

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2013-0093 – UST

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**In the Matter of Underground Storage Tank Case Closure**

**Pursuant to Health and Safety Code Section 25299.39.2 and the Low Threat  
Underground Storage Tank Case Closure Policy**

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**BY THE EXECUTIVE DIRECTOR<sup>1</sup>:**

Pursuant to Health and Safety Code section 25299.39.2, the Manager of the Underground Storage Tank Cleanup Fund (Fund) recommends closure of the underground storage tank (UST) case at the site listed below.<sup>2</sup> The name of the Fund claimant, the Fund claim number, the site name and the applicable site address are as follows:

**Mehdi Mohammadian**

**Claim No. 12999/15058**

**Chevron #21-1285/Cal Gas**

**15595 Washington Ave., San Lorenzo, CA**

**Alameda County Environmental Health Department**

**I. STATUTORY AND PROCEDURAL BACKGROUND**

Section 25299.39.2 directs the Fund manager to review the case history of claims that have been active for five years or more (five-year review), unless there is an objection from the UST owner or operator. This section further authorizes the Fund Manager to make recommendations to the State Water Resources Control Board (State Water Board) for closure of a five-year-review case if the UST owner or operator approves. In response to a recommendation by the Fund Manager, the State Water Board, or in certain cases the State Water Board Executive Director, may close a case or require the closure of a UST case. Closure of a UST case is appropriate where the corrective action ensures the protection of

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<sup>1</sup> State Water Board Resolution No. 2012-0061 delegates to the Executive Director the authority to close or require the closure of any UST case if the case meets the criteria found in the State Water Board's Low Threat Underground Storage Tank Case Closure Policy adopted by State Water Board Resolution No. 2012-0016.

<sup>2</sup> Unless otherwise noted, all references are to the Health and Safety Code.

human health, safety, and the environment and where the corrective action is consistent with:

- 1) Chapter 6.7 of Division 20 of the Health and Safety Code and implementing regulations;
- 2) Any applicable waste discharge requirements or other orders issued pursuant to Division 7 of the Water Code;
- 3) All applicable state policies for water quality control; and
- 4) All applicable water quality control plans.

The Fund Manager has completed a five-year review of the UST case identified above, and recommends that this case be closed. The recommendation is based upon the facts and circumstances of this particular UST case. A UST Case Closure Review Summary Report has been prepared for the case identified above and the bases for determining compliance with the Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closures (Low-Threat Closure Policy or Policy) are explained in the Case Closure Review Summary Report.

#### **A. Low-Threat Closure Policy**

In State Water Board Resolution No. 2012-0016, the State Water Board adopted the Low Threat Closure Policy. The Policy became effective on August 17, 2012. The Policy establishes consistent statewide case closure criteria for certain low-threat petroleum UST sites. In the absence of unique attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents, cases that meet the general and media-specific criteria in the Low-Threat Closure Policy pose a low threat to human health, safety and the environment and are appropriate for closure under Health and Safety Code section 25296.10. The Policy provides that if a regulatory agency determines that a case meets the general and media-specific criteria of the Policy, then the regulatory agency shall notify responsible parties and other specified interested persons that the case is eligible for case closure. Unless the regulatory agency revises its determination based on comments received on the proposed case closure, the Policy provides that the agency shall issue a closure letter as specified in Health and Safety Code section 25296.10. The closure letter may only be issued after the expiration of the 60-day comment period, proper destruction or maintenance of monitoring wells or borings, and removal of waste associated with investigation and remediation of the site.

Health and Safety Code section 25299.57, subdivision (l)(1) provides that claims for reimbursement of corrective action costs that are received by the Fund more than 365 days after the date of a closure letter or a Letter of Commitment, whichever occurs later, shall not be reimbursed unless specified conditions are satisfied. A Letter of Commitment has already been issued on the claim subject to this order and the respective Fund claimant, so the 365-day

timeframe for the submittal of claims for corrective action costs will start upon the issuance of the closure letter.

## II. FINDINGS

Based upon the UST Case Closure Review Summary Report prepared for the case attached hereto, the State Water Board finds that corrective action taken to address the unauthorized release of petroleum at the UST release site identified as:

**Claim No. 12999/15058**

**Chevron #21-1285/Cal Gas**

ensures protection of human health, safety and the environment and is consistent with Chapter 6.7 of Division 20 of the Health and Safety Code and implementing regulations, the Low-Threat Closure Policy and other water quality control policies and applicable water quality control plans.

Pursuant to the Low-Threat Closure Policy, notification has been provided to all entities that are required to receive notice of the proposed case closure, a 60-day comment period has been provided to notified parties, and any comments received have been considered by the Board in determining that the case should be closed.

The UST case identified above may be the subject of orders issued by the Regional Water Quality Control Water Board (Regional Water Board) pursuant to Division 7 of the Water Code. Any orders that have been issued by the Regional Water Board pursuant to Division 7 of the Water Code, or directives issued by a Local Oversight Program agency for this case should be rescinded to the extent they are inconsistent with this Order.

## III. ORDER

**IT IS THEREFORE ORDERED** that:

- A. The UST case identified in Section II of this Order, meeting the general and media-specific criteria established in the Low-Threat Closure Policy, be closed in accordance with the following conditions and after the following actions are complete. Prior to the issuance of a closure letter, the Fund claimant is ordered to:

1. Properly destroy monitoring wells and borings unless the owner of real property on which the well or boring is located certifies that the wells or borings will be maintained in accordance with local or state requirements;
  2. Properly remove from the site and manage all waste piles, drums, debris, and other investigation and remediation derived materials in accordance with local or state requirements; and
  3. Within six months of the date of this Order, submit documentation to the regulatory agency overseeing the UST case identified in Section II of this Order that the tasks in subparagraphs (1) and (2) have been completed.
- B. The tasks in subparagraphs (1) and (2) of paragraph (A) are ordered pursuant to Health and Safety Code section 25296.10 and failure to comply with these requirements may result in the imposition of civil penalties pursuant to Health and Safety Code section 25299, subdivision (d)(1). Penalties may be imposed administratively by the State Water Board or Regional Water Board.
- C. Within 30 days of receipt of proper documentation from the Fund claimant that requirements in subparagraphs (1) and (2) of paragraph (A) are complete, the regulatory agency that is responsible for oversight of the UST case identified in Section II of this Order shall notify the State Water Board that the tasks have been satisfactorily completed.
- D. Within 30 days of notification from the regulatory agency that the tasks are complete pursuant to paragraph (C), the Deputy Director of the Division of Financial Assistance shall issue a closure letter consistent with Health and Safety Code section 25296.10, subdivision (g) and upload the closure letter and UST Case Closure Review Summary Report to GeoTracker.
- E. As specified in Health and Safety Code section 25299.39.2, subdivision (a) (2), corrective action costs incurred after a recommendation of closure shall be limited to \$10,000 per year unless the Board or its delegated representative agrees that corrective action in excess of that amount is necessary to meet closure requirements, or additional corrective actions are necessary pursuant to section 25296.10, subdivisions (a) and (b). Pursuant to section 25299.57, subdivision (l) (1), and except in specified circumstances,

all claims for reimbursement of corrective action costs must be received by the Fund within 365 days of issuance of the closure letter in order for the costs to be considered.

- F. Any Regional Water Board or Local Oversight Program Agency directive or order that directs corrective action or other action inconsistent with case closure for the UST case identified in Section II is rescinded, but only to the extent the Regional Water Board order or Local Oversight Program Agency directive is inconsistent with this Order.

T. Thomas Howard  
Executive Director

9/20/13  
Date



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## State Water Resources Control Board

### UST CASE CLOSURE REVIEW SUMMARY REPORT

#### Agency Information

Agency Name: Alameda County Environmental Health Department (County)	Address: 1131 Harbor Bay Parkway, Alameda, CA 94502
Agency Caseworker: Mark Detterman	Case No: RO0000374

#### Case Information

USTCF Claim No.: 12999/15058	Global ID: T0600101374
Site Name: Chevron #21-1285/Cal Gas	Site Address: 15595 Washington Avenue, San Lorenzo, CA 94608
Responsible Party: Mehdi Mohammadian	Address: P O Box 415, Talmage, CA 95481 / Enviro Soil Tech, 131 Tully Rd., San Jose, CA 95111
USTCF Expenditures to Date: \$365,703	Number of Years Case Open: 26 Years

**URL:** [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101374](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101374)

#### 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 meets 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 Site Information (Conceptual Site Model)**. Highlights of the case follow:

This site is an active service station. In 1986 Texaco removed four USTs, excavated contaminated soil, and installed three groundwater monitoring wells. A leak was reported in March 1993. In 1998 and 2007, seven additional monitoring wells were installed to assess potential offsite migration to a residential area. No active remediation has been conducted. According to the latest groundwater data, water quality objectives have been achieved for all constituents except for TPHg at one well on site.

The petroleum release is limited to the shallow soil and groundwater. According to data available in GeoTracker, there are no California Department of Public Health regulated supply wells within 1,000 feet of the defined plume boundary. Water is provided to water users near the Site by the East Bay Municipal Utility District. The affected groundwater is not currently being used as a source of drinking water, and it is highly unlikely that the affected groundwater will be used as a source of drinking water in the foreseeable future. Other designated beneficial uses of impacted groundwater are not threatened, and it is highly unlikely that they will be considering these factors in the context of the site setting. Remaining petroleum hydrocarbon constituents are limited, stable and concentrations are declining.

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE OFFICER

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Corrective action has been implemented and additional corrective actions are not necessary. Any remaining petroleum hydrocarbon constituents do not pose significant risk to human health, safety or the environment.

#### **Rationale for Closure under the Low-Threat Policy**

- General Criteria – The case meets all eight Policy general criteria.
- Groundwater Specific Criteria – The case meets Policy Criterion 1 by Class 5. The contaminant plume that exceeds water quality objectives is less than 250 feet in length. According to data available in GeoTracker, although there are no California Department of Public Health regulated supply wells within 1,000 feet of the defined plume boundary, San Loranzo Creek, a concrete-lined storm water channel, is located 600 feet northwest of the defined plume boundary. The contaminant plume that exceeds water quality objectives is stable and the remaining contaminant mass has expanded to the distance from the release where attenuation exceeds migration. Therefore, it is highly unlikely the contaminant plume will ever reach the creek. The concrete-lined channel further diminishes the likelihood of potential impact from the plume. Based on the analysis of site specific conditions, under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment, and water quality objectives will be achieved within a reasonable time frame.
- Vapor Intrusion to Indoor Air – The case meets Policy Criterion 2a by Scenario 3a. The maximum benzene concentration in groundwater is less than 100 µg/L. The minimum depth to groundwater is greater than 5 feet, overlain by soil containing less than 100 mg/kg of TPH. The site specific groundwater data also show that groundwater concentrations in the area beneath the apartment buildings west of the Site have achieved water quality objectives.
- Direct Contact and Outdoor Air Exposure – The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 for Commercial/Industrial and Residential use, and the concentration limits for a Utility Worker are not exceeded.

#### **Objections to Closure**

The County objected to UST case closure for this case because:

- The Cleanup Fund has not considered residual contamination in soil or soil vapor.

##### RESPONSE

Very little to no fuel oxygenate(s) or BTEX petroleum fuel contamination has been noted at the Site. Concentrations are expected to continue to decline over time to below water quality objectives. Both the residual soil impact and soil vapor have been considered, and as stated in this summary report they meet all Policy Criteria for case closure and do not pose a significant risk to human health and the environment.

- There are unregistered domestic supply wells nearby.

##### RESPONSE

There is one well identified at approximately 185 feet cross-gradient from the site release point. The County has informed the well owner and the well is no longer used.

Site Address: 15595 Washington Ave, San Lorenzo

June 2013

Site Name: Chevron #21-1285/Cal Gas

Claim No: 12999/15058

**Determination**

Based on the review performed in accordance with Health & Safety Code Section 25299.39.2 subdivision (a), the Fund Manager has determined that closure of the case is appropriate.

**Recommendation for Closure**

Based on available information, residual petroleum hydrocarbons at the Site do not pose a significant risk to human health, safety, or the environment, and the case meets the requirements of the Policy. Accordingly, the Fund Manager recommends that the case be closed. The State Water Board is conducting public notification as required by the Policy. Alameda County has the regulatory responsibility to supervise the abandonment of monitoring wells.

*Lisa Babcock*

**Lisa Babcock, P.G. 3939, C.E.G. 1235**

*6/26/13*

**Date**

**Prepared by: Walter Bahm**



**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</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 checked="" 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 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>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>        If YES, check applicable scenarios: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4</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><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><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</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 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><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</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><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</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 type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

Site Address: 15595 Washington Ave, San Lorenzo  
Site Name: Chevron #21-1285/Cal Gas  
Claim No: 12999/15058

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

### Site Location/History

- The Site is located on the northwest corner of Washington Avenue and Via Enrico Street, in San Lorenzo, California, and is currently an active commercial petroleum fueling facility.
- The Site has one single story building. The former USTs were located at the center portion of the property south of the pump islands.
- The property is located in an area of commercial and residential development. Several apartment buildings are across the street to the west. Commercial land-use surrounds the remainder of the Site.
- Ten monitoring wells were installed and monitored regularly.
- Site map showing the location of the Site facilities, monitoring wells, and groundwater level contours is included at the end of this summary.
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: March 30, 1993
- Status of Release: USTs removed and replaced.
- Free Product: None reported

### Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active?	Date
1	10,000	Gasoline	Removed	11/1986
2	10,000	Gasoline	Removed	11/1986
3	10,000	Gasoline	Removed	11/1986
4	280	Waste Oil	Removed	11/1986
5	10,000	Gasoline	Installed	02/1987
6	10,000	Gasoline	Installed	02/1987
7	10,000	Gasoline	Installed	02/1987
8	500	Waste Oil	Installed	02/1987

### Receptors

- GW Basin: Santa Clara Valley - East Bay Plain
- Beneficial Uses: Municipal and Domestic Supply.
- Land Use Designation: Commercial.
- Public Water System: East Bay Municipal Utility District, P.O. Box 24055, Oakland, CA 94623
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no California Department of Public Health regulated supply wells within 1,000 feet of the defined plume boundary.
- Distance to Nearest Surface Water: San Lorenzo Creek, a concrete-lined storm water channel, is located approximately 600 feet northwest of the defined plume boundary.

### Geology/Hydrogeology

- Stratigraphy: The soil beneath the Site consists of interbedded layers of gravelly silty sands, silty clays, clayey silts, sandy clays and silty clays.
- Maximum Sample Depth: 31 feet below ground surface (bgs).

Site Address: 15595 Washington Ave, San Lorenzo  
 Site Name: Chevron #21-1285/Cal Gas  
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- Minimum Groundwater Depth: 6.13 feet bgs in well STMW-8.
- Maximum Groundwater Depth: 12.50 feet bgs in well STMW-10.
- Current Average Depth to Groundwater: 8.55 feet bgs.
- Saturated Zones(s) Studied: 5 to 23 feet bgs.
- Appropriate Screen Interval: Yes, with the exception of MW-4 and MW-5.
- Groundwater Flow Direction: Generally westerly with some northwest and southwest components depending upon which wells are being used for the calculation.

**Monitoring Well Information**

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth To Water (11/14/2012)
MW-1	1986	5-15	8.80
MW-2	1986	5-15	7.65
MW-3	1986	5-15	8.45
MW-4	August 1998	10-20	9.40*
MW-5	August 1998	10-20	8.41*
STMW-6	April 2007	7-22	7.64
STMW-7	April 2007	7-22	8.93
STMW-8	April 2007	8-23	7.81
STMW-9	April 2007	7-22	8.57
STMW-10	April 2007	7-22	9.87

\* Well screen submerged

**Remediation Action**

- Free Product: None reported in the files reviewed.
- Soil Excavation: Soil excavation reported during UST removal.
- In-Situ Soil and Groundwater Remediation: Air sparging/soil vapor extraction was proposed in addition to over excavation in the highly affected area and not approved by the County.

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

Constituent	Maximum 0-5 ft. bgs. [mg/kg and date]	Maximum 5-10 ft. bgs [mg/kg and date]
Benzene	<0.005 (10/24/2006)	<0.005 (10/24/2006)
Ethylbenzene	<0.005 (10/24/2006)	<0.005 (10/24/2006)
Naphthalene	<0.005 (10/24/2006)	0.86 (10/24/2006)
PAHs	NA	NA

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)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	11/14/2012	<50	<1	<1	<1	<2	0.63	<10
MW-2	11/14/2012	<50	<1	<1	<1	<2	<1	<10
MW-3	11/14/2012	<50	<1	<1	<1	<2	0.69	<10
MW-4	11/14/2012	<50	<1	<1	<1	<2	<1	<10
MW-5	11/14/2012	<b>1,080</b>	0.32 <sup>J</sup>	0.3 <sup>J</sup>	2.3	<2	2.8	42.7
STMW-6	11/14/2012	<50	<1	<1	<1	<2	0.94	<10
STMW-7	11/14/2012	<50	<1	<1	<1	<2	<1	<10
STMW-8	11/14/2012	<50	<1	<1	<1	<2	<1	<10
STMW-9	11/14/2012	<50	<1	<1	<1	<2	<1	<10
STMW-10	11/14/2012	<50	<1	<1	<1	<2	<1	<10
<b>WQOs</b>	-	<b>50<sup>1</sup></b>	<b>1</b>	<b>150</b>	<b>700</b>	<b>1,750</b>	<b>5</b>	<b>1,200<sup>2</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, Region 2 Basin Plan

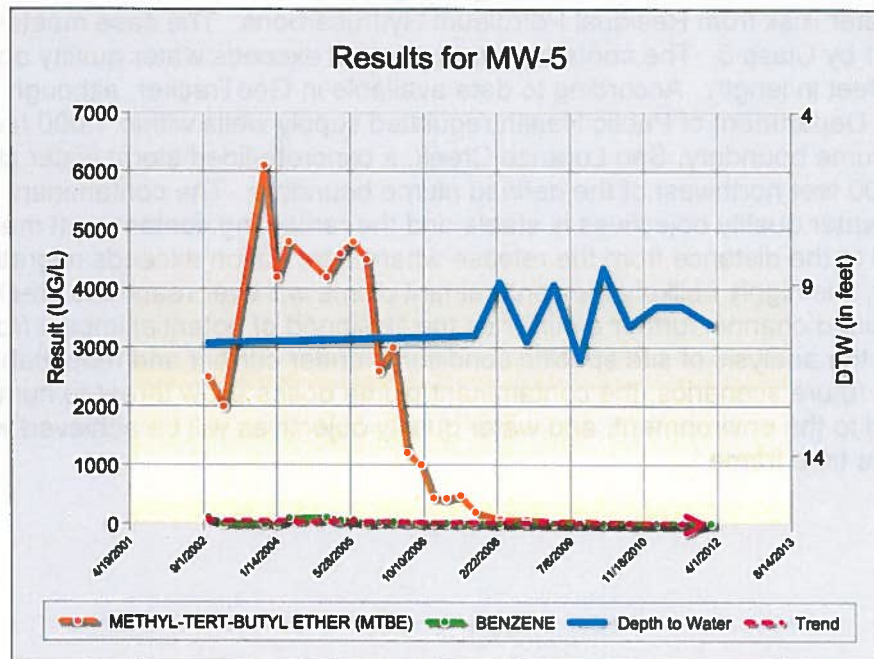
<sup>J</sup>: Estimated value.

<sup>1</sup>: Typical laboratory detection limit.

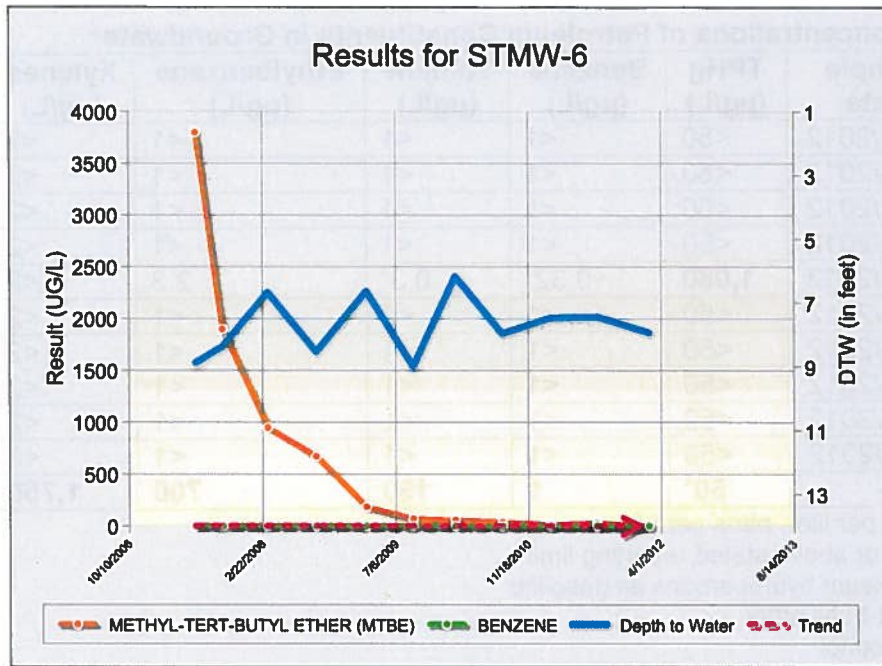
<sup>2</sup>: California Department of Environmental Health, Response Level.

**Groundwater Trends:**

The graphs below present benzene and MTBE concentration trends plotted against water levels for Site wells MW-5 in the source area, and STMW-6 downgradient.







**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: None reported.
- Plume Length: <250 feet long.
- Plume Stable or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 1 by Class 5. The contaminant plume that exceeds water quality objectives is less than 250 feet in length. According to data available in GeoTracker, although there are no California Department of Public Health regulated supply wells within 1,000 feet of the defined plume boundary, San Loranzo Creek, a concrete-lined storm water channel, is located 600 feet northwest of the defined plume boundary. The contaminant plume that exceeds water quality objectives is stable and the remaining contaminant mass has expanded to the distance from the release where attenuation exceeds migration. Therefore, it is highly unlikely the contaminant plume will ever reach the creek. The concrete-lined channel further diminishes the likelihood of potential impact from the plume. Based on the analysis of site specific conditions, under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment, and water quality objectives will be achieved within a reasonable time frame.

- **Indoor Vapor Risk from Residual Petroleum Hydrocarbons:** The case meets Policy Criterion 2a by Scenario 3a. The maximum benzene concentration in groundwater is less than 100 µg/L. The minimum depth to groundwater is greater than 5 feet, overlain by soil containing less than 100 mg/kg of TPH. The site specific groundwater data also show that groundwater concentrations in the area beneath the apartment buildings west of the Site have achieved water quality objectives.
- **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 and Residential use, and the concentration limits for a Utility Worker are not exceeded.

