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GOVERNOR

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SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## State Water Resources Control Board

December 26, 2013

Gregg Kwey  
RWQCB, Region 4  
320 W. Fourth Street, Ste. 200  
Los Angeles, CA 90013

### **PRELIMINARY REVIEW SUMMARY REPORT FOR CLAIM NUMBER 19894; SITE ADDRESS: 5910 DEL AMO BLVD, LAKEWOOD**

The UST Cleanup Fund (Fund) has completed our review of RWQCB, Region 4 (Regional Board) case number R-26278. The Preliminary Review Summary Report for this case is enclosed for your information and comment. Please note that the Fund's recommendations are based on review of information contained in the Fund's case files, data currently in the Geotracker database and any other sources of information that were readily available to Fund staff at the time the review was conducted. Consequently, they may not reflect historical information that has not been uploaded to the Geotracker database or available in the Fund's case files and any data that has been recently submitted to your office.

The Fund requests that the Regional Board staff notify the Fund within 45 days from the date of this letter as to whether you agree or disagree with our recommendations for this case. If you agree with our recommendation, we request that you provide the Fund with an estimated timeframe to either implement the recommendations for additional corrective action or for closing this case. If you do not agree with our recommendations, we request that you provide the Fund with a summary of the reasons for disagreeing and/or impediments to implementing the recommendations for additional corrective action or closing this case. Responses to the Fund may be provided by e-mail, letter or a copy of correspondence to the RP, if the correspondence addresses all the information requested by the Fund.

Fund staff will be sending copies of all completed 5-Year Review Summary Reports to claimants 45 days from the date of this letter unless the Regional Board notifies the Fund that they wish to discuss this case prior to transmittal to the claimant. If you or your staff has any questions or concerns on specific reports that you would like to discuss with the Fund prior to transmittal of the report to the claimant, please contact us within this period. The Fund reviewer name and telephone number are included on the last page of the summary Report.

Sincerely,

Robert Trommer  
Senior Engineering Geologist  
Chief, Technical Review Unit  
Underground Storage Tank Cleanup Fund

Enclosure  
cc by email: Noman Chowdhury/R4

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR



**State Water Resources Control Board**

**DRAFT  
REVIEW SUMMARY REPORT – ADDITIONAL WORK  
PRELIMINARY REVIEW – DECEMBER 2013**

**Agency Information**

Agency Name: Los Angeles Regional Water Quality Control Board (Regional Water Board)	Address: 320 West 4 <sup>th</sup> Street, Suite 200 Los Angeles, CA 90013
Agency Caseworker: Noman Chowdhury	Case No.: R-26278

**Case Information**

USTCF Claim No.: 19894	GeoTracker Global ID: T0603794860
Site Name: Former Shell Station	Site Address: 5910 East Del Amo Blvd. Lakewood, CA 90713
Responsible Party: Equilon Enterprises, LLC c/o: Shell Oil Products US Attn: Deborah Pryor	Address: 20945 South Wilmington Ave. Carson, CA 90810
USTCF Expenditures to Date: \$0	Number of Years Case Open: 11

**URL: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0603794860](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603794860)**

**Summary**

The Low-Threat Underground Storage Tank (UST) Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Policy. This case does meet all of the required criteria of the Policy. A summary evaluation of compliance with the Policy is shown in **Attachment 1: Compliance with State Water Board Policies and State Law**. The Conceptual Site Model upon which the evaluation of the case has been made is described in **Attachment 2: Summary of Basic Case Information (Conceptual Site Model)**. Highlights of the case follow:

This case is a former commercial petroleum fueling facility, and is currently a shopping plaza. An unauthorized release was reported in April 2002 following the removal of three 10,000-gallon gasoline USTs and the associated fueling facilities. Approximately 425 tons of impacted soil were excavated and disposed offsite during the UST removal. In November 2004, an additional 1,340 tons of impacted soil were excavated to a depth of 16 feet below surface from the source area. Since 2004, nine groundwater monitoring wells have been installed and regularly monitored. According to groundwater data, water quality objectives have been achieved or nearly achieved in all monitoring wells except source area well MW-4.

The petroleum release is limited to the soil and shallow groundwater. According to data available in GeoTracker, there are no supply wells regulated by the California Department of Public Health or surface water bodies within 1,000 feet of the defined plume boundary. No other water supply wells have been identified within 1,000 feet of the defined plume boundary in files reviewed. Water is provided to water users near the Site by the City of Lakewood. The affected groundwater is not



**ATTACHMENT 1: COMPLIANCE WITH STATE WATER BOARD POLICIES AND STATE LAW**

The case complies with the State Water Resources Control Board policies and state law. Section 25296.10 of the Health and Safety Code requires that sites be cleaned up to protect human health, safety, and the environment. Based on available information, any residual petroleum constituents at the Site do not pose significant risk to human health, safety, or the environment.

**The case complies with the requirements of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.<sup>1</sup>**

<p><b>Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations?</b>          The corrective action provisions contained in Chapter 6.7 of the Health and Safety Code and the implementing regulations govern the entire corrective action process at leaking UST sites. If it is determined, at any stage in the corrective action process, that UST site closure is appropriate, further compliance with corrective action requirements is not necessary. Corrective action at this site has been consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations and, since this case meets applicable case-closure requirements, further corrective action is not necessary, unless the activity is necessary for case closure.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p><b>Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?</b></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><b>If so, was the corrective action performed consistent with any order?</b></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p><b><u>General Criteria</u></b>          General criteria that must be satisfied by all candidate sites:</p> <p><b>Is the unauthorized release located within the service area of a public water system?</b></p> <p><b>Does the unauthorized release consist only of petroleum?</b></p> <p><b>Has the unauthorized (“primary”) release from the UST system been stopped?</b></p> <p><b>Has free product been removed to the maximum extent practicable?</b></p> <p><b>Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?</b></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 type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

<sup>1</sup> Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.  
[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2012/rs2012\\_0016atta.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf)

<p><b>Has secondary source been removed to the extent practicable?</b></p> <p><b>Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?</b></p> <p><b>Nuisance as defined by Water Code section 13050 does not exist at the Site?</b></p> <p><b>Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?</b></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</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</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><b><u>Media-Specific Criteria</u></b>        Candidate sites must satisfy all three of these media-specific criteria:</p> <p><b>1. Groundwater:</b>        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><b>Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?</b></p> <p><b>Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?</b></p> <p>If YES, check applicable class: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5</p> <p><b>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?</b></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p><b>2. Petroleum Vapor Intrusion to Indoor Air:</b>        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><b>Is the Site an active commercial petroleum fueling facility?</b>        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><b>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?</b></p> <p>If YES, check applicable scenarios: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

<p><b>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?</b></p> <p><b>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?</b></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><b>3. Direct Contact and Outdoor Air Exposure:</b>          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><b>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)?</b></p> <p><b>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?</b></p> <p><b>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?</b></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>

**ATTACHMENT 2: SUMMARY OF BASIC CASE INFORMATION (Conceptual Site Model)**

**Site Location/History**

- This case is located on the southeast corner of the intersection of Del Amo Boulevard and Woodruff Avenue, and is a shopping plaza.
- The Site is bounded on the south by a restaurant, on the west by a shopping plaza across Woodruff Avenue, on the north by a supermarket across Del Amo Boulevard, and on the east by a restaurant.
- Site maps showing the location of the former USTs, monitoring wells, groundwater level contours, and benzene concentrations are provided at the end of this document (CRA, September 2013).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: April 2002.
- Status of Release: USTs removed.

**Tank Information**

Tank No.	Size in Gallons	Contents	Closed in Place/Removed/Active	Date
1	10,000	Gasoline	Removed	February 2002
2	10,000	Gasoline	Removed	February 2002
3	10,000	Gasoline	Removed	February 2002

**Receptors**

- GW Basin: Coastal Plain of Los Angeles – Central (4-11.04).
- Beneficial Uses: Regional Water Board Basin Plan lists municipal, industrial service, industrial process and agriculture supplies.
- Land Use Designation: Aerial photograph available on GeoTracker indicates commercial land use in the vicinity of the Site.
- Public Water System: City of Lakewood.
- Water District: Metropolitan Water District of Southern California.
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no public supply wells regulated by the California Department of Public Health within 1,000 feet of the defined plume boundary. No other water supply wells were identified within 1,000 feet of the defined plume boundary in the files reviewed.
- Distance to Nearest Surface Water: There is no identified surface water within 1,000 feet of the defined plume boundary.

**Geology/Hydrogeology**

- Stratigraphy: The Site is underlain by interbedded clay, silt, silty sand and sand.
- Maximum Sample Depth: 60 feet below ground surface (bgs).
- Minimum Groundwater Depth: 10.76 feet bgs at monitoring well MW-3.
- Maximum Groundwater Depth: 19.05 feet bgs at monitoring well MW-4.
- Current Average Depth to Groundwater: Approximately 14 feet bgs.
- Saturated Zones(s) Studied: Approximately 11 - 35 feet bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: South to southwest with an average gradient of 0.018 feet/foot (September 2013).

**Monitoring Well Information**

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (09/04/2013)
MW-1	May 2004	10 – 35	13.53
MW-2	May 2004	10 – 35	13.72
MW-3	May 2004	10 – 35	13.23
MW-4	May 2004	10 – 35	14.44
MW-5	May 2004	10 – 35	13.66
MW-6	May 2004	10 – 35	Paved over
MW-7	May 2009	6 – 31	13.96
MW-8	May 2009	6 – 31	12.06
MW-9	October 2012	8 – 30	13.84

**Remediation Summary**

- Free Product: None reported.
- Soil Excavation: Approximately 425 tons of impacted soil were excavated and disposed offsite during the UST removal in February 2002. In November 2004, an additional 1,340 tons of impacted soil were excavated to a depth of 16 feet below surface from the source area.
- In-Situ Soil/Groundwater Remediation: None reported.

**Most Recent Concentrations of Petroleum Constituents in Soil\***

Constituent	Maximum 0-5 feet bgs [mg/kg (date) sample-depth]	Maximum 5-10 feet bgs [mg/kg (date) sample-depth]
Benzene	0.01 (01/18/02) B-6-5'	2.2 (05/06/04) MW-4-10'
Ethylbenzene	0.34 (01/18/02) B-6-5'	33 (05/06/04) MW-4-10'
Naphthalene	<0.0044 (06/10/13) SVP-1-5'	<0.0043 (06/10/13) SVP-1-10'
PAHs	NA	NA

\*: Soil boring B-4 and B-6 locations were over-excavated to 16 feet below surface in November 2004 and results are not included in this table.

NA: Not Analyzed, Not Applicable or Data Not Available

mg/kg: Milligrams per kilogram, parts per million

<: Not detected at or above stated reporting limit

PAHs: Polycyclic aromatic hydrocarbons

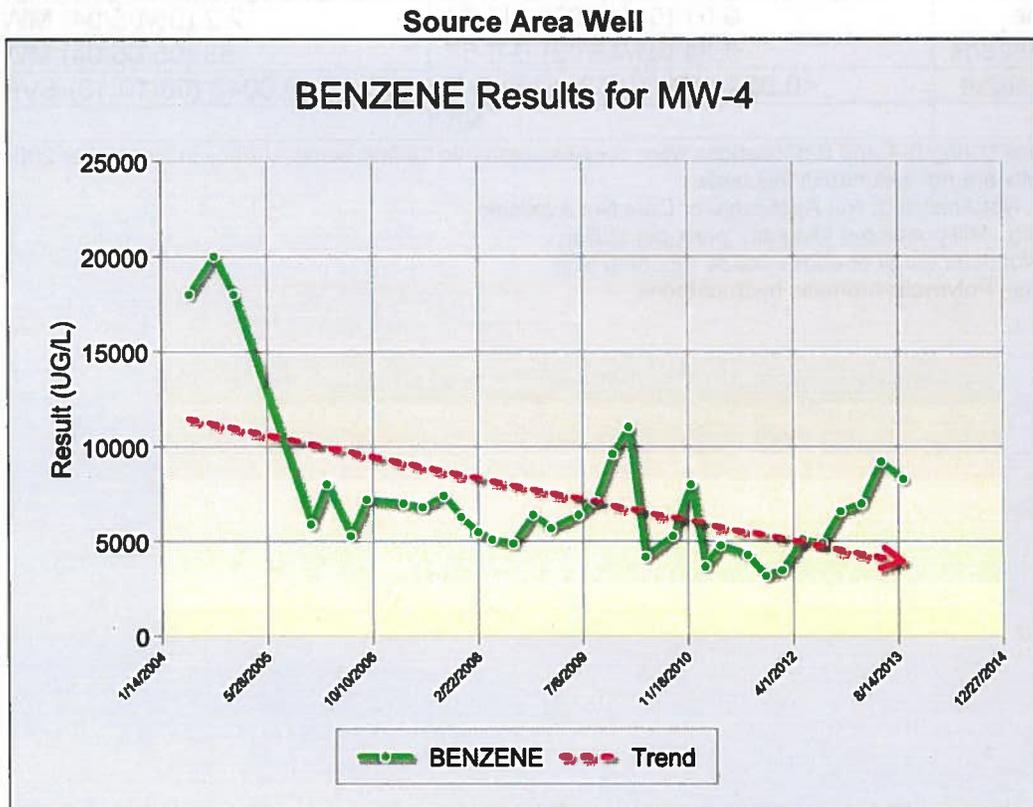
**Most Recent Concentrations of Petroleum Constituents in Groundwater**

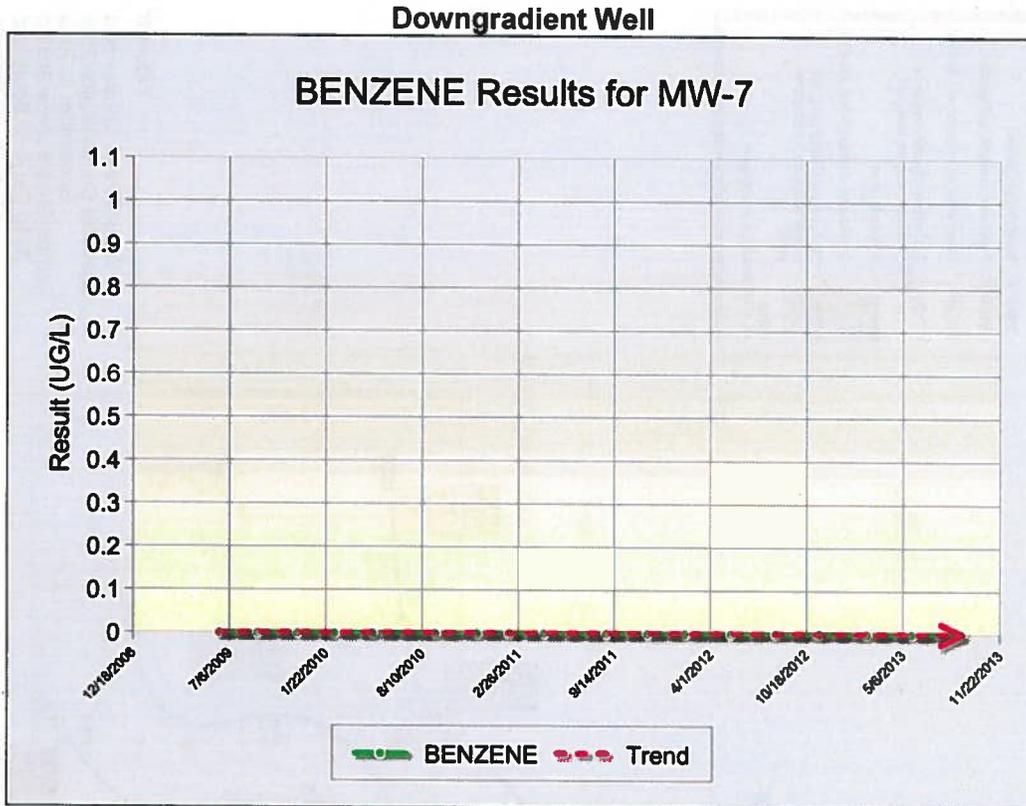
Sample	Sample Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	09/04/13	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10
MW-2	09/04/13	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10
MW-3	09/04/13	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10
MW-4	09/04/13	38,000	8,300	220	3,000	3,600	<50	<1,000
MW-5	09/04/13	3,700	62	3.7	170	130	4.7	<20
MW-7	09/04/13	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10
MW-8	09/04/13	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10
MW-9	09/04/13	67	0.78	<0.50	<0.50	<1.0	<0.50	<10
<b>WQOs</b>		--	<b>1</b>	<b>150</b>	<b>300</b>	<b>1,750</b>	<b>5<sup>a</sup></b>	<b>1,200<sup>b</sup></b>

µg/L: Micrograms per liter, parts per billion  
 <: Not detected at or above stated reporting limit  
 TPHg: Total petroleum hydrocarbons as gasoline  
 MTBE: Methyl tert-butyl ether; TBA: Tert-butyl alcohol  
 WQOs: Water Quality Objectives, Regional Water Board Basin Plan  
 --: Regional Water Board Basin Plan does not have a numeric water quality objective for TPHg  
<sup>a</sup>: Secondary maximum contaminant level (MCL)  
<sup>b</sup>: California Department of Public Health, Response Level

**Groundwater Trends**

- Since 2004, nine groundwater monitoring wells have been installed and regularly monitored. Benzene trends in the source area well MW-4 and downgradient well MW-7 are shown below:





### Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/Groundwater tested for methyl tert-butyl ether (MTBE): Yes, see table above.
- Oxygen Concentrations in Soil Vapor: >8% (CRA, September 2013).
- Plume Length: <250 feet.
- Plume Stable or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Risk from Residual Petroleum Hydrocarbons: The case does not meet Policy criteria. Although the contaminant plume that exceeds water quality objectives is less than 250 feet in length and stable, benzene concentrations in the source area is high.
- Indoor Vapor Risk from Residual Petroleum Hydrocarbons: This case meets Policy Criterion 2b. A site-specific risk assessment of potential exposure to petroleum constituents as a result of vapor intrusion (Low-Threat Closure Request, CRA September, 2013) found that maximum concentrations of petroleum constituents remaining in soil and groundwater will have no significant risk of adversely affecting human health.
- Direct Contact Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 for Commercial/Industrial use, and the concentration limits for a Utility Worker are not exceeded.

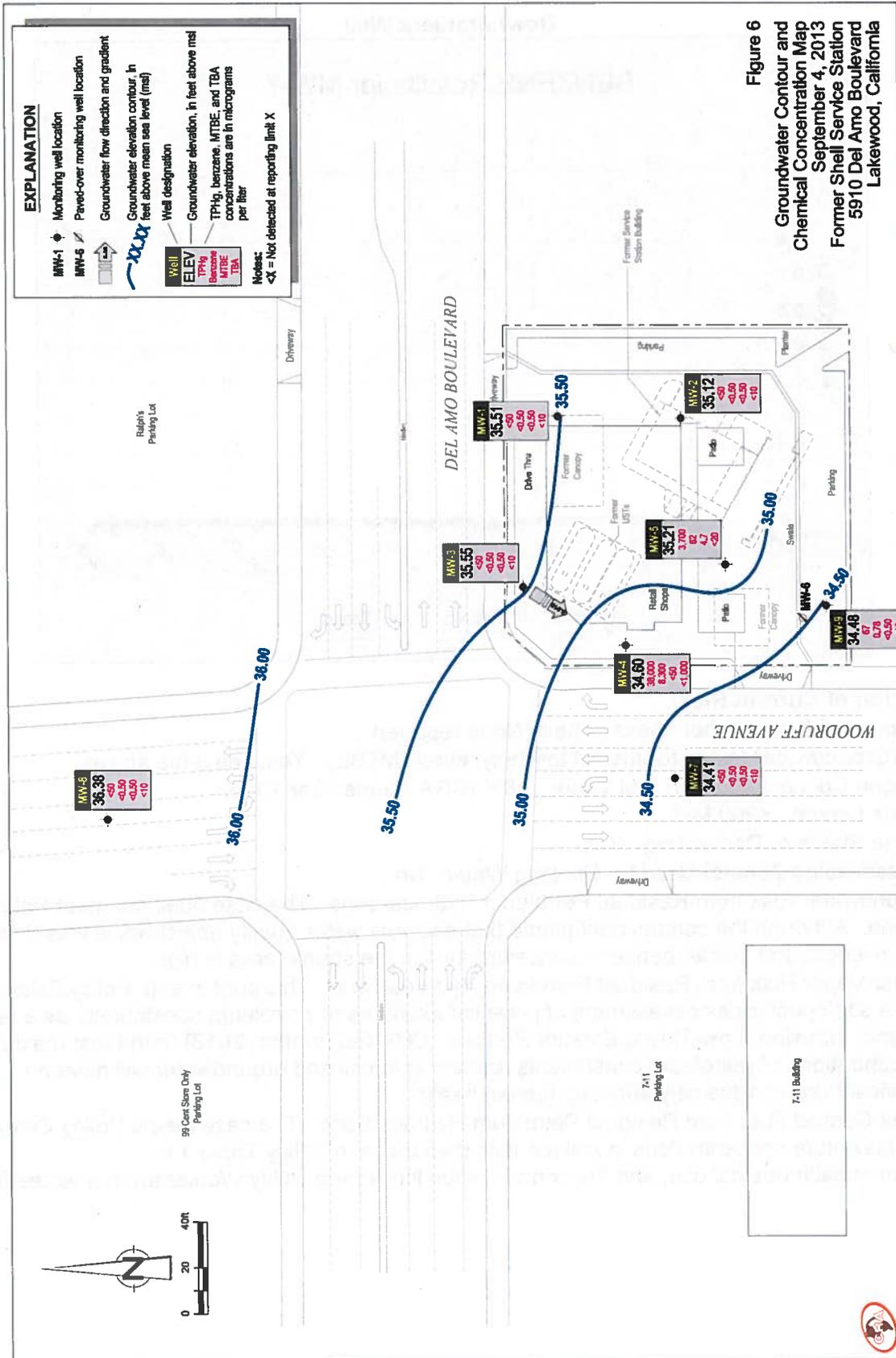


Figure 6  
 Groundwater Contour and  
 Chemical Concentration Map  
 September 4, 2013  
 Former Shell Service Station  
 5910 Del Amo Boulevard  
 Lakewood, California

