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October 14, 2016

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

RECEIVED

By Alameda County Environmental Health 10:19 am, Oct 20, 2016

Re: 76 Station No. 0746 (351647)
Updated Conceptual Site Model
3943 Broadway, Oakland, California
Fuel Leak Case No.: RO0000203
GeoTracker Global ID #T0600101471

I have reviewed the attached report dated October 14, 2016.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Arcadis U.S., Inc., 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,

James P. Kiernan, P.E.
Project Manager

Attachment: Updated Conceptual Site Model by Arcadis

Mr. Keith Nowell, PG, CHG
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject:
Response to Comments and Updated Conceptual Site Model

ENVIRONMENT

Dear Mr. Nowell,

On behalf of Chevron Environmental Management Company's (CEMC's) affiliate, Union Oil Company of California (Union Oil), Arcadis has prepared the attached *Response to Comments and Updated Conceptual Site Model* for the following facility:

Date:
October 14, 2016

<u>76 Station No.</u>	<u>Case No.</u>	<u>Location</u>
Unocal #0746	RO0000203	3943 Broadway Oakland, CA

Contact:
Tamera Rogers

Phone:
408.797.2013

Email:
Tamera.Rogers@arcadis.com

If you have any questions, please do not hesitate to contact me.

Sincerely,

Our ref:
B0035135.1647

Arcadis U.S., Inc.



Tamera Rogers
Project Manager



Katherine Brandt, P.G.
Senior Geologist



Mr. Keith Nowell
October 14, 2016

Copies:

Geotracker Database

Mr. James Kiernan, CEMC (electronic)

MEMO

To:

Mr. Keith Nowell, PG, CHG
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Alameda, California 94502-6577

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Tel 925 274 1100
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From:

Arcadis U.S., Inc.

Date:

October 14, 2016

Arcadis Project No.:

B0035135.1647

Subject:

Response to Comments on Low-Threat Closure Request, Data Gap Investigation Workplan, and Site Conceptual Model

Unocal #0746 (351647)

3943 Broadway, Oakland, California 94611

Case #RO0000203

GeoTracker Global ID #T0600101471

Dear Mr. Nowell:

On behalf of Chevron Environmental Management Company's (CEMC's) affiliate, Union Oil Company of California ("Union Oil"), Arcadis U.S., Inc. (Arcadis) is submitting this memo to provide responses to Alameda County Environmental Health (ACEH's) Technical Comments (1-12) outlined in the letter dated July 1, 2016. In response to the comments and as directed, an Updated Conceptual Site Mode (CSM) is provided with this memo. Note that in the July 1, 2016 letter, the originally specified due date for submission of this memo was August 15, 2016; however, ACEH granted an extension of this due date to October 14, 2016.

Response to Comments

Arcadis reviewed ACEH's comments based on the Low-Threat Closure Policy (LTCP), which are reproduced below in italics, followed by Arcadis' response.

*Comment 1: **Groundwater monitoring wells MW-8 and MW-9** – Table 4 of the GMR, entitled Historical Groundwater Monitoring Data and Analytical Results, indicates wells MW-8 and MW-9 have not been sampled since December 2010. However, ACEH is unable to locate the discussion in the GMR regarding why the wells are not included in the well sampling program. ACEH requests a discussion why wells in the network have not been sampled for the current monitoring event. Please include the discussion of excluded wells for future monitoring events.*

Arcadis Response: Wells MW-8 and MW-9 have not been sampled since 2010 as access to the property expired and an updated access agreement has not been able to be obtained to date. As requested, all future monitoring reports will include a discussion of any deviations from the established groundwater monitoring program.

*Comment 2: **Extent and stability of LNAPL are not known** – AECOM proposed to replace a skimmer in well MW-5 with a hydrophobic sock to be removed monthly. It is unclear to ACEH if the sock will be removed and re-inserted in the well, if the sock will be replaced with an unused one, and what frequency a sock will be placed in the well. Please elaborate on the usage of hydrophobic socks at the site in the requested report.*

Arcadis Response: Absorbent socks are deployed in wells MW-5 and RW-1 to remove LNAPL, if present. The site wells are gauged on a monthly basis. During each monthly visit, the existing socks are removed from the wells, the gallons of absorption and weight of the removed socks are measured, and depth to water and depth to LNAPL (if present), is recorded. Photographs are also taken of the removed socks. The used socks are then placed in a holding drum and new socks are weighed and re-installed in the wells. As further discussed in the updated CSM, no LNAPL was observed in MW-5 or RW-1 during the April and May monthly monitoring events, or the June semi-annual monitoring event.

*Comment 3: **Offsite vapor intrusion risk has not been assessed** – On August 12, 1998, ACEH requested a risk assessment be performed as monitoring well MW-5, located at the property line, continues to identify elevated benzene concentrations, and indicated the contaminant plume has migrated beneath the adjacent down gradient property. In a letter dated June 19, 2014, ACEH requested a work plan to delineate the downgradient extent of the contaminant plume as benzene and free product in well MW-5 remain a concern to downgradient properties. We are unable to locate the response to these requests in the ACEH case file.*

Due to the continuing presence of free phase product in monitoring well MW-5, on June 6, 2015, ACEH stated free product well MW-5 is located adjacent to a commercial building situated on the down gradient side of the site. It is not known if the nearby structures have basements. With depth to water (dtw) typically less than 10 feet below the ground surface (bgs), a bioattenuation zone may not exist, potentially posing unacceptable health risks to human occupants of the existing buildings. Therefore ACEH requested a strategy in the site conceptual model (SCM) to collect soil gas data to collect additional data to satisfy the bioattenuation zone characteristics of Scenarios 1, 2 or 3, or to collect soil gas data to satisfy Scenario 4.

The AECOM response is that a vapor intrusion investigation plan will be prepared once offsite access is secured; however, requests for site access to perform the survey have not been successful.

Therefore, in order to facilitate site access, ACEH requests copies of the correspondences requesting access to the property to conduct the vapor intrusion assessment. ACEH will prepare a letter to the property owner and the occupant requesting site access, including a compilation of the dates of your

MEMO

requests, on ACEH letterhead. Please present your communications in an appendix in the requested report.

Arcadis Response: Correspondence requesting property access is included in Appendix I of the enclosed Updated Conceptual Site Model.

*Comment 4: **Groundwater immediately downgradient from known impacts has not been monitored since December 29, 2010** – Sampling of wells MW-8 and MW-9 has not occurred since December 2010 due to site access being denied by the property owner. Therefore, similar to the discussion for Technical Comment 3 above, ACEH requests copies of the correspondences requesting access to the wells be submitted to ACEH. ACEH will prepare a letter to the property owner and occupant requesting site access, including a compilation of the dates of your requests, on ACEH letterhead. Please present your communications in an appendix in the report requested below.*

Arcadis Response: Please see response to Comment 3 above.

*Comment 5: **Utilities and Potential Preferential Pathways have not been investigated** – It is unclear to ACEH why the preferential pathway study is dependent on other subsurface work. Please present an explanation of why the study needs to be performed in conjunction with subsurface activities. Additionally, ACEH requests you review the case file to determine if all or part of a preferential pathway study has previously been performed. Please include your response in the requested report.*

Arcadis Response: Upon review of the available files for the site, a preferential pathway assessment was conducted via an underground conduit survey by Delta Environmental Consultants, Inc. (Delta) in 2009. The results were presented in the October 12, 2009 *Soil and Groundwater Investigation Report* (Delta 2009). As discussed in the report, utility companies reportedly were unwilling to provide information regarding the depth of their trenches; however, using a private utility locator the depths of utility lines onsite and in the surrounding area were able to be determined. Based on the results of the survey and the depth to first encountered groundwater, Delta concluded that there was minimal risk of existing utilities acting as conduits for shallow groundwater in the vicinity of the site. No further work regarding potential preferential pathways appears warranted.

*Comment 6: **Geology and Hydrogeology** – A review of AECOM's geology and hydrogeology element does not indicate if the groundwater layer monitored by the well network is confined, unconfined, or semi-confined. ACEH requests a documented description of the groundwater monitored by the network. Additionally, only the lateral extent of groundwater contamination is discussed. Please include a discussion of the vertical distribution of contaminants in groundwater. ACEH requests this element of the SCM be updated to further reflect groundwater condition and be included in the requested SCM.*

Arcadis Response: Based on analysis of the boring logs for the site, the shallow groundwater has been determined to be semi-confined (CSM Section 3.7.2.3). Boring logs are provided in Appendix D of the enclosed CSM. A paragraph was added to Section 3.5.3 to discuss the vertical distribution of hydrocarbons in groundwater based on Delta's soil and groundwater investigation report.

*Comment 7: **Nearby Wells** – This element includes the statement that the results of the Alameda County Public Works Agency (ACPWA) well search was reported to have been provided at ACEH separately as it contains confidential data. ACEH has reviewed its case file and has been unable to locate the report. Therefore, ACEH requests that the report be resubmitted to the county ftp site as a confidential document.*

Arcadis Response: On August 15, 2016, AECOM submitted the *Confidential Addendum to Site Conceptual Model* including the well search results to Geotracker and the ACEH ftp site. The results are further discussed in Section 3.7.1 of the CSM.

*Comment 8: **Potential Receptors** – The only sensitive receptors identified in this SCM element is the Duck's Nest Preschool and the Oakland Medical Center. ACEH is of the opinion that until vapor intrusion risks have been evaluated, nearby structures are also potential receptors and should also be identified in this element. ACEH requests this element be updated to include potential vapor intrusion receptors until this data gap has been evaluated and a determination made.*

Arcadis Response: Comment noted. The updated CSM includes an updated and more extensive discussion of potential sensitive receptors and potential transport and release mechanisms.

*Comment 9: **Site History and Ownership** – This SCM element does not address historic station configurations, e.g. locations of the station buildings, tank locations, and the presence of the car wash. Additionally, there is no discussion of ownership. Therefore, ACEH requests this element be updated to address these data gaps and be included in the requested SCM.*

Arcadis Response: As discussed in the CSM, based on historical facility plans and aerial photographs, the Union Oil station in its current configuration (including the car wash) appears to have been constructed in 1967. At that time, the two 10,000-gallon gasoline USTs were located closer to the station building and the waste oil UST was located adjacent to the northwest side of the building. In 1989, the three USTs were replaced; the new 12,000-gallon gasoline USTs were moved somewhat to the northeast closer to 40th Street, and the new waste oil UST was installed on the northeast side of the building. Based on historical aerial photographs dated 1946 and 1958, the site also appears to have previously been occupied by a service station in a different configuration. Regarding property ownership, it appears Union Oil (and later Tosco and ConocoPhillips) owned the site as of 1967; prior ownership/operator information is unknown. In 2007, the property was sold by ConocoPhillips to CJS Leung, LLC; the current owner.

*Comment 10: **Utilities and Preferential Pathways** – Please see Technical Comment 5 above.*

Arcadis Response: Please see response to Comment 5 above.

*Comment 11: **Distribution of Petroleum Hydrocarbons** – This element states soil analytical results are shown in Table 2. Table 2 presents a summary of soil analytical data, with shading utilized for samples which have been over excavated. It is unclear to ACEH that all the samples for the 8/24/1989 and 2/19/1998 dates have been over-excavated. Please provide ACEH with the documentation, in the requested report, indicating soil from these areas has been over excavated.*

Arcadis Response: Based on our review of the associated reports, the majority of the soil samples previously shown as collected on 8/24/1989 and 2/19/1998 were erroneously indicated as excavated. As

discussed in the August 30, 1989 *Soil Sampling Report* by Kaprealian Engineering, Inc., only soil at samples SW1 and SW2 (collected on 8/16/89 from the northeastern sidewall of the gasoline UST excavation) was later excavated (Appendix J). This sidewall was extended to the northeast and an additional sample (SW2[R]) was collected on 8/18/89 from the new sidewall. None of the other sample locations appear to have been later excavated. It should be noted that some of the sample dates shown as 8/24/89 are incorrect and have been updated in the CSM. It should also be noted for clarification that sample US-1 collected on 2/19/98 was a composite sample of stockpiled soil that was later disposed offsite.

Additionally, it was discovered that the results shown for soil samples collected from borings B-1 and B-2 on August 27, 2009 were actually the grab-groundwater sample results. This error has been corrected in the soil table included in the updated CSM. Some additional analytes not indicated in the previous table have also been added.

*Comment 12: **Remedial Actions** – This element identifies one excavation, one soil vapor extraction (SVE) pilot test, and one dual-phase extraction (DPE) pilot test as the remedial actions performed at the site. ACEH requests the case file be reviewed for other remedial actions which may have occurred at the site. Based on the findings of the document review, please update this element for inclusion in the SCM requested.*

Arcadis Response: As discussed in Section 3.3.3 of the updated CSM, based on our review of the available documents, site remedial activities have included the following: two remedial excavations (August 1989 and February 1998), pumping of approximately 14,000 gallons of groundwater from the gasoline UST excavation in 1989, LNAPL removal efforts beginning in 1990 including bailing, skimmers, and absorbent socks, a soil vapor extraction (SVE) pilot test in April 1993, the use of Oxygen Releasing Compound® (ORC) in the wells in at least 1995 and 1996, and a 68-hour dual-phase extraction (DPE) event in April 2005.

References:

Delta Environmental Consultants, Inc. (Delta) 2009. Soil and Groundwater Investigation Report, 76 Service Station No. 3746, 3943 Broadway, Oakland, California. October 12.

Chevron Environmental Management Company

UPDATED CONCEPTUAL SITE MODEL

Unocal Station No. 0746

3943 Broadway
Oakland, California

Case No. RO0000203

October 14, 2016



UPDATED CONCEPTUAL SITE MODEL

Unocal Station No. 0746
3943 Broadway
Oakland, California
Case No.:RO0000203



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October 14, 2016



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Table 2. Historical Soil Analytical Summary

Table 3. Well Construction Details

Table 4. Geochemical Parameters

Table 5. Linear Regression Analysis Summary

FIGURES

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Figure 2. Site Layout Map

Figure 3. Cross Section Location Map

Figure 4. Cross Section A-A'

Figure 5. Cross Section B-B'

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APPENDICES

Appendix A. ACEH Directive

Appendix B. Extension Correspondence

Appendix C. Low-Threat Closure Checklist

Appendix D. Soil Boring Logs

Appendix E. AECOM 2016 First Semi-Annual Groundwater Monitoring Report

Appendix F. COPC and Groundwater Elevation Trend Graphs

Appendix G. Linear Regression Analysis

Appendix H. ACEH Waste Oil Directive

Appendix I. Owner Correspondence

Appendix J. Kaprealian Engineering Original 1989 Site Layout

ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
ACEH	Alameda County Environmental Health
Arcadis	Arcadis U.S., Inc.
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
btoc	below top of casing
CEMC	Chevron Environmental Management Company
COPC	constituent of potential concern
CSM	conceptual site model
Delta	Delta Environmental Consultants, Inc.
DPE	dual-phase extraction
DWR	Department of Water Resources
EBMUD	East Bay Municipal Utilities District
ESL	Environmental Screening Level
GRI	Gettler-Ryan Incorporated
KEI	Kaprealian Engineering Inc.
LNAPL	light nonaqueous phase liquid
Low-Threat Closure Policy	Low-Threat Underground Storage Tank Case Closure Policy
LUST	leaking underground storage tank
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
MRL	method reporting limit
MTBE	methyl tertiary butyl ether
ORC	Oxygen Releasing Compound
R ² value	coefficient of determination
SFRWQCB	San Francisco Regional Water Quality Control Board
site	Unocal Station No. 0746, located at 3943 Broadway, Oakland, California
SVE	soil vapor extraction
SWRCB	State Water Resources Control Board

UPDATED CONCEPTUAL SITE MODEL

TBA	tertiary butyl alcohol
TPH-g	total petroleum hydrocarbons as gasoline
Union Oil	Union Oil Company of California
USEPA	United States Environmental Protection Agency
USGS	U.S. Geological Survey
UST	underground storage tank
WQO	water quality objective
µg/L	micrograms per liter
°F	degrees Fahrenheit

1 INTRODUCTION

On behalf of Chevron Environmental Management Company's (CEMC's) affiliate, Union Oil Company of California (Union Oil), Arcadis U.S., Inc. (Arcadis) has prepared this *Updated Conceptual Site Model* (CSM) for Unocal Station No. 0746, located at 3943 Broadway in Oakland, California (site; Figure 1). Arcadis prepared this CSM as requested by Alameda County Environmental Health (ACEH) in a letter dated July 1, 2016 (Appendix A). Note that the originally specified due date for this CSM in the July 1, 2016 letter was August 15, 2016. However, in telephone calls and follow-up e-mails, ACEH granted an extension for submittal of this report to October 14, 2016 (Appendix B).

This CSM summarizes existing site data used to support a request for low-threat case closure. The site qualifies for closure as a low-threat fuel site, as described in the State Water Resources Control Board's (SWRCB's) Low-Threat Underground Storage Tank Case Closure Policy (LTCP) adopted by the SWRCB on May 1, 2012 and effective August 17, 2012 (SWRCB 2012b). A completed Low-Threat Closure Checklist is included as Appendix C.

This CSM includes a comprehensive site assessment and remediation history, regional and site-specific geology and hydrogeology, review of soil and groundwater conditions at the site (including the distribution of constituents of potential concern [COPCs]), and evaluation of potential risk to human health or the environment from site-related COPCs. Based on the information provided in the following sections, the site meets General and Media-Specific Criteria of the LTCP (SWRCB 2012b); therefore, Arcadis requests the site be considered for low-threat closure.

2 SITE DESCRIPTION

The site is an operating 76-branded gas station located in a mixed commercial and residential area at 3943 Broadway in Oakland, California (Figure 1). Station features currently include two 12,000-gallon double-walled Glasteel gasoline underground storage tanks (USTs), one 520-gallon waste oil UST, one station building including a service bay, one car wash building, and two product dispenser islands (Figure 2). The site is bounded by 40th Street to the northeast, Manila Avenue to the northwest, commercial and residential properties to the southwest, and Broadway to the southeast.

Based on historical aerial photographs, the site has been occupied by a service station with the current configuration since at least 1980. Based on available facility plans, the Union Oil station appears to have been constructed in 1967. The site appears to have previously been occupied by a service station in a different configuration based on aerial photographs dated 1946 and 1958.

The nearest sensitive receptors are the Duck's Nest Preschool, which is located approximately 750 feet northeast and hydraulically upgradient from the site, and the Oakland Medical Center, which is located approximately 800 feet southeast and hydraulically crossgradient from the site.

3 CONCEPTUAL SITE MODEL

This section summarizes the CSM, including the regional setting, regional and site geology and hydrogeology, previous work, potential offsite sources, distribution of fuel hydrocarbons and oxygenates in the subsurface, linear regression analysis and plume stability, and potential exposure pathways and risks to human health and the environment.

3.1 Regional Setting

3.1.1 Topography and Site Elevation

The site is located on relatively flat land at an elevation of approximately 80 feet above mean sea level.

3.1.2 Geography

The site is located on the southwest corner of the intersection of 40th Street and Broadway in Oakland, California (Figure 1).

3.1.3 Surface-Water Drainage

The nearest surface-water body is Glen Echo Creek, which is located approximately 1,630 feet southeast of the site (Figure 1).

3.1.4 Climate

The average rainfall for the area is approximately 23 inches per year. The average high temperature is 67 degrees Fahrenheit (°F), and the average low temperature is 52°F.

3.1.5 Vegetation

The site is primarily covered with asphalt, concrete, or the buildings of the service station with a few small perimeter landscaping areas.

3.2 Regional and Site Geology and Hydrogeology

The site is located in the East Bay Plain Subbasin of the Santa Clara Valley Groundwater Basin (U.S. Geological Survey [USGS] 2006). The site is underlain by Holocene (400 feet below ground surface [bgs] in the central portion of the basin) and Pleistocene-age eolian sand deposits (400 to 4,000 feet bgs in the central portion of the basin) referred to as the Merrit Sand. The Merrit Sand is described as typically consisting of fine-grained, very well-sorted, well-drained eolian sand, interfingering with Holocene Bay Mud. The sand deposits can extend to a depth of approximately 50 feet bgs in the Oakland area (USGS 2000). Soil beneath the site predominantly comprises alternating layers of silt and clay.

Based on previous investigations, the site is underlain by fill material ranging from 2 to 4 feet in thickness. Beneath the fill, soil are primarily comprises interlayered clayey/silty deposits and silty/clayey sand. A continuous sand layer extends from approximately 6 to 12 feet bgs. A deeper saturated sand layer

UPDATED CONCEPTUAL SITE MODEL

extends from 14 to 16 feet bgs. Shallow groundwater beneath the site is considered to be semi-confined. Monitoring wells are typically screened into both the 6- to 12-foot and 14- to 16-foot-bgs sand layers with the exception of RW-1 which is screened from 5 to 15 feet bgs where the sandy layers occur at 10 to 13 feet bgs. Geologic cross sections are provided on Figures 3, 4, and 5. Copies of available boring logs are provided in Appendix D.

Twelve groundwater monitoring wells and one remediation well are present at the site (MW-1 through MW-12 and RW-1). Historically, the depth to groundwater at the site has ranged from approximately 3.61 to 15.79 feet below top of casing (btoc), with both depths recorded in June 2011. The most recent monitoring and sampling event was conducted at the site in June 2016; during this event the measured depth to groundwater ranged from 7.91 feet btoc (onsite well MW-6) to 13.58 feet btoc (offsite well MW-10). Historical groundwater flow direction has been to the southwest, with gradients ranging from 0.05 to 0.01 foot per foot. During the most recent monitoring event conducted in June 2016, the groundwater flow direction was to the southwest at a gradient of approximately 0.01 foot per foot (Appendix E). Table 1 presents historical water levels dating back to December 1992. A groundwater elevation contour map for the June 2016 sampling event is presented on Figure 3 of Appendix E.

As mentioned above, shallow groundwater is considered semi-confined. Groundwater was first encountered in the well and exploratory borings at depths ranging from 10.5 to 20 feet bgs; but generally between 11 and 13 feet bgs.

3.3 Summary of Previous Work

Investigation activities at the site commenced in 1989 during routine UST replacement activities. This section summarizes previous work including release history, site assessment, and site remediation activities.

3.3.1 Release History

In August 1989, one steel 10,000-gallon regular unleaded gasoline UST, one steel 10,000-gallon super unleaded gasoline UST, and one single-walled steel 280-gallon waste oil UST were removed from the site. The installation date of the tanks is unknown. Associated product lines were also removed and replaced. No holes or cracks were observed in the tanks upon removal. Following removal of the tanks, Kaprealian Engineering, Inc. (KEI) collected soil samples from the UST pits and the product pipe trenches. Analytical results indicated that gasoline had been released to the subsurface (KEI 1989a).

In February 1998, product piping and associated dispensers were replaced. Gettler-Ryan Incorporated (GRI) collected soil samples at each end of the product piping. Based on the presence of total petroleum hydrocarbons as gasoline (TPH-g), benzene, and methyl tertiary butyl ether (MTBE) in soil beneath the product piping near the fuel dispenser islands, a release of an unknown amount of petroleum hydrocarbons was suspected to have occurred (GRI 1998).

Given the apparent long history of service station use at the site, other releases may have occurred that were not documented but may have contributed to impacts at the site.

3.3.2 Site Assessment History

Historical Site assessment activities are summarized below:

- **August 1989:** Twelve soil samples and two groundwater samples were collected in August 1989. Seven of the soil samples were collected from the sidewalls of the fuel tank pit at a depth of 9.5 feet bgs. Four soil samples were collected from the product pipe trenches at depths ranging from 5 to 6.5 feet bgs. One soil sample of native material beneath the waste oil tank, was collected at a depth of 8 feet bgs. Two groundwater samples were collected from the gasoline UST excavation after groundwater pumping at a depth of 10.5 feet bgs. Concentrations of TPH-g and benzene in the samples were up to 4,700 and 180 micrograms per liter ($\mu\text{g/L}$), respectively (KEI 1989a).
- **October 1989:** KEI oversaw the installation of three onsite monitoring wells (MW-1, MW-2, and MW-3). The wells were installed to depths ranging from 20 to 22.5 feet bgs. Soil samples were collected during installation (KEI 1989b).
- **November 1989:** Quarterly groundwater monitoring activities began and included the three site monitoring wells (MW-1, MW-2, and MW-3).
- **January 1990:** Two additional onsite monitoring wells (MW-4 and MW-5) were installed under KEI's supervision. Wells were installed to a depth of 20 feet bgs, and soil samples were collected between 5 and 11.5 feet bgs from each well boring (KEI 1990a).
- **October 1990:** KEI oversaw the installation of two onsite monitoring wells (MW-6 and MW-7) and two offsite monitoring wells (MW-8 and MW-9) to delineate the extent of petroleum hydrocarbon impacts. Wells were installed to depths ranging from 20 to 22 feet bgs. Soil samples were collected during installation of each well at depths ranging from 5 to 12 feet bgs (KEI 1990b).
- **January 1992:** KEI oversaw the installation of two additional offsite monitoring wells (MW-10 and MW-11) to delineate the extent of petroleum hydrocarbon impacts. Wells were installed to depths of 22 and 19 feet bgs, respectively. Soil samples were collected from each well at depths ranging from 5 to 19.5 feet bgs (KEI 1992a).
- **June 1992:** KEI oversaw the installation of one offsite monitoring well (MW-12) and one onsite recovery well (RW-1). MW-12 and RW-1 were installed to depths of 17.5 and 17 feet bgs, respectively. Soil samples were collected from the MW-12 boring at depths ranging from 5 to 11.5 feet bgs (KEI 1992b).
- **November 1992:** A well survey within $\frac{1}{2}$ mile of the site identified three irrigation wells, one domestic well, and one industrial well.
- **January 1996:** Groundwater sampling frequency was reduced from quarterly to semiannually.

UPDATED CONCEPTUAL SITE MODEL

- **February 1998:** GRI oversaw the replacement of product piping and associated dispenser islands. Four soil samples were collected at a depth of 4 feet bgs. Results indicated the presence of petroleum hydrocarbons.
- **2007:** TRC performed a sensitive receptor survey to identify the locations of public and municipal wells within 0.5 mile of the site and an evaluation of nearby surface-water bodies (TRC 2007). The survey identified two irrigation wells and one domestic well. The nearest well was an irrigation well located approximately 1,300 feet east of the site (crossgradient).
- **August 2009:** Delta Environmental Consultants (Delta) performed a soil and groundwater investigation. Two onsite cone penetration test (CPT) borings (B-1 and B-2) were advanced to 36 feet bgs, and soil samples were collected from 6 to 35 feet bgs to evaluate the vertical extent of impacts. Low concentrations of TPH-g, benzene, toluene, ethylbenzene and total xylenes (collectively BTEX), and MTBE were detected in the soil samples. Discrete-depth groundwater samples were also collected from the borings. At this time, Delta conducted an underground conduit survey to determine if there were any preferential migration pathways for petroleum-hydrocarbons on and near the site. Utility location information was requested from companies owning subsurface utilities near the site. Based on the shallow depths of the utilities, it was concluded there was minimal risk they would act as preferential pathways for the migration of impacted groundwater. Although utility trenches were found to contain permeable fill material that could act as conduits for the migration of petroleum hydrocarbon vapors from groundwater, the groundwater was overlain by low-permeability silts and clays which inhibit vapor transport (Delta 2009).
- **June 2014:** Arcadis performed a Department of Water Resources (DWR) well search, which identified four wells within 2,000 feet of the site (Figure 6): two irrigation wells and two cathodic protection wells. The nearest well was an irrigation well located approximately 1,300 feet east of the site (crossgradient).
- **September 2015:** AECOM conducted a well search to identify any wells within a 1-mile radius of the site. The well search results yielded no new information from the well search that was conducted by Arcadis in 2014.

During historical groundwater monitoring activities, light non-aqueous phase liquid (LNAPL) was observed in monitoring wells MW-3 and MW-5 as indicated below:

- MW-3 – from February 1993 through October 1994
- MW-5 – periodically since August 1991

3.3.3 Remediation History

Historical site remediation activities are summarized below:

- **August 1989:** Three USTs and associated product piping were removed and replaced in August 1989. During the tank removals and over-excavation of the northern sidewall of the gasoline UST pit, approximately 350 cubic yards of soil were excavated and disposed offsite. Under KEI's oversight, approximately 14,000 gallons of groundwater were pumped from the UST cavity and disposed of offsite.

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- October 1990: Bi-weekly over-purging of wells MW-3, MW-4, MW-5, and MW-8 was initiated.
- October 1991: A water recovery test was performed at four wells onsite to estimate the water recovery rate and potential locations of recovery wells. The tested wells required between approximately 0.5 to 1.5 hours for full recovery. KEI recommended three of the four wells continue to be purged biweekly (KEI 1991).
- September 1992: A skimmer was installed in MW-5 to remove LNAPL.
- April 1993: KEI performed a soil vapor extraction (SVE) pilot test using onsite well RW-1. A maximum TPH-g concentration of 8.6 µg/L was reported in the influent vapor stream. The calculated maximum hydrocarbon extraction rate during the test was 0.00049 pound per hour (KEI 1993). Based on the low extraction rate, relatively high groundwater levels, and fine-grained soil beneath the site, KEI concluded that SVE was not a feasible remedial option.
- Second quarter 1993: A skimmer was installed in MW-3 to remove LNAPL.
- Second quarter 1995: Oxygen Releasing Compound® (ORC) socks were installed in select wells to enhance biodegradation. The socks were in place at least through 1996.
- March 1998: During product piping and dispenser island replacement in March 1998, petroleum-hydrocarbon-impacted soil was encountered and a total of 30.2 tons were excavated and disposed offsite (GRI 1998).
- April 1999: A passive skimmer was installed in MW-5. The skimmer was removed in June 2000, and re-installed in February 2001.
- April 2005: TRC conducted a 68-hour dual-phase extraction (DPE) test. A mobile treatment system was used to remove vapors and liquids from three onsite wells (RW-1, MW-3, and MW-5). A total of 39.03 pounds of hydrocarbons and 6,500 gallons of groundwater were removed during the test (Delta 2008).
- 2016: An absorbent sock was deployed in well MW-5 similar to RW-1 (deployed in June 2015): the sock is changed out monthly to remove LNAPL. New socks are weighed to determine initial weight before mass is removed and measured to determine length of absorption. Old socks are removed and placed in a holding drum provided onsite.

3.4 Offsite Sources

According to the GeoTracker Environmental Information Management System (<http://geotracker.waterboards.ca.gov>), seven closed and two open leaking underground storage tank (LUST) cleanup sites are located within 1,000 feet of the site. Each site is summarized below:

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- Accutune, located at 4045 Broadway, approximately 330 feet northeast of the site, was a LUST cleanup site with waste oil impacts. The case was opened on June 26, 1996. Impacted soil was excavated and the case was closed on February 20, 2001.
- Five C Group, located at 4101 Broadway, approximately 510 feet northeast of the site, was a LUST cleanup site with gasoline impacts. The case was opened on June 12, 1991. Impacted soil was excavated and the case was closed on December 16, 1998.
- 7-Eleven, located at 4100 Broadway, approximately 615 feet northeast of the site, was a LUST cleanup site with gasoline impacts. The case was opened on August 29, 1986. Impacted soil was excavated and the case was closed on May 27, 1998.
- Downtown Toyota, located at 4145 Broadway, approximately 900 feet northeast of the site, was a LUST cleanup site with waste oil impacts. During removal of a 500-gallon waste oil tank on February 7, 1992, oil and grease impacts were detected. Subsequently, the case was opened. Soil samples collected in 2013 indicated the area was free of petroleum hydrocarbons. The case was closed on September 24, 2014.
- Glovatorium, located at 3820 Manila Avenue, approximately 440 feet south-southwest of the site, is an open remediation LUST cleanup site with Stoddard solvent, fuel oil, and waste oil impacts. Reportedly, a significant amount of Stoddard solvent was released in the 1970s. The current LUST case was opened on May 31, 1990. Six USTs onsite were abandoned in 1997 by backfilling with either cement-sand slurry or pea gravel. During these activities, holes were noticed in two of the tanks containing Stoddard solvent. Remediation activities included free product removal from 2002 to 2008 and multiphase extraction from 2008 to 2011.
- Earl Thompson Property, located at 316 38th Street, approximately 450 feet south-southwest of the site, is an open remediation LUST cleanup site with Stoddard solvent, diesel, and gasoline impacts. During tank removal in November 2008, one of the tanks was found to have a small hole. The site is currently in the site assessment phase.
- Chevron #21-1283/Express Auto Clinic, located at 3810 Broadway, approximately 570 feet south of the site, was a remediation LUST cleanup site with gasoline and waste oil impacts. The site was a Texaco Service Station from 1963 to 1980 (<http://geotracker.waterboards.ca.gov>). Four 6,000-gallon leaded gasoline USTs were removed in February 1980. A 550-gallon waste oil UST remained onsite until removal in May 1991. During removal of this UST, impacted soil was discovered and excavated. The case was opened May 15, 1991. Further excavation occurred in 2000, removing approximately 1,400 cubic yards of petroleum-hydrocarbon-impacted soil. The case was closed on May 16, 2014.
- Firestone #3658, located at 3785 Broadway, approximately 530 feet southwest of the site, was a LUST cleanup site with waste oil impacts. The case was opened on December 10, 1990; impacted soil was excavated and the case was closed on February 22, 1994.
- Kaiser Development/Val Strough Honda, located at 3735-3799 Broadway, approximately 500 feet southwest of the site, was a LUST cleanup site with chromium, diesel, gasoline, lead, nickel, and waste oil impacts. The initial release was reported on February 27, 1987. The site consists of multiple parcels, which were formerly a car wash, Honda dealership, automotive service facility,

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office space, Firestone automotive service facility, and Midas automotive service facility. The site was excavated to remove impacted soil. During excavation, groundwater was encountered and dewatering was performed. The encountered groundwater was treated onsite prior to discharge to the sanitary sewer. The case was closed on November 7, 2012.

None of these facilities appears to have impacted the subject site.

3.5 Current and Historical Distribution of Residual Hydrocarbons and Oxygenates

COPCs at the site include TPH-g, BTEX, and MTBE. Discussions regarding residual petroleum hydrocarbons and fuel oxygenates in soil, LNAPL, groundwater, and soil vapor are presented in Sections 3.5.1 through 3.5.4.

3.5.1 Soil

Sixty-four soil samples have been collected at the site since 1989 at depths ranging from 4 to 35 feet bgs to characterize concentrations of fuel hydrocarbons and oxygenates in site soil. Soil analytical results are summarized in Table 2.

Detectable petroleum hydrocarbon impacts were identified at depths between 4 and 35 feet bgs. Soil samples collected below approximately 10 feet bgs represent saturated soil conditions. Petroleum hydrocarbon impacts were reported in vadose and saturated zone soil samples collected underneath the USTs, dispenser islands, and product lines. Generally, the highest concentrations of COPCs were reported in the vadose zone and capillary fringe soil near the product dispensers.

Maximum historical detected concentrations of fuel hydrocarbons and oxygenates in soil extending to 10 feet bgs include:

- TPH-g at 4,300 milligrams per kilogram (mg/kg) in UT-2-4 at 4 feet bgs
- Benzene at 1.9 mg/kg from B-2 at 10 feet bgs
- Toluene at 8.7 mg/kg in SW2 at 9.5 feet bgs (note the soil at SW2 was later excavated)
- Ethylbenzene at 58 mg/kg in UT-2-4 at 4 feet bgs
- Total xylenes at 410 mg/kg in UT-2-4 at 4 feet bgs
- MTBE at 2.9 mg/kg in UT-3-4 at 4 feet bgs

Soil samples UT-2-4 and UT-3-4 were collected below the western side of the south dispenser island and eastern side of the north dispenser island, respectively. Sample SW2 was collected from the northern sidewall of the UST pit area, which was subsequently excavated to facilitate the installation of larger USTs.

The soil analytical data for the site were compared to the commercial/industrial and utility worker soil screening levels presented in Table 1 of the LTCP (SWRCB 2012b). The maximum benzene and ethylbenzene concentrations in soil between 0 and 10 feet bgs do not exceed these screening levels.

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The majority of the soil analytical results are from investigations conducted 7 to 27 years ago. These data allowed for a comprehensive analysis of site conditions. However, it is reasonable to assume that current concentrations of COPCs in soil are significantly lower relative to historical data, as reflected in the lower concentrations of COPCs currently observed in groundwater. Remedial activities and natural attenuation processes have likely lowered current concentrations to some degree since the collection of the older soil data.

The lateral extent of site COPCs in soil is defined by boring locations MW-11 (offsite) to the southwest, MW-12 (offsite) to the south, MW-10 (offsite) to the southeast, and monitoring well MW-2 (onsite) to the west (Figure 2). The soil samples collected from these locations generally had no detections of site COPCs. In monitoring well MW-6, located in the northern portion of the site, only total xylenes were detected at a concentration of 0.01 mg/kg at 9 feet bgs.

Offsite monitoring well MW-9 contained detectable concentrations of site COPCs in soil at depths of 10 and 12 feet bgs. Offsite monitoring well MW-8 had a trace concentration of total xylenes at 10 feet bgs. These data are summarized in Table 2.

Based on the CPT boring results in 2009 (B-1 and B-2), the vertical extent of impacted soil is adequately defined.

3.5.2 Light Non-Aqueous Phase Liquid

Measurable amounts of LNAPL were detected in monitoring well MW-3 from 1993 to 1994 and in monitoring well MW-5 from 1991 to early 2016. Currently, LNAPL gauging is performed during semi-annual groundwater monitoring events, and monthly in MW-5 and RW-1. Historically, LNAPL was removed via baildown methods or skimmers. From 1999 through 2011, 4 gallons of LNAPL were removed from monitoring well MW-5. In their second semi-annual report of 2015, AECOM proposed to replace the skimmer in MW-5 with an absorbent sock that will more effectively remove the remaining free product (AECOM 2015). This was subsequently completed and the socks have been changed monthly and replaced with new socks since January 2016. Approximately 1.04 gallons of LNAPL were removed from MW-5 during the January, February and March 2016 monthly monitoring events using the absorbent socks. Measureable amounts of LNAPL were not detected in MW-5 or RW-1 during the April and May monthly monitoring events, or the June semi-annual monitoring event (Appendix E). Table 1 presents the historical groundwater analytical data.

3.5.3 Groundwater

COPCs in groundwater at the site have been monitored since November 1989. The current well network consists of 13 wells (MW-1 through MW-12 and RW-1). The wells are currently sampled semiannually during the second and fourth quarters. Current and historical groundwater analytical results and well construction details are presented in Tables 1 and 3, respectively.

Dissolved-phase COPC concentrations in groundwater samples collected as of second quarter 2016 indicate the following:

- TPH-g concentrations at the site ranged from non-detect (method reporting limit [MRL] of 50 µg/L) to 17,000 µg/L in well MW-5, which is located on the southeastern portion of the site.

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TPH-g only remains in onsite wells MW-3 (1,900 µg/L), MW-4 (1,900 µg/L), and MW-5. The historical maximum concentration of TPH-g was 1,100,000 µg/L in well MW-3 on November 20, 1992.

- Benzene concentrations ranged from non-detect (MRL of 0.50 µg/L) to 210 µg/L in well MW-5. Other than MW-5, benzene only remains in MW-3 (71 µg/L). The historical maximum concentration of benzene was 34,000 µg/L in well MW-5 on February 1, 2011.
- Toluene was not detected at or above the MRL of 0.50 µg/L in any of the wells and has not been detected since 2014. The historical maximum concentration of toluene was 6,400 µg/L in well MW-3 on November 20, 1992.
- Ethylbenzene concentrations ranged from non-detect (MRL of 0.50 µg/L) to 450 µg/L in well MW-5. As with TPH-g, ethylbenzene only remains in onsite wells MW-3 (81 µg/L), MW-4 (7.2 µg/L), and MW-5. The historical maximum concentration of ethylbenzene was 18,000 µg/L in well MW-5 on May 22, 2000.
- Total xylenes concentrations ranged from non-detect (MRL of 1.0 µg/L) to 540 µg/L in well MW-5. Other than MW-5, xylenes only remain in MW-3 (6.2 µg/L). The maximum concentration of total xylenes was 59,000 µg/L in MW-5 on May 22, 2000.
- MTBE concentrations ranged from non-detect (MRL of 0.50 µg/L) to 21 µg/L in well MW-3. MTBE only remains in wells MW-2 (0.91 µg/L), MW-3, and MW-12 (1.1 µg/L). MTBE was reported at a historical maximum concentration of 2,700 µg/L in well MW-2 on May 25, 1993.
- Tertiary butyl alcohol (TBA) was not detected in any of the wells and has not been detected since 2006.

The data presented above establish that the groundwater plume is stable or decreasing. Remaining concentrations are significantly less than historical maximums. Isoconcentration maps for TPH-g, benzene, and MTBE are shown on Figures 5, 6, and 7 of Appendix E, respectively. Historical trend graphs displaying site COPCs in monitoring wells are included in Appendix F.

During the December 9, 2011 groundwater monitoring event, four samples (MW-1, MW-4, MW-11, and MW-12) were collected and analyzed for natural attenuation parameters. The sampled wells represented upgradient (MW-1), plume area (MW-4) and downgradient (MW-11 and MW-12) wells. The electron acceptors analyzed were nitrate as nitrogen and sulfate. These electron acceptors are typically consumed during biodegradation of LNAPL and dissolved constituents. A comparison of nitrate and sulfate concentrations (Table 4) shows lower concentrations (non-detect) in the plume area than in the upgradient and downgradient areas, which suggests that biodegradation is occurring in the plume area and creating a stable and decreasing plume.

The lateral extent of the groundwater plume is defined by wells MW-2 and MW-6 to the northwest, wells MW-1 and MW-7 to the north, well MW-10 (offsite) to the southeast, well MW-11 (offsite) to the southwest, and well MW-12 (offsite) to the south. COPC concentrations in these monitoring wells are non-detect or below water quality objectives (WQOs), defined as the relevant San Francisco Regional Water Quality Control Board (SFRWQCB) groundwater environmental screening levels (ESLs). It is noted that wells MW-8 and MW-9 have not been sampled since 2010 due to property access issues; however, during the last sampling event in these wells, COPCs were either non-detect or only present at low

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concentrations. Section 3.6 further discusses concentration trends through the use of linear regression analysis.

The vertical extent of the groundwater plume was determined via the drilling of the CPT borings (Delta 2008). Two borings (B-1 and B-2) were advanced to collect depth-discrete groundwater samples in the area of MW-5, MW-3, and MW-4. Groundwater samples were collected from boring B-1 at 12.5 to 15.5 feet bgs, 22 to 24 feet bgs, and 33 to 35 feet bgs; from boring B-2 at 12 to 15 feet bgs, 23 to 25 feet bgs, and 32 to 34.5 feet bgs. In boring B-1, TPH-g, MTBE, and TBA were detected in groundwater at maximum concentrations of 1,700, 9.2, and 47 µg/L respectively, in the sample collected from 12.5 to 15.5 feet bgs. However, petroleum hydrocarbons were not detected in the groundwater sample collected at 33 to 35 feet bgs from B-1. Similarly, concentrations in groundwater in boring B-2 decreased with depth and only low concentrations of a few COPCs were detected in the sample collected at 32-34.5 feet bgs.

The plume travel pathway for TPH-g is presented on Figure 6. The average and 90th percentile plume lengths are based on the SWRCB's Technical Justification for Groundwater Media-Specific Criteria (SWRCB 2012a). Using the plume lengths presented by the SWRCB in conjunction with the rose diagram for groundwater flow direction, an area of potential plume migration was defined. As shown on Figure 6, there are no known irrigation, domestic, other privately owned, or municipal supply wells within the area of potential migration.

3.5.4 Soil Vapor

Under the LTCP (SWRCB 2012b), active commercial service stations are not required to meet vapor intrusion criteria unless underground releases can reasonably be believed to pose unacceptable risk. The site is an active station and exposure to volatile petroleum hydrocarbon constituents associated with historical fuel system releases are deemed insignificant relative to typical exposures from surface spills and fugitive vapors at service stations. The site is located adjacent to a community commercial property at 3915 Broadway along the southwest site boundary, which can be classified as a potential offsite receptor. LNAPL was historically present in MW-5 located adjacent to this building. Therefore, Arcadis plans to conduct soil vapor investigation to determine if there are any potential vapor intrusion concerns at 3915 Broadway.

3.6 Linear Regression Analysis and Plume Stability

A statistical analysis of historical groundwater monitoring data was performed to assess trends in COPC concentrations through time. Graphs of log-normalized concentration data versus time were created and a linear regression trend test was used to evaluate the statistical significance of COPC concentration trends (Appendix G). The statistical analysis used historical groundwater monitoring data collected following completion of source removal and soil excavation in 1998 for 12 wells (MW-1 through MW-4, MW-6 through MW-12, and RW-1).

COPC concentrations were screened against WQOs, which were defined as the relevant SFRWQCB ESLs for shallow soils that are not a current or potential source of drinking water. The site COPCs and WQOs are listed below:

- TPH-g – 220 µg/L

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- Benzene – 1.0 µg/L
- Toluene – 40 µg/L
- Ethylbenzene – 30 µg/L
- Total xylenes – 20 µg/L
- MTBE – 5.0 µg/L

A linear regression analysis was completed for those monitoring wells and COPC pairs where:

- Concentrations of COPCs were greater than the respective MRL for at least 50 percent of the data collected since 1999.
- Concentrations of COPCs greater than the relevant WQO have been detected at least once during the last two years.
- At least eight data points greater than detection were present in the dataset.

The linear regression analysis used the first monitoring event after 1998, when the last excavation event was conducted. The trend analysis is reflective of the natural attenuation of COPCs and is representative of ongoing attenuation rates in the foreseeable future.

3.6.1 Linear Regression Methodology

Linear regression analyses using natural log-normalized concentration data were conducted to estimate trend direction, attenuation rates, and approximate time to achieve WQOs for the selected locations and COPCs (United States Environmental Protection Agency [USEPA] 2002). Results of the linear regression analyses, including coefficients of determination (R^2 values), p-values of the correlation, and trend directions, are summarized in Table 5; individual analyses are included in Appendix G. The R^2 value is a measure of how well the linear regression model fits the site data. R^2 values less than 0.1 indicate a weak model fit; R^2 values greater than 0.5 indicate a stronger model fit. The p-value of the correlation provides a measure of the level of significance of the slope of the trend line. Trends were accepted as significant for p-values less than or equal to 0.05 (95 percent confidence level) and were considered not significant for p-values greater than 0.05. For this analysis, datasets with R^2 values less than 0.1 and p-values greater than 0.05 were defined as having no apparent trend. The trend direction was defined as decreasing if the slope of the linear regression was negative and increasing if the slope of the regression was positive.

Non-detect concentrations were set equal to the MRL. If the MRL was not provided, the non-detect value was not used in the analysis. Use of the MRL for concentrations that were non-detect provides a conservative estimate for evaluating concentration trends through time.

Based on the criteria outlined above, a linear regression analysis was completed for the following monitoring well and COPC pairs:

- TPH-g: MW-3, MW-4
- Benzene: MW-3
- Ethylbenzene: MW-3

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Concentrations of COPCs in all other monitoring locations did not meet the linear regression analysis criteria. Groundwater samples were collected from monitoring well MW-5 when no LNAPL was detected (February 2011, December 2013, June 2013). However, LNAPL was historically present in MW-5; therefore, these samples are not considered representative of COPC concentrations. Subsequently, well MW-5 did not meet the linear regression analysis criteria.

3.6.2 Linear Regression Results

Results of the linear regression analyses are summarized in Table 5; the distributions of COPCs in groundwater are presented on Figures 5, 6, and 7 of Appendix E. Results from the linear regression analyses indicate the following:

- There is evidence of natural attenuation of COPCs at the site.
- The majority of monitoring well and COPC pairs exhibit statistically significant decreasing trends, or no apparent trend with concentrations likely to be stable.
- The most recent concentrations of COPCs in monitoring wells sampled on June 22, 2016 were less than the relevant WQOs, except the following:
 - TPH-g in wells MW-3 (1,900 µg/L), MW-4 (1,900 µg/L), and MW-5 (17,000 µg/L)
 - Benzene in wells MW-3 (71 µg/L) and MW-5 (210 µg/L)
 - Ethylbenzene in wells MW-3 (81 µg/L) and MW-5 (450 µg/L)
 - Total xylenes in well MW-5 (540 µg/L)

Monitoring wells MW-8 and MW-9 (downgradient) were last sampled in December 2010 and the concentrations for all constituents were non-detect or less than the relevant WQOs at that time.

Concentration trends specific to each COPC are discussed below.

3.6.2.1 Total Petroleum Hydrocarbons as Gasoline

No apparent trend in concentrations of TPH-g was observed for monitoring well MW-3; concentrations in this monitoring well appear to be stable. Historically, the highest concentrations of TPH-g have been detected in monitoring well MW-3. In monitoring well MW-3, TPH-g concentrations continue to be greater than the WQO. However, concentrations are lower than historical detections in groundwater, indicative of stable to decreasing conditions.

Concentrations of TPH-g in monitoring well MW-4 exhibit a statistically significant increasing trend when all data post-excavation are included in the evaluation. The increasing trend in TPH-g concentrations in monitoring well MW-4 is a result of non-detect concentrations recorded prior to December 2009. Since December 2009, concentrations in monitoring well MW-4 show no apparent trend and appear to be stable.

3.6.2.2 Benzene

A statistically significant decreasing trend in benzene concentrations was observed for monitoring well MW-3, with concentrations greater than the WQO of 9.7 µg/L in June 2016 (71 µg/L). Concentrations have fluctuated greater than and less than the WQO; however, the overall trend is significantly decreasing. Only three detections greater than the WQO in the last 4.5 years suggests that concentrations are not migrating offsite.

3.6.2.3 Ethylbenzene

A statistically significant decreasing trend in ethylbenzene concentrations was observed for monitoring well MW-3. Linear regression analysis projected the ethylbenzene concentration to reach the WQO in 2014; however, ethylbenzene was detected at a concentration greater than the WQO in June 2016 (81 µg/L). Based on the statistical trend, concentrations are expected to continue to decrease and reach the WQO in the near future.

3.6.3 Summary

There is evidence to support that natural attenuation of COPCs is occurring and has resulted in an overall stable to decreasing groundwater plume. Natural attenuation is expected to further reduce concentrations of COPCs at the site. It is expected that monitoring wells with stable concentration trends will shift to decreasing trends as the plume continues to shrink. For monitoring wells with statistically significant decreasing trends, COPCs were projected to reach their WQOs by 2014 or 2027; however, due to seasonal fluctuations, COPC concentrations in some monitoring wells remain greater than the respective WQOs.

3.7 Assessment of Potential Impacts of Residual Constituents on Public Health and the Environment

Based on the assessment of data presented in this CSM, the residual concentrations of COPCs in site media are unlikely to pose significant adverse effects to human health or the environment. This section summarizes sensitive receptors observed near the site, results of a water supply well survey, potential exposure pathways, and a comparison of residual COPC concentrations in site media to human health risk-based screening levels.

3.7.1 Sensitive Receptors and Water Supply Well Survey

The site is an operating service station surrounded by commercial and residential properties. Potential receptors were identified based on current and expected future land use at the site. Current and reasonably anticipated future land use of the site is commercial (i.e., continued operation as a gasoline service station).

The site is located within the city limits of Oakland, California. Existing land use in this area is mostly commercial property with some single- and multi-family residential properties. The closest residences are

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located approximately 100 feet southwest from the site boundary. Residential development in Oakland was expected to increase with the addition of 2,375 new homes between 2010 and 2015 (City of Oakland 2010), however the site was never redeveloped as a residential property.

Groundwater beneath the site is not currently used as a potable source and is not expected to be used as a drinking water source in the future. The East Bay Municipal Utilities District (EBMUD) currently supplies drinking water to the site and surrounding properties and is expected to provide water to these areas in the future (EBMUD 2015). Ninety percent of the water used within the EBMUD public water system, which includes drinking water at the site, is imported water from the Mokelumne River watershed in the Sierra Nevada Mountains (EBMUD 2015). The remaining 10 percent originates as runoff from the watershed lands in the East Bay Area.

A DWR well search was performed by TRC in 2007 (TRC 2007), Arcadis in 2014, and AECOM in 2015. All three well searches identified an irrigation well located approximately 1,300 feet east of the site (crossgradient) as the nearest well to the site. All wells identified in the three well searches are located upgradient or crossgradient from the site and more than 1,000 feet from the site. Therefore, the wells are unlikely to be impacted by historical or current operations at the site.

Glen Echo Creek is the nearest surface-water body to the site and is located approximately 1,630 feet southeast of the site (Figure 1). Glen Echo Creek is crossgradient from the site and is unlikely to be impacted by historical or current operations at the site.

The site is devoid of ecological receptors and is not immediately adjacent or upgradient to known sensitive receptors or water supply wells. Based on this information, potential exposure pathways for sensitive receptors are considered insignificant.

3.7.2 Potential Transport and Release Mechanisms and Receptors

The site is an active commercial petroleum fueling and service station. In the reasonably anticipated future, the site is expected to remain an active commercial gasoline service station. This section discusses the potential transport and release mechanisms and receptors at the site.

3.7.2.1 Volatilization

A potential release mechanism at the site may include the volatilization of COPCs in subsurface soil or groundwater to indoor air of onsite commercial buildings, outdoor air, air within a trench used by a future onsite utility worker, or indoor air of current and future offsite residential or commercial buildings.

In general, exposure to petroleum vapors migrating from soil or groundwater to indoor air may pose unacceptable human health risks. However, under the LTCP (SWRCB 2012b), active service stations are not required to meet vapor intrusion criteria unless underground releases can reasonably be believed to pose unacceptable risk, which is not the case for the site based on available data. Exposure to volatile petroleum hydrocarbon constituents associated with historical fuel system releases is deemed insignificant relative to typical exposure from surface spills and fugitive vapors at service stations. Additionally, in many petroleum release cases, potential human exposures to vapors are mitigated by bioattenuation processes as vapors migrate toward the ground surface.

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Vapor migration from the subsurface (i.e., soil and groundwater) to indoor air is considered an unlikely and insignificant exposure pathway for current and future onsite station workers. Vapor migration into trench air or outdoor air is unlikely due to the potential for dilution in outdoor areas. In addition, residual soil concentrations do not exceed the commercial volatilization to outdoor air or utility worker criteria of the LTCP. However, as previously mentioned in Section 3.5.4, the adjacent building at 3915 Broadway can be classified as a potential offsite receptor and further soil vapor investigation appears warranted to determine whether or not this pathway is significant.

3.7.2.2 Leaching to Groundwater

The release of petroleum hydrocarbons from former USTs and associated piping can leach from soil to groundwater. This release mechanism is likely responsible for the majority of historical groundwater impacts. However, overall decreasing or stable petroleum hydrocarbon trends in groundwater (Section 3.6) indicate that this release mechanism has likely been mitigated through remediation, weathering, and natural attenuation.

3.7.2.3 Direct Contact with Groundwater

As described in Section 3.7.1, drinking water is supplied to the site by the EBMUD from distant sources. Well surveys completed in 2007 (TRC 2007), 2014 (Arcadis 2014), and 2015 identified three water supply wells within 0.5 mile of the site; two cathodic protection wells were identified, but are not classified as water supply wells. All three water supply wells are greater than 1,000 feet from the site, with the closest well (an irrigation well) identified approximately 1,300 feet east of the site. All wells are located upgradient or crossgradient from the site. Therefore, direct contact with groundwater through supply wells is not expected to be a complete or significant exposure pathway.

The depth at which groundwater was encountered at each well location based on their boring logs (Appendix C) ranged from approximately 10.5 feet bgs (MW-11) to 20 feet bgs (MW-10). To our knowledge, there are no plans for redevelopment or station upgrades; therefore, it is unlikely that future onsite utility workers will be directly exposed to residual petroleum hydrocarbons in groundwater. If subsurface work is required, dewatering will typically occur when water is exposed in excavation trenches. Therefore, the direct contact with groundwater pathway for future onsite utility workers is considered complete but insignificant.

3.7.2.4 Direct Contact with Soil

The site is primarily covered with buildings, fuel dispensers, concrete and asphalt paving, and small perimeter landscaping areas. As such, current and future onsite commercial workers will likely not be exposed to COPCs in soil via direct contact exposure pathways (i.e., incidental ingestion, dermal contact, and inhalation of particulates). Therefore, the risk for direct contact with surface and subsurface soil for the current and future onsite commercial worker is likely insignificant.

Future onsite utility workers may be directly exposed to petroleum hydrocarbon constituents in subsurface soil during intrusive activities. Typically, utility trenches are located at a depth of no greater than 8 feet bgs. Impacted soil appears at depths of approximately 4 to 34.5 feet bgs and could be encountered by construction, excavation, and utility workers. However, we are aware of no current plans for

redevelopment or station upgrades in the near future. Therefore, the future onsite utility worker potential direct contact exposure pathway to constituents in surface and subsurface soil is considered complete but insignificant. In addition, residual concentrations in soil do not exceed the utility worker criteria of the LTCP.

3.7.2.5 Potential Ecological Receptors

The site is devoid of ecological habitat and surface water; therefore, it is anticipated that ecological receptors are absent from the site. It is expected that the site use will remain the same for the foreseeable future. The nearest surface-water body (Glen Echo Creek) is located 1,630 feet southeast of the site. Impacts to the nearest surface-water body are unlikely because the creek is located crossgradient and a sizable distance from the site. Based on this information, potential exposure pathways for ecological receptors are incomplete.

3.8 Summary of Potential Exposure Pathways

Potential human receptors at the site were identified based on current and likely future land use at and near the site. As discussed previously, current and reasonably anticipated future land use at the site is commercial (i.e., continued operation of the service station). Potential receptors include current and future onsite and offsite commercial workers (3915 Broadway), current and future offsite residents, and future onsite utility/construction workers. Potentially complete but insignificant human health exposure pathways include:

- Current and future offsite residents: COPCs migrating to indoor air from groundwater
- Future onsite utility workers:
 - Inhalation (outdoor air) of air vapors
 - Inhalation (outdoor air) of dust particles
 - Ingestion of surface and subsurface soil
 - Dermal contact with groundwater
 - Dermal contact with subsurface soil

4 ASSESSMENT OF SITE CONDITIONS RELATIVE TO LOW-THREAT CLOSURE POLICY

The LTCP (SWRCB 2012b) outlines eight General Criteria to assess whether sites are candidates for low-threat case closure and three categories of Media-Specific Criteria (groundwater, petroleum vapor intrusion to indoor air, and direct contact and outdoor air exposure) that also must be met. This section evaluates current site conditions in relation to the General and Media-Specific Criteria. Based on this evaluation, Arcadis concludes that the site meets the General and Media-Specific Criteria requirements for low-threat case closure.

4.1 Evaluation of Low-Threat Closure General Criteria

This section evaluates the site conditions related to each of the eight General Criteria.

Criteria A - The unauthorized release is located within the service area of a public water system

The site lies within the East Bay Plain Subbasin of the Santa Clara Valley Groundwater Basin. The site is located within the service area of the City of Oakland public water system. Water used within the City of Oakland public water system service system, which includes drinking water at the site, is imported water supplied by the EBMUD. Approximately 90 percent of the EBMUD's water supply comes from the Mokelumne River watershed in the Sierra Nevada Mountains with the remaining 10 percent from surface water runoff in the area (EBMUD 2015). As discussed in Section 3.7.1, well survey results for active and inactive wells identified three water supply wells located with a 0.5-mile radius of the site. All wells are located either upgradient or crossgradient from the site. The nearest well identified is an irrigation well located 1,300 feet north (crossgradient) of the site.

Criteria B - The unauthorized release consists only of petroleum

Soil and groundwater impacts occurred as a result of unauthorized historical releases from USTs, dispensers, and/or product piping. COPCs at the site include TPH-g, BTEX, and MTBE, which are indicative of a petroleum release. No non-petroleum impacts or releases at the site have been documented.

Criteria C - The unauthorized ("primary") release from the UST system has been stopped

In August 1989, during UST replacement, 350 cubic yards of soil were removed and disposed of offsite. Approximately 14,000 gallons of groundwater were pumped from the gasoline UST cavity and disposed of offsite. During product piping and dispenser island replacement in March 1998, a total of 30.2 tons of impacted soil from the site were excavated and disposed of offsite. The unauthorized releases ceased with the replacement of this infrastructure.

Criteria D - Free product has been removed to the maximum extent practicable

Site monitoring wells have been screened for LNAPL accumulation during groundwater monitoring events from 1992 to the present. LNAPL historically was observed at the site in wells MW-3 and MW-5. Historically, any free product found was removed via baildown methods or skimmers. From 1999 through 2011, 4 gallons of free product were removed from well MW-5. An additional gallon of free product was removed from MW-5 during the first half of 2016 after the skimmer was removed from the well and replaced with an installed absorbent sock. Currently, the absorbent sock in MW-5 is replaced monthly. During the April, May, and June monthly or semi-annual events, no LNAPL was observed in MW-5. Therefore, site-wide, LNAPL has been removed to the maximum extent practicable (Section 3.5.2).

Criteria E - A conceptual site model that assesses the nature, extent, and mobility of the release has been developed

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A CSM that includes a comprehensive site assessment and remediation history, regional and site-specific geology and hydrogeology, review of soil and groundwater conditions at the site, and evaluation of potential human health exposure from site-related COPCs is presented in Section 3.

Criteria F - Secondary source has been removed to the extent practicable

As detailed in Section 3.6, results of the regression analysis indicate attenuation or stable trends of all COPCs in groundwater beneath the site. The decreasing trends provide evidence that secondary source removal at the site has been achieved to the extent practicable through biodegradation and remediation efforts.

Criteria G - Soil and groundwater have been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15

Soil samples collected in 1998 and 2009 (Table 2) and groundwater samples collected during site investigation and monitoring events from 1995 to 2002 were analyzed for MTBE using USEPA Method 8021B; groundwater samples collected from 1999 to the present have been analyzed for MTBE using USEPA Method 8021B and/or 8260B (Table 1).

Criteria H - Nuisance as defined by Water Code Section 13050 does not exist at the site

No nuisance exists at the site, as defined by Water Code Section 13050. Site conditions and the treatment and disposal of site wastes are not injurious to health, are not indecent or offensive to the senses, and do not obstruct free use of property or interfere with the comfortable enjoyment of life or property. Site conditions and the treatment and disposal of site wastes do not affect an entire community or neighborhood or any considerable number of persons. Site impacts are restricted to the subsurface and are present in a limited area that does not adversely affect the community at large.

4.2 Evaluation of Low-Threat Closure: Media-Specific Criteria

This section evaluates the site conditions related to each of the three categories of Media-Specific Criteria.

4.2.1 Groundwater

Groundwater at the site does not currently pose a risk to existing or anticipated future beneficial uses of groundwater and meets the groundwater-specific criteria outlined in the LTCP (SWRCB 2012b). The LTCP states that “the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites” (SWRCB 2012b).

4.2.1.1 Plume Stability

According to the Technical Justification for Groundwater Media-Specific Criteria (SWRCB 2012a), plume stability can be demonstrated in two ways:

UPDATED CONCEPTUAL SITE MODEL

- “[R]outinely observed non-detect values for groundwater parameters in down-gradient wells”
- “[S]table or decreasing concentration levels in down-gradient wells”

Plume stability is discussed in Section 3.6. Results of the linear regression analyses are summarized in Table 5, and the individual analysis results are included in Appendix G. Results of the regression analyses indicate attenuation of COPCs in groundwater beneath the site (Section 3.6.1). Evaluation of groundwater monitoring data indicates plume stability at the site as defined by the Technical Justification for Groundwater Media-Specific Criteria (SWRCB 2012a).

4.2.1.2 Additional Groundwater-Specific Criteria

As described in the LTCP (SWRCB 2012b), a site can meet the Groundwater-Specific Criteria through one of five main classes. This site most closely falls into **Class 3** as described below.

3a. The contaminant plume that exceeds water quality objectives is less than 250 feet in length

To determine the classification of groundwater impacts, the length of the plume exceeding WQOs for each of the current site COPCs was measured using the most recent isoconcentration maps included on Figures 5, 6, and 7 in Appendix E. Plume lengths were conservatively measured from the north corner of the USTs (i.e., source area) to the farthest downgradient isoconcentration contour and are estimated based on the most recent available data collected in June 2016:

- The TPH-g plume exceeding 220 µg/L is approximately 80 feet long.
- The benzene plume exceeding 1.0 µg/L is approximately 55 feet long.
- The MTBE plume exceeding 5 µg/L is approximately 25 feet long.

3b. Free product has been removed to the maximum extent practicable, may still be present below the site where the release originated, but does not extend offsite

LNAPL has been observed in site monitoring wells MW-3 and MW-5, as detailed in Section 3.5.2 and in Section 4.1 for General Criteria D. LNAPL has been observed onsite and removed from MW-5 through the use of an installed absorbent sock.

3c. The plume has been stable or decreasing for a minimum of five years

As described in Sections 3.5.3 and 3.6, the plume continues to decrease in size. According to the linear regression analysis, the COPCs have decreasing or stable trends, indicating a stable plume.

3d. The nearest existing water supply well or surface-water body is greater than 1,000 feet from the defined plume boundary

As described in Section 3.7.1 and in Section 4.1 for General Criteria A, no water supply wells were identified within 1,000 feet from the site or the defined plume boundary. Glen Echo Creek is the nearest surface-water body and is located approximately 1,630 feet southeast of the site (Section 3.7.1) and greater than 1,000 feet from the defined plume boundary.

3e. The property owner is willing to accept a land use restriction if the regulatory agency requires a land use restriction as a condition of closure

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Current site zoning is commercial. The future land use of the site is not expected to change. However, if zoning changes, land use restrictions may be required by the oversight agency.

4.2.2 Petroleum Vapor Intrusion to Indoor Air

As described in the LTCP (SWRCB 2012b), satisfaction of the Media-Specific Criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities where there are no site-specific characteristics that would pose an unacceptable health risk. The site is an active commercial petroleum fueling facility with no unacceptable risk characteristics; therefore, the site is exempt from the Media-Specific Criteria for petroleum vapor intrusion to indoor air. Further soil vapor investigation appears warranted to evaluate if there are any vapor intrusion concerns at the adjacent building at 3915 Broadway.

4.2.3 Direct Contact and Outdoor Air Exposure

As described in the LTCP (SWRCB 2012b), sites will meet the Media-Specific Criteria for direct contact with contaminated soil or inhalation of contaminants volatilized to outdoor air if any of the following apply:

- The maximum concentrations of COPCs in soil are less than or equal to those listed in Table 1 of the Low-Threat Closure Policy.
- A site-specific risk assessment shows that COPCs present in soil will not adversely affect human health.
- Exposure to COPCs is mitigated through engineering controls.

This site meets the criterion as summarized below:

- The site is completely covered with a building and pavement and there is little or no potential for direct human contact with site soil or for offsite wind dispersion of soil. Therefore, direct contact exposure pathways (i.e., ingestion, dermal contact, and inhalation of particulates) with soil are considered incomplete and are expected to remain the same in the future.
- Benzene and ethylbenzene concentrations were evaluated using concentrations for commercial/industrial exposure because the site is not anticipated to be developed for residential use (Table 1 of SWRCB 2012b). Polycyclic aromatic hydrocarbons (PAHs), including naphthalene, are not considered COPCs at the site. The evaluation of benzene and ethylbenzene concentrations for commercial/industrial exposure is summarized below. Historical soil data are included in Table 2.

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Chemical	Commercial/Industrial				Utility Worker	
	0 to 5 feet bgs (mg/kg)		Volatilization to Outdoor Air (5 to 10 feet bgs) (mg/kg)		0 to 10 feet bgs (mg/kg)	
	Low-Threat Closure Policy Table 1	Site Maximum	Low-Threat Closure Policy Table 1	Site Maximum	Low-Threat Closure Policy Table 1	Site Maximum
Benzene	8.2	0.3 (P3)	12	1.9 (B-2)	14	1.9 (B-2)
Ethylbenzene	89	58 (UT-2-4)	134	10 (B-2)	314	58 (UT-2-4)

As indicated in the table above, the maximum concentrations of benzene and ethylbenzene are less than the low-threat criteria (Table 1 of SWRCB 2012b) for commercial/industrial direct contact and volatilization to outdoor air and utility worker direct contact in soil samples collected from 0 to 10 feet bgs.

Although a waste oil tank present on site, based on KEI's soil sampling report (Kaprealian 1989a), ACEH concluded that the tank did not experience a release and no further action is necessary (Appendix H). Because the soil on-site was not impacted by waste oil, PAHs do not need to be analyzed based on the first note under Table 1 of the LTCP (SWRCB 2012b).

5 RECOMMENDATIONS

Arcadis respectfully requests that ACEH review and update the Low-Threat Closure Checklist on the SWRCB GeoTracker website according to the data included in this CSM. Arcadis reviewed the checklist and found the following inconsistencies:

1. *Media-Specific Criteria: Groundwater*
 - *Free Product Extends Offsite: Yes*

Historically, free product has only been detected at measurable quantities in MW-3 and MW-5, which are located onsite.

1. *Media-Specific Criteria: Groundwater*
 - *Benzene Concentration: Unknown*
2. *Media Specific Criteria: Petroleum Intrusion to Indoor Air*
 - *Benzene Concentration in Groundwater: Unknown*

Benzene has been monitored at the site during routine groundwater sampling since fourth quarter 2004. Following the first semi-annual 2016 groundwater monitoring event, the site maximum (210 µg/L) was observed in MW-5.

3. *Media Specific Criteria: Direct Contact and Outdoor Air Exposure*
 - *Exposure Type: Residential*

The site currently an active service station and the property is classified by the Alameda County Assessor's Office under Use code 8500 (8x – Series – Improved Commercial). All properties located within the offsite monitoring well network are similarly classified under commercial use codes. Arcadis subsequently compared historical soil analytical data to concentrations for commercial/industrial exposure (see Section 4.2.3).

Additionally, Arcadis concludes that further investigation of soil vapor appears warranted to determine if indoor vapor intrusion is a potentially significant pathway to the building at 3915 Broadway, located adjacent to the site and near MW-5. Arcadis will continue to work with Chevron EMC and the property owner to gain access for future indoor air sampling and installation of soil vapor probes. Updates to access will included in the semi-annual groundwater monitoring reports.

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TABLES



Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-1															
	11/1/1989	--	--	--	--	--	ND	--	ND	ND	ND	0.3	--	--	
	2/15/1990	--	--	--	--	--	170	--	7.9	ND	2.2	2.8	--	--	
	8/16/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/7/1990	--	--	--	--	--	45	--	ND	ND	ND	ND	--	--	
	2/25/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	5/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/19/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	2/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/26/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/20/1992	--	--	--	--	--	ND	--	0.75	ND	ND	ND	--	--	
	12/21/1992	81.07	8.12	0	72.95	--	--	--	--	--	--	--	--	--	
	1/30/1993	81.07	7.63	0	73.44	0.49	--	--	--	--	--	--	--	--	
	2/24/1993	81.07	7.16	0	73.91	0.47	1,100	--	280	4.9	120	140	--	--	
	3/22/1993	81.07	6.26	0	74.81	0.90	--	--	--	--	--	--	--	--	
	4/28/1993	81.07	7.91	0	73.16	-1.65	--	--	--	--	--	--	--	--	
	5/25/1993	81.07	7.87	0	73.20	0.04	260	--	27	4.9	2.6	54	--	--	
	6/23/1993	80.54	7.66	0	72.88	-0.32	--	--	--	--	--	--	--	--	
	7/22/1993	80.54	7.87	0	72.67	-0.21	--	--	--	--	--	--	--	--	
	8/25/1993	80.54	8.00	0	72.54	-0.13	ND	--	ND	ND	ND	ND	--	--	
	9/22/1993	80.54	8.10	0	72.44	-0.10	--	--	--	--	--	--	--	--	
	10/28/1993	80.54	8.15	0	72.39	-0.05	--	--	--	--	--	--	--	--	
	11/30/1993	80.54	7.65	0	72.89	0.50	--	--	--	--	--	--	--	--	
	2/16/1994	80.54	7.46	0	73.08	0.19	ND	--	0.84	ND	ND	0.59	--	--	
	5/31/1994	80.54	7.80	0	72.74	-0.34	--	--	--	--	--	--	--	--	
	8/31/1994	80.54	8.27	0	72.27	-0.47	ND	--	ND	0.98	ND	0.84	--	--	
	9/27/1994	80.54	8.37	0	72.17	-0.10	--	--	--	--	--	--	--	--	
	10/11/1994	80.54	8.36	0	72.18	0.01	--	--	--	--	--	--	--	--	
	11/10/1994	80.54	6.43	0	74.11	1.93	--	--	--	--	--	--	--	--	
	2/7/1995	80.54	7.06	0	73.48	-0.63	6,100	--	670	ND	120	60	--	--	
	5/3/1995	80.54	6.85	0	73.69	0.21	260	--	21	39	17	24	--	--	
	8/3/1995	80.54	7.69	0	72.85	-0.84	--	--	--	--	--	--	--	--	
	11/7/1995	80.54	8.15	0	72.39	-0.46	ND	--	ND	ND	ND	ND	--	--	
	5/6/1996	80.54	7.40	0	73.14	0.75	170	--	1.0	20	2.3	17	55	--	
	11/5/1996	80.54	7.90	0	72.64	-0.50	ND	--	ND	ND	ND	ND	5.2	--	
	5/15/1997	80.54	7.77	0	72.77	0.13	ND	--	ND	ND	ND	ND	16	--	
	11/12/1997	80.54	7.48	0	73.06	0.29	ND	--	ND	ND	ND	ND	11	--	
	5/4/1998	80.54	7.39	0	73.15	0.09	ND	--	ND	ND	ND	ND	320	--	
	11/11/1998	80.54	7.37	0	73.17	0.02	ND	--	ND	ND	ND	ND	200	--	
	5/20/1999	80.54	7.41	0	73.13	-0.04	ND	--	ND	ND	ND	ND	89	47	
	11/15/1999	80.54	7.84	0	72.70	-0.43	ND	--	ND	ND	ND	ND	8.12	7.19	
	5/22/2000	80.54	7.53	0	73.01	0.31	ND	--	0.89	ND	ND	ND	220	290	
	11/22/2000	80.54	7.35	0	73.19	0.18	ND	--	ND	ND	ND	ND	105	142	
	5/15/2001	80.54	7.48	0	73.06	-0.13	345	--	ND	3.41	2.77	25.2	178	374	
	11/23/2001	80.54	7.57	0	72.97	-0.09	<50	--	<0.50	<0.50	<0.50	<0.50	350	350	
	5/24/2002	80.54	7.10	0	73.44	0.47	70	--	<0.50	<0.50	<0.50	<0.50	200	240	
	11/29/2002	80.54	7.96	0	72.58	-0.86	<250	--	<2.5	<2.5	<2.5	<5.0	--	330	
	5/15/2003	80.54	7.22	0	73.32	0.74	<250	--	<2.5	<2.5	<2.5	<5.0	--	210	

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Oakland, California

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MW-1 (cont.)	11/4/2003	80.54	7.94	0	72.60	-0.72	--	120	<1.0	<1.0	<1.0	<2.0	--	140	
	5/24/2004	80.54	7.54	0	73.00	0.40	--	<50	<0.50	<0.50	<0.50	<1.0	--	26	
	11/29/2004	80.54	7.27	0	73.27	0.27	--	58	<0.50	<0.50	<0.50	<1.0	--	44	
	6/24/2005	80.54	7.06	0	73.48	0.21	--	87	<0.50	<0.50	<0.50	<1.0	--	80	
	12/15/2005	80.54	7.35	0	73.19	-0.29	--	<50	<0.50	<0.50	<0.50	<1.0	--	32	
	6/14/2006	80.54	7.06	0	73.48	0.29	--	<50	<0.50	<0.50	<0.50	<1.0	--	44	
	12/21/2006	80.54	7.12	0	73.42	-0.06	--	<50	<0.50	<0.50	<0.50	<0.50	--	16	
	6/28/2007	80.54	7.79	0	72.75	-0.67	--	<50	<0.50	<0.50	<0.50	<0.50	--	5.6	
	12/13/2007	80.54	7.94	0	72.60	-0.15	--	<50	<0.50	<0.50	<0.50	<1.0	--	10	
	6/9/2008	80.54	8.00	0	72.54	-0.06	--	<50	<0.50	<0.50	<0.50	<1.0	--	29	
	12/30/2008	80.54	7.51	0	73.03	0.49	--	<50	<0.50	<0.50	<0.50	<1.0	--	3.2	
	9/28/2009	80.54	8.10	0	72.44	-0.59	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.98	
	12/15/2009	80.54	7.32	0	73.22	0.78	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/28/2010	80.54	7.80	0	72.74	-0.48	--	<50	<0.50	<0.50	<0.50	<1.0	--	8.1	
	12/29/2010	80.54	6.22	0	74.32	1.58	--	99	<0.50	<0.50	<0.50	<1.0	--	1.6	
	6/7/2011	80.54	6.25	0	74.29	-0.03	--	140	<0.50	<0.50	<0.50	<1.0	--	22	
	12/9/2011	80.54	7.97	0	72.57	-1.72	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.2	
6/1/2012	80.54	7.63	0	72.91	0.34	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.87		
12/27/2012	80.54	6.22	0	74.32	1.41	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.7		
6/6/2013	80.54	7.88	0	72.66	-1.66	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.51		
12/13/2013	80.54	8.34	0	72.20	-0.46	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/23/2014	80.54	8.27	0	72.27	0.07	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/17/2014	80.54	5.82	0	74.72	2.45	1,200	1100	50	8.2	14	230.0	--	0.89		
6/9/2015	80.54	8.06	0	72.48	-2.24	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/30/2015	80.54	7.72	0	72.82	0.34	<50	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/22/2016	80.54	8.06	0	72.48	-0.34	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
MW-2	11/1/1989	--	--	--	--	--	200	--	ND	ND	3.0	1.2	--	--	
	2/15/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/16/1990	--	--	--	--	--	ND	--	ND	6.7	ND	ND	--	--	
	11/7/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	2/25/1991	--	--	--	--	--	ND	--	0.68	0.42	ND	0.86	--	--	
	5/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/19/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	2/6/1992	--	--	--	--	--	ND	--	0.36	0.66	ND	0.62	--	--	
	5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/26/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/20/1992	--	--	--	--	--	510	--	ND	ND	ND	ND	--	--	
	12/21/1992	81.62	9.14	0	72.48	--	--	--	--	--	--	--	--	--	
	1/30/1993	81.62	8.99	0	72.63	0.15	--	--	--	--	--	--	--	--	
	2/24/1993	81.62	8.03	0	73.59	0.96	11,000J	--	ND	ND	ND	ND	--	--	
	3/22/1993	81.62	9.50	0	72.12	-1.47	--	--	--	--	--	--	--	--	
	4/28/1993	81.62	8.87	0	72.75	0.63	--	--	--	--	--	--	--	--	
	5/25/1993	81.62	9.04	0	72.58	-0.17	1,300J	--	ND	ND	ND	ND	2700	--	
	6/23/1993	81.32	9.17	0	72.15	-0.43	--	--	--	--	--	--	--	--	
7/22/1993	81.32	9.42	0	71.90	-0.25	--	--	--	--	--	--	--	--		
8/25/1993	81.32	9.53	0	71.79	-0.11	190J	--	ND	ND	ND	ND	--	--		
9/22/1993	81.32	9.67	0	71.65	-0.14	--	--	--	--	--	--	--	--		
10/28/1993	81.32	9.65	0	71.67	0.02	--	--	--	--	--	--	--	--		

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-2 (cont.)	11/30/1993	81.32	9.18	0	72.14	0.47	480J	--	ND	ND	ND	ND	--	--	
	2/16/1994	81.32	8.91	0	72.41	0.27	3,200J	--	ND	ND	ND	ND	--	--	
	5/31/1994	81.32	9.36	0	71.96	-0.45	1,100J	--	ND	ND	ND	ND	--	--	
	8/31/1994	81.32	9.85	0	71.47	-0.49	310J	--	ND	ND	ND	ND	--	--	
	9/27/1994	81.32	9.95	0	71.37	-0.10	--	--	--	--	--	--	--	--	
	11/10/1994	81.32	7.47	0	73.85	2.48	95J	--	ND	ND	ND	ND	--	--	
	2/7/1995	81.32	8.29	0	73.03	-0.82	1,600J	--	ND	ND	ND	ND	--	--	
	5/3/1995	81.32	8.12	0	73.20	0.17	ND	--	ND	ND	ND	ND	--	--	
	8/3/1995	81.32	9.35	0	71.97	-1.23	ND	--	ND	ND	ND	ND	--	--	
	8/19/1995	81.32	--	0	--	--	--	--	--	--	--	--	--	--	
	10/11/1995	81.32	9.95	0	71.37	--	--	--	--	--	--	--	--	--	
	11/7/1995	81.32	9.65	0	71.67	0.30	ND	--	ND	ND	ND	ND	160	--	
	5/6/1996	81.32	8.90	0	72.42	0.75	--	--	--	--	--	--	--	--	
	11/5/1996	81.32	10.98	0	70.34	-2.08	--	--	--	--	--	--	--	--	
	5/15/1997	81.32	9.13	0	72.19	1.85	--	--	--	--	--	--	--	--	
	11/12/1997	81.32	9.84	0	71.48	-0.71	--	--	--	--	--	--	--	--	
	5/4/1998	81.32	9.26	0	72.06	0.58	--	--	--	--	--	--	--	--	
	11/11/1998	81.32	8.88	0	72.44	0.38	--	--	--	--	--	--	--	--	
	5/20/1999	81.32	8.68	0	72.64	0.20	--	--	--	--	--	--	--	--	
	11/15/1999	81.32	8.91	0	72.41	-0.23	--	--	--	--	--	--	--	--	
	5/22/2000	81.32	8.61	0	72.71	0.30	--	--	--	--	--	--	--	--	
	11/22/2000	81.32	8.64	0	72.68	-0.03	--	--	--	--	--	--	--	--	
	5/15/2001	81.32	8.73	0	72.59	-0.09	--	--	--	--	--	--	--	--	
	11/23/2001	81.32	8.61	0	72.71	0.12	--	--	--	--	--	--	--	--	
	5/24/2002	81.32	8.03	0	73.29	0.58	--	--	--	--	--	--	--	--	
	11/29/2002	81.32	8.79	0	72.53	-0.76	--	--	--	--	--	--	--	--	
	5/15/2003	81.32	8.21	0	73.11	0.58	--	--	--	--	--	--	--	--	
	11/4/2003	81.32	--	--	--	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
	5/24/2004	81.32	--	--	--	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
	11/29/2004	81.32	--	--	--	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
	6/24/2005	81.32	--	--	--	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
	12/15/2005	81.32	--	--	--	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
	6/14/2006	81.32	8.56	0	72.76	--	--	140	<0.50	<0.50	<0.50	<1.0	--	190	
	12/21/2006	81.32	8.38	0	72.94	0.18	--	<50	<0.50	<0.50	<0.50	<0.50	--	32	
	6/28/2007	81.32	9.23	0	72.09	-0.85	--	<50	<0.50	<0.50	<0.50	<0.50	--	8.3	
	12/13/2007	81.32	9.10	0	72.22	0.13	--	<50	<0.50	1.1	<0.50	1.4	--	10	
	6/9/2008	81.32	10.01	0	71.31	-0.91	--	<50	<0.50	<0.50	<0.50	<1.0	--	12	
	12/30/2008	81.32	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate due to debris

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-2 (cont.)	9/28/2009	81.32	--	--	--	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
	12/15/2009	81.32	8.93	0	72.39	--	--	69	<0.50	<0.50	<0.50	<1.0	--	5.9	
	6/28/2010	81.32	9.65	0	71.67	-0.72	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.3	
	12/29/2010	81.32	7.91	0	73.41	1.74	--	67	<0.50	<0.50	<0.50	<1.0	--	2.1	
	6/7/2011	81.32	7.75	0	73.57	0.16	--	73	0.97	<0.50	<0.50	<1.0	--	14	
	12/9/2011	81.32	8.95	0	72.37	-1.20	--	<50	<0.50	<0.50	<0.50	<1.0	--	7.9	
	6/1/2012	81.32	9.18	0	72.14	-0.23	--	<50	<0.50	<0.50	<0.50	<1.0	--	2.9	
	12/27/2012	81.32	7.26	0	74.06	1.92	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.5	
	6/6/2013	81.32	9.40	0	71.92	-0.22	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.95	
	12/13/2013	81.32	9.68	0	71.64	-0.28	--	<50	<0.50	<0.50	<0.50	3.1	--	1.1	
	6/23/2014	81.32	9.69	0	71.63	-0.01	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.82	
	12/17/2014	81.32	6.88	0	74.44	2.81	--	<50	0.8	<0.50	<0.50	<1.0	--	0.68	
	6/9/2015	81.32	9.01	0	72.31	-2.13	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/30/2015	81.32	8.89	0	72.43	0.12	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.58	
	6/22/2016	81.32	9.04	0	72.28	-0.15	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.91	
MW-3	11/1/1989	--	--	--	--	--	13,000	--	57	48	1.7	120	--	--	
	2/15/1990	--	--	--	--	--	20,000	--	1,700	2,100	750	3,100	--	--	
	8/16/1990	--	--	--	--	--	6,800	--	600	660	760	160	--	--	
	11/7/1990	--	--	--	--	--	42,000	--	1,400	5,000	1,800	7,500	--	--	
	2/25/1991	--	--	--	--	--	37,000	--	730	2,900	1,300	7,300	--	--	
	5/28/1991	--	--	--	--	--	24,000	--	570	1,100	810	4,200	--	--	
	8/28/1991	--	--	--	--	--	16,000	--	650	2,200	1,100	5,400	--	--	
	11/19/1991	--	--	--	--	--	22,000	--	250	440	660	3,000	--	--	
	2/6/1992	--	--	--	--	--	24,000	--	600	1,800	1,200	5,800	--	--	
	5/23/1992	--	--	--	--	--	25,000	--	300	130	880	4,900	--	--	
	8/26/1992	--	--	--	--	--	20,000	--	690	1,900	1,300	5,700	--	--	
	11/20/1992	--	--	--	--	--	110,000	--	1,800	6,400	3,000	15,000	--	--	
	12/4/1992	82.01	10.30	0	71.71	--	--	--	--	--	--	--	--	--	
	12/21/1992	82.01	9.78	0	72.23	0.52	--	--	--	--	--	--	--	--	Sheen
	1/9/1993	82.01	8.55	0	73.46	1.23	--	--	--	--	--	--	--	--	
	1/30/1993	82.01	8.90	0	73.11	-0.35	--	--	--	--	--	--	--	--	
	2/10/1993	82.01	9.01	0.01	73.01	-0.10	--	--	--	--	--	--	--	--	LPH in well
	2/24/1993	82.01	8.26	0.01	73.76	0.75	--	--	--	--	--	--	--	--	LPH in well
	3/9/1993	82.01	9.18	0.02	72.85	-0.91	--	--	--	--	--	--	--	--	LPH in well
	3/22/1993	82.01	8.81	0.02	73.22	0.37	--	--	--	--	--	--	--	--	LPH in well
	4/8/1993	82.01	9.14	0.02	72.89	-0.33	--	--	--	--	--	--	--	--	LPH in well
	4/28/1993	82.01	9.44	0.03	72.59	-0.29	--	--	--	--	--	--	--	--	LPH in well
	5/12/1993	82.01	9.57	0.03	72.46	-0.13	--	--	--	--	--	--	--	--	LPH in well
	5/25/1993	82.01	9.45	0.03	72.58	0.12	--	--	--	--	--	--	--	--	LPH in well
	6/7/1993	81.41	8.94	0	72.47	-0.11	--	--	--	--	--	--	--	--	
	6/23/1993	81.41	9.20	0.02	72.23	-0.24	--	--	--	--	--	--	--	--	LPH in well
	7/8/1993	81.41	9.31	0.03	72.12	-0.10	--	--	--	--	--	--	--	--	LPH in well
	7/22/1993	81.41	9.47	0	71.94	-0.18	--	--	--	--	--	--	--	--	
	8/11/1993	81.41	9.59	0	71.82	-0.12	--	--	--	--	--	--	--	--	
	8/25/1993	81.41	9.67	0.03	71.76	-0.06	--	--	--	--	--	--	--	--	LPH in well
	9/8/1993	81.41	10.34	0	71.07	-0.69	--	--	--	--	--	--	--	--	
	9/22/1993	81.41	9.84	0.02	71.59	0.51	--	--	--	--	--	--	--	--	LPH in well

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Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-3 (cont.)	10/7/1993	81.41	9.87	0	71.54	-0.05	--	--	--	--	--	--	--	--	
	10/28/1993	81.41	10.03	0	71.38	-0.16	--	--	--	--	--	--	--	--	
	11/12/1993	81.41	9.76	0	71.65	0.27	--	--	--	--	--	--	--	--	
	11/30/1993	81.41	9.66	0.02	71.76	0.11	--	--	--	--	--	--	--	--	LPH in well
	2/16/1994	81.41	8.87	0	72.54	0.78	57,000	--	910	2,500	2,100	9,000	--	--	Sheen
	5/31/1994	81.41	9.48	0	71.93	-0.61	39,000	--	670	630	1,500	6,200	--	--	
	8/31/1994	81.41	10.08	0	71.33	-0.60	44,000	--	500	240	1,400	5,700	--	--	
	9/24/1994	81.41	10.22	0	71.19	-0.14	--	--	--	--	--	--	--	--	
	10/11/1994	81.41	10.41	0.01	71.01	-0.18	--	--	--	--	--	--	--	--	LPH in well
	11/10/1994	81.41	7.47	0	73.94	2.93	86,000	--	3,300	3,800	1,800	8,300	--	--	Sheen
	2/7/1995	81.41	8.05	0	73.36	-0.58	45,000	--	1,400	1,300	1,500	5,600	--	--	
	3/14/1995	81.41	7.05	0	74.36	1.00	--	--	--	--	--	--	--	--	
	5/3/1995	81.41	7.91	0	73.50	-0.86	26,000	--	740	990	1,100	4,400	--	--	
	8/3/1995	81.41	9.28	0	72.13	-1.37	18,000	--	59	ND	530	1,900	--	--	
	8/19/1995	81.41	--	0	--	--	--	--	--	--	--	--	--	--	
	11/7/1995	81.41	10.79	0	70.62	--	17,000	--	110	26	400	1,500	880	--	
	5/6/1996	81.41	9.44	0	71.97	1.35	5,100	--	48	ND	87	210	370	--	Sheen
	11/5/1996	81.41	10.64	0	70.77	-1.20	35,000	--	2,200	ND	1,200	2,800	460	--	
	5/15/1997	81.41	9.61	0	71.80	1.03	2,400	--	110	ND	ND	140	100	--	
	11/12/1997	81.41	9.18	0	72.23	0.43	29,000	--	2,000	ND	1,800	3,000	ND	--	
	5/4/1998	81.41	9.50	0	71.91	-0.32	8,200	--	430	ND	310	320	ND	--	
	11/11/1998	81.41	9.25	0	72.16	0.25	8,700	--	500	ND	330	310	ND	--	
	5/20/1999	81.41	8.95	0	72.46	0.30	4,300	--	250	ND	ND	86	ND	--	
	11/15/1999	81.41	10.35	0	71.06	-1.40	6,720	--	326	ND	398	226	120	45.1	
	5/22/2000	81.41	9.14	0	72.27	1.21	4,000	--	99	4.5	190	75	100	94	
	11/22/2000	81.41	9.33	0	72.08	-0.19	6,130	--	93.7	6.71	174	47.8	212	131	
	5/15/2001	81.41	9.25	0	72.16	0.08	4,490	--	229	7.09	160	31.6	97.1	75.5	
	11/23/2001	81.41	9.12	0	72.29	0.13	3,500	--	41	<5.0	120	8.0	320	390	
	5/24/2002	81.41	8.58	0	72.83	0.54	4,000	--	86	6.0	120	5.8	120	73	
	11/29/2002	81.41	9.81	0	71.60	-1.23	5,300	--	<25	<25	65	<50	--	340	
	5/15/2003	81.41	8.76	0	72.65	1.05	5,600	--	<5.0	<5.0	81	<10	--	440	
	11/4/2003	81.41	9.90	0	71.51	-1.14	--	13,000	<20	<20	72	56	--	530	
	5/24/2004	81.41	9.29	0	72.12	0.61	--	10,000	14	<10	81	<20	--	1,200	
	11/29/2004	81.41	9.15	0	72.26	0.14	--	9,000	5.9	<5.0	45	<10	--	550	
	6/24/2005	81.41	8.65	0	72.76	0.50	--	5,600	31	4.1	97	220	--	400	
	12/15/2005	81.41	9.27	0	72.14	-0.62	--	6,800	81	45	110	220	--	280	
	6/14/2006	81.41	8.73	0	72.68	0.54	--	10,000	38	<2.5	130	170	--	160	
	12/21/2006	81.41	8.95	0	72.46	-0.22	--	6,600	36	<2.5	150	120	--	96	
	6/28/2007	81.41	10.01	0	71.40	-1.06	--	6,700	33	<0.50	70	24	--	75	
	12/13/2007	81.41	10.22	0	71.19	-0.21	--	4,000	20	<1.0	51	19	--	27	
	6/9/2008	81.41	10.25	0	71.16	-0.03	--	9,700	190	<2.5	170	48	--	19	
	12/30/2008	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate due to debris
	9/28/2009	81.41	10.15	0	71.26	--	--	6,200	39	<2.5	170	12	--	18	
	12/15/2009	81.41	9.18	0	72.23	0.97	--	3,300	9.1	<2.5	47	5.6	--	13	
	6/28/2010	81.41	9.82	0	71.59	-0.64	--	10,000	13	<0.50	92	14	--	17	
	12/29/2010	81.41	7.84	0	73.57	1.98	--	3,900	16	<0.50	36	5.2	--	28	
	6/7/2011	81.41	6.10	0	75.31	1.74	--	3,700	170	<1.0	150	40	--	5.7	
	12/9/2011	81.41	10.08	0	71.33	-3.98	--	9,900	11	<2.5	98	47	--	9.3	A01

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments	
MW-3 (cont.)	6/1/2012	81.41	9.92	0	71.49	0.16	--	4,300	4.6	<0.50	17	3.4	--	19	A01	
	12/27/2012	81.41	7.54	0	73.87	2.38	--	7,100	1.7	<1.0	86	12	--	11	A01	
	6/6/2013	81.41	9.78	0	71.63	0.14	--	2,000	1.3	<0.50	12	<1.0	--	11	A01	
	12/13/2013	81.41	10.39	0	71.02	-0.61	--	1,100	<0.50	<0.50	23	4.2	--	6		
	6/23/2014	81.41	10.28	0	71.13	0.11	--	4,200	87	<0.50	76	13	--	7.6		
	12/17/2014	81.41	7.99	0	73.42	2.29	8,700	5,900	35	<0.50	56	4.7	--	15		
	6/9/2015	81.41	9.74	0	71.67	-1.75	--	6,500	4	<0.50	<0.50	<1.0	--	16		
	12/30/2015	81.41	9.44	0	71.97	0.30	--	3,100	2.3	<0.50	20	<1.0	--	6.3		
6/22/2016	81.41	9.81	0	71.60	-0.37	--	1,900	71	<2.5	81	6.2	--	21			
MW-4	2/15/1990	--	--	--	--	--	150	--	8.0	8.0	10	45	--	--		
	8/16/1990	--	--	--	--	--	3,600	--	480	17	230	260	--	--		
	11/7/1990	--	--	--	--	--	180	--	1.5	0.37	6.3	26	--	--		
	2/25/1991	--	--	--	--	--	22,000	--	600	1,300	780	2,800	--	--		
	5/28/1991	--	--	--	--	--	38	--	ND	ND	ND	1.9	--	--		
	8/28/1991	--	--	--	--	--	2,000.00	--	1,500	20	120	300	--	--		
	11/19/1991	--	--	--	--	--	55	--	9.2	4.5	1.4	6.7	--	--		
	2/6/1992	--	--	--	--	--	5,700	--	2200	140	57	980	--	--		
	5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--		
	8/26/1992	--	--	--	--	--	120	--	86	0.52	0.57	1.6	--	--		
	11/20/1992	--	--	--	--	--	ND	--	6.2	ND	1.2	0.52	--	--		
	1/30/1993	81.48	8.35	0	73.13	--	--	--	--	--	--	--	--	--	--	
	2/24/1993	81.48	8.17	0	73.31	0.18	140	--	12	0.64	9.4	3.7	--	--		
	3/22/1993	81.48	8.12	0	73.36	0.05	--	--	--	--	--	--	--	--		
	4/28/1993	81.48	9.36	0	72.12	-1.24	--	--	--	--	--	--	--	--		
	5/25/1993	81.48	8.75	0	72.73	0.61	74	--	10	ND	4.6	1.8	--	--		
	6/23/1993	81.29	8.90	0	72.39	-0.34	--	--	--	--	--	--	--	--		
	7/22/1993	81.29	9.26	0	72.03	-0.36	--	--	--	--	--	--	--	--		
	8/25/1993	81.29	9.45	0	71.84	-0.19	640	--	100	1.1	100	22	--	--		
	9/22/1993	81.29	9.63	0	71.66	-0.18	--	--	--	--	--	--	--	--		
	10/28/1993	81.29	9.62	0	71.67	0.01	--	--	--	--	--	--	--	--		
	11/30/1993	81.29	9.40	0	71.89	0.22	200	--	28	ND	17	8.1	--	--		
	12/21/1993	81.48	9.10	0	72.38	0.49	--	--	--	--	--	--	--	--		
	2/16/1994	81.29	9.21	0	72.08	-0.30	190	--	11	0.98	21	6.6	--	--		
	5/31/1994	81.29	9.11	0	72.18	0.10	1100	--	190	ND	100	58	--	--		
	8/31/1994	81.29	10.01	0	71.28	-0.90	400	--	17	0.94	14	5.2	--	--		
	9/27/1994	81.29	10.09	0	71.20	-0.08	--	--	--	--	--	--	--	--		
	10/11/1994	81.29	11.50	0	69.79	-1.41	--	--	--	--	--	--	--	--		
	11/10/1994	81.29	9.21	0	72.08	2.29	7,700	--	1,800	280	460	1,300	--	--		
	2/7/1995	81.29	7.66	0	73.63	1.55	540	--	47	ND	17	2.5	--	--		
5/3/1995	81.29	8.29	0	73.00	-0.63	160	--	8.3	0.52	1.5	3.7	--	--			
8/3/1995	81.29	8.60	0	72.69	-0.31	57	--	2.0	ND	ND	ND	--	--			
8/19/1995	81.29	--	0	--	--	--	--	--	--	--	--	--	--			
11/7/1995	81.29	10.28	0	71.01	--	ND	--	0.71	ND	ND	ND	0.86	--			
5/6/1996	81.29	8.70	0	72.59	1.58	1,200	--	12	11	15	36	ND	--			
11/5/1996	81.29	10.00	0	71.29	-1.30	700	--	32	0.71	1.8	1.3	6.5	--			
5/15/1997	81.29	9.37	0	71.92	0.63	51	--	ND	ND	ND	ND	ND	--			
11/12/1997	81.29	8.92	0	72.37	0.45	74	--	1.7	ND	ND	ND	ND	--			
5/4/1998	81.29	9.48	0	71.81	-0.56	ND	--	ND	ND	ND	ND	ND	--			

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-4 (cont.)	11/11/1998	81.29	9.13	0	72.16	0.35	ND	--	0.63	ND	ND	ND	ND	--	
	5/20/1999	81.29	8.41	0	72.88	0.72	ND	--	ND	ND	ND	ND	ND	--	
	11/15/1999	81.29	9.68	0	71.61	-1.27	ND	--	ND	ND	ND	ND	ND	--	
	5/22/2000	81.29	8.60	0	72.69	1.08	ND	--	ND	ND	ND	ND	ND	--	
	11/22/2000	81.29	8.91	0	72.38	-0.31	ND	--	ND	ND	ND	ND	ND	--	
	5/15/2001	81.29	8.66	0	72.63	0.25	ND	--	ND	1.10	ND	1.16	ND	--	
	11/23/2001	81.29	8.84	0	72.45	-0.18	<50	--	<0.50	<0.50	<0.50	<0.50	<5.0	--	
	5/24/2002	81.29	7.93	0	73.36	0.91	<50	--	<0.50	<0.50	<0.50	<0.50	9.6	3.5	
	11/29/2002	81.29	9.34	0	71.95	-1.41	<50	--	<0.50	<0.50	<0.50	<1.0	--	2.6	
	5/15/2003	81.29	7.87	0	73.42	1.47	<50	--	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	11/4/2003	81.48	9.45	0	72.03	-1.39	--	61	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	5/24/2004	81.48	8.49	0	72.99	0.96	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	11/29/2004	81.48	9.01	0	72.47	-0.52	--	120	<0.50	<0.50	0.52	<1.0	--	0.55	
	6/24/2005	81.48	7.81	0	73.67	1.20	--	90	<0.50	<0.50	<0.50	<1.0	--	<0.50	
12/15/2005	81.48	8.73	0	72.75	-0.92	--	170	<0.50	<0.50	<0.50	<1.0	--	0.65		
6/14/2006	81.48	7.43	0	74.05	1.30	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
	12/21/2006	--	7.04	0	--	--	--	62	<0.50	<0.50	<0.50	<0.50	--	0.67	Casing elevation modified on 6/21/2006
	6/28/2007	--	11.49	0	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	--	0.61	
	12/13/2007	--	11.79	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.62	
	6/9/2008	--	12.24	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.99	
	12/30/2008	--	9.34	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.1	
	9/28/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	12/15/2009	--	10.22	0	--	--	--	1,800	4.4	<0.50	8.5	<1.0	--	4.0	
	6/28/2010	--	11.74	0	--	--	--	230	<0.50	<0.50	<0.50	<1.0	--	2.7	
	12/29/2010	--	9.33	0	--	--	--	5,300	0.72	0.55	35	<1.0	--	0.78	
	6/7/2011	--	8.68	0	--	--	--	3,900	<2.5	<2.5	46	<5.0	--	<2.5	
	12/9/2011	--	9.04	0	--	--	--	1,900	<0.50	<0.50	1.4	<1.0	--	<0.50	
	6/1/2012	--	9.92	0	--	--	--	680	<2.5	<2.5	<2.5	<5.0	--	<2.5	
	12/27/2012	--	9.66	0	--	--	--	1,100	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/6/2013	--	9.17	0	--	--	--	410	0.52	<0.50	<0.50	<1.0	--	<0.50	
	12/13/2013	--	10.05	0	--	--	--	3,200	2.1	<0.50	3.2	<1.0	--	<0.50	
	6/23/2014	--	10.28	0	--	--	--	2,600	2.5	<0.50	9.1	<1.0	--	<0.50	
	12/17/2014	--	9.32	0	--	--	1,900	1,800	4.5	<0.50	9.1	<1.0	--	0.55	
	6/9/2015	--	9.41	0	--	--	--	2,200	1.8	<0.50	11	<1.0	--	<0.50	
	12/30/2015	--	9.78	0	--	--	--	5,000	1.4	<0.50	9.3	<1.0	--	<0.50	
	6/22/2016	--	9.08	0	--	--	--	1,900	<0.50	<0.50	7.2	<1.0	--	<0.50	
MW-5	2/15/1990	--	--	--	--	--	24,000	--	1,500	1,700	260	3,600	--	--	
	8/16/1990	--	--	--	--	--	16,000	--	1,400	1,900	2,800	660	--	--	
	11/7/1990	--	--	--	--	--	20,000	--	640	1,100	670	3,000	--	--	
	2/25/1991	--	--	--	--	--	25,000	--	950	1,300	900	3,500	--	--	
	5/28/1991	--	--	--	--	--	24,000	--	2,300	3,400	1,300	6,000	--	--	
	8/28/1991	--	--	--	--	--	--	--	--	--	--	--	--	--	LPH in well
	11/19/1991	--	--	--	--	--	--	--	--	--	--	--	--	--	LPH in well
2/6/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	LPH in well	

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Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-5 (cont.)	5/23/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	LPH in well
	8/26/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	LPH in well
	11/20/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	LPH in well
	12/4/1992	81.59	10.03	0.08	71.62	--	--	--	--	--	--	--	--	--	LPH in well
	12/21/1992	81.59	9.50	0.01	72.10	0.48	--	--	--	--	--	--	--	--	LPH in well
	1/9/1993	81.59	8.22	0	73.37	1.27	--	--	--	--	--	--	--	--	
	1/30/1993	81.59	8.58	0	73.01	-0.36	--	--	--	--	--	--	--	--	Sheen
	2/10/1993	81.59	8.68	0	72.91	-0.10	--	--	--	--	--	--	--	--	Sheen
	2/24/1993	81.59	7.91	0.01	73.69	0.78	--	--	--	--	--	--	--	--	LPH in well
	3/9/1993	81.59	8.87	0.01	72.73	-0.96	--	--	--	--	--	--	--	--	LPH in well
	3/22/1993	81.59	8.46	0.01	73.14	0.41	--	--	--	--	--	--	--	--	LPH in well
	4/8/1993	81.59	8.84	0.01	72.76	-0.38	--	--	--	--	--	--	--	--	LPH in well
	4/28/1993	81.59	9.14	0.02	72.46	-0.29	--	--	--	--	--	--	--	--	LPH in well
	5/12/1993	81.59	9.28	0.02	72.32	-0.14	--	--	--	--	--	--	--	--	LPH in well
	5/25/1993	81.59	9.63	0.13	72.06	-0.27	--	--	--	--	--	--	--	--	LPH in well
	6/7/1993	81.38	9.75	0.01	71.64	-0.42	--	--	--	--	--	--	--	--	LPH in well
	6/23/1993	81.38	9.32	0.03	72.08	0.44	--	--	--	--	--	--	--	--	LPH in well
	7/8/1993	81.38	9.48	0.04	71.93	-0.15	--	--	--	--	--	--	--	--	LPH in well
	7/22/1993	81.38	9.73	0.16	71.77	-0.16	--	--	--	--	--	--	--	--	LPH in well
	8/11/1993	81.38	9.84	0.04	71.57	-0.20	--	--	--	--	--	--	--	--	LPH in well
	8/25/1993	81.38	9.81	0.02	71.58	0.02	--	--	--	--	--	--	--	--	LPH in well
	9/8/1993	81.38	10.09	0.03	71.31	-0.27	--	--	--	--	--	--	--	--	LPH in well
	9/22/1993	81.38	10.01	0.05	71.41	0.10	--	--	--	--	--	--	--	--	LPH in well
	10/7/1993	81.38	9.94	0.03	71.46	0.06	--	--	--	--	--	--	--	--	LPH in well
	10/28/1993	81.38	10.04	0.02	71.35	-0.11	--	--	--	--	--	--	--	--	LPH in well
	11/12/1993	81.38	9.79	0	71.59	0.24	--	--	--	--	--	--	--	--	
	11/30/1993	81.38	9.62	0	71.76	0.17	--	--	--	--	--	--	--	--	
	2/16/1994	81.38	8.95	0.02	72.44	0.69	--	--	--	--	--	--	--	--	LPH in well
	5/31/1994	81.38	9.63	0	71.75	-0.69	43,000	--	1,500	1,200	1,600	6,700	--	--	
	8/31/1994	81.38	10.25	0.02	71.14	-0.61	--	--	--	--	--	--	--	--	LPH in well
	9/27/1994	81.38	10.38	0	71.00	-0.14	--	--	--	--	--	--	--	--	
	10/11/1994	81.38	10.45	0.02	70.94	-0.06	--	--	--	--	--	--	--	--	LPH in well
	11/10/1994	81.38	7.54	0.08	73.90	2.95	--	--	--	--	--	--	--	--	LPH in well
	2/7/1995	81.38	8.10	0	73.28	-0.62	25,000	--	1,400	740	990	3,000	--	--	
	3/14/1995	81.38	7.04	0	74.34	1.06	--	--	--	--	--	--	--	--	
	5/3/1995	81.38	7.98	0	73.40	-0.94	12,000	--	680	160	600	1,800	--	--	
	8/3/1995	81.38	9.25	0	72.13	-1.27	23,000	--	940	280	810	2,700	--	--	
	8/19/1995	81.38	--	0	--	--	--	--	--	--	--	--	--	--	
	11/7/1995	81.38	10.00	0	71.38	--	40,000	--	510	280	1,000	5,700	630	--	
	5/6/1996	81.38	9.03	0	72.35	0.97	13,000	--	200	ND	180	610	170	--	Sheen
	11/5/1996	81.38	10.41	0	70.97	-1.38	35,000	--	1,800	ND	1,300	4,900	580	--	
	5/15/1997	81.38	9.41	0	71.97	1.00	10,000	--	490	ND	ND	1,300	ND	--	Sheen
	11/12/1997	81.38	9.27	0	72.11	0.14	100	--	5.1	ND	ND	ND	74	--	
	5/4/1998	81.38	9.18	0	72.20	0.09	39,000	--	1,600	230	1,000	3,200	ND	--	
	11/11/1998	81.38	9.23	0.37	72.43	0.23	--	--	--	--	--	--	--	--	LPH in well
	2/22/1999	81.38	7.69	0.25	73.88	1.45	--	--	--	--	--	--	--	--	LPH in well
	4/2/1999	81.38	8.19	0.28	73.40	-0.48	--	--	--	--	--	--	--	--	LPH in well
	5/4/1999	81.38	8.44	0.01	72.95	-0.45	--	--	--	--	--	--	--	--	LPH in well
	5/20/1999	81.38	8.73	0.04	72.68	-0.27	--	--	--	--	--	--	--	--	LPH in well
	6/29/1999	81.38	8.91	0.05	72.51	-0.17	--	--	--	--	--	--	--	--	LPH in well

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3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-5 (cont.)	7/29/1999	81.38	9.12	0.07	72.31	-0.20	--	--	--	--	--	--	--	--	LPH in well
	8/24/1999	81.38	9.37	0.09	72.08	-0.24	--	--	--	--	--	--	--	--	LPH in well
	9/27/1999	81.38	9.51	0.06	71.91	-0.16	--	--	--	--	--	--	--	--	LPH in well
	10/28/1999	81.38	--	0.05	--	--	--	--	--	--	--	--	--	--	LPH in well
	11/15/1999	81.38	9.29	0	72.09	--	--	--	--	--	--	--	--	--	Sheen
	12/20/1999	81.38	9.14	0	72.24	0.15	--	--	--	--	--	--	--	--	
	1/20/2000	81.38	9.08	0	72.30	0.06	--	--	--	--	--	--	--	--	
	2/26/2000	81.38	8.69	0	72.69	0.39	--	--	--	--	--	--	--	--	
	3/31/2000	81.38	8.48	0	72.90	0.21	--	--	--	--	--	--	--	--	
	4/13/2000	81.38	8.66	0	72.72	-0.18	--	--	--	--	--	--	--	--	
	5/22/2000	81.38	9.06	0	72.32	-0.40	240,000	--	33,000	5,000	18,000	59,000	640	21	
	11/22/2000	81.38	9.24	0.67	72.64	0.32	--	--	--	--	--	--	--	--	LPH in well
	2/14/2001	81.38	7.63	0.33	74.00	1.35	--	--	--	--	--	--	--	--	LPH in well
	3/28/2001	81.38	8.82	0	72.56	-1.44	--	--	--	--	--	--	--	--	
	4/28/2001	81.38	8.66	0	72.72	0.16	--	--	--	--	--	--	--	--	
	5/15/2001	81.38	8.97	0	72.41	-0.31	--	--	--	--	--	--	--	--	
	6/29/2001	81.38	8.73	0	72.65	0.24	--	--	--	--	--	--	--	--	
	7/17/2001	81.38	8.92	0.02	72.47	-0.17	--	--	--	--	--	--	--	--	LPH in well
	8/30/2001	81.38	8.85	0	72.53	0.06	--	--	--	--	--	--	--	--	
	9/24/2001	81.38	8.89	0	72.49	-0.04	--	--	--	--	--	--	--	--	
	10/15/2001	81.38	9.11	0.03	72.29	-0.20	--	--	--	--	--	--	--	--	LPH in well
	11/23/2001	81.38	8.77	0	72.61	0.32	29,000	--	3,900	450	1,400	3,500	<500	--	
	12/10/2001	81.38	8.75	0	72.63	0.02	--	--	--	--	--	--	--	--	
	1/14/2002	81.38	8.26	0	73.12	0.49	--	--	--	--	--	--	--	--	
	2/22/2002	81.38	6.30	0	75.08	1.96	--	--	--	--	--	--	--	--	
	3/11/2002	81.38	6.47	0	74.91	-0.17	--	--	--	--	--	--	--	--	
	4/15/2002	81.38	6.56	0	74.82	-0.09	--	--	--	--	--	--	--	--	
	5/24/2002	81.38	8.32	0.15	73.17	-1.65	--	--	--	--	--	--	--	--	LPH in well
	6/17/2002	81.38	8.41	0.2	73.12	-0.05	--	--	--	--	--	--	--	--	LPH in well
	7/15/2002	81.38	8.63	0.2	72.90	-0.22	--	--	--	--	--	--	--	--	LPH in well
	8/19/2002	81.38	8.76	0.31	72.85	-0.05	--	--	--	--	--	--	--	--	LPH in well
	9/5/2002	81.38	8.73	0.16	72.77	-0.08	--	--	--	--	--	--	--	--	LPH in well
	10/7/2002	81.38	8.79	0.09	72.66	-0.11	--	--	--	--	--	--	--	--	LPH in well
	11/29/2002	81.38	9.18	0.05	72.24	-0.42	--	--	--	--	--	--	--	--	LPH in well
	12/12/2002	81.38	9.12	0.04	72.29	0.05	--	--	--	--	--	--	--	--	LPH in well
	1/6/2003	81.38	9.05	0.03	72.35	0.06	--	--	--	--	--	--	--	--	LPH in well
	2/12/2003	81.38	8.87	0.04	72.54	0.19	--	--	--	--	--	--	--	--	LPH in well
	3/13/2003	81.38	8.25	0.03	73.15	0.61	--	--	--	--	--	--	--	--	LPH in well
	4/7/2003	81.38	8.31	0.02	73.08	-0.07	--	--	--	--	--	--	--	--	LPH in well
	5/15/2003	81.38	8.58	0.03	72.82	-0.26	--	--	--	--	--	--	--	--	LPH in well
	6/12/2003	81.38	8.63	0.02	72.76	-0.06	--	--	--	--	--	--	--	--	LPH in well
	7/7/2003	81.38	8.59	0.02	72.80	0.04	--	--	--	--	--	--	--	--	LPH in well
	8/14/2003	81.38	8.65	0.03	72.75	-0.05	--	--	--	--	--	--	--	--	LPH in well
	9/12/2003	81.38	8.82	0.03	72.58	-0.17	--	--	--	--	--	--	--	--	LPH in well
	11/4/2003	81.38	9.90	0.25	71.67	-0.92	--	--	--	--	--	--	--	--	LPH in well
	5/24/2004	81.38	9.33	0.25	72.24	0.57	--	--	--	--	--	--	--	--	LPH in well
	11/29/2004	81.38	9.16	0.21	72.38	0.14	--	--	--	--	--	--	--	--	LPH in well
	6/24/2005	81.38	8.41	0	72.97	0.59	--	53,000	560	230	1,600	5,100	--	82	
	12/15/2005	81.38	8.96	0	72.42	-0.55	--	27,000	130	<25	560	1,800	--	120	
	6/14/2006	81.38	8.41	0	72.97	0.55	--	11,000	110	<12	360	640	--	48	

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-5 (cont.)	12/21/2006	81.38	9.65	0	71.73	-1.24	--	78,000	490	43	1,400	4,300	--	96	
	6/28/2007	81.38	9.99	0.29	71.61	-0.12	--	--	--	--	--	--	--	--	LPH in well
	12/13/2007	81.38	10.12	0.17	71.39	-0.22	--	--	--	--	--	--	--	--	LPH in well
	6/9/2008	81.38	10.12	0.17	71.39	0.00	--	--	--	--	--	--	--	--	LPH in well
	12/30/2008	81.38	9.33	0.13	72.15	0.76	--	--	--	--	--	--	--	--	LPH in well
	9/28/2009	81.38	9.77	0.01	71.62	-0.53	--	--	--	--	--	--	--	--	LPH in well
	12/15/2009	81.38	8.87	0.01	72.52	0.90	--	--	--	--	--	--	--	--	LPH in well
	6/28/2010	81.38	9.82	0.5	71.93	-0.58	--	--	--	--	--	--	--	--	LPH in well
	12/29/2010	81.38	8.69	1.49	73.81	1.87	--	--	--	--	--	--	--	--	LPH in well
	2/1/2011	81.38	8.30	1.35	74.09	0.28	--	--	34,000	--	--	--	--	--	LPH in well
	6/7/2011	81.38	5.43	0	75.95	1.86	--	37,000	<12	<12	190	450	--	<12	
	9/13/2011	81.38	6.70	0	74.68	-1.27	--	--	--	--	--	--	--	--	
	10/21/2011	81.38	6.72	0	74.66	-1.29	--	--	--	--	--	--	--	--	
	11/4/2011	81.38	6.64	0	74.74	-1.21	--	--	--	--	--	--	--	--	
	12/9/2011	81.38	10.02	0.21	71.36	-3.30	--	--	--	--	--	--	--	--	
	1/12/2012	81.38	10.12	0.02	71.26	-0.10	--	--	--	--	--	--	--	--	
	6/1/2012	81.38	8.22	0.02	73.16	1.90	--	--	--	--	--	--	--	--	
	12/27/2012	81.38	7.31	0.02	74.07	0.91	--	23,000	190	<12	1,100	1,700	--	<12	A01
	6/6/2013	81.38	9.75	0.02	71.63	-1.53	--	30,000	410	6.6	970	1,300	--	2.5	A01
	12/13/2013	81.38	10.30	0.21	71.08	-0.55	--	--	--	--	--	--	--	--	
	6/23/2014	81.38	10.26	0.21	71.12	0.04	--	--	--	--	--	--	--	--	
	12/17/2014	81.38	6.61	0.03	74.75	3.63	--	--	--	--	--	--	--	--	
	6/9/2015	81.38	9.41	0.03	71.95	-2.80	--	--	--	--	--	--	--	--	
	9/2/2015	81.38	10.58	0.30	70.57	-1.38	--	--	--	--	--	--	--	--	
	10/16/2015	81.38	10.91	0.35	70.21	-0.36	--	--	--	--	--	--	--	--	
	11/12/2015	81.38	10.40	0.22	70.81	0.60	--	--	--	--	--	--	--	--	
	12/30/2015	81.38	9.35	0.19	71.89	1.08	--	--	--	--	--	--	--	--	
	6/22/2016	81.38	9.43	0	71.95	0.06	--	17,000	210	<5.0	450	540	--	<5.0	
MW-6															
	11/7/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	2/25/1991	--	--	--	--	--	ND	--	0.37	0.4	0.35	1.5	--	--	
	5/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	0.42	--	--	
	8/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/19/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	2/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/26/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/20/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	12/21/1992	80.47	7.71	0	72.76	--	--	--	--	--	--	--	--	--	
	1/30/1993	80.47	7.25	0	73.22	0.46	--	--	--	--	--	--	--	--	
	2/24/1993	80.47	6.74	0	73.73	0.51	ND	--	ND	ND	ND	ND	--	--	
	3/22/1993	80.47	5.85	0	74.62	0.89	--	--	--	--	--	--	--	--	
	4/28/1993	80.47	7.58	0	72.89	-1.73	--	--	--	--	--	--	--	--	
	5/25/1993	80.47	7.48	0	72.99	0.10	ND	--	ND	ND	ND	ND	--	--	
	6/23/1993	79.94	7.34	0	72.60	-0.39	--	--	--	--	--	--	--	--	
	7/22/1993	79.94	7.53	0	72.41	-0.19	--	--	--	--	--	--	--	--	
	8/25/1993	79.94	7.66	0	72.28	-0.13	ND	--	ND	ND	ND	ND	--	--	
	9/22/1993	79.94	7.76	0	72.18	-0.10	--	--	--	--	--	--	--	--	
	10/28/1993	79.94	8.30	0	71.64	-0.54	--	--	--	--	--	--	--	--	

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-6 (cont.)	11/30/1993	79.94	7.40	0	72.54	0.90	--	--	--	--	--	--	--	--	
	2/16/1994	79.94	7.13	0	72.81	0.27	ND	--	ND	ND	ND	ND	--	--	
	5/31/1994	79.94	7.49	0	72.45	-0.36	--	--	--	--	--	--	--	--	
	8/31/1994	79.94	7.93	0	72.01	-0.44	ND	--	ND	1.5	ND	1.6	--	--	
	9/27/1994	79.94	8.03	0	71.91	-0.10	--	--	--	--	--	--	--	--	
	10/11/1994	79.94	8.05	0	71.89	-0.02	--	--	--	--	--	--	--	--	
	11/10/1994	79.94	6.12	0	73.82	1.93	--	--	--	--	--	--	--	--	
	2/7/1995	79.94	6.65	0	73.29	-0.53	ND	--	ND	ND	ND	ND	--	--	
	5/3/1995	79.94	6.47	0	73.47	0.18	ND	--	ND	ND	ND	1.0	--	--	
	8/3/1995	79.94	7.28	0	72.66	-0.81	--	--	--	--	--	--	--	--	
	11/7/1995	79.94	7.98	0	71.96	-0.70	ND	--	ND	ND	ND	ND	--	--	
	5/6/1996	79.94	7.80	0	72.14	0.18	--	--	--	--	--	--	--	--	
	11/5/1996	79.94	7.63	0	72.31	0.17	--	--	--	--	--	--	--	--	
	5/15/1997	79.94	7.41	0	72.53	0.22	--	--	--	--	--	--	--	--	
	11/12/1997	79.94	7.51	0	72.43	-0.10	--	--	--	--	--	--	--	--	
	5/4/1998	79.94	7.15	0	72.79	0.36	--	--	--	--	--	--	--	--	
	11/11/1998	79.94	7.04	0	72.90	0.11	--	--	--	--	--	--	--	--	
	5/20/1999	79.94	7.00	0	72.94	0.04	--	--	--	--	--	--	--	--	
	11/15/1999	79.94	7.42	0	72.52	-0.42	--	--	--	--	--	--	--	--	
	5/22/2000	79.94	7.24	0	72.70	0.18	--	--	--	--	--	--	--	--	
	11/22/2000	79.94	7.40	0	72.54	-0.16	--	--	--	--	--	--	--	--	
	5/15/2001	79.94	7.12	0	72.82	0.28	--	--	--	--	--	--	--	--	
	11/23/2001	79.94	7.19	0	72.75	-0.07	--	--	--	--	--	--	--	--	
	5/24/2002	79.94	6.54	0	73.40	0.65	--	--	--	--	--	--	--	--	
	11/29/2002	79.94	7.26	0	72.68	-0.72	--	--	--	--	--	--	--	--	
	5/15/2003	79.94	6.26	0	73.68	1.00	--	--	--	--	--	--	--	--	
	11/4/2003	79.94	7.80	0	72.14	-1.54	--	<50	<0.50	<0.50	<0.50	<1.0	--	2.4	
	5/24/2004	79.94	7.54	0	72.40	0.26	--	<50	<0.50	<0.50	<0.50	<1.0	--	2.8	
	11/29/2004	79.94	7.01	0	72.93	0.53	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.8	
	6/24/2005	79.94	7.68	0	72.26	-0.67	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.47	
	12/15/2005	79.94	7.49	0	72.45	0.19	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.88	
	6/14/2006	79.94	6.45	0	73.49	1.04	--	<50	<0.50	<0.50	<0.50	<1.0	--	3.0	
	12/21/2006	79.94	6.91	0	73.03	-0.46	--	<50	<0.50	<0.50	<0.50	<0.50	--	1.0	
	6/28/2007	79.94	7.46	0	72.48	-0.55	--	<50	<0.50	<0.50	<0.50	<0.50	--	1.2	
	12/13/2007	79.94	7.41	0	72.53	0.05	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.64	
	6/9/2008	79.94	8.20	0	71.74	-0.79	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.65	
	12/30/2008	79.94	7.47	0	72.47	0.73	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	9/28/2009	79.94	7.96	0	71.98	-0.49	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.67	
	12/15/2009	79.94	7.22	0	72.72	0.74	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/28/2010	79.94	7.68	0	72.26	-0.46	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/29/2010	79.94	5.93	0	74.01	1.75	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/7/2011	79.94	6.24	0	73.70	-0.31	--	<50	<0.50	<0.50	<0.50	<1.0	--	12	
	12/9/2011	79.94	6.75	0	73.19	-0.51	--	<50	<0.50	<0.50	<0.50	<1.0	--	2.0	
	6/1/2012	79.94	7.32	0	72.62	-0.57	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.64	
	12/27/2012	79.94	5.78	0	74.16	0.54	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.6	
	6/6/2013	79.94	7.50	0	72.44	-0.18	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/13/2013	79.94	8.02	0	71.92	-0.52	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/23/2014	79.94	7.87	0	72.07	0.15	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/17/2014	79.94	5.54	0	74.40	2.33	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/9/2015	79.94	7.71	0	72.23	-2.17	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-6 (cont.)	12/30/2015	79.94	7.21	0	72.73	0.50	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/22/2016	79.94	7.91	0	72.03	-0.70	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
MW-7															
	11/7/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	2/25/1991	--	--	--	--	--	70	--	ND	ND	ND	0.52	--	--	
	5/28/1991	--	--	--	--	--	39	--	ND	ND	ND	0.73	--	--	
	8/28/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/19/1991	--	--	--	--	--	32	--	ND	ND	ND	ND	--	--	
	2/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/26/1992	--	--	--	--	--	ND	--	ND	ND	0.73	ND	--	--	
	11/20/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	12/21/1992	81.83	8.42	0	73.41	--	--	--	--	--	--	--	--	--	
	1/30/1993	81.83	8.21	0	73.62	0.21	--	--	--	--	--	--	--	--	
	2/24/1993	81.83	7.85	0	73.98	0.36	ND	--	ND	ND	ND	ND	--	--	
	3/22/1993	81.83	6.97	0	74.86	0.88	--	--	--	--	--	--	--	--	
	4/28/1993	81.83	8.39	0	73.44	-1.42	--	--	--	--	--	--	--	--	
	5/25/1993	81.83	8.43	0	73.40	-0.04	ND	--	ND	ND	ND	ND	--	--	
	6/23/1993	81.64	8.47	0	73.17	-0.23	--	--	--	--	--	--	--	--	
	7/22/1993	81.64	8.83	0	72.81	-0.36	--	--	--	--	--	--	--	--	
	8/25/1993	81.64	8.81	0	72.83	0.02	ND	--	ND	ND	ND	ND	--	--	
	9/22/1993	81.64	8.96	0	72.68	-0.15	--	--	--	--	--	--	--	--	
	10/28/1993	81.64	8.98	0	72.66	-0.02	--	--	--	--	--	--	--	--	
	11/30/1993	81.64	8.65	0	72.99	0.33	--	--	--	--	--	--	--	--	
	2/16/1994	81.64	8.36	0	73.28	0.29	ND	--	ND	ND	ND	0.7	--	--	
	5/31/1994	81.64	8.67	0	72.97	-0.31	--	--	--	--	--	--	--	--	
	8/31/1994	81.64	9.12	0	72.52	-0.45	ND	--	ND	0.8	ND	0.75	--	--	
	9/27/1994	81.64	9.22	0	72.42	-0.10	--	--	--	--	--	--	--	--	
	10/11/1994	81.64	9.23	0	72.41	-0.01	--	--	--	--	--	--	--	--	
	11/10/1994	81.64	7.66	0	73.98	1.57	--	--	--	--	--	--	--	--	
	2/7/1995	81.64	7.88	0	73.76	-0.22	ND	--	ND	ND	ND	ND	--	--	
	5/3/1995	81.64	7.71	0	73.93	0.17	ND	--	ND	ND	ND	1.0	--	--	
	8/3/1995	81.64	8.40	0	73.24	-0.69	--	--	--	--	--	--	--	--	
	11/7/1995	81.64	8.95	0	72.69	-0.55	ND	--	ND	ND	ND	ND	--	--	
	5/6/1996	81.64	8.15	0	73.49	0.80	--	--	--	--	--	--	--	--	
	11/5/1996	81.64	8.67	0	72.97	-0.52	--	--	--	--	--	--	--	--	
	5/15/1997	81.64	8.47	0	73.17	0.20	--	--	--	--	--	--	--	--	
	11/12/1997	81.64	7.88	0	73.76	0.59	--	--	--	--	--	--	--	--	
	5/4/1998	81.64	7.93	0	73.71	-0.05	--	--	--	--	--	--	--	--	
	11/11/1998	81.64	8.20	0	73.44	-0.27	--	--	--	--	--	--	--	--	
	5/20/1999	81.64	8.04	0	73.60	0.16	--	--	--	--	--	--	--	--	
	11/15/1999	81.64	8.17	0	73.47	-0.13	--	--	--	--	--	--	--	--	
	5/22/2000	81.64	8.10	0	73.54	0.07	--	--	--	--	--	--	--	--	
	11/22/2000	81.64	8.30	0	73.34	-0.20	--	--	--	--	--	--	--	--	
	5/15/2001	81.64	8.09	0	73.55	0.21	--	--	--	--	--	--	--	--	
	11/23/2001	81.64	8.14	0	73.50	-0.05	--	--	--	--	--	--	--	--	
	5/24/2002	81.64	7.56	0	74.08	0.58	--	--	--	--	--	--	--	--	
	11/29/2002	81.64	8.23	0	73.41	-0.67	--	--	--	--	--	--	--	--	
	5/15/2003	81.64	7.25	0	74.39	0.98	--	--	--	--	--	--	--	--	

Table 1
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Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-7 (cont.)	11/4/2003	81.64	8.76	0	72.88	-1.51	--	70	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	5/24/2004	81.64	8.32	0	73.32	0.44	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.4	
	11/29/2004	81.64	8.21	0	73.43	0.11	--	62	<0.50	<0.50	<0.50	<1.0	--	3.6	
	6/24/2005	81.64	7.84	0	73.80	0.37	--	85	<0.50	<0.50	<0.50	<1.0	--	1.6	
	12/15/2005	81.64	8.15	0	73.49	-0.31	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.72	
	6/14/2006	81.64	7.76	0	73.88	0.39	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/21/2006	--	7.64	0	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	--	0.75	Casing elevation modified on 6/21/2006
6/28/2007	--	8.18	0	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	--	0.51		
12/13/2007	--	8.52	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.58		
6/9/2008	--	8.67	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.54		
12/30/2008	--	8.46	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.0		
9/28/2009	--	8.30	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.52		
12/15/2009	--	8.22	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.6		
6/28/2010	--	8.02	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/29/2010	--	7.18	0	--	--	--	56	<0.50	<0.50	<0.50	<1.0	--	6.0		
6/7/2011	--	6.97	0	--	--	--	790	11	<0.50	6.5	<1.0	--	19		
12/9/2011	--	8.54	0	--	--	--	120	<0.50	<0.50	<0.50	<1.0	--	4.5		
6/1/2012	--	8.22	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.71		
12/27/2012	--	7.12	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.5		
6/6/2013	--	8.56	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/13/2013	--	9.09	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/23/2014	--	9.01	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/17/2014	--	6.95	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/9/2015	--	8.82	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/30/2015	--	8.58	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	2.1		
6/22/2016	--	8.79	0	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
MW-8															
	11/7/1990	--	--	--	--	--	4,700	--	28	38	86	7,200	--	--	
	2/25/1991	--	--	--	--	--	5,300	--	17	6.1	53	300	--	--	
	5/28/1991	--	--	--	--	--	4,800	--	4.2	1.3	5.1	170	--	--	
	8/28/1991	--	--	--	--	--	1,800	--	3.2	1.9	19	74	--	--	
	11/19/1991	--	--	--	--	--	1,600	--	8.1	1.8	19	52	--	--	
	2/6/1992	--	--	--	--	--	2,600	--	4.1	7.0	31	93	--	--	
	5/23/1992	--	--	--	--	--	2,100	--	8.6	1.6	1.7	28	--	--	
	8/26/1992	--	--	--	--	--	1,800	--	12	8.0	4.0	13	--	--	
	11/20/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	12/21/1992	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	1/9/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	1/30/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	2/10/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	2/24/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	3/9/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	3/22/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	4/8/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	4/28/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	5/12/1993	81.71	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible

Table 1
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Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-8 (cont.)	5/25/1993	81.71	10.12	0	71.59	--	1,200	--	5.4	ND	9.0	21	--	--	
	6/7/1993	81.41	9.98	0	71.43	-0.16	--	--	--	--	--	--	--	--	
	6/23/1993	81.41	10.36	0	71.05	-0.38	--	--	--	--	--	--	--	--	
	7/8/1993	81.41	10.52	0	70.89	-0.16	--	--	--	--	--	--	--	--	
	7/22/1993	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	8/11/1993	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	8/25/1993	81.41	10.95	0	70.46	--	1,800	--	11	17	8.9	29	--	--	
	9/8/1993	81.41	11.34	0	70.07	-0.39	--	--	--	--	--	--	--	--	
	9/22/1993	81.41	11.13	0	70.28	0.21	--	--	--	--	--	--	--	--	
	10/7/1993	81.41	10.96	0	70.45	0.17	--	--	--	--	--	--	--	--	
	10/28/1993	81.41	11.19	0	70.22	-0.23	--	--	--	--	--	--	--	--	
	11/12/1993	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	11/30/1993	81.41	10.42	0	70.99	--	3,500	--	18	ND	ND	ND	--	--	
	2/16/1994	81.41	9.86	0	71.55	0.56	990	--	4.9	1.8	2.4	4.5	--	--	
	5/31/1994	81.41	10.61	0	70.80	-0.75	350	--	3.0	1.0	0.73	1.7	--	--	
	8/31/1994	81.41	11.37	0	70.04	-0.76	1,800	--	ND	ND	ND	ND	--	--	
	9/27/1994	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	10/11/1994	81.41	11.50	0	69.91	--	--	--	--	--	--	--	--	--	
	11/10/1994	81.41	7.81	0	73.60	3.69	940	--	6.7	6.3	ND	16	--	--	
	2/7/1995	81.41	8.69	0	72.72	-0.88	230	--	1.4	0.95	0.9	1.1	--	--	
	5/3/1995	81.41	8.60	0	72.81	0.09	75	--	ND	ND	ND	1.0	--	--	
	8/3/1995	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	11/7/1995	81.41	11.05	0	70.36	--	210	--	1.3	1.2	ND	ND	--	--	
	5/6/1996	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	11/5/1996	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	5/15/1997	81.41	10.46	0	70.95	--	ND	--	ND	ND	ND	ND	43	--	
	11/12/1997	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	5/4/1998	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	11/11/1998	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	5/20/1999	81.41	9.75	0	71.66	--	ND	--	ND	ND	ND	ND	23	10	
	11/15/1999	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	5/22/2000	81.41	9.80	0	71.61	--	ND	--	ND	1.9	ND	3.3	ND	--	
	11/22/2000	81.41	9.76	0	71.65	0.04	ND	--	ND	1.16	ND	1.22	ND	--	
	5/15/2001	81.41	9.87	0	71.54	-0.11	ND	--	ND	ND	ND	ND	ND	--	
	11/23/2001	81.41	9.92	0	71.49	-0.05	<50	--	<0.50	<0.50	<0.50	<0.50	<5.0	--	
	5/24/2002	81.41	9.26	0	72.15	0.66	<50	--	<0.50	<0.50	<0.50	<0.50	<5.0	--	
	11/29/2002	81.41	9.71	0	71.70	-0.45	<50	--	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	5/15/2003	81.41	9.04	0	72.37	0.67	<50	--	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	11/4/2003	81.41	10.20	0	71.21	-1.16	--	690	<1.0	<1.0	3.3	<2.0	--	190	
	5/24/2004	81.41	10.04	0	71.37	0.16	--	450	<2.5	<2.5	<2.5	<5.0	--	750	
	11/29/2004	81.41	9.88	0	71.53	0.16	--	1500	<10	<10	<10	<20	--	1600	
	6/24/2005	81.41	9.40	0	72.01	0.48	--	150	<0.50	<0.50	<0.50	<1.0	--	190	

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Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-8 (cont.)	12/15/2005	81.41	10.01	0	71.40	-0.61	--	520	<0.50	<0.50	<0.50	<1.0	--	1000	
	6/14/2006	81.41	5.91	0	75.50	4.10	--	230	<0.50	<0.50	0.60	<1.0	--	39	
	12/21/2006	81.41	9.65	0	71.76	-3.74	--	260	2.5	<0.50	12	43	--	15	
	6/28/2007	81.41	11.10	0	70.31	-1.45	--	<50	<0.50	<0.50	<0.50	<0.50	--	--	8.4
	12/13/2007	81.41	11.18	0	70.23	-0.08	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	6.8
	6/9/2008	81.41	11.25	0	70.16	-0.07	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	6.5
	12/30/2008	81.41	10.05	0	71.36	1.20	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	2.9
	9/28/2009	81.41	11.10	0	70.31	-1.05	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	3.1
	12/15/2009	81.41	10.00	0	71.41	1.10	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	2.9
	6/28/2010	81.41	10.86	0	70.55	-0.86	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	3.6
	12/29/2010	81.41	8.57	0	72.84	2.29	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	2.7
	6/7/2011	81.41	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	12/9/2011	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
	6/1/2012	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
	12/27/2012	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
	6/6/2013	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
	12/13/2013	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
	6/23/2014	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
	12/17/2014	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
	6/9/2015	81.41	--	--	--	--	--	--	--	--	--	--	--	--	
12/30/2015	81.41	--	--	--	--	--	--	--	--	--	--	--	--		
6/22/2016	81.41	--	--	--	--	--	--	--	--	--	--	--	--		
MW-9	11/7/1990	--	--	--	--	--	480	--	7.8	1.2	13	47	--	--	
	2/25/1991	--	--	--	--	--	390	--	13	1.1	2.8	14	--	--	
	5/28/1991	--	--	--	--	--	590	--	6.0	0.43	6.8	1.4	--	--	
	8/28/1991	--	--	--	--	--	450	--	17	0.9	13	14	--	--	
	11/19/1991	--	--	--	--	--	360	--	17	0.45	15	11	--	--	
	2/6/1992	--	--	--	--	--	660	--	41	1.0	33	15	--	--	
	5/23/1992	--	--	--	--	--	460	--	18	0.66	1.4	3.2	--	--	
	8/26/1992	--	--	--	--	--	250	--	13	ND	8.6	3.8	--	--	
	11/20/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	12/21/1992	81.13	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	1/30/1993	81.13	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	2/24/1993	81.13	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	3/22/1993	81.13	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	4/28/1993	81.13	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	5/25/1993	81.13	11.50	0	69.63	--	160	--	6.1	ND	7.4	1.1	--	--	
	6/23/1993	80.53	9.78	0	70.75	1.12	--	--	--	--	--	--	--	--	
	7/22/1993	80.53	10.10	0	70.43	-0.32	--	--	--	--	--	--	--	--	
	8/25/1993	80.53	10.44	0	70.09	-0.34	220	--	10	ND	6.8	1.4	--	--	
	9/22/1993	80.53	10.64	0	69.89	-0.20	--	--	--	--	--	--	--	--	
	10/28/1993	80.53	10.68	0	69.85	-0.04	--	--	--	--	--	--	--	--	
11/30/1993	80.53	9.87	0	70.66	0.81	200	--	5.6	ND	2.9	2.7	--	--		
2/16/1994	80.53	9.21	0	71.32	0.66	250	--	5.1	1.3	4.4	1.5	--	--		
5/31/1994	80.53	10.15	0	70.38	-0.94	360	--	7.8	0.97	4.6	2.2	--	--		
8/31/1994	80.53	10.97	0	69.56	-0.82	650	--	7.7	2.8	4.4	5.0	59	--		
9/27/1994	80.53	11.10	0	69.43	-0.13	--	--	--	--	--	--	--	--		
10/11/1994	80.53	11.20	0	69.33	-0.10	--	--	--	--	--	--	--	--		

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-9 (cont.)	11/10/1994	80.53	7.25	0	73.28	3.95	ND	--	ND	ND	ND	ND	--	--	
	2/7/1995	80.53	7.76	0	72.77	-0.51	57	--	0.7	ND	0.86	ND	--	--	
	5/3/1995	80.53	7.82	0	72.71	-0.06	ND	--	0.85	0.67	1.3	1.0	--	--	
	8/3/1995	80.53	9.70	0	70.83	-1.88	91	--	1.1	ND	ND	ND	--	--	
	11/7/1995	80.53	10.64	0	69.89	-0.94	130	--	1.5	0.62	0.71	ND	60	--	
	5/6/1996	80.53	9.01	0	71.52	1.63	860	--	6.1	13	6.0	25	ND	--	
	11/5/1996	80.53	11.42	0	69.11	-2.41	84	--	0.74	ND	1.2	4.5	ND	--	
	5/15/1997	80.53	9.89	0	70.64	1.53	ND	--	ND	ND	ND	ND	ND	--	
	11/12/1997	80.53	10.22	0	70.31	-0.33	ND	--	0.55	ND	ND	ND	74	--	
	5/4/1998	80.53	10.05	0	70.48	0.17	ND	--	ND	ND	ND	ND	45	--	
	11/11/1998	80.53	9.23	0	71.30	0.82	ND	--	ND	ND	ND	ND	ND	--	
	5/20/1999	80.53	8.78	0	71.75	0.45	ND	--	ND	ND	ND	ND	ND	--	
	11/15/1999	80.53	9.12	0	71.41	-0.34	ND	--	ND	ND	ND	ND	ND	--	
	5/22/2000	80.53	9.17	0	71.36	-0.05	ND	--	ND	1.9	ND	3.5	ND	--	
	11/22/2000	80.53	9.08	0	71.45	0.09	ND	--	ND	1.18	ND	1.16	ND	--	
	5/15/2001	80.53	8.85	0	71.68	0.23	ND	--	ND	ND	ND	ND	ND	--	
	11/23/2001	80.53	9.10	0	71.43	-0.25	<50	--	<0.50	<0.50	<0.50	<0.50	<5.0	--	
	5/24/2002	80.53	8.79	0	71.74	0.31	<50	--	<0.50	<0.50	<0.50	<0.50	<5.0	--	
	11/29/2002	80.53	9.24	0	71.29	-0.45	<50	--	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	5/15/2003	80.53	8.56	0	71.97	0.68	<50	--	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	11/4/2003	80.53	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
	5/24/2004	80.53	9.38	0	71.15	--	--	330	1.8	<0.50	<0.50	<1.0	--	160	
	11/29/2004	80.53	9.55	0	70.98	-0.17	--	690	0.72	<0.50	1.3	<1.0	--	160	
	6/24/2005	80.53	8.65	0	71.88	0.90	--	240	0.80	<0.50	0.55	<1.0	--	67	
	12/15/2005	80.53	9.43	0	71.10	-0.78	--	400	<0.50	<0.50	<0.50	<1.0	--	82	
	6/14/2006	80.53	9.43	0	71.10	0.00	--	<50	<0.50	<0.50	<0.50	<1.0	--	5.2	
	12/21/2006	80.53	9.01	0	71.52	0.42	--	580	<0.50	<0.50	0.71	<0.50	--	36	
	6/28/2007	80.53	11.64	0	68.89	-2.63	--	1,200	0.81	<0.50	<0.50	0.54	--	52	
	12/13/2007	80.53	11.18	0	69.35	0.46	--	1,100	<0.50	<0.50	<0.50	<1.0	--	31	
	6/9/2008	80.53	11.10	0	69.43	0.08	--	1,500	<0.50	<0.50	<0.50	<1.0	--	27	
	12/30/2008	80.53	9.66	0	70.87	1.44	--	970	<0.50	<0.50	0.84	<1.0	--	5.0	
	9/28/2009	80.53	10.83	0	69.70	-1.17	--	860	<0.50	<0.50	<0.50	<1.0	--	7.5	
	12/15/2009	80.53	10.00	0	70.53	0.83	--	870	<0.50	<0.50	<0.50	<1.0	--	3.7	
	6/28/2010	80.53	10.45	0	70.08	-0.45	--	360	<0.50	<0.50	1.0	<1.0	--	2.2	
	12/29/2010	80.53	7.72	0	72.81	2.73	--	53	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/7/2011	80.53	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	12/9/2011	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	6/1/2012	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	12/27/2012	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	6/6/2013	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	12/13/2013	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	6/23/2014	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	12/17/2014	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	6/9/2015	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	12/30/2015	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
	6/22/2016	80.53	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	2/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-10 (cont.)	5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/26/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/20/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	12/21/1992	81.90	13.41	0	68.49	--	--	--	--	--	--	--	--	--	
	1/30/1993	81.90	11.60	0	70.30	1.81	--	--	--	--	--	--	--	--	
	2/24/1993	81.90	11.23	0	70.67	0.37	ND	--	ND	ND	ND	ND	--	--	
	3/22/1993	81.90	10.89	0	71.01	0.34	--	--	--	--	--	--	--	--	
	4/28/1993	81.90	12.11	0	69.79	-1.22	--	--	--	--	--	--	--	--	
	5/25/1993	81.90	12.02	0	69.88	0.09	ND	--	ND	ND	ND	ND	--	--	
	6/23/1993	81.61	12.11	0	69.50	-0.38	--	--	--	--	--	--	--	--	
	7/22/1993	81.61	12.49	0	69.12	-0.38	--	--	--	--	--	--	--	--	
	8/25/1993	81.61	12.78	0	68.83	-0.29	ND	--	ND	ND	ND	ND	--	--	
	9/22/1993	81.61	13.06	0	68.55	-0.28	--	--	--	--	--	--	--	--	
	10/28/1993	81.61	13.23	0	68.38	-0.17	--	--	--	--	--	--	--	--	
	11/30/1993	81.61	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
	2/16/1994	81.61	12.43	0	69.18	--	ND	--	ND	ND	ND	ND	--	--	
	5/31/1994	81.61	12.69	0	68.92	-0.26	ND	--	ND	0.9	ND	0.91	--	--	
	8/31/1994	81.61	13.47	0	68.14	-0.78	ND	--	ND	0.64	ND	0.54	--	--	
	9/27/1994	81.61	13.72	0	67.89	-0.25	--	--	--	--	--	--	--	--	
	10/11/1994	81.61	14.80	0	66.81	-1.08	--	--	--	--	--	--	--	--	
	11/10/1994	81.61	12.64	0	68.97	2.16	ND	--	ND	ND	ND	ND	--	--	
	2/7/1995	81.61	10.29	0	71.32	2.35	--	--	--	--	--	--	--	--	
	5/3/1995	81.61	10.22	0	71.39	0.07	ND	--	ND	ND	ND	0.65	--	--	
	8/3/1995	81.61	11.73	0	69.88	-1.51	--	--	--	--	--	--	--	--	
	11/7/1995	81.61	12.98	0	68.63	-1.25	ND	--	ND	ND	ND	ND	--	--	
	5/6/1996	81.61	10.90	0	70.71	2.08	--	--	--	--	--	--	--	--	
	11/5/1996	81.61	11.96	0	69.65	-1.06	--	--	--	--	--	--	--	--	
	5/15/1997	81.61	10.79	0	70.82	1.17	--	--	--	--	--	--	--	--	
	11/12/1997	81.61	10.07	0	71.54	0.72	--	--	--	--	--	--	--	--	
	5/4/1998	81.61	10.01	0	71.60	0.06	--	--	--	--	--	--	--	--	
	11/11/1998	81.61	12.03	0	69.58	-2.02	--	--	--	--	--	--	--	--	
	5/20/1999	81.61	10.05	0	71.56	1.98	--	--	--	--	--	--	--	--	
	11/15/1999	81.61	10.16	0	71.45	-0.11	--	--	--	--	--	--	--	--	
	5/22/2000	81.61	10.06	0	71.55	0.10	--	--	--	--	--	--	--	--	
	11/22/2000	81.61	10.12	0	71.49	-0.06	--	--	--	--	--	--	--	--	
	5/15/2001	81.61	10.08	0	71.53	0.04	--	--	--	--	--	--	--	--	
	11/23/2001	81.61	10.14	0	71.47	-0.06	--	--	--	--	--	--	--	--	
	5/24/2002	81.61	9.48	0	72.13	0.66	--	--	--	--	--	--	--	--	
	11/29/2002	81.61	10.11	0	71.50	-0.63	--	--	--	--	--	--	--	--	
	5/15/2003	81.61	9.22	0	72.39	0.89	--	--	--	--	--	--	--	--	
	11/4/2003	81.61	12.82	0	68.79	-3.60	--	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	5/24/2004	81.61	11.52	0	70.09	1.30	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.75	
	11/29/2004	81.61	12.58	0	69.03	-1.06	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.72	
	6/24/2005	81.61	10.70	0	70.91	1.88	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/15/2005	81.61	12.09	0	69.52	-1.39	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/14/2006	81.61	9.77	0	71.84	2.32	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/21/2006	81.61	11.57	0	70.04	-1.80	--	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	
	6/28/2007	81.61	14.11	0	67.50	-2.54	--	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	
	12/13/2007	81.61	15.72	0	65.89	-1.61	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/9/2008	81.61	14.93	0	66.68	0.79	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	

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3943 Broadway
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Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-10 (cont.)	12/30/2008	81.61	13.56	0	68.05	1.37	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	9/28/2009	81.61	13.52	0	68.09	0.04	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/15/2009	81.61	14.02	0	67.59	-0.50	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/28/2010	81.61	13.55	0	68.06	0.47	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/29/2010	81.61	13.23	0	68.38	0.32	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/7/2011	81.61	12.36	0	69.25	0.87	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/9/2011	81.61	14.41	0	67.20	-2.05	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/1/2012	81.61	12.65	0	68.96	1.76	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.1	
	12/27/2012	81.61	11.87	0	69.74	0.78	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.6	
	6/6/2013	81.61	13.28	0	68.33	-0.63	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.92	
	12/13/2013	81.61	14.48	0	67.13	-1.20	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.92	
	6/23/2014	81.61	14.10	0	67.51	0.38	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/17/2014	81.61	12.93	0	68.68	1.17	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/9/2015	81.61	14.04	0	67.57	-1.11	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/30/2015	81.61	14.66	0	66.95	-0.62	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
6/22/2016	81.61	13.58	0	68.03	1.08	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
MW-11	2/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	5/23/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	8/26/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/20/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	12/21/1992	78.43	12.34	0	66.09	--	--	--	--	--	--	--	--	--	
	1/30/1993	78.43	14.17	0	64.26	-1.83	--	--	--	--	--	--	--	--	
	2/24/1993	78.43	12.70	0	65.73	1.47	ND	--	ND	ND	ND	ND	--	--	
	3/22/1993	78.43	8.95	0	69.48	3.75	--	--	--	--	--	--	--	--	
	4/28/1993	78.43	13.87	0	64.56	-4.92	--	--	--	--	--	--	--	--	
	5/25/1993	78.43	15.14	0	63.29	-1.27	ND	--	ND	0.75	ND	1.0	--	--	
	6/23/1993	78.43	15.08	0	63.10	-0.19	--	--	--	--	--	--	--	--	
	7/22/1993	78.43	15.46	0	62.72	-0.38	--	--	--	--	--	--	--	--	
	8/25/1993	78.43	14.10	0	64.08	1.36	ND	--	ND	ND	ND	ND	--	--	
	9/22/1993	78.43	15.03	0	63.15	-0.93	--	--	--	--	--	--	--	--	
	10/28/1993	78.43	13.84	0	64.34	1.19	--	--	--	--	--	--	--	--	
	11/30/1993	78.43	13.04	0	65.14	0.80	ND	--	ND	ND	ND	ND	--	--	
	2/16/1994	78.43	12.76	0	65.42	0.28	ND	--	ND	ND	ND	ND	--	--	
	5/31/1994	78.43	12.79	0	65.39	-0.03	ND	--	ND	ND	ND	ND	--	--	
	8/31/1994	78.43	12.97	0	65.21	-0.18	ND	--	ND	1.5	ND	1.8	--	--	
	9/27/1994	78.43	14.88	0	63.30	-1.91	--	--	--	--	--	--	--	--	
	10/11/1994	78.43	13.40	0	64.78	1.48	--	--	--	--	--	--	--	--	
	11/10/1994	78.43	13.57	0	64.61	-0.17	ND	--	ND	ND	ND	ND	--	--	
	2/7/1995	78.43	12.28	0	65.90	1.29	--	--	--	--	--	--	--	--	
5/3/1995	78.43	9.28	0	68.90	3.00	ND	--	ND	ND	ND	ND	--	--		
8/3/1995	78.43	12.67	0	65.51	-3.39	--	--	--	--	--	--	--	--		
11/7/1995	78.43	12.28	0	65.90	0.39	ND	--	ND	ND	ND	ND	--	--		
5/6/1996	78.43	13.30	0	64.88	-1.02	--	--	--	--	--	--	--	--		
11/5/1996	78.43	10.90	0	67.28	2.40	--	--	--	--	--	--	--	--		
5/15/1997	78.43	11.65	0	66.53	-0.75	--	--	--	--	--	--	--	--		
11/12/1997	78.43	9.66	0	68.52	1.99	--	--	--	--	--	--	--	--		
5/4/1998	78.43	10.87	0	67.31	-1.21	--	--	--	--	--	--	--	--		
11/11/1998	78.43	11.40	0	66.78	-0.53	--	--	--	--	--	--	--	--		

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Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-11 (cont.)	5/20/1999	78.43	10.71	0	67.47	0.69	ND	--	ND	ND	ND	ND	ND	--	
	11/15/1999	78.43	11.32	0	66.86	-0.61	ND	--	ND	1.04	ND	ND	ND	--	
	5/22/2000	78.43	10.98	0	67.20	0.34	ND	--	ND	ND	ND	ND	ND	--	
	11/22/2000	78.43	11.17	0	67.01	-0.19	ND	--	ND	ND	ND	ND	ND	--	
	5/15/2001	78.43	10.93	0	67.25	0.24	ND	--	ND	ND	ND	ND	ND	--	
	11/23/2001	78.43	11.08	0	67.10	-0.15	<50	--	<0.50	<0.50	<0.50	<0.50	<5.0	--	
	5/24/2002	78.43	10.58	0	67.60	0.50	<50	--	<0.50	<0.50	<0.50	<0.50	<5.0	--	
	11/29/2002	78.43	11.27	0	66.91	-0.69	<50	--	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	5/15/2003	78.43	10.25	0	67.93	1.02	<50	--	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	11/4/2003	78.43	11.23	0	66.95	-0.98	--	<50	<0.50	<0.50	<0.50	<1.0	--	<2.0	
	5/24/2004	78.43	10.10	0	68.08	1.13	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	11/29/2004	78.43	10.96	0	67.22	-0.86	--	63	<0.50	<0.50	1.0	2.5	--	<0.50	
	6/24/2005	78.43	14.07	0	64.11	-3.11	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/15/2005	78.43	13.28	0	64.90	0.79	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/14/2006	78.43	12.53	0	65.65	0.75	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/21/2006	78.43	12.78	0	65.40	-0.25	--	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	
	6/28/2007	78.43	--	--	--	--	--	--	--	--	--	--	--	--	Bus parked over well
	12/13/2007	78.43	15.37	0	62.81	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/9/2008	78.43	14.80	0	63.38	0.57	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
12/30/2008	78.43	12.90	0	65.28	1.90	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
9/28/2009	78.43	12.57	0	65.61	0.33	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/15/2009	78.43	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well	
6/28/2010	78.43	14.42	0	63.76	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/29/2010	78.43	15.40	0	62.78	-0.98	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/7/2011	78.43	15.79	0	62.39	-0.39	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/9/2011	78.43	13.27	0	64.91	2.52	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/1/2012	78.43	14.50	0	63.68	-1.23	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/27/2012	78.43	14.49	0	63.69	0.01	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/6/2013	78.43	15.32	0	62.86	-0.82	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/13/2013	78.18	15.04	0	63.14	0.28	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/23/2014	78.18	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible	
12/17/2014	78.18	14.56	0	63.62	0.48	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/9/2015	78.18	14.51	0	63.67	0.05	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
12/30/2015	78.18	10.81	0	67.37	3.70	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
6/22/2016	78.18	13.07	0	65.11	-2.26	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
MW-12	8/26/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	11/20/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
	12/21/1992	79.89	12.11	0	67.78	--	--	--	--	--	--	--	--	--	
	1/30/1993	79.89	13.18	0	66.71	-1.07	--	--	--	--	--	--	--	--	
	2/24/1993	79.89	12.13	0	67.76	1.05	ND	--	ND	ND	ND	ND	--	--	
	3/22/1993	79.89	11.22	0	68.67	0.91	--	--	--	--	--	--	--	--	
	4/28/1993	79.89	13.42	0	66.47	-2.20	--	--	--	--	--	--	--	--	
	5/25/1993	79.89	13.68	0	66.21	-0.26	ND	--	ND	ND	ND	ND	--	--	
	6/23/1993	79.61	14.56	0	65.05	-1.16	--	--	--	--	--	--	--	--	
	7/22/1993	79.61	14.96	0	64.65	-0.40	--	--	--	--	--	--	--	--	
8/25/1993	79.61	13.61	0	66.00	1.35	ND	--	ND	ND	ND	ND	--	--		

Table 1
Groundwater Gauging and Analytical Results
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-12 (cont.)	9/22/1993	79.61	15.02	0	64.59	-1.41	--	--	--	--	--	--	--	--	
	10/28/1993	79.61	14.04	0	65.57	0.98	--	--	--	--	--	--	--	--	
	11/30/1993	79.61	13.28	0	66.33	0.76	ND	--	ND	ND	ND	ND	--	--	
	2/16/1994	79.61	12.76	0	66.85	0.52	ND	--	ND	ND	ND	ND	--	--	
	5/31/1994	79.61	12.64	0	66.97	0.12	ND	--	ND	0.81	ND	0.82	--	--	
	8/31/1994	79.61	12.82	0	66.79	-0.18	ND	--	ND	1.0	ND	1.0	--	ND	
	9/27/1994	79.61	14.66	0	64.95	-1.84	--	--	--	--	--	--	--	--	
	10/11/1994	79.61	14.25	0	65.36	0.41	--	--	--	--	--	--	--	--	
	11/10/1994	79.61	13.40	0	66.21	0.85	ND	--	ND	ND	ND	ND	--	--	
	2/7/1995	79.61	11.72	0	67.89	1.68	--	--	--	--	--	--	--	--	
	5/3/1995	79.61	13.38	0	66.23	-1.66	ND	--	ND	ND	ND	ND	--	--	
	8/3/1995	79.61	13.47	0	66.14	-0.09	--	--	--	--	--	--	--	--	
	11/7/1995	79.61	12.78	0	66.83	0.69	ND	--	ND	ND	ND	ND	--	--	
	5/6/1996	79.61	13.25	0	66.36	-0.47	--	--	--	--	--	--	--	--	
	11/5/1996	79.61	11.88	0	67.73	1.37	--	--	--	--	--	--	--	--	
	5/15/1997	79.61	11.72	0	67.89	0.16	--	--	--	--	--	--	--	--	
	11/12/1997	79.61	10.01	0	69.60	1.71	--	--	--	--	--	--	--	--	
	5/4/1998	79.61	10.96	0	68.65	-0.95	--	--	--	--	--	--	--	--	
	11/11/1998	79.61	11.53	0	68.08	-0.57	--	--	--	--	--	--	--	--	
	5/20/1999	79.61	10.84	0	68.77	0.69	--	--	--	--	--	--	--	--	
	11/15/1999	79.61	11.36	0	68.25	-0.52	--	--	--	--	--	--	--	--	
	5/22/2000	79.61	11.19	0	68.42	0.17	--	--	--	--	--	--	--	--	
	11/22/2000	79.61	11.36	0	68.25	-0.17	--	--	--	--	--	--	--	--	
	5/15/2001	79.61	11.04	0	68.57	0.32	--	--	--	--	--	--	--	--	
	11/23/2001	79.61	11.14	0	68.47	-0.10	--	--	--	--	--	--	--	--	
	5/24/2002	79.61	10.69	0	68.92	0.45	--	--	--	--	--	--	--	--	
	11/29/2002	79.61	11.23	0	68.38	-0.54	--	--	--	--	--	--	--	--	
	5/15/2003	79.61	10.38	0	69.23	0.85	--	--	--	--	--	--	--	--	
	11/4/2003	79.61	11.34	0	68.27	-0.96	--	<50	<0.50	<0.50	<0.50	<1.0	--	4.4	
	5/24/2004	79.61	9.84	0	69.77	1.50	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.7	
	11/29/2004	79.61	12.17	0	67.44	-2.33	--	64	0.68	<0.50	1.2	3.0	--	0.71	
	6/24/2005	79.61	13.16	0	66.45	-0.99	--	53	<0.50	<0.50	0.13	0.42	--	<0.50	
	12/15/2005	79.61	13.94	0	65.67	-0.78	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/14/2006	79.61	13.11	0	66.50	0.83	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/21/2006	79.61	9.03	0	70.58	4.08	--	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	
	6/28/2007	79.61	11.75	0	67.86	-2.72	--	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	
	12/13/2007	79.61	14.83	0	64.78	-3.08	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/9/2008	79.61	14.84	0	64.77	-0.01	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/30/2008	79.61	13.22	0	66.39	1.62	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	9/28/2009	79.61	10.55	0	69.06	2.67	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.55	
	12/15/2009	79.61	9.33	0	70.28	1.22	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.56	
	6/28/2010	79.61	9.31	0	70.30	0.02	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.97	
	12/29/2010	79.61	9.51	0	70.10	-0.20	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.95	
	6/7/2011	79.61	7.33	0	72.28	2.18	--	<50	<0.50	<0.50	<0.50	<1.0	--	2.0	
	12/9/2011	79.61	9.42	0	70.19	-2.09	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/1/2012	79.61	10.13	0	69.48	-0.71	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.2	
	12/27/2012	79.61	7.80	0	71.81	2.33	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.88	
	6/6/2013	79.61	9.52	0	70.09	0.61	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/13/2013	79.61	10.96	0	68.65	-1.44	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/23/2014	79.61	11.11	0	68.50	-0.15	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	

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Groundwater Gauging and Analytical Results
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3943 Broadway
Oakland, California

Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments	
MW-12 (cont.)	12/17/2014	79.61	9.76	0	69.85	1.35	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
	6/9/2015	79.61	10.13	0	69.48	-0.37	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50		
	12/30/2015	79.61	10.06	0	69.55	0.07	--	<50	<0.50	<0.50	<0.50	<1.0	--	0.55		
	6/22/2016	79.61	10.27	0	69.34	-0.21	--	<50	<0.50	<0.50	<0.50	<1.0	--	1.1		
RW-1																
	2/24/1993	81.20	7.19	0	74.01	--	--	--	--	--	--	--	--	--		
	5/12/1993	81.20	8.82	0	72.38	-1.63	--	--	--	--	--	--	--	--		
	5/25/1993	81.20	8.58	0	72.62	0.24	--	--	--	--	--	--	--	--		
	6/7/1993	80.63	8.16	0	72.47	-0.15	--	--	--	--	--	--	--	--		
	6/23/1993	80.63	8.53	0	72.10	-0.37	--	--	--	--	--	--	--	--		
	7/8/1993	80.63	8.69	0	71.94	-0.16	--	--	--	--	--	--	--	--		
	8/11/1993	80.63	9.00	0	71.63	-0.31	--	--	--	--	--	--	--	--		
	8/25/1993	80.63	9.07	0	71.56	-0.07	--	--	--	--	--	--	--	--		
	9/8/1993	80.63	9.71	0	70.92	-0.64	--	--	--	--	--	--	--	--		
	9/22/1993	80.63	9.25	0	71.38	0.46	--	--	--	--	--	--	--	--		
	11/12/1993	80.63	9.00	--	71.63	0.25	--	--	--	--	--	--	--	--		
	2/16/1994	80.63	7.82	0	72.81	1.18	--	--	--	--	--	--	--	--		
	5/31/1994	80.63	8.81	0	71.82	-0.99	--	--	--	--	--	--	--	--		
	8/31/1994	80.63	9.61	0	71.02	-0.80	--	--	--	--	--	--	--	--		
	11/10/1994	80.63	6.34	0	74.29	3.27	--	--	--	--	--	--	--	--		
	2/7/1995	80.63	7.18	0	73.45	-0.84	--	--	--	--	--	--	--	--		
	3/14/1995	80.63	6.01	0	74.62	1.17	--	--	--	--	--	--	--	--		
	11/7/1995	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/15/2001	80.63	8.43	0	72.20	--	--	--	--	--	--	--	--	--		
	11/23/2001	80.63	8.57	0	72.06	-0.14	--	--	--	--	--	--	--	--		
	12/10/2001	80.63	8.51	0	72.12	0.06	--	--	--	--	--	--	--	--		
	1/14/2002	80.63	8.13	0	72.50	0.38	--	--	--	--	--	--	--	--		
	2/22/2002	80.63	6.18	0	74.45	1.95	--	--	--	--	--	--	--	--		
	3/11/2002	80.63	6.31	0	74.32	-0.13	--	--	--	--	--	--	--	--		
	4/15/2002	80.63	6.39	0	74.24	-0.08	--	--	--	--	--	--	--	--		
	5/24/2002	80.63	8.14	0	72.49	-1.75	--	--	--	--	--	--	--	--		
	6/17/2002	80.63	8.18	0	72.45	-0.04	--	--	--	--	--	--	--	--		
	7/15/2002	80.63	8.29	0	72.34	-0.11	--	--	--	--	--	--	--	--		
	8/19/2002	80.63	8.44	0	72.19	-0.15	--	--	--	--	--	--	--	--		
	9/5/2002	80.63	8.47	0	72.16	-0.03	--	--	--	--	--	--	--	--		
	10/7/2002	80.63	8.43	0	72.20	0.04	--	--	--	--	--	--	--	--		
	11/29/2002	80.63	8.92	0	71.71	-0.49	--	--	--	--	--	--	--	--		
	12/12/2002	80.63	8.87	0	71.76	0.05	--	--	--	--	--	--	--	--		
	1/6/2003	80.63	8.66	0	71.97	0.21	--	--	--	--	--	--	--	--		
	2/12/2003	80.63	8.39	0	72.24	0.27	--	--	--	--	--	--	--	--		
	3/13/2003	80.63	8.06	0	72.57	0.33	--	--	--	--	--	--	--	--		
	4/7/2003	80.63	8.09	0	72.54	-0.03	--	--	--	--	--	--	--	--		
	5/15/2003	80.63	8.07	0	72.56	0.02	--	--	--	--	--	--	--	--		
	6/12/2003	80.63	8.11	0	72.52	-0.04	--	--	--	--	--	--	--	--		
7/7/2003	80.63	8.13	0	72.50	-0.02	--	--	--	--	--	--	--	--			
8/14/2003	80.63	8.23	0	72.40	-0.10	--	--	--	--	--	--	--	--			
9/12/2003	80.63	8.29	0	72.34	-0.06	--	--	--	--	--	--	--	--			
11/4/2003	80.63	9.97	0	70.66	-1.68	--	2,600	11	<10	<10	<20	--	210			
5/24/2004	80.63	8.31	0	72.32	1.66	--	3,100	20	<5.0	16	<10	--	200			

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Well ID	Date Sampled	TOC Elevation (feet amsl)	Depth to Water (feet btoc)	LPH Thickness (feet)	Ground-Water Elevation (feet amsl)	Change in Elevation (feet)	TPH-g 8015 (µg/l)	TPH-g (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
RW-1 (cont.)	11/29/2004	80.63	8.23	0	72.40	0.08	--	4,500	46	<1.0	34	3.6	--	140	
	6/24/2005	80.63	7.53	0	73.10	0.70	--	2,000	20	0.87	50	3.0	--	56	
	12/15/2005	80.63	8.11	0	72.52	-0.58	--	3,300	37	0.70	35	4.7	--	44	
	6/14/2006	80.63	7.41	0	73.22	0.70	--	1,500	2.0	0.95	6.9	<1.0	--	21	
	12/21/2006	80.63	7.78	0	72.85	-0.37	--	3,100	21	0.65	56	5.4	--	27	
	6/28/2007	80.63	9.09	0	71.54	-1.31	--	2,800	46	0.96	44	2.6	--	65	
	12/13/2007	80.63	9.21	0	71.42	-0.12	--	9,100	190	2.1	400	81	--	30	
	6/9/2008	80.63	9.30	0	71.33	-0.09	--	5,400	23	<2.5	330	13	--	39	
	12/30/2008	80.63	8.23	0	72.40	1.07	--	5,800	130	<2.5	270	58	--	22	
	9/28/2009	80.63	9.10	0	71.53	-0.87	--	3,400	3.8	<2.5	23	5.0	--	21	
	12/15/2009	80.63	7.96	0	72.67	1.14	--	9,100	18	<2.5	450	160	--	<2.5	
	6/28/2010	80.63	8.68	0	71.95	-0.72	--	2,300	20	1.0	56	<1.0	--	5.6	
	12/29/2010	80.63	6.04	0	74.59	2.64	--	4,100	9.3	1.3	6.8	<1.0	--	1.6	
	6/7/2011	80.63	3.61	0	77.02	2.43	--	730	4.1	<0.50	16	<1.0	--	<0.50	
	10/21/2011	80.63	5.45	0	75.18	-1.84	--	--	--	--	--	--	--	--	
	12/9/2011	80.63	9.28	0	71.35	-3.83	--	2,900	240	1.2	180	30	--	<0.50	A01
	1/12/2012	80.63	9.53	0	71.10	-0.25	--	--	--	--	--	--	--	--	
	6/1/2012	80.63	8.48	0	72.15	1.05	--	3,600	140	<2.5	56	<5.0	--	<2.5	A01
	12/27/2012	80.63	6.11	0	74.52	2.37	--	780	<0.50	<0.50	0.93	<1.0	--	<0.50	
	6/6/2013	80.63	8.73	0	71.90	-0.25	--	1,300	1.2	1.4	5.8	<1.0	--	<0.50	
	12/13/2013	80.63	9.20	0	71.43	-0.47	--	150	0.81	<0.50	<0.50	<1.0	--	<0.50	
	6/23/2014	80.63	9.20	0	71.43	0.00	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	12/17/2014	80.63	5.81	0	74.82	3.39	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/9/2015	80.63	8.10	0	72.53	-2.29	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	10/16/2015	80.63	9.58	0	71.05	-1.48	--	--	--	--	--	--	--	--	
	11/12/2015	80.63	9.18	0	71.45	0.40	--	--	--	--	--	--	--	--	
	12/30/2015	80.63	7.94	0	72.69	1.24	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	
	6/22/2016	80.63	8.41	0	72.22	-0.47	--	<50	<0.50	<0.50	<0.50	<1.0	--	<0.50	

Notes:
amsl = above mean sea level
btoc = below top of casing
A01 = method detection limit is raised due to sample dilution
GC/MS = gas chromatography / mass spectrometer
LPH = liquid phase hydrocarbons
LPH in well = sample not collected due to the presence of LPH
MTBE = methyl tertiary butyl ether
ND = not detected above the method reporting limit
TOC = top of casing
TPH-g = total petroleum hydrocarbons as gasoline
µg/L = micrograms per liter
< = not detected above the method reporting limit
-- = not analyzed

Table 2
Historical Soil Analytical Summary
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Sample	Date	Depth (feet)	TPH-g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)
SW1	8/16/1989	9.5	13	ND	0.13	0.15	0.39	--	--
SW2	8/16/1989	9.5	290	0.82	8.7	7.6	44	--	--
SW2(R)	8/18/1989	9.5	ND	ND	ND	ND	ND	--	--
SW3	8/24/1989	9.5	ND	ND	ND	ND	ND	--	--
SW4	8/24/1989	9.5	ND	ND	ND	ND	ND	--	--
SW5	8/24/1989	9.5	ND	ND	ND	ND	ND	--	--
SW6	8/24/1989	9.5	ND	ND	ND	ND	ND	--	--
P1	8/24/1989	6.5	6.1	ND	ND	ND	ND	--	--
P2	8/24/1989	6.5	36	0.52	4.4	1.4	8	--	--
P3	8/24/1989	5	20	0.3	2.5	1.1	5.6	--	--
P4	8/24/1989	5	3.8	0.11	0.19	0.1	0.23	--	--
WO1*	8/24/1989	8	1.6	ND	1.3	ND	ND	--	--
MW1(5)	10/17/1989	5	8.5	ND	ND	ND	0.14	--	--
MW1(10)	10/17/1989	10	ND	ND	ND	ND	ND	--	--
MW2(5)	10/17/1989	5	ND	ND	ND	ND	ND	--	--
MW2(10)	10/17/1989	10	ND	ND	ND	ND	ND	--	--
MW2(12.5)	10/17/1989	12.5	ND	ND	ND	ND	ND	--	--
MW3(5)	10/17/1989	5	3.1	0.068	ND	ND	ND	--	--
MW3(10)	10/17/1989	10	69	0.89	2.6	2	7.9	--	--
MW3(11)	10/17/1989	11	1,100	16	85	35	150	--	--
MW4(5)	1/26/1990	5	22	0.059	ND	ND	ND	--	--
MW4(7)	1/26/1990	7	2.5	ND	ND	ND	ND	--	--
MW4(10)	1/26/1990	10	250	1.2	0.66	1.4	20	--	--
MW4(11)	1/26/1990	11	280	1	4	7.6	36	--	--
MW5(5)	1/26/1990	5	25	0.21	ND	ND	ND	--	--
MW5(7.5)	1/26/1990	7.5	46	0.25	0.28	0.46	0.2	--	--
MW5(10)	1/26/1990	10	140	1.5	1.7	4	10	--	--
MW5(11.5)	1/26/1990	11.5	370	1.8	14	11	51	--	--
MW6(5)	10/23/1990	5	ND	ND	ND	ND	ND	--	--
MW6(9)	10/23/1990	9	ND	ND	ND	ND	0.01	--	--
MW6(11.5)	10/23/1990	11.5	ND	ND	ND	ND	ND	--	--
MW7(5)	10/23/1990	5	11	ND	ND	0.0064	0.032	--	--
MW7(8.5)	10/23/1990	8.5	ND	ND	ND	ND	0.019	--	--
MW7(11.5)	10/23/1990	11.5	ND	ND	ND	ND	0.036	--	--
MW8(5)	10/23/1990	5	ND	ND	ND	ND	ND	--	--

Table 2
Historical Soil Analytical Summary
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Sample	Date	Depth (feet)	TPH-g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)
MW8(10)	10/23/1990	10	ND	ND	ND	ND	0.008	--	--
MW9(5.5)	10/23/1990	5.5	ND	ND	ND	ND	ND	--	--
MW9(10)	10/23/1990	10	84	0.32	0.27	0.63	0.51	--	--
MW9(12)	10/23/1990	12	120	0.19	0.11	0.14	0.69	--	--
MW10(5)	1/7/1992	5	ND	ND	ND	ND	0.021	--	--
MW10(7)	1/7/1992	7	ND	ND	ND	ND	ND	--	--
MW10(11.5)	1/7/1992	11.5	ND	ND	ND	ND	ND	--	--
MW10(14.5)	1/7/1992	14.5	ND	ND	ND	ND	ND	--	--
MW10(19.5)	1/7/1992	19.5	ND	ND	ND	ND	ND	--	--
MW11(5)	1/7/1992	5	ND	ND	ND	ND	ND	--	--
MW11(10)	1/7/1992	10	ND	ND	ND	ND	ND	--	--
MW11(12.5)	1/7/1992	12.5	ND	ND	ND	ND	ND	--	--
MW12(5)	6/26/1992	5	ND	ND	ND	ND	ND	--	--
MW12(10)	6/26/1992	10	ND	ND	ND	ND	ND	--	--
MW12(11.5)	6/26/1992	11.5	ND	ND	ND	ND	ND	--	--
UT-1-4	2/19/1998	4	2,400	ND	ND	8.8	56	<0.5	--
UT-2-4	2/19/1998	4	4,300	ND	6.3	58	410	<0.5	--
UT-3-4	2/19/1998	4	23	0.039	0.077	0.22	0.051	2.9	--
UT-4-4	2/19/1998	4	ND	ND	ND	ND	ND	<0.5	--
US-1	2/19/1998	composite	4	ND	0.016	0.009	0.13	0.31	--
B-1	8/27/2009	6	1.3	ND	ND	ND	ND	0.0055	ND
B-1	8/27/2009	10	120	ND	ND	ND	ND	ND	ND
B-1	8/27/2009	13	110	ND	ND	ND	ND	ND	ND
B-1	8/27/2009	14	ND	ND	ND	ND	ND	ND	ND
B-1	8/27/2009	35	6.1	ND	ND	ND	ND	ND	ND
B-2	8/27/2009	6	6.6	ND	ND	0.0093	0.015	0.0085	ND
B-2	8/27/2009	10	250	1.9	ND	10	24	ND	ND
B-2	8/27/2009	12	760	0.71	ND	42	130	ND	ND
B-2	8/27/2009	13	790	0.22	ND	6.3	12	ND	ND
B-2	8/27/2009	35	ND	ND	ND	ND	ND	ND	ND

Table 2
Historical Soil Analytical Summary
Unocal Service Station No. 0746
3943 Broadway
Oakland, California

Sample	Date	Depth (feet)	TPH-g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)
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Notes:
bolded = sample exc sample exceeds Environmental Screening Levels
 -- = not analyzed
 mg/kg = milligrams per kilogram
 MTBE = methyl tertiary butyl ether
 TBA = tertiary butyl alcohol
 TPH-g = total petroleum hydrocarbons as gasoline
 * = WO1 also analyzed for Total Petroleum Hydrocarbons as diesel by EPA Method 8015, Oil and Grease by Infrared Spectrometric Method 503 D&E, and Halogenated Volatile Organic Compounds by EPA Method 8010. All results were below the method detection limit.

Table 3
Well Construction Details
Unocal Service Station No. 0746
3942 Broadway
Oakland, California

Well ID	Installation Date	TOC (feet amsl)	Boring Depth (feet bgs)	Well Depth (feet bgs)	Boring Diameter (inches)	Well Diameter (inches)	Screen Interval (feet bgs)	Screen Size (inches)	Sand Filter Pack	Screen Zone Within Soil Type	Location	Status
MW-1	10/17/1989	81.07	20	20	9	2	5-20	0.020	#3	(5-7.5)CH (7.5-10)SC (10-12)GC (12-14)GP/GC (14-19)CH (19-20)GC	Onsite	Active
MW-2	10/17/1989	81.62	20	20	9	2	5-20	0.020	#3	(5-6.5)CH (6.5-10)CL/CH (10-13)SC (13-15)GW/GC (15-20)CL/CH	Onsite	Active
MW-3	10/17/1989	82.01	22.5	22.5	9	2	5-22.5	0.020	#3	(5-7.5)CH (7.5-11)CL/CH (11-14)SC (14-22.5)CL/CH	Onsite	Active
MW-4	1/26/1990	81.48	20	20	9	2	5-20	0.020	#3	(5-6.5)MH (6.5-10)CH (10-11.5)GC (11.5-12.5)CH (12.5-13)GC (13-20)CH	Onsite	Active
MW-5	1/26/1990	81.59	20	20	9	2	5-20	0.020	#3	(5-6.5)MH (6.5-11)CH (11-13.5)SC (13.5-15.5)GW/GC	Onsite	Active
MW-6	10/22/1990	80.47	20	20	9	2	5-20	0.020	#3	(5-7)CL/CH (7-10)GC (10-17)CL/CH (17-20)ML/MH	Onsite	Active

Table 3
Well Construction Details
Unocal Service Station No. 0746
3942 Broadway
Oakland, California

Well ID	Installation Date	TOC (feet amsl)	Boring Depth (feet bgs)	Well Depth (feet bgs)	Boring Diameter (inches)	Well Diameter (inches)	Screen Interval (feet bgs)	Screen Size (inches)	Sand Filter Pack	Screen Zone Within Soil Type	Location	Status
MW-7	10/22/1990	81.83	20	20	9	2	5-20	0.020	#3	(5-7)CH (7-10)CL/CH (10-11.5)SC (11.5-12.5)GW (12.5-14)GC (14-20)ML/MH	Onsite	Active
MW-8	10/22/1990	81.71	22	22	9	2	5-22	0.020	#3	(5-8.5)CL/CH (8.5-12)GC (12-22)CL/CH	Offsite	Active
MW-9	10/23/1990	81.13	22	22	9	2	5-22	0.020	#3	(5-5.5)MH (5.5-11.5)CL/CH (11.5-15.5)GC (15.5-22)CL/CH	Offsite	Active
MW-10	1/7/1992	81.90	22	22	9	2	6-22	0.010	#2/16	(6-7)SM (7-10)CH (10-12)GC (12-19)CL (19-20)ML (20-22)SC	Offsite	Active
MW-11	1/7/1992	78.43	21	19	9	2	5-19	0.010	#2/16	(5-8)SC (8-10)GC (10-20)CH (20-21)SW/SM	Offsite	Active
MW-12	6/26/1992	79.89	17.5	17.5	8	2	5-17.5	0.010	#2/12	(5-5.5)MH (5.5-6.5)CL/SC (6.5-8.5)CH (8.5-11.5)GC (11.5-17.5)CL	Offsite	Active

Table 3
Well Construction Details
Unocal Service Station No. 0746
3942 Broadway
Oakland, California

Well ID	Installation Date	TOC (feet amsl)	Boring Depth (feet bgs)	Well Depth (feet bgs)	Boring Diameter (inches)	Well Diameter (inches)	Screen Interval (feet bgs)	Screen Size (inches)	Sand Filter Pack	Screen Zone Within Soil Type	Location	Status
RW-1	6/25/1992	81.20	17.5	17.5	13.5	6	5-15	0.010	#2/12	(5-6.5)MH (6.5-10)CH (10-11)SC (11-12.5)GC (12.5-17)CL (17-17.5)SC	Onsite	Active

Notes:

- amsl = above mean sea level
- bgs = below ground surface
- CH = silty clay
- CL = clay
- GC = clayey gravel
- GP = poorly-graded gravel
- GW = well-graded gravel
- ML = silty gravel
- MH = clayey silt
- SC = clayey sand
- SM = silty sand
- SW = well-graded sand
- TOC = top of casing

Table 4
Geochemical Parameters
Unocal Service Station No. 00746
3943 Broadway
Oakland, California

Well ID	Date	Total Iron (µg/L)	Total Alkalinity as CACO ₃ (mg/L)	Nitrate as Nitrogen (mg/L)	Sulfate (mg/L)	Total Sulfide (mg/L)
MW-1	12/9/2011	6,200	230	2.4	21	<0.10
MW-4	12/9/2011	12,000	130	<0.090	<0.12	<0.40
MW-11	12/9/2011	600	270	9.8	69	<0.10
MW-12	12/9/2011	1,000	390	0.77	10	<0.10

Notes:

CACO₃ = calcium carbonate

mg/L = milligram per liter

µg/L = microgram per liter

**Table 5
Linear Regression Analysis Summary**

Unocal Service Station 0746
3943 Broadway
Oakland, California

Constituent	Well	Water Quality Objective (µg/L) ¹	Data Range					Linear Regression Analysis						
			Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Most Recent Concentration (µg/L)	% of Data Above Laboratory Reporting Limit	Start Date	End Date	Coefficient of Determination, R-squared ²	p-value of Correlation (Significance of Slope)	Attenuation Half-life (days)	Trend Direction	Significance of Trend ³	Projected Year to WQO
TPH-g	MW-3	220	1,100	13,000	1,900	100	5/20/1999	6/22/2016	0.10	0.07	NA	No Trend	NS	NA
	MW-4	220	<i>50</i>	5,300	1,900	66	11/23/2001	6/22/2016	0.71	<0.01	NA	Increasing	Significant	NA
	MW-4 (2009 Onwards)	220	230	5,300	1,900	100	12/15/2009	6/22/2016	0.07	0.35	NA	No Trend	NS	NA
Benzene	MW-3	1.0	<i>0.5</i>	326	71.0	88	5/20/1999	6/22/2016	0.28	<0.01	1,543	Decreasing	Significant	2027
Ethylbenzene	MW-3	30	<i>0.5</i>	398	81	97	11/15/1999	6/22/2016	0.32	<0.01	1,957	Decreasing	Significant	2014

Notes, Abbreviations and Assumptions:

µg/L = micrograms per liter

BWQO = Below Water Quality Objective since the data shown (as month/year)

NS = not significant

NA = not applicable due to increasing trend, non-significant trend or no apparent trend

TPH-g = Total Petroleum Hydrocarbons, Gasoline

WQO = Water Quality Objective

¹ San Francisco ESLs for all contaminants

² Linear regression analysis with R² values <0.1 and p-values > 0.05 were defined as having no apparent trend (No Trend).

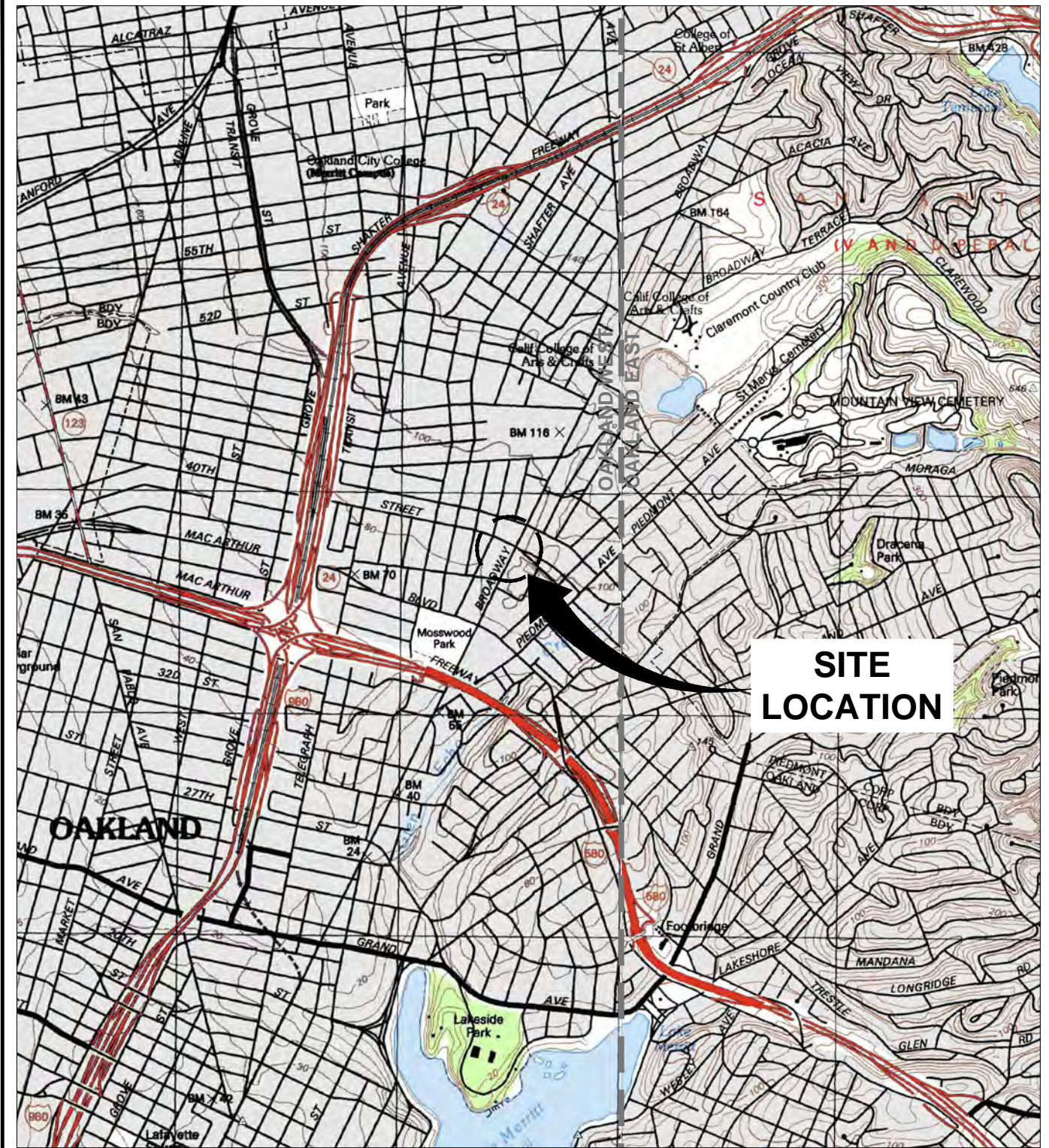
³ Statistically significant trend defined as having p-value ≤ 0.05

Italicized = value below the laboratory detection limit

FIGURES

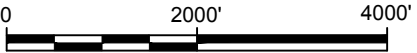


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**SITE
LOCATION**

REFERENCE: BASE MAP USGS 7.5 MIN. TOPO. QUAD., OAKLAND WEST, CALIFORNIA, 1993, AND OAKLAND EAST, CALIFORNIA, 1997.



Approximate Scale: 1 in. = 2000 ft.



UNION OIL
 STATION NO. 0746
 3943 BROADWAY
 OAKLAND, CALIFORNIA

SITE LOCATION MAP



FIGURE
1

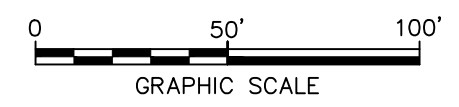
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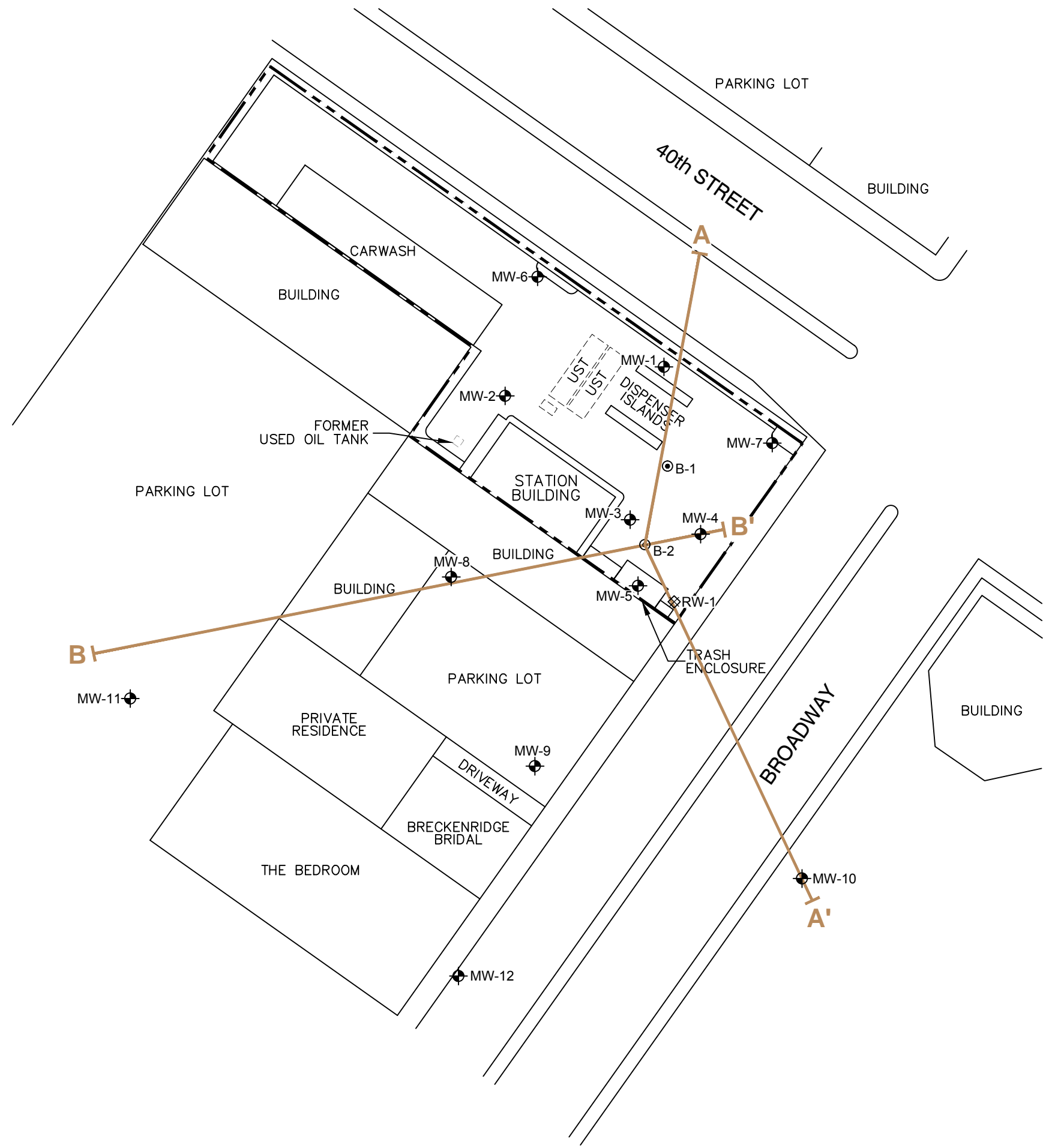
- LEGEND**
- PROPERTY BOUNDARY
 - MW-1 ◉ MONITORING WELL
 - RW-1 ◈ RECOVERY WELL
 - B-1 ◉ CPT BORING
 - SW1 • SAMPLE POINT (KAPREALIAN ENGINEERING, INC.)
 - UT-1-4 ◈ SOIL SAMPLE (GETTLER-RYAN, INC.)
 - - - - - APPROXIMATE EXCAVATION AREA (KAPREALIAN ENGINEERING, INC.)

- NOTES:**
1. BASE MAP DIGITIZED FROM A FIGURE PDF PROVIDED BY DELTA, DATED 09/14/09, AT A SCALE OF 1"=50'.
 2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.



UNION OIL STATION NO. 0746 3943 BROADWAY OAKLAND, CALIFORNIA	
SITE LAYOUT MAP	
Design & Consultancy for natural and built assets	FIGURE 2

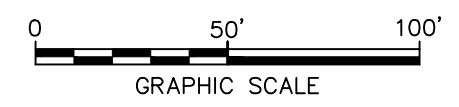
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LEGEND

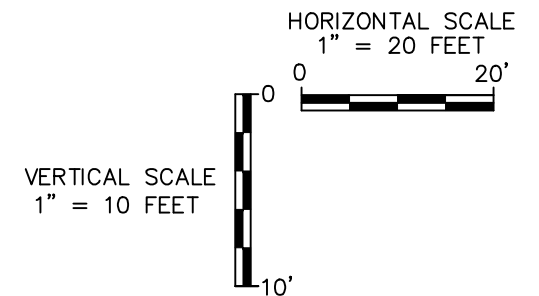
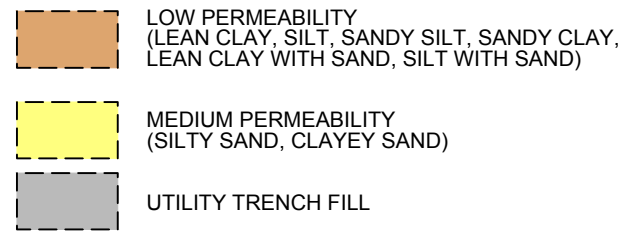
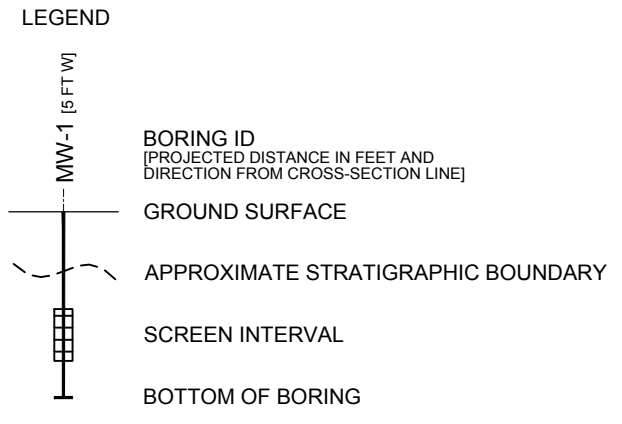
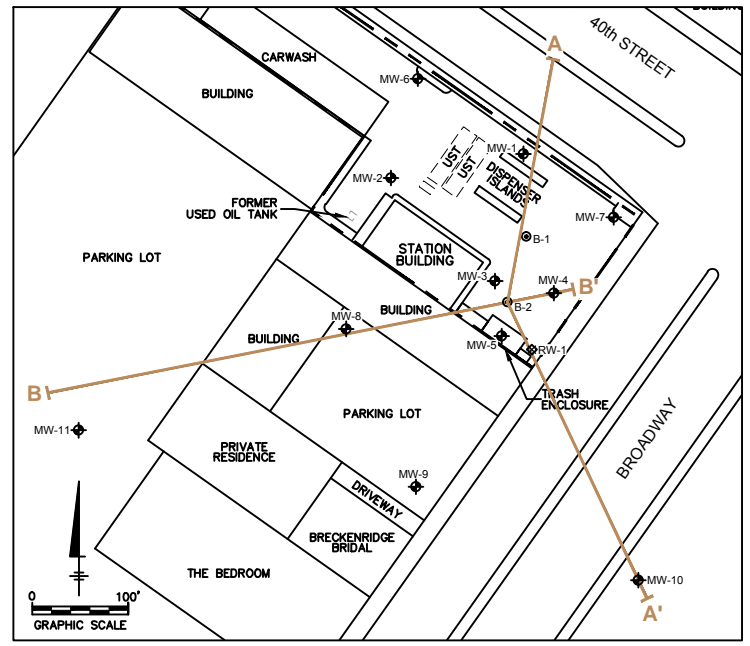
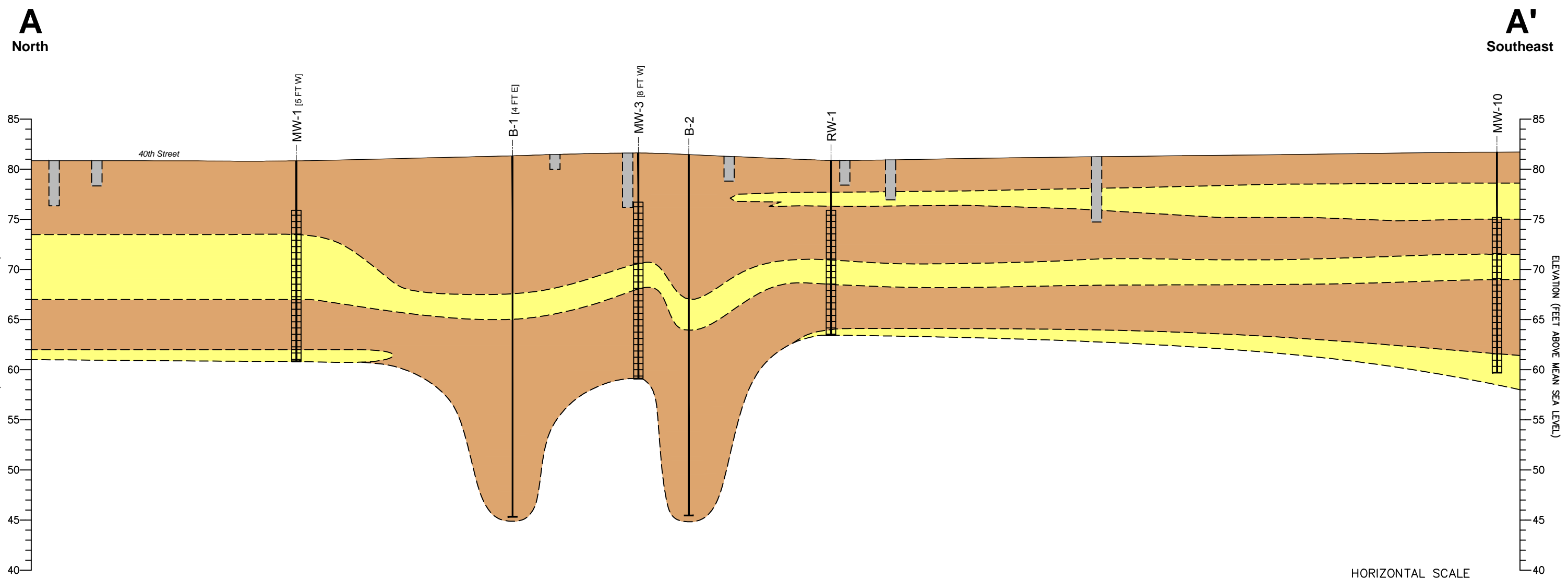
- PROPERTY BOUNDARY
- MW-1 MONITORING WELL
- RW-1 RECOVERY WELL
- B-1 CPT BORING
- CROSS SECTION LOCATION

- NOTES:**
1. BASE MAP DIGITIZED FROM A FIGURE PDF PROVIDED BY DELTA, DATED 09/14/09, AT A SCALE OF 1"=50'.
 2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.



UNION OIL STATION NO. 0746 3943 BROADWAY OAKLAND, CALIFORNIA	
CROSS SECTION LOCATION MAP	
	FIGURE 3

CITY: SAN RAFAEL, CA DIV/GROUP: ENV/CAD DB: J. HARRIS
 C:\Users\jharris\Desktop\ENV\CAD\B0035195\164716005\DWG\351951647\01.dwg LAYOUT: 4 SAVED: 9/15/2016 5:33 PM ACADVER: 19.1S (LMS TECH) PAGES: 4 PLOTTED: 10/13/2016 11:53 AM BY: HARRIS, JESSICA
 XREFS: IMAGES: PROJECTNAME: 351351647X01



- NOTES:**
- CROSS SECTION PROVIDED BY DELTA, DATED 10/08/09, TITLED GEOLOGIC CROSS SECTION A-A'.
 - ALL DISTANCES ARE APPROXIMATE.

UNION OIL
 STATION NO. 0746
 3943 BROADWAY
 OAKLAND, CALIFORNIA

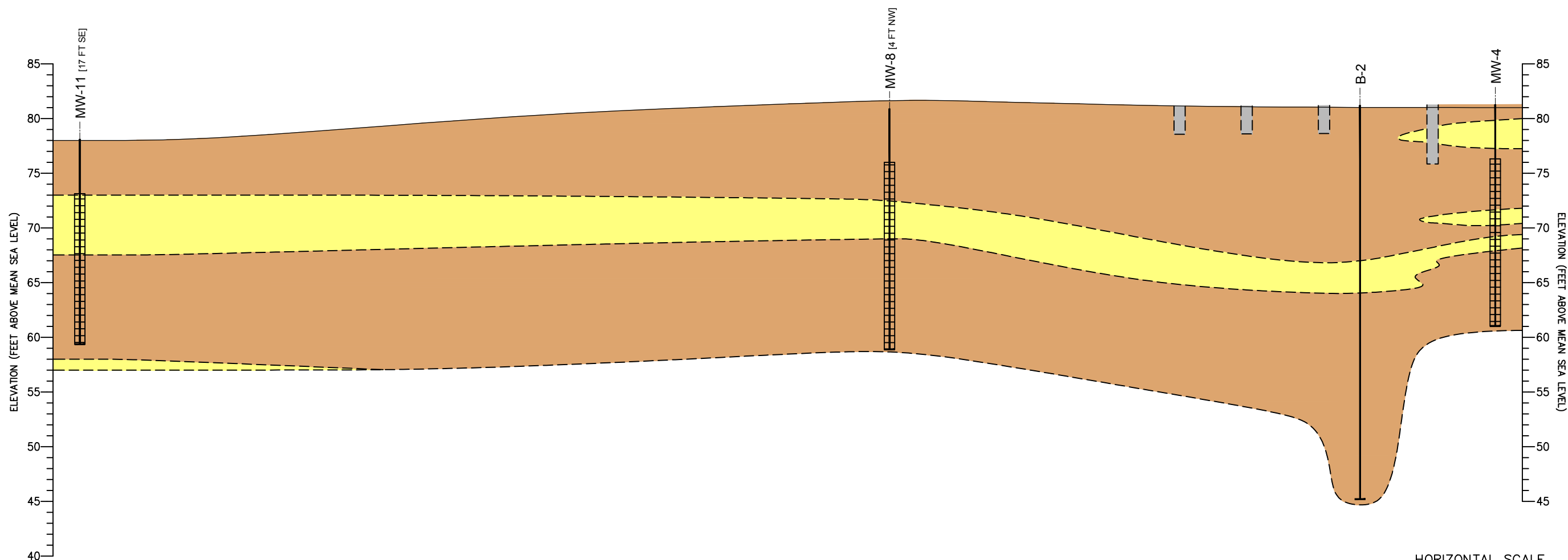
CROSS SECTION A-A'

ARCADIS Design & Consultancy
for natural and built assets

FIGURE
4

CITY: SAN RAFAEL, CA DIV/GROUP: ENVCAD DB: J. HARRIS C:\Users\jharris\Desktop\ENVCAD\B0035195\164716005\DWG\351951647\02.dwg LAYOUT: 5 SAVED: 9/15/2016 3:57 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 10/13/2016 11:57 AM BY: HARRIS, JESSICA XREFS: IMAGES: PROJECTNAME: --- 351351647X01

B
Southwest

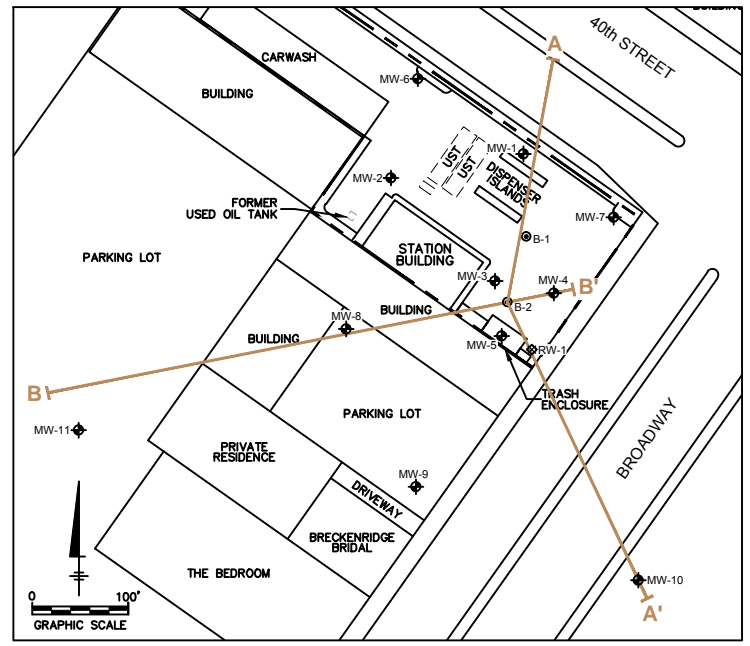


B'
Northeast

HORIZONTAL SCALE
1" = 20 FEET
0 20'

VERTICAL SCALE
1" = 10 FEET
0 10'

- NOTES:
- CROSS SECTION PROVIDED BY DELTA, DATED 10/08/09, TITLED GEOLOGIC CROSS SECTION B-B'.
 - ALL DISTANCES ARE APPROXIMATE.



LEGEND

- MW-8 [4 FT NW]
- BORING ID
(PROJECTED DISTANCE IN FEET AND DIRECTION FROM CROSS-SECTION LINE)
- GROUND SURFACE
- APPROXIMATE STRATIGRAPHIC BOUNDARY
- SCREEN INTERVAL
- BOTTOM OF BORING

- LOW PERMEABILITY
(LEAN CLAY, SILT, SANDY SILT, SANDY CLAY, LEAN CLAY WITH SAND, SILT WITH SAND)
- MEDIUM PERMEABILITY
(SILTY SAND, CLAYEY SAND)
- UTILITY TRENCH FILL

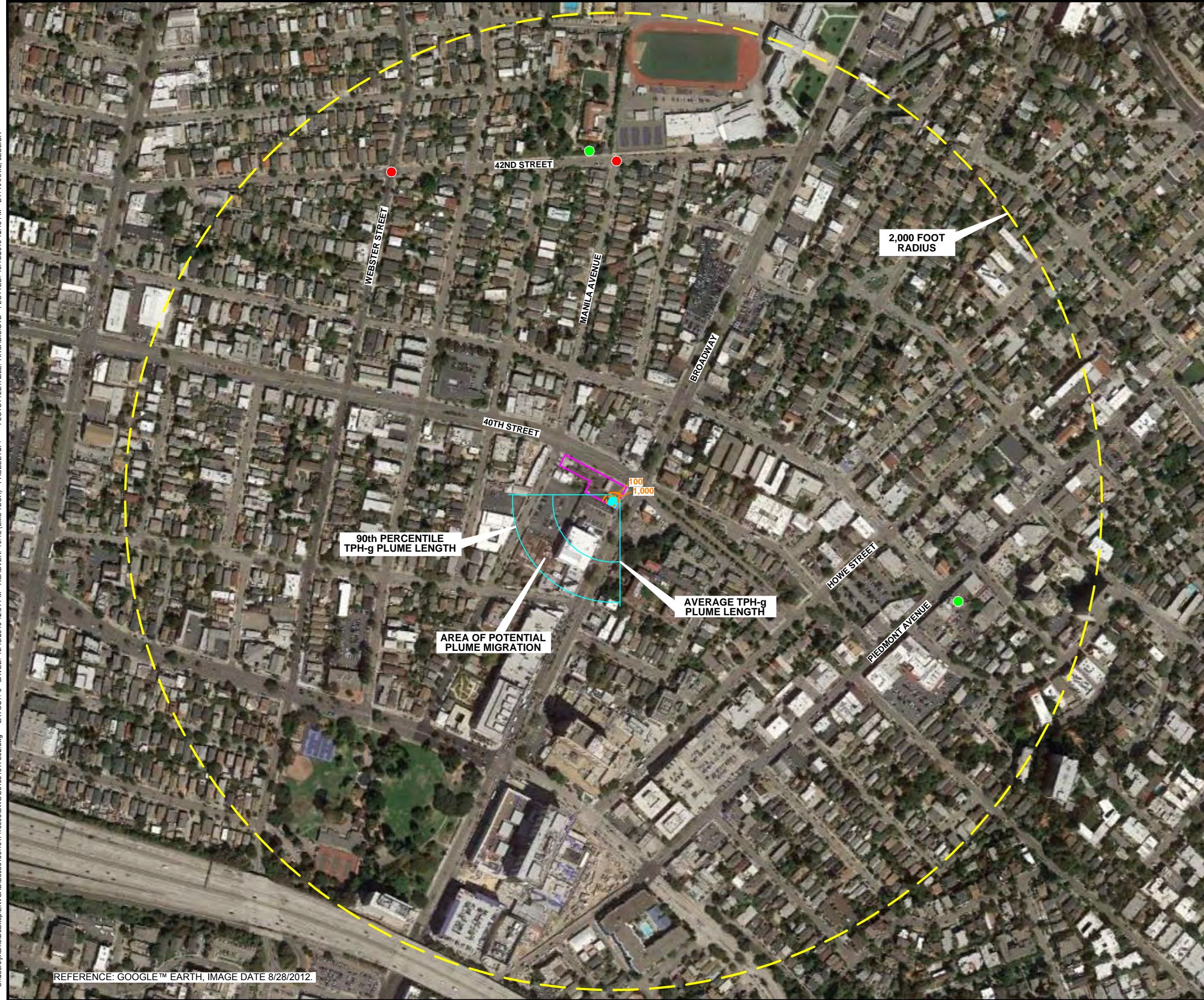
UNION OIL
STATION NO. 0746
3943 BROADWAY
OAKLAND, CALIFORNIA

CROSS SECTION B-B'

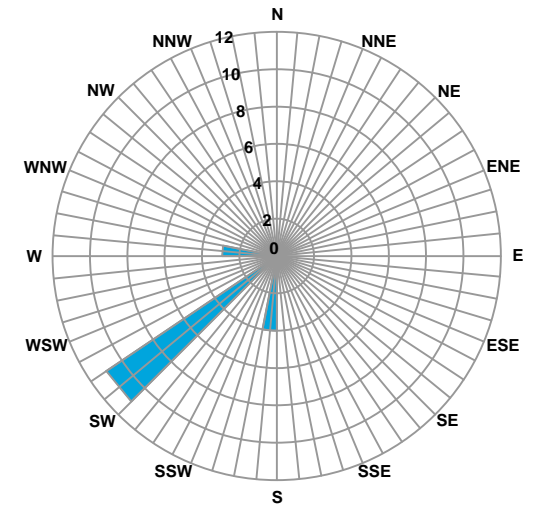
ARCADIS Design & Consultancy
for natural and built assets

FIGURE
5

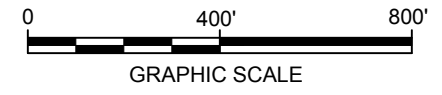
CITY: SAN RAFAEL, CA DIV/GROUP: ENV/CAD DB: J. HARRIS
 C:\Users\jharris\Desktop\ENV\CAD\B00351957164716005\DWG\351957164716005.dwg LAYOUT: 6 SAVED: 10/13/2016 12:04 PM ACADVER: 19.1S (LMS TECH) PAGES/SETUP: 6 PLOTTED: 10/13/2016 12:13 PM BY: HARRIS, JESSICA



- LEGEND**
- SITE BOUNDARY
 - IRRIGATION WELL
 - CATHODIC PROTECTION WELL
 - TPH-g CONCENTRATION CONTOUR (µg/L)
 - TPH-g TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (C6-C12)
 - µg/L MICROGRAMS PER LITER
 - SOURCE AREA



- NOTES:**
1. BASE MAP DIGITIZED FROM A FIGURE PDF PROVIDED BY DELTA, DATED 09/14/09, AT A SCALE OF 1"=50'.
 2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
 3. REFERENCE FOR PLUME LENGTH: STATE WATER RESOURCES CONTROL BOARD. 2012. *TECHNICAL JUSTIFICATION FOR GROUNDWATER MEDIA-SPECIFIC CRITERIA*. APRIL 24.
 4. WELL LOCATIONS BASED ON 2,000 FOOT RADIUS WELL SEARCH PERFORMED BY ARCADIS IN 2014. 1 MILE WELL SEARCH CONDUCTED BY AECOM IN 2015 DID NOT YIELD ANY NEW WELL LOCATIONS.



UNION OIL
 STATION NO. 0746
 3943 BROADWAY
 OAKLAND, CALIFORNIA

RESEARCH-BASED TPH-g PLUME MIGRATION ANALYSIS

REFERENCE: GOOGLE™ EARTH, IMAGE DATE 8/28/2012.

APPENDIX A

ACEH Directive





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

July 1, 2016

Union Oil Company of California, a Chevron affiliate
Db a Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Attn.: James Kiernan
(Sent via electronic mail to: jkiernan@chevron.com)

Phillips 66
76 Broadway
Sacramento, CA 95818
Attn.: Ed Ralston (Sent via electronic mail to:
Ed.C.Ralston@p66.com)

CJS Leung, LLC
C/o Clement Leung
3943 Broadway
Oakland, CA 94611

Clement K. Leung
Broadway Union #0746
3943 Broadway
Oakland, CA 94611

Clover Trust 1997-1
C/o Circle R Co #U-0746
Address Unknown

Suncor Holdings COP II LLC
Address Unknown

Subject: Request for Information, Fuel Leak Case No. RO0000203 and GeoTracker Global ID T0600101471, Unocal #0746, 3943 Broadway, Oakland, CA 94611

Dear Responsible Parties:

Alameda County Environmental Health (ACEH) has reviewed the case file for the subject site including the documents entitled *Response to Comments on Low-Threat Closure Request, Data Gap Investigation Workplan, and Focused Site Conceptual Model (RTC)*, dated October 30, 2015, and *Second Semi-Annual 2015 Groundwater Monitoring Report (GMR)*, dated January 15, 2016. Both documents were prepared by AECOM for the subject site.

The GMR presents the findings of the most recent groundwater monitoring event conducted on December 30, 2015. The GMR includes figures, including plume maps, tables containing current and historical data, and hydrographs for 13 wells.

The RTC contains responses to comments made by ACEH in our staff letter dated June 22, 2015, presents a path to address identified data gaps, and provides an updated site conceptual model. The data gaps identified by AECOM and path to address them are:

A. Extent and stability of LNAPL are not known.

To address this data gap, AECOM proposes to replace a skimmer in well MW-5 with a hydrophobic sock to be removed monthly.

B. Offsite vapor intrusion risk has not been assessed.

AECOM will prepare a soil vapor investigation workplan that is consistent with the Department of Toxic Substances Control's Final Vapor Intrusion Guidance once access to the down gradient property is secured.

- C. Groundwater immediately downgradient from known impacts has not been monitored since 12/29/2010.

AECOM states that groundwater has not been sampled at MW-8 and MW-9 since December 29, 2010 due to site access being denied by the property owner, and that data from these locations is essential to determining the extent and stability of dissolved hydrocarbon concentrations in site groundwater. Chevron is actively seeking access to the adjacent property and is currently working through negotiations with the property owner. Several past attempts to gain access have been unsuccessful. AECOM intends to sample MW-8 and MW-9 as soon as access is granted and incorporate these wells into the existing semi-annual groundwater monitoring schedule.

- D. Utilities and potential preferential pathways have not been investigated.

AECOM intends to perform a geophysical utility survey to identify subsurface utilities and potential preferential pathways. The survey will include a literature review of existing 'as-built' diagrams and a map showing the location of any surface features indicating subsurface utilities. AECOMs schedule for performing the survey is to wait until ground disturbing activities are next conducted at the site or at the adjacent property.

Additional data may be available that ACEH is not aware of, or may not have been submitted, and therefore has not been incorporated in to ACEH's review. If additional data is made available, the data can be incorporated in future LTCP reviews. The evaluation of the site under the LTCP that is presented below is intended to initiate further discussions, submittal of other available documents, or the collection of additional data in order to determine if or when the site can be closed under the LTCP and to document current LTCP data gaps.

Based on our review, ACEH requests you address the following Technical Comments and submit the documents requested below.

TECHNICAL COMMENTS

- 1. Groundwater monitoring wells MW-8 and MW-9** – Table 4 of the GMR, entitled *Historical Groundwater Monitoring Data and Analytical Results*, indicates wells MW-8 and MW-9 have not been sampled since December 2010. However, ACEH is unable to locate the discussion in the GMR regarding why the wells are not included in the well sampling program. ACEH requests a discussion why wells in the network have not been sampled for the current monitoring event. Please include the discussion of excluded wells for future monitoring events.
- 2. Extent and stability of LNAPL are not known** – As indicated above, AECOM proposes to replace a skimmer in well MW-5 with a hydrophobic sock to be removed monthly. It is unclear to ACEH if the sock will be removed and re- inserted in the well, if the sock will be replaced with an unused one, and what frequency a sock will be placed in the well. Please elaborate on the usage of hydrophobic socks at the site in the report requested below.
- 3. Offsite vapor intrusion risk has not been assessed** – On August 12, 1998, ACEH requested a risk assessment be performed as monitoring well MW-5, located at the property line, continues to identify elevated benzene concentrations, and indicated the contaminant plume has migrated beneath the adjacent down gradient property. In a letter dated June 19, 2014, ACEH requested a work plan to delineate the downgradient extent of the contaminant plume as benzene and free product in well MW-5 remain a concern to downgradient properties. We are unable to locate the response to these requests in the ACEH case file.

Due to the continuing presence of free phase product in monitoring well MW-5, on June 6, 2015, ACEH stated free product well MW-5 is located adjacent to a commercial building situated on the down gradient side of the site. It is not known if the nearby structures have basements. With depth to water (dtw) typically less than 10 feet below the ground surface (bgs), a bioattenuation zone may not exist,

potentially posing unacceptable health risks to human occupants of the existing buildings. Therefore, ACEH requested a strategy in the site conceptual model (SCM) to collect additional data to satisfy the bioattenuation zone characteristics of Scenarios 1, 2 or 3, or to collect soil gas data to satisfy Scenario 4.

The AECOM response is that a vapor intrusion investigation plan will be prepared once offsite access is secured; however, requests for site access to perform the survey have not been successful.

Therefore, in order to facilitate site access, ACEH requests copies of the correspondences requesting access to the property to conduct the vapor intrusion assessment. ACEH will prepare a letter to the property owner and occupant requesting site access, including a compilation of the dates of your requests, on ACEH letterhead. Please present your communications in an appendix in the report requested below.

4. **Groundwater immediately downgradient from known impacts has not been monitored since December 29, 2010** – Sampling of wells MW-8 and MW-9 has not occurred since December 2010 due to site access being denied by the property owner. Therefore, similar to the discussion for Technical Comment 3 above, ACEH requests copies of the correspondences requesting access to the wells be submitted to ACEH. ACEH will prepare a letter to the property owner and occupant requesting site access, including a compilation of the dates of your requests, on ACEH letterhead. Please present your communications in an appendix in the report requested below.
5. **Utilities and Potential Preferential Pathways have not been investigated** – It is unclear to ACEH why the preferential pathway study is dependent on other subsurface work. Please present an explanation of why the study is needed to be performed in conjunction with subsurface activities. Additionally, ACEH requests you review the case file to determine if all or part of a preferential pathway study has previously been performed. Please include your response in the report requested below.
6. **Geology and Hydrogeology** – A review of this SCM element does not indicate if the groundwater layer monitored by the well network is confined, unconfined or is semi-confined. ACEH requests a documented description of the groundwater monitored by the network. Additionally, only the lateral extent of groundwater contamination is discussed. Please include a discussion of the vertical distribution of contaminants in groundwater. ACEH requests this element of the SCM be updated to further reflect groundwater conditions and be included in the SCM requested below.
7. **Nearby Wells** – This element includes the statement that the results of the Alameda County Public Works Agency (ACPWA) well search was reported to have been provided at ACEH separately as it contains confidential data. ACEH has reviewed its case file and has been unable to locate the report. Therefore, ACEH requests that the report be resubmitted to the county ftp site as a confidential document.
8. **Potential Receptors** – The only sensitive receptors identified in this SCM element is the Duck's Nest Preschool and the Oakland Medical Center. ACEH is of the opinion that until vapor intrusion risks have been evaluated, nearby structures are also potential receptors and should also be identified in this element. ACEH requests this element be updated to include potential vapor intrusion receptors until this data gap has been evaluated and a determination made.
9. **Site History and Ownership** – This SCM element does not address historic station configurations, e.g. locations of the station buildings, tank locations, and the presence of the car wash. Additionally, there is no discussion of ownership. Therefore, ACEH requests this element be updated to address these data gaps and be included in the SCM requested below.
10. **Utilities and Preferential Pathways** – Please see Technical Comment 5 above.
11. **Distribution of Petroleum Hydrocarbons** – This element states soil analytical results are shown in Table 2. Table 2 presents a summary of soil analytical data, with shading utilized for samples which have been over excavated. It is unclear to ACEH that all the samples for the 8/24/1989 and 2/19/1998

dates have been over excavated. Please provide ACEH with the documentation, in the report requested below, indicating soil from these areas have been over excavated.

- 12. Remedial Actions** – This element identifies one excavation, one soil vapor extraction (SVE) pilot test, and one dual-phase extraction (DPE) pilot test as the remedial actions performed at the site. ACEH requests the case file be reviewed for other remedial actions which may have occurred at the site. Based on the findings of the document review, please update this element for inclusion in the SCM requested below.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Keith Nowell), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention and schedule:

- **July 31, 2016– Well Search Report** – Alameda County Public Works Agency (file name: RO0000203_COND_WELL_R_Confidential_yyyy-mm-dd)
- **August 15, 2016– Response to Comments** (file name: RO0000203_SITE_SUM_R_yyyy-mm-dd)
- **August 15, 2016– Updated Site Conceptual Model** (may be included as an attachment to the Response to Comments report requested above or submitted as a standalone document with the file name: RO0000203_SCM_R_yyyy-mm-dd)

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.

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org.

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,



Digitally signed by Keith Nowell
DN: cn=Keith Nowell, o, ou,
email=keith.nowell@acgov.org,
c=US
Date: 2016.07.01 15:28:51 -07'00'

Keith Nowell, PG, CHG
Hazardous Materials Specialist

Attachment 1 - Responsible Party(ies) Legal Requirements/Obligations &
ACEH Electronic Report Upload (ftp) Instructions

cc: Tamera Rogers, Arcadis U.S. Inc., 6296 San Ignacio Ave, Suite C & D, San Jose, CA, 95119
(Sent via electronic mail to: tamera.rogers@arcadis.com)

Dilan Roe, ACEH, (Sent via electronic mail to dilan.roe@acgov.org)
Keith Nowell, ACEH, (Sent via electronic mail to keith.nowell@acgov.org)
Geotracker, Electronic File

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and [other](#) data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	REVISION DATE: May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection.**
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

- 1) Obtain User Name and Password
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to deh.loptoxic@acgov.org
 - b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
 - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

Extension Correspondence



Nowell, Keith, Env. Health

From: Nowell, Keith, Env. Health
Sent: Tuesday, September 27, 2016 11:36 AM
To: 'Edwards, Carl'
Cc: Rogers, Tamera; Roe, Dilan, Env. Health
Subject: RE: RO0000203 UNOCAL #0746 Extension Request- GeoTracker Global ID T0600101471, 3943 Broadway, Oakland

Carl,

Your extension request for the SCM Update for the subject case for submittal by October 14, 2016 has been approved.

Regards,
Keith Nowell

From: Edwards, Carl [mailto:Carl.Edwards@arcadis.com]
Sent: Tuesday, September 27, 2016 10:12 AM
To: Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>
Cc: Rogers, Tamera <Tamera.Rogers@arcadis.com>
Subject: RO0000203 - Response to Comments and CSM Update

Hi Keith,

I left a message on your phone regarding a small extension request for our Response to Comments and CSM update, on behalf of Tamera Rogers (copied). Our client is asking for additional time to review the draft we have provided to them.

Our last correspondence (email on 8/26) requested an extension to September 30th. We are asking for an additional 2 weeks to upload the finalized Response to Comments and CSM update, which would set the deadline at October 14th. Please let me know if you have concerns or comments regarding this extension request. I am available at 415-825-0759.

Thanks,
Carl

Carl Edwards | Environmental Scientist | Carl.Edwards@arcadis-us.com

ARCADIS U.S., Inc. | 100 Montgomery Street, STE 300 | San Francisco, CA, 94104
TM: 415 825 0759

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ARCADIS, Imagine the result

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APPENDIX C

Low Threat Closure Checklist



Site meets the criteria of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.¹

<p><u>General Criteria</u> General criteria that must be satisfied by all candidate sites:</p> <p>Is the unauthorized release located within the service area of a public water system?</p> <p>Does the unauthorized release consist only of petroleum?</p> <p>Has the unauthorized (“primary”) release from the UST system been stopped?</p> <p>Has free product been removed to the maximum extent practicable?</p> <p>Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?</p> <p>Has secondary source been removed to the extent practicable?</p> <p>Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?</p> <p>Does nuisance as defined by Water Code section 13050 exist at the site?</p> <p>Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><u>Media-Specific Criteria</u> Candidate sites must satisfy all three of these media-specific criteria:</p> <p>1. Groundwater: To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:</p> <p>Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?</p> <p>Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?</p> <p>If YES, check applicable class: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p>

¹ Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

<p>For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p>2. Petroleum Vapor Intrusion to Indoor Air: The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.</p> <p>Is the site an active commercial petroleum fueling facility? Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.</p> <p>a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4? If YES, check applicable scenarios: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4</p> <p>b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?</p> <p>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p>3. Direct Contact and Outdoor Air Exposure: The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c).</p> <p>a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?</p> <p>b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?</p> <p>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

APPENDIX D

Soil Boring Logs



BORING LOG

Project No. KEI-P89-0805	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal Oakland - Broadway	Well Head Elevation N/A	Date Drilled 10/17/89
Boring No. MW1	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Strati- graphy USCS	Description
		0		A.C. Pavement Clay, sand and gravel: fill.
				Silty clay, high plasticity, very stiff, moist, black, trace gravel.
5/7/15		5	CH	Sandy clay, high plasticity, trace gravel, very stiff, moist, dark olive gray.

			SC	Clayey sand, 30-40% clay, medium dense, very moist, grayish brown, mottled.
7/10/16	▽	10	GC	Clayey gravel with sand, medium dense, very moist, olive brown and strong brown, mottled.

10/15/12			GP/ GC	Poorly graded gravel with clay and sand, medium dense, wet, dark yellowish brown.

		15	CH	Clay, high plasticity, very stiff, moist, greenish gray and olive brown.
11/17/23			CH	Clayey gravel with sand, very dense, moist, dark greenish gray, gravel to 1".
10/16/19			GC MH	Clayey silt, very stiff, moist, dark greenish gray.
		20		TOTAL DEPTH 20'

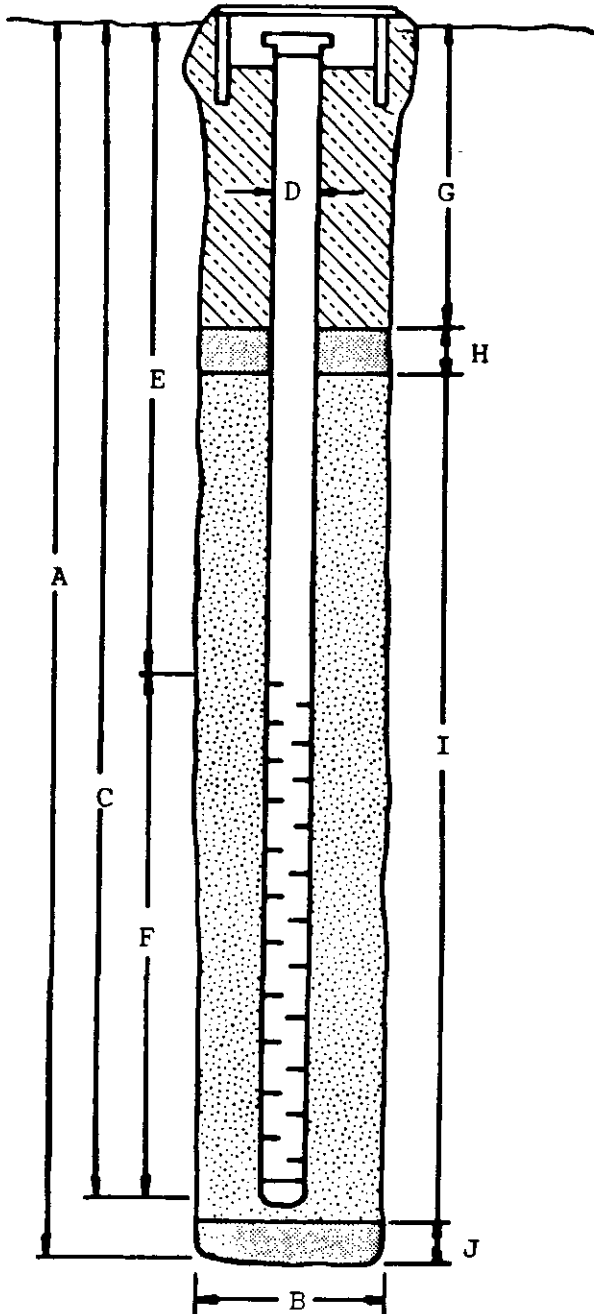
W E L L C O M P L E T I O N D I A G R A M

PROJECT NAME: Unocal - Oakland - Broadway BORING/WELL NO. MW1

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: 89456

Flush-mounted Well Cover



- A. Total Depth: 20'
- B. Boring Diameter*: 9"
Drilling Method: Hollow Stem Auger
- C. Casing Length: 20'
Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
ID = 2.067"
- E. Depth to Perforations: 5'
- F. Perforated Length: 15'
Perforation Type: Machined Slot
Perforation Size: 0.020"
- G. Surface Seal: 2'
Seal Material: Concrete
- H. Seal: 2'
Seal Material: Bentonite
- I. Gravel Pack: 16'
Pack Material: RMC Lonestar Sand
Size: #3
- J. Bottom Seal: None
Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

B O R I N G L O G

Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By D.L.	
Project Name Unocal Oakland - Broadway		Well Head Elevation N/A		Date Drilled 10/17/89	
Boring No. MW2		Drilling Method Hollow-stem Auger		Drilling Company EGI	
Penetration blows/6"	G. W. level	Depth (ft) Samples	Strati- graphy USCS	Description	
		0		A.C. Pavement Clay, sand and gravel: fill.	
6/9/15		5	CH	Silty clay, high plasticity, stiff, moist, black, organic odor, trace - 15% gravel below 3.5 feet.	
				Sandy clay, 5-10% gravel, very stiff, moist, dark olive gray.	
7/8/11		10	CL/ CH	Gravelly clay, 15-30% gravel to 5/8", stiff to very stiff, moist, dark brown.	
6/7/10			SC	Clayey sand, medium dense, moist to very moist, olive brown and strong brown, mottled.	
12/22/28	▽		GW/ GC	Well graded gravel with clay and sand, gravel to 2 1/2", dense to very dense.	
		15		Clay, very stiff to hard, olive brown to yellowish brown, mottled.	
			CL/ CH	Clay, as above, yellowish brown, 10% silt, trace - 15% sand.	
9/20/18		20		TOTAL DEPTH 20'	

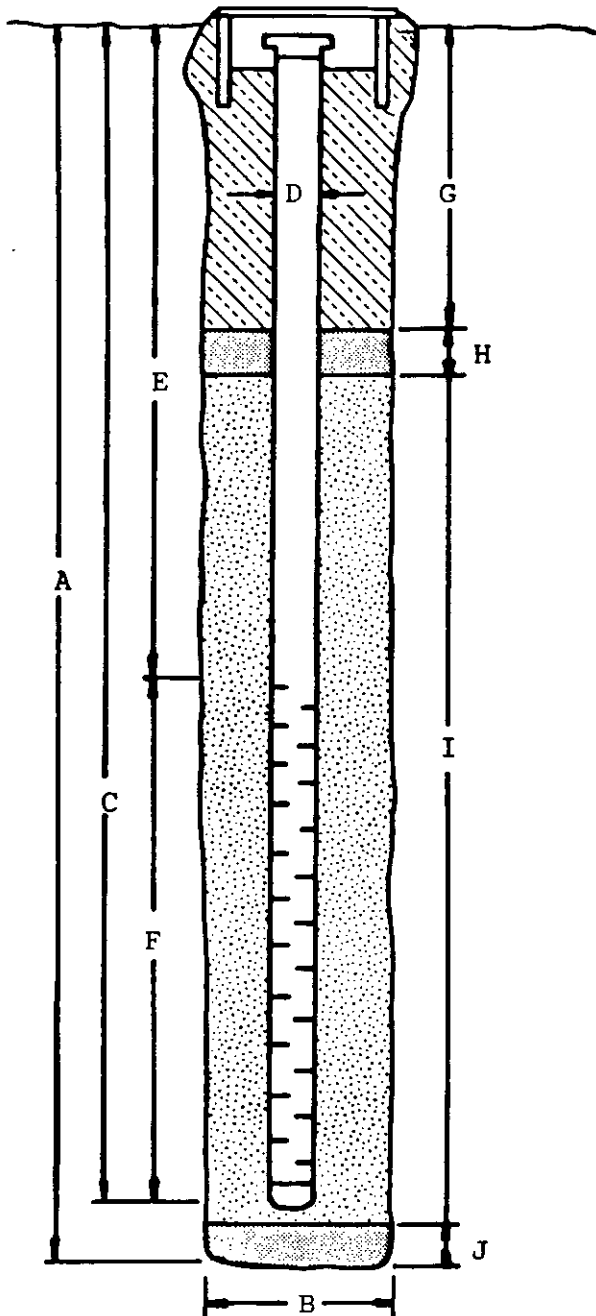
W E L L C O M P L E T I O N D I A G R A M

PROJECT NAME: Unocal - Oakland - Broadway BORING/WELL NO. MW2

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: 89456

Flush-mounted Well Cover



A. Total Depth: 20'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 20'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 5'

F. Perforated Length: 15'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 2'

Seal Material: Concrete

H. Seal: 2'

Seal Material: Bentonite

I. Gravel Pack: 16'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

15/4W 24L6

BORING LOG

01-449L

Project No. KEI-P89-0805	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal Oakland - Broadway	Well Head Elevation N/A	Date Drilled 10/17/89
Boring No. MW3	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Strati- graphy USCS	Description
		0		A.C. Pavement Clay, sand and gravel: fill.
5/5/11		5	CH	Sandy clay, high plasticity with gravel, firm, moist, olive gray and black, mottled with debris, disturbed. Silty clay, high plasticity, 5-10% sand, firm, moist, black.
5/7/12		10	CL/ CH	Gravelly clay, 30% gravel to 1/2", firm, moist, very dark grayish brown, gray root holes.
3/9/11	▽		SC	Sandy clay, stiff, moist, olive brown and gray, mottled.
6/17/16				Clayey sand, medium dense, very moist, 40% clay, olive gray and olive brown, mottled.
7/9/13		15		Clayey sand w/gravel, 15% clay, dense, very moist.
			CL/ CH	Clay, very stiff, moist, grayish green and olive brown, mottled. brown, mottled.
9/11/14		20		Clay, as above, greenish gray and light olive brown.

1S/4W 24L6
01-449L

B O R I N G L O G

Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By D.L.	
Project Name Unocal Oakland - Broadway		Well Head Elevation N/A		Date Drilled 10/17/89	
Boring No. MW3		Drilling Method Hollow-stem Auger		Drilling Company EGI	
Penetration blows/6"	G. W. level	Depth (ft) Samples	Strati- graphy USCS	Description	
9/12/15			CL/ CH	<p>Sandy clay, with gravel to 1/2", very stiff, moist, light olive brown.</p> <hr/> <p>Clay with silt, high plasticity, very stiff, moist light olive brown.</p>	
		25			
		30			
		35			
		40			
				TOTAL DEPTH 22.5'	

15/4W 24LG
01-449L

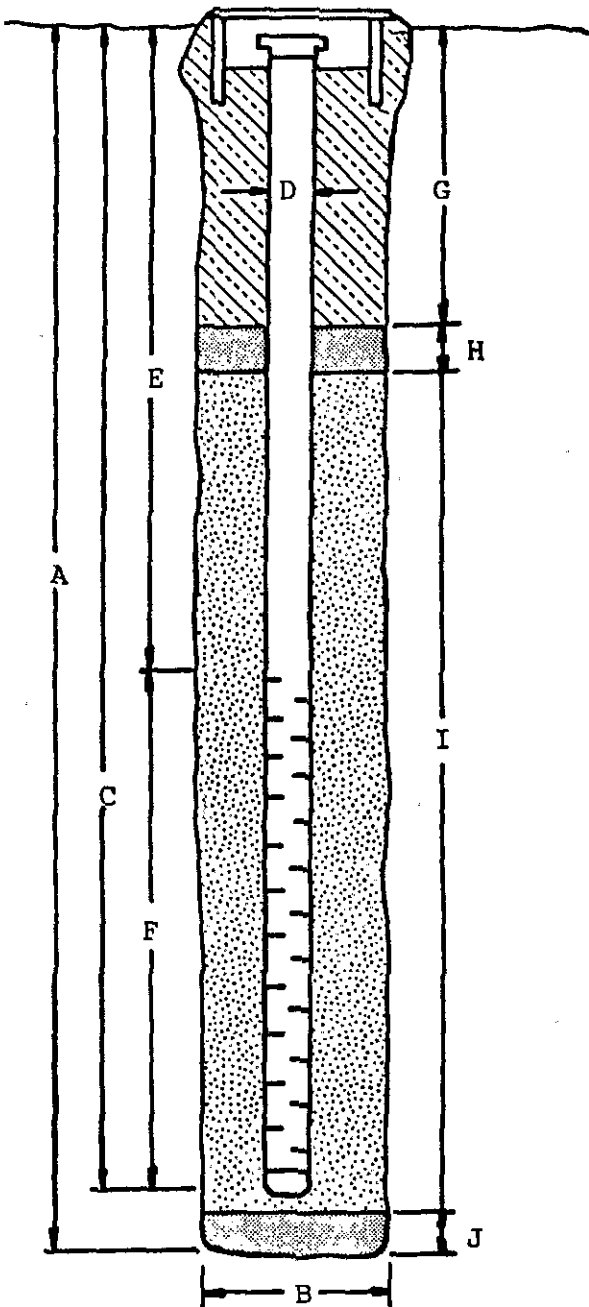
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland - Broadway BORING/WELL NO. MW3

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: 89456

Flush-mounted Well Cover



A. Total Depth: 22.5'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem
Auger

C. Casing Length: 22.5'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 5'

F. Perforated Length: 17.5'

Perforation Type: Machined
Slot

Perforation Size: 0.020"

G. Surface Seal: 2'

Seal Material: Concrete

H. Seal: 2'

Seal Material: Bentonite

I. Gravel Pack: 18.5'

Pack Material: RMC Lonestar
Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

15/4W 24L2

BORING LOG				308393A
Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By D.L. <i>Don Brown</i> CEG 1310
Project Name Unocal Oakland - Broadway		Well Head Elevation N/A		Date Drilled 1-26-90
Boring No. MW4		Drilling Method Hollow-stem Auger		Drilling Company EGI
Penetration blows/6"	G. W. level	Depth (ft) Samples	Strati- graphy USCS	Description
		0		A.C. Pavement. Sand and gravel: Fill Clay
			SW- SC	Well graded sand with clay and silt medium dense, moist, dark greenish gray.
6/5/11		5	MH	Clayey elastic silt, 5-10% sand, stiff, moist, black.
16/21/24			CH	Clay, with gravel, 10-15% sand gravel to 1/4", very stiff, moist, very dark grayish brown and black, mottled with root holes.
15/24/28		10	GC	Clayey gravel with sand, 15-20% clay, gravel to 3/4", medium dense, moist, dark greenish gray.
8/10/11	▼		CH	Clay, olive brown and dark greenish gray, mottled.
8/7/14			GC	Clayey gravel with with sand, olive brown and dark greenish gray.
10/16/21		15	CH	Clay high plasticity, with silt, 5-10% sand, very stiff, moist, dark yellowish brown and light olive brown, mottled.
10/10/14				Silty clay, high plasticity, 5-10% sand stiff, moist, light olive brown.
		20		TOTAL DEPTH: 20'

15/4W 24L2

308393A

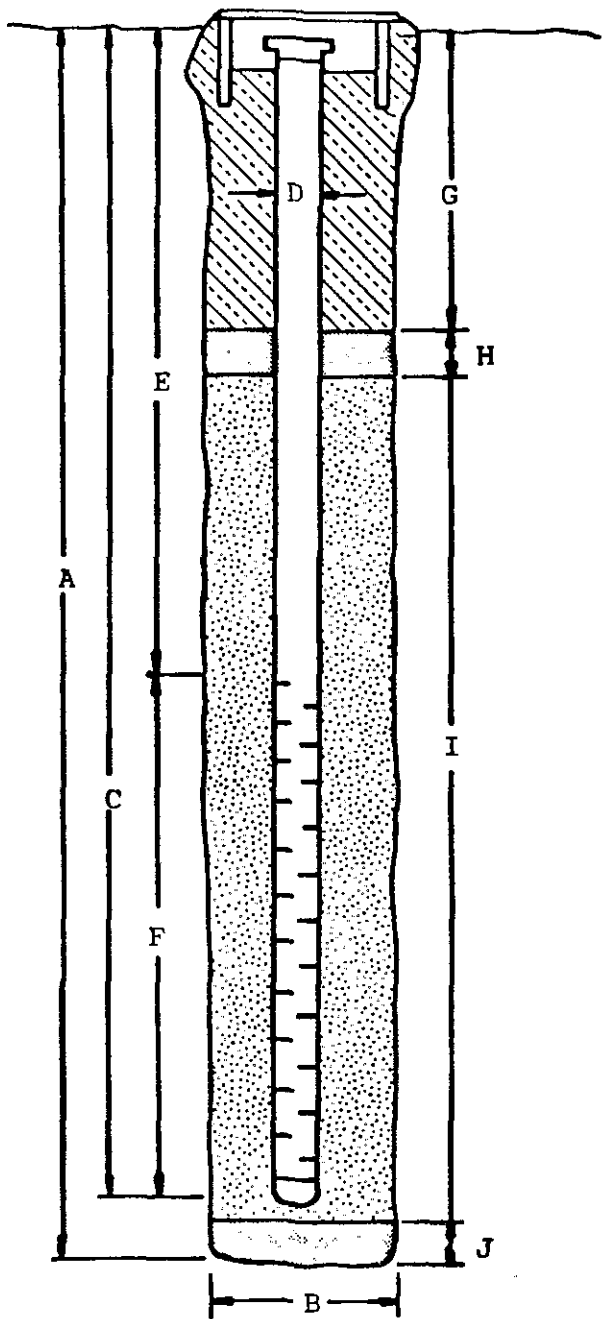
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland - Broadway BORING/WELL NO. MW4

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: _____

Flush-mounted Well Cover



- A. Total Depth: 20'
- B. Boring Diameter*: 9"
Drilling Method: Hollow Stem Auger
- C. Casing Length: 20'
Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
ID = 2.067"
- E. Depth to Perforations: 5'
- F. Perforated Length: 15'
Perforation Type: Machined Slot
Perforation Size: 0.020"
- G. Surface Seal: 2'
Seal Material: Neat Cement
- H. Seal: 2'
Seal Material: Bentonite
- I. Gravel Pack: 16'
Pack Material: RMC Lonestar Sand
Size: #3
- J. Bottom Seal: None
Seal Material: N/A


*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

15/4W 24L3

BORING LOG

308393 B

Project No. KEI-P89-0805	Boring & Casing Diameter 9" 2"	Logged By D.L. <i>John P. Brown</i> CFG 1310
Project Name Unocal Oakland - Broadway	Well Head Elevation N/A	Date Drilled 1-26-90
Boring No. MW5	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Strati- graphy USCS	Description
		0		A.C. Pavement. Sand and gravel to 9": Fill
			CH	Silty clay, high plasticity, 5-15% sand stiff, moist, dark greenish gray and black, mottled.
5/4/5		5	MH	Clayey elastic silt, 5-10% sand, firm, very moist black.
			CH	Silty clay, high plasticity 10-15% sand stiff, moist, dark olive gray.
8/17/24				Clay, high plasticity, with gravel, 15-30% gravel to 1/2", trace silt, very stiff, moist, dark brown and black, mottled, with root holes.
8/15/23		10		Sandy below 10 feet, olive gray grades to clayey sand.
7/10/12			SC	Clayey sand, 10-15% silt, dense, moist to very moist, dark greenish gray and olive gray, mottled with gravel below 13'.
6/10/18				
6/10/11		15	GW-GC	Well graded gravel with clay and sand, medium dense, wet, dark greenish gray, gravel to >2" diameter.
8/15/18			CH	Clay, high plasticity, trace silt, stiff, moist, dark greenish gray and light olive brown, mottled, dark greenish gray in voids/fissures. Silty clay, high plasticity, stiff, moist to wet, light olive brown and dark greenish gray, mottled, olive greenish gray below 19.5 feet.
		20		TOTAL DEPTH: 20'

15/4W 24L3

308393B

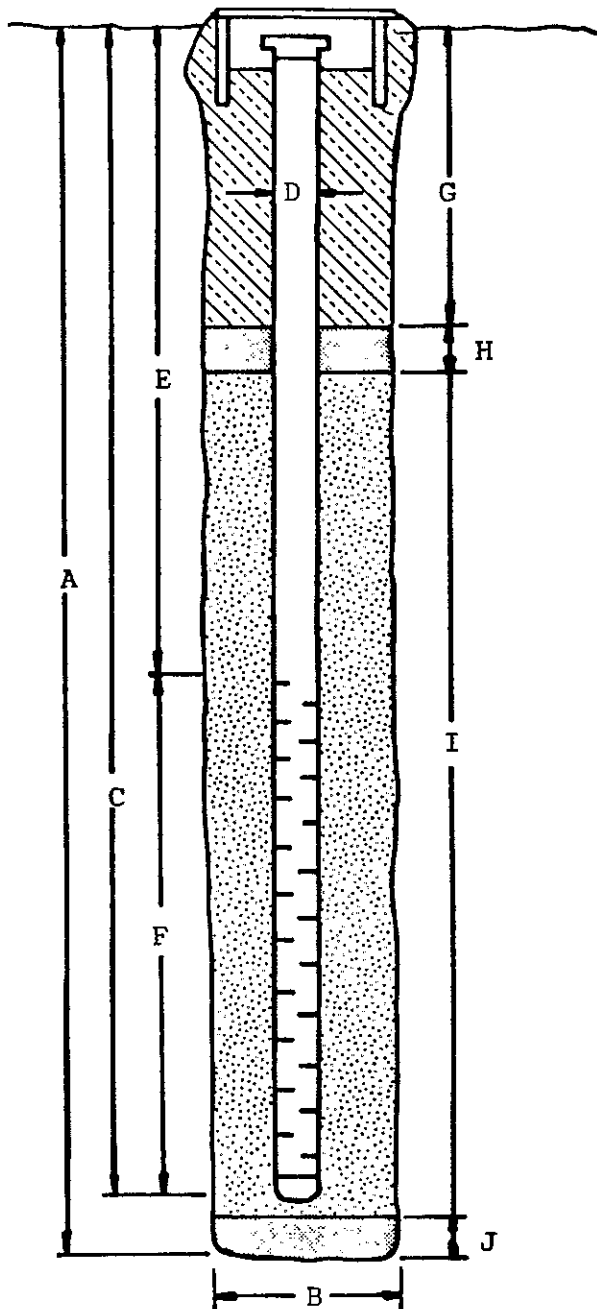
W E L L C O M P L E T I O N D I A G R A M

PROJECT NAME: Unocal - Oakland - Broadway BORING/WELL NO. MW5

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: _____

Flush-mounted Well Cover



A. Total Depth: 20'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 20'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 5'

F. Perforated Length: 15'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 2'

Seal Material: Neat Cement

H. Seal: 2'

Seal Material: Bentonite

I. Gravel Pack: 16'

Pack Material: RMC Lonestar Sand

Size: #3


J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

BORING LOG

15/4W 2417

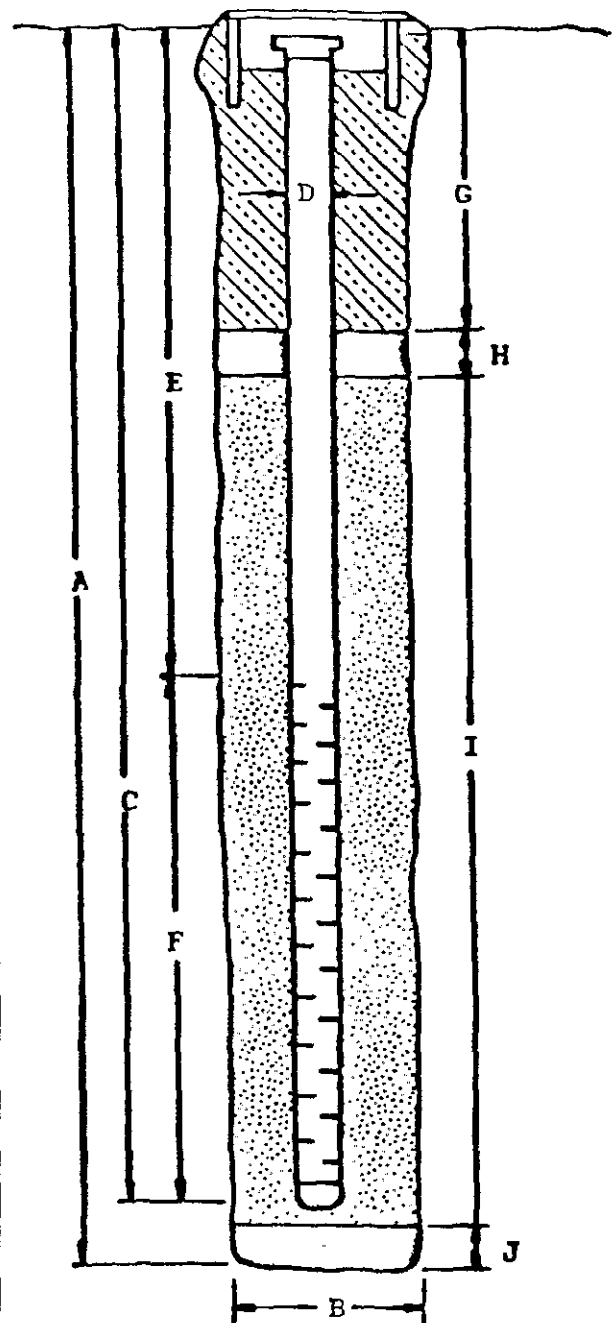
Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By W.W.	
Project Name Unocal 3943 Broadway, Oaklnd		Well Head Elevation N/A		Date Drilled 10/22/90	
Boring No. MW6		Drilling Method Hollow-stem Auger		Drilling Company EGI	
Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description	
		0		Asphalt over sand and gravel base.	
			CL/ CH	Silty clay, trace fine sand, moist, stiff, orange brown. Base of Fill Materials	
			CH	Silty clay, trace fine sand, moist, moist, firm, black.	
4/9/13		5	CL/ CH	Clay, 5% silt, trace rootlets, moist, very stiff, dark grayish brown, trace gravel to 3/8" diameter.	
8/10/15			GC	Clayey gravel, trace sand, subangular gravel to 1-1/8" diameter, moist, very stiff, dark grayish brown, trace orange brown.	
5/6/12			CL/ CH	Clay, trace gravel to 3/8" diameter, trace very fine sand, trace organic matter, moist to very moist, very stiff, light yellowish brown with trace pale olive mottling.	
4/7/11		15		Clay, 5% silt, trace organic matter, trace caliche, slightly moist, very moist, very stiff, light yellowish brown.	
5/8/14			ML/ MH	Clayey silt, trace sand, saturated, very stiff, light yellowish brown light yellowish brown mottled with orange brown and light greenish gray.	
		20		TOTAL DEPTH: 20'	

364640A
15/4W 24L 7

WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - 3943 Broadway St., Oakland BORING/WELL NO. MW6
 PROJECT NUMBER: KEI-P89-0805
 WELL PERMIT NO.: _____

Flush-mounted Well Cover



- A. Total Depth: 20'
- B. Boring Diameter*: 9"
 Drilling Method: Hollow Stem Auger
- C. Casing Length: 20'
 Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
ID = 2.067"
- E. Depth to Perforations: 5'
- F. Perforated Length: 15'
 Perforation Type: Machined Slot
 Perforation Size: 0.020"
- G. Surface Seal: 2'
 Seal Material: Neat Cement
- H. Seal: 2'
 Seal Material: Bentonite
- I. Gravel Pack: 16'
 Pack Material: RMC Lonestar Sand
 Size: #3
- J. Bottom Seal: None
 Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

364640 B
15/4W 2AL8

BORING LOG					
Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By W.W.	
Project Name Unocal 3943 Broadway, Oaklnd		Well Head Elevation N/A		Date Drilled 10/22/90	
Boring No. MW7		Drilling Method Hollow-stem Auger		Drilling Company EGI	
Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description	
		0		Asphalt over sand and gravel base with cobbles to 6" diameter.	
			CL/ CH	Silty clay with gravel, trace sand, gravel to 1-1/4" diameter, moist, firm, brown. Clay, 5-10% fine sand, trace silt, moist, stiff, dark yellowish brown. Base of fill?	
3/4/5		5	CH	Silty clay, highly organic, trace subangular gravel to 1" diameter, moist, firm to stiff, moist, black.	
5/10/12			CL/ CH	Clay, trace rootlets, trace silt, trace sand, moist, very stiff, olive brown.	
		10	SC	Clayey sand, trace gravel to 3/8" dia., fine to medium grained, very moist, medium dense, bluish gray.	
6/9/15			GW	Sandy gravel, 5% clay, trace rootlets, gravel to 1" diameter, saturated, medium dense, yellowish brown.	
			GC	Clayey gravel with sand, slight odor, gravel to 1" diameter, saturated, medium dense, bluish gray.	
		15	ML/ MH	Clayey silt, 5% very fine sand, trace organic matter, stiff to very stiff, very moist to saturated, pale olive mottled with light olive brown.	
4/7/9		20		TOTAL DEPTH: 20'	

364640B
15/4W 2/28

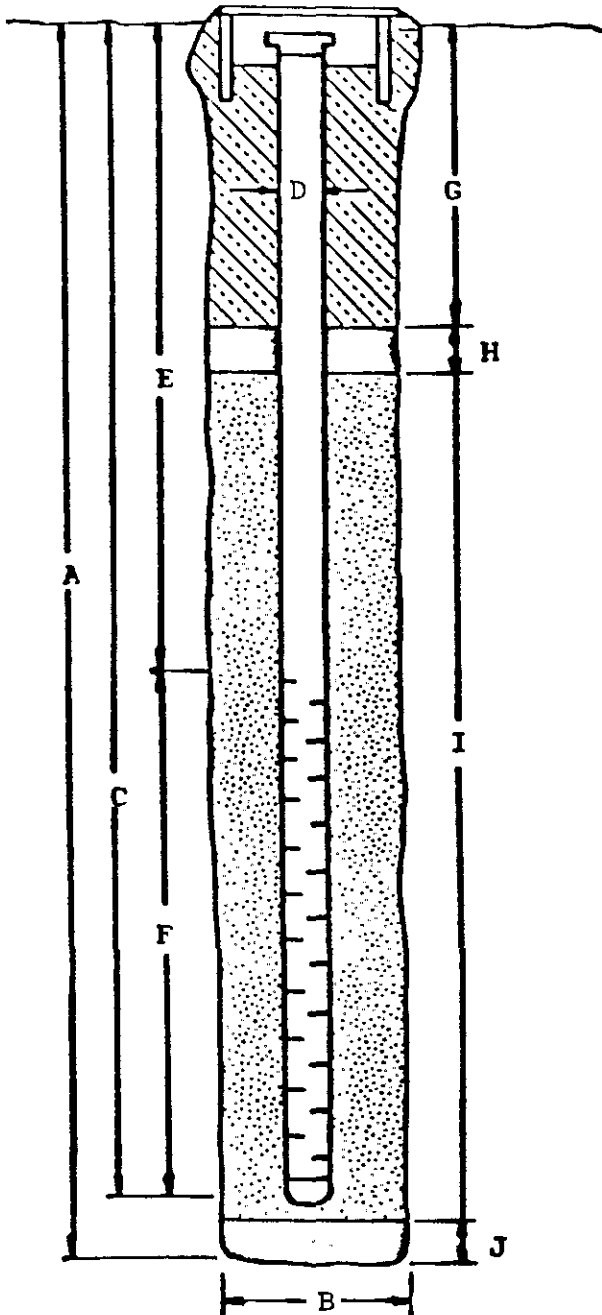
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - 3943 Broadway St, Oakland BORING/WELL NO. MW7

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: _____

Flush-mounted Well Cover



A. Total Depth: 20'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem
Auger

C. Casing Length: 20'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 5'

F. Perforated Length: 15'

Perforation Type: Machined
Slot

Perforation Size: 0.020"

G. Surface Seal: 2'

Seal Material: Neat Cement

H. Seal: 2'

Seal Material: Bentonite

I. Gravel Pack: 16'

Pack Material: RMC Lonestar
Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

364640C

15/4W 24L9

BORING LOG

Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By W.W./J.E.
Project Name Unocal 3943 Broadway, Oaklnd		Well Head Elevation N/A		Date Drilled 10/22/90
Boring No. MW8		Drilling Method	Hollow-stem Auger	Drilling Company EGI - Dave Yager

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
		0		6" concrete slab over sand and gravel.
				Clayey gravel with concrete cobbles, moist, reddish brown.
				Base of fill materials.
3/3/5		5	CL/ CH	Silty clay, trace organic matter, trace gravel, stiff, very dark brown to black, moist.
12/13/15		10	GC	Clayey gravel, highly weathered sand- stone, trace sand, medium dense, mottled, light brown to dark brown, very moist to wet.
5/10/13		15	CL/ CH	Gravelly clay, gravel is subrounded to rounded, very stiff, trace sand, gray to light brown, grading to sandy clay, moist.
5/9/14		20		Sandy clay, trace gravel, very stiff light brown, moist.

364640C

1S/4W 2#L9

BORING LOG

Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By W.W./J.E.
Project Name Unocal 3943 Broadway, Oaklnd		Well Head Elevation N/A		Date Drilled 10/22/90
Boring No. MW8		Drilling Method Hollow-stem Auger	Drilling Company EGI - Dave Yager	
Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
				<p>Sandy clay, trace gravel, very stiff, moist, light brown.</p>
				TOTAL DEPTH: 22'

364640C

WELL COMPLETION DIAGRAM

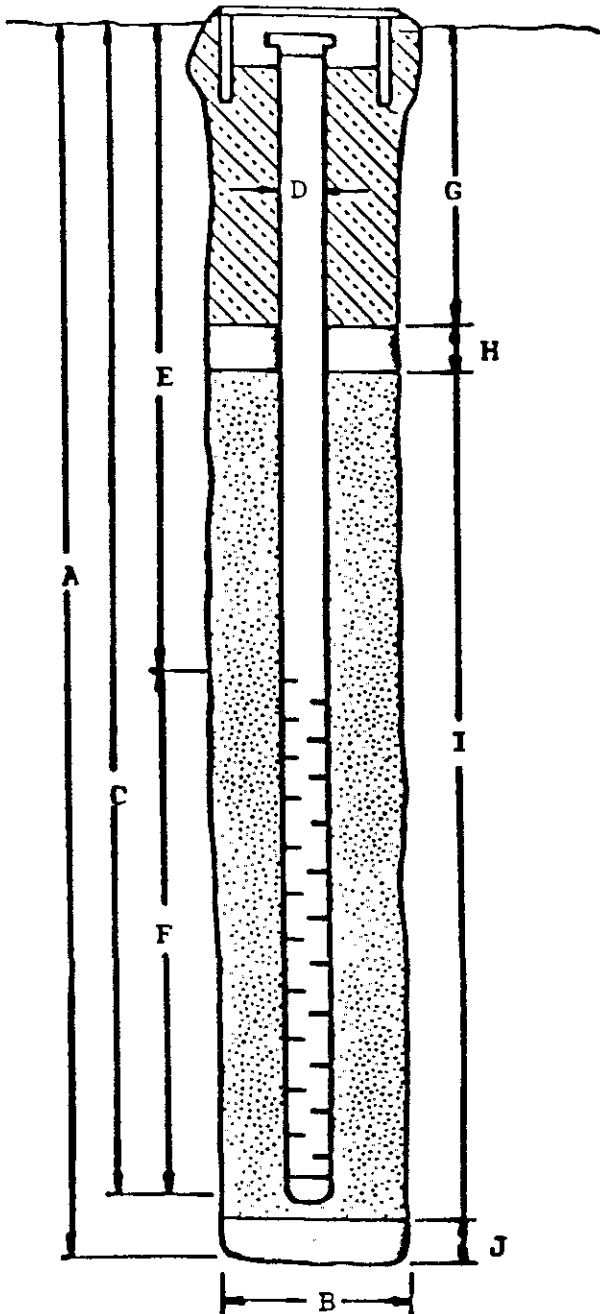
15/11/24L9

PROJECT NAME: Unocal, 3943 Broadway St., Oakland BORING/WELL NO. MW8

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: _____

Flush-mounted Well Cover



A. Total Depth: 22'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 22'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 5'

F. Perforated Length: 17'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 2'

Seal Material: Neat Cement

H. Seal: 2'

Seal Material: Bentonite

I. Gravel Pack: 18'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None


Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

364640D
IS/4W 24L10

BORING LOG

Project No. KEI-P89-0805	Boring & Casing Diameter 9" 2"	Logged By W.W.
Project Name Unocal 3943 Broadway, Oaklnd	Well Head Elevation N/A	Date Drilled 10/23/90
Boring No. MW9	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Asphalt over sand and gravel baserock.
			GC	Clayey gravel with asphalt and concrete cobbles, moist, brown.
3/4/6		5	MH	Clayey silt, 5% fine sand, trace coarse sand, very moist, stiff, pale brown. Base of fill material.
			CL/CH	Silty clay, trace fine sand, trace gravel to 3/8" diameter, moist, stiff, very dark brown to black, trace of red iron oxide staining.
5/9/14		10		Clay, trace silt and sand, trace organic matter, moist, very stiff, slight odor, dark grayish brown mottled with dark yellowish brown.
5/9/12			GC	Clayey gravel with sand, gravel to 3/4" diameter, some highly weathered, trace organic matter, strong odor, very moist to saturated, greenish gray and bluish gray.
		15		
			CL/CH	Sandy clay, trace silt, trace gravel to 3/8" diameter, very moist, very stiff, pale olive to pale yellow.
6/9/15		20		

364640D

BORING LOG

15/4W 24L10

Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By W.W.
Project Name Unocal 3943 Broadway, Oaklnd		Well Head Elevation N/A		Date Drilled 10/23/90
Boring No. MW9		Drilling Method	Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
			CL/ CH	Sandy clay, trace silt, trace gravel to 3/8" diameter, very moist, very stiff, pale olive to pale yellow.
		25		
		30		
		35		
		40		
				TOTAL DEPTH: 22'

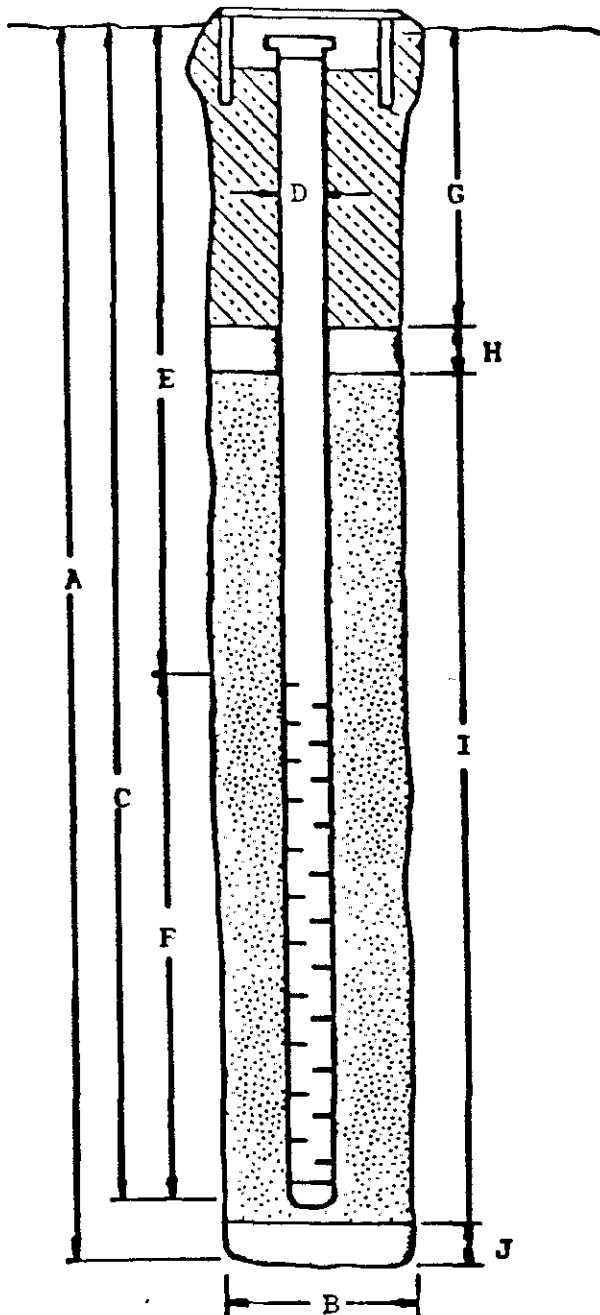
1S/4W 24L10

WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal, 3943 Broadway St., Oakland BORING/WELL NO. MW9PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: _____


Flush-mounted Well Cover



- A. Total Depth: 22'
- B. Boring Diameter*: 9"
Drilling Method: Hollow Stem Auger
- C. Casing Length: 22'
Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
ID = 2.067"
- E. Depth to Perforations: 5'
- F. Perforated Length: 17'
Perforation Type: Machined Slot
Perforation Size: 0.020"
- G. Surface Seal: 2'
Seal Material: Neat Cement
- H. Seal: 2'
Seal Material: Bentonite
- I. Gravel Pack: 18'
Pack Material: RMC Lonestar Sand
Size: #3
- J. Bottom Seal: None
Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

422134A OIS OAW 24214

BORING LOG				
Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By D.L.
Project Name Unocal Oakland, Broadway		Well Cover Elevation		Date Drilled 1/7/92
Boring No. MW10		Drilling Method Hollow-stem Auger	Drilling Company Woodward Drilling	
Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
		0		Asphalt pavement over sand and gravel.
				Silty clay with minor sand, stiff, moist, dark greenish gray and black mottled (fill).
				Clayey sand with gravel, very stiff, moist, brown, pocketed with silty clay as above (fill).
8/11/14		5	SM	Silty sand with gravel, estimated at 5 to 10% clay content, gravel is angular to rounded, to 3/4" diameter, medium dense, moist, brown.
11/12/14				
6/11/19			CH	Sandy clay, variable clay content estimated at 15 to 30%, trace gravel below 9', very stiff, moist, olive brown,
7/16/24		10	GC	Clayey gravel with sand, gravel to 1" diameter, some gravel is decomposed, medium dense to dense, moist, dark yellowish brown.
11/17/32				Gravelly clay with sand, gravel to 3/4" diameter, hard, moist, brown.
		15	CL	Clay with silt and trace sand, clay is slickensided, hard, moist, olive.
13/20/20				Sandy clay with trace gravel, very stiff, moist, pale olive.
				Silty clay with organic matter, very stiff to hard, moist, pale olive, locally grades to clayey silt.
7/11/17		20	ML	Sandy silt, stiff, moist, olive brown.
			SC	Clayey sand, est. at 15 to 20% clay, med. dense, moist, olive brown, lenses of well graded sand, gravel at 20'. TOTAL DEPTH: 22'

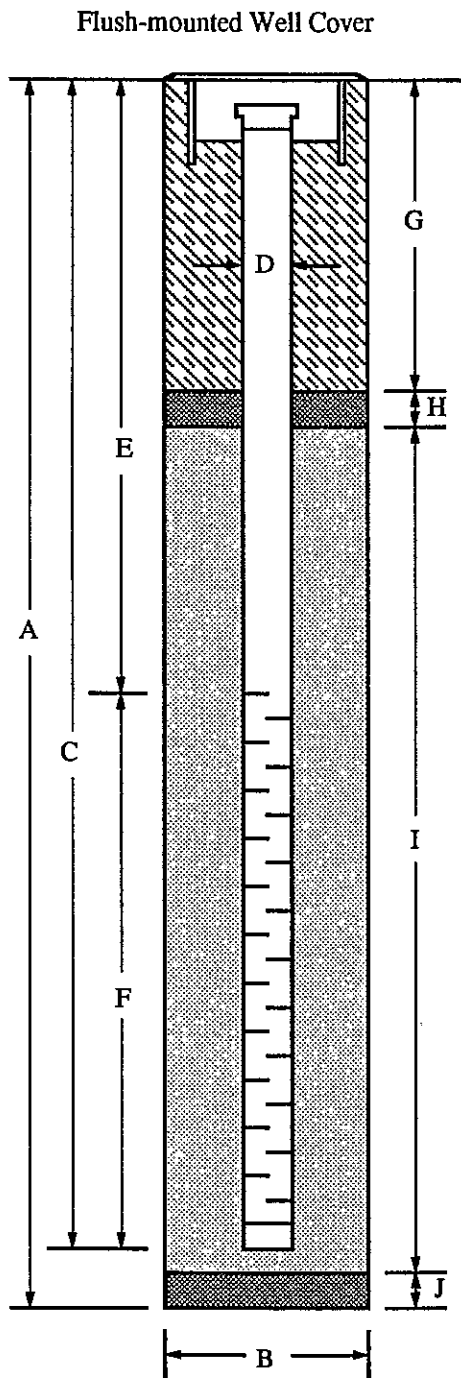
472734A
 015 04/2 24/14

WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland, Broadway WELL NO. MW10

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: ACFD&WCD 91219



- A. Total Depth : 22'
- B. Boring Diameter* : 9"
 Drilling Method: Hollow Stem Auger
- C. Casing Length: 22'
 Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
ID = 2.067"
- E. Depth to Perforations: 6'
- F. Perforated Length: 16'
 Perforation Type: Machined Slot
 Perforation Size: 0.010"
- G. Surface Seal: 2'
 Seal Material: Neat Cement
- H. Seal: 2'
 Seal Material: Bentonite
- I. Filter Pack: 18'
 Pack Material: RMC Lonestar Sand
 Size: #2/16
- J. Bottom Seal: none
 Seal Material: N/A

* Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

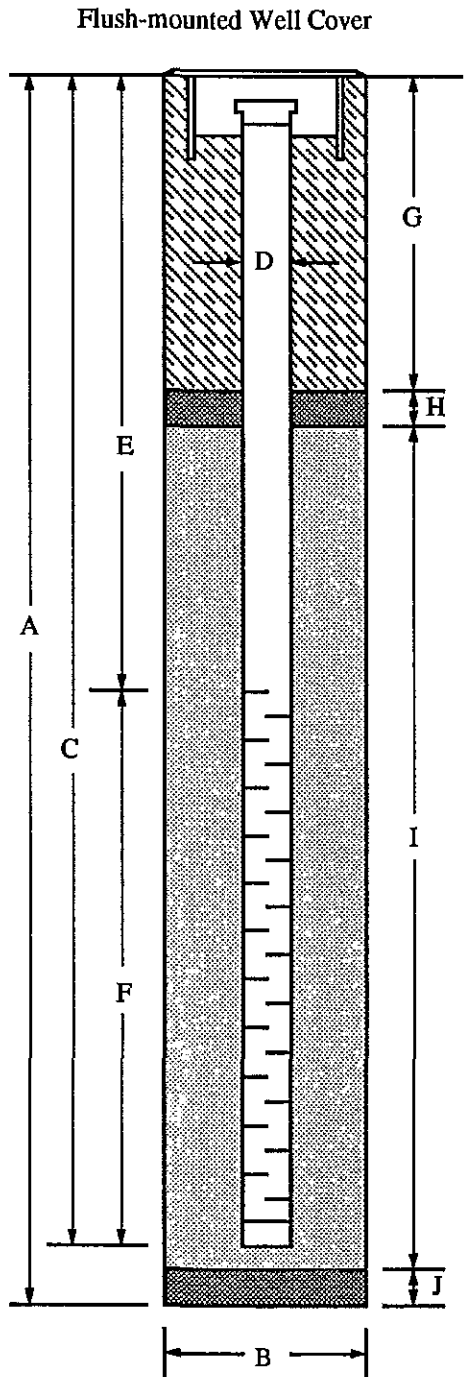
422134B OIS 04/2 24415

BORING LOG				
Project No. KEI-P89-0805		Boring & Casing Diameter 9" 2"		Logged By D.L.
Project Name Unocal Oakland, Broadway		Well Cover Elevation		Date Drilled 1/7/92
Boring No. MW11		Drilling Method Hollow-stem Auger	Drilling Company Woodward Drilling	
Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
		0		Asphalt pavement over sand and gravel.
				Silty gravel with sand, bricks and concrete, dense, moist to very moist, black (fill).
9/14/19		5	CH	Sandy clay, estimated at 5 to 10% gravel to 1-1/4" diameter, very stiff, very moist, very dark grayish brown.
			SC	Clayey sand with gravel, estimated at 15 to 20% clay, sand is coarse- to fine-grained, dense, moist, very dark grayish brown and dark brown, mottled.
5/11/14		10	GC	Clayey gravel with sand, angular gravel to 1-1/2" diameter, medium dense, moist to very moist, dark greenish gray and olive brown.
4/8/14				Clay, high plasticity, trace silt and sand, stiff to very stiff, moist, olive brown and dark yellowish brown.
6/13/29		15	CH	Silty clay with trace organic matter, very stiff to hard, moist, olive and olive brown mottled.
13/16/21				Clay, with trace organic matter, slickensided, very stiff to hard, moist, olive and olive brown mottled.
9/17/28		20	SW/ SM	Well graded sand with silt and gravel, estimated at 15 to 20% gravel to 1/4" diameter, medium dense to dense, wet, dark yellowish brown. TOTAL DEPTH: 21'

015 04W 24/15
422/34B

WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland, Broadway WELL NO. MW11
PROJECT NUMBER: KEI-P89-0805
WELL PERMIT NO.: ACFD&WCD 91219



- A. Total Depth : 21'
- B. Boring Diameter*: 9"
Drilling Method: Hollow Stem Auger
- C. Casing Length: 19'
Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
ID = 2.067"
- E. Depth to Perforations: 5'
- F. Perforated Length: 14'
Perforation Type: Machined Slot
Perforation Size: 0.010"
- G. Surface Seal: 2'
Seal Material: Neat Cement
- H. Seal: 2'
Seal Material: Bentonite
- I. Filter Pack: 15'
Pack Material: RMC Lonestar Sand
Size: #2/16
- J. Bottom Seal: 2'
Seal Material: Bentonite

* Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

413608A

15/4W 24219

BORING LOG

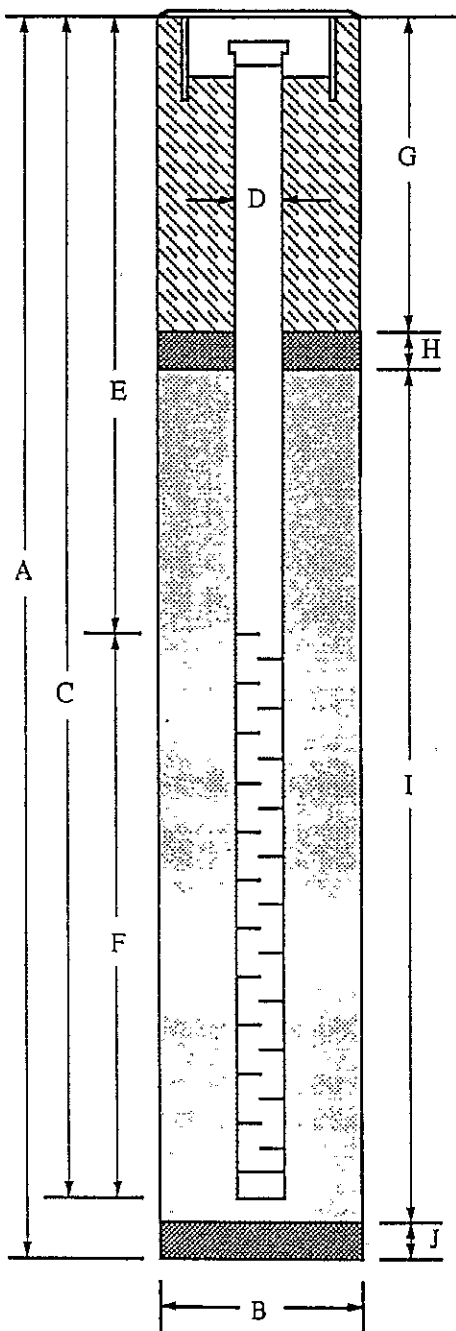
Project No. KEI-P89-0805		Boring & Casing Diameter 8' 2'		Logged By <i>JGG</i> D.L. <i>CEG 1633</i>
Project Name Unocal S/S #0746 3943 Broadway, Oakland		Well Cover Elevation		Date Drilled 6/26/92
Boring No. MW12		Drilling Method Hollow-stem Auger		Drilling Company Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
		0		Concrete pavement.
				Clayey sand and gravel and disturbed soil (fill).
			SC	Clayey sand with trace silt, medium dense, moist, dark greenish gray.
2/3/5		5	MH	Clayey silt, trace fine grained sand, firm, very moist, black.
			CL/SC	Sandy clay, firm, moist, dark greenish gray, lensed with clayey sand.
4/7/10			CH	Clay, estimated at 10-15% gravel to 1/2 inch in diameter, trace sand, stiff to very stiff, moist, black with root holes.
11/22/19		10	GC	Clayey gravel with sand, angular to rounded gravel to 1-1/2 inches in diameter, dense, moist, very dark grayish brown.
6/9/13				Clayey gravel with sand as above, except dark grayish brown and olive brown, mottled.
5/7/12				Sandy clay, trace gravel to 1/4 inch in diameter, very stiff, moist, dark yellowish brown and olive brown, mottled.
		15	CL	Clay, trace gravel to 3/8 inch in diameter, stiff to very stiff, moist, olive and light olive brown, mottled.
9/14/20				Clay, as above, stiff to very stiff, friable.
				TOTAL DEPTH 17.5'
		20		

WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal S/S #0746, 3943 Broadway, Oakland WELL NO. MW12
 PROJECT NUMBER: KEI-P89-0805
 WELL PERMIT NO.: _____

Flush-mounted Well Cover



- A. Total Depth : 17.5'
- B. Boring Diameter: 8"
 Drilling Method: Hollow Stem Auger
- C. Casing Length: 17.5'
 Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"
ID = 2.067"
- E. Depth to Perforations: 5'
- F. Perforated Length: 12.5'
 Perforation Type: Machined Slot
 Perforation Size: 0.010"
- G. Surface Seal: 2'
 Seal Material: Neat Cement
- H. Seal: 1.5'
 Seal Material: Bentonite
- I. Filter Pack: 14'
 Pack Material: RMC Lonestar Sand
 Size: #2/12
- J. Bottom Seal: None
 Seal Material: N/A

413608B

15/4w 2420

BORING LOG				
Project No. KEI-P89-0805		Boring & Casing Diameter 13.5' 6'		Logged By D.L. JGG LEG 1633
Project Name Unocal S/S #0746 3943 Broadway, Oakland		Well Cover Elevation		Date Drilled 6/25/92
Boring No. RW1		Drilling Method Hollow-stem Auger		Drilling Company Woodward Drilling
Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
		0		A.C. pavement over sand and gravel base.
				Clayey sand and gravel with cobbles to 10 inches in diameter, very stiff, moist (fill).
			CH	Sandy clay, stiff, moist, dark greenish gray.
			SC	Clayey sand with trace silt, medium dense, moist, dark greenish gray.
		5	MH	Clayey silt, trace fine grained sand, very stiff, moist, black, with organic matter.
			CH	Clay, estimated at 10-15% gravels to 4 inches in diameter, trace sand, stiff to very stiff, moist, dark olive gray and very dark grayish brown, mottled.
		10	SC	Grades to gravelly clay with sand, gravels to 1 inch in diameter, very stiff, moist, dark olive gray and very dark grayish brown mottled.
			GC	Clayey sand, estimated at 10-15% gravel to 1 inch in diameter, medium dense, moist, dark greenish gray and dark olive gray mottled.
			CL	Clayey gravel with sand, gravels to 3-1/2 inches in diameter, medium dense, moist, dark greenish gray.
		15	CL	Clay, estimated at 10-15% gravel, stiff, moist, olive brown and dark greenish gray, mottled, fissured.
			SC	Silty clay, trace fine-grained sand, stiff, moist, olive brown and dark greenish gray mottled, fissured.
			SC	Clayey sand, minor silt, medium dense, moist, olive brown and dark greenish gray, mottled.
				TOTAL DEPTH 17.5'
				No ground water encountered.
		20		

No blow count data - samples continuously cored

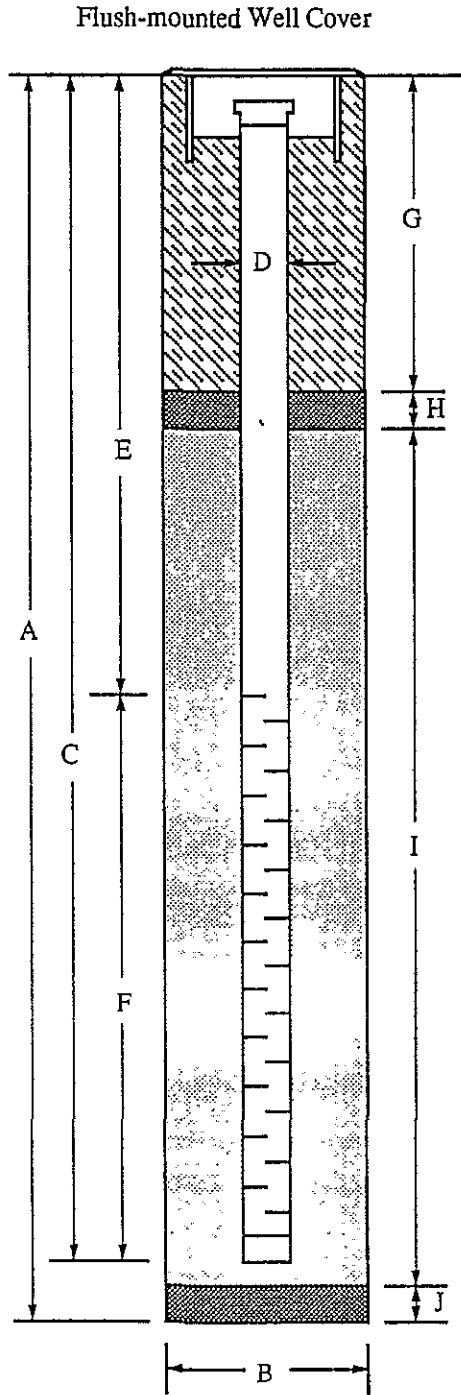
No recovery from 11.25 to 12.5 feet.

WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal S/S #0746, 3943 Broadway, Oakland WELL NO. RW1

PROJECT NUMBER: KEI-P89-0805

WELL PERMIT NO.: ACFC & WCD 92270



- A. Total Depth : 17.5'
- B. Boring Diameter* : 13.5"
- Drilling Method: Hollow Stem Auger
- C. Casing Length: 17'
- Material: Schedule 40 PVC
- D. Casing Diameter: OD = 6.625"
ID = 6.065"
- E. Depth to Perforations: 5'
- F. Perforated Length: 10' (2' Blank on bottom)
- Perforation Type: Machined Slot
- Perforation Size: 0.010"
- G. Surface Seal: 3'
- Seal Material: Neat Cement
- H. Seal: 1'
- Seal Material: Bentonite
- I. Filter Pack: 13'
- Pack Material: RMC Lonestar Sand
- Size: #2/12
- J. Bottom Seal: 6"
- Seal Material: Bentonite

Delta Consultants

Project No: c100746006
 Logged By: A. Buehler
 Driller: Gregg Drilling and Testing
 Drilling Method: CPT
 Sampling Method: Direct Push
 Casing Type: NA
 Slot Size: NA
 Gravel Pack: NA

Client: ConocoPhillips
 Location: 3943 Broadway, Oakland, CA
 Date Drilled: 8/27/09
 Hole Diameter: 1 3/4 inches
 Hole Depth: 36
 Well Diameter: NA
 Well Depth: NA
 Casing Stickup: NA

B-1
 Page 1 of 2

Location Map
 Please see site map
 ▽ = First Water
 ▼ = Measured Water Level
 Prior to Grouting Borehole

Elevation Northing Easting

Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
						↑		Hand Augered to 5 feet
					1		CL	Lean Clay, black, medium plasticity
					2			
					3		CL	Sandy Lean Clay, grey-green, low-medium plasticity
					4			
					5	▼		
		Moist	26		6		CL	Lean Clay, very dark brown
		Moist	2.5		7			As above: 5% sand
		Moist	92.8		8			As above: medium plasticity
		Moist	16.7		9			As above: mottled brown/gray
	▼ 10.2	Moist	26.2		10			As above
		Moist	40.0		11			As above: brown, low plasticity
		Moist	129		12		CL	Lean Clay with Sand, brown/gray, 20 % sand, low plasticity
		Damp	154		13		CL	Lean Clay, brown, medium plasticity
	▽	Wet	116		14		SM	Silty Sand, brown, sand is coarse
					15			No Recovery
					16			
					17			
					18			
					19			
		Wet	2.0		20		ML	Sandy Silt, light brown, 35% fine sand
					21			
					22			

Delta Consultants

Project No: c100746006
 Logged By: A. Buehler
 Driller: Gregg Drilling and Testing
 Drilling Method: CPT
 Sampling Method: Direct Push
 Casing Type: NA
 Slot Size: NA
 Gravel Pack: NA

Client: ConocoPhillips
 Location: 3943 Broadway, Oakland, CA
 Date Drilled: 8/27/09
 Hole Diameter: 1 3/4 inches
 Hole Depth: 36
 Well Diameter: NA
 Well Depth: NA
 Casing Stickup: NA

B-1
 Page 2 of 2

Location Map

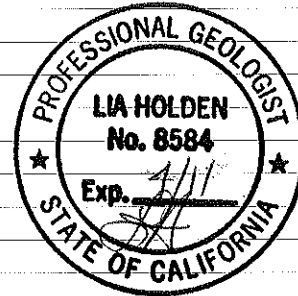
Please see site map

▽ = First Water

▼ = Measured Water Level
 Prior to Grouting Borehole

Elevation Northing Easting

Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill Casing					23			Sandy Silt continued
		Wet	67.6		24			
					25		CH	Fat Clay with Sand, light brown, 15-20% sand
					26			
					27			
					28			
		Damp	0.0		29			
					30		CL	Lean Clay, light brown, medium plasticity
					31			
					32			
					33			
		Damp	17.2		34			
					35			As above: 5-10% fine sand
					36			
					37			Bottom of boring = 36 feet
					38			
					39			
					40			
					41			
					42			
					43			
					44			





Project No: c100746006 Client: ConocoPhillips
 Logged By: E. Chantikian Location: 3943 Broadway, Oakland, CA
 Driller: Gregg Drilling and Testing Date Drilled: 8/27/09
 Drilling Method: CPT Hole Diameter: 1 3/4 inches
 Sampling Method: Direct Push Hole Depth: 36
 Casing Type: NA Well Diameter: NA
 Slot Size: NA Well Depth: NA
 Gravel Pack: NA Casing Stickup: NA

Location Map
 Please see site map
 ▽ = First Water
 ▼ = Measured Water Level
 Prior to Grouting Borehole

Elevation Northing Easting

Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample		Soil Type	LITHOLOGY / DESCRIPTION
						Recovery	Interval		
									Hand Augered to 5 feet
					1			CL	Lean Clay, black, medium plasticity
					2				
					3			CL	Sandy Lean Clay, grey-green, low-medium plasticity
					4				
					5				
		Moist	20.2		6			CL	Lean Clay, black, 5-10% fine sand, medium plasticity
		Moist	76.8		7			CL	Lean Clay with Sand, dark brown, 10-20% fine sand, low plasticity
	▼ 8.2	Moist	161		8				As above: brown
		Moist	925		9				As above: 15-25% fine sand
		Moist	1093		10				As above: 10-20% fine sand
		Moist	311.0		11				As above: 20-25% fine sand
		Moist	508		12			CL	Sandy Lean Clay, brown, 20-30% fine sand, low plasticity
	▽	Wet	195		13				As above: dark gray, 30-40% fine sand
		Wet	172		14			SC	Clayey Sand, dark gray, trace fine gravel, 20-30% plastic fines
			56.7		15				As above: 4 inch thick lense of lean clay at 15.5 feet
					16				No recovery
					17				No recovery
					18				
					19				
		Wet	58.6		20			CL	Sandy Lean Clay, gray, 20-30% fine sand, low to medium plasticity
					21				
					22				

Delta Consultants

Project No: c100746006
 Logged By: E. Chantikian
 Driller: Gregg Drilling and Testing
 Drilling Method: CPT
 Sampling Method: Direct Push
 Casing Type: NA
 Slot Size: NA
 Gravel Pack: NA

Client: ConocoPhillips
 Location: 3943 Broadway, Oakland, CA
 Date Drilled: 8/27/09
 Hole Diameter: 1 3/4 inches
 Hole Depth: 36
 Well Diameter: NA
 Well Depth: NA
 Casing Stickup: NA

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 Page 2 of 2

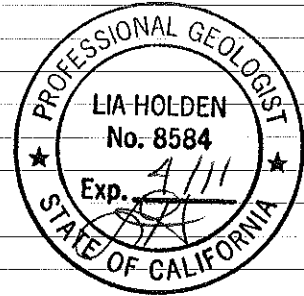
Location Map

Please see site map
 ▽ = First Water

▼ = Measured Water Level
 Prior to Grouting Borehole

Elevation Northing Easting

Well Completion Backfill Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
					23			Lean Clay with Sand continued
			49.9		24			
		Wet			25		CL	Sandy Lean Clay, dark brown mottled with light brown, 20-30% fine sand, low to medium plasticity
					26			
					27			
					28			
					29			
		Damp	30.7		30		CL	Lean Clay with Sand, light brown, 15-20% fine sand, low to medium plasticity
					31			
					32			
					33			
					34			
		Damp	0.0		35		CL	Sandy Lean Clay, light brown, 35-40% fine sand, low plasticity
					36			
					37			Bottom of boring = 36 feet
					38			
					39			
					40			
					41			
					42			
					43			
					44			



APPENDIX E

AECOM 2016 First Semi-Annual Groundwater Monitoring Report





James P. Kiernan, P.E.
Project Manager

**Chevron Environmental
Management Company**
6001 Bollinger Canyon Road
Room C2102
San Ramon, CA 94583
Tel (925) 842-3220
jkiernan@chevron.com

July 15, 2016

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

Re: 76 Station No. 0746 (351647)
First Semi-Annual 2016 Groundwater Monitoring Report
3943 Broadway, Oakland, California
Fuel Leak Case No.: RO0000203
GeoTracker Global ID #T0600101471

I have reviewed the attached report dated July 15, 2016.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report 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,

A handwritten signature in blue ink, appearing to be 'J. Kiernan', written over a horizontal line.

James P. Kiernan, P.E.
Project Manager

Attachment: First Semi-Annual 2016 Groundwater Monitoring Report by AECOM

July 15, 2016

Mr. Keith Nowell
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577
(via internet upload)

**Subject: First Semiannual 2016 Groundwater Monitoring Report
76 Station No. 0746 (351647)
3943 Broadway, Oakland, California
Fuel Leak Case No.: RO0000203**

Dear Mr. Nowell:

On behalf of Chevron Environmental Management Company's (EMC's) affiliate, Union Oil Company of California ("Union Oil"), AECOM is pleased to submit this first semiannual 2016 groundwater monitoring report for the above-referenced site.

Recommendations and Proposed Future Work

- Continue semiannual groundwater monitoring and reporting to further evaluate groundwater quality and concentration trends. Sampling of off-site wells MW-8 and MW-9 is pending access to that property. The next event is scheduled for fourth quarter 2016.
- Continue monthly LNAPL gauging and absorbent sock changeouts in MW-5 and RW-1 consistent with *Response to Comments on Low Threat Closure Request, Data Gap Investigation Workplan, and Focused Site Conceptual Model* dated October 30, 2015.

Remarks/Signatures

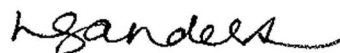
The interpretations in this report represent AECOM's professional opinions and are based, in part, on the information supplied by the groundwater monitoring contractor and laboratory. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have any questions regarding this project, please contact Mr. Chad Roper at (805) 764-4027.

Sincerely,



Chad Roper, PhD
Project Manager



Lorien Sanders, PG No. 8019
Project Geologist



cc: James Kiernan, EMC (via electronic copy)
Ed Ralston, Phillips 66 (via electronic copy)
Clement K. Leung, CJS Leung, LLC (via email)

7/15/2016

Enclosures:

Attachment A - Groundwater Summary

Attachment B - Figures

Attachment C - Tables

Attachment D - Hydrographs

Attachment E - Field Procedures and Field Logs

Attachment F - Laboratory Analytical Report and Chain-of-Custody Documentation

ATTACHMENT A

GROUNDWATER SUMMARY

GROUNDWATER MONITORING SUMMARY REPORT

76 Station No. 0746 (351647)
3943 Broadway, Oakland, California

CURRENT FIELD ACTIVITIES

Groundwater monitoring frequency:	Semiannual
Activity date:	6/22/2016
Groundwater monitoring subcontractor:	Gettler-Ryan Inc. (G-R)
Number of groundwater wells total:	13
Number of groundwater wells off-site:	5
Number of wells sampled (this period):	11 (MW-8 and MW-9 could not be sampled due to lack of property access)
Number of wells with LNAPL (this period):	2
LNAPL removed (gallons) (this period)	1.04
LNAPL removed (gallons) (cumulative)	4.96

SITE HYDROGEOLOGY

Depth to water range (feet below top of casing) (this period):	7.91 to 13.58
Approximate groundwater flow direction (this period):	South-southeast to southwest
Approximate hydraulic gradient (feet per foot) (this period):	Variable

GROUNDWATER CONDITIONS

Maximum detected TPH-g concentration (this period):	17,000 µg/L (MW-5)
Historical maximum detected TPH-g concentration:	1,100,000 µg/L (MW-3) on 11/20/1992
Maximum detected benzene concentration (this period):	210 µg/L (MW-5)
Historical maximum detected benzene concentration:	34,000 µg/L (MW-5) on 2/1/2011
Maximum detected MTBE concentration (this period):	21 µg/L (MW-3)
Historical maximum detected MTBE concentration:	2,700 µg/L (MW-2) on 5/25/1993 via EPA Method 8021B 1,600 µg/L (MW-8) on 11/29/2004 via EPA Method 8260B

GROUNDWATER TRENDS AND OBSERVATIONS

- Groundwater flow direction was variable from the south-southeast to southwest.
- Groundwater analytical results were consistent with previous events. Concentrations are generally stable to declining.
- TPH-g was only detected in groundwater samples collected from three of 11 wells sampled during this period. The detected concentrations ranged from 1,900 µg/L (wells MW-3 and MW-4) to 17,000 µg/L (well MW-5). The current concentration in MW-5 was the lowest since 2006.
- Benzene was only detected in groundwater samples collected from two of 11 wells sampled during this period, 71 µg/L (well MW-3) and 210 µg/L (well MW-5).

GROUNDWATER MONITORING SUMMARY REPORT

76 Station No. 0746 (351647)
3943 Broadway Avenue, Oakland, California

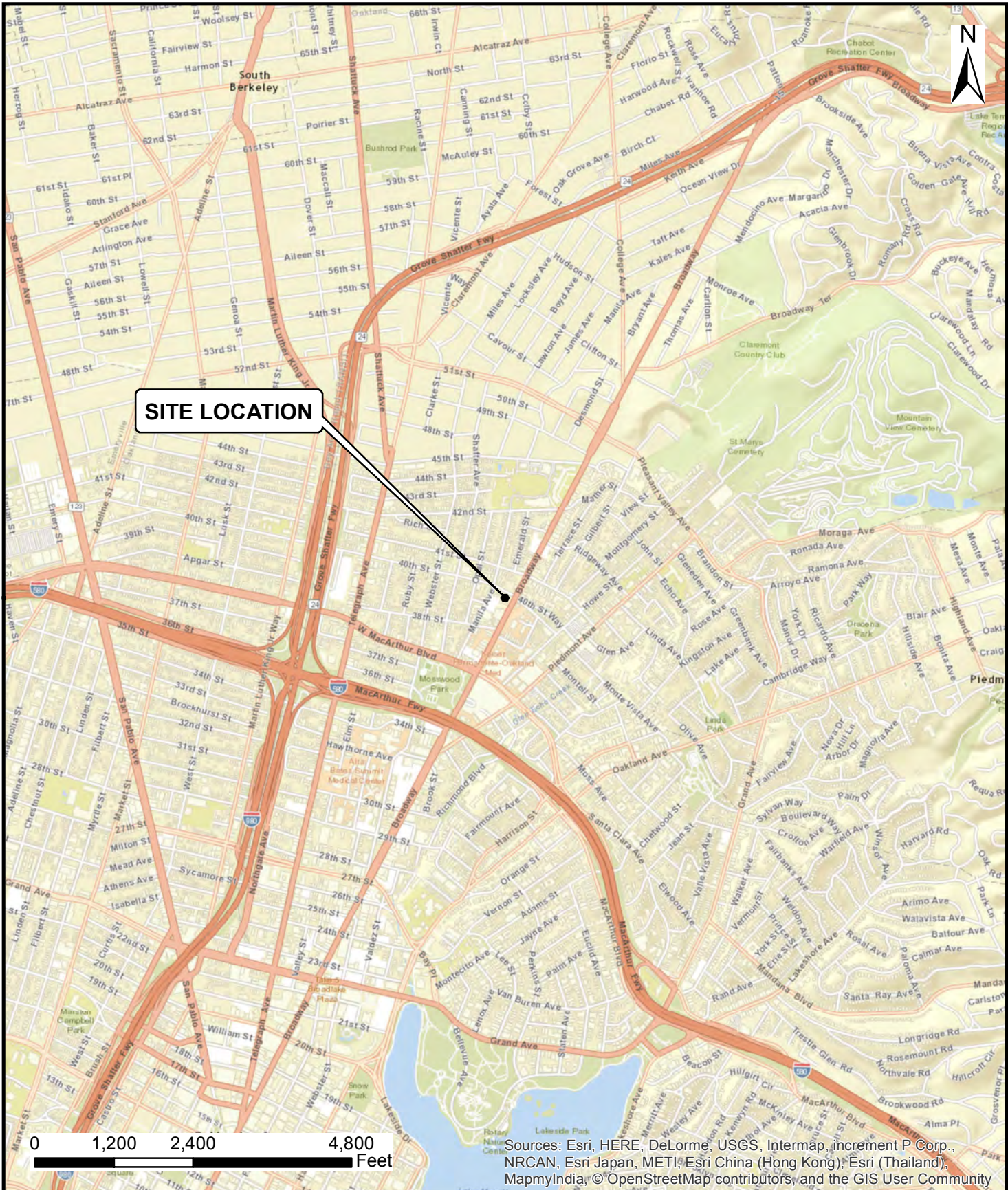
- MTBE was only detected in groundwater samples collected from three of 11 wells sampled during this period. The detected concentrations ranged from 0.91 µg/L (well MW-2) to 21 µg/L (well MW-3).
- As previously proposed, the skimmer in well MW-5 was removed and an absorbent sock was installed during this reporting period. Absorbent socks are currently in wells MW-5 and RW-1. The absorbent socks in these wells were removed and replaced with new socks during the monthly events. LNAPL (up to 0.22 feet) was measured in well MW-5 during the January, February, and March monthly events, but was not measured during the April and May monthly events or the June semi-annual sampling event. LNAPL had consistently been measured in this well for the past three years. Approximately 1.04 gallons of LNAPL was removed from the wells this period using the absorbent socks (4.96 gallons cumulatively).

RECOMMENDATIONS AND PROPOSED FUTURE WORK


- Continue semiannual groundwater monitoring and reporting to further evaluate groundwater quality and concentration trends. Sampling of off-site wells MW-8 and MW-9 is pending access to that property. The next event is scheduled for fourth quarter 2016.
- Continue monthly LNAPL gauging and absorbent sock changeouts in MW-5 and RW-1 consistent with *Response to Comments on Low Threat Closure Request, Data Gap Investigation Workplan, and Focused Site Conceptual Model* dated October 30, 2015.

ATTACHMENT B

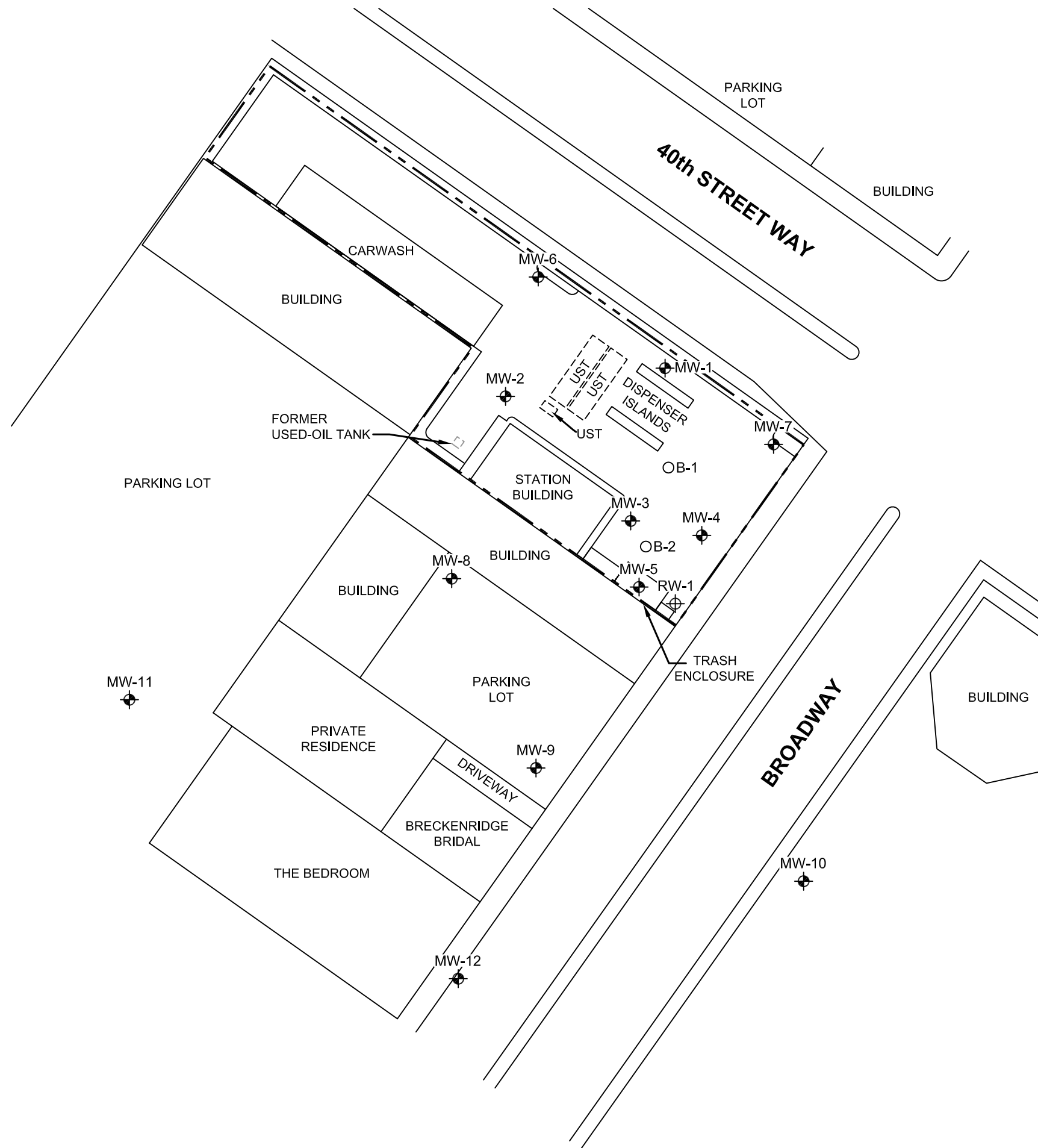
FIGURES



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

 AECOM 1220 AVENIDA ACASO CAMARILLO, CALIFORNIA 93012 PHONE: 805.388.3775 FAX: 805.388.3577 WEB: HTTP://WWW.AECOM.COM	SITE LOCATION MAP 76 Station No. 0746 (351647) 3943 Broadway Oakland, California			FIGURE NUMBER: <div style="text-align: center; font-size: 24pt; font-weight: bold;">1</div>
	DRAWN BY: M. Scop	DATE: 07/06/2016	PROJECT NUMBER: 60508949	SHEET NUMBER: 1 of 1

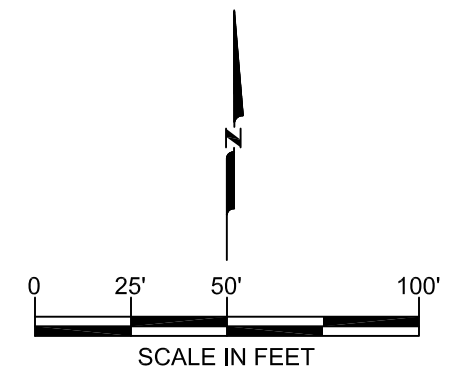
J:\Client--Projects\76_Products\351647_0746_Oakland_3943_Broadway\900-CAD-GIS\910 CAD_BIM\01-MODELS\1SA16\351647 1SA16.dwg



LEGEND

- SUBJECT PROPERTY BOUNDARY
- ⊕ MONITORING WELL
- ⊕ RECOVERY WELL
- CPT BORING
- UST UNDERGROUND STORAGE TANK

NOTE:
 BASE MAP DIGITIZED FROM A FIGURE PDF
 PROVIDED BY DELTA, DATED 9/14/2009, AT
 A SCALE OF 1"=50'.



REVISIONS	DATE	BY
TQ		
TQ		
DF		
CR		

AECOM

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

SITE PLAN

76 STATION NO. 0746 (351647)
 3943 BROADWAY
 OAKLAND, CALIFORNIA

SCALE: 1" = 50'
 DATE: 07/07/2016
 PROJECT NUMBER: 60508949

FIGURE NUMBER:
2

SHEET NUMBER:
 1 of 1

ATTACHMENT C

TABLES

Table 1
Well Construction Details
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	INSTALLATION DATE	TOC (feet amsl)	BORING DEPTH (feet bgs)	WELL DEPTH (feet bgs)	BORING DIAMETER (inches)	WELL DIAMETER (inches)	SCREEN INTERVAL (feet bgs)	SCREEN SIZE (inches)	SAND FILTER PACK	SCREEN ZONE (feet bgs) WITHIN SOIL TYPE	LOCATION	STATUS
MW-1	10/17/1989	81.07	20	20	9	2	5-20	0.020	#3	(5-7.5)CH (7.5-10)SC (10-12)GC (12-14)GP/GC (14-19)CH (19-20)GC	On-site	Active
MW-2	10/17/1989	81.62	20	20	9	2	5-20	0.020	#3	(5-6.5)CH (6.5-10)CL/CH (10-13)SC (13-15)GW/GC (15-20)CL/CH	On-site	Active
MW-3	10/17/1989	82.01	22.5	22.5	9	2	5-22.5	0.020	#3	(5-7.5)CH (7.5-11)CL/CH (11-14)SC (14-22.5)CL/CH	On-site	Active
MW-4	1/26/1990	81.48	20	20	9	2	5-20	0.020	#3	(5-6.5)MH (6.5-10)CH (10-11.5)GC (11.5-12.5)CH (12.5-13)GC (13-20)CH	On-site	Active
MW-5	1/26/1990	81.59	20	20	9	2	5-20	0.020	#3	(5-6.5)MH (6.5-11)CH (11-13.5)SC (13.5-15.5)GW/GC (15.5-20)CH	On-site	Active
MW-6	10/22/1990	80.47	20	20	9	2	5-20	0.020	#3	(5-7)CL/CH (7-10)GC (10-17)CL/CH (17-20)ML/MH	On-site	Active
MW-7	10/22/1990	81.83	20	20	9	2	5-20	0.020	#3	(5-7)CH (7-10)CL/CH (10-11.5)SC (11.5-12.5)GW (12.5-14)GC (14-20)ML/MH	On-site	Active
MW-8	10/22/1990	81.71	22	22	9	2	5-22	0.020	#3	(5-8.5)CL/CH (8.5-12)GC (12-22)CL/CH	Off-site	Active
MW-9	10/23/1990	81.13	22	22	9	2	5-22	0.020	#3	(5-5.5)MH (5.5-11.5)CL/CH (11.5-15.5)GC (15.5-22)CL/CH	Off-site	Active
MW-10	1/7/1992	81.90	22	22	9	2	6-22	0.010	#2/16	(5-7)SM (7-10)CH (10-12)GC (12-19)CL (19-20)ML (20-22)SC	Off-site	Active
MW-11	1/7/1992	78.43	21	19	9	2	5-19	0.010	#2/16	(5-8)SC (8-10)GC (10-20)CH (20-21)SW/SM	Off-site	Active
MW-12	6/26/1992	79.89	17.5	17.5	8	2	5-17.5	0.010	#2/12	(5-5.5)MH (5.5-6.5)CL/SC (6.5-8.5)CH (8.5-11.5)GC (11.5-17.5)CL	Off-site	Active
RW-1	6/25/1992	81.20	17.5	17.5	13.5	6	5-15	0.010	#2/12	(5-6.5)MH (6.5-10)CH (10-11)SC (11-12.5)GC (12.5-17)CL (17-17.5)SC	On-site	Active

NOTES:
amsl = Above mean sea level
bgs = Below ground surface
CH = Silty clay
CL = Clay
GC = Clayey gravel
GP = Poorly-graded gravel
GW = Well-graded gravel
ID = Identification
ML = Silty gravel
MH = Clayey silt
SC = Clayey sand
SM = Silty sand
SW = Well-graded sand
TOC = Top of casing

Table 2
Current Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-1	80.54	6/22/2016	8.06	72.48	0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-2	81.32	6/22/2016	9.04	72.28	0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-3	81.41	6/22/2016	9.81	71.60	0	1,900	71	ND<2.5	81	6.2	
MW-4	--	6/22/2016	9.08	--	0	1,900	ND<0.50	ND<0.50	7.2	ND<1.0	
MW-5	81.38	6/22/2016	9.43	71.95	0	17,000	210	ND<5.0	450	540	
MW-6	79.94	6/22/2016	7.91	72.03	0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-7	--	6/22/2016	8.79	--	0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-8	81.41	6/22/2016	--	--	--	--	--	--	--	--	Inaccessible
MW-9	80.53	6/22/2016	--	--	--	--	--	--	--	--	Inaccessible
MW-10	81.61	6/22/2016	13.58	68.03	0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-11	78.18	6/22/2016	13.07	65.11	0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-12	79.61	6/22/2016	10.27	69.34	0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
RW-1	80.63	6/22/2016	8.41	72.22	0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
QA	--	6/22/2016	--	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level. GWE for wells with LNAPL has been adjusted for LNAPL thickness.

BTEX analyzed by Environmental Protection Agency (EPA) Method 8260B.

TPH-g analyzed by Leaking Underground Fuel Tank-gas chromatography/mass spectrometry method

µg/L = Micrograms per liter

-- = Not available/not sampled

B = Benzene

DTW = Depth to water below TOC

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

LNAPL = Light non-aqueous phase liquid

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

QA = Quality assurance/trip blank

T = Toluene

TOC = Top of casing

TPH-g = Total petroleum hydrocarbons as gasoline; reported as Total Purgeable Petroleum Hydrocarbons in the laboratory report

X = Total xylenes

Table 3
Current Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-1	6/22/2016	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-2	6/22/2016	0.91	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-3	6/22/2016	21	ND<50	ND<1,200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
MW-4	6/22/2016	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-5	6/22/2016	ND<5.0	ND<100	ND<2,500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
MW-6	6/22/2016	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-7	6/22/2016	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-8	6/22/2016	--	--	--	--	--	--	--	--
MW-9	6/22/2016	--	--	--	--	--	--	--	--
MW-10	6/22/2016	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-11	6/22/2016	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-12	6/22/2016	1.1	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
RW-1	6/22/2016	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
QA	6/22/2016	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B
µg/L = Micrograms per liter
-- = Not available/not sampled
DIPE = Diisopropyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
ID = Identification
J = Laboratory estimated value
MTBE = Methyl t-Butyl Ether
ND<# = Analyte not detected at or above indicated laboratory practical quantitation limit
QA = Quality assurance/trip blank
TAME = t-Amyl Methyl ether
TBA = t-Butyl alcohol

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-1	--	11/1/1989	--	--	--	--	ND	ND	ND	ND	0.3	
	--	2/15/1990	--	--	--	--	170	7.9	ND	2.2	2.8	
	--	8/16/1990	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/7/1990	--	--	--	--	45	ND	ND	ND	ND	
	--	2/25/1991	--	--	--	--	ND	ND	ND	ND	ND	
	--	5/28/1991	--	--	--	--	ND	ND	ND	ND	ND	
	--	8/28/1991	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/19/1991	--	--	--	--	ND	ND	ND	ND	ND	
	--	2/6/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	5/23/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	8/26/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/20/1992	--	--	--	--	ND	0.75	ND	ND	ND	
	81.07	12/21/1992	8.12	72.95	0	--	--	--	--	--	--	
	81.07	1/30/1993	7.63	73.44	0	--	--	--	--	--	--	
	81.07	2/24/1993	7.16	73.91	0	--	1,100	280	4.9	120	140	
	81.07	3/22/1993	6.26	74.81	0	--	--	--	--	--	--	
	81.07	4/28/1993	7.91	73.16	0	--	--	--	--	--	--	
	81.07	5/25/1993	7.87	73.20	0	--	260	27	4.9	2.6	54	
	80.54	6/23/1993	7.66	72.88	0	--	--	--	--	--	--	
	80.54	7/22/1993	7.87	72.67	0	--	--	--	--	--	--	
	80.54	8/25/1993	8.00	72.54	0	--	ND	ND	ND	ND	ND	
	80.54	9/22/1993	8.10	72.44	0	--	--	--	--	--	--	
	80.54	10/28/1993	8.15	72.39	0	--	--	--	--	--	--	
	80.54	11/30/1993	7.65	72.89	0	--	--	--	--	--	--	
	80.54	2/16/1994	7.46	73.08	0	--	ND	0.84	ND	ND	0.59	
	80.54	5/31/1994	7.80	72.74	0	--	--	--	--	--	--	
	80.54	8/31/1994	8.27	72.27	0	--	ND	ND	0.98	ND	0.84	
	80.54	9/27/1994	8.37	72.17	0	--	--	--	--	--	--	
	80.54	10/11/1994	8.36	72.18	0	--	--	--	--	--	--	
	80.54	11/10/1994	6.43	74.11	0	--	--	--	--	--	--	
	80.54	2/7/1995	7.06	73.48	0	--	6,100	670	ND	120	60	
	80.54	5/3/1995	6.85	73.69	0	--	260	21	39	17	24	
	80.54	8/3/1995	7.69	72.85	0	--	--	--	--	--	--	
	80.54	11/7/1995	8.15	72.39	0	--	ND	ND	ND	ND	ND	
	80.54	5/6/1996	7.40	73.14	0	--	170	1.0	20	2.3	17	
	80.54	11/5/1996	7.90	72.64	0	--	ND	ND	ND	ND	ND	
	80.54	5/15/1997	7.77	72.77	0	--	ND	ND	ND	ND	ND	
	80.54	11/12/1997	7.48	73.06	0	--	ND	ND	ND	ND	ND	
	80.54	5/4/1998	7.39	73.15	0	--	ND	ND	ND	ND	ND	
	80.54	11/11/1998	7.37	73.17	0	--	ND	ND	ND	ND	ND	
	80.54	5/20/1999	7.41	73.13	0	--	ND	ND	ND	ND	ND	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
80.54		11/15/1999	7.84	72.70	0	--	ND	ND	ND	ND	ND	
80.54		5/22/2000	7.53	73.01	0	--	ND	0.89	ND	ND	ND	
80.54		11/22/2000	7.35	73.19	0	--	ND	ND	ND	ND	ND	
80.54		5/15/2001	7.48	73.06	0	--	345	ND	3.41	2.77	25.2	
80.54		11/23/2001	7.57	72.97	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
80.54		5/24/2002	7.10	73.44	0	--	70	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
80.54		11/29/2002	7.96	72.58	0	--	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<5.0	
80.54		5/15/2003	7.22	73.32	0	--	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<5.0	
80.54		11/4/2003	7.94	72.60	0	120	--	ND<1.0	ND<1.0	ND<1.0	ND<2.0	
80.54		5/24/2004	7.54	73.00	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		11/29/2004	7.27	73.27	0	58	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/24/2005	7.06	73.48	0	87	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/15/2005	7.35	73.19	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/14/2006	7.06	73.48	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/21/2006	7.12	73.42	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
80.54		6/28/2007	7.79	72.75	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
80.54		12/13/2007	7.94	72.60	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/9/2008	8.00	72.54	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/30/2008	7.51	73.03	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		9/28/2009	8.10	72.44	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/15/2009	7.32	73.22	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/28/2010	7.80	72.74	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/29/2010	6.22	74.32	0	99	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/7/2011	6.25	74.29	0	140	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/9/2011	7.97	72.57	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/1/2012	7.63	72.91	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/6/2013	7.88	72.66	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/13/2013	8.34	72.20	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/23/2014	8.27	72.27	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/17/2014	5.82	74.72	0	1,100	1,200	50	8.2	14	230	
80.54		6/9/2015	8.06	72.48	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		12/30/2015	7.72	72.82	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.54		6/22/2016	8.06	72.48	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-2	--	11/1/1989	--	--	--	--	200	ND	ND	3.0	1.2	
	--	2/15/1990	--	--	--	--	ND	ND	ND	ND	ND	
	--	8/16/1990	--	--	--	--	ND	ND	6.7	ND	ND	
	--	11/7/1990	--	--	--	--	ND	ND	ND	ND	ND	
	--	2/25/1991	--	--	--	--	ND	0.68	0.42	ND	0.86	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
--	--	5/28/1991	--	--	--	--	ND	ND	ND	ND	ND	
--	--	8/28/1991	--	--	--	--	ND	ND	ND	ND	ND	
--	--	11/19/1991	--	--	--	--	ND	ND	ND	ND	ND	
--	--	2/6/1992	--	--	--	--	ND	0.36	0.66	ND	0.62	
--	--	5/23/1992	--	--	--	--	ND	ND	ND	ND	ND	
--	--	8/26/1992	--	--	--	--	ND	ND	ND	ND	ND	
--	--	11/20/1992	--	--	--	--	510	ND	ND	ND	ND	
81.62		12/21/1992	9.14	72.48	0	--	--	--	--	--	--	
81.62		1/30/1993	8.99	72.63	0	--	--	--	--	--	--	
81.62		2/24/1993	8.03	73.59	0	--	11,000 J	ND	ND	ND	ND	
81.62		3/22/1993	9.50	72.12	0	--	--	--	--	--	--	
81.62		4/28/1993	8.87	72.75	0	--	--	--	--	--	--	
81.62		5/25/1993	9.04	72.58	0	--	1,300 J	ND	ND	ND	ND	
81.32		6/23/1993	9.17	72.15	0	--	--	--	--	--	--	
81.32		7/22/1993	9.42	71.90	0	--	--	--	--	--	--	
81.32		8/25/1993	9.53	71.79	0	--	190 J	ND	ND	ND	ND	
81.32		9/22/1993	9.67	71.65	0	--	--	--	--	--	--	
81.32		10/28/1993	9.65	71.67	0	--	--	--	--	--	--	
81.32		11/30/1993	9.18	72.14	0	--	480 J	ND	ND	ND	ND	
81.32		2/16/1994	8.91	72.41	0	--	3,200 J	ND	ND	ND	ND	
81.32		5/31/1994	9.36	71.96	0	--	1,100 J	ND	ND	ND	ND	
81.32		8/31/1994	9.85	71.47	0	--	310 J	ND	ND	ND	ND	
81.32		9/27/1994	9.95	71.37	0	--	--	--	--	--	--	
81.32		11/10/1994	7.47	73.85	0	--	95 J	ND	ND	ND	ND	
81.32		2/7/1995	8.29	73.03	0	--	1,600 J	ND	ND	ND	ND	
81.32		5/3/1995	8.12	73.20	0	--	ND	ND	ND	ND	ND	
81.32		8/3/1995	9.35	71.97	0	--	ND	ND	ND	ND	ND	
81.32		8/19/1995	--	--	0	--	--	--	--	--	--	
81.32		10/11/1995	9.95	71.37	0	--	--	--	--	--	--	
81.32		11/7/1995	9.65	71.67	0	--	ND	ND	ND	ND	ND	
81.32		5/6/1996	8.90	72.42	0	--	--	--	--	--	--	
81.32		11/5/1996	10.98	70.34	0	--	--	--	--	--	--	
81.32		5/15/1997	9.13	72.19	0	--	--	--	--	--	--	
81.32		11/12/1997	9.84	71.48	0	--	--	--	--	--	--	
81.32		5/4/1998	9.26	72.06	0	--	--	--	--	--	--	
81.32		11/11/1998	8.88	72.44	0	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.32		5/20/1999	8.68	72.64	0	--	--	--	--	--	--	
81.32		11/15/1999	8.91	72.41	0	--	--	--	--	--	--	
81.32		5/22/2000	8.61	72.71	0	--	--	--	--	--	--	
81.32		11/22/2000	8.64	72.68	0	--	--	--	--	--	--	
81.32		5/15/2001	8.73	72.59	0	--	--	--	--	--	--	
81.32		11/23/2001	8.61	72.71	0	--	--	--	--	--	--	
81.32		5/24/2002	8.03	73.29	0	--	--	--	--	--	--	
81.32		11/29/2002	8.79	72.53	0	--	--	--	--	--	--	
81.32		5/15/2003	8.21	73.11	0	--	--	--	--	--	--	
81.32		11/4/2003	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
81.32		5/24/2004	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
81.32		11/29/2004	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
81.32		6/24/2005	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
81.32		12/15/2005	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
81.32		6/14/2006	8.56	72.76	0	140	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		12/21/2006	8.38	72.94	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.32		6/28/2007	9.23	72.09	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.32		12/13/2007	9.10	72.22	0	ND<50	--	ND<0.50	1.1	ND<0.50	1.4	
81.32		6/9/2008	10.01	71.31	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		12/30/2008	--	--	--	--	--	--	--	--	--	Unable to locate due to debris
81.32		9/28/2009	--	--	--	--	--	--	--	--	--	Unable to open due to stripped bolts
81.32		12/15/2009	8.93	72.39	0	69	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		6/28/2010	9.65	71.67	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		12/29/2010	7.91	73.41	0	67	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		6/7/2011	7.75	73.57	0	73	--	0.97	ND<0.50	ND<0.50	ND<1.0	
81.32		12/9/2011	8.95	72.37	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		6/1/2012	9.18	72.14	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		6/6/2013	9.40	71.92	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		12/13/2013	9.68	71.64	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	3.1	
81.32		6/23/2014	9.69	71.63	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		12/17/2014	6.88	74.44	0	--	ND<50	0.8	ND<0.50	ND<0.50	ND<1.0	
81.32		6/9/2015	9.01	72.31	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		12/30/2015	8.89	72.43	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.32		6/22/2016	9.04	72.28	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-3	--	11/1/1989	--	--	--	--	13,000	57	48	1.7	120	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
--	--	2/15/1990	--	--	--	--	20,000	1,700	2,100	750	3,100	
--	--	8/16/1990	--	--	--	--	6,800	600	660	760	160	
--	--	11/7/1990	--	--	--	--	42,000	1,400	5,000	1,800	7,500	
--	--	2/25/1991	--	--	--	--	37,000	730	2,900	1,300	7,300	
--	--	5/28/1991	--	--	--	--	24,000	570	1,100	810	4,200	
--	--	8/28/1991	--	--	--	--	16,000	650	2,200	1,100	5,400	
--	--	11/19/1991	--	--	--	--	22,000	250	440	660	3,000	
--	--	2/6/1992	--	--	--	--	24,000	600	1,800	1,200	5,800	
--	--	5/23/1992	--	--	--	--	25,000	300	130	880	4,900	
--	--	8/26/1992	--	--	--	--	20,000	690	1,900	1,300	5,700	
--	--	11/20/1992	--	--	--	--	1,100,000	1,800	6,400	3,000	15,000	
82.01		12/4/1992	10.30	71.71	0	--	--	--	--	--	--	
82.01		12/21/1992	9.78	72.23	0	--	--	--	--	--	--	Sheen
82.01		1/9/1993	8.55	73.46	0	--	--	--	--	--	--	
82.01		1/30/1993	8.90	73.11	0	--	--	--	--	--	--	
82.01		2/10/1993	9.01	72.99	0.01	--	--	--	--	--	--	
82.01		2/24/1993	8.26	73.74	0.01	--	--	--	--	--	--	
82.01		3/9/1993	9.18	72.82	0.02	--	--	--	--	--	--	
82.01		3/22/1993	8.81	73.19	0.02	--	--	--	--	--	--	
82.01		4/8/1993	9.14	72.86	0.02	--	--	--	--	--	--	
82.01		4/28/1993	9.44	72.55	0.03	--	--	--	--	--	--	
82.01		5/12/1993	9.57	72.42	0.03	--	--	--	--	--	--	
82.01		5/25/1993	9.45	72.54	0.03	--	--	--	--	--	--	
81.41		6/7/1993	8.94	72.47	0	--	--	--	--	--	--	
81.41		6/23/1993	9.20	72.20	0.02	--	--	--	--	--	--	
81.41		7/8/1993	9.31	72.08	0.03	--	--	--	--	--	--	
81.41		7/22/1993	9.47	71.94	0	--	--	--	--	--	--	
81.41		8/11/1993	9.59	71.82	0	--	--	--	--	--	--	
81.41		8/25/1993	9.67	71.72	0.03	--	--	--	--	--	--	
81.41		9/8/1993	10.34	71.07	0	--	--	--	--	--	--	
81.41		9/22/1993	9.84	71.56	0.02	--	--	--	--	--	--	
81.41		10/7/1993	9.87	71.54	0	--	--	--	--	--	--	
81.41		10/28/1993	10.03	71.38	0	--	--	--	--	--	--	
81.41		11/12/1993	9.76	71.65	0	--	--	--	--	--	--	
81.41		11/30/1993	9.66	71.74	0.02	--	--	--	--	--	--	
81.41		2/16/1994	8.87	72.54	0	--	57,000	910	2,500	2,100	9,000	Sheen

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.41		5/31/1994	9.48	71.93	0	--	39,000	670	630	1,500	6,200	
81.41		8/31/1994	10.08	71.33	0	--	44,000	500	240	1,400	5,700	
81.41		9/24/1994	10.22	71.19	0	--	--	--	--	--	--	
81.41		10/11/1994	10.41	70.99	0.01	--	--	--	--	--	--	LPH in well
81.41		11/10/1994	7.47	73.94	0	--	86,000	3,300	3,800	1,800	8,300	Sheen
81.41		2/7/1995	8.05	73.36	0	--	45,000	1,400	1,300	1,500	5,600	
81.41		3/14/1995	7.05	74.36	0	--	--	--	--	--	--	
81.41		5/3/1995	7.91	73.50	0	--	26,000	740	990	1,100	4,400	
81.41		8/3/1995	9.28	72.13	0	--	18,000	59	ND	530	1,900	
81.41		8/19/1995	--	--	0	--	--	--	--	--	--	
81.41		11/7/1995	10.79	70.62	0	--	17,000	110	26	400	1,500	
81.41		5/6/1996	9.44	71.97	0	--	5,100	48	ND	87	210	Sheen
81.41		11/5/1996	10.64	70.77	0	--	35,000	2,200	ND	1,200	2,800	
81.41		5/15/1997	9.61	71.80	0	--	2,400	110	ND	ND	140	
81.41		11/12/1997	9.18	72.23	0	--	29,000	2,000	ND	1,800	3,000	
81.41		5/4/1998	9.50	71.91	0	--	8,200	430	ND	310	320	
81.41		11/11/1998	9.25	72.16	0	--	8,700	500	ND	330	310	
81.41		5/20/1999	8.95	72.46	0	--	4,300	250	ND	ND	86	
81.41		11/15/1999	10.35	71.06	0	--	6,720	326	ND	398	226	
81.41		5/22/2000	9.14	72.27	0	--	4,000	99	4.5	190	75	
81.41		11/22/2000	9.33	72.08	0	--	6,130	93.7	6.71	174	47.8	
81.41		5/15/2001	9.25	72.16	0	--	4,490	229	7.09	160	31.6	
81.41		11/23/2001	9.12	72.29	0	--	3,500	41	ND<5.0	120	8.0	
81.41		5/24/2002	8.58	72.83	0	--	4,000	86	6.0	120	5.8	
81.41		11/29/2002	9.81	71.60	0	--	5,300	ND<25	ND<25	65	ND<50	
81.41		5/15/2003	8.76	72.65	0	--	5,600	ND<5.0	ND<5.0	81	ND<10	
81.41		11/4/2003	9.90	71.51	0	13,000	--	ND<20	ND<20	72	56	
81.41		5/24/2004	9.29	72.12	0	10,000	--	14	ND<10	81	ND<20	
81.41		11/29/2004	9.15	72.26	0	9,000	--	5.9	ND<5.0	45	ND<10	
81.41		6/24/2005	8.65	72.76	0	5,600	--	31	4.1	97	220	
81.41		12/15/2005	9.27	72.14	0	6,800	--	81	45	110	220	
81.41		6/14/2006	8.73	72.68	0	10,000	--	38	ND<2.5	130	170	
81.41		12/21/2006	8.95	72.46	0	6,600	--	36	ND<2.5	150	120	
81.41		6/28/2007	10.01	71.40	0	6,700	--	33	ND<0.50	70	24	
81.41		12/13/2007	10.22	71.19	0	4,000	--	20	ND<1.0	51	19	
81.41		6/9/2008	10.25	71.16	0	9,700	--	190	ND<2.5	170	48	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
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WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.41		12/30/2008	--	--	--	--	--	--	--	--	--	Unable to locate due to debris
81.41		9/28/2009	10.15	71.26	0	6,200	--	39	ND<2.5	170	12	
81.41		12/15/2009	9.18	72.23	0	3,300	--	9.1	ND<2.5	47	5.6	
81.41		6/28/2010	9.82	71.59	0	10,000	--	13	ND<0.50	92	14	
81.41		12/29/2010	7.84	73.57	0	3,900	--	16	ND<0.50	36	5.2	
81.41		6/7/2011	6.10	75.31	0	3,700	--	170	ND<1.0	150	40	
81.41		12/9/2011	10.08	71.33	0	--	9,900	11	ND<2.5	98	47	
81.41		6/1/2012	9.92	71.49	0	--	4,300	4.6	ND<0.50	17	3.4	
81.41		11/23/2012	9.78	71.63	0	--	2,000	1.3	ND<0.50	12	ND<1.0	
81.41		12/13/2013	10.39	71.02	0	--	1,100	ND<0.50	ND<0.50	23	4.2	
81.41		6/23/2014	10.28	71.13	0	--	4,200	87	ND<0.50	76	13	
81.41		12/17/2014	7.99	73.42	0	8,700	5,900	35	ND<0.50	56	4.7	
81.41		6/9/2015	9.74	71.67	0	--	6,500	4	ND<0.50	ND<0.50	ND<1.0	Sheen
81.41		12/30/2015	9.44	71.97	0	--	3,100	2.3	ND<0.50	20	ND<1.0	
81.41		6/22/2016	9.81	71.60	0	--	1,900	71	ND<2.5	81	6.2	
MW-4	--	2/15/1990	--	--	--	--	150	8.0	8.0	10	45	
	--	8/16/1990	--	--	--	--	3,600	480	17	230	260	
	--	11/7/1990	--	--	--	--	180	1.5	0.37	6.3	26	
	--	2/25/1991	--	--	--	--	22,000	600	1,300	780	2,800	
	--	5/28/1991	--	--	--	--	38	ND	ND	ND	2	
	--	8/28/1991	--	--	--	--	2,000	1,500	20	120	300	
	--	11/19/1991	--	--	--	--	55	9.2	4.5	1.4	6.7	
	--	2/6/1992	--	--	--	--	5,700	2,200	140	57	980	
	--	5/23/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	8/26/1992	--	--	--	--	120	86	0.52	0.57	1.6	
	--	11/20/1992	--	--	--	--	ND	6.2	ND	1.2	0.52	
81.48		1/30/1993	8.35	73.13	0	--	--	--	--	--	--	
81.48		2/24/1993	8.17	73.31	0	--	140	12	0.64	9.4	3.7	
81.48		3/22/1993	8.12	73.36	0	--	--	--	--	--	--	
81.48		4/28/1993	9.36	72.12	0	--	--	--	--	--	--	
81.48		5/25/1993	8.75	72.73	0	--	74	10	ND	4.6	1.8	
81.29		6/23/1993	8.90	72.39	0	--	--	--	--	--	--	
81.29		7/22/1993	9.26	72.03	0	--	--	--	--	--	--	
81.29		8/25/1993	9.45	71.84	0	--	640	100	1.1	100	22	
81.29		9/22/1993	9.63	71.66	0	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.29		10/28/1993	9.62	71.67	0	--	--	--	--	--	--	
81.29		11/30/1993	9.40	71.89	0	--	200	28	ND	17	8.1	
81.48		12/21/1993	9.10	72.38	0	--	--	--	--	--	--	
81.29		2/16/1994	9.21	72.08	0	--	190	11	0.98	21	6.6	
81.29		5/31/1994	9.11	72.18	0	--	1,100	190	ND	100	58	
81.29		8/31/1994	10.01	71.28	0	--	400	17	0.94	14	5.2	
81.29		9/27/1994	10.09	71.20	0	--	--	--	--	--	--	
81.29		10/11/1994	11.50	69.79	0	--	--	--	--	--	--	
81.29		11/10/1994	9.21	72.08	0	--	7,700	1,800	280	460	1,300	
81.29		2/7/1995	7.66	73.63	0	--	540	47	ND	17	2.5	
81.29		5/3/1995	8.29	73.00	0	--	160	8.3	0.52	1.5	3.7	
81.29		8/3/1995	8.60	72.69	0	--	57	2.0	ND	ND	ND	
81.29		8/19/1995	--	--	0	--	--	--	--	--	--	
81.29		11/7/1995	10.28	71.01	0	--	ND	0.71	ND	ND	ND	
81.29		5/6/1996	8.70	72.59	0	--	1,200	12	11	15	36	
81.29		11/5/1996	10.00	71.29	0	--	700	32	0.71	1.8	1.3	
81.29		5/15/1997	9.37	71.92	0	--	51	ND	ND	ND	ND	
81.29		11/12/1997	8.92	72.37	0	--	74	1.7	ND	ND	ND	
81.29		5/4/1998	9.48	71.81	0	--	ND	ND	ND	ND	ND	
81.29		11/11/1998	9.13	72.16	0	--	ND	0.63	ND	ND	ND	
81.29		5/20/1999	8.41	72.88	0	--	ND	ND	ND	ND	ND	
81.29		11/15/1999	9.68	71.61	0	--	ND	ND	ND	ND	ND	
81.29		5/22/2000	8.60	72.69	0	--	ND	ND	ND	ND	ND	
81.29		11/22/2000	8.91	72.38	0	--	ND	ND	ND	ND	ND	
81.29		5/15/2001	8.66	72.63	0	--	ND	ND	1.10	ND	1.16	
81.29		11/23/2001	8.84	72.45	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.29		5/24/2002	7.93	73.36	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.29		11/29/2002	9.34	71.95	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.29		5/15/2003	7.87	73.42	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.48		11/4/2003	9.45	72.03	0		61	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0
81.48		5/24/2004	8.49	72.99	0		ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0
81.48		11/29/2004	9.01	72.47	0		120	--	ND<0.50	ND<0.50	0.52	ND<1.0
81.48		6/24/2005	7.81	73.67	0		90	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0
81.48		12/15/2005	8.73	72.75	0		170	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0
81.48		6/14/2006	7.43	74.05	0		ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0
--		12/21/2006	7.04	--	0		62	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50 Casing elevation modified on 6/21/2006

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	--	6/28/2007	11.49	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	--	12/13/2007	11.79	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	6/9/2008	12.24	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	12/30/2008	9.34	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	9/28/2009	--	--	--	--	--	--	--	--	--	Car parked over well
	--	12/15/2009	10.22	--	0	1,800	--	4.4	ND<0.50	8.5	ND<1.0	
	--	6/28/2010	11.74	--	0	230	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	12/29/2010	9.33	--	0	5,300	--	0.72	0.55	35	ND<1.0	
	--	6/7/2011	8.68	--	0	3,900	--	ND<2.5	ND<2.5	46	ND<5.0	
	--	12/9/2011	9.04	--	0	--	1,900	ND<0.50	ND<0.50	1.4	ND<1.0	
	--	6/1/2012	9.92	--	0	--	680	ND<2.5	ND<2.5	ND<2.5	ND<5.0	
	--	6/6/2013	9.17	--	0	--	410	0.52	ND<0.50	ND<0.50	ND<1.0	
	--	12/13/2013	10.05	--	0	--	3,200	2.1	ND<0.50	3.2	ND<1.0	
	--	6/23/2014	10.28	--	0	--	2,600	2.5	ND<0.50	9.1	ND<1.0	
	--	12/17/2014	9.32	--	0	1,900	1,800	4.5	ND<0.50	9.1	ND<1.0	
	--	6/9/2015	9.41	--	0	--	2,200	1.8	ND<0.50	11	ND<1.0	
	--	12/30/2015	9.78	--	0	--	5,000	1.4	ND<0.50	9.3	ND<1.0	
	--	6/22/2016	9.08	--	0	--	1,900	ND<0.50	ND<0.50	7.2	ND<1.0	
MW-5	--	2/15/1990	--	--	--	--	24,000	1,500	1,700	260	3,600	
	--	8/16/1990	--	--	--	--	16,000	1,400	1,900	2,800	660	
	--	11/7/1990	--	--	--	--	20,000	640	1,100	670	3,000	
	--	2/25/1991	--	--	--	--	25,000	950	1,300	900	3,500	
	--	5/28/1991	--	--	--	--	24,000	2,300	3,400	1,300	6,000	
	--	8/28/1991	--	--	--	--	--	--	--	--	--	
	--	11/19/1991	--	--	--	--	--	--	--	--	--	
	--	2/6/1992	--	--	--	--	--	--	--	--	--	
	--	5/23/1992	--	--	--	--	--	--	--	--	--	
	--	8/26/1992	--	--	--	--	--	--	--	--	--	
	--	11/20/1992	--	--	--	--	--	--	--	--	--	
	81.59	12/4/1992	10.03	71.50	0.08	--	--	--	--	--	--	
	81.59	12/21/1992	9.50	72.08	0.01	--	--	--	--	--	--	
	81.59	1/9/1993	8.22	73.37	0	--	--	--	--	--	--	
	81.59	1/30/1993	8.58	73.01	0	--	--	--	--	--	--	Sheen
	81.59	2/10/1993	8.68	72.91	0	--	--	--	--	--	--	Sheen
	81.59	2/24/1993	7.91	73.67	0.01	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.59		3/9/1993	8.87	72.71	0.01	--	--	--	--	--	--	
81.59		3/22/1993	8.46	73.12	0.01	--	--	--	--	--	--	
81.59		4/8/1993	8.84	72.74	0.01	--	--	--	--	--	--	
81.59		4/28/1993	9.14	72.43	0.02	--	--	--	--	--	--	
81.59		5/12/1993	9.28	72.29	0.02	--	--	--	--	--	--	
81.59		5/25/1993	9.63	71.86	0.13	--	--	--	--	--	--	
81.38		6/7/1993	9.75	71.62	0.01	--	--	--	--	--	--	
81.38		6/23/1993	9.32	72.04	0.03	--	--	--	--	--	--	
81.38		7/8/1993	9.48	71.87	0.04	--	--	--	--	--	--	
81.38		7/22/1993	9.73	71.53	0.16	--	--	--	--	--	--	
81.38		8/11/1993	9.84	71.51	0.04	--	--	--	--	--	--	
81.38		8/25/1993	9.81	71.55	0.02	--	--	--	--	--	--	
81.38		9/8/1993	10.09	71.27	0.03	--	--	--	--	--	--	
81.38		9/22/1993	10.01	71.33	0.05	--	--	--	--	--	--	
81.38		10/7/1993	9.94	71.42	0.03	--	--	--	--	--	--	
81.38		10/28/1993	10.04	71.32	0.02	--	--	--	--	--	--	
81.38		11/12/1993	9.79	71.59	0	--	--	--	--	--	--	
81.38		11/30/1993	9.62	71.76	0	--	--	--	--	--	--	
81.38		2/16/1994	8.95	72.41	0.02	--	--	--	--	--	--	
81.38		5/31/1994	9.63	71.75	0	--	43,000	1,500	1,200	1,600	6,700	
81.38		8/31/1994	10.25	71.11	0.02	--	--	--	--	--	--	
81.38		9/27/1994	10.38	71.00	0	--	--	--	--	--	--	
81.38		10/11/1994	10.45	70.91	0.02	--	--	--	--	--	--	
81.38		11/10/1994	7.54	73.78	0.08	--	--	--	--	--	--	
81.38		2/7/1995	8.10	73.28	0	--	25,000	1,400	740	990	3,000	
81.38		3/14/1995	7.04	74.34	0	--	--	--	--	--	--	
81.38		5/3/1995	7.98	73.40	0	--	12,000	680	160	600	1,800	
81.38		8/3/1995	9.25	72.13	0	--	23,000	940	280	810	2,700	
81.38		8/19/1995	--	--	0	--	--	--	--	--	--	
81.38		11/7/1995	10.00	71.38	0	--	40,000	510	280	1,000	5,700	
81.38		5/6/1996	9.03	72.35	0	--	13,000	200	ND	180	610	Sheen
81.38		11/5/1996	10.41	70.97	0	--	35,000	1,800	ND	1,300	4,900	
81.38		5/15/1997	9.41	71.97	0	--	10,000	490	ND	ND	1,300	Sheen
81.38		11/12/1997	9.27	72.11	0	--	100	5	ND	ND	ND	
81.38		5/4/1998	9.18	72.20	0	--	39,000	1,600	230	1,000	3,200	
81.38		11/11/1998	9.23	71.87	0.37	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.38		2/22/1999	7.69	73.50	0.25	--	--	--	--	--	--	
81.38		4/2/1999	8.19	72.98	0.28	--	--	--	--	--	--	
81.38		5/4/1999	8.44	72.93	0.01	--	--	--	--	--	--	
81.38		5/20/1999	8.73	72.62	0.04	--	--	--	--	--	--	
81.38		6/29/1999	8.91	72.43	0.05	--	--	--	--	--	--	
81.38		7/29/1999	9.12	72.21	0.07	--	--	--	--	--	--	
81.38		8/24/1999	9.37	71.94	0.09	--	--	--	--	--	--	
81.38		9/27/1999	9.51	71.82	0.06	--	--	--	--	--	--	
81.38		10/28/1999	--	--	0.05	--	--	--	--	--	--	
81.38		11/15/1999	9.29	72.09	0	--	--	--	--	--	--	Sheen
81.38		12/20/1999	9.14	72.24	0	--	--	--	--	--	--	
81.38		1/20/2000	9.08	72.30	0	--	--	--	--	--	--	
81.38		2/26/2000	8.69	72.69	0	--	--	--	--	--	--	
81.38		3/31/2000	8.48	72.90	0	--	--	--	--	--	--	
81.38		4/13/2000	8.66	72.72	0	--	--	--	--	--	--	
81.38		5/22/2000	9.06	72.32	0	--	240,000	33,000	5,000	18,000	59,000	
81.38		11/22/2000	9.24	71.64	0.67	--	--	--	--	--	--	
81.38		2/14/2001	7.63	73.50	0.33	--	--	--	--	--	--	
81.38		3/28/2001	8.82	72.56	0	--	--	--	--	--	--	
81.38		4/28/2001	8.66	72.72	0	--	--	--	--	--	--	
81.38		5/15/2001	8.97	72.41	0	--	--	--	--	--	--	
81.38		6/29/2001	8.73	72.65	0	--	--	--	--	--	--	
81.38		7/17/2001	8.92	72.44	0.02	--	--	--	--	--	--	
81.38		8/30/2001	8.85	72.53	0	--	--	--	--	--	--	
81.38		9/24/2001	8.89	72.49	0	--	--	--	--	--	--	
81.38		10/15/2001	9.11	72.25	0.03	--	--	--	--	--	--	
81.38		11/23/2001	8.77	72.61	0	--	29,000	3,900	450	1,400	3,500	
81.38		12/10/2001	8.75	72.63	0	--	--	--	--	--	--	
81.38		1/14/2002	8.26	73.12	0	--	--	--	--	--	--	
81.38		2/22/2002	6.30	75.08	0	--	--	--	--	--	--	
81.38		3/11/2002	6.47	74.91	0	--	--	--	--	--	--	
81.38		4/15/2002	6.56	74.82	0	--	--	--	--	--	--	
81.38		5/24/2002	8.32	72.95	0.15	--	--	--	--	--	--	
81.38		6/17/2002	8.41	72.82	0.2	--	--	--	--	--	--	
81.38		7/15/2002	8.63	72.60	0.2	--	--	--	--	--	--	
81.38		8/19/2002	8.76	72.39	0.31	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.38		9/5/2002	8.73	72.53	0.16	--	--	--	--	--	--	
81.38		10/7/2002	8.79	72.52	0.09	--	--	--	--	--	--	
81.38		11/29/2002	9.18	72.16	0.05	--	--	--	--	--	--	
81.38		12/12/2002	9.12	72.23	0.04	--	--	--	--	--	--	
81.38		1/6/2003	9.05	72.31	0.03	--	--	--	--	--	--	
81.38		2/12/2003	8.87	72.48	0.04	--	--	--	--	--	--	
81.38		3/13/2003	8.25	73.11	0.03	--	--	--	--	--	--	
81.38		4/7/2003	8.31	73.05	0.02	--	--	--	--	--	--	
81.38		5/15/2003	8.58	72.78	0.03	--	--	--	--	--	--	
81.38		6/12/2003	8.63	72.73	0.02	--	--	--	--	--	--	
81.38		7/7/2003	8.59	72.77	0.02	--	--	--	--	--	--	
81.38		8/14/2003	8.65	72.71	0.03	--	--	--	--	--	--	
81.38		9/12/2003	8.82	72.54	0.03	--	--	--	--	--	--	
81.38		11/4/2003	9.90	71.29	0.25	--	--	--	--	--	--	
81.38		5/24/2004	9.33	71.86	0.25	--	--	--	--	--	--	
81.38		11/29/2004	9.16	72.38	0.21	--	--	--	--	--	--	
81.38		6/24/2005	8.41	72.97	0	53,000	--	560	230	1,600	5,100	
81.38		12/15/2005	8.96	72.42	0	27,000	--	130	ND<25	560	1,800	
81.38		6/14/2006	8.41	72.97	0	11,000	--	110	ND<12	360	640	
81.38		12/21/2006	9.65	71.73	0	78,000	--	490	43	1,400	4,300	
81.38		6/28/2007	9.99	71.17	0.29	--	--	--	--	--	--	
81.38		12/13/2007	10.12	71.13	0.17	--	--	--	--	--	--	
81.38		6/9/2008	10.12	71.13	0.17	--	--	--	--	--	--	
81.38		12/30/2008	9.33	71.95	0.13	--	--	--	--	--	--	
81.38		9/28/2009	9.77	71.60	0.01	--	--	--	--	--	--	
81.38		12/15/2009	8.87	72.50	0.01	--	--	--	--	--	--	
81.38		6/28/2010	9.82	71.18	0.5	--	--	--	--	--	--	
81.38		12/29/2010	8.69	71.57	1.49	--	--	--	--	--	--	
81.38		2/1/2011	8.30	72.07	1.35	--	--	34,000	--	--	--	
81.38		6/7/2011	5.43	75.95	0	37,000	--	ND<12	ND<12	190	450	
81.38		9/13/2011	6.70	74.68	0	--	--	--	--	--	--	
81.38		10/21/2011	6.72	74.66	0	--	--	--	--	--	--	
81.38		11/4/2011	6.64	74.74	0	--	--	--	--	--	--	
81.38		12/9/2011	10.02	71.20	0.21	--	--	--	--	--	--	
81.38		1/12/2012	10.12	71.24	0.02	--	--	--	--	--	--	
81.38		6/1/2012	8.22	73.14	0.02	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	81.38	6/6/2013	9.75	71.63	0	--	30,000	410	7	970	1,300	
	81.38	12/13/2013	10.30	70.92	0.21	--	--	--	--	--	--	
	81.38	6/23/2014	10.26	70.96	0.21	--	--	--	--	--	--	
	81.38	12/17/2014	6.61	74.75	0.03	--	--	--	--	--	--	
	81.38	6/9/2015	9.41	71.95	0.03	--	--	--	--	--	--	
	81.38	9/2/2015	10.58	70.57	0.30	--	--	--	--	--	--	
	81.38	10/16/2015	10.91	70.21	0.35	--	--	--	--	--	--	
	81.38	11/12/2015	10.40	70.81	0.22	--	--	--	--	--	--	
	81.38	12/30/2015	9.35	71.89	0.19	--	--	--	--	--	--	
	81.38	6/22/2016	9.43	71.95	0	--	17,000	210	ND<5.0	450	540	
MW-6	--	11/7/1990	--	--	--	--	ND	ND	ND	ND	ND	
	--	2/25/1991	--	--	--	--	ND	0.37	0.4	0.35	1.5	
	--	5/28/1991	--	--	--	--	ND	ND	ND	ND	0.42	
	--	8/28/1991	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/19/1991	--	--	--	--	ND	ND	ND	ND	ND	
	--	2/6/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	5/23/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	8/26/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/20/1992	--	--	--	--	ND	ND	ND	ND	ND	
	80.47	12/21/1992	7.71	72.76	0	--	--	--	--	--	--	
	80.47	1/30/1993	7.25	73.22	0	--	--	--	--	--	--	
	80.47	2/24/1993	6.74	73.73	0	--	ND	ND	ND	ND	ND	
	80.47	3/22/1993	5.85	74.62	0	--	--	--	--	--	--	
	80.47	4/28/1993	7.58	72.89	0	--	--	--	--	--	--	
	80.47	5/25/1993	7.48	72.99	0	--	ND	ND	ND	ND	ND	
	79.94	6/23/1993	7.34	72.60	0	--	--	--	--	--	--	
	79.94	7/22/1993	7.53	72.41	0	--	--	--	--	--	--	
	79.94	8/25/1993	7.66	72.28	0	--	ND	ND	ND	ND	ND	
	79.94	9/22/1993	7.76	72.18	0	--	--	--	--	--	--	
	79.94	10/28/1993	8.30	71.64	0	--	--	--	--	--	--	
	79.94	11/30/1993	7.40	72.54	0	--	--	--	--	--	--	
	79.94	2/16/1994	7.13	72.81	0	--	ND	ND	ND	ND	ND	
	79.94	5/31/1994	7.49	72.45	0	--	--	--	--	--	--	
	79.94	8/31/1994	7.93	72.01	0	--	ND	ND	1.5	ND	1.6	
	79.94	9/27/1994	8.03	71.91	0	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
79.94		10/11/1994	8.05	71.89	0	--	--	--	--	--	--	
79.94		11/10/1994	6.12	73.82	0	--	--	--	--	--	--	
79.94		2/7/1995	6.65	73.29	0	--	ND	ND	ND	ND	ND	
79.94		5/3/1995	6.47	73.47	0	--	ND	ND	ND	ND	1.0	
79.94		8/3/1995	7.28	72.66	0	--	--	--	--	--	--	
79.94		11/7/1995	7.98	71.96	0	--	ND	ND	ND	ND	ND	
79.94		5/6/1996	7.80	72.14	0	--	--	--	--	--	--	
79.94		11/5/1996	7.63	72.31	0	--	--	--	--	--	--	
79.94		5/15/1997	7.41	72.53	0	--	--	--	--	--	--	
79.94		11/12/1997	7.51	72.43	0	--	--	--	--	--	--	
79.94		5/4/1998	7.15	72.79	0	--	--	--	--	--	--	
79.94		11/11/1998	7.04	72.90	0	--	--	--	--	--	--	
79.94		5/20/1999	7.00	72.94	0	--	--	--	--	--	--	
79.94		11/15/1999	7.42	72.52	0	--	--	--	--	--	--	
79.94		5/22/2000	7.24	72.70	0	--	--	--	--	--	--	
79.94		11/22/2000	7.40	72.54	0	--	--	--	--	--	--	
79.94		5/15/2001	7.12	72.82	0	--	--	--	--	--	--	
79.94		11/23/2001	7.19	72.75	0	--	--	--	--	--	--	
79.94		5/24/2002	6.54	73.40	0	--	--	--	--	--	--	
79.94		11/29/2002	7.26	72.68	0	--	--	--	--	--	--	
79.94		5/15/2003	6.26	73.68	0	--	--	--	--	--	--	
79.94		11/4/2003	7.80	72.14	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		5/24/2004	7.54	72.40	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		11/29/2004	7.01	72.93	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		6/24/2005	7.68	72.26	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		12/15/2005	7.49	72.45	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		6/14/2006	6.45	73.49	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		12/21/2006	6.91	73.03	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
79.94		6/28/2007	7.46	72.48	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
79.94		12/13/2007	7.41	72.53	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		6/9/2008	8.20	71.74	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		12/30/2008	7.47	72.47	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		9/28/2009	7.96	71.98	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		12/15/2009	7.22	72.72	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		6/28/2010	7.68	72.26	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.94		12/29/2010	5.93	74.01	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	79.94	6/7/2011	6.24	73.70	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	12/9/2011	6.75	73.19	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	6/1/2012	7.32	72.62	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	6/6/2013	7.50	72.44	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	12/13/2013	8.02	71.92	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	6/23/2014	7.87	72.07	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	12/17/2014	5.54	74.40	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	6/9/2015	7.71	72.23	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	12/30/2015	7.21	72.73	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.94	6/22/2016	7.91	72.03	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-7	--	11/7/1990	--	--	--	--	ND	ND	ND	ND	ND	
	--	2/25/1991	--	--	--	--	70	ND	ND	ND	0.52	
	--	5/28/1991	--	--	--	--	39	ND	ND	ND	0.73	
	--	8/28/1991	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/19/1991	--	--	--	--	32	ND	ND	ND	ND	
	--	2/6/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	5/23/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	8/26/1992	--	--	--	--	ND	ND	ND	0.73	ND	
	--	11/20/1992	--	--	--	--	ND	ND	ND	ND	ND	
	81.83	12/21/1992	8.42	73.41	0	--	--	--	--	--	--	
	81.83	1/30/1993	8.21	73.62	0	--	--	--	--	--	--	
	81.83	2/24/1993	7.85	73.98	0	--	ND	ND	ND	ND	ND	
	81.83	3/22/1993	6.97	74.86	0	--	--	--	--	--	--	
	81.83	4/28/1993	8.39	73.44	0	--	--	--	--	--	--	
	81.83	5/25/1993	8.43	73.40	0	--	ND	ND	ND	ND	ND	
	81.64	6/23/1993	8.47	73.17	0	--	--	--	--	--	--	
	81.64	7/22/1993	8.83	72.81	0	--	--	--	--	--	--	
	81.64	8/25/1993	8.81	72.83	0	--	ND	ND	ND	ND	ND	
	81.64	9/22/1993	8.96	72.68	0	--	--	--	--	--	--	
	81.64	10/28/1993	8.98	72.66	0	--	--	--	--	--	--	
	81.64	11/30/1993	8.65	72.99	0	--	--	--	--	--	--	
	81.64	2/16/1994	8.36	73.28	0	--	ND	ND	ND	ND	0.7	
	81.64	5/31/1994	8.67	72.97	0	--	--	--	--	--	--	
	81.64	8/31/1994	9.12	72.52	0	--	ND	ND	0.8	ND	0.75	
	81.64	9/27/1994	9.22	72.42	0	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.64		10/11/1994	9.23	72.41	0	--	--	--	--	--	--	
81.64		11/10/1994	7.66	73.98	0	--	--	--	--	--	--	
81.64		2/7/1995	7.88	73.76	0	--	ND	ND	ND	ND	ND	
81.64		5/3/1995	7.71	73.93	0	--	ND	ND	ND	ND	1.0	
81.64		8/3/1995	8.40	73.24	0	--	--	--	--	--	--	
81.64		11/7/1995	8.95	72.69	0	--	ND	ND	ND	ND	ND	
81.64		5/6/1996	8.15	73.49	0	--	--	--	--	--	--	
81.64		11/5/1996	8.67	72.97	0	--	--	--	--	--	--	
81.64		5/15/1997	8.47	73.17	0	--	--	--	--	--	--	
81.64		11/12/1997	7.88	73.76	0	--	--	--	--	--	--	
81.64		5/4/1998	7.93	73.71	0	--	--	--	--	--	--	
81.64		11/11/1998	8.20	73.44	0	--	--	--	--	--	--	
81.64		5/20/1999	8.04	73.60	0	--	--	--	--	--	--	
81.64		11/15/1999	8.17	73.47	0	--	--	--	--	--	--	
81.64		5/22/2000	8.10	73.54	0	--	--	--	--	--	--	
81.64		11/22/2000	8.30	73.34	0	--	--	--	--	--	--	
81.64		5/15/2001	8.09	73.55	0	--	--	--	--	--	--	
81.64		11/23/2001	8.14	73.50	0	--	--	--	--	--	--	
81.64		5/24/2002	7.56	74.08	0	--	--	--	--	--	--	
81.64		11/29/2002	8.23	73.41	0	--	--	--	--	--	--	
81.64		5/15/2003	7.25	74.39	0	--	--	--	--	--	--	
81.64		11/4/2003	8.76	72.88	0	70	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.64		5/24/2004	8.32	73.32	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.64		11/29/2004	8.21	73.43	0	62	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.64		6/24/2005	7.84	73.80	0	85	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.64		12/15/2005	8.15	73.49	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.64		6/14/2006	7.76	73.88	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
--		12/21/2006	7.64	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	Casing elevation modified on 6/21/2006
--		6/28/2007	8.18	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
--		12/13/2007	8.52	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
--		6/9/2008	8.67	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
--		12/30/2008	8.46	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
--		9/28/2009	8.30	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
--		12/15/2009	8.22	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
--		6/28/2010	8.02	--	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
--		12/29/2010	7.18	--	0	56	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	--	6/7/2011	6.97	--	0	790	--	11	ND<0.50	6.5	ND<1.0	
	--	12/9/2011	8.54	--	0	--	120	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	6/1/2012	8.22	--	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	6/6/2013	8.56	--	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	12/13/2013	9.09	--	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	6/23/2014	9.01	--	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	12/17/2014	6.95	--	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	6/9/2015	8.82	--	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	12/30/2015	8.58	--	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	6/22/2016	8.79	--	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-8	--	11/7/1990	--	--	--	--	4,700	28	38	86	7,200	
	--	2/25/1991	--	--	--	--	5,300	17	6.1	53	300	
	--	5/28/1991	--	--	--	--	4,800	4.2	1.3	5.1	170	
	--	8/28/1991	--	--	--	--	1,800	3.2	1.9	19	74	
	--	11/19/1991	--	--	--	--	1,600	8.1	1.8	19	52	
	--	2/6/1992	--	--	--	--	2,600	4.1	7.0	31	93	
	--	5/23/1992	--	--	--	--	2,100	8.6	1.6	1.7	28	
	--	8/26/1992	--	--	--	--	1,800	12	8.0	4.0	13	
	--	11/20/1992	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	12/21/1992	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	1/9/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	1/30/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	2/10/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	2/24/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	3/9/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	3/22/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	4/8/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	4/28/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	5/12/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.71	5/25/1993	10.12	71.59	0	--	1,200	5.4	ND	9.0	21	
	81.41	6/7/1993	9.98	71.43	0	--	--	--	--	--	--	Inaccessible
	81.41	6/23/1993	10.36	71.05	0	--	--	--	--	--	--	Inaccessible
	81.41	7/8/1993	10.52	70.89	0	--	--	--	--	--	--	Inaccessible
	81.41	7/22/1993	--	--	--	--	--	--	--	--	--	Inaccessible
	81.41	8/11/1993	--	--	--	--	--	--	--	--	--	Inaccessible

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.41		8/25/1993	10.95	70.46	0	--	1,800	11	17	8.9	29	
81.41		9/8/1993	11.34	70.07	0	--	--	--	--	--	--	Inaccessible
81.41		9/22/1993	11.13	70.28	0	--	--	--	--	--	--	Inaccessible
81.41		10/7/1993	10.96	70.45	0	--	--	--	--	--	--	Inaccessible
81.41		10/28/1993	11.19	70.22	0	--	--	--	--	--	--	Inaccessible
81.41		11/12/1993	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		11/30/1993	10.42	70.99	0	--	3,500	18	ND	ND	ND	
81.41		2/16/1994	9.86	71.55	0	--	990	4.9	1.8	2.4	4.5	
81.41		5/31/1994	10.61	70.80	0	--	350	3.0	1.0	0.73	1.7	
81.41		8/31/1994	11.37	70.04	0	--	1,800	ND	ND	ND	ND	
81.41		9/27/1994	--	--	--	--	--	--	--	--	--	Car parked over well
81.41		10/11/1994	11.50	69.91	0	--	--	--	--	--	--	Inaccessible
81.41		11/10/1994	7.81	73.60	0	--	940	6.7	6.3	ND	16	
81.41		2/7/1995	8.69	72.72	0	--	230	1.4	0.95	0.9	1.1	
81.41		5/3/1995	8.60	72.81	0	--	75	ND	ND	ND	1.0	
81.41		8/3/1995	--	--	--	--	--	--	--	--	--	Car parked over well
81.41		11/7/1995	11.05	70.36	0	--	210	1.3	1.2	ND	ND	
81.41		5/6/1996	--	--	--	--	--	--	--	--	--	Car parked over well
81.41		11/5/1996	--	--	--	--	--	--	--	--	--	Car parked over well
81.41		5/15/1997	10.46	70.95	0	--	ND	ND	ND	ND	ND	
81.41		11/12/1997	--	--	--	--	--	--	--	--	--	Car parked over well
81.41		5/4/1998	--	--	--	--	--	--	--	--	--	Car parked over well
81.41		11/11/1998	--	--	--	--	--	--	--	--	--	Car parked over well
81.41		5/20/1999	9.75	71.66	0	--	ND	ND	ND	ND	ND	
81.41		11/15/1999	--	--	--	--	--	--	--	--	--	Car parked over well
81.41		5/22/2000	9.80	71.61	0	--	ND	ND	1.9	ND	3.3	
81.41		11/22/2000	9.76	71.65	0	--	ND	ND	1.16	ND	1.22	
81.41		5/15/2001	9.87	71.54	0	--	ND	ND	ND	ND	ND	
81.41		11/23/2001	9.92	71.49	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.41		5/24/2002	9.26	72.15	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.41		11/29/2002	9.71	71.70	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		5/15/2003	9.04	72.37	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		11/4/2003	10.20	71.21	0	690	--	ND<1.0	ND<1.0	3.3	ND<2.0	
81.41		5/24/2004	10.04	71.37	0	450	--	ND<2.5	ND<2.5	ND<2.5	ND<5.0	
81.41		11/29/2004	9.88	71.53	0	1,500	--	ND<10	ND<10	ND<10	ND<20	
81.41		6/24/2005	9.40	72.01	0	150	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.41		12/15/2005	10.01	71.40	0	520	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		6/14/2006	5.91	75.50	0	230	--	ND<0.50	ND<0.50	0.60	ND<1.0	
81.41		12/21/2006	9.65	71.76	0	260	--	2.5	ND<0.50	12	43	
81.41		6/28/2007	11.10	70.31	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.41		12/13/2007	11.18	70.23	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		6/9/2008	11.25	70.16	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		12/30/2008	10.05	71.36	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		9/28/2009	11.10	70.31	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		12/15/2009	10.00	71.41	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		6/28/2010	10.86	70.55	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		12/29/2010	8.57	72.84	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.41		6/7/2011	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		12/9/2011	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		6/1/2012	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		6/6/2013	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		12/13/2013	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		6/23/2014	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		12/17/2014	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		6/9/2015	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		12/30/2015	--	--	--	--	--	--	--	--	--	Inaccessible
81.41		6/22/2016	--	--	--	--	--	--	--	--	--	Inaccessible
MW-9	--	11/7/1990	--	--	--	--	480	7.8	1.2	13	47	
	--	2/25/1991	--	--	--	--	390	13	1.1	2.8	14	
	--	5/28/1991	--	--	--	--	590	6.0	0.43	6.8	1.4	
	--	8/28/1991	--	--	--	--	450	17	0.9	13	14	
	--	11/19/1991	--	--	--	--	360	17	0.45	15	11	
	--	2/6/1992	--	--	--	--	660	41	1.0	33	15	
	--	5/23/1992	--	--	--	--	460	18	0.66	1.4	3.2	
	--	8/26/1992	--	--	--	--	250	13	ND	8.6	3.8	
	--	11/20/1992	--	--	--	--	--	--	--	--	--	Inaccessible
81.13		12/21/1992	--	--	--	--	--	--	--	--	--	Inaccessible
81.13		1/30/1993	--	--	--	--	--	--	--	--	--	Inaccessible
81.13		2/24/1993	--	--	--	--	--	--	--	--	--	Inaccessible
81.13		3/22/1993	--	--	--	--	--	--	--	--	--	Inaccessible
81.13		4/28/1993	--	--	--	--	--	--	--	--	--	Inaccessible

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.13		5/25/1993	11.50	69.63	0	--	160	6.1	ND	7.4	1.1	
80.53		6/23/1993	9.78	70.75	0	--	--	--	--	--	--	Inaccessible
80.53		7/22/1993	10.10	70.43	0	--	--	--	--	--	--	Inaccessible
80.53		8/25/1993	10.44	70.09	0	--	220	10	ND	6.8	1.4	
80.53		9/22/1993	10.64	69.89	0	--	--	--	--	--	--	Inaccessible
80.53		10/28/1993	10.68	69.85	0	--	--	--	--	--	--	Inaccessible
80.53		11/30/1993	9.87	70.66	0	--	200	5.6	ND	2.9	2.7	
80.53		2/16/1994	9.21	71.32	0	--	250	5.1	1.3	4.4	1.5	
80.53		5/31/1994	10.15	70.38	0	--	360	7.8	0.97	4.6	2.2	
80.53		8/31/1994	10.97	69.56	0	--	650	7.7	2.8	4.4	5.0	
80.53		9/27/1994	11.10	69.43	0	--	--	--	--	--	--	Inaccessible
80.53		10/11/1994	11.20	69.33	0	--	--	--	--	--	--	Inaccessible
80.53		11/10/1994	7.25	73.28	0	--	ND	ND	ND	ND	ND	
80.53		2/7/1995	7.76	72.77	0	--	57	0.7	ND	0.86	ND	
80.53		5/3/1995	7.82	72.71	0	--	ND	0.85	0.67	1.3	1.0	
80.53		8/3/1995	9.70	70.83	0	--	91	1.1	ND	ND	ND	
80.53		11/7/1995	10.64	69.89	0	--	130	1.5	0.62	0.71	ND	
80.53		5/6/1996	9.01	71.52	0	--	860	6.1	13	6.0	25	
80.53		11/5/1996	11.42	69.11	0	--	84	0.74	ND	1.2	4.5	
80.53		5/15/1997	9.89	70.64	0	--	ND	ND	ND	ND	ND	
80.53		11/12/1997	10.22	70.31	0	--	ND	0.55	ND	ND	ND	
80.53		5/4/1998	10.05	70.48	0	--	ND	ND	ND	ND	ND	
80.53		11/11/1998	9.23	71.30	0	--	ND	ND	ND	ND	ND	
80.53		5/20/1999	8.78	71.75	0	--	ND	ND	ND	ND	ND	
80.53		11/15/1999	9.12	71.41	0	--	ND	ND	ND	ND	ND	
80.53		5/22/2000	9.17	71.36	0	--	ND	ND	1.9	ND	3.5	
80.53		11/22/2000	9.08	71.45	0	--	ND	ND	1.18	ND	1.16	
80.53		5/15/2001	8.85	71.68	0	--	ND	ND	ND	ND	ND	
80.53		11/23/2001	9.10	71.43	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
80.53		5/24/2002	8.79	71.74	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
80.53		11/29/2002	9.24	71.29	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		5/15/2003	8.56	71.97	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		11/4/2003	--	--	--	--	--	--	--	--	--	Car parked over well
80.53		5/24/2004	9.38	71.15	0	330	--	1.8	ND<0.50	ND<0.50	ND<1.0	
80.53		11/29/2004	9.55	70.98	0	690	--	0.72	ND<0.50	1.3	ND<1.0	
80.53		6/24/2005	8.65	71.88	0	240	--	0.80	ND<0.50	0.55	ND<1.0	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
80.53		12/15/2005	9.43	71.10	0	400	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		6/14/2006	9.43	71.10	0	<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		12/21/2006	9.01	71.52	0	580	--	ND<0.50	ND<0.50	0.71	ND<0.50	
80.53		6/28/2007	11.64	68.89	0	1,200	--	0.81	ND<0.50	ND<0.50	0.54	
80.53		12/13/2007	11.18	69.35	0	1,100	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		6/9/2008	11.10	69.43	0	1,500	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		12/30/2008	9.66	70.87	0	970	--	ND<0.50	ND<0.50	0.84	ND<1.0	
80.53		9/28/2009	10.83	69.70	0	860	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		12/15/2009	10.00	70.53	0	870	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		6/28/2010	10.45	70.08	0	360	--	ND<0.50	ND<0.50	1.0	ND<1.0	
80.53		12/29/2010	7.72	72.81	0	53	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
80.53		6/7/2011	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		12/9/2011	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		6/1/2012	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		6/6/2013	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		12/13/2013	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		6/23/2014	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		12/17/2014	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		6/9/2015	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		12/30/2015	--	--	--	--	--	--	--	--	--	Inaccessible
80.53		6/22/2016	--	--	--	--	--	--	--	--	--	Inaccessible
MW-10	--	2/6/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	5/23/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	8/26/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/20/1992	--	--	--	--	ND	ND	ND	ND	ND	
81.90		12/21/1992	13.41	68.49	0	--	--	--	--	--	--	
81.90		1/30/1993	11.60	70.30	0	--	--	--	--	--	--	
81.90		2/24/1993	11.23	70.67	0	--	ND	ND	ND	ND	ND	
81.90		3/22/1993	10.89	71.01	0	--	--	--	--	--	--	
81.90		4/28/1993	12.11	69.79	0	--	--	--	--	--	--	
81.90		5/25/1993	12.02	69.88	0	--	ND	ND	ND	ND	ND	
81.61		6/23/1993	12.11	69.50	0	--	--	--	--	--	--	
81.61		7/22/1993	12.49	69.12	0	--	--	--	--	--	--	
81.61		8/25/1993	12.78	68.83	0	--	ND	ND	ND	ND	ND	
81.61		9/22/1993	13.06	68.55	0	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
81.61		10/28/1993	13.23	68.38	0	--	--	--	--	--	--	
81.61		11/30/1993	--	--	--	--	--	--	--	--	--	Inaccessible
81.61		2/16/1994	12.43	69.18	0	--	ND	ND	ND	ND	ND	
81.61		5/31/1994	12.69	68.92	0	--	ND	ND	0.9	ND	0.91	
81.61		8/31/1994	13.47	68.14	0	--	ND	ND	0.64	ND	0.54	
81.61		9/27/1994	13.72	67.89	0	--	--	--	--	--	--	
81.61		10/11/1994	14.80	66.81	0	--	--	--	--	--	--	
81.61		11/10/1994	12.64	68.97	0	--	ND	ND	ND	ND	ND	
81.61		2/7/1995	10.29	71.32	0	--	--	--	--	--	--	
81.61		5/3/1995	10.22	71.39	0	--	ND	ND	ND	ND	0.65	
81.61		8/3/1995	11.73	69.88	0	--	--	--	--	--	--	
81.61		11/7/1995	12.98	68.63	0	--	ND	ND	ND	ND	ND	
81.61		5/6/1996	10.90	70.71	0	--	--	--	--	--	--	
81.61		11/5/1996	11.96	69.65	0	--	--	--	--	--	--	
81.61		5/15/1997	10.79	70.82	0	--	--	--	--	--	--	
81.61		11/12/1997	10.07	71.54	0	--	--	--	--	--	--	
81.61		5/4/1998	10.01	71.60	0	--	--	--	--	--	--	
81.61		11/11/1998	12.03	69.58	0	--	--	--	--	--	--	
81.61		5/20/1999	10.05	71.56	0	--	--	--	--	--	--	
81.61		11/15/1999	10.16	71.45	0	--	--	--	--	--	--	
81.61		5/22/2000	10.06	71.55	0	--	--	--	--	--	--	
81.61		11/22/2000	10.12	71.49	0	--	--	--	--	--	--	
81.61		5/15/2001	10.08	71.53	0	--	--	--	--	--	--	
81.61		11/23/2001	10.14	71.47	0	--	--	--	--	--	--	
81.61		5/24/2002	9.48	72.13	0	--	--	--	--	--	--	
81.61		11/29/2002	10.11	71.50	0	--	--	--	--	--	--	
81.61		5/15/2003	9.22	72.39	0	--	--	--	--	--	--	
81.61		11/4/2003	12.82	68.79	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.61		5/24/2004	11.52	70.09	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.61		11/29/2004	12.58	69.03	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.61		6/24/2005	10.70	70.91	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.61		12/15/2005	12.09	69.52	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.61		6/14/2006	9.77	71.84	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
81.61		12/21/2006	11.57	70.04	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.61		6/28/2007	14.11	67.50	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
81.61		12/13/2007	15.72	65.89	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	81.61	6/9/2008	14.93	66.68	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	12/30/2008	13.56	68.05	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	9/28/2009	13.52	68.09	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	12/15/2009	14.02	67.59	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	6/28/2010	13.55	68.06	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	12/29/2010	13.23	68.38	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	6/7/2011	12.36	69.25	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	12/9/2011	14.41	67.20	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	6/1/2012	12.65	68.96	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	6/6/2013	13.28	68.33	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	12/13/2013	14.48	67.13	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	6/23/2014	14.10	67.51	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	12/17/2014	12.93	68.68	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	6/9/2015	14.04	67.57	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	12/30/2015	14.66	66.95	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	81.61	6/22/2016	13.58	68.03	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-11	--	2/6/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	5/23/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	8/26/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/20/1992	--	--	--	--	ND	ND	ND	ND	ND	
	78.43	12/21/1992	12.34	66.09	0	--	--	--	--	--	--	
	78.43	1/30/1993	14.17	64.26	0	--	--	--	--	--	--	
	78.43	2/24/1993	12.70	65.73	0	--	ND	ND	ND	ND	ND	
	78.43	3/22/1993	8.95	69.48	0	--	--	--	--	--	--	
	78.43	4/28/1993	13.87	64.56	0	--	--	--	--	--	--	
	78.43	5/25/1993	15.14	63.29	0	--	ND	ND	0.75	ND	1.0	
	78.43	6/23/1993	15.08	63.10	0	--	--	--	--	--	--	
	78.43	7/22/1993	15.46	62.72	0	--	--	--	--	--	--	
	78.43	8/25/1993	14.10	64.08	0	--	ND	ND	ND	ND	ND	
	78.43	9/22/1993	15.03	63.15	0	--	--	--	--	--	--	
	78.43	10/28/1993	13.84	64.34	0	--	--	--	--	--	--	
	78.43	11/30/1993	13.04	65.14	0	--	ND	ND	ND	ND	ND	
	78.43	2/16/1994	12.76	65.42	0	--	ND	ND	ND	ND	ND	
	78.43	5/31/1994	12.79	65.39	0	--	ND	ND	ND	ND	ND	
	78.43	8/31/1994	12.97	65.21	0	--	ND	ND	1.5	ND	1.8	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
78.43		9/27/1994	14.88	63.30	0	--	--	--	--	--	--	
78.43		10/11/1994	13.40	64.78	0	--	--	--	--	--	--	
78.43		11/10/1994	13.57	64.61	0	--	ND	ND	ND	ND	ND	
78.43		2/7/1995	12.28	65.90	0	--	--	--	--	--	--	
78.43		5/3/1995	9.28	68.90	0	--	ND	ND	ND	ND	ND	
78.43		8/3/1995	12.67	65.51	0	--	--	--	--	--	--	
78.43		11/7/1995	12.28	65.90	0	--	ND	ND	ND	ND	ND	
78.43		5/6/1996	13.30	64.88	0	--	--	--	--	--	--	
78.43		11/5/1996	10.90	67.28	0	--	--	--	--	--	--	
78.43		5/15/1997	11.65	66.53	0	--	--	--	--	--	--	
78.43		11/12/1997	9.66	68.52	0	--	--	--	--	--	--	
78.43		5/4/1998	10.87	67.31	0	--	--	--	--	--	--	
78.43		11/11/1998	11.40	66.78	0	--	--	--	--	--	--	
78.43		5/20/1999	10.71	67.47	0	--	ND	ND	ND	ND	ND	
78.43		11/15/1999	11.32	66.86	0	--	ND	ND	1.04	ND	ND	
78.43		5/22/2000	10.98	67.20	0	--	ND	ND	ND	ND	ND	
78.43		11/22/2000	11.17	67.01	0	--	ND	ND	ND	ND	ND	
78.43		5/15/2001	10.93	67.25	0	--	ND	ND	ND	ND	ND	
78.43		11/23/2001	11.08	67.10	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
78.43		5/24/2002	10.58	67.60	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
78.43		11/29/2002	11.27	66.91	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		5/15/2003	10.25	67.93	0	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		11/4/2003	11.23	66.95	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		5/24/2004	10.10	68.08	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		11/29/2004	10.96	67.22	0	63	--	ND<0.50	ND<0.50	1.0	2.5	
78.43		6/24/2005	14.07	64.11	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		12/15/2005	13.28	64.90	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		6/14/2006	12.53	65.65	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		12/21/2006	12.78	65.40	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
78.43		6/28/2007	--	--	--	--	--	--	--	--	--	Bus parked over well
78.43		12/13/2007	15.37	62.81	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		6/9/2008	14.80	63.38	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		12/30/2008	12.90	65.28	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		9/28/2009	12.57	65.61	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
78.43		12/15/2009	--	--	--	--	--	--	--	--	--	Car parked over well
78.43		6/28/2010	14.42	63.76	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	78.43	12/29/2010	15.40	62.78	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.43	6/7/2011	15.79	62.39	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.18	12/9/2011	13.27	64.91	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.18	6/1/2012	14.50	63.68	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.18	6/6/2013	15.32	62.86	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.18	12/13/2013	15.04	63.14	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.18	6/23/2014	--	--	--	--	--	--	--	--	--	Unable to access
	78.18	12/17/2014	14.56	63.62	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.18	6/9/2015	14.51	63.67	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.18	12/30/2015	10.81	67.37	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	78.18	6/22/2016	13.07	65.11	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
MW-12	--	8/26/1992	--	--	--	--	ND	ND	ND	ND	ND	
	--	11/20/1992	--	--	--	--	ND	ND	ND	ND	ND	
	79.89	12/21/1992	12.11	67.78	0	--	--	--	--	--	--	
	79.89	1/30/1993	13.18	66.71	0	--	--	--	--	--	--	
	79.89	2/24/1993	12.13	67.76	0	--	ND	ND	ND	ND	ND	
	79.89	3/22/1993	11.22	68.67	0	--	--	--	--	--	--	
	79.89	4/28/1993	13.42	66.47	0	--	--	--	--	--	--	
	79.89	5/25/1993	13.68	66.21	0	--	ND	ND	ND	ND	ND	
	79.61	6/23/1993	14.56	65.05	0	--	--	--	--	--	--	
	79.61	7/22/1993	14.96	64.65	0	--	--	--	--	--	--	
	79.61	8/25/1993	13.61	66.00	0	--	ND	ND	ND	ND	ND	
	79.61	9/22/1993	15.02	64.59	0	--	--	--	--	--	--	
	79.61	10/28/1993	14.04	65.57	0	--	--	--	--	--	--	
	79.61	11/30/1993	13.28	66.33	0	--	ND	ND	ND	ND	ND	
	79.61	2/16/1994	12.76	66.85	0	--	ND	ND	ND	ND	ND	
	79.61	5/31/1994	12.64	66.97	0	--	ND	ND	0.81	ND	0.82	
	79.61	8/31/1994	12.82	66.79	0	--	ND	ND	1.0	ND	1.0	
	79.61	9/27/1994	14.66	64.95	0	--	--	--	--	--	--	
	79.61	10/11/1994	14.25	65.36	0	--	--	--	--	--	--	
	79.61	11/10/1994	13.40	66.21	0	--	ND	ND	ND	ND	ND	
	79.61	2/7/1995	11.72	67.89	0	--	--	--	--	--	--	
	79.61	5/3/1995	13.38	66.23	0	--	ND	ND	ND	ND	ND	
	79.61	8/3/1995	13.47	66.14	0	--	--	--	--	--	--	
	79.61	11/7/1995	12.78	66.83	0	--	ND	ND	ND	ND	ND	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
79.61		5/6/1996	13.25	66.36	0	--	--	--	--	--	--	
79.61		11/5/1996	11.88	67.73	0	--	--	--	--	--	--	
79.61		5/15/1997	11.72	67.89	0	--	--	--	--	--	--	
79.61		11/12/1997	10.01	69.60	0	--	--	--	--	--	--	
79.61		5/4/1998	10.96	68.65	0	--	--	--	--	--	--	
79.61		11/11/1998	11.53	68.08	0	--	--	--	--	--	--	
79.61		5/20/1999	10.84	68.77	0	--	--	--	--	--	--	
79.61		11/15/1999	11.36	68.25	0	--	--	--	--	--	--	
79.61		5/22/2000	11.19	68.42	0	--	--	--	--	--	--	
79.61		11/22/2000	11.36	68.25	0	--	--	--	--	--	--	
79.61		5/15/2001	11.04	68.57	0	--	--	--	--	--	--	
79.61		11/23/2001	11.14	68.47	0	--	--	--	--	--	--	
79.61		5/24/2002	10.69	68.92	0	--	--	--	--	--	--	
79.61		11/29/2002	11.23	68.38	0	--	--	--	--	--	--	
79.61		5/15/2003	10.38	69.23	0	--	--	--	--	--	--	
79.61		11/4/2003	11.34	68.27	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		5/24/2004	9.84	69.77	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		11/29/2004	12.17	67.44	0	64	--	0.68	ND<0.50	1.2	3.0	
79.61		6/24/2005	13.16	66.45	0	53	--	ND<0.50	ND<0.50	0.13	0.42	
79.61		12/15/2005	13.94	65.67	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		6/14/2006	13.11	66.50	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		12/21/2006	9.03	70.58	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
79.61		6/28/2007	11.75	67.86	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
79.61		12/13/2007	14.83	64.78	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		6/9/2008	14.84	64.77	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		12/30/2008	13.22	66.39	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		9/28/2009	10.55	69.06	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		12/15/2009	9.33	70.28	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		6/28/2010	9.31	70.30	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		12/29/2010	9.51	70.10	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		6/7/2011	7.33	72.28	0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		12/9/2011	9.42	70.19	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		6/1/2012	10.13	69.48	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		6/6/2013	9.52	70.09	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		12/13/2013	10.96	68.65	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
79.61		6/23/2014	11.11	68.50	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	79.61	12/17/2014	9.76	69.85	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.61	6/9/2015	10.13	69.48	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.61	12/30/2015	10.06	69.55	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	79.61	6/22/2016	10.27	69.34	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
RW-1	81.20	2/24/1993	7.19	74.01	0	--	--	--	--	--	--	
	81.20	5/12/1993	8.82	72.38	0	--	--	--	--	--	--	
	81.20	5/25/1993	8.58	72.62	0	--	--	--	--	--	--	
	80.63	6/7/1993	8.16	72.47	0	--	--	--	--	--	--	
	80.63	6/23/1993	8.53	72.10	0	--	--	--	--	--	--	
	80.63	7/8/1993	8.69	71.94	0	--	--	--	--	--	--	
	80.63	8/11/1993	9.00	71.63	0	--	--	--	--	--	--	
	80.63	8/25/1993	9.07	71.56	0	--	--	--	--	--	--	
	80.63	9/8/1993	9.71	70.92	0	--	--	--	--	--	--	
	80.63	9/22/1993	9.25	71.38	0	--	--	--	--	--	--	
	80.63	11/12/1993	9.00	71.63	--	--	--	--	--	--	--	
	80.63	2/16/1994	7.82	72.81	0	--	--	--	--	--	--	
	80.63	5/31/1994	8.81	71.82	0	--	--	--	--	--	--	
	80.63	8/31/1994	9.61	71.02	0	--	--	--	--	--	--	
	80.63	11/10/1994	6.34	74.29	0	--	--	--	--	--	--	
	80.63	2/7/1995	7.18	73.45	0	--	--	--	--	--	--	
	80.63	3/14/1995	6.01	74.62	0	--	--	--	--	--	--	
	--	11/7/1995	--	--	--	--	--	--	--	--	--	
	80.63	10/15/2001	8.43	72.20	0	--	--	--	--	--	--	
	80.63	11/23/2001	8.57	72.06	0	--	--	--	--	--	--	
	80.63	12/10/2001	8.51	72.12	0	--	--	--	--	--	--	
	80.63	1/14/2002	8.13	72.50	0	--	--	--	--	--	--	
	80.63	2/22/2002	6.18	74.45	0	--	--	--	--	--	--	
	80.63	3/11/2002	6.31	74.32	0	--	--	--	--	--	--	
	80.63	4/15/2002	6.39	74.24	0	--	--	--	--	--	--	
	80.63	5/24/2002	8.14	72.49	0	--	--	--	--	--	--	
	80.63	6/17/2002	8.18	72.45	0	--	--	--	--	--	--	
	80.63	7/15/2002	8.29	72.34	0	--	--	--	--	--	--	
	80.63	8/19/2002	8.44	72.19	0	--	--	--	--	--	--	
	80.63	9/5/2002	8.47	72.16	0	--	--	--	--	--	--	
	80.63	10/7/2002	8.43	72.20	0	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
80.63		11/29/2002	8.92	71.71	0	--	--	--	--	--	--	
80.63		12/12/2002	8.87	71.76	0	--	--	--	--	--	--	
80.63		1/6/2003	8.66	71.97	0	--	--	--	--	--	--	
80.63		2/12/2003	8.39	72.24	0	--	--	--	--	--	--	
80.63		3/13/2003	8.06	72.57	0	--	--	--	--	--	--	
80.63		4/7/2003	8.09	72.54	0	--	--	--	--	--	--	
80.63		5/15/2003	8.07	72.56	0	--	--	--	--	--	--	
80.63		6/12/2003	8.11	72.52	0	--	--	--	--	--	--	
80.63		7/7/2003	8.13	72.50	0	--	--	--	--	--	--	
80.63		8/14/2003	8.23	72.40	0	--	--	--	--	--	--	
80.63		9/12/2003	8.29	72.34	0	--	--	--	--	--	--	
80.63		11/4/2003	9.97	70.66	0	2,600	--	11	ND<10	ND<10	ND<20	
80.63		5/24/2004	8.31	72.32	0	3,100	--	20	ND<5.0	16	ND<10	
80.63		11/29/2004	8.23	72.40	0	4,500	--	46	ND<1.0	34	3.6	
80.63		6/24/2005	7.53	73.10	0	2,000	--	20	0.87	50	3.0	
80.63		12/15/2005	8.11	72.52	0	3,300	--	37	0.70	35	4.7	
80.63		6/14/2006	7.41	73.22	0	1,500	--	2.0	0.95	6.9	ND<1.0	
80.63		12/21/2006	7.78	72.85	0	3,100	--	21	0.65	56	5.4	
80.63		6/28/2007	9.09	71.54	0	2,800	--	46	0.96	44	2.6	
80.63		12/13/2007	9.21	71.42	0	9,100	--	190	2.1	400	81	
80.63		6/9/2008	9.30	71.33	0	5,400	--	23	ND<2.5	330	13	
80.63		12/30/2008	8.23	72.40	0	5,800	--	130	ND<2.5	270	58	
80.63		9/28/2009	9.10	71.53	0	3,400	--	3.8	ND<2.5	23	5.0	
80.63		12/15/2009	7.96	72.67	0	9,100	--	18	ND<2.5	450	160	
80.63		6/28/2010	8.68	71.95	0	2,300	--	20	1.0	56	ND<1.0	
80.63		12/29/2010	6.04	74.59	0	4,100	--	9.3	1.3	6.8	ND<1.0	
80.63		6/7/2011	3.61	77.02	0	730	--	4.1	ND<0.50	16	ND<1.0	
80.63		10/21/2011	5.45	75.18	0	--	--	--	--	--	--	
80.63		12/9/2011	9.28	71.35	0	--	2,900	240	1.2	180	30	
80.63		1/12/2012	9.53	71.10	0	--	--	--	--	--	--	

Table 4
Historical Groundwater Monitoring Data and Analytical Results
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-GRO (8260B)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	80.63	6/1/2012	8.48	72.15	0	--	3,600	140	ND<2.5	56	ND<5.0	
	80.63	6/6/2013	8.73	71.90	0	--	1,300	1.2	1.4	5.8	ND<1.0	
	80.63	12/13/2013	9.20	71.43	0	--	150	0.81	ND<0.50	ND<0.50	ND<1.0	
	80.63	6/23/2014	9.20	71.43	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	80.63	12/17/2014	5.81	74.82	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	80.63	6/9/2015	8.10	72.53	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	80.63	10/16/2015	9.58	71.05	0	--	--	--	--	--	--	
	80.63	11/12/2015	9.18	71.45	0	--	--	--	--	--	--	
	80.63	12/30/2015	7.94	72.69	0	--	75	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	80.63	6/22/2016	8.41	72.22	0	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
QA	--	12/30/2015	--	--	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	
	--	6/22/2016	--	--	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level. GWE for wells with LNAPL has been adjusted for LNAPL thickness.

µg/L = Micrograms per liter

-- = Not available/not sampled

8260B = Analyzed by Environmental Protection Agency (EPA) Method 8260B

B = Benzene

DTW = Depth to water below TOC

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

J = Laboratory estimated value

LNAPL = Light non-aqueous phase liquid

ND = Not detected

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

QA = Quality assurance/trip blank

T = Toluene

TOC = Top of casing

TPH-g = Total petroleum hydrocarbons as gasoline; reported as Total Purgeable Petroleum Hydrocarbons in the laboratory report

TPH-GRO = Total petroleum hydrocarbons-gasoline range organics

X = Total xylenes

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
MW-1	11/1/1989	--	--	--	--	--	--	--	--	--	--
	2/15/1990	--	--	--	--	--	--	--	--	--	--
	8/16/1990	--	--	--	--	--	--	--	--	--	--
	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	--	--	--	--	--	--	--	--	--	--
	5/6/1996	55	--	--	--	--	--	--	--	--	--
	11/5/1996	5.2	--	--	--	--	--	--	--	--	--
	5/15/1997	16	--	--	--	--	--	--	--	--	--
	11/12/1997	11	--	--	--	--	--	--	--	--	--
	5/4/1998	320	--	--	--	--	--	--	--	--	--
	11/11/1998	200	--	--	--	--	--	--	--	--	--
	5/20/1999	89	47	ND	ND	ND	ND	ND	--	--	--
	11/15/1999	8.12	7.19	ND	ND	ND	ND	ND	--	--	--
	5/22/2000	220	290	130	ND	ND	ND	ND	--	--	--
	11/22/2000	105	142	--	--	ND	ND	ND	--	--	--
	5/15/2001	178	374	ND	ND	ND	ND	ND	--	--	--
	11/23/2001	350	350	ND<57	ND<1,400	ND<2.9	ND<2.9	ND<2.9	ND<2.9	--	ND<2.9
	5/24/2002	200	240	ND<200	ND<1,000	ND<4.0	ND<4.0	ND<4.0	ND<4.0	--	ND<4.0
	11/29/2002	--	330	ND<500	ND<2,500	ND<10	ND<10	ND<10	ND<10	--	ND<10
	5/15/2003	--	210	ND<500	ND<2,500	ND<10	ND<10	ND<10	ND<10	--	ND<10
	11/4/2003	--	140	ND<200	ND<1,000	ND<4.0	ND<4.0	ND<4.0	--	--	--
	5/24/2004	--	26	ND<5.0	ND<50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	11/29/2004	--	44	--	ND<50	--	--	--	--	--	--
	6/24/2005	--	80	--	ND<1,000	--	--	--	--	--	--
	12/15/2005	--	32	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/14/2006	--	44	--	ND<250	--	--	--	--	--	--
	12/21/2006	--	16	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	6/28/2007	--	5.6	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	10	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	29	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	3.2	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	0.98	--	ND<250	--	--	--	--	--	--
	12/15/2009	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	8.1	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	1.6	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	22	--	--	--	--	--	--	--	--
	12/9/2011	--	4.2	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/1/2012	--	0.87	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/6/2013	--	0.51	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	1.3	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	0.89	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
MW-2	11/1/1989	--	--	--	--	--	--	--	--	--	--
	2/15/1990	--	--	--	--	--	--	--	--	--	--
	8/16/1990	--	--	--	--	--	--	--	--	--	--
	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	2,700	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	8/19/1995	--	--	--	--	--	--	--	--	--	--
	10/11/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	160	--	--	--	--	--	--	--	--	--
	5/6/1996	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	5/15/1997	--	--	--	--	--	--	--	--	--	--
	11/12/1997	--	--	--	--	--	--	--	--	--	--
	5/4/1998	--	--	--	--	--	--	--	--	--	--
	11/11/1998	--	--	--	--	--	--	--	--	--	--
	5/20/1999	--	--	--	--	--	--	--	--	--	--
	11/15/1999	--	--	--	--	--	--	--	--	--	--
	5/22/2000	--	--	--	--	--	--	--	--	--	--
	11/22/2000	--	--	--	--	--	--	--	--	--	--
	5/15/2001	--	--	--	--	--	--	--	--	--	--
	11/23/2001	--	--	--	--	--	--	--	--	--	--
	5/24/2002	--	--	--	--	--	--	--	--	--	--
	11/29/2002	--	--	--	--	--	--	--	--	--	--
	5/15/2003	--	--	--	--	--	--	--	--	--	--
	11/4/2003	--	--	--	--	--	--	--	--	--	--
	5/24/2004	--	--	--	--	--	--	--	--	--	--
	11/29/2004	--	--	--	--	--	--	--	--	--	--
	6/24/2005	--	--	--	--	--	--	--	--	--	--
	12/15/2005	--	--	--	--	--	--	--	--	--	--
	6/14/2006	--	190	--	ND<250	--	--	--	--	--	--
	12/21/2006	--	32	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/28/2007	--	8.3	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	10	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	12	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	--	--	--	--	--	--	--	--	--
	9/28/2009	--	--	--	--	--	--	--	--	--	--
	12/15/2009	--	5.9	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	4.3	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	2.1	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	14	--	--	--	--	--	--	--	--
	12/9/2011	--	7.9	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/1/2012	--	2.9	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/6/2013	--	0.95	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	1.1	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	0.82	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	0.68	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	0.58	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	0.91	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
MW-3	11/1/1989	--	--	--	--	--	--	--	--	--	--
	2/15/1990	--	--	--	--	--	--	--	--	--	--
	8/16/1990	--	--	--	--	--	--	--	--	--	--
	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/4/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/9/1993	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/10/1993	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/9/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/8/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/12/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/7/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/8/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/11/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/8/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/7/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/12/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/24/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	3/14/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	8/19/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	880	--	--	--	--	--	--	--	--	--
	5/6/1996	370	--	--	--	--	--	--	--	--	--
	11/5/1996	460	--	--	--	--	--	--	--	--	--
	5/15/1997	100	--	--	--	--	--	--	--	--	--
	11/12/1997	ND	--	--	--	--	--	--	--	--	--
	5/4/1998	ND	--	--	--	--	--	--	--	--	--
	11/11/1998	ND	--	--	--	--	--	--	--	--	--
	5/20/1999	ND	--	--	--	--	--	--	--	--	--
	11/15/1999	120	45.1	--	--	--	--	--	--	--	--
	5/22/2000	100	94	ND	ND	ND	ND	ND	--	--	--
	11/22/2000	212	131	--	--	ND	ND	ND	--	--	--
	5/15/2001	97.1	75.5	ND	ND	ND	ND	ND	--	--	--
	11/23/2001	320	390	79	ND<1,200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	--	ND<2.5
	5/24/2002	120	73	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	ND<2.0
	11/29/2002	--	340	ND<5,000	ND<25,000	ND<100	ND<100	ND<100	ND<100	--	ND<100
	5/15/2003	--	440	ND<1,000	ND<5,000	ND<20	ND<20	ND<20	ND<20	--	ND<20
	11/4/2003	--	530	ND<4,000	ND<20,000	ND<80	ND<80	ND<80	--	--	--
	5/24/2004	--	1200	190	ND<1,000	ND<20	ND<10	ND<10	ND<10	--	ND<10
	11/29/2004	--	550	--	ND<500	--	--	--	--	--	--
	6/24/2005	--	400	--	ND<10,000	--	--	--	--	--	--
	12/15/2005	--	280	ND<500	ND<12,000	ND<25	ND<25	ND<25	ND<25	--	ND<25
	6/14/2006	--	160	--	ND<1,200	--	--	--	--	--	--
	12/21/2006	--	96	110	ND<1,200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	--	ND<2.5
	6/28/2007	--	75	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	27	--	ND<500	--	--	--	--	--	--
	6/9/2008	--	19	--	ND<1,200	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	12/30/2008	--	--	--	--	--	--	--	--	--	--
	9/28/2009	--	18	--	ND<1,200	--	--	--	--	--	--
	12/15/2009	--	13	--	ND<1,200	--	--	--	--	--	--
	6/28/2010	--	17	--	ND<250	--	--	--	ND<0.50	ND<0.010	ND<0.50
	12/29/2010	--	28	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	5.7	--	--	--	--	--	--	--	--
	12/9/2011	--	9.3	--	ND<1,200	--	--	--	ND<2.5	--	ND<2.5
	6/1/2012	--	19	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	11/23/2012	--	11	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	6	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	7.6	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	15	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	16	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	6.3	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	21	ND<50	ND<1,200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	--	ND<2.5
MW-4	2/15/1990	--	--	--	--	--	--	--	--	--	--
	8/16/1990	--	--	--	--	--	--	--	--	--	--
	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	12/21/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	8/19/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	0.86	--	--	--	--	--	--	--	--	--
	5/6/1996	ND	--	--	--	--	--	--	--	--	--
	11/5/1996	6.5	--	--	--	--	--	--	--	--	--
	5/15/1997	ND	--	--	--	--	--	--	--	--	--
	11/12/1997	ND	--	--	--	--	--	--	--	--	--
	5/4/1998	ND	--	--	--	--	--	--	--	--	--
	11/11/1998	ND	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	5/20/1999	ND	--	--	--	ND<2.0	--	--	--	--	--
	11/15/1999	ND	--	--	--	--	--	--	--	--	--
	5/22/2000	ND	--	--	--	--	--	--	--	--	--
	11/22/2000	ND	--	--	--	--	--	--	--	--	--
	5/15/2001	ND	--	--	--	--	--	--	--	--	--
	11/23/2001	ND<5.0	--	--	--	--	--	--	--	--	--
	5/24/2002	9.6	3.5	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	ND<2.0
	11/29/2002	--	2.6	ND<100	ND<500	--	ND<2.0	ND<2.0	ND<2.0	--	ND<2.0
	5/15/2003	--	ND<2.0	--	--	--	--	--	--	--	--
	11/4/2003	--	ND<2.0	--	ND<500	--	--	--	--	--	--
	5/24/2004	--	ND<0.50	--	ND<50	ND<1.0	--	--	--	--	--
	11/29/2004	--	0.55	ND<5.0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/24/2005	--	ND<0.50	--	ND<1,000	ND<0.50	--	--	--	--	--
	12/15/2005	--	0.65	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/14/2006	--	ND<0.50	--	ND<250	ND<0.50	--	--	--	--	--
	12/21/2006	--	0.67	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/28/2007	--	0.61	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	0.62	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	0.99	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	1.1	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	--	--	--	--	--	--	--	--	--
	12/15/2009	--	4.0	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	2.7	--	ND<250	ND<0.50	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	0.78	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	ND<2.5	--	--	--	--	--	--	--	--
	12/9/2011	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/1/2012	--	ND<2.5	--	ND<1,200	--	--	--	ND<2.5	--	ND<2.5
	6/6/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	0.55	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
MW-5	2/15/1990	--	--	--	--	--	--	--	--	--	--
	8/16/1990	--	--	--	--	--	--	--	--	--	--
	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/4/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/9/1993	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/10/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/9/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/8/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	5/12/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/7/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/8/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/11/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/8/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/7/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/12/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	3/14/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	8/19/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	630	--	--	--	--	--	--	--	--	--
	5/6/1996	170	--	--	--	--	--	--	--	--	--
	11/5/1996	580	--	--	--	--	--	--	--	--	--
	5/15/1997	ND	--	--	--	--	--	--	--	--	--
	11/12/1997	74	--	--	--	--	--	--	--	--	--
	5/4/1998	ND	--	--	--	ND	--	--	--	--	--
	11/11/1998	--	--	--	--	--	--	--	--	--	--
	2/22/1999	--	--	--	--	--	--	--	--	--	--
	4/2/1999	--	--	--	--	--	--	--	--	--	--
	5/4/1999	--	--	--	--	--	--	--	--	--	--
	5/20/1999	--	--	--	--	--	--	--	--	--	--
	6/29/1999	--	--	--	--	--	--	--	--	--	--
	7/29/1999	--	--	--	--	--	--	--	--	--	--
	8/24/1999	--	--	--	--	--	--	--	--	--	--
	9/27/1999	--	--	--	--	--	--	--	--	--	--
	10/28/1999	--	--	--	--	--	--	--	--	--	--
	11/15/1999	--	--	--	--	--	--	--	--	--	--
	12/20/1999	--	--	--	--	--	--	--	--	--	--
	1/20/2000	--	--	--	--	--	--	--	--	--	--
	2/26/2000	--	--	--	--	--	--	--	--	--	--
	3/31/2000	--	--	--	--	--	--	--	--	--	--
	4/13/2000	--	--	--	--	--	--	--	--	--	--
	5/22/2000	640	21	ND	ND	--	ND	ND	--	--	--
	11/22/2000	--	--	--	--	--	--	--	--	--	--
	2/14/2001	--	--	--	--	--	--	--	--	--	--
	3/28/2001	--	--	--	--	--	--	--	--	--	--
	4/28/2001	--	--	--	--	--	--	--	--	--	--
	5/15/2001	--	--	--	--	--	--	--	--	--	--
	6/29/2001	--	--	--	--	--	--	--	--	--	--
	7/17/2001	--	--	--	--	--	--	--	--	--	--
	8/30/2001	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	9/24/2001	--	--	--	--	--	--	--	--	--	--
	10/15/2001	--	--	--	--	--	--	--	--	--	--
	11/23/2001	ND<500	--	--	--	--	--	--	--	--	--
	12/10/2001	--	--	--	--	--	--	--	--	--	--
	1/14/2002	--	--	--	--	--	--	--	--	--	--
	2/22/2002	--	--	--	--	--	--	--	--	--	--
	3/11/2002	--	--	--	--	--	--	--	--	--	--
	4/15/2002	--	--	--	--	--	--	--	--	--	--
	5/24/2002	--	--	--	--	--	--	--	--	--	--
	6/17/2002	--	--	--	--	--	--	--	--	--	--
	7/15/2002	--	--	--	--	--	--	--	--	--	--
	8/19/2002	--	--	--	--	--	--	--	--	--	--
	9/5/2002	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--
	11/29/2002	--	--	--	--	--	--	--	--	--	--
	12/12/2002	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--
	2/12/2003	--	--	--	--	--	--	--	--	--	--
	3/13/2003	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--
	5/15/2003	--	--	--	--	--	--	--	--	--	--
	6/12/2003	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--	--	--
	9/12/2003	--	--	--	--	--	--	--	--	--	--
	11/4/2003	--	--	--	--	--	--	--	--	--	--
	5/24/2004	--	--	--	--	--	--	--	--	--	--
	11/29/2004	--	--	--	--	--	--	--	--	--	--
	6/24/2005	--	82	--	ND<50,000	ND<25	--	--	--	--	--
	12/15/2005	--	120	ND<500	ND<12,000	--	ND<25	ND<25	ND<25	--	ND<25
	6/14/2006	--	48	--	ND<6,200	ND<25	--	--	--	--	--
	12/21/2006	--	96	ND<500	ND<12,000	--	ND<25	ND<25	ND<25	--	ND<25
	6/28/2007	--	--	--	--	--	--	--	--	--	--
	12/13/2007	--	--	--	--	--	--	--	--	--	--
	6/9/2008	--	--	--	--	--	--	--	--	--	--
	12/30/2008	--	--	--	--	--	--	--	--	--	--
	9/28/2009	--	--	--	--	--	--	--	--	--	--
	12/15/2009	--	--	--	--	--	--	--	--	--	--
	6/28/2010	--	--	--	--	--	--	--	--	--	--
	12/29/2010	--	--	--	--	--	--	--	--	--	--
	2/1/2011	--	--	--	--	--	--	--	--	--	--
	6/7/2011	--	ND<12	--	--	--	--	--	--	--	--
	9/13/2011	--	--	--	--	--	--	--	--	--	--
	10/21/2011	--	--	--	--	--	--	--	--	--	--
	11/4/2011	--	--	--	--	--	--	--	--	--	--
	12/9/2011	--	--	--	--	--	--	--	--	--	--
	1/12/2012	--	--	--	--	--	--	--	--	--	--
	6/1/2012	--	--	--	--	--	--	--	--	--	--
	6/6/2013	--	2.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	--	--	--	--	--	--	--	--	--
	6/23/2014	--	--	--	--	--	--	--	--	--	--
	12/17/2014	--	--	--	--	--	--	--	--	--	--
	6/9/2015	--	--	--	--	--	--	--	--	--	--
	12/30/2015	--	--	--	--	--	--	--	--	--	--
	6/22/2016	--	ND<5.0	ND<100	ND<2,500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	ND<5.0

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76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
MW-6	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	--	--	--	--	--	--	--	--	--	--
	5/6/1996	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	--	--	--	--	--	--	--	--
	5/15/1997	--	--	--	--	--	--	--	--	--	--
	11/12/1997	--	--	--	--	--	--	--	--	--	--
	5/4/1998	--	--	--	--	ND<2.0	--	--	--	--	--
	11/11/1998	--	--	--	--	--	--	--	--	--	--
	5/20/1999	--	--	--	--	--	--	--	--	--	--
	11/15/1999	--	--	--	--	--	--	--	--	--	--
	5/22/2000	--	--	--	--	--	--	--	--	--	--
	11/22/2000	--	--	--	--	--	--	--	--	--	--
	5/15/2001	--	--	--	--	--	--	--	--	--	--
	11/23/2001	--	--	--	--	--	--	--	--	--	--
	5/24/2002	--	--	--	--	--	--	--	--	--	--
	11/29/2002	--	--	--	--	--	--	--	--	--	--
	5/15/2003	--	--	--	--	--	--	--	--	--	--
	11/4/2003	--	2.4	ND<100	ND<500	ND<1.0	ND<2.0	ND<2.0	--	--	--
	5/24/2004	--	2.8	ND<5.0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	11/29/2004	--	4.8	--	ND<50	--	--	--	--	--	--
	6/24/2005	--	0.47	--	ND<1,000	ND<0.50	--	--	--	--	--
	12/15/2005	--	0.88	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/14/2006	--	3.0	--	ND<250	ND<0.50	--	--	--	--	--
	12/21/2006	--	1.0	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/28/2007	--	1.2	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	0.64	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	0.65	--	ND<250	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	12/30/2008	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	0.67	--	ND<250	--	--	--	--	--	--
	12/15/2009	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	ND<0.50	--	ND<250	ND<0.50	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	ND<0.50	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	12	--	--	--	--	--	--	--	--
	12/9/2011	--	2.0	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/1/2012	--	0.64	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/6/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
MW-7	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	--	--	--	--	--	--	--	--	--	--
	5/6/1996	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	--	--	--	--	--	--	--	--
	5/15/1997	--	--	--	--	--	--	--	--	--	--
	11/12/1997	--	--	--	--	--	--	--	--	--	--
	5/4/1998	--	--	--	--	--	--	--	--	--	--
	11/11/1998	--	--	--	--	--	--	--	--	--	--
	5/20/1999	--	--	--	--	--	--	--	--	--	--
	11/15/1999	--	--	--	--	--	--	--	--	--	--
	5/22/2000	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	11/22/2000	--	--	--	--	--	--	--	--	--	--
	5/15/2001	--	--	--	--	--	--	--	--	--	--
	11/23/2001	--	--	--	--	--	--	--	--	--	--
	5/24/2002	--	--	--	--	--	--	--	--	--	--
	11/29/2002	--	--	--	--	--	--	--	--	--	--
	5/15/2003	--	--	--	--	--	--	--	--	--	--
	11/4/2003	--	ND<2.0	--	ND<500	ND<1.0	--	--	--	--	--
	5/24/2004	--	1.4	ND<5.0	ND<50	--	ND<0.5	ND<0.5	ND<0.5	--	ND<0.5
	11/29/2004	--	3.6	--	ND<50	--	--	--	--	--	--
	6/24/2005	--	1.6	--	ND<1,000	ND<0.50	--	--	--	--	--
	12/15/2005	--	0.72	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/14/2006	--	ND<0.50	--	ND<250	ND<0.50	--	--	--	--	--
	12/21/2006	--	0.75	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/28/2007	--	0.51	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	0.58	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	0.54	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	1.0	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	0.52	--	ND<250	--	--	--	--	--	--
	12/15/2009	--	1.6	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	ND<0.50	--	ND<250	ND<0.50	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	6.0	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	19	--	--	--	--	--	--	--	--
	12/9/2011	--	4.5	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/1/2012	--	0.71	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/6/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	2.1	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
MW-8	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/9/1993	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/10/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/9/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/8/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/12/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/7/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/8/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	8/11/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/8/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/7/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/12/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	--	--	--	--	--	--	--	--	--	--
	5/6/1996	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	--	--	--	--	--	--	--	--
	5/15/1997	43	--	--	--	ND	--	--	--	--	--
	11/12/1997	--	--	--	--	--	--	--	--	--	--
	5/4/1998	--	--	--	--	--	--	--	--	--	--
	11/11/1998	--	--	--	--	--	--	--	--	--	--
	5/20/1999	23	10	ND	ND	ND	ND	ND	--	--	--
	11/15/1999	--	--	ND	ND	ND<4.0	ND	ND	--	--	--
	5/22/2000	ND	--	--	--	--	--	--	--	--	--
	11/22/2000	ND	--	--	--	--	--	--	--	--	--
	5/15/2001	ND	--	--	--	--	--	--	--	--	--
	11/23/2001	ND<5.0	--	--	--	--	--	--	--	--	--
	5/24/2002	ND<5.0	--	--	--	--	--	--	--	--	--
	11/29/2002	--	ND<2.0	--	--	--	--	--	--	--	--
	5/15/2003	--	ND<2.0	--	--	--	--	--	--	--	--
	11/4/2003	--	190	ND<200	ND<1,000	ND<5.0	ND<4.0	ND<4.0	--	--	--
	5/24/2004	--	750	ND<25	ND<250	ND<20	ND<2.5	ND<2.5	ND<2.5	--	ND<2.5
	11/29/2004	--	1,600	ND<100	ND<1,000	--	ND<10	ND<10	ND<10	--	ND<10
	6/24/2005	--	190	--	ND<1,000	ND<0.50	--	--	--	--	--
	12/15/2005	--	1,000	ND<10	ND<250	--	ND<0.50	0.95	ND<0.50	--	ND<0.50
	6/14/2006	--	39	--	ND<250	ND<0.50	--	--	--	--	--
	12/21/2006	--	15	13	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/28/2007	--	8.4	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	6.8	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	6.5	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	2.9	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	3.1	--	ND<250	--	--	--	--	--	--
	12/15/2009	--	2.9	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	3.6	--	ND<250	ND<0.50	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	2.7	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	--	--	--	--	--	--	--	--	--
	12/9/2011	--	--	--	--	--	--	--	--	--	--
	6/1/2012	--	--	--	--	--	--	--	--	--	--
	6/6/2013	--	--	--	--	--	--	--	--	--	--
	12/13/2013	--	--	--	--	--	--	--	--	--	--
	6/23/2014	--	--	--	--	--	--	--	--	--	--
	12/17/2014	--	--	--	--	--	--	--	--	--	--
	6/9/2015	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	12/30/2015	--	--	--	--	--	--	--	--	--	--
	6/22/2016	--	--	--	--	--	--	--	--	--	--
MW-9	11/7/1990	--	--	--	--	--	--	--	--	--	--
	2/25/1991	--	--	--	--	--	--	--	--	--	--
	5/28/1991	--	--	--	--	--	--	--	--	--	--
	8/28/1991	--	--	--	--	--	--	--	--	--	--
	11/19/1991	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	59	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	60	--	--	--	--	--	--	--	--	--
	5/6/1996	ND	--	--	--	--	--	--	--	--	--
11/5/1996	ND	--	--	--	--	--	--	--	--	--	
5/15/1997	ND	--	--	--	--	--	--	--	--	--	
11/12/1997	74	--	--	--	--	--	--	--	--	--	
5/4/1998	45	--	--	--	--	--	--	--	--	--	
11/11/1998	ND	--	--	--	--	--	--	--	--	--	
5/20/1999	ND	--	--	--	--	ND<1.0	--	--	--	--	
11/15/1999	ND	--	--	--	--	--	--	--	--	--	
5/22/2000	ND	--	--	--	--	--	--	--	--	--	
11/22/2000	ND	--	--	--	--	--	--	--	--	--	
5/15/2001	ND	--	--	--	--	--	--	--	--	--	
11/23/2001	ND<5.0	--	--	--	--	--	--	--	--	--	
5/24/2002	ND<5.0	--	--	--	--	--	--	--	--	--	
11/29/2002	--	--	ND<2.0	--	--	--	--	--	--	--	
5/15/2003	--	--	ND<2.0	--	--	--	--	--	--	--	
11/4/2003	--	--	--	--	--	--	--	--	--	--	
5/24/2004	--	--	160	29	ND<50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
11/29/2004	--	--	160	23	ND<50	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
6/24/2005	--	--	67	--	ND<1,000	ND<0.50	--	--	--	--	--
12/15/2005	--	--	82	11	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
6/14/2006	--	--	5.2	--	ND<250	ND<0.50	--	--	--	--	--
12/21/2006	--	--	36	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	6/28/2007	--	52	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	31	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	27	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	5.0	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	7.5	--	ND<250	--	--	--	--	--	--
	12/15/2009	--	3.7	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	2.2	--	ND<250	ND<0.50	--	--	ND<0.50	ND<0.010	ND<0.50
	12/29/2010	--	ND<0.50	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	--	--	--	--	--	--	--	--	--
	12/9/2011	--	--	--	--	--	--	--	--	--	--
	6/1/2012	--	--	--	--	--	--	--	--	--	--
	6/6/2013	--	--	--	--	--	--	--	--	--	--
	12/13/2013	--	--	--	--	--	--	--	--	--	--
	6/23/2014	--	--	--	--	--	--	--	--	--	--
	12/17/2014	--	--	--	--	--	--	--	--	--	--
	6/9/2015	--	--	--	--	--	--	--	--	--	--
	12/30/2015	--	--	--	--	--	--	--	--	--	--
	6/22/2016	--	--	--	--	--	--	--	--	--	--
MW-10	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	--	--	--	--	--	--	--	--	--	--
	5/6/1996	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	--	--	--	--	--	--	--	--
	5/15/1997	--	--	--	--	--	--	--	--	--	--
	11/12/1997	--	--	--	--	--	--	--	--	--	--
	5/4/1998	--	--	--	--	--	--	--	--	--	--
	11/11/1998	--	--	--	--	--	--	--	--	--	--
	5/20/1999	--	--	--	--	--	--	--	--	--	--
	11/15/1999	--	--	--	--	--	--	--	--	--	--
	5/22/2000	--	--	--	--	--	--	--	--	--	--
	11/22/2000	--	--	--	--	--	--	--	--	--	--
	5/15/2001	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	11/23/2001	--	--	--	--	--	--	--	--	--	--
	5/24/2002	--	--	--	--	--	--	--	--	--	--
	11/29/2002	--	--	--	--	--	--	--	--	--	--
	5/15/2003	--	--	--	--	--	--	--	--	--	--
	11/4/2003	--	ND<2.0	--	ND<500	ND<1.0	--	--	--	--	--
	5/24/2004	--	0.75	ND<5.0	ND<50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	11/29/2004	--	0.72	6.1	ND<50	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/24/2005	--	ND<0.50	--	ND<1,000	--	--	--	--	--	--
	12/15/2005	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/14/2006	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/21/2006	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/28/2007	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/15/2009	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	ND<0.50	--	ND<250	ND<0.50	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	ND<0.50	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	ND<0.50	--	--	--	--	--	--	--	--
	12/9/2011	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/1/2012	--	1.1	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/6/2013	--	0.92	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	0.92	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
MW-11	2/6/1992	--	--	--	--	--	--	--	--	--	--
	5/23/1992	--	--	--	--	--	--	--	--	--	--
	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	5/6/1996	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	--	--	--	--	--	--	--	--
	5/15/1997	--	--	--	--	--	--	--	--	--	--
	11/12/1997	--	--	--	--	--	--	--	--	--	--
	5/4/1998	--	--	--	--	--	--	--	--	--	--
	11/11/1998	--	--	--	--	--	--	--	--	--	--
	5/20/1999	ND	--	--	--	--	--	--	--	--	--
	11/15/1999	ND	--	--	--	--	--	--	--	--	--
	5/22/2000	ND	--	--	--	--	--	--	--	--	--
	11/22/2000	ND	--	--	--	--	--	--	--	--	--
	5/15/2001	ND	--	--	--	--	--	--	--	--	--
	11/23/2001	ND<5.0	--	--	--	--	--	--	--	--	--
	5/24/2002	ND<5.0	--	--	--	--	--	--	--	--	--
	11/29/2002	--	ND<2.0	--	--	--	--	--	--	--	--
	5/15/2003	--	ND<2.0	--	--	--	--	--	--	--	--
	11/4/2003	--	ND<2.0	--	ND<500	--	--	--	--	--	--
	5/24/2004	--	ND<0.50	--	ND<50	--	--	--	--	--	--
	11/29/2004	--	ND<0.50	--	ND<50	--	--	--	--	--	--
	6/24/2005	--	ND<0.50	--	ND<1,000	--	--	--	--	--	--
	12/15/2005	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/14/2006	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/21/2006	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/28/2007	--	--	--	--	--	--	--	--	--	--
	12/13/2007	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/15/2009	--	--	--	--	--	--	--	--	--	--
	6/28/2010	--	ND<0.50	--	ND<250	ND<0.50	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	ND<0.50	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	ND<0.50	--	--	--	--	--	--	--	--
	12/9/2011	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/1/2012	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/6/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	--	--	--	--	--	--	--	--	--
	12/17/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
MW-12	8/26/1992	--	--	--	--	--	--	--	--	--	--
	11/20/1992	--	--	--	--	--	--	--	--	--	--
	12/21/1992	--	--	--	--	--	--	--	--	--	--
	1/30/1993	--	--	--	--	--	--	--	--	--	--
	2/24/1993	--	--	--	--	--	--	--	--	--	--
	3/22/1993	--	--	--	--	--	--	--	--	--	--
	4/28/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/22/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	10/28/1993	--	--	--	--	--	--	--	--	--	--
	11/30/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	ND	--	--	--	--	--	--	--	--
	9/27/1994	--	--	--	--	--	--	--	--	--	--
	10/11/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	5/3/1995	--	--	--	--	--	--	--	--	--	--
	8/3/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	--	--	--	--	--	--	--	--	--	--
	5/6/1996	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	--	--	--	--	--	--	--	--
	5/15/1997	--	--	--	--	--	--	--	--	--	--
	11/12/1997	--	--	--	--	--	--	--	--	--	--
	5/4/1998	--	--	--	--	ND<2.0	--	--	--	--	--
	11/11/1998	--	--	--	--	--	--	--	--	--	--
	5/20/1999	--	--	--	--	--	--	--	--	--	--
	11/15/1999	--	--	--	--	--	--	--	--	--	--
	5/22/2000	--	--	--	--	--	--	--	--	--	--
	11/22/2000	--	--	--	--	--	--	--	--	--	--
	5/15/2001	--	--	--	--	--	--	--	--	--	--
	11/23/2001	--	--	--	--	--	--	--	--	--	--
	5/24/2002	--	--	--	--	--	--	--	--	--	--
	11/29/2002	--	--	--	--	--	--	--	--	--	--
	5/15/2003	--	--	--	--	--	--	--	--	--	--
	11/4/2003	--	4.4	ND<100	ND<500	ND<1.0	ND<2.0	ND<2.0	--	--	--
	5/24/2004	--	1.7	ND<5.0	ND<50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	11/29/2004	--	0.71	ND<5.0	ND<50	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/24/2005	--	ND<0.50	--	ND<1,000	--	--	--	--	--	--
	12/15/2005	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/14/2006	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/21/2006	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/28/2007	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	6/9/2008	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	12/30/2008	--	ND<0.50	--	ND<250	--	--	--	--	--	--
	9/28/2009	--	0.55	--	ND<250	--	--	--	--	--	--
	12/15/2009	--	0.56	--	ND<250	--	--	--	--	--	--
	6/28/2010	--	0.97	--	ND<250	ND<0.50	--	--	ND<0.50	ND<0.010	ND<0.50
	12/29/2010	--	0.95	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	2.0	--	--	--	--	--	--	--	--
	12/9/2011	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/1/2012	--	1.2	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/6/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	0.55	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	0.55	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	1.1	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
RW-1	2/24/1993	--	--	--	--	--	--	--	--	--	--
	5/12/1993	--	--	--	--	--	--	--	--	--	--
	5/25/1993	--	--	--	--	--	--	--	--	--	--
	6/7/1993	--	--	--	--	--	--	--	--	--	--
	6/23/1993	--	--	--	--	--	--	--	--	--	--
	7/8/1993	--	--	--	--	--	--	--	--	--	--

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	8/11/1993	--	--	--	--	--	--	--	--	--	--
	8/25/1993	--	--	--	--	--	--	--	--	--	--
	9/8/1993	--	--	--	--	--	--	--	--	--	--
	9/22/1993	--	--	--	--	--	--	--	--	--	--
	11/12/1993	--	--	--	--	--	--	--	--	--	--
	2/16/1994	--	--	--	--	--	--	--	--	--	--
	5/31/1994	--	--	--	--	--	--	--	--	--	--
	8/31/1994	--	--	--	--	--	--	--	--	--	--
	11/10/1994	--	--	--	--	--	--	--	--	--	--
	2/7/1995	--	--	--	--	--	--	--	--	--	--
	3/14/1995	--	--	--	--	--	--	--	--	--	--
	11/7/1995	--	--	--	--	--	--	--	--	--	--
	10/15/2001	--	--	--	--	--	--	--	--	--	--
	11/23/2001	--	--	--	--	--	--	--	--	--	--
	12/10/2001	--	--	--	--	--	--	--	--	--	--
	1/14/2002	--	--	--	--	--	--	--	--	--	--
	2/22/2002	--	--	--	--	--	--	--	--	--	--
	3/11/2002	--	--	--	--	--	--	--	--	--	--
	4/15/2002	--	--	--	--	--	--	--	--	--	--
	5/24/2002	--	--	--	--	--	--	--	--	--	--
	6/17/2002	--	--	--	--	--	--	--	--	--	--
	7/15/2002	--	--	--	--	--	--	--	--	--	--
	8/19/2002	--	--	--	--	--	--	--	--	--	--
	9/5/2002	--	--	--	--	--	--	--	--	--	--
	10/7/2002	--	--	--	--	--	--	--	--	--	--
	11/29/2002	--	--	--	--	--	--	--	--	--	--
	12/12/2002	--	--	--	--	--	--	--	--	--	--
	1/6/2003	--	--	--	--	--	--	--	--	--	--
	2/12/2003	--	--	--	--	--	--	--	--	--	--
	3/13/2003	--	--	--	--	--	--	--	--	--	--
	4/7/2003	--	--	--	--	--	--	--	--	--	--
	5/15/2003	--	--	--	--	--	--	--	--	--	--
	6/12/2003	--	--	--	--	--	--	--	--	--	--
	7/7/2003	--	--	--	--	--	--	--	--	--	--
	8/14/2003	--	--	--	--	--	--	--	--	--	--
	9/12/2003	--	--	--	--	--	--	--	--	--	--
	11/4/2003	--	210	ND<2,000	ND<10,000	ND<10	ND<40	ND<40	--	--	--
	5/24/2004	--	200	ND<50	ND<500	ND<2.0	ND<5.0	ND<5.0	ND<5.0	--	ND<5.0
	11/29/2004	--	140	38	ND<100	--	ND<1.0	1.3	ND<1.0	--	ND<1.0
	6/24/2005	--	56	--	ND<1,000	ND<0.50	--	--	--	--	--
	12/15/2005	--	44	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/14/2006	--	21	--	ND<250	ND<0.50	--	--	--	--	--
	12/21/2006	--	27	34	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/28/2007	--	65	--	ND<250	--	--	--	--	--	--
	12/13/2007	--	30	--	ND<500	--	--	--	--	--	--
	6/9/2008	--	39	--	ND<1,200	--	--	--	--	--	--
	12/30/2008	--	22	--	ND<1,200	--	--	--	--	--	--
	9/28/2009	--	21	--	ND<1,200	--	--	--	--	--	--
	12/15/2009	--	ND<2.5	--	ND<1,200	--	--	--	--	--	--
	6/28/2010	--	5.6	--	ND<250	ND<0.50	--	--	ND<0.50	--	ND<0.50
	12/29/2010	--	1.6	ND<10	ND<250	--	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
	6/7/2011	--	ND<0.50	--	--	--	--	--	--	--	--
	10/21/2011	--	--	--	--	--	--	--	--	--	--
	12/9/2011	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	1/12/2012	--	--	--	--	--	--	--	--	--	--
	6/1/2012	--	ND<2.5	--	ND<1,200	--	--	--	ND<2.5	--	ND<2.5

Table 5
Historical Groundwater Analytical Results - Oxygenate Compounds
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

WELL ID	DATE	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDB 504 (µg/L)	EDC (µg/L)
	6/6/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/13/2013	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/23/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/17/2014	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/9/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	12/30/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50
QA	12/30/2015	--	ND<0.50	--	ND<250	--	--	--	ND<0.50	--	ND<0.50
	6/22/2016	--	ND<0.50	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50

NOTES:

µg/L = Micrograms per liter

-- = Not available/not sampled

504 = Analyzed by Environmental Protection Agency (EPA) Method 504

8021 = Analyzed by EPA Method 8021B

8260B = Analyzed by EPA Method 8260B

DIPE = Diisopropyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

ID = Identification

J = Laboratory estimated value

MTBE = Methyl t-Butyl Ether

ND = Not detected

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

QA = Quality assurance/trip blank

TAME = t-Amyl Methyl ether

TBA = t-Butyl alcohol

Table 6
LNAPL Recovery Data
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

DATE	MW-5	RW-1
11/11/1998	0	0
2/22/1999	0.04	0
4/2/1999	0.07	0
5/4/1999	0	0
5/20/1999	0	0
6/29/1999	0	0
0729/99	0	0
8/24/1999	0	0
9/27/1999	0	0
10/28/1999	0	0
11/15/1999	0	0
12/20/1999	0	0
1/20/2000	0	0
2/26/2000	0	0
3/31/2000	0	0
4/13/2000	0	0
5/22/2000	0	0
11/22/2000	0.02	0
2/14/2001	0.06	0
3/28/2001	0	0
4/28/2001	0	0
5/15/2001	0	0
6/29/2001	0	0
7/17/2001	0	0
8/30/2001	0	0
9/24/2001	0	0
10/15/2001	0.03	0
11/23/2001	0	0
12/10/2001	0	0
1/14/2002	0	0
2/22/2002	0	0
3/11/2002	0	0
4/15/2002	0	0
5/24/2002	0.04	0
6/17/2002	0.04	0
7/15/2002	0.02	0
8/19/2002	0.05	0
9/5/2002	0.03	0
10/7/2002	0.02	0
11/29/2002	0.02	0
12/12/2002	0.01	0
1/6/2003	0.01	0
2/12/2003	0.02	0
3/13/2003	0.02	0
4/7/2003	0.01	0
5/15/2003	0.03	0
6/12/2003	0.02	0
7/7/2003	0.01	0
8/14/2003	0.02	0
9/12/2003	0.02	0
10/15/2003	0.087	0
11/4/2003	0.043	0
11/21/2003	0.032	0
12/18/2003	0.024	0
1/7/2004	0.009	0

Table 6
LNAPL Recovery Data
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

DATE	MW-5	RW-1
2/9/2004	0.01	0.01
3/24/2004	0.031	0
4/16/2004	0	0
5/24/2004	0.050	0
6/8/2004	0.049	0
7/2/2004	0.046	0
8/20/2004	0.080	0
9/17/2004	0.048	0
10/22/2004	0.024	0
11/29/2004	0.036	0
12/21/2004	0.010	0
1/24/2005	0.027	0
2/18/2005	0.020	0
3/18/2005	0.024	0
4/14/2005	0.010	0
5/17/2005	0.010	0
6/24/2005	0	0
7/14/2005	0.020	0
8/5/2005	0.050	0
9/16/2005	0.009	0
10/21/2005	0	0
11/22/2005	0	0
12/15/2005	0	0
1/19/2006	0	0
2/15/2006	0	0
3/25/2006	0	0
4/27/2006	0	0
5/25/2006	0	0
6/14/2006	0	0
7/3/2006	0	0
8/10/2006	0	0
9/15/2006	0.027	0
10/27/2006	0.009	0
11/22/2006	0.017	0
12/21/2006	0	0
2/5/2007	0.010	0
2/20/2007	0	0
3/28/2007	0	0
4/30/2007	0	0
5/23/2007	0.073	0
6/28/2007	0.049	0
8/1/2007	0	0
8/27/2007	0	0
9/12/2007	0.040	0
10/16/2007	0	0
12/13/2007	0.029	0
1/29/2008	0.010	0
2/28/2008	0.020	0
3/21/2008	0	0
4/11/2008	0.058	0
5/21/2008	0.044	0
6/9/2008	0.029	0
7/18/2008	0.032	0
8/15/2008	0.024	0
9/24/2008	0.051	0

Table 6
LNAPL Recovery Data
76 Station No. 0746 (351647)
3943 Broadway
Oakland, California

DATE	MW-5	RW-1
10/22/2008	0.044	0
11/26/2008	0.034	0
12/30/2008	0.022	0
1/23/2009	NA	0
3/27/2009	0	0
4/28/2009	0.102	0
5/28/2009	NA	NA
7/31/2009	0.034	0
8/21/2009	0.102	0
9/28/2009	0.017	0
10/26/2009	0.063	0
11/30/2009	0.075	0
12/15/2009	0.010	0
1/25/2010	0.003	0
2/26/2010	0	0
3/23/2010	0.01	0
4/22/2010	0.009	0
5/21/2010	0.117	0
6/28/2010	0.085	0
7/21/2010	0.04	0
8/18/2010	0.07	0
9/29/2010	0.03	0
10/18/2010	0.046	0
11/30/2010	0.058	0
12/29/2010	0.25	0
1/6/2011	0.138	0
1/20/2011	0.231	0
2/1/2011	0.23	0
2/14/2011	0	0
3/3/2011	0	0
3/22/2011	0	0
4/25/2011	0	0
5/27/2011	0	0
9/13/2011	0	0
10/20/2011	0	0
11/4/2011	0	0
12/23/2011	0.21	0
9/2/2015	0	NA
10/16/2015	0	0
11/12/2015	0	0
12/30/2015	0	0
1/22/2016	0	NM
2/24/2016	0	NM
3/14/2016	0	0.05
4/21/2016	0	0
5/20/2016	0.21	0.31
6/22/2016	0.14	0.33
Total LNAPL Removed (gallons):	4.26	0.70

NOTES:

LNAPL = Light non-aqueous phase liquid

NA = Not applicable

NM = Not measured

ATTACHMENT D

HYDROGRAPHS

Chart 1 - Hydrograph for Well MW-1



Chart 2 - Hydrograph for Well MW-2

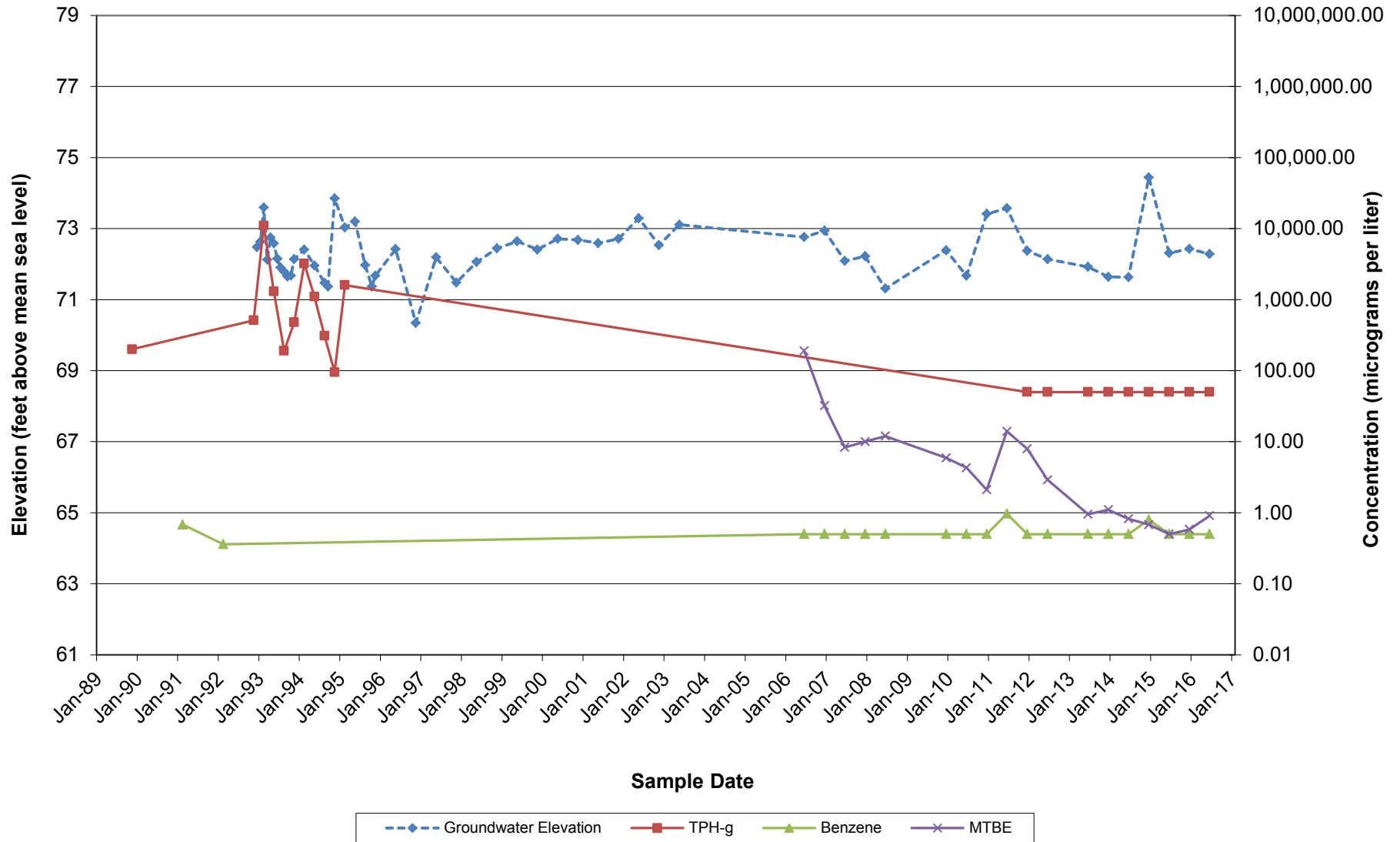


Chart 3 - Hydrograph for Well MW-3

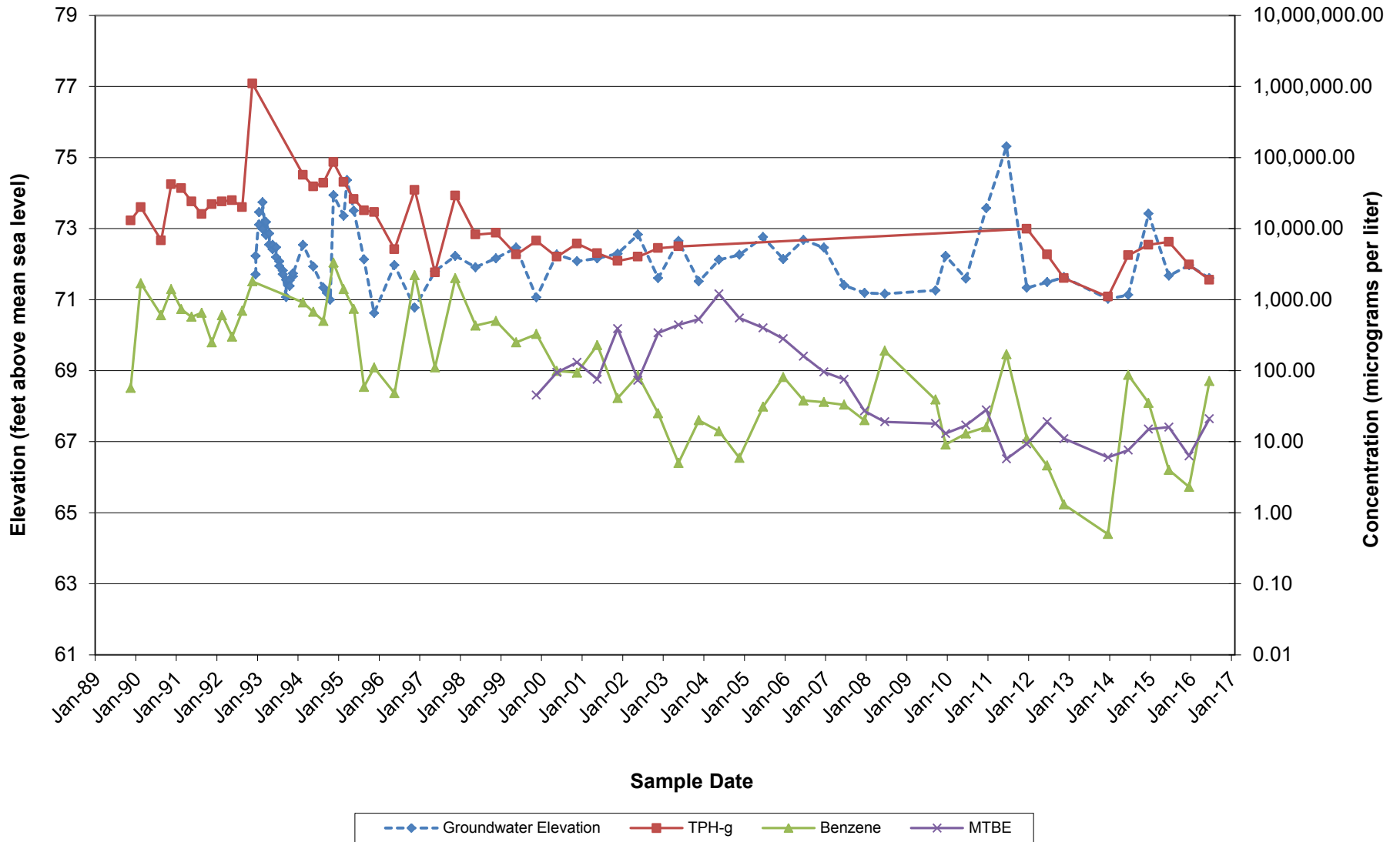


Chart 4 - Hydrograph for Well MW-4

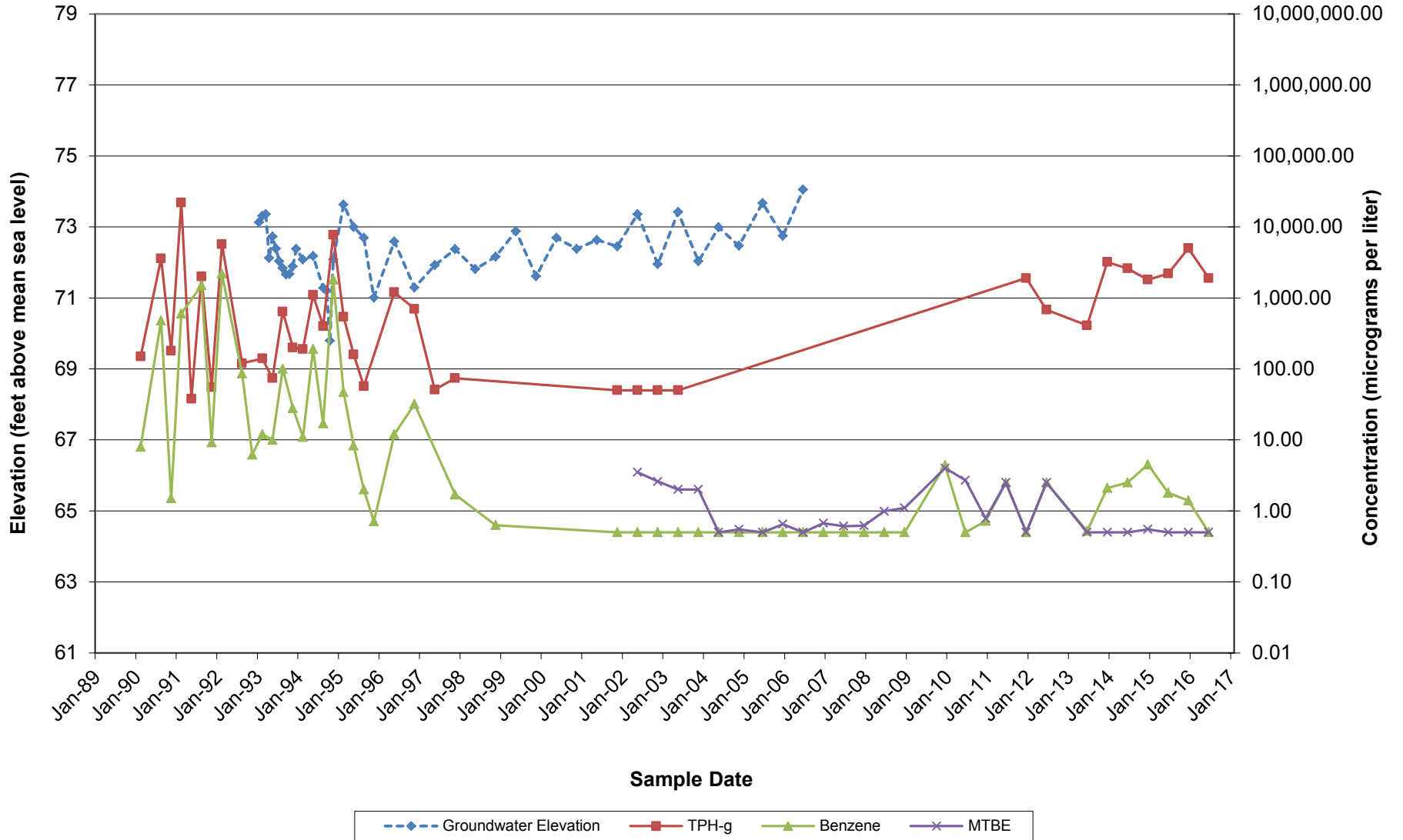


Chart 5 - Hydrograph for Well MW-5

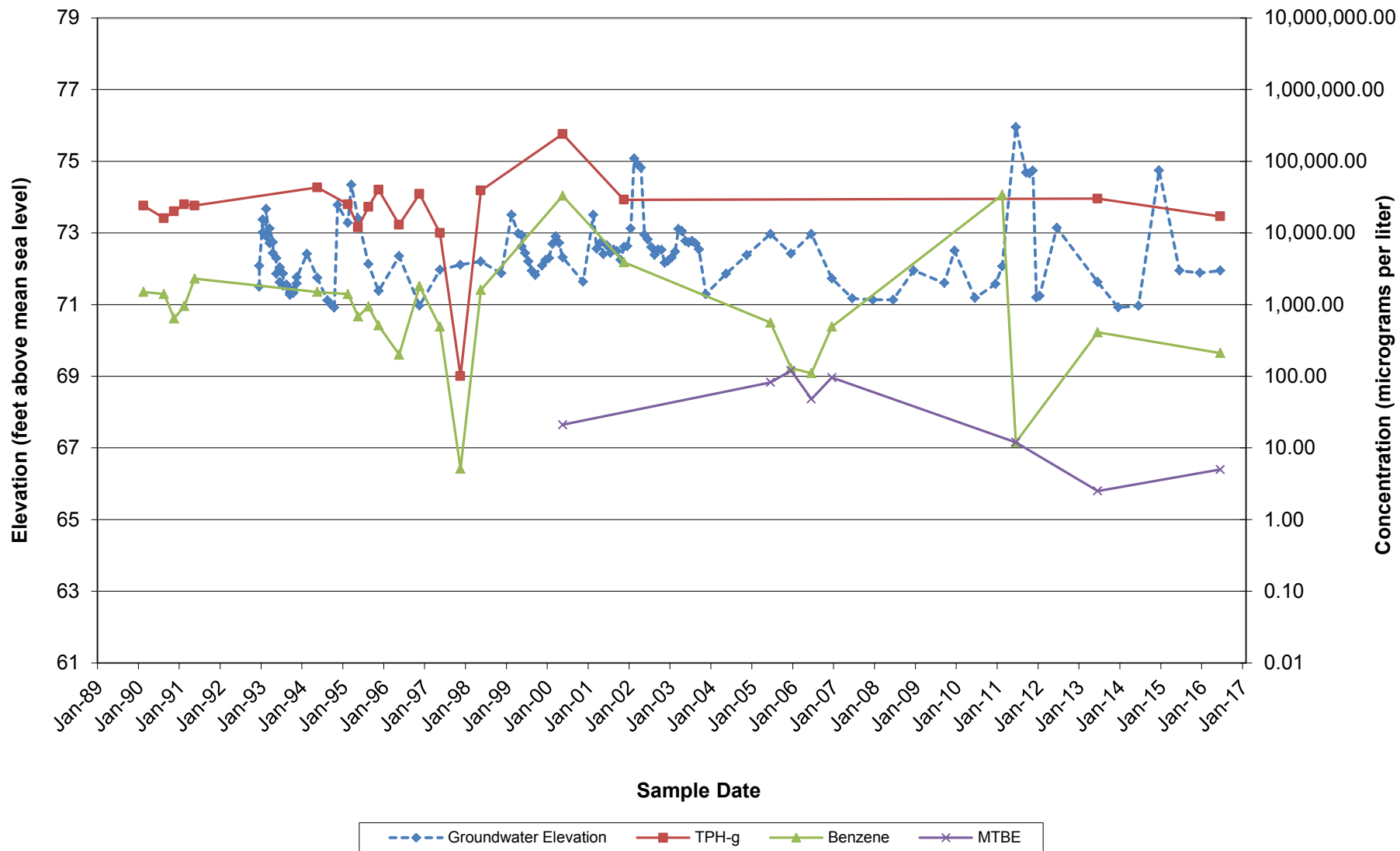


Chart 6 - Hydrograph for Well MW-6

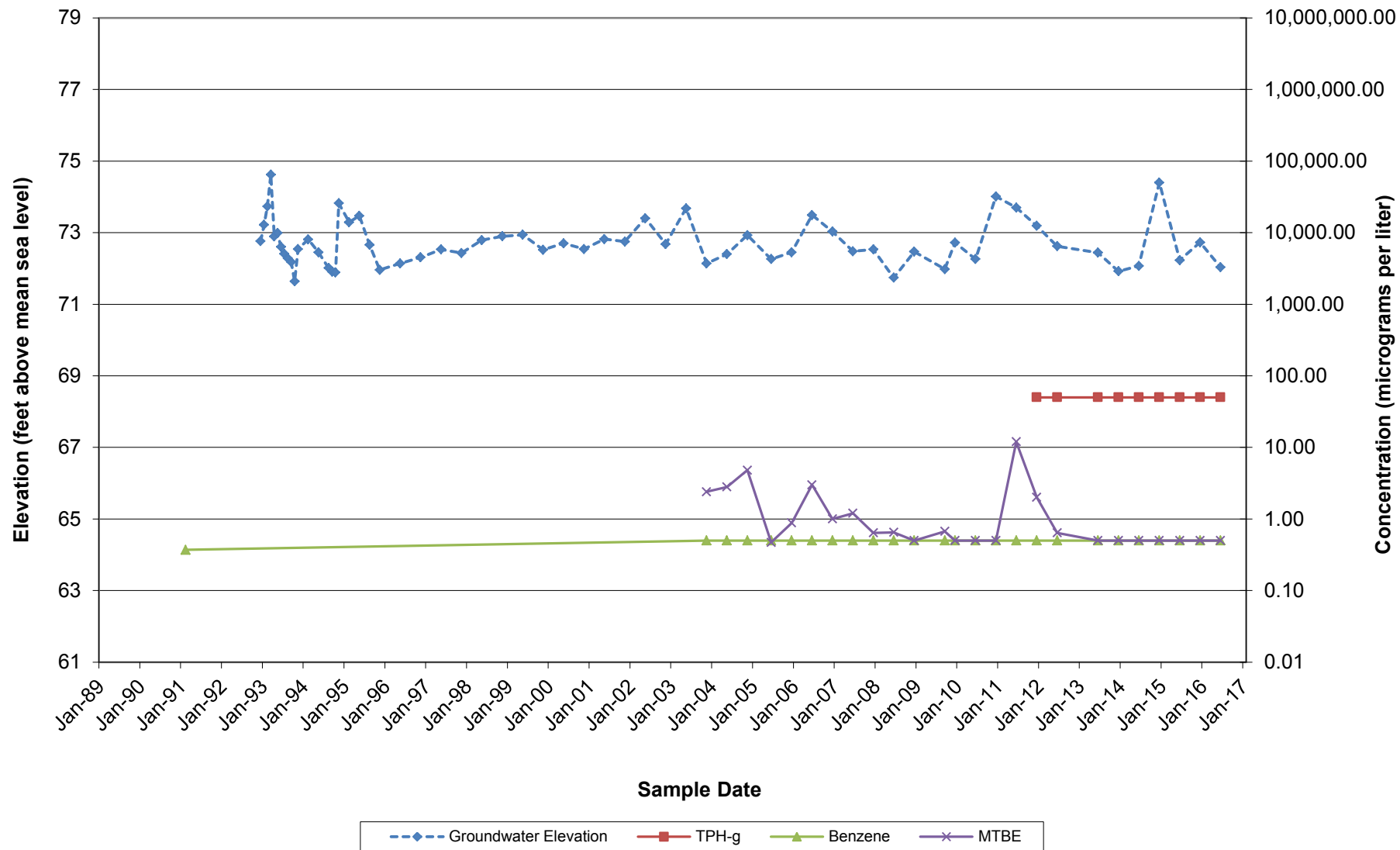


Chart 7 - Hydrograph for Well MW-7

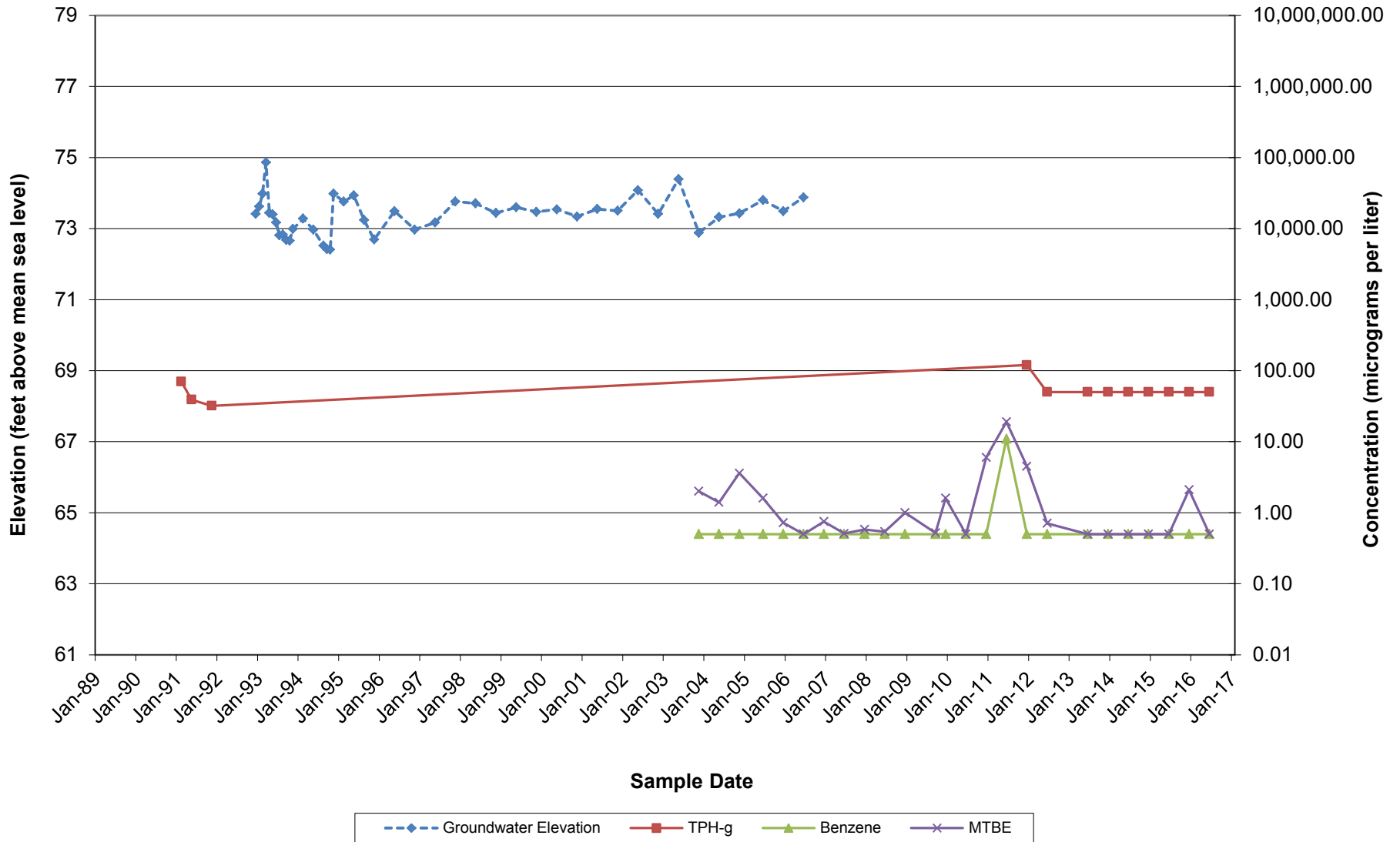


Chart 8 - Hydrograph for Well MW-8

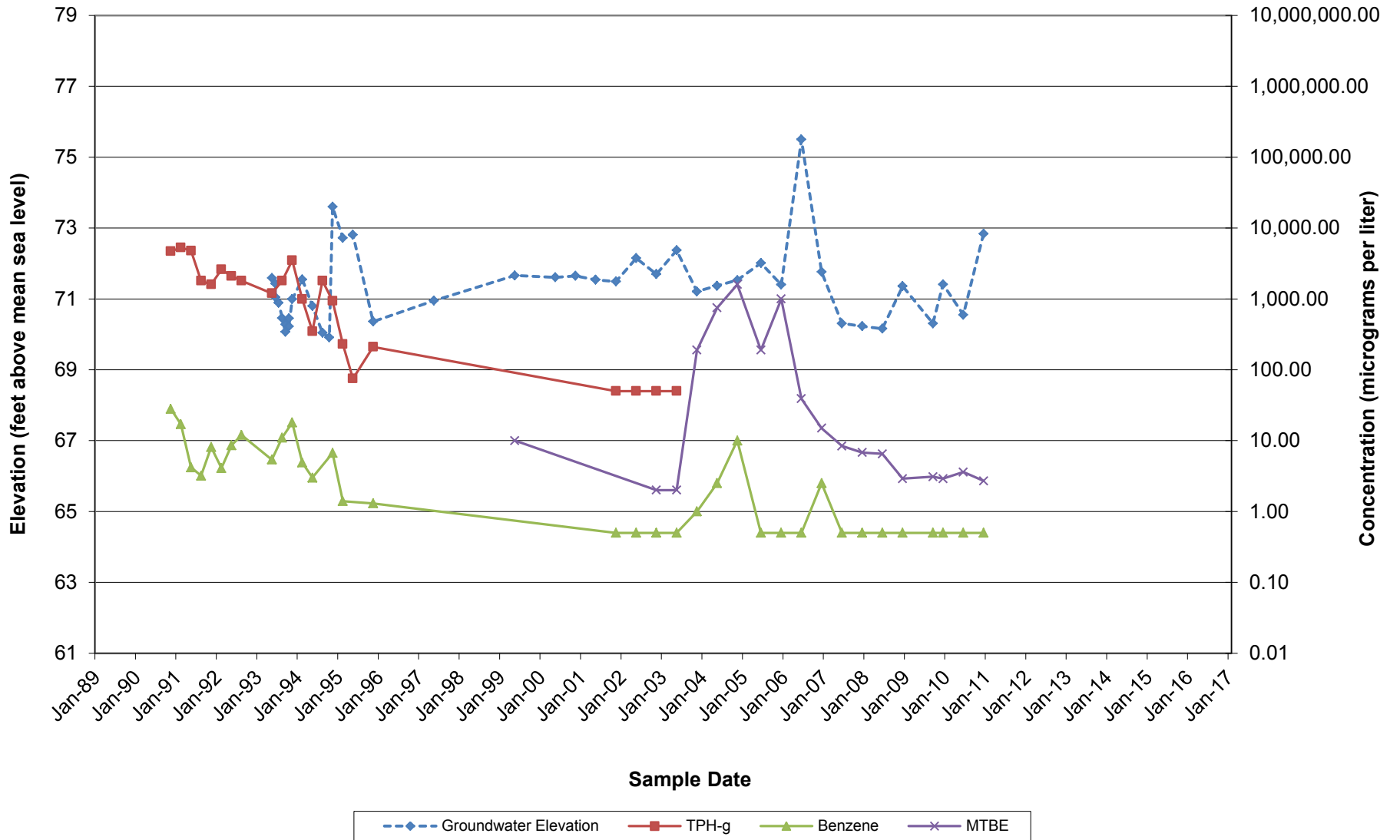


Chart 9 - Hydrograph for Well MW-9

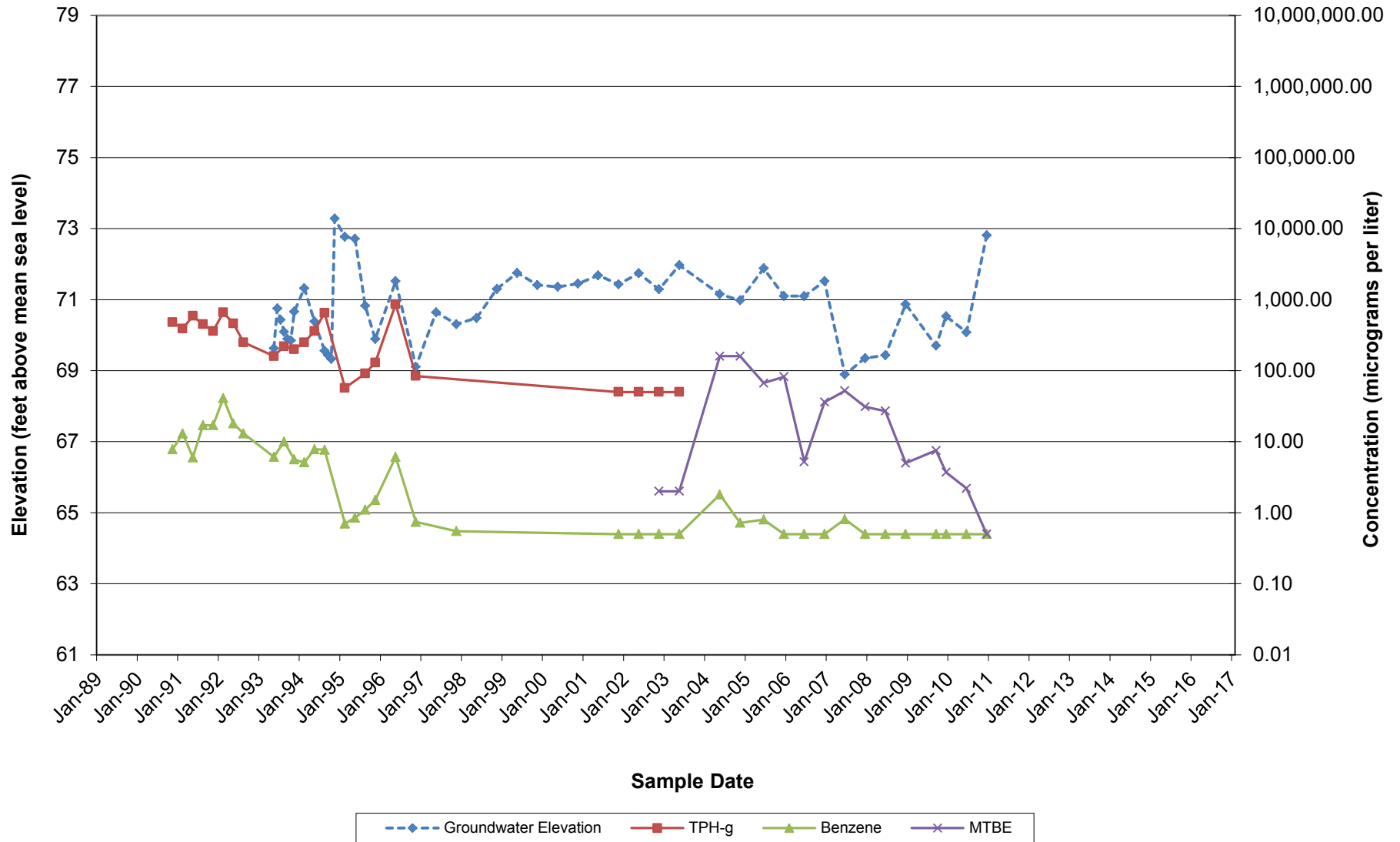


Chart 10 - Hydrograph for Well MW-10

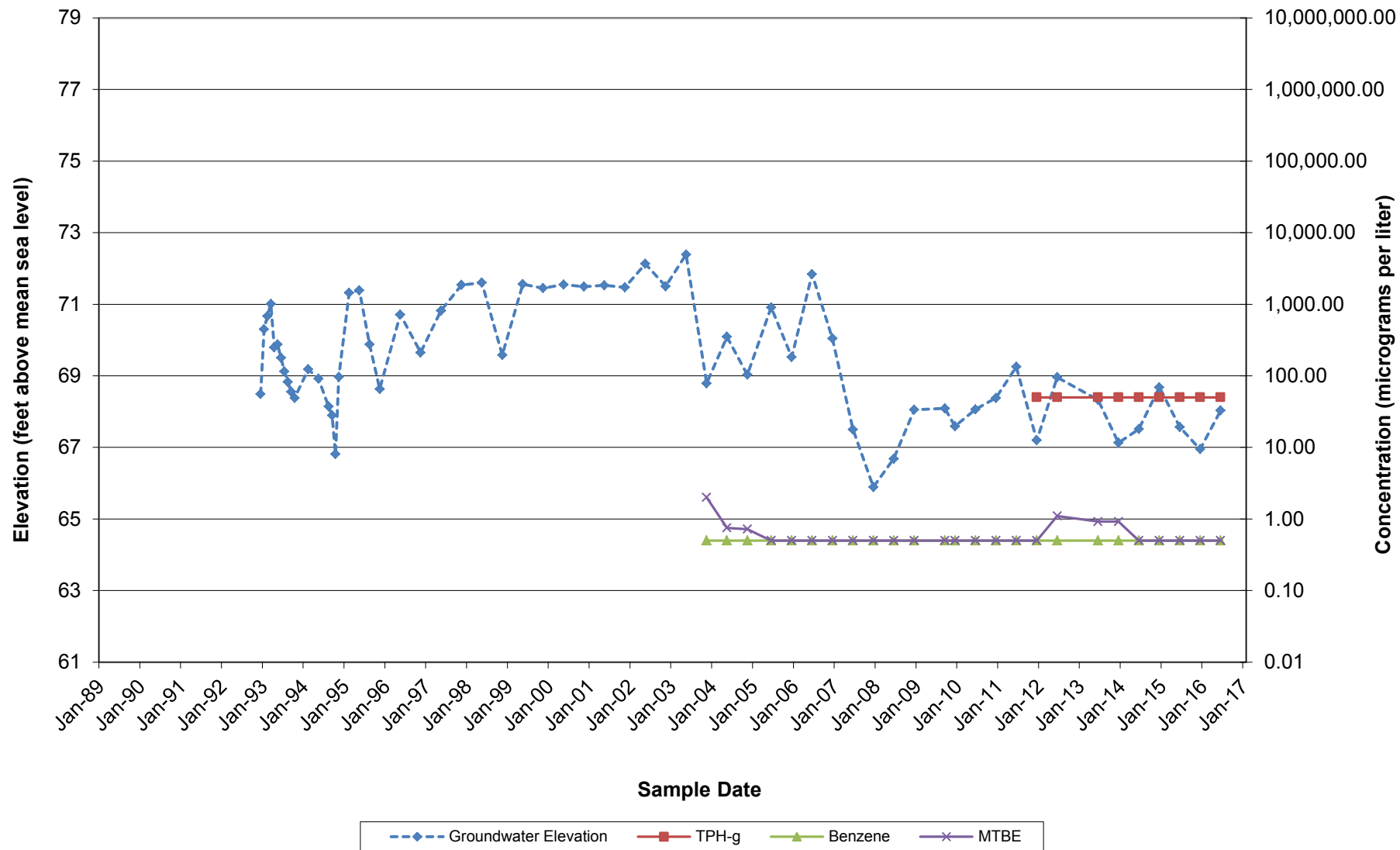


Chart 11 - Hydrograph for Well MW-11

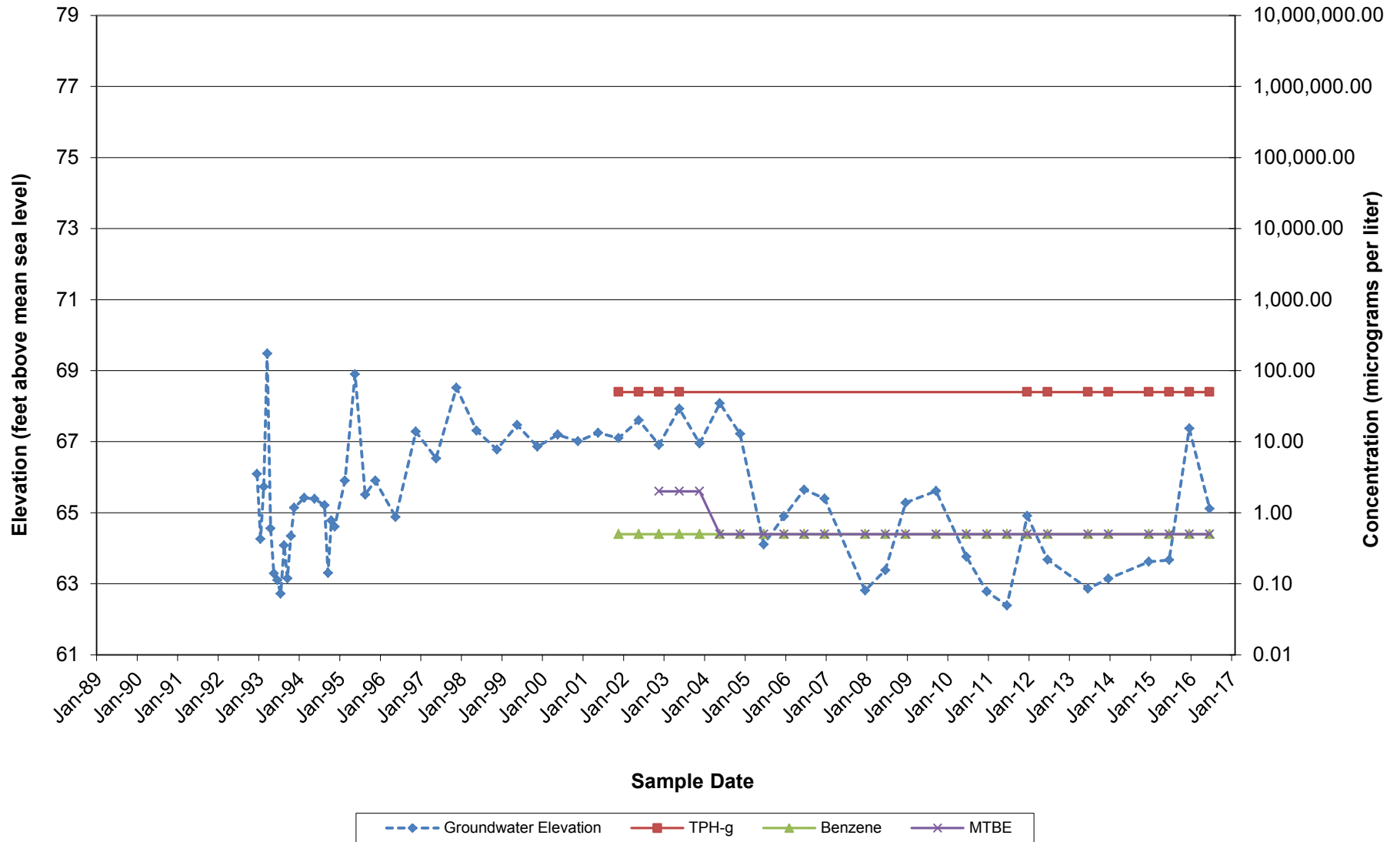


Chart 12 - Hydrograph for Well MW-12

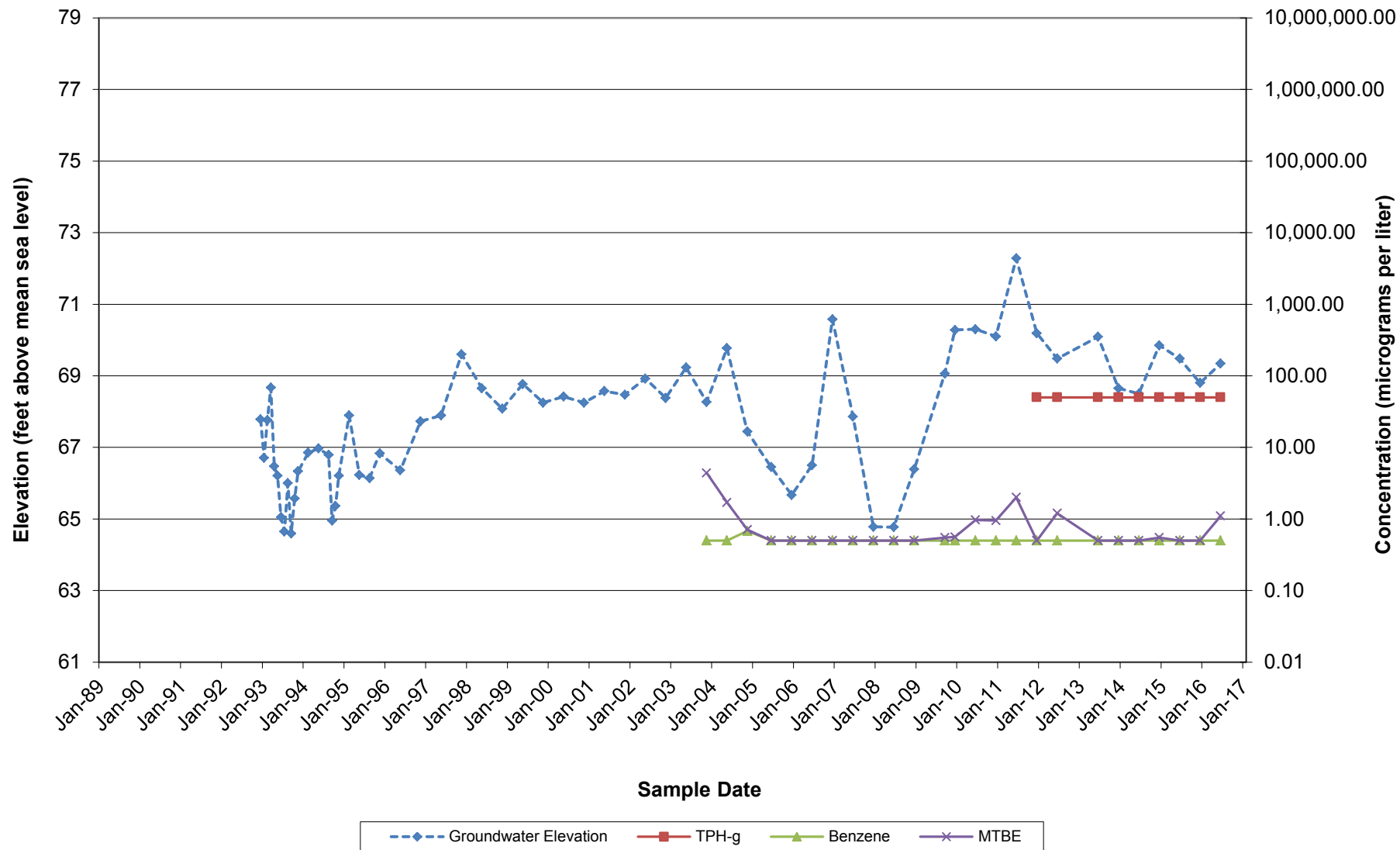
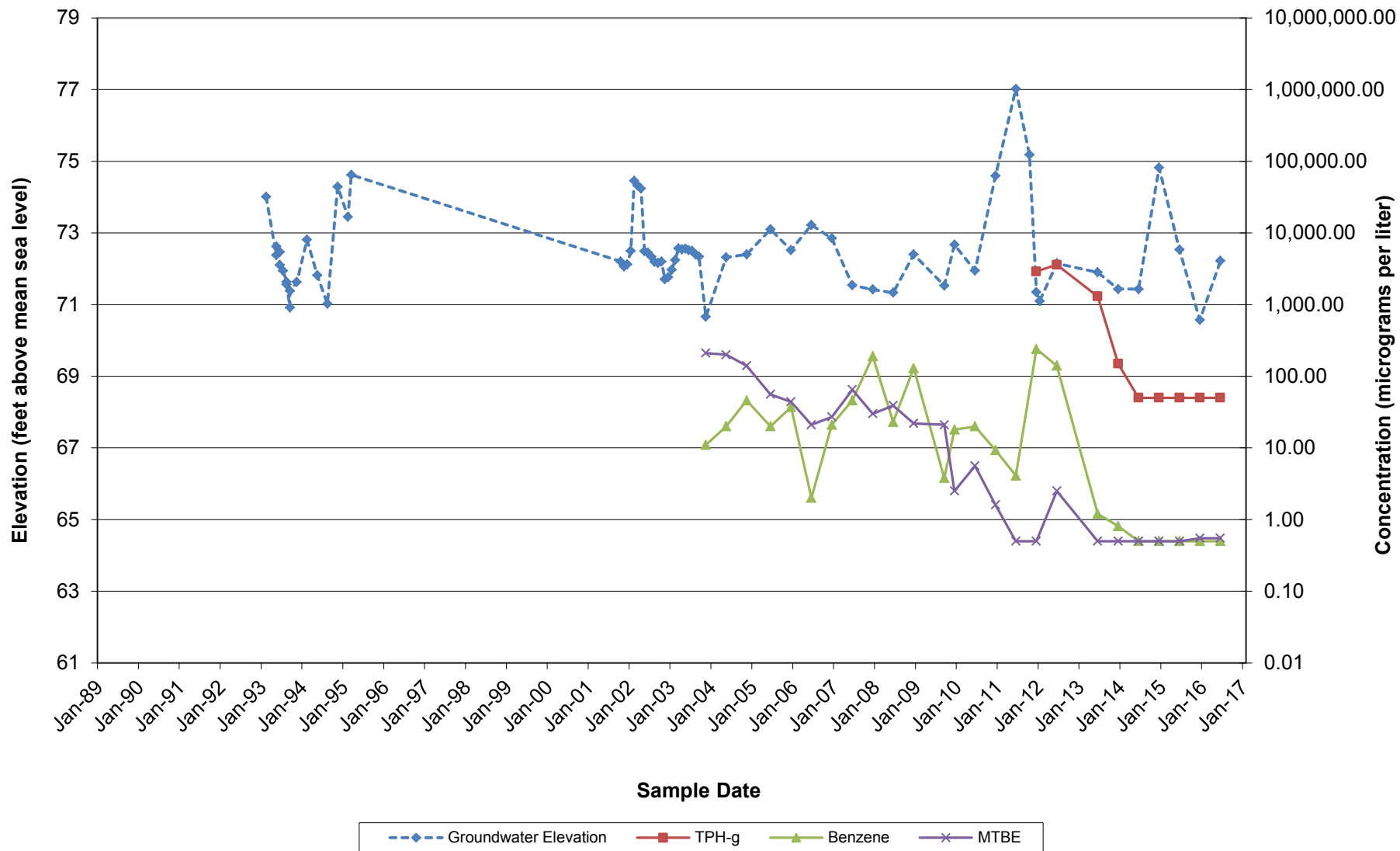


Chart 13 - Hydrograph for Well RW-1



ATTACHMENT E

**FIELD PROCEDURES AND
FIELD LOGS**



GETTLER-RYAN INC.



TRANSMITTAL

January 29, 2016
G-R #385648

TO: Mr. Chad Roper
AECOM
1220 Avenida Acaso
Camarillo, California 93012

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Unocal 0746**
Chevron #351647
3943 Broadway
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Monthly Event of January 22, 2016

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351647 0746

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 1.22.16 (inclusive)
 Sampler: FR

Well ID: MW-5 Date Monitored: 1.22.16
 Well Diameter: 216 in.
 Total Depth: 50.16 ft.
 Depth to Water: 7.80 ft. Check if water column is less than 0.50 ft.
42.36 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.
 Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): _____

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: 7.58 ft
 Depth to Water: 7.80 ft
 Hydrocarbon Thickness: .22 ft
 Visual Confirmation/Description:
Yes / Blk, oily
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: 0 ltr
 Amt Removed from Well: 0 ltr
 Water Removed: 0 ltr

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING
SKIMMER IN WELL
M10

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
Site Address: 3943 Broadway
City: Oakland, CA

Job Number: 385648
Event Date: 1.22.16 (inclusive)
Sampler: FT

Well ID: RW-1
Well Diameter: 21(6) in.
Total Depth: 16.34 ft.
Depth to Water: 6.48 ft.

Date Monitored: 1.22.16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

9.86 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
Stainless Steel Bailer _____
Stack Pump _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: _____

Sampling Equipment:

Disposable Bailer _____
Pressure Bailer _____
Metal Filters _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: _____

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: _____ ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ ltr
Amt Removed from Well: _____ ltr
Water Removed: _____ ltr

Start Time (purge): _____ Weather Conditions: _____
Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
Approx. Flow Rate: _____ gpm. Sediment Description: _____
Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING NO PRODUCT PRESENT IN H2O
SOCK IN WELL
M10

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER - RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: FRANK TENNINONI	Date: 1-22-16	Project Number: Chevron #351647
Site Address: 3943 Broadway Oakland, CA	Well ID: RW-1	Weather: RAIN

1. Time absorbent sock removed from well for inspection: 1015

2. Condition of sock:

a. Length of sock showing product saturation: 8"

b. Length of sock showing dryness: 22"

c. Color of sock showing product saturation: BRN.

d. Weight of the removed sock: NA

e. Weight of new/clean/dry sock: NA

f. Difference in weight [(d-e) to 0.01 ounces]: NA

3. Picture of sock removed from well taken:

4. Sock removed from well deposited into a waste drum:

Confirm drum is labeled: NA

How full is the drum (%): NA

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

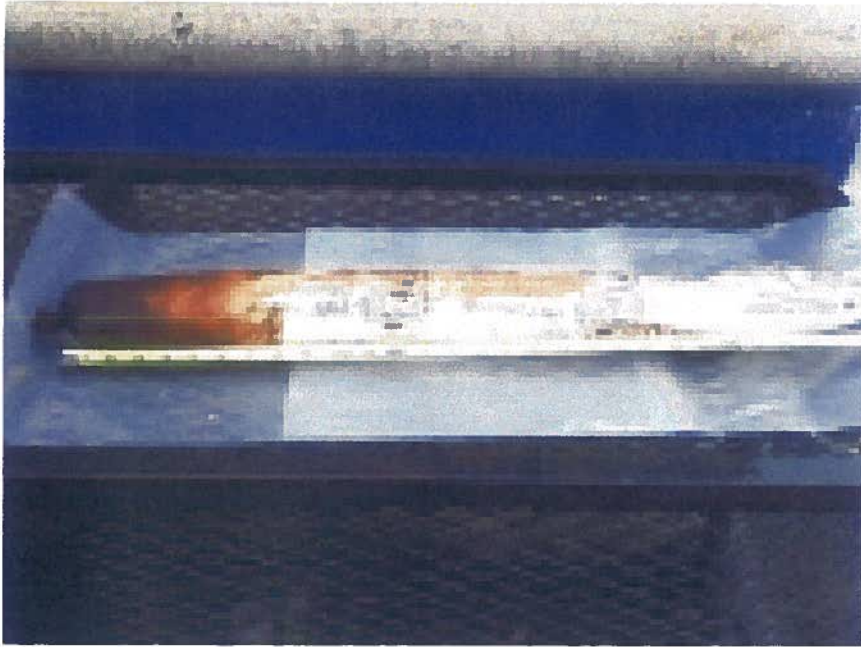
a. Depth to product: 0

b. Depth to water: 6.48

c. Thickness of product (b-a): 0

6. Size and type of sock installed: NA

7. Comments: _____



351647, Oakland RW-1



GETTLER-RYAN INC.



TRANSMITTAL

March 4, 2016
G-R #385648

TO: Mr. Chad Roper
AECOM
1220 Avenida Acaso
Camarillo, California 93012

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Unocal 0746
Chevron #351647
3943 Broadway
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Monthly Event of February 24, 2016

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351647 0746

WELL CONDITION STATUS SHEET

Client/
 Facility #: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job #: 385648
 Event Date: 2.24.16
 Sampler: Ft

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retaped	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Y/N
MW-5	OK							↓	↓	Emco 12" 2	
RW-1	OK							↓	↓	Emco 16" 3	

Comments _____

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 2-24-16 (inclusive)
 Sampler: FT

Well ID: MW-5
 Well Diameter: 0.6 in.
 Total Depth: 30.16 ft.
 Depth to Water: 9.07 ft.
41.09 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2-24-16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____	(2400 hrs)
Time Completed:	_____	(2400 hrs)
Depth to Product:	<u>9.04</u>	ft
Depth to Water:	<u>9.07</u>	ft
Hydrocarbon Thickness:	<u>.03</u>	ft
Visual Confirmation/Description:	<u>BLK / Oily</u>	
Skimmer / Absorbant Sock (circle one)	_____	
Amt Removed from Skimmer:	<u>0</u>	ltr
Amt Removed from Well:	<u>0</u>	ltr
Water Removed:	<u>0</u>	ltr

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: / Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 2.24.16 (inclusive)
 Sampler: FT

Well ID: RW-1
 Well Diameter: 210 in.
 Total Depth: 16.34 ft.
 Depth to Water: 9.46 ft.
6.88 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.24.16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer/ Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: <u>Frank Tennison</u>	Date: <u>2-24-16</u>	Project Number: <u>Chevron #351647</u>
Site Address: <u>3943 Broadway</u> <u>Oakland, CA</u>	Well ID: <u>RW-1</u>	Weather: <u>SUNNY</u>

1. Time absorbent sock removed from well for inspection: 1045

2. Condition of sock:

a. Length of sock showing product saturation: 6"

b. Length of sock showing dryness: 24"

c. Color of sock showing product saturation: Brown

d. Weight of the removed sock: NA

e. Weight of new/clean/dry sock: NA

f. Difference in weight [(d-e) to 0.01 ounces]: NA

3. Picture of sock removed from well taken:

4. Sock removed from well deposited into a waste drum:

Confirm drum is labeled: NA

How full is the drum (%): NA

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

a. Depth to product: 0

b. Depth to water: 9.07

c. Thickness of product (b-a): 0

6. Size and type of sock installed: NA

7. Comments: _____





GETTLER-RYAN INC.



TRANSMITTAL

March 22, 2016
G-R #385648

TO: Mr. Chad Roper
AECOM
1220 Avenida Acaso
Camarillo, California 93012

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Unocal 0746
Chevron #351647
3943 Broadway
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Monthly Event of March 14, 2016

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351647 0746

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 3/14/16 (inclusive)
 Sampler: JB

Well ID: MW-5
 Well Diameter: 2.6 in.
 Total Depth: 50.16 ft.
 Depth to Water: 6.45 ft.

Date Monitored: 3/14/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

43.71 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: 6.31 ft
 Depth to Water: 6.45 ft
 Hydrocarbon Thickness: .14 ft
 Visual Confirmation/Description: Amber
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING Skimmer in well

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 3/14/16 (inclusive)
 Sampler: JH

Well ID: RW-1
 Well Diameter: 2 1/6 in.
 Total Depth: 16.39 ft.
 Depth to Water: 6.20 ft.

Date Monitored: 3/14/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

10.14 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: 0 ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING Sole in well

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: <u>J. Herrera</u>	Date: <u>3/19/16</u>	Project Number: <u>Chevron #351647</u>
Site Address: <u>3943 Broadway</u> <u>Oakland, CA</u>	Well ID: <u>BW-1</u>	Weather: <u>clear</u>

1. Time absorbent sock removed from well for inspection:

1230

2. Condition of sock:

a. Length of sock showing product saturation:

6"

b. Length of sock showing dryness:

24"

c. Color of sock showing product saturation:

Black/Brown

d. Weight of the removed sock:

15.1 oz

e. Weight of new/clean/dry sock:

10 oz

f. Difference in weight [(d-e) to 0.01 ounces]:

5.1 oz

3. Picture of sock removed from well taken:



4. Sock removed from well deposited into a waste drum:



N/A

Confirm drum is labeled:

How full is the drum (%):

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

a. Depth to product:

0

b. Depth to water:

6.20

c. Thickness of product (b-a):

N/A

6. Size and type of sock installed:

N/A

7. Comments:

evaluation only



3/17/2016 / 10:48:42, RW-1 Sock.jpg



GETTLER-RYAN INC.



TRANSMITTAL

April 29, 2016
G-R #385648

TO: Mr. Chad Roper
AECOM
1220 Avenida Acaso
Camarillo, California 93012

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Unocal 0746
Chevron #351647
3943 Broadway
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Monthly Event of April 21, 2016

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351647 0746

WELL CONDITION STATUS SHEET

Client/
Facility #: Chevron #351647 / 0746

Site Address: 3943 Broadway

City: Oakland, CA

Job #: 385648

Event Date: 4.21.16

Sampler: FX

WELL ID	Vault Frame Condition	Gasket/O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retaped	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/ <input checked="" type="radio"/>	REPLACE CAP <input checked="" type="radio"/>	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken <input checked="" type="radio"/> /N
MW-5	OK						→	↓	Y	Emco 12" 2	
RW-1	OK						→	↓	N	Emco 18" 3	

Comments _____

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
Site Address: 3943 Broadway
City: Oakland, CA

Job Number: 385648
Event Date: 4. 21.16 (inclusive)
Sampler: FT

Well ID: MW-5
Well Diameter: 2/6 in.
Total Depth: 50.16 ft.
Depth to Water: 8.63 ft.
41.53 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 4. 21.16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:

Purge Equipment:

Disposable Bailer _____
Stainless Steel Bailer _____
Stack Pump _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: _____

Sampling Equipment:

Disposable Bailer _____
Pressure Bailer _____
Metal Filters _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbent Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr

Start Time (purge): _____
Sample Time/Date: _____ / _____
Approx. Flow Rate: _____ gpm.
Did well de-water? _____ If yes, Time: _____

Weather Conditions: _____
Water Color: _____ Odor: Y / N
Sediment Description: _____
Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING

NEW 2" PLUG INSTALLED.
SOCK IN WELL INSIDE A CAGE.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug:



GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: <u>FRANK TENNIONI</u>	Date: <u>4.21.16</u>	Project Number: <u>Chevron #351647</u>
Site Address: <u>3943 Broadway</u> <u>Oakland, CA</u>	Well ID: <u>MW-5</u>	Weather: <u>CLOUDY</u>

1. Time absorbent sock removed from well for inspection: 1200

2. Condition of sock:

a. Length of sock showing product saturation: 12"

b. Length of sock showing dryness: 0

c. Color of sock showing product saturation: LIGHT BLK

d. Weight of the removed sock: 1lb 15 1/2 oz.

e. Weight of new/clean/dry sock: NA

f. Difference in weight [(d-e) to 0.01 ounces]: NA

3. Picture of sock removed from well taken:

4. Sock removed from well deposited into a waste drum:

Confirm drum is labeled: NA

How full is the drum (%): NA

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

a. Depth to product: 0

b. Depth to water: 8.63

c. Thickness of product (b-a): 0

6. Size and type of sock installed: 2" x 35" / TYPE UNKNOWN

7. Comments: WHOLE SOCK WAS SATURATED NO DRYNESS

INSTALLED NEW WELL PLUG.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 4.21.16 (inclusive)
 Sampler: FT

Well ID: Rw-1
 Well Diameter: 21/6 in.
 Total Depth: 16.34 ft.
 Depth to Water: 7.63 ft.
8.71 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 4.21.16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): _____
 Sample Time/Date: 1
 Approx. Flow Rate: _____ gpm.
 Did well de-water? 1 If yes, Time: _____

Weather Conditions: _____
 Water Color: _____ Odor: Y / N
 Sediment Description: _____
 Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING

SOCK IN WELL INSIDE A CAGE.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN Inc.

SORBENT SOCK EVALUATION FORM

Name: FRANK TEMLINON	Date: 4. 21.16	Project Number: Chevron #351647
Site Address: 3943 Broadway Oakland, CA	Well ID: RW-1	Weather: CLOUDY

1. Time absorbent sock removed from well for inspection: 1130

2. Condition of sock:

a. Length of sock showing product saturation: 0

b. Length of sock showing dryness: 0

c. Color of sock showing product saturation: 0

d. Weight of the removed sock: 2 lbs 17 1/8 oz.

e. Weight of new/clean/dry sock: NA

f. Difference in weight [(d-e) to 0.01 ounces]: NA

3. Picture of sock removed from well taken:

4. Sock removed from well deposited into a waste drum:

Confirm drum is labeled: NA

How full is the drum (%): NA

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

a. Depth to product: 0

b. Depth to water: 7.63

c. Thickness of product (b-a): 0

6. Size and type of sock installed: 4" x 40" / TYPE UNKNOWN

7. Comments: WHOLE SOCK WAS SATURATED WITH GROUND WATER
NO EVIDENCE OF ANY PRODUCT SATURATION.



GETTLER-RYAN INC.



TRANSMITTAL

May 27, 2016
G-R #385648

TO: Mr. Chad Roper
AECOM
1220 Avenida Acaso
Camarillo, California 93012

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Unocal 0746
Chevron #351647
3943 Broadway
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Monthly Event of May 20, 2016

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351647 0746

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
Site Address: 3943 Broadway
City: Oakland, CA

Job Number: 385648
Event Date: 5.20.16 (inclusive)
Sampler: FT

Well ID: MW-5
Well Diameter: 216 in.
Total Depth: 50.16 ft.
Depth to Water: 8.73 ft.
41.43 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 5.20.16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
Stainless Steel Bailer _____
Stack Pump _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: _____

Sampling Equipment:

Disposable Bailer _____
Pressure Bailer _____
Metal Filters _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: _____

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: _____ ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ ltr
Amt Removed from Well: _____ ltr
Water Removed: _____ ltr

Start Time (purge): _____
Sample Time/Date: _____ / _____
Approx. Flow Rate: _____ gpm.
Did well de-water? _____ If yes, Time: _____

Weather Conditions: _____
Water Color: _____ Odor: Y / N
Sediment Description: _____
Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: <u>FRANK TENUINONI</u>	Date: <u>5-20-16</u>	Project Number: <u>Chevron #351647</u>
Site Address: <u>3943 Broadway</u> <u>Oakland, CA</u>	Well ID: <u>MW-5</u>	Weather: <u>SUNNY CLOUDY</u>

1. Time absorbent sock removed from well for inspection:

1030

2. Condition of sock:

a. Length of sock showing product saturation:

11"

b. Length of sock showing dryness:

NONE

c. Color of sock showing product saturation:

BLK

d. Weight of the removed sock:

116 8 7/8 oz.

e. Weight of new/clean/dry sock:

3 7/8 oz.

f. Difference in weight [(d-e) to 0.01 ounces]:

116 5 oz.

3. Picture of sock removed from well taken:

4. Sock removed from well deposited into a waste drum:

Confirm drum is labeled:

yes

How full is the drum (%):

2%

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

a. Depth to product:

0.00

b. Depth to water:

8.73

c. Thickness of product (b-a):

0

6. Size and type of sock installed:

SOAK EASE 2" x 36"

7. Comments:



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746 Job Number: 385648
 Site Address: 3943 Broadway Event Date: 5.20.16 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: RW-1 Date Monitored: 5.20.16
 Well Diameter: 21 in. Check if water column is less than 0.50 ft.
 Total Depth: 16.34 ft.
 Depth to Water: 7.73 ft. xVF 8.61 = x3 case volume = Estimated Purge Volume: gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: MONTHLY PRODUCT GAUGING

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: <u>FRANK TENNINONI</u>	Date: <u>5.20.16</u>	Project Number: <u>Chevron #351647</u>
Site Address: 3943 Broadway Oakland, CA	Well ID: <u>RW-1</u>	Weather: <u>SUNNY / CLOUDY</u>

1. Time absorbent sock removed from well for inspection: 1000

2. Condition of sock:

a. Length of sock showing product saturation: NONE

b. Length of sock showing dryness: NONE

c. Color of sock showing product saturation: NONE

d. Weight of the removed sock: 216 8 1/4 oz.

e. Weight of new/clean/dry sock: 9 3/8 oz.

f. Difference in weight [(d-e) to 0.01 ounces]: 207 1/8 oz

3. Picture of sock removed from well taken:

4. Sock removed from well deposited into a waste drum:

Confirm drum is labeled: YES

How full is the drum (%): 2%

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

a. Depth to product: 0.00

b. Depth to water: 7.73

c. Thickness of product (b-a): 0

6. Size and type of sock installed: SOAK BASE 4" x 36"

7. Comments: _____



GETTLER-RYAN INC.



TRANSMITTAL

July 1, 2016
G-R #385648

TO: Ms. Tamera Rogers
Arcadis
6296 San Ignacio Ave., Suite C & D
San Jose, California 95119

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Unocal 0746
Chevron #351647
3943 Broadway
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package First Semi Annual Event of June 22, 2016

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351647 0746

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-1
 Well Diameter: 21/6 in.
 Total Depth: 54.03 ft.
 Depth to Water: 8.06 ft.
45.97 xVF = 0.17 = 7.81

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 23.44 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 17.25

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0510
 Sample Time/Date: 0540 / 6/22/16
 Approx. Flow Rate: 2 gpm.
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Foggy
 Water Color: Clear Odor: Y / 10
 Sediment Description: None
 DTW @ Sampling: 19.10

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/mS µmhos/cm)	Temperature (°C / °F)	D.O. (mg/L)	ORP (mV)
<u>0514</u>	<u>8</u>	<u>6.72</u>	<u>875</u>	<u>17.7</u>	/	/
<u>0518</u>	<u>16</u>	<u>6.65</u>	<u>843</u>	<u>17.6</u>	/	/
<u>0522</u>	<u>24</u>	<u>6.49</u>	<u>821</u>	<u>17.3</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746 Job Number: 385648
 Site Address: 3943 Broadway Event Date: 6/22/16 (inclusive)
 City: Oakland, CA Sampler: JH

Well ID: MW-2 Date Monitored: 6/22/16
 Well Diameter: 2.6 in.
 Total Depth: 19.82 ft.
 Depth to Water: 9.04 ft. Check if water column is less than 0.50 ft.
10.78 xVF 0.17 = 1.83 x3 case volume = Estimated Purge Volume: 5.49 gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.19

Purge Equipment:

Disposable Bailer X
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr

Start Time (purge): 0720 Weather Conditions: Foggy
 Sample Time/Date: 0750 / 6/22/16 Water Color: Clean Odor: Y / 0
 Approx. Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 10.90

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS / cmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0725</u>	<u>2</u>	<u>6.68</u>	<u>613</u>	<u>18.4</u>	/	/
<u>0730</u>	<u>4</u>	<u>6.55</u>	<u>605</u>	<u>18.2</u>	/	/
<u>0735</u>	<u>5.5</u>	<u>6.43</u>	<u>601</u>	<u>18.1</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-3
 Well Diameter: 216 in.
 Total Depth: 51.59 ft.
 Depth to Water: 9.81 ft.
41.78 xVF .17 = 7.10

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 21.30 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 18.16

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr

Start Time (purge): 0810
 Sample Time/Date: 0840 / 6/22/16
 Approx. Flow Rate: 1-2 gpm.
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Clear
 Water Color: Cloudy Odor: GIN Strong
 Sediment Description: Light
 DTW @ Sampling: 12.05

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (°C / °F)	D.O. (mg/L)	ORP (mV)
<u>0815</u>	<u>7</u>	<u>6.96</u>	<u>871</u>	<u>18.8</u>		
<u>0820</u>	<u>14</u>	<u>6.91</u>	<u>843</u>	<u>18.4</u>		
<u>0825</u>	<u>21</u>	<u>6.84</u>	<u>825</u>	<u>18.1</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-4
 Well Diameter: 6/6 in.
 Total Depth: 49.40 ft.
 Depth to Water: 9.08 ft.

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.
 $40.32 \times VF .17 = 6.85$ x3 case volume = Estimated Purge Volume: 20.56 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 17.14

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0640
 Sample Time/Date: 0710 / 6/22/16
 Approx. Flow Rate: 1-2 gpm.
 Did well de-water? No If yes, Time: _____

Weather Conditions: Foggy
 Water Color: Clear Odor: 0/N Light
 Sediment Description: None
 Volume: _____ gal. DTW @ Sampling: 12.71

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/mS µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>0644</u>	<u>7</u>	<u>6.86</u>	<u>934</u>	<u>18.1</u>		
<u>0648</u>	<u>14</u>	<u>6.80</u>	<u>922</u>	<u>17.9</u>		
<u>0653</u>	<u>21</u>	<u>6.72</u>	<u>906</u>	<u>17.6</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW 4</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-5
 Well Diameter: 216 in.
 Total Depth: 50.16 ft.
 Depth to Water: 9.43 ft.
40.73 xVF .17 = 6.92

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 17.57
 x3 case volume = Estimated Purge Volume: 20.77 gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	<u>0</u> ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr

Start Time (purge): 0855
 Sample Time/Date: 0925 / 6/22/16
 Approx. Flow Rate: 1-2 gpm.
 Did well de-water? No If yes, Time: _____

Weather Conditions: Clean
 Water Color: Cloudy Odor: 0 / N Strong
 Sediment Description: Lutite
 Volume: _____ gal. DTW @ Sampling: 13.10

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0900</u>	<u>7</u>	<u>6.52</u>	<u>1610</u>	<u>18.4</u>	/	/
<u>0905</u>	<u>14</u>	<u>6.47</u>	<u>1602</u>	<u>18.3</u>	/	/
<u>0911</u>	<u>21</u>	<u>6.41</u>	<u>1586</u>	<u>18.2</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS: SOCK EVALUATED, WEIGHED AND PLACED IN HOLDING DRUM
NEW SOCK INSTALLED

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER - RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: <u>J. Heenan</u>	Date: <u>6/22/16</u>	Project Number: Chevron #351647
Site Address: 3943 Broadway Oakland, CA	Well ID: <u>MW-5</u>	Weather: <u>clear</u>

1. Time absorbent sock removed from well for inspection: 0410

2. Condition of sock:

a. Length of sock showing product saturation: 36"

b. Length of sock showing dryness: 0"

c. Color of sock showing product saturation: Yellow

d. Weight of the removed sock: 19.20

e. Weight of new/clean/dry sock: 5.07

f. Difference in weight [(d-e) to 0.01 ounces]: 14.13

3. Picture of sock removed from well taken:

4. Sock removed from well deposited into a waste drum:

Confirm drum is labeled: yes

How full is the drum (%): 10%

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

a. Depth to product: 0

b. Depth to water: 9.43

c. Thickness of product (b-a): 0

6. Size and type of sock installed: 2" x 36" Soakose

7. Comments: SOCK EVALUATED, WEIGHED AND PLACED IN HOLDING DRUM
NEW SOCK INSTALLED





GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-6
 Well Diameter: 216 in.
 Total Depth: 51.22 ft.
 Depth to Water: 7.91 ft.

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.
 $43.31 \times VF .17 = 7.36$ x3 case volume = Estimated Purge Volume: 22.00 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.57

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0430
 Sample Time/Date: 0500 / 6/22/16
 Approx. Flow Rate: 2 gpm.
 Did well de-water? No If yes, Time: _____

Weather Conditions: DARK Foggy
 Water Color: Cloudy Odor: Oil N Light
 Sediment Description: Light
 Volume: _____ gal. DTW @ Sampling: 14.40

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS / cmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0434</u>	<u>8</u>	<u>6.43</u>	<u>662</u>	<u>18.3</u>	/	/
<u>0438</u>	<u>14</u>	<u>6.40</u>	<u>640</u>	<u>18.1</u>	/	/
<u>0442</u>	<u>22</u>	<u>6.29</u>	<u>631</u>	<u>17.9</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-7
 Well Diameter: Ø16 in.
 Total Depth: 49.26 ft.
 Depth to Water: 6.99 ft.
40.47 xVF .17 = 6.87

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 20.63 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.88

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr

Start Time (purge): 0555
 Sample Time/Date: 0625 / 6/22/16
 Approx. Flow Rate: 1-2 gpm.
 Did well de-water? No If yes, Time: _____

Weather Conditions: Foggy
 Water Color: Clean Odor: Ø / N L. g. H₂O
 Sediment Description: None
 Volume: _____ gal. DTW @ Sampling: 13.10

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (°C / °F)	D.O. (mg/L)	ORP (mV)
<u>0558</u>	<u>6</u>	<u>6.60</u>	<u>537</u>	<u>18.8</u>	/	/
<u>0601</u>	<u>12</u>	<u>6.53</u>	<u>523</u>	<u>18.6</u>	/	/
<u>0606</u>	<u>21</u>	<u>6.48</u>	<u>509</u>	<u>18.3</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/ EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-10
 Well Diameter: 216 in.
 Total Depth: 21.74 ft.
 Depth to Water: 13.58 ft.
8.16 xVF .17 = 1.38

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 4.16 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.21

Purge Equipment:

Disposable Bailer X
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 1155
 Sample Time/Date: 1225 / 6/22/16
 Approx. Flow Rate: _____ gpm.
 Did well de-water? no If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Clear
 Water Color: cloudy Odor: Y10
 Sediment Description: Niac
 DTW @ Sampling: 15.04

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1200</u>	<u>1.5</u>	<u>7.65</u>	<u>540</u>	<u>17.8</u>	/	/
<u>1205</u>	<u>3.0</u>	<u>7.53</u>	<u>534</u>	<u>17.6</u>	/	/
<u>1208</u>	<u>4.0</u>	<u>7.48</u>	<u>522</u>	<u>17.3</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-11
 Well Diameter: 2.6 in.
 Total Depth: 19.10 ft.
 Depth to Water: 13.07 ft.
6.03 xVF = 1.02

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 3.07 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.27

Purge Equipment:

Disposable Bailer: X
 Stainless Steel Bailer: _____
 Stack Pump: _____
 Peristaltic Pump: _____
 QED Bladder Pump: _____
 Other: _____

Sampling Equipment:

Disposable Bailer: X
 Pressure Bailer: _____
 Metal Filters: _____
 Peristaltic Pump: _____
 QED Bladder Pump: _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr

Start Time (purge): 1110
 Sample Time/Date: 1140 / 6/22/16
 Approx. Flow Rate: _____ gpm.
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Clean
 Water Color: Clean Odor: Y / 0
 Sediment Description: None
 DTW @ Sampling: 14.20

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>1113</u>	<u>1</u>	<u>6.40</u>	<u>811</u>	<u>19.4</u>	/	/
<u>1116</u>	<u>2</u>	<u>6.44</u>	<u>819</u>	<u>19.3</u>	/	/
<u>1120</u>	<u>3</u>	<u>6.47</u>	<u>824</u>	<u>19.2</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-11</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/ EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: MW-12
 Well Diameter: 2.6 in.
 Total Depth: 17.65 ft.
 Depth to Water: 10.27 ft.
7.38 xVF .17 = 1.25

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 3.76 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.74

Purge Equipment:

Disposable Bailer X
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: _____ ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ ltr
Amt Removed from Well: _____ ltr
Water Removed: _____ ltr

Start Time (purge): 1025
 Sample Time/Date: 1055 / 6/22/16
 Approx. Flow Rate: - gpm.
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Clear
 Water Color: Clear Odor: Y / 0
 Sediment Description: None
 DTW @ Sampling: 11.20

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS / umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1030</u>	<u>1.5</u>	<u>6.83</u>	<u>691</u>	<u>19.1</u>	/	/
<u>1035</u>	<u>3.0</u>	<u>6.80</u>	<u>698</u>	<u>19.0</u>	/	/
<u>1040</u>	<u>4.0</u>	<u>6.71</u>	<u>706</u>	<u>18.8</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-12</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351647 / 0746
 Site Address: 3943 Broadway
 City: Oakland, CA

Job Number: 385648
 Event Date: 6/22/16 (inclusive)
 Sampler: JH

Well ID: RW-1
 Well Diameter: 21(6) in.
 Total Depth: 16.34 ft.
 Depth to Water: 8.41 ft.
2.93 xVF 1.50 = 11.89

Date Monitored: 6/22/16

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.
 x3 case volume = Estimated Purge Volume: 35.68 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.99

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer X
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0940 Weather Conditions: Clear
 Sample Time/Date: 1010 / 6/22/16 Water Color: Cloudy Odor: 0 / N Strong
 Approx. Flow Rate: 3 gpm. Sediment Description: L.M.W
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 9.25

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS / cmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0944</u>	<u>12</u>	<u>6.43</u>	<u>425</u>	<u>19.4</u>		
<u>0948</u>	<u>24</u>	<u>6.40</u>	<u>438</u>	<u>18.8</u>		
<u>0952</u>	<u>36</u>	<u>6.35</u>	<u>447</u>	<u>18.5</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>RW-1</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(C6-C12)(8015)/BTEX+MTBE(8260)/EDB/EDC(8260)/ETHANOL(8260B)</u>

COMMENTS: SOCK EVALUATED, WEIGHED AND PLACED IN HOLDING DRUM
NEW SOCK INSTALLED

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: X Add/Replaced Plug: X 6"



GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: <u>J. Herzog</u>	Date: <u>6/22/16</u>	Project Number: Chevron #351647
Site Address: 3943 Broadway Oakland, CA	Well ID: <u>RW-1</u>	Weather: <u>clean</u>

1. Time absorbent sock removed from well for inspection: 0415

2. Condition of sock:

a. Length of sock showing product saturation: 36"

b. Length of sock showing dryness: 0"

c. Color of sock showing product saturation: yellow

d. Weight of the removed sock: 41.76 oz

e. Weight of new/clean/dry sock: 9.02

f. Difference in weight [(d-e) to 0.01 ounces]: 32.76 oz

3. Picture of sock removed from well taken:

4. Sock removed from well deposited into a waste drum:

Confirm drum is labeled: yes How full is the drum (%): 10%

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

a. Depth to product: 0

b. Depth to water: 8.41

c. Thickness of product (b-a): 0

6. Size and type of sock installed: 3" x 36" Soakase

7. Comments: SOCK EVALUATED, WEIGHED AND PLACED IN HOLDING DRUM
NEW SOCK INSTALLED

351647 Oakland 6-22-16, RW-1 Sock



6/23/2016 / 10:44:28, IMG_3829.JPG

CHAIN OF CUSTODY FORM

Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583

COC 1 of 1

Union Oil Site ID: <u>0746</u>	Union Oil Consultant: <u>Arcadis</u>	ANALYSES REQUIRED			
Site Global ID: <u>T0600101171</u>	Consultant Contact: <u>J. Rogers</u>	TPH - Diesel by EPA 8015 TPH - G by GC/MS <u>GC-C17</u> BTEX/MTBE/ OXYS by EPA 8260B Ethanol by EPA 8260B EPA 8260B Full List with OXYS <u>FDB/EX/8260</u>	Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>	Special Instructions	
Site Address: <u>5943 Broadway, Oakland CA</u>	Consultant Phone No.: <u>408-797-2013</u>				
Union Oil PM: <u>N. Arceneaux</u>	Sampling Company: <u>Gettler Ryan</u>				
Union Oil PM Phone No.: <u>925-790-6912</u>	Sampled By (PRINT): <u>S. Herron</u>				
Charge Code: <u>NWRTB-0 251647 -0-LAB</u>	Sampler Signature:				
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.		BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911			

SAMPLE ID				Sample Time	# of Containers	TPH - Diesel by EPA 8015	TPH - G by GC/MS <u>GC-C17</u>	BTEX/MTBE/ OXYS by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	<u>FDB/EX/8260</u>	Notes / Comments
Field Point Name	Matrix	Depth	Date (yyymmdd)									
<u>QA</u>	<u>W-S-A</u>		<u>110622</u>	<u>-</u>	<u>2</u>		<u>X</u>	<u>X</u>				
<u>MW-1</u>	<u>W-S-A</u>			<u>0540</u>	<u>6</u>				<u>X</u>	<u>X</u>		
<u>MW-2</u>	<u>W-S-A</u>			<u>0750</u>								
<u>MW-3</u>	<u>W-S-A</u>			<u>0840</u>								
<u>MW-4</u>	<u>W-S-A</u>			<u>0710</u>								
<u>MW-5</u>	<u>W-S-A</u>			<u>0925</u>								
<u>MW-6</u>	<u>W-S-A</u>			<u>0500</u>								
<u>MW-7</u>	<u>W-S-A</u>			<u>0625</u>								
<u>MW-10</u>	<u>W-S-A</u>			<u>1225</u>								
<u>MW-11</u>	<u>W-S-A</u>			<u>1140</u>								
<u>MW-12</u>	<u>W-S-A</u>			<u>1055</u>								
<u>RW-1</u>	<u>W-S-A</u>			<u>1010</u>								

Relinquished By: Company: <u>Gettler Ryan</u> Date / Time: <u>6/22/16 1600</u>	Relinquished By: _____ Company: _____ Date / Time: _____	Relinquished By: _____ Company: _____ Date / Time: _____
Received By: <u>Shane Bogan</u> Company: <u>BeLAB</u> Date / Time: <u>6-23-16 1500</u>	Received By: _____ Company: _____ Date / Time: _____	Received By: _____ Company: _____ Date / Time: _____

ATTACHMENT F

**LABORATORY ANALYTICAL
REPORT AND CHAIN-OF-
CUSTODY DOCUMENTATION**



Date of Report: 06/29/2016

Tamera Rogers

Arcadis

6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Client Project: 351647
BCL Project: 0389
BCL Work Order: 1617339
Invoice ID: B239252

Enclosed are the results of analyses for samples received by the laboratory on 6/23/2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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CHAIN OF CUSTODY FORM

Union Oil Company of California 6101 Bollinger Canyon Road San Ramon, CA 94583

COC _____ of _____

Union Oil Site ID: <u>0746</u> Site Global ID: <u>T0600101471</u> Site Address: <u>3943 Broadway, Oakland CA</u>	Union Oil Consultant: <u>ARCADIS</u> Consultant Contact: <u>J. Rogers</u> Consultant Phone No.: <u>408-757-2013</u> Sampling Company: <u>Bethel Ryan</u> Sampled By (PRINT): <u>S. Heeron</u> Sampler Signature:	Union Oil PM: <u>N. ARCESEaux</u> Union Oil PM Phone No.: <u>925-750-6912</u> Charge Code: <u>NWRTB-0 351647 -0- LAB</u>	Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/> Special Instructions	
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.				
Union Oil Company of California 6101 Bollinger Canyon Road San Ramon, CA 94583				
Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911				
ANALYSES REQUIRED				
TPH - Diesel by EPA 8015 TPH - G by EPA 8260B BTEX/MTBE/OC by EPA 8260B Ethanol by EPA 8260B EPA 8260B Full List with OXYS FDB/EDC/8260				
Relinquished By: <u>Bethel Ryan</u> Date / Time: <u>6/22/16 1600</u> Received By: <u>Doug Bergen</u> Date / Time: <u>6/23/16 1500</u>				
Relinquished By: <u>Henry Bergen</u> Date / Time: <u>6/23-16 1830</u> Received By: <u>ARCADIS</u> Date / Time: <u>6/23/16 18:50</u>				
Relinquished By: <u>ARCADIS</u> Date / Time: <u>6/23/16 2145</u> Received By: <u>BURB</u> Date / Time: <u>6/23/16 2145</u>				
Relinquished By: <u>ARCADIS</u> Date / Time: <u>6/23/16 1830</u> Received By: <u>BURB</u> Date / Time: <u>6/23/16 2145</u>				

Field Point Name	Matrix	Depth	Date (yy/mm/dd)	SAMPLE ID		# of Containers	Notes / Comments
				Matrix	Depth		
QA	W-S-A	-1	160622			2	
MW-1	W-S-A	-1				6	
MW-2	W-S-A	-3					
MW-3	W-S-A	-4					
MW-4	W-S-A	-5					
MW-5	W-S-A	-6					
MW-6	W-S-A	-7					
MW-7	W-S-A	-8					
MW-10	W-S-A	-9					
MW-11	W-S-A	-10					
MW-12	W-S-A	-11					
RW-1	W-S-A	-10					

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 16-17339

SHIPPING INFORMATION: Fed Ex UPS Ontrac Hand Delivery BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO W/S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received: YES NO

Emissivity: 0.97 Container: 60A Thermometer ID: 208 Date/Time: 6-23 2000

Temperature: (A) 0.4 °C / (C) 0.1 °C Analyst Init: ARL

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK <u>094</u>		<u>AB</u>								
40ml VOA VIAL <u>096</u>	<u>A</u>	<u>F</u>	<u>A</u>	<u>F</u>	<u>A</u>	<u>F</u>	<u>A</u>	<u>F</u>	<u>A</u>	<u>F</u>
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: JOL Date/Time: 6-24-16 0839 Rev 21 05/23/2016

A = Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 10-17339

SHIPPING INFORMATION: Fed Ex, UPS, Ontrac, Hand Delivery, BC Lab Field Service. SHIPPING CONTAINER: Ice Chest, None, Box, Other. FREE LIQUID: YES, NO (W) S

Refrigerant: Ice, Blue Ice, None, Other. Comments:

Custody Seals: Ice Chest, Containers, Intact? Yes/No

All samples received? Yes/No. All samples containers intact? Yes/No. Description(s) match COC? Yes/No

COC Received: YES/NO. Emissivity: 0.97. Container: 40A. Thermometer ID: 208. Date/Time: 6-23-2000. Analyst Init: ARL. Temperature: (A) 0.4 °C / (C) 0.1 °C

Table with columns: SAMPLE CONTAINERS, SAMPLE NUMBERS (1-10). Rows include: QT PE UNPRES, 4oz / 8oz / 16oz PE UNPRES, 2oz Cr⁶, QT INORGANIC CHEMICAL METALS, INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz, PT CYANIDE, PT NITROGEN FORMS, PT TOTAL SULFIDE, 2oz. NITRATE / NITRITE, PT TOTAL ORGANIC CARBON, PT CHEMICAL OXYGEN DEMAND, PIA PHENOLICS, 40ml VOA VIAL TRAVEL BLANK, 40ml VOA VIAL (with handwritten 'A2F A2F'), QT EPA 1664, PT ODOR, RADIOLOGICAL, BACTERIOLOGICAL, 40 ml VOA VIAL- 504, QT EPA 508/608/8080, QT EPA 515.1/8150, QT EPA 525, QT EPA 525 TRAVEL BLANK, 40ml EPA 547, 40ml EPA 531.1, 8oz EPA 548, QT EPA 549, QT EPA 8015M, QT EPA 8270, 8oz / 16oz / 32oz AMBER, 8oz / 16oz / 32oz JAR, SOIL SLEEVE, PCB VIAL, PLASTIC BAG, TEDLAR BAG, FERROUS IRON, ENCORE, SMART KIT, SUMMA CANISTER

Comments: Sample Numbering Completed By: [Signature] Date/Time: 6-24-16 0839 Rev 21 05/23/2016 [SAWPDoc\Word\Perfect\LAB_DOCS\FORMS\SISAMRECrev 201



Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1617339-01	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: QA-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Trip Blank Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1617339-02	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-1-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 05:40 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1617339-03	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-2-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 07:50 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1617339-04	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-3-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 08:40 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1617339-05	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-4-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 07:10 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1617339-06	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-5-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 09:25 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1617339-07	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-6-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 05:00 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1617339-08	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-7-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 06:25 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-7 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1617339-09	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-10-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 12:25 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-10 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1617339-10	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-11-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 11:40 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-11 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

1617339-11	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: MW-12-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 10:55 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): MW-12 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

1617339-12	COC Number: --- Project Number: 0746 Sampling Location: --- Sampling Point: RW-1-W-160622 Sampled By: GRD	Receive Date: 06/23/2016 21:45 Sampling Date: 06/22/2016 10:10 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101471 Location ID (FieldPoint): RW-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-01	Client Sample Name: 0746, QA-W-160622, 6/22/2016 12:00:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 12:35	IO1	MS-V10	1	BZF2179

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-02	Client Sample Name: 0746, MW-1-W-160622, 6/22/2016 5:40:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 12:55	IO1	MS-V10	1	BZF2179

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Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-03	Client Sample Name: 0746, MW-2-W-160622, 6/22/2016 7:50:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	0.91	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 13:14	IO1	MS-V10	1	BZF2179

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Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-04	Client Sample Name: 0746, MW-3-W-160622, 6/22/2016 8:40:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	71	ug/L	2.5		EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	ug/L	2.5		EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	ug/L	2.5		EPA-8260B	ND	A01	1
Ethylbenzene	81	ug/L	2.5		EPA-8260B	ND	A01	1
Methyl t-butyl ether	21	ug/L	2.5		EPA-8260B	ND	A01	1
Toluene	ND	ug/L	2.5		EPA-8260B	ND	A01	1
Total Xylenes	6.2	ug/L	5.0		EPA-8260B	ND	A01	1
t-Amyl Methyl ether	ND	ug/L	2.5		EPA-8260B	ND	A01	1
t-Butyl alcohol	ND	ug/L	50		EPA-8260B	ND	A01	1
Diisopropyl ether	ND	ug/L	2.5		EPA-8260B	ND	A01	1
Ethanol	ND	ug/L	1200		EPA-8260B	ND	A01	1
Ethyl t-butyl ether	ND	ug/L	2.5		EPA-8260B	ND	A01	1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	1900	ug/L	250		Luft-GC/MS	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 15:31	IO1	MS-V10	5	BZF2179

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Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-05	Client Sample Name: 0746, MW-4-W-160622, 6/22/2016 7:10:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	7.2	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	1900	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	110	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/28/16 11:35	IO1	MS-V10	1	BZF2179

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Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-06	Client Sample Name: 0746, MW-5-W-160622, 6/22/2016 9:25:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	210	ug/L	5.0		EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	ug/L	5.0		EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	ug/L	5.0		EPA-8260B	ND	A01	1
Ethylbenzene	450	ug/L	5.0		EPA-8260B	ND	A01	1
Methyl t-butyl ether	ND	ug/L	5.0		EPA-8260B	ND	A01	1
Toluene	ND	ug/L	5.0		EPA-8260B	ND	A01	1
Total Xylenes	540	ug/L	10		EPA-8260B	ND	A01	1
t-Amyl Methyl ether	ND	ug/L	5.0		EPA-8260B	ND	A01	1
t-Butyl alcohol	ND	ug/L	100		EPA-8260B	ND	A01	1
Diisopropyl ether	ND	ug/L	5.0		EPA-8260B	ND	A01	1
Ethanol	ND	ug/L	2500		EPA-8260B	ND	A01	1
Ethyl t-butyl ether	ND	ug/L	5.0		EPA-8260B	ND	A01	1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	17000	ug/L	500		Luft-GC/MS	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 16:09	IO1	MS-V10	10	BZF2179

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Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-07	Client Sample Name: 0746, MW-6-W-160622, 6/22/2016 5:00:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 13:34	IO1	MS-V10	1	BZF2179

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Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-08	Client Sample Name: 0746, MW-7-W-160622, 6/22/2016 6:25:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 13:53	IO1	MS-V10	1	BZF2179

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Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-09	Client Sample Name: 0746, MW-10-W-160622, 6/22/2016 12:25:00PM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 14:13	IO1	MS-V10	1	BZF2179

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Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-10	Client Sample Name: 0746, MW-11-W-160622, 6/22/2016 11:40:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 14:32	IO1	MS-V10	1	BZF2179

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Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
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Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-11	Client Sample Name: 0746, MW-12-W-160622, 6/22/2016 10:55:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	1.1	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 14:52	IO1	MS-V10	1	BZF2179

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Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1617339-12	Client Sample Name: 0746, RW-1-W-160622, 6/22/2016 10:10:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons (C6-C12)	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	06/27/16	06/27/16 15:11	IO1	MS-V10	1	BZF2179

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.



Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BZF2179						
Benzene	BZF2179-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BZF2179-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BZF2179-BLK1	ND	ug/L	0.50		
Ethylbenzene	BZF2179-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BZF2179-BLK1	ND	ug/L	0.50		
Toluene	BZF2179-BLK1	ND	ug/L	0.50		
Total Xylenes	BZF2179-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BZF2179-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BZF2179-BLK1	ND	ug/L	10		
Diisopropyl ether	BZF2179-BLK1	ND	ug/L	0.50		
Ethanol	BZF2179-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BZF2179-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons (C6-)	BZF2179-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BZF2179-BLK1	100	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BZF2179-BLK1	97.0	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BZF2179-BLK1	102	%	80 - 120 (LCL - UCL)		

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BZF2179										
Benzene	BZF2179-BS1	LCS	26.110	25.000	ug/L	104		70 - 130		
Toluene	BZF2179-BS1	LCS	24.550	25.000	ug/L	98.2		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BZF2179-BS1	LCS	9.7800	10.000	ug/L	97.8		75 - 125		
Toluene-d8 (Surrogate)	BZF2179-BS1	LCS	9.7700	10.000	ug/L	97.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	BZF2179-BS1	LCS	9.7900	10.000	ug/L	97.9		80 - 120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: BZF2179		Used client sample: N								
Benzene	MS	1616196-20	ND	27.060	25.000	ug/L		108		70 - 130
	MSD	1616196-20	ND	24.540	25.000	ug/L	9.8	98.2	20	70 - 130
Toluene	MS	1616196-20	ND	26.290	25.000	ug/L		105		70 - 130
	MSD	1616196-20	ND	23.840	25.000	ug/L	9.8	95.4	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1616196-20	ND	9.7000	10.000	ug/L		97.0		75 - 125
	MSD	1616196-20	ND	9.7800	10.000	ug/L	0.8	97.8		75 - 125
Toluene-d8 (Surrogate)	MS	1616196-20	ND	10.020	10.000	ug/L		100		80 - 120
	MSD	1616196-20	ND	10.050	10.000	ug/L	0.3	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1616196-20	ND	10.240	10.000	ug/L		102		80 - 120
	MSD	1616196-20	ND	10.040	10.000	ug/L	2.0	100		80 - 120

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 06/29/2016 16:02
Project: 0389
Project Number: 351647
Project Manager: Tamera Rogers

Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.

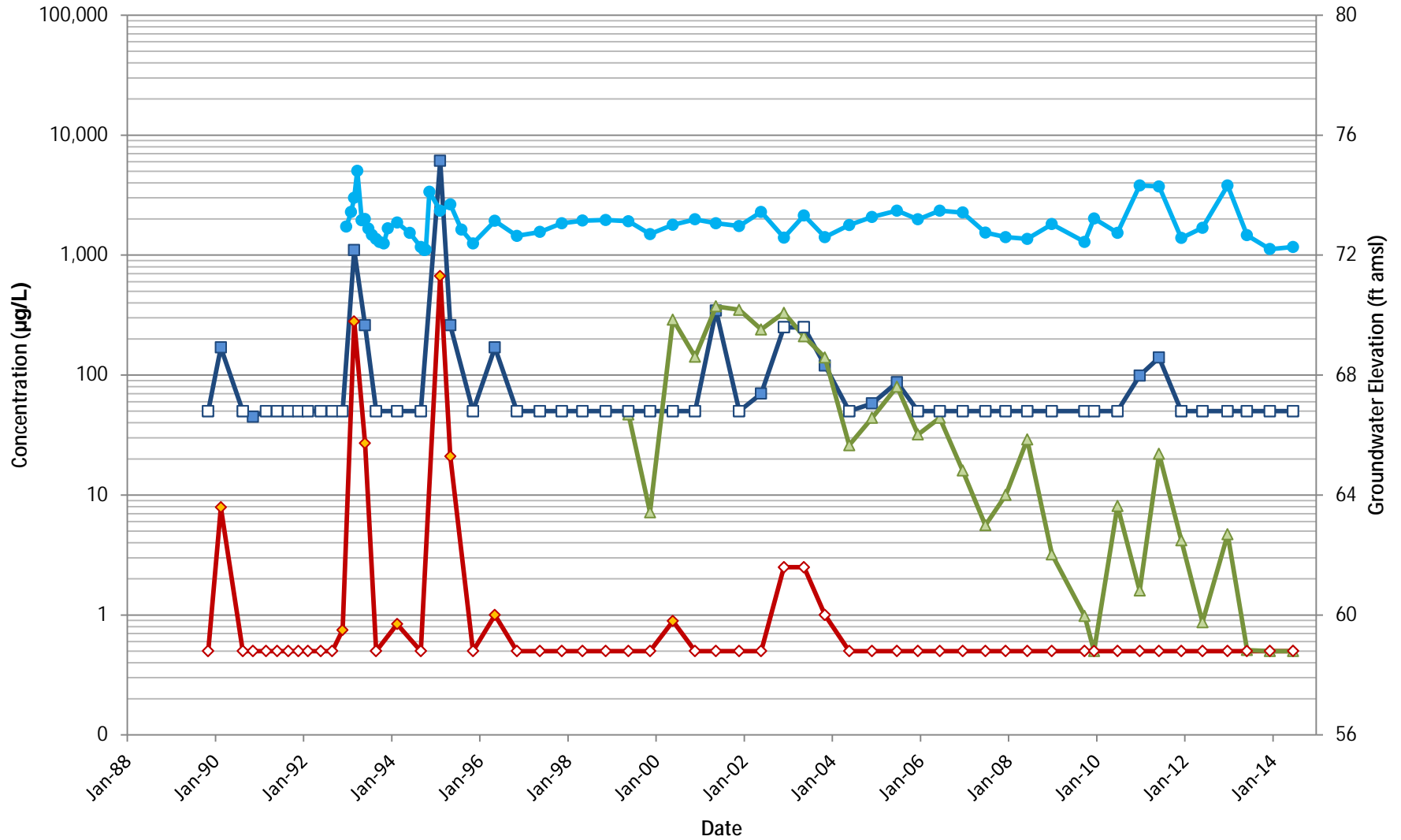
APPENDIX F

COPC and Groundwater Elevation Trend Graphs



Temporal Monitoring Trends for MW-1

Chevron Facility #351647
3943 Broadway, CA

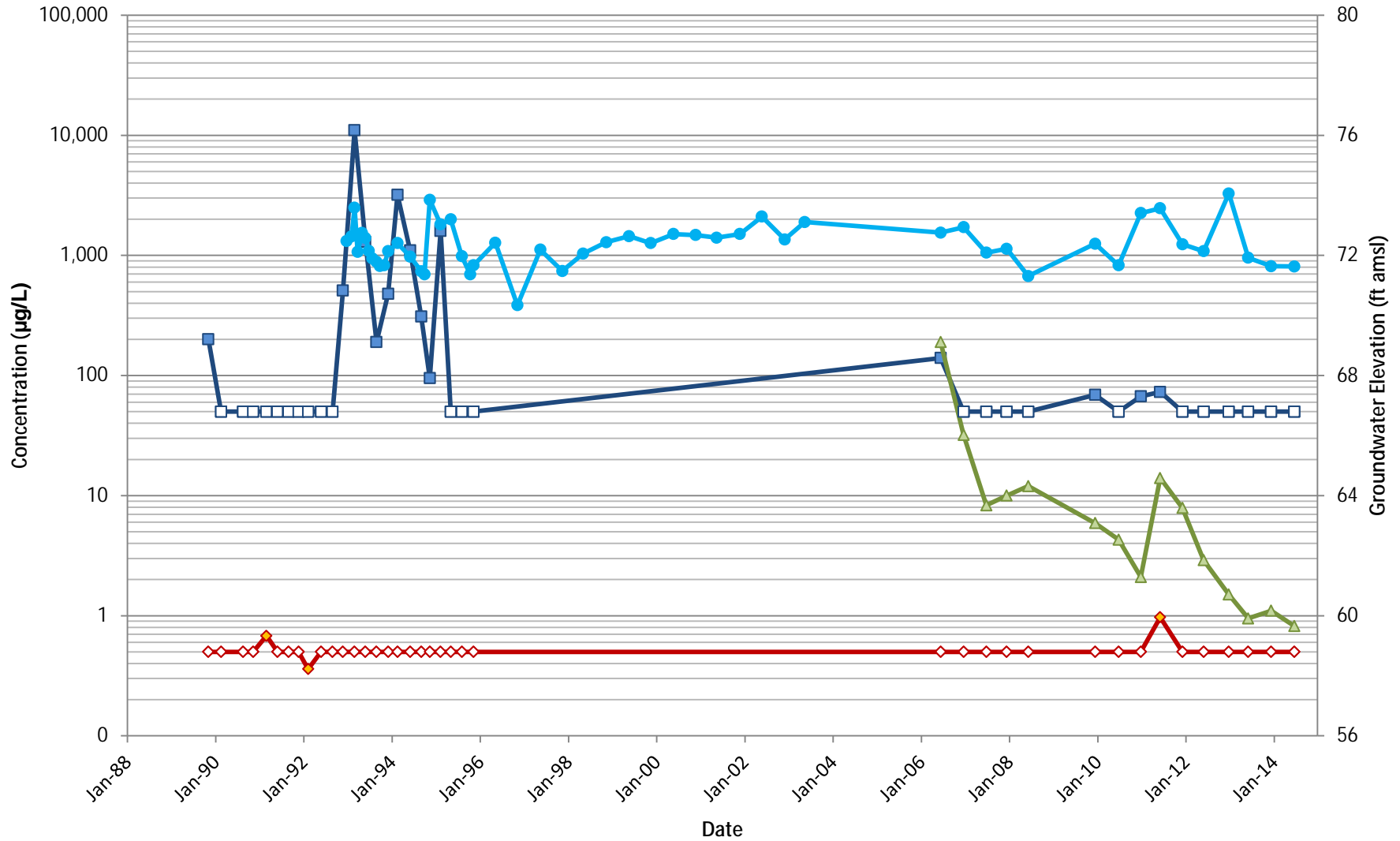


■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values

Temporal Monitoring Trends for MW-2

Chevron Facility #351647
3943 Broadway, CA

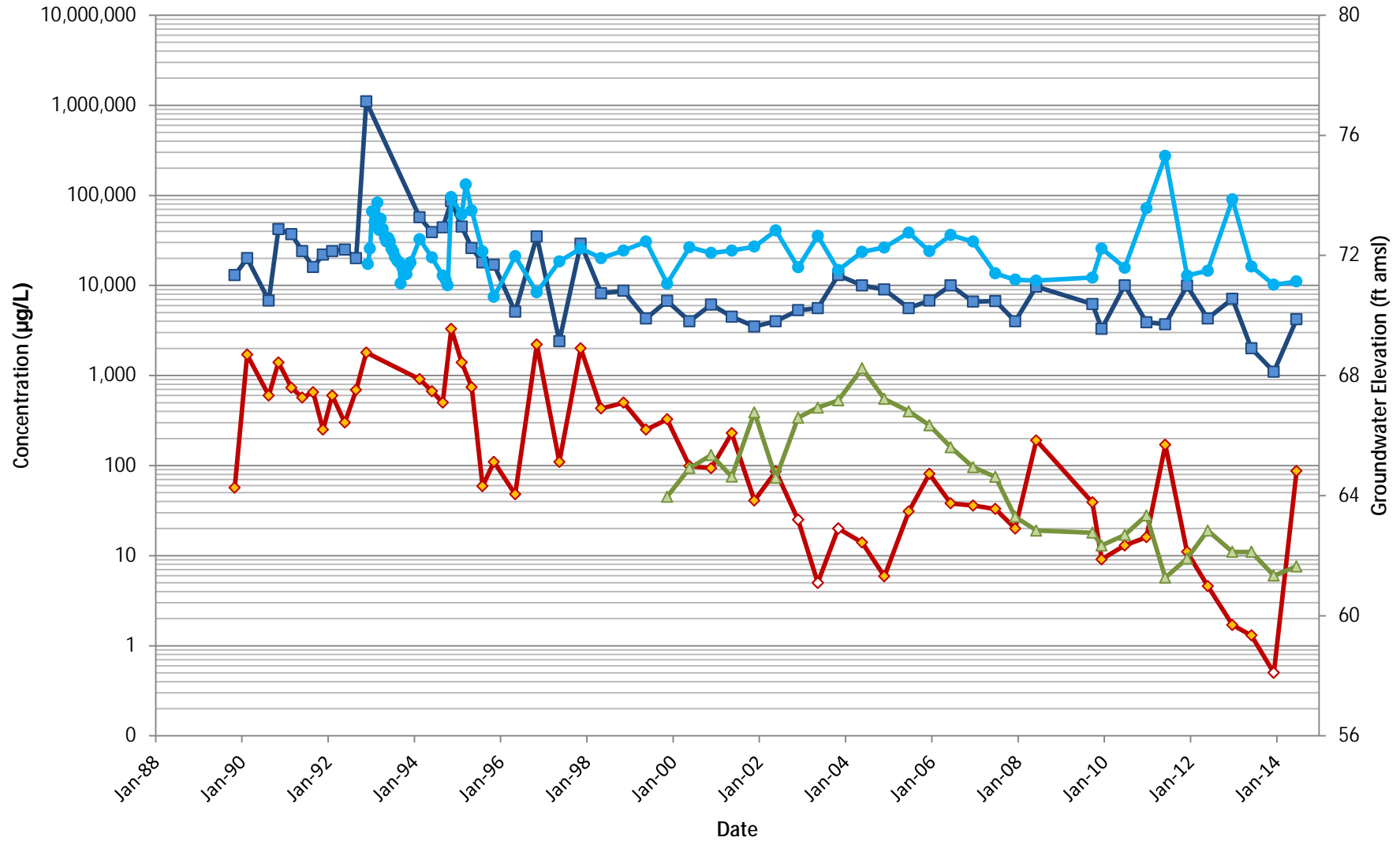


Legend:
■ TPH-G
◆ Benzene
▲ MTBE
● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values

Temporal Monitoring Trends for MW-3

Chevron Facility #351647
3943 Broadway, CA



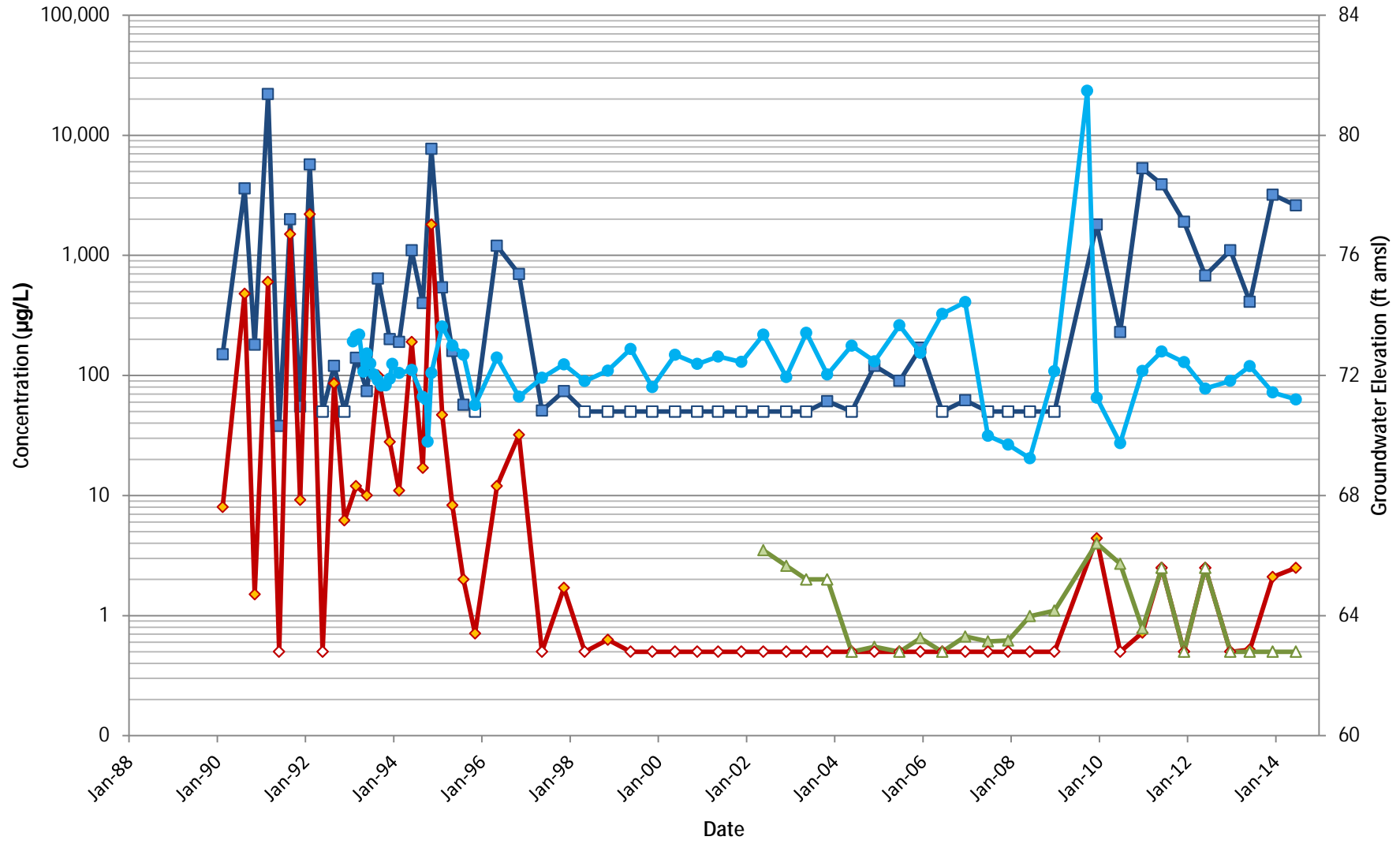
■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values



Temporal Monitoring Trends for MW-4

Chevron Facility #351647
3943 Broadway, CA



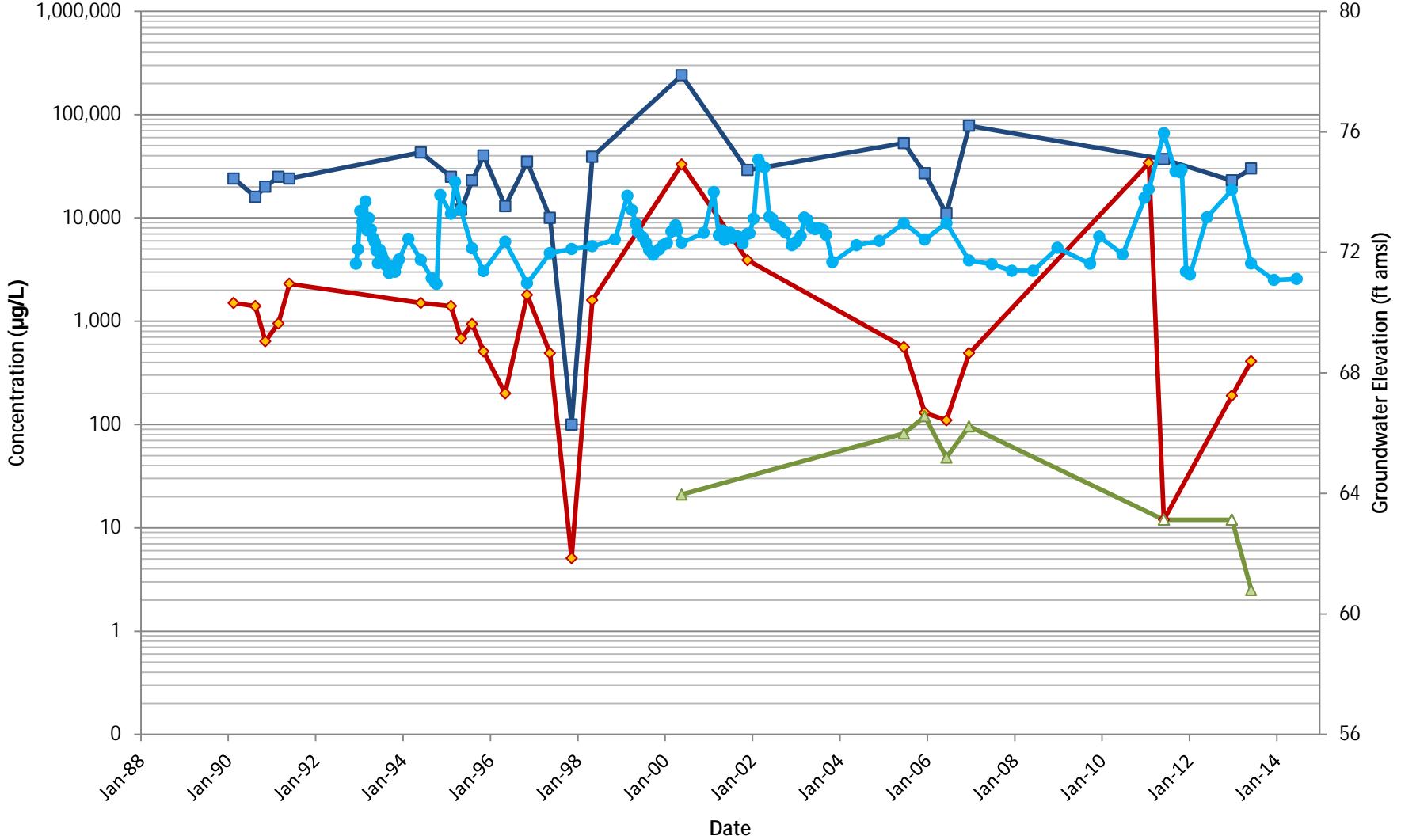
Legend:
■ TPH-G
◆ Benzene
▲ MTBE
● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values



Temporal Monitoring Trends for MW-5

Chevron Facility #351647
3943 Broadway, CA



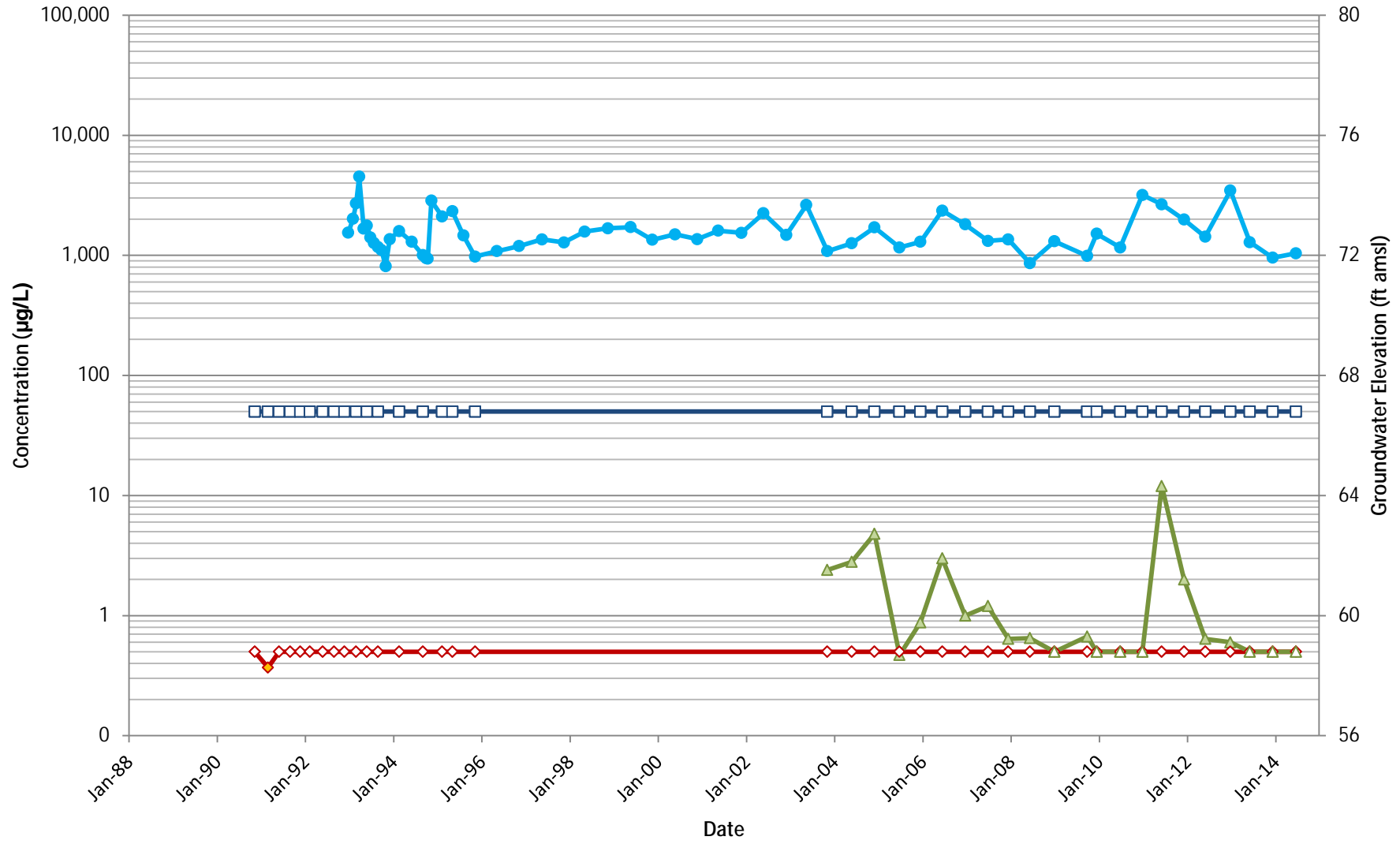
■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values



Temporal Monitoring Trends for MW-6

Chevron Facility #351647
3943 Broadway, CA



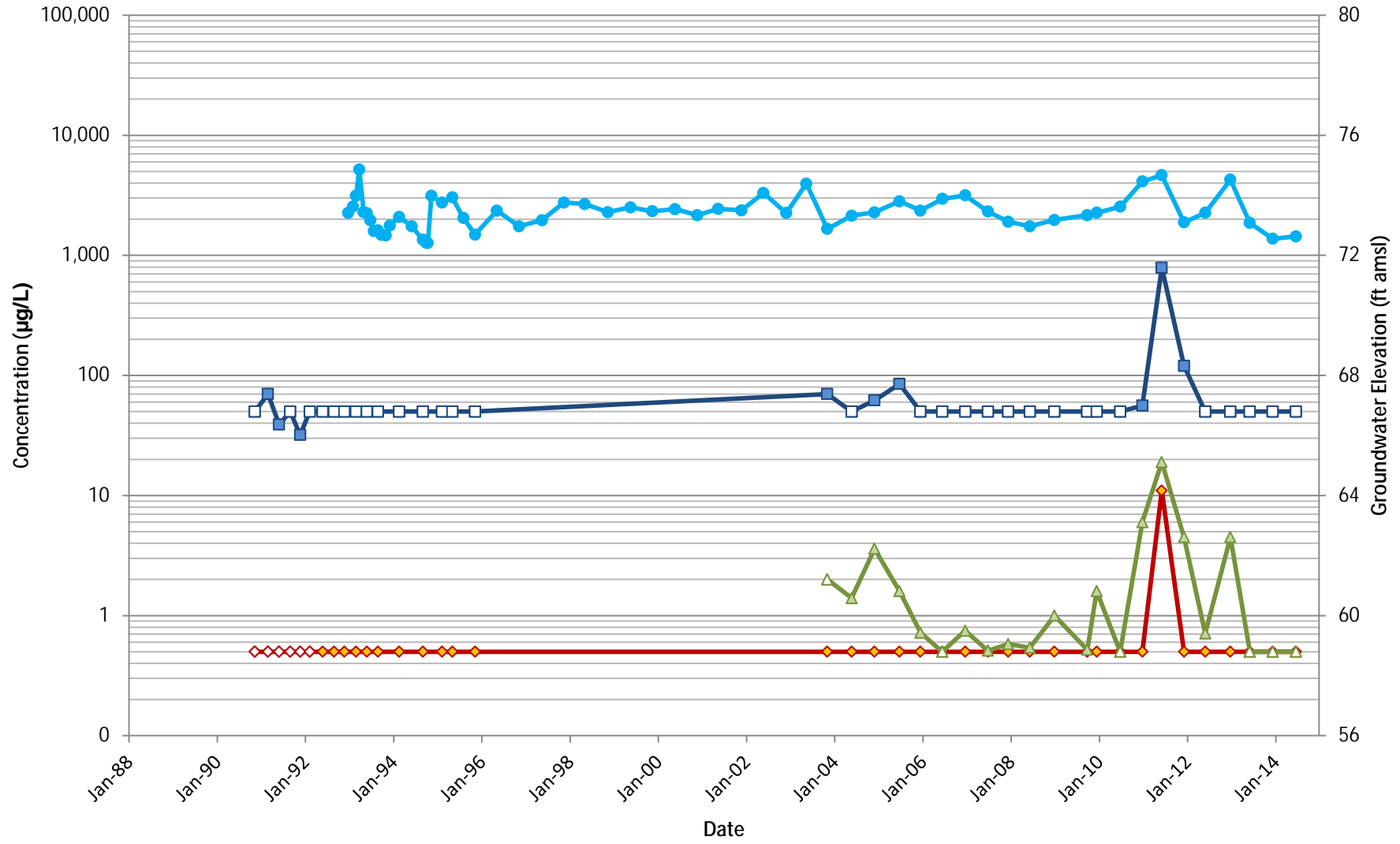
■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values



Temporal Monitoring Trends for MW-7

Chevron Facility #351647
3943 Broadway, CA



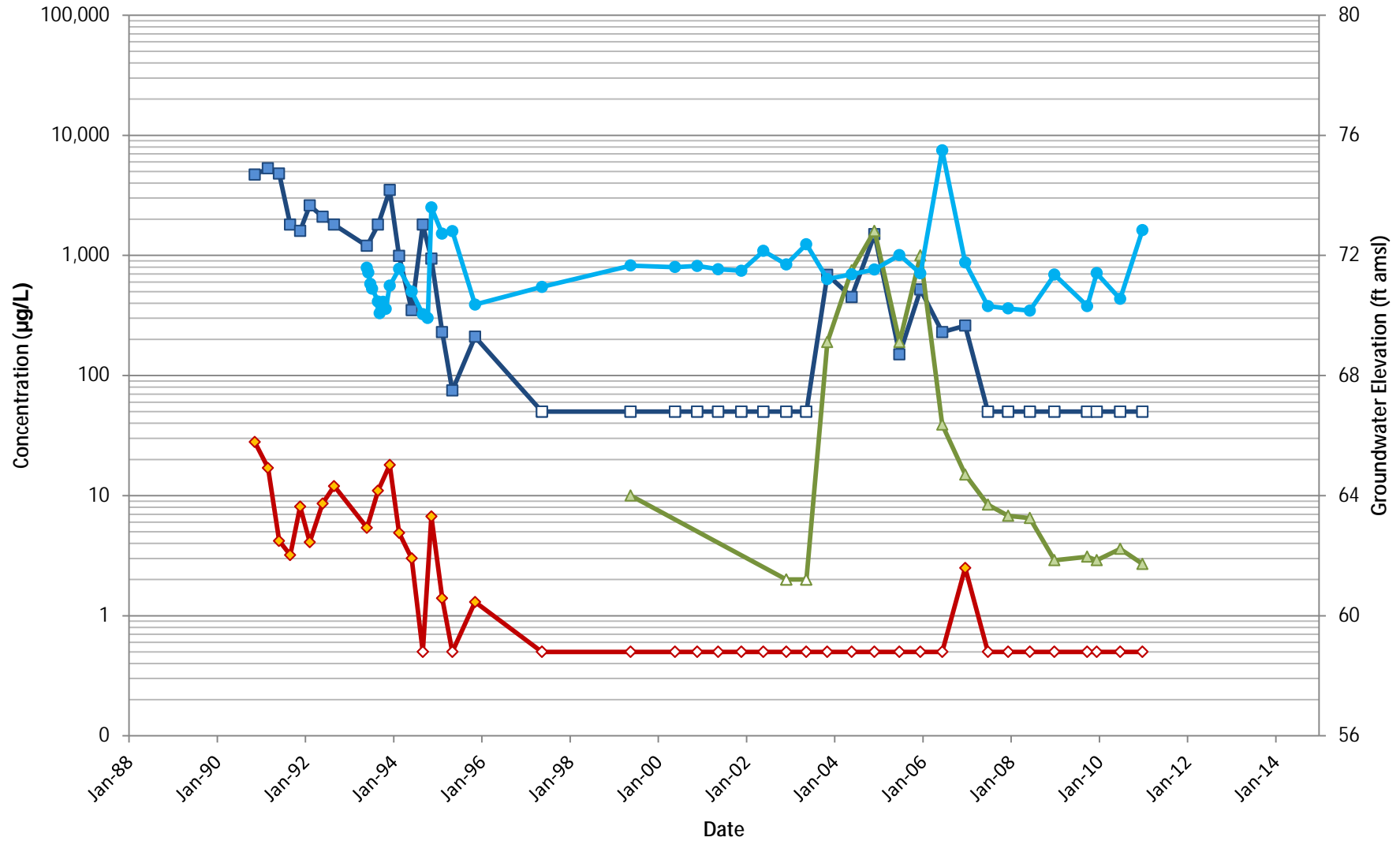
■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values



Temporal Monitoring Trends for MW-8

Chevron Facility #351647
3943 Broadway, CA

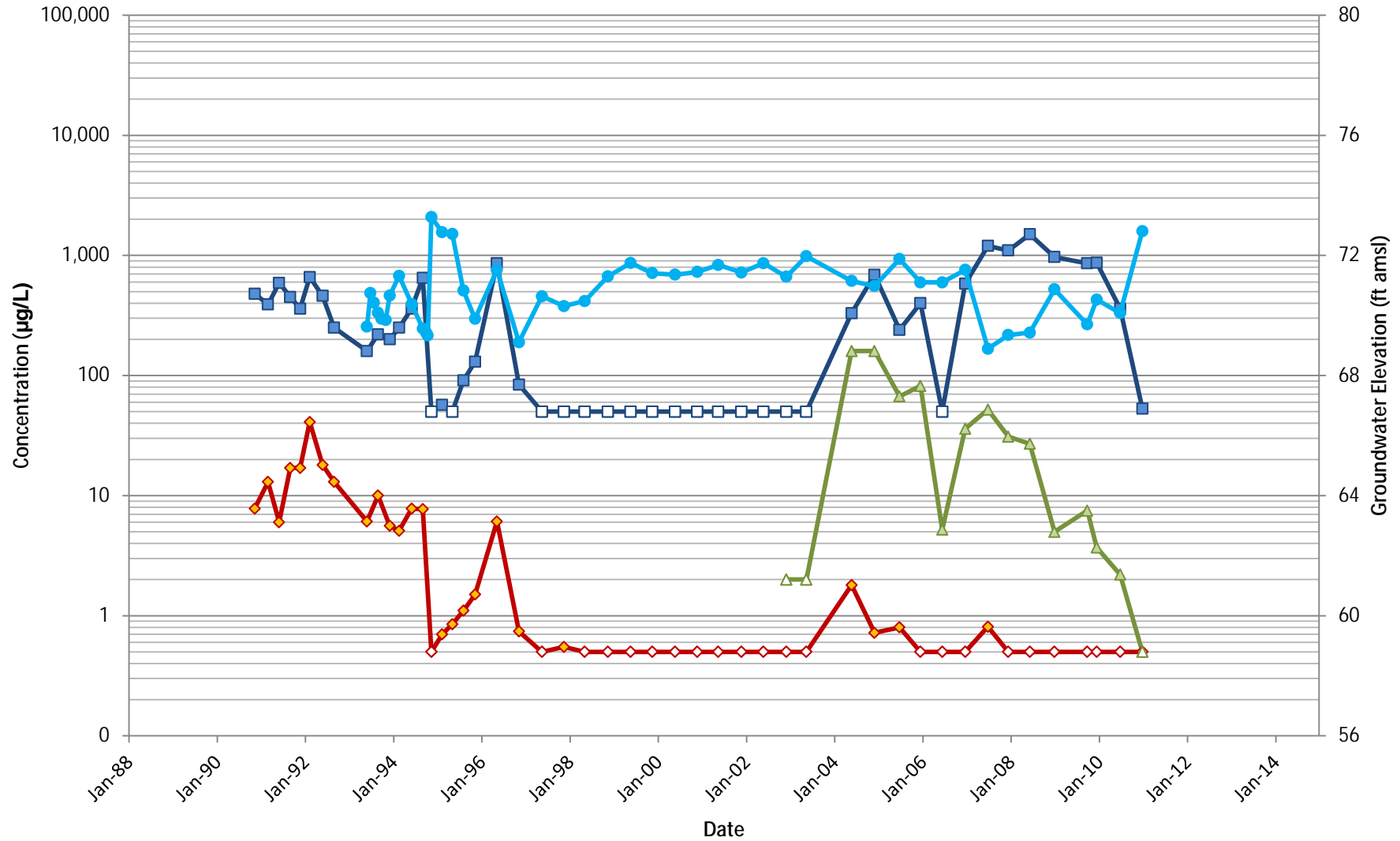


■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values

Temporal Monitoring Trends for MW-9

Chevron Facility #351647
3943 Broadway, CA

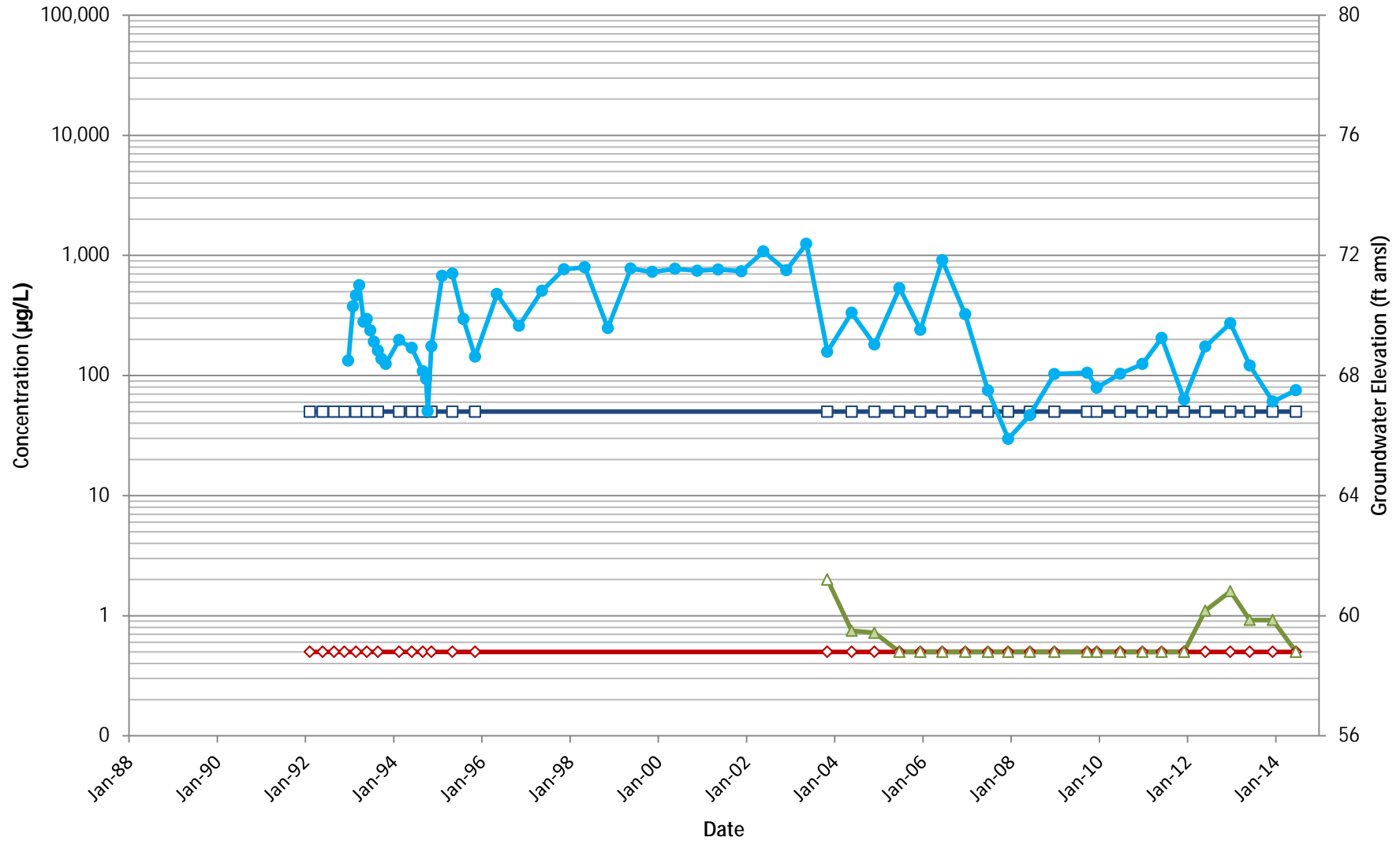


■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values

Temporal Monitoring Trends for MW-10

Chevron Facility #351647
3943 Broadway, CA

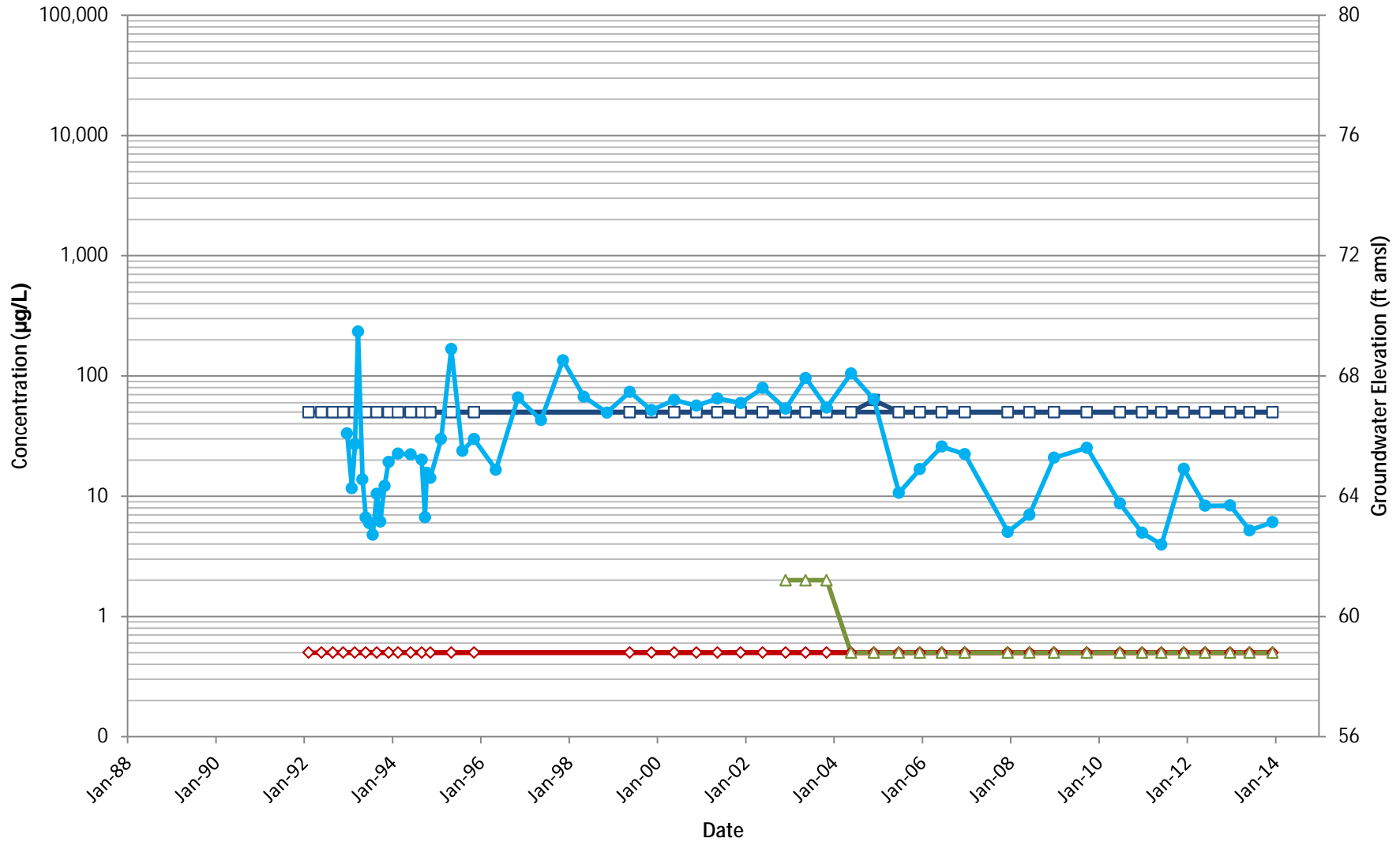


■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values

Temporal Monitoring Trends for MW-11

Chevron Facility #351647
3943 Broadway, CA

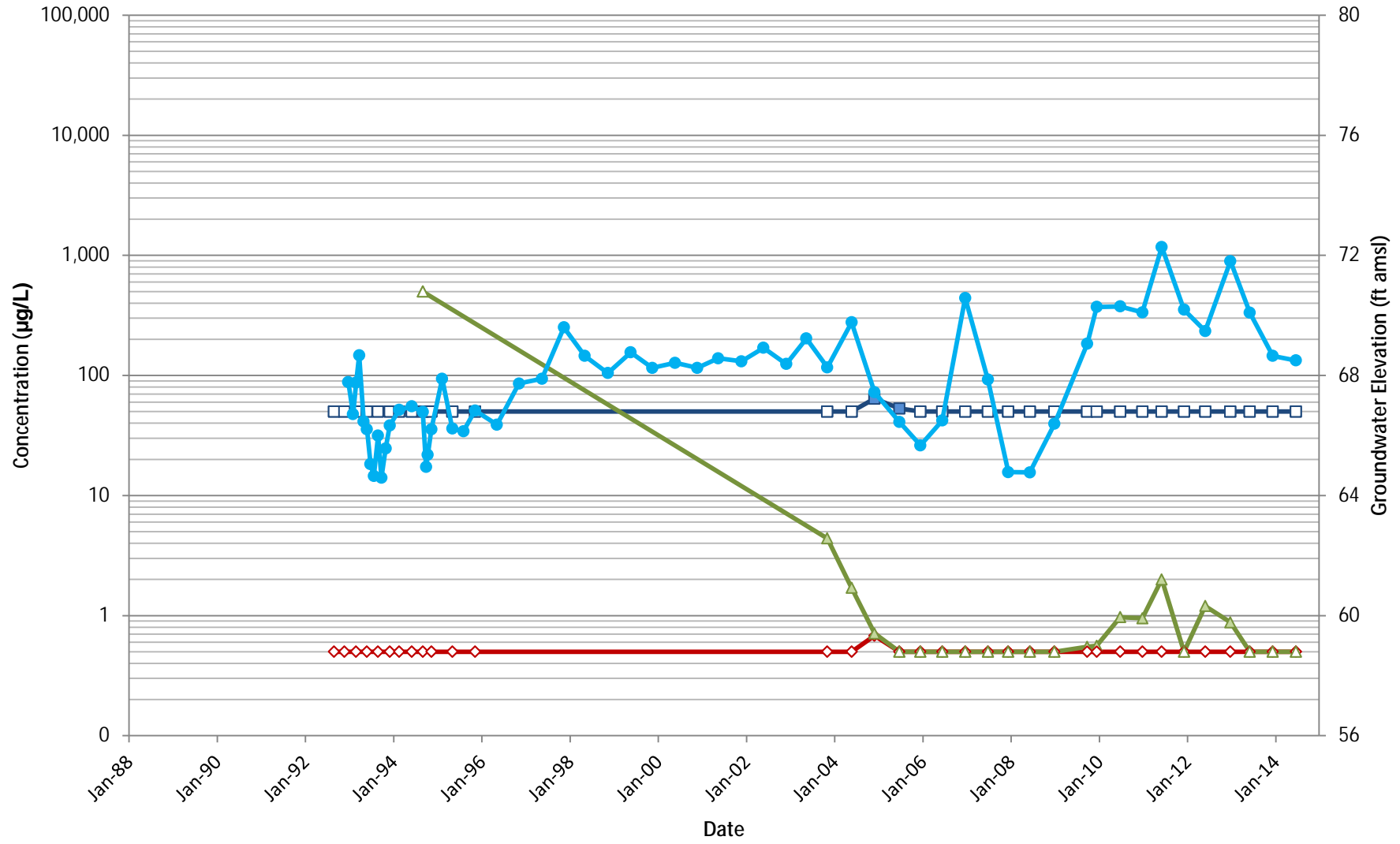


■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values

Temporal Monitoring Trends for MW-12

Chevron Facility #351647
3943 Broadway, CA

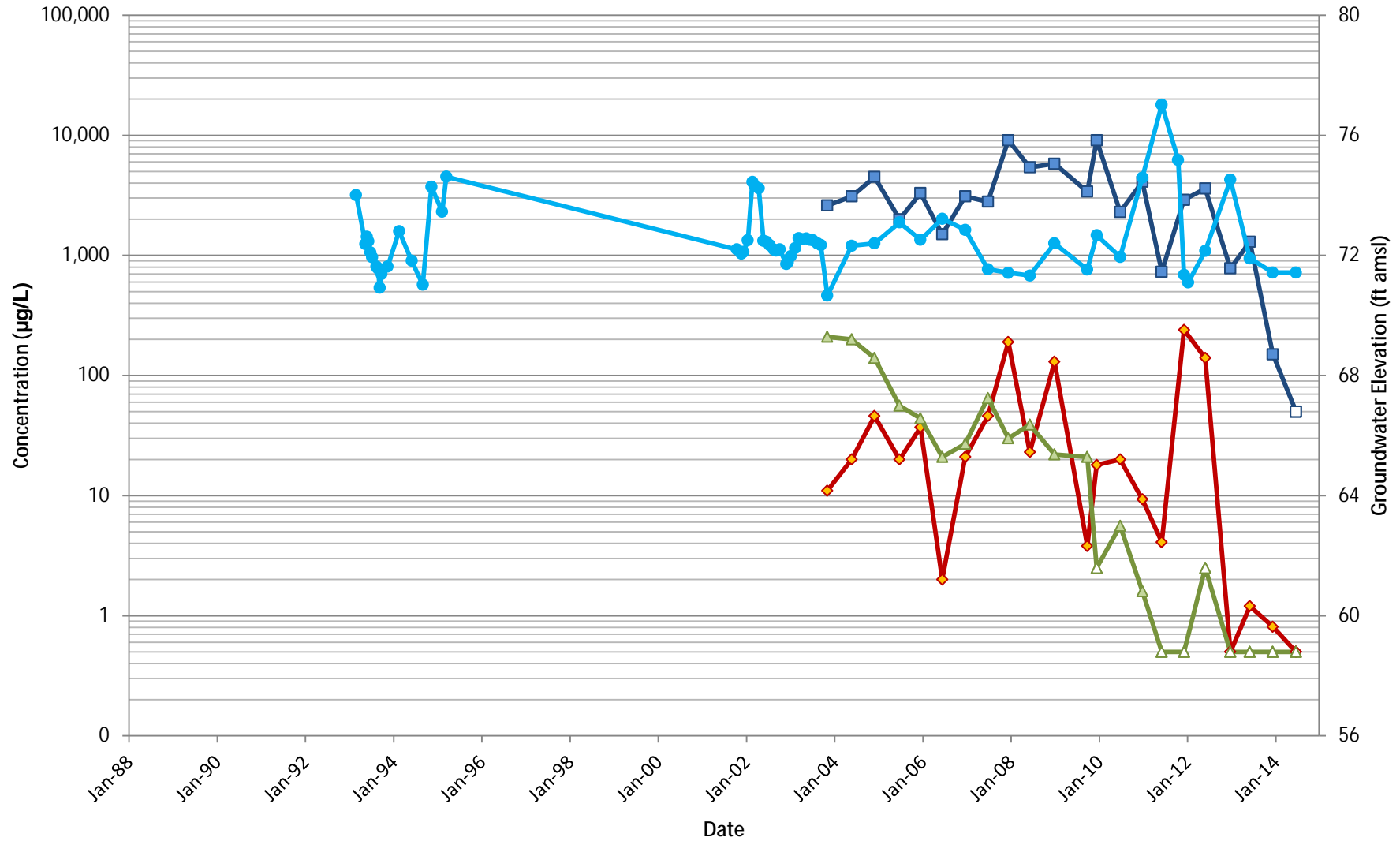


Legend:
■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values

Temporal Monitoring Trends for RW-1

Chevron Facility #351647
3943 Broadway, CA



■ TPH-G ◆ Benzene ▲ MTBE ● GWE

µg/L = micrograms per liter
ft/amsl = feet above mean sea level
Symbols with white fill represent non-detect values

APPENDIX G

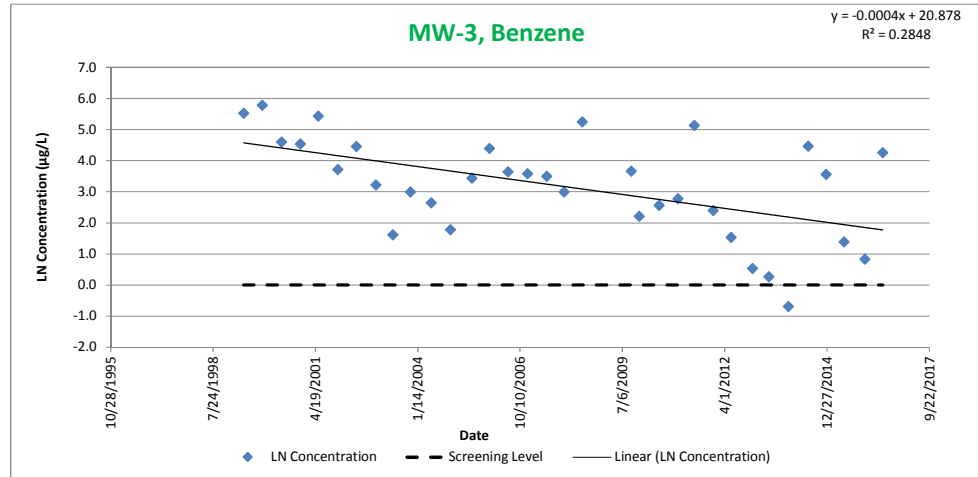
Linear Regression Analysis



Sample Information
 Sample Location
 Constituent

MW-3
 Benzene

Sample Date	Concentration (ug/L)	LN Concentration
5/20/1999	250	5.52
11/15/1999	326	5.79
5/22/2000	99	4.60
11/22/2000	93.7	4.54
5/15/2001	229	5.43
11/23/2001	41	3.71
5/24/2002	86	4.45
11/29/2002	25	3.22
5/15/2003	5.0	1.61
11/4/2003	20	3.00
5/24/2004	14	2.64
11/29/2004	5.9	1.77
6/24/2005	31	3.43
12/15/2005	81	4.39
6/14/2006	38	3.64
12/21/2006	36	3.58
6/28/2007	33	3.50
12/13/2007	20	3.00
6/9/2008	190	5.25
9/28/2009	39	3.66
12/15/2009	9.1	2.21
6/28/2010	13	2.56
12/29/2010	16	2.77
6/7/2011	170	5.14
12/9/2011	11	2.40
6/1/2012	4.6	1.53
12/27/2012	1.7	0.53
6/6/2013	1.3	0.26
12/13/2013	0.50	-0.69
6/23/2014	87	4.47
12/17/2014	35	3.56
6/9/2015	4	1.39
12/30/2015	2.3	0.83
6/22/2016	71	4.26



Notes:

ND taken at reporting limit/reported value
 Qualified data converted to reported value

Data quality

Total # of data points used in regression	34
# of nondetects	4
% of data as detects	88

Results

Coefficient of Determination (R^2) =	0.2848	
p-Value =	1.15E-03	
Attenuation Rate in Groundwater (K) =	0.0004	days ⁻¹
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0002	days ⁻¹
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.54E+03	days

Date Screening Level Reached

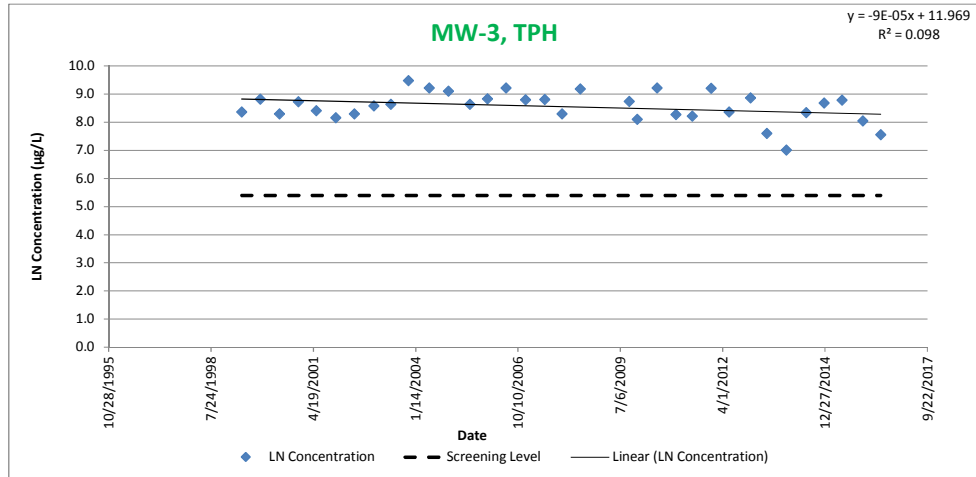
Screening Level	1
LN Screening Level	0.0
Intercept	20.878
Slope	-0.0004
Date to Screening Level	4/7/2027

Abbreviations and Notes

ug/l = micrograms per liter
 LN = Natural Logarithm

Sample Information
Sample Location MW-3
Constituent TPH-g

Sample Date	Concentration (ug/L)	LN Concentration
5/20/1999	4300	8.37
11/15/1999	6720	8.81
5/22/2000	4000	8.29
11/22/2000	6130	8.72
5/15/2001	4490	8.41
11/23/2001	3500	8.16
5/24/2002	4000	8.29
11/29/2002	5300	8.58
5/15/2003	5600	8.63
11/4/2003	13000	9.47
5/24/2004	10000	9.21
11/29/2004	9000	9.10
6/24/2005	5600	8.63
12/15/2005	6800	8.82
6/14/2006	10000	9.21
12/21/2006	6600	8.79
6/28/2007	6700	8.81
12/13/2007	4000	8.29
6/9/2008	9700	9.18
9/28/2009	6200	8.73
12/15/2009	3300	8.10
6/28/2010	10000	9.21
12/29/2010	3900	8.27
6/7/2011	3700	8.22
12/9/2011	9900	9.20
6/1/2012	4300	8.37
12/27/2012	7100	8.87
6/6/2013	2000	7.60
12/13/2013	1100	7.00
6/23/2014	4200	8.34
12/17/2014	5900	8.68
6/9/2015	6500	8.78
12/30/2015	3100	8.04
6/22/2016	1900	7.55



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality

Total # of data points used in regression	34
# of nondetects	0
% of data as detects	100

Results

Coefficient of Determination (R^2) =	0.0980	
p-Value =	7.14E-02	
Attenuation Rate in Groundwater (K) =	0.0001	days ⁻¹
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0000	days ⁻¹
Chemical Half Life in Groundwater ($t_{1/2}$) =	7.99E+03	days

Date Screening Level Reached

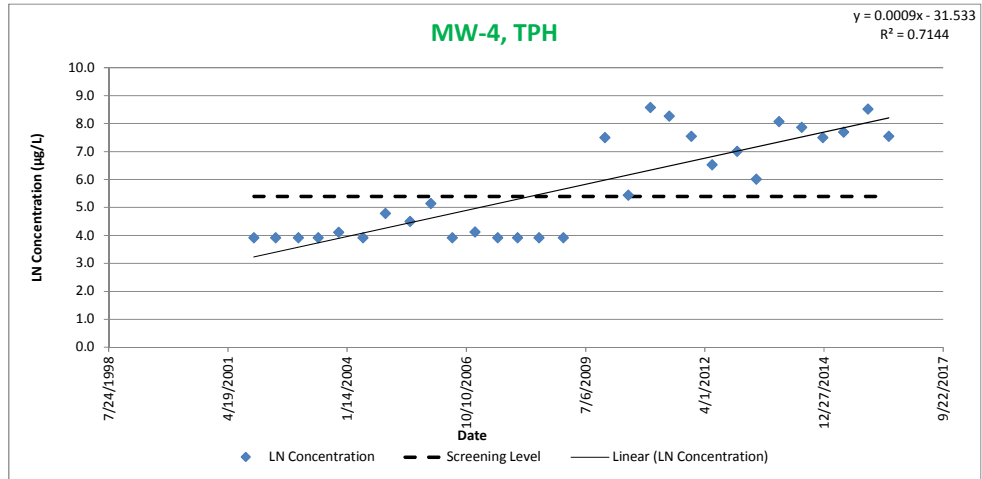
Screening Level	220
LN Screening Level	5.4
Intercept	11.969
Slope	-0.0001
Date to Screening Level	NA

Abbreviations and Notes

ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
 Sample Location MW-4
 Constituent TPH-g

Sample Date	Concentration (ug/L)	LN Concentration
11/23/2001	50	3.91
5/24/2002	50	3.91
11/29/2002	50	3.91
5/15/2003	50	3.91
11/4/2003	61	4.11
5/24/2004	50	3.91
11/29/2004	120	4.79
6/24/2005	90	4.50
12/15/2005	170	5.14
6/14/2006	50	3.91
12/21/2006	62	4.13
6/28/2007	50	3.91
12/13/2007	50	3.91
6/9/2008	50	3.91
12/30/2008	50	3.91
12/15/2009	1800	7.50
6/28/2010	230	5.44
12/29/2010	5300	8.58
6/7/2011	3900	8.27
12/9/2011	1,900	7.55
6/1/2012	680	6.52
12/27/2012	1100	7.00
6/6/2013	410	6.02
12/13/2013	3200	8.07
6/23/2014	2600	7.86
12/17/2014	1800	7.50
6/9/2015	2200	7.70
12/30/2015	5000	8.52
6/22/2016	1900	7.55



Notes:

ND taken at reporting limit/reported value
 Qualified data converted to reported value

Data quality	
Total # of data points used in regression	29
# of nondetects	10
% of data as detects	66

Less than 75% data above reporting limits.

Results		
Coefficient of Determination (R^2) =	0.7144	
p-Value =	8.00E-09	
Attenuation Rate in Groundwater (K) =	-0.0009	days ⁻¹
Attenuation Rate in Groundwater at 90% confidence (K) =	-0.0012	days ⁻¹
Chemical Half Life in Groundwater ($t_{1/2}$) =	NA	days

Date Screening Level Reached	
Screening Level	220
LN Screening Level	5.4
Intercept	-31.533
Slope	0.0009
Date to Screening Level	NA

Abbreviations and Notes
 ug/l = micrograms per liter
 LN = Natural Logarithm

APPENDIX H

ACEH Waste Oil Directive





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

November 18, 2015

Mr. Martin Musonge
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
(Sent via E-mail to:
Martin.Musonge@waterboards.ca.gov)

Subject: Fuel Leak Case No. RO0000203 and GeoTracker Global ID T0600101471, Unocal #0746, 3943
Broadway, Oakland, CA 94611

Dear Mr. Musonge:

The information contained in this letter summarizes Alameda County Environmental Health's (ACEH) Low Threat Underground Storage Tank Case Closure Policy (LTCP) of the case file with regard to the waste oil tank at the subject site.

Documents review by ACEH staff included the *Soil Sampling Report* (SWI), dated August 30, 1989, which was prepared by Kaprealian Engineering, Inc. (KEI) for the subject site. The SWI includes documentation regarding the recovery of 12 soil samples following the removal of two 10,000-gallon underground storage tanks (USTs) used for the storage of gasoline motor vehicle fuel and one 280-gallon UST used for the storage of waste oil (WOT). A summary of our review is provided below.

- The SWI states the following: "KEI's field work was conducted on August 16, 1989 when two underground fuel storage tanks and one 280 gallon waste oil tank were removed from the site. The fuel tanks consisted of one 10,000 gallon super unleaded tank, and one 10,000 gallon regular unleaded gasoline tank. The tanks were made of steel and no apparent holes or cracks were observed in the tanks. Tank removal and soil sampling were performed in the presence of Mr. Gil Wistar of the Alameda County Health Agency."
- The WOT investigation consisted of the recovery of one soil sample from native soil beneath the tank at a depth of 8 feet below the ground surface (bgs). Groundwater was not encountered in the WOT pit. The soil sample, identified as WO1, was analyzed for total petroleum hydrocarbons as gasoline (TPHg) - referred to as low to medium boiling point hydrocarbons in the laboratory analysis report, total petroleum hydrocarbons as diesel (TPHd) - referred to as high boiling point hydrocarbons in the laboratory analysis report, benzene, toluene, ethylbenzene, and xylenes (BTEX), total oil and grease (TOG), and halogenated volatile organics (HVOs).
- TPHg and TPHd were analyzed by EPA Test Method 8015, BTEX by EPA Test Method 8020, TOG by Test Method SM 503 D&G (gravimetric), and the HVOs by EPA Test Method 8010. A review of the analytical test results revealed 1.6 milligrams per kilogram (mg/kg) TPHg and 1.3 mg/kg toluene in soil beneath the WOT. Concentrations of TPHd, BTX, TOG, and the 28 compounds included in the HVO analysis, which includes tetrachloroethene (PCE) and trichloroethene (TCE), were below their respective laboratory reporting limit.

Mr. Musonge
RO0000203
November 18, 2015, Page 2

Based on our review of the WOT investigation, ACEH is of the opinion the WOT does not appear to have experienced a release, and that the low concentrations of TPHg and toluene may be the result of contamination from the release(s) associated with the site's fuel dispensing system. Due to the limited impacts to soil beneath the WOT, no further action for the WOT is deemed necessary.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please call me at (510) 567 - 6764 or send me an electronic mail message at keith.nowell@acgov.org.

Sincerely,



Digitally signed by Keith Nowell
DN: cn=Keith Nowell, o=Alameda County,
ou=Department of Environmental Health,
email=keith.nowell@acgov.org, c=US
Date: 2015.11.18 15:13:28 -08'00'

Keith Nowell, P.G., C.HG
Hazardous Materials Specialist

Enclosures: Attachment 1 - Site Figure Showing Waste Oil Tank Location

Attachment 2 – Waste Oil Tank Analytical Analysis Results

cc: Laurent Meillier, San Francisco Bay Region, Regional Water Quality Control Board, 1515 Clay Street, Suite 1400, Oakland, CA 94612 (Sent via E-mail to: Laurent.Meillier@waterboards.ca.gov)

Dilan Roe, ACEH (Sent via E-mail to: dilan.roe@acgov.org)
Keith Nowell, ACEH (Sent via E-mail to: keith.nowell@acgov.org)
GeoTracker, file

ATTACHMENT 1



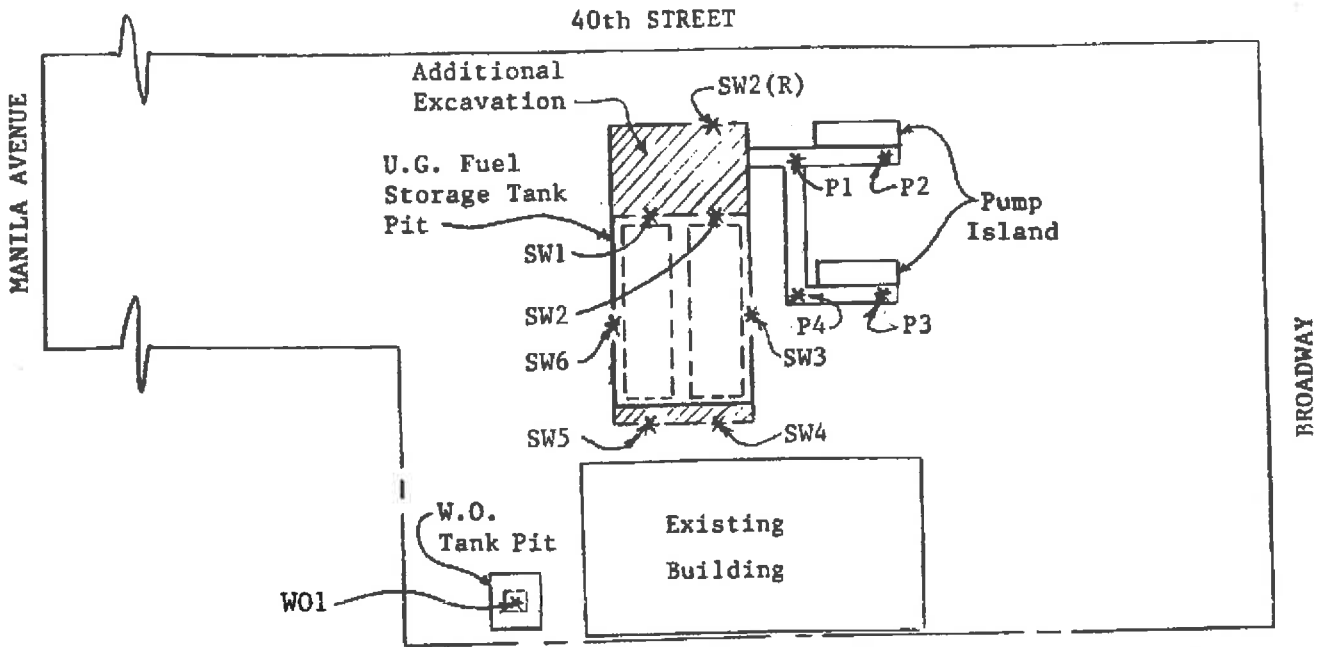
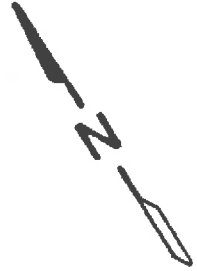
KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA CA 94510

(707) 746-6915



SITE PLAN



* Sample Point Location

Unocal Service Station #0746
3943 Broadway Street
Oakland, California

ATTACHMENT 2

KEI-J89-0805.R1
August 30, 1989

TABLE 1

SUMMARY OF LABORATORY ANALYSES
SOIL

(Results in ppm)

(Samples collected on August 16, 17, 18 & 24, 1989)

<u>Sample #</u>	<u>Depth (feet)</u>	<u>TPH as Gasoline</u>	<u>TPH as Diesel</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethyl- benzene</u>
SW1	9.5	13	---	ND	0.13	0.39	0.15
SW2	9.5	290	---	0.82	8.7	44	7.6
SW2 (R)	9.5	ND	---	ND	ND	ND	ND
SW3	9.5	ND	---	ND	ND	ND	ND
SW4	9.5	ND	---	ND	ND	ND	ND
SW5	9.5	ND	---	ND	ND	ND	ND
SW6	9.5	ND	---	ND	ND	ND	ND
P1	6.5	6.1	---	ND	ND	ND	ND
P2	6.5	36	---	0.52	4.4	8.0	1.4
P3	5	20	---	0.30	2.5	5.6	1.1
P4	5	3.8	---	0.11	0.19	0.23	0.1
WO1*	8	1.6	ND	ND	1.3	ND	ND
Detection Limits		1.0	1.0	0.05	0.1	0.1	0.1

* TOG and EPA 8010 constituents for this sample were non-detectable.

ND = Non-detectable.



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc.	Client Project ID: Unocal, Oakland, 3943 Broadway/40th St.	Sampled: Aug 18, 1989
P.O. Box 913	Sample Descript.: Soil, WO1	Received: Aug 16, 1989
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Aug 23, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number: 908-1752	Reported: Aug 25, 1989

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons	1.0	1.0
Benzene	0.05	N.D.
Toluene	0.1	N.D.
Ethyl Benzene	0.1	N.D.
Xylenes	0.1	N.D.

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director



SEQUOIA ANALYTICAL

650 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc. P.O. Box 913 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: Unocal, Oakland, 3943 Broadway/40th St. Matrix Descript: Soil Analysis Method: EPA 3550/8015 First Sample #: 908-1752	Sampled: Aug 16, 1989 Received: Aug 16, 1989 Extracted: Aug 22, 1989 Analyzed: Aug 23, 1989 Reported: Aug 25, 1989
--	---	--

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
908-1752	WO1	N.D.

Detection Limits:

2.0

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director

9081752.KEI <2>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kaprelian Engineering, Inc. P.O. Box 913 Benicia, CA 94510 Attention: Mardo Kaprelian, P.E.	Client Project ID: Unocal, Oakland, 3943 Broadway/40th St. Matrix Descript: Soil Analysis Method: SM 503 D&E (Gravimetric) First Sample #: 908-1752	Sampled: Aug 16, 1989 Received: Aug 16, 1989 Extracted: Aug 22, 1989 Analyzed: Aug 24, 1989 Reported: Aug 25, 1989
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TOTAL RECOVERABLE OIL & GREASE

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
908-1752	WO1	N.D.

Detection Limits:

30.0

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director

9081752.KEI <3>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kapreallan Engineering, Inc.	Client Project ID:	Unocal, Oakland, 3943 Broadway/40th St.	Sampled:	Aug 16, 1989
P.O. Box 913	Sample Descript:	Soil, WO1	Received:	Aug 16, 1989
Benicia, CA 94510	Analysis Method:	EPA 5030/8010	Analyzed:	Aug 24, 1989
Attention: Mardo Kapreallan, P.E.	Lab Number:	908-1752	Reported:	Aug 25, 1989

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane.....	5.0	N.D.
Bromoform.....	5.0	N.D.
Bromomethane.....	5.0	N.D.
Carbon tetrachloride.....	5.0	N.D.
Chlorobenzene.....	5.0	N.D.
Chloroethane.....	25.0	N.D.
2-Chloroethylvinyl ether.....	5.0	N.D.
Chloroform.....	5.0	N.D.
Chloromethane.....	5.0	N.D.
Dibromochloromethane.....	5.0	N.D.
1,2-Dichlorobenzene.....	10.0	N.D.
1,3-Dichlorobenzene.....	10.0	N.D.
1,4-Dichlorobenzene.....	10.0	N.D.
1,1-Dichloroethane.....	5.0	N.D.
1,2-Dichloroethane.....	5.0	N.D.
1,1-Dichloroethene.....	5.0	N.D.
Total 1,2-Dichloroethane.....	5.0	N.D.
1,2-Dichloropropane.....	5.0	N.D.
cis-1,3-Dichloropropene.....	5.0	N.D.
trans-1,3-Dichloropropene.....	5.0	N.D.
Methylene chloride.....	10.0	N.D.
1,1,2,2-Tetrachloroethane.....	5.0	N.D.
Tetrachloroethene.....	5.0	N.D.
1,1,1-Trichloroethane.....	5.0	N.D.
1,1,2-Trichloroethane.....	5.0	N.D.
Trichloroethane.....	5.0	N.D.
Trichlorofluoromethane.....	5.0	N.D.
Vinyl chloride.....	10.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director

9081762.KEI <4>



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA CA 94510

(415) 876-9100 (707) 748-6915

CHAIN OF CUSTODY

SAMPLER: HAGOP
(Signature)

DATE/TIME OF COLLECTION: 8-16-89

TURN AROUND TIME: Five Days

SAMPLE DESCRIPTION AND PROJECT NUMBER:

UNOCAL - OAKLAND - 3943 Broadway / 40th St.

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/WATER
<u>W01</u>	<u>TPH-G/BTXE/TPH-D/ TOG/8010</u>	<u>G</u>	<u>1</u>	<u>S</u>

RELINQUISHED BY*	TIME/DATE	RECEIVED BY*	TIME/DATE
<u>Hagop Kework</u>	<u>17:00 8-16-89</u>	<u>Eric #23</u>	<u>8/16/89 7:1700</u>
<u>Eric #23</u>	<u>8/16/89</u>	<u>Derek [unclear]</u>	<u>18:52 8-16-89</u>
<u>3.</u>			

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: _____

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR BTX&E (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.

APPENDIX I

Owner Correspondence



October 20, 2011-Chevron sends Site Access Agreement (SAA) package/request to property owners of 3915 Broadway, Oakland, CA.

October 26, 2011-Attorney for property owner emails Chevron instructing them to communicate with him and not the property owners, notifies Chevron there will be revisions to the SAA and that neither Chevron, nor its agents or subcontractors are authorized to access the property prior to execution of a SAA. Attorney for property owner requested most recent reports for site.

October 27, 2011-Chevron provides requested information via email.

October 27, 2011-January, 2012-Variou s revisions to the SAA requested by attorney for property owner to include a 5 year term of access and provisions for attorney's fees, yearly attorneys/access fees, payment to "verify property restoration", sample the wells early morning to avoid interruption to business. Chevron agreed to certain payment provisions and revisions to the SAA, but not all.

January 2012-Negotiations stalled as parties could not come to mutual agreement on terms of SAA.

August 11, 2015- SAA request sent to property owners of 3915 Broadway, Oakland, CA

September 14, 2015 – "Agent" for property owner emails Chevron stating the property owner "does not agree with the "Site Access Agreement", but will entertain ideas for limited site access if the agreement is revised and includes, but not limited to: compensation for limited access to monitoring wells, no monitoring equipment or barrels left on property, and hours of limited access being completed by but not less than 2 hours within opening hours. Agent for owner also mentioned how owner had to perform extensive work at the property and due to the owner's request for access to the 35-1647 Service Station being denied by the station owner they incurred additional expenditures of \$30,000.

September 17, 2015-Chevron responds to email explaining that Chevron does not own or operate the existing service station and had no involvement with the owner's previous attempts to gain access to the service station property. Chevron states it will not leave monitoring equipment or barrels on the property and will sample the wells within not less than 2 hours of opening and Chevron does not pay compensation to access wells that we are being directed to sample. No response.

October 15, 2015-Chevron sends follow up email to agent for property owner reiterating terms and requesting agent for property owner call to discuss. No response.

To date requests to discuss SAA with agent for property owner have not been returned.

APPENDIX J

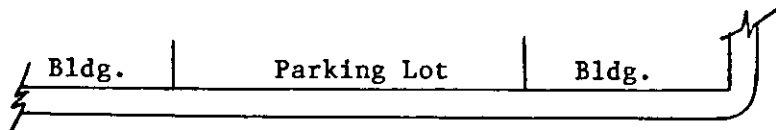
Kaprealian Engineering Original 1989 Site Layout



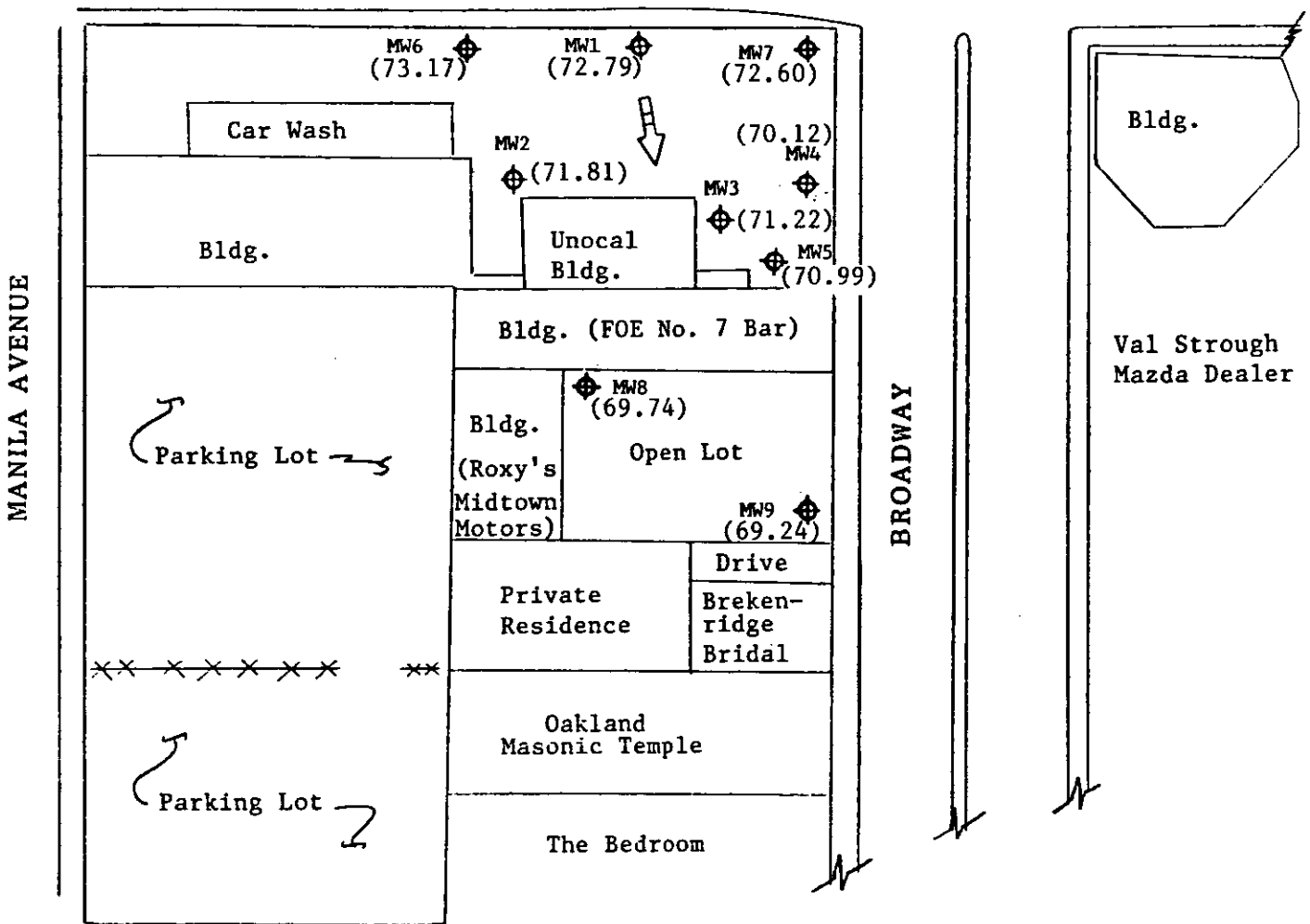
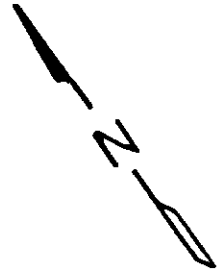


KAPREALIAN ENGINEERING, INC.
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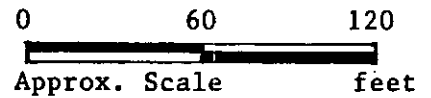
40th STREET



SITE VICINITY MAP

LEGEND

- ⊕ Monitoring Well (existing)
- () Elevation of Ground Water Table in feet above Mean Sea Level on 10/26/90.
- ➔ Direction of Ground Water Flow



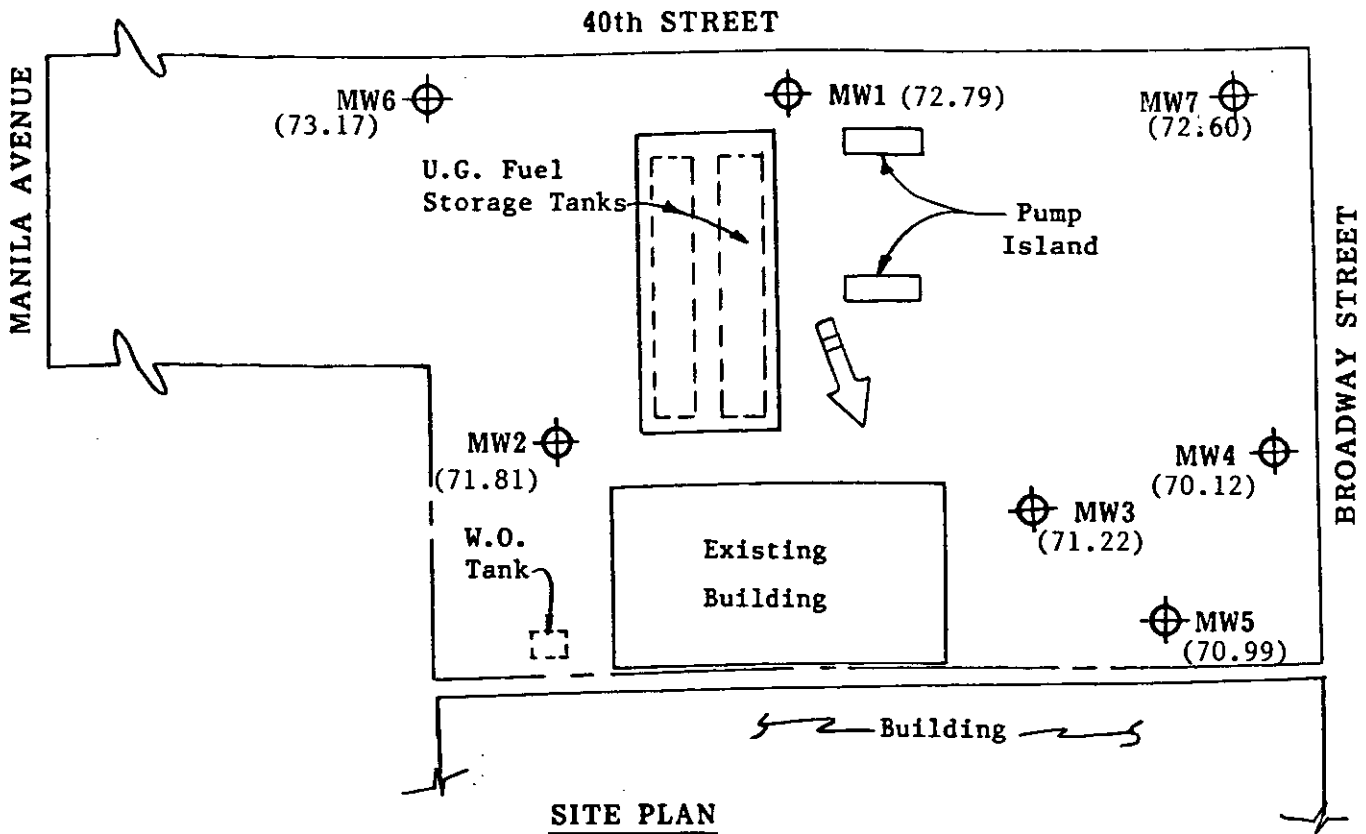
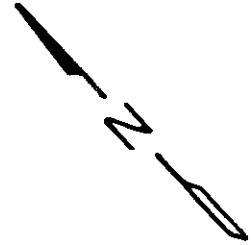
Unocal S/S #0746
 3943 Broadway
 Oakland, California



KAPREALIAN ENGINEERING, INC.



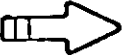
Consulting Engineers

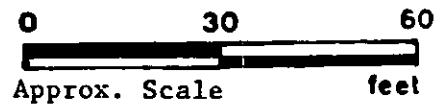
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581



SITE PLAN
Figure 1

LEGEND

-  Monitoring Well (Existing)
-  () Ground water surface elevation in feet above Mean Sea Level on 10/26/90.
-  Direction of ground water flow

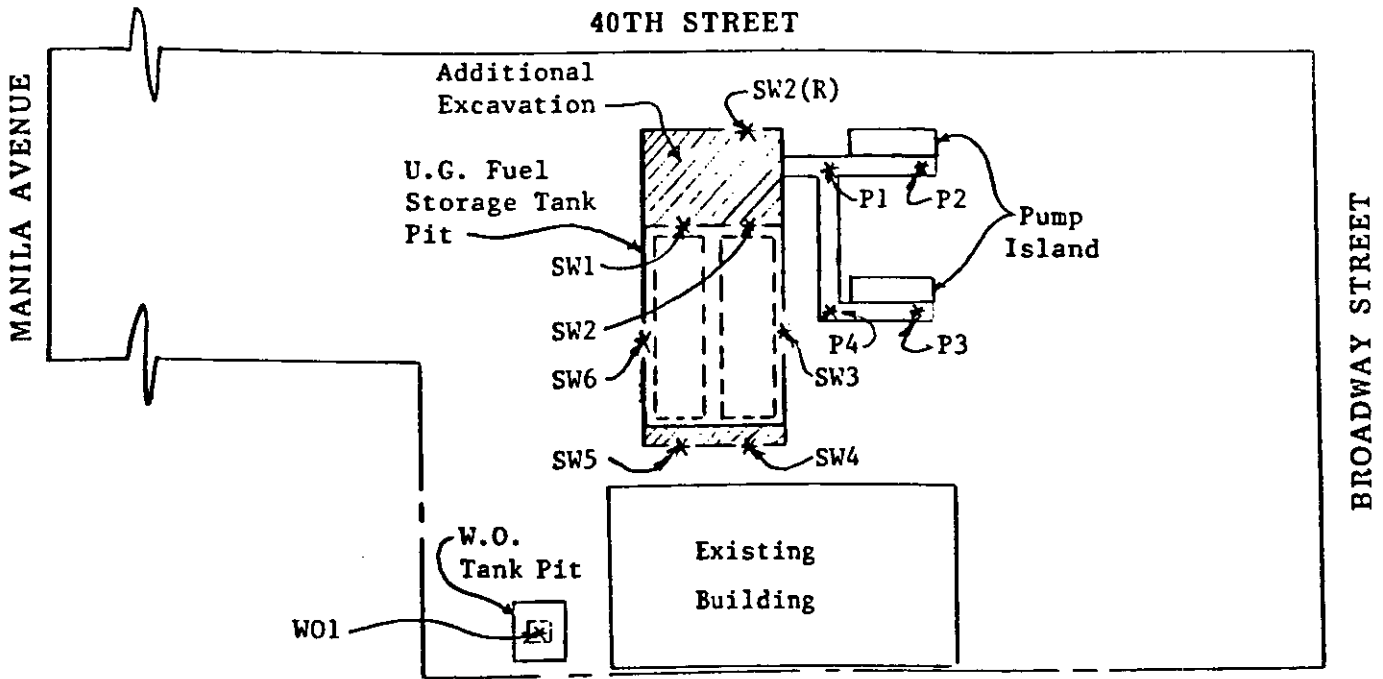
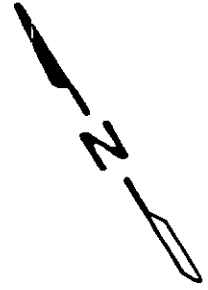


Unocal Service Station #0746
3943 Broadway Street
Oakland, California



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Consulting Engineers

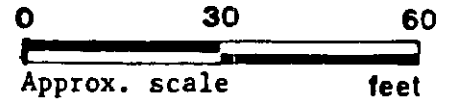
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581



SITE PLAN
Figure 2

LEGEND

* Sample Point Location



Unocal S/S #0746
3943 Broadway Street
Oakland, CA

Arcadis U.S., Inc.

2999 Oak Road

Suite 300

Walnut Creek, California 94597

Tel 925 274 1100

Fax 925 274 1103

www.arcadis.com

A decorative graphic consisting of three thin orange lines. One line is horizontal, extending across the width of the page. Two other lines are diagonal, starting from the bottom left and extending towards the top right, intersecting the horizontal line.