/QUALIFICATIONS

Well construction and installation requires a moderate degree of training and experience as numerous drilling situations may occur which will require field decisions to be made. It is recommended that inexperienced personnel be supervised for several well installations before working on their own. Experienced drillers are also of great assistance with problem resolution in the field. Field personnel should be health and safety certified as specified by OSHA (29 CFR 1910.120(e)(3)(i)) to work on sites where hazardous waste materials are considered to be present.

8.0 REFERENCES

1. Standard References for Monitoring Wells, Massachusetts Department of Environmental Protection, WSC-310-91, 1991.

APPENDIX: DEFINITIONS

Annulus: The measured width between the borehole wall and the outside of the well screen or riser pipe.

Bentonite Seal: A granular, chip, or pellet-size bentonite material that is often used to provide an annular seal above the well screen filter pack. This seal is typically installed dry followed by in-place hydration with or without the addition of water. Hydrated bentonite is sometimes used as a grout seal.

Bottom Cap/Plug: Threaded or slip-on cap placed at the bottom of the well prior to installation. Often serves as a sump for accumulation of silt which settles within the well. The measured length from the lowermost well screen slot to the bottom of the bottom cap is known as the sump or tail pipe portion of the well.

Centralizers: Stainless steel expansion clamps which, when fitted to well screens or riser pipe, expand to contact the borehole walls positioning the well centrally within the open borehole. Centralizers assist with even positioning and distribution of filter pack and sealant materials and assist with maintaining well plumbness.

Expansion Cap/Well Cap: Cap used to cover the opening at the top of the well riser pipe. Expansion caps are equipped with a rubber gasket and threaded wing nut which, when turned, provides a watertight seal. Expansion caps may also be locked, and generally are recommended for use with flush-constructed wells where road box protective casings are also used. Other well caps may include slip-on or threaded caps made of the same material as the well casing.

Filter Pack: A well-graded, clean sand or gravel placed around the well screen to act as a filter in preventing the entry of very fine soil particles into the well.

Grout Seal: A cement/bentonite mixture used to seal a borehole that has been drilled to a depth greater than the final well installation depth or to seal the remaining borehole annulus once the well has been installed. Occasionally, pure cement or pure bentonite is used as a grout seal.

Measuring Point: A selected point at the top of the well casing (riser pipe) used for obtaining periodic water-level measurements. The measuring point should consist of either a notch or indelibly marked point on the upper surface of the casing. Typically, the highest point on the casing (if not level) is used as the measuring point. The measuring point is also the point that is surveyed when well elevation data is obtained.

Protective Casing: A locking metal casing, placed around that portion of the well riser pipe that extends above the ground surface. The protective casing is generally cemented in place when the concrete pad is constructed around the well.

Riser Pipe: The section of unperforated well casing material used to connect the well screen with the ground surface. Frequently, it is made of the same material and has the same diameter as the well screen. Riser pipe is typically available pre-cleaned and pre-threaded for immediate use.

Road Box: A protective casing that is flush-mounted with the ground around a well installation. Road boxes are used in areas where the monitoring well cannot extend above the ground surface for traffic or security reasons. Road boxes usually require a special key to open.

Tremie Pipe: A small diameter pipe which fits in the open borehole annulus and is used to inject filter sands or hydrated seal materials under pressure.

Well Screen: That portion of the well casing material that is perforated in some manner so as to provide a hydraulic connection to the aquifer. Typically a well screen is purchased pre-slotted, pre-cleaned, and pre-threaded for immediate use.

Vent Hole: Small diameter hole drilled in the upper portion of the well riser pipe which provides atmospheric venting of the well. Allows for constant equilibration of the water level with changing atmospheric conditions. In flood-prone areas, or with flush-mount wells, vent holes should not be used.

Figure 1 Monitoring Well Construction Detail

Client:

Project Number:

Site Location:

Well Location: *Coords:*

Method:

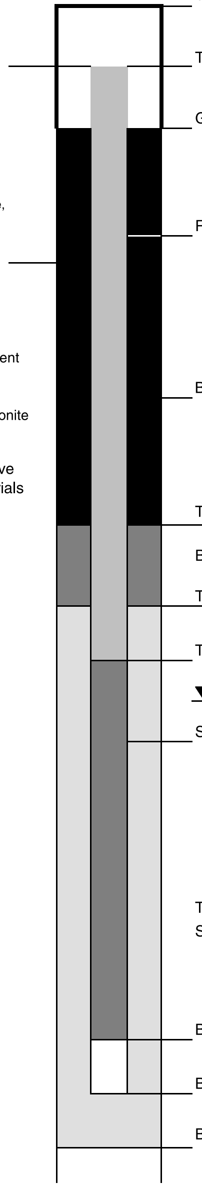
WELL ID:

Date installed:

Inspector:

Contractor:

MONITORING WELL CONSTRUCTION DETAIL



	Depth from G.S. (feet)	Elevation(feet) Datum ______
Top of Steel Guard Pipe	______	______
Top of Riser Pipe	______	______
Ground Surface (G.S.)	0.0	______
Top of Bentonite	______	______
Top of Sand	______	______
Top of Screen	______	______
▼ Stabilized Water Level	______	______
Bottom of Screen	______	______
Bottom of Tail Pipe:	______	______
Bottom of Borehole	______	______

Riser Pipe:

Length ______

Inside Diameter (ID) ______

Type of Material ______

______ % Cement

______ % Bentonite

______ % Native Materials

Bottom of Steel Guard Pipe

Bentonite Seal Thickness ______

Screen:

Length ______

Inside Diameter (ID) ______

Slot Size ______

Type of Material ______

Type/Size of sand ______

Sand Pack Thickness ______

Bottom of Tail Pipe:

Length ______

Borehole Diameter ______

Approved:

______ Signature

______ Date

Describe Measuring Point:

______

SOP NUMBER: 7221

Monitoring Well Development

Date:	4th Qtr., 1994
Revision Number:	2
Author:	Charles Martin
Discipline:	Geosciences

1.0 PURPOSE AND APPLICABILITY

1.1 Purpose and Applicability

This SOP describes the methods used for developing newly installed monitoring wells and/or existing wells which may require redevelopment/rehabilitation. This SOP is applicable to monitoring wells and/or small diameter recovery wells and piezometers.

Monitoring well development and/or redevelopment is necessary for several reasons:

- To improve/restore hydraulic conductivity of the surrounding formations as they have likely been disturbed during the drilling process, or may have become partially plugged with silt,

- To remove drilling fluids (water, mud), when used, from the borehole and surrounding formations, and

- To remove residual fines from well filter materials and reduce turbidity of groundwater, therefore, reducing the chance of chemical alteration of groundwater samples caused by suspended sediments.

Respective state or federal agency (regional offices) regulations may require specific types of equipment for use or variations in the indicated method of well development. Deviations from this SOP to accommodate other regulatory requirements should be reviewed in advance of the field program, should be explained in the project work plan, and must be documented in the field project notebook when they occur.

1.2 General Principles

Well development generally involves withdrawal of an un-specified volume of water from a well using a pump, surge block or other suitable method such that, when completed effectively, the well is in good or restored hydraulic connection with the surrounding water bearing unit and is suitable for obtaining representative groundwater samples or for other testing purposes.

1.3 Quality Assurance Planning Considerations

Field project personnel should follow specific quality assurance guidelines as outlined in the site-specific Quality Assurance Project Plan (QAPP) and/or Sampling Plan. The plan should indicate the preferred method of well development at a particular site based on project objectives, aquifer conditions, and agency requirements. Specific well performance criteria such as low turbidity values to be achieved following well development should also be specified as well as any requirements for collection/containerization and disposal of well development water.

1.4 Health and Safety Considerations

Monitoring well development may involve chemical hazards associated with materials in the soil or aquifer being characterized and may involve physical hazards associated with use of well development equipment. When wells are to be installed and developed on hazardous waste investigation sites, a Health and Safety Plan must be prepared and approved by the Health and Safety Officer before field work commences. This plan must be approved by the project Health and Safety Officer before work commences, must be distributed to all field project personnel, and must be adhered to as field activities are performed.

2.0 RESPONSIBILITIES

2.1 Project Geologist/Engineer

Development or oversight of development of new monitoring wells is the responsibility of the project geologist/engineer involved in the original installation of the well. Records of well development methods and results will be retained in the project file.

2.2 Project Manager

The project manager is responsible for ensuring that the appropriate method of well development has been chosen which best meets project objectives, site hydrogeologic conditions, and/or relevant regulatory requirements.

3.0 REQUIRED MATERIALS

Well development can be performed using a variety of methods and equipment. The specific method chosen for development of any given well is governed by the purpose of the well, well diameter and materials, depth, accessibility, geologic conditions, static water level in the well, and type of contaminants present, if any.

The following list of equipment, each with their own particular application, may be used to develop and/or purge monitoring wells.

3.1 Bailer Purging

A bailer is used to purge silt-laden water from wells after using other devices such as a surge block. In some situations, the bailer can be used to develop a well by bailing and surging, often accompanied with pumping. A bailer should be used for purging in situations where the depth to static water is greater than 25 feet and/or where insufficient hydraulic head is available for use of other development methods.

3.2 Surge Block Development

Surge blocks are commercially available for use with Waterra™-type pumping systems or may be manufactured using a rubber or teflon "plunger" attached to a rod or pipe of sufficient length to reach the bottom of the well. Well drillers usually can provide surge blocks if requested. A recommended design is shown in Figure 1.

3.3 Pump Development

A pump is often necessary to remove large quantities of silt-laden ground water from a well after using the surge block. In some situations, the pump alone can be used to develop the well and remove the fines by overpumping. Since the purpose of well development is to remove suspended solids from a well and surrounding filter pack, the pump must be capable of moving some solids without damage. The preferred pump is a submersible pump which can be used in both shallow and deep ground water situations. A centrifugal pump may be used in shallow wells but will work only where the depth to static ground water is less than approximately 25 feet. Pumping may not be successful in low-yielding aquifer materials or in wells with insufficient hydraulic head.

3.4 Compressed Gas Development

Compressed gas, generally nitrogen from a tank or compressed air through a compressor, can be used to both surge and develop a monitoring well. The method works by injection of compressed gas at the bottom of the water column, driving sediment-laden water to the surface. Compressed gas can also be used for "jetting" - a process by which the gas is directed at the slots in the well screen to cause turbulence (thereby disturbing fine materials in the adjacent filter pack). Compressed gas is not limited by any depth range.

Since the compressed gas will be used to "lift" water from the monitoring well, provisions must be made for controlling the discharge from contaminated wells. This is generally accomplished by attaching a "tee" discharge to the top of the casing and providing drums to contain the discharged water. Gas-lifting should never be done in contaminated wells without providing a means to control discharge.

3.5 Other Required Materials:

- Well development records (Figure 2)
- Health and Safety equipment
- Equipment decontamination materials
- Water quality instrumentation: nephelometer, pH, temperature, specific conductance meters, as required
- Field project notebook/pen

4.0 METHOD

4.1 General Preparation

4.1.1 Well Records Review: Well completion diagrams should be reviewed to determine well construction characteristics. Formation characteristics should also be determined from review of available boring logs.

4.1.2 Site Preparation: Well development, similar to groundwater sampling, should be conducted in as clean an environment as possible. This usually requires, at a minimum, placing sheet plastic on the ground to provide a clean working area for development equipment.

4.1.3 IDW Containment: Provisions should be in place for collection and management of investigation-derived wastes (IDW), specifically well development water and miscellaneous expendable materials generated during the development process. The collection of IDW in drums or tanks may be required depending on project-specific requirements. The QAPP should specify the requirements for IDW containment.

4.1.4 Water Level/Well Depth Measurement: The water level and well depth should be measured with a water level indicator and written on the well development record. This information is used to calculate the volume of standing water (i.e., the well volume) within the well.

4.1.5 Equipment Decontamination: All down-well equipment should be decontaminated prior to use in accordance with ENSR SOP-7600 (Decontamination of Equipment).

4.1.6 Removal of Drilling Fluids: Drilling fluids such as mud or water, if used during the drilling and well installation process, should be removed during the well development procedure. It is recommended that a minimum of 1.5 times the volume of added fluid be removed from the well during development. Drilling muds should initially have been flushed from the drilling casing during the well installation procedure with water added during the flushing process. If the quantity of added fluid is not known or could not be reasonably estimated, removal of a minimum of 10 well volumes of water is recommended during the development procedure.

4.2 Development Procedures

4.2.1 Development Method Selection

The construction details of each well shall be used to define the most suitable method of well development. Some consideration should be given to the potential degree of contamination in each well as this will impact IDW containment requirements.

The criteria for selecting a well development method include well diameter, total well depth, static water depth, screen length, the likelihood and level of contamination, and characteristics of the geologic formation adjacent to the screened interval.

The limitations, if any, of a specific procedure are discussed within each of the following procedures.

4.2.2 General Water Quality Measurements

Measure and record water temperature, pH, specific conductance, and turbidity periodically during development using the available water quality instruments. These measurements will aid in determining whether well development is proceeding efficiently, will assist in identifying when well development is complete, will determine whether the development process is effective or not with any given well and, potentially, may identify well construction irregularities (i.e., grout in well, poor well screen slot-size selection). Water quality parameters should be checked a minimum of 3 to 5 times during the development process.

4.2.3 Bailer Procedure

- As stated previously, bailers shall preferably not be used for well development but may be used in combination with a surge block to remove silt-laden water from the well.

- When using a bailer to purge well water; select the appropriate bailer, then tie a length of bailer cord onto the end of it.

- Lower the bailer into the screened interval of the monitoring well. Silt, if present, will generally accumulate within the lower portions of the well screen.

- The bailer may be raised and lowered repeatedly in the screened interval to further simulate the action of a surge block and pull silt through the well screen.

- Remove the bailer from the well and empty it into the appropriate storage container.

- Continue surging/bailing the well until sediment-free water is obtained. If moderate to heavy siltation is still present, the surge block procedure should be repeated and followed again with bailing.

- Check water quality parameters periodically.

4.2.4 Surge Block Procedure

- A surge block effectively develops most monitoring wells. This device first forces water within the well through the well screen and out into the formation, and then pulls water back through the screen into the well along with fine soil particles. Surge blocks may be manufactured to meet the design criteria shown in the example (Figure 1) or may be purchased as an adaptor to fit commercially available well purging systems such as the Waterra system.

- Insert the surge block into the well and lower it slowly to the level of static water. Start the surge action slowly and gently above the well screen using the water column to transmit the surge action to the screened interval. A slow initial surging, using plunger strokes of approximately 3 feet, will allow material which is blocking the screen to separate and become suspended.

- After 5 to 10 plunger strokes, remove the surge block and purge the well using a pump or bailer. The returned water should be heavily laden with suspended silt and clay particles. Discharge the purged water into the appropriate storage container.

- Repeat the process. As development continues, slowly increase the depth of surging to the bottom of the well screen. For monitoring wells with long screens (greater than 10 feet) surging should be undertaken along the entire screen length in short intervals (2 to 3 feet) at a time. Continue this cycle of surging and purging until the water yielded by the well is free of visible suspended material.

- Check water quality parameters periodically.

4.2.5 Pump Procedure

- Well development using only a pump is most effective in monitoring wells that will yield water continuously. Theoretically, pumping will increase the hydraulic gradient and velocity of groundwater near the well by drawing the water level down. The increased velocity will move residual fine soil particles into the well and clear the well screen of this material. Effective development cannot be accomplished if the pump has to be shut off to allow the well to recharge.

- When using a submersible pump or surface pump, set the intake of the pump or intake line in the center of the screened interval of the monitoring well.

- Pump a minimum of three well volumes of water from the well and raise and lower the pump line through the screened interval to remove any silt/laden water.

- Continue pumping water from the well until sediment-free water is obtained. This method may be combined with the manual surge block method if well yield is not rapid enough to extract silt from the surrounding formations.

- Check water quality parameters periodically.

4.2.6 Compressed Gas Procedure

- Although the equipment used to develop a well using this method is more difficult to obtain and use, well development using compressed gas is considered to be a very effective method. This method is also not limited by well depth, well diameter, or depth to static water. Caution must be exercised, however, in highly permeable formations not to inject gas into the formation. Drilling subcontractors will often provide the necessary materials as well as perform this method , if requested. When using a compressor, an oil-less compressor should be used, or an oil trap/filter should be placed on the air discharge line which enters the well.

- Lower the gas line into the well, setting it near the bottom of the screened interval. Install the discharge control equipment (i.e., tee fitting) at the well head.

- Set the gas flow rate to allow continuous discharge of water from the well.

- At intervals during gas-lifting, especially when the discharge begins to contain less suspended material , shut off the air flow and allow the water in the well to backflush through the screened interval to disturb any bridging that may have occurred. Re-establish the gas flow when the water level in the well has returned to the pre-development level.

- Continue gas-lifting and/or jetting until the discharged water is free from suspended material.

- Check water quality parameters periodically.

5.0 QUALITY CONTROL

A well has been successfully developed when one or more of the following criteria are met:

- The sediment load in the well has been eliminated or greatly reduced. Regulatory requirements may be in place which state that water turbidity values ranging from 5 to 50 NTU must be achieved at the end of the development procedure. Use of a nephelometer is required during the well development procedure to measure water turbidity if meeting a specific turbidity value is required by the regulations. Attaining low turbidity values in fine-grained formations may be difficult to achieve.

- Permeability tests conducted in accordance with ENSR SOP-7720 (Hydraulic Conductivity Testing) yield repeatable hydraulic conductivity values.

6.0 DOCUMENTATION

The Monitoring Well Development Record (Figure 2) will be completed by the geologist or hydrogeologist conducting the development. In addition, a field project notebook should be maintained detailing any problems or unusual conditions which may have occurred during the development process.

7.0 TRAINING/QUALIFICATIONS

Well development procedures vary in complexity. It is recommended that initial development attempts be supervised by more experienced personnel. Field personnel should be health and safety certified as specified by OSHA (29 CFR 1910.120(e)(3)(i)) to work on sites where hazardous waste materials are considered to be present.

8.0 REFERENCES

Standard References for Monitoring Wells, Massachusetts Department of Environmental Protection, WSC-310-91, 1991.

APPENDIX: DEFINITIONS

Bridging: A condition within the filter pack outside the well screen whereby the smaller particles are wedged together in a manner that causes blockage of pore spaces.

Hydraulic Conductivity: a characteristic property of aquifer materials which describes the permeability of the material with respect to flow of water.

Hydraulic Connection: A properly installed and developed monitoring well should have good hydraulic connection with the aquifer. The well screen and filter material should not provide any restriction to the flow of water from the aquifer into the well.

Permeability Test: Used to determine the hydraulic conductivity of the aquifer formation near a well screen. Generally conducted by displacing the water level in a well and monitoring the rate of recovery of the water level as it returns to equilibrium. Various methods of analysis are available to calculate the hydraulic conductivity from these data.

Static Water Level: The water level in a well that represents an equilibrium or stabilized condition, usually with respect to atmospheric conditions in the case of monitoring wells.

Well Surging: That process of moving water in and out of a well screen to remove fine sand, silt and clay size particles from the adjacent formation.

Well Purging: The process of removing standing water from a well to allow surrounding formation water to enter the well.

Well Screen: That portion of the well casing material that is perforated in some manner so as to provide a hydraulic connection to the aquifer. The perforated, or slotted, portion of a well is also known as the screened interval.

Figure 1
Recommended Surge Block Design

SURGE BLOCK DESIGN
(Not to Scale)

Steel washers should be 1/2" to 3/4" smaller in diameter than the well ID. Gasket can be rubber or leather and should be the same diameter or 1/8" smaller than the well ID to compensate for swelling of the leather/ Rod can be steel, fiberglass, or plastic but must be strong and lightweight.

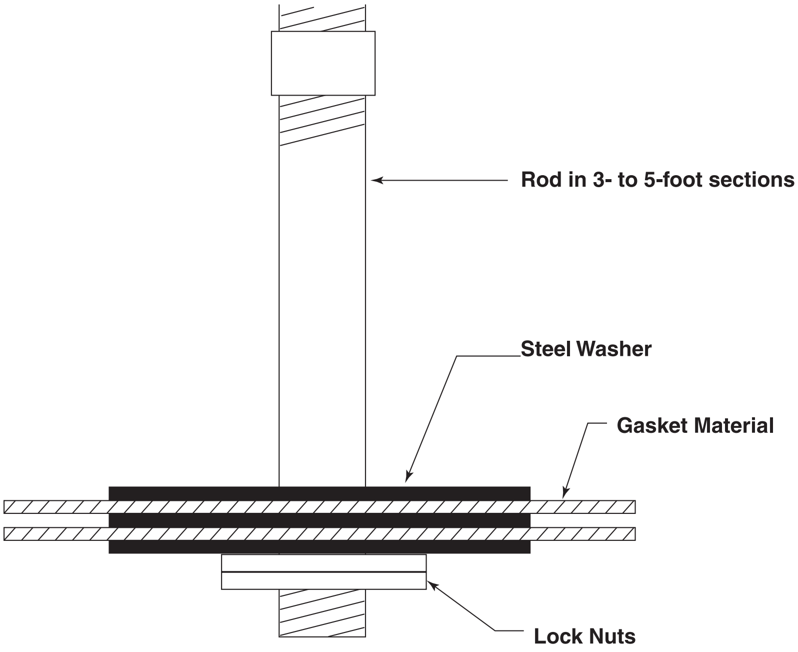


Figure 2
Well Development Record

MONITORING WELL DEVELOPMENT RECORD

DATE: ____________________

WELL I.D.: ____________________

PROJECT NAME: ____________________

LOCATION: ____________________

PROJECT NUMBER: ____________________

DEVELOPER: ____________________

☐ ORIGINAL DEVELOPMENT

☐ REDEVELOPMENT

ORIGINAL DEVELOPMENT DATE: ____________________

WELL DATA

Well Diameter: __________

Total Well Depth: __________

Depth to Top of Screen: __________

Depth to Bottom of Screen: __________

Depth to Static Water Level: __________

Geology at Screened Interval:

Likely Contaminants:

Purge Water & Sediment Disposal Method:

DEVELOPMENT METHOD

PURGE METHOD

PERMEABILITY TEST RESULTS

ACCEPTANCE CRITERIA

Signature: ____________________

Date: __________