

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Orange County Environmental Health Department (County)	Address: 1241 East Dyer Road, Suite 120 Santa Ana, CA 92705
Agency Caseworker: Geniece Higgins	Case No.: 03UT034

Case Information

USTCF Claim No.: 18013	GeoTracker Global ID: T0605911931
Site Name: Sharda AM/PM	Site Address: 18972 Beach Blvd., Huntington Beach, CA 92648
Responsible Party: Sharda, Inc., Attn: Suresh Sharda	Address: 18972 Beach Blvd., Huntington Beach, CA 92648
USTCF Expenditures to Date: \$240,544	Number of Years Case Open: 10

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605911931

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

An unauthorized release was reported in February 2003 at the Site. Since 2003, numerous soil borings were installed at the Site, and nine of them were converted to groundwater monitoring wells. Several soil vapor extraction (SVE) wells were also installed. An SVE test was conducted at the Site in early 2011. The five-day test removed approximately 1,051 pounds of total petroleum hydrocarbons as gasoline (TPH-g) and 50 pounds of methyl tert-butyl ether (MTBE). Additional SVE wells were installed, and SVE tests were conducted from September to November 2011. During the weeklong tests, 1,494 pounds of TPH-g and 91 pounds of MTBE were removed. The nine monitoring wells have been monitored through the first quarter 2012. According to groundwater data, water quality objectives have been achieved for all constituents except MTBE.

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 or surface water bodies within 1,000 feet of the Site. No other water supply wells have been identified within 1,000 feet of the Site in files reviewed. Water is provided to water users near the Site by the City of Huntington Beach Public Works. 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. Corrective actions have been implemented and additional corrective actions are not necessary. Any remaining petroleum hydrocarbon constituents do not pose a significant risk to human health, safety or the environment.

Rationale for Closure under the Policy

- General Criteria – The case meets all eight Policy general criteria.
- Groundwater Specific Criteria – The case meets Policy Criterion 1 by Class 5. The MTBE contaminant plume is degrading rapidly in the plume flow direction, and the plume is projected to be less than 250 feet in length. The MTBE contaminant plume that exceeds the water quality objective is projected a short distance past the most downgradient well MW-5, because the MTBE concentration in MW-5 was only one third of that in the source well MW-6, approximately 60 feet upgradient from MW-5 (A.C.C.E.S., March 2012). There are no water supply wells from the projected plume boundary in any direction, the nearest surface water is more than 1,000 feet northwest (downgradient) of the projected plume boundary, and groundwater at the Site is approximately 50 feet below surface. The regulatory agency determines, based on an analysis of site specific conditions, that 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. Water quality objectives have been achieved or will be achieved within a reasonable time frame.
- Vapor Intrusion to Indoor Air – The case meets the Policy Exclusion for Active Station. Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility and release characteristics cannot be reasonably believed to pose an unacceptable health risk.
- Direct Contact and Outdoor Air Exposure – This case meets Policy Criterion 3b. Although no document titled “Risk Assessment” was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to residual soil contamination found that maximum concentrations of petroleum constituents remaining in soil will have no significant risk of adversely affecting human health. Concentrations of benzene and ethylbenzene were detected in the dispenser trench during the March 20, 2003 UST closure and retrofit activities. The excavated soil was used for backfill and capped with asphalt or concrete, therefore, accidental access to Site soils is prevented. As an active petroleum fueling facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.

Objections to Closure and Responses

The County objects to UST case closure for this case (August 16, 2012 letter) because:

- The secondary source has not been fully removed, SVE should continue and residual impacts in soil are readily recoverable.
RESPONSE: The secondary source has been removed to the extent practicable. Influent concentrations for all constituents except MTBE have reached water quality objectives. SVE alone is not a practical technology to remove dissolved MTBE from groundwater. Groundwater concentrations have achieved or nearly achieved water quality objectives for petroleum hydrocarbon constituents. The case meets the Policy criteria.
- Additional soil vapor survey is needed to ensure soil vapor intrusion is not a threat to the adjacent property 25 feet from well MW-7.
RESPONSE: The only constituent of concern above water quality objective is MTBE in well MW-7. MTBE does not present a vapor intrusion threat due to the compound's affinity to

stay in solution. The plume is stable and concentrations are decreasing. The Site meets the Policy criteria.

Determination

Based on the review performed in accordance with Health & Safety Code Section 25296.10 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. Orange County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock

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

1/21/14

Date

Prepared by: James Young

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.¹

<p>Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations? 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>Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>If so, was the corrective action performed consistent with any order?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Does the unauthorized release consist only of petroleum? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Has the unauthorized (“primary”) release from the UST system been stopped? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Has free product been removed to the maximum extent practicable? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p>Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	

¹ 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

<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>Nuisance as defined by Water Code section 13050 does not 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</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 type="checkbox"/> 3 <input type="checkbox"/> 4 <input checked="" type="checkbox"/> 5</p> <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 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>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><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>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 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 type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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>

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

Site Location/History

- The Site is an active commercial fueling facility located at 18972 Beach Boulevard, Huntington Beach, California. It is located on the northwest corner of Beach Boulevard and Garfield Avenue. The adjacent properties are primarily commercial.
- The Site is bounded to the west by Beach Boulevard, to the south by Garfield Avenue, to the east by a parking lot, and to the north by a strip mall.
- Site map showing the location of the USTs, monitoring wells and groundwater level contours is provided at the end of this closure review summary.
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: February 2003.
- Status of Release: USTs replaced.
- Free Product: None reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1-4	10,000	Gasoline	Removed	1990
5-8	10,000	Gasoline	Active	

Receptors

- GW Basin: Coastal Plain of Orange County.
- Beneficial Uses: The Santa Ana Regional Water Quality Control Board (Regional Water Board) Basin Plan lists municipal and domestic supply.
- Land Use Designation: Commercial.
- Public Water System: City of Huntington Beach Public Works and 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 projected plume boundary. No other water supply wells were identified within 1,000 feet of the projected plume boundary in the files reviewed.
- Distance to Nearest Surface Water: There is no identified surface water within 1,000 feet of the projected plume boundary.

Geology/Hydrogeology

- Stratigraphy: The soil encountered during investigations generally consisted of silty fine sand, silty clay, clay and clayey silt.
- Maximum Sample Depth: 70 feet below ground surface (bgs).
- Minimum Groundwater Depth: 47.18 feet bgs at monitoring well MW-3.
- Maximum Groundwater Depth: 66.22 feet bgs at monitoring well MW-1.
- Current Average Depth to Groundwater: 53.33 feet bgs.
- Saturated Zones(s) Studied: Approximately 45 to 70 feet bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: West-northwest with a flow gradient of 0.002 feet/foot.

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (2/24/2012)
MW-1	December 2006	45 – 70	53.10
MW-2	December 2006	45 – 70	54.03
MW-3	December 2006	45 – 70	48.50
MW-4	December 2002	58 – 73	52.39
MW-5	April 2009	58 – 73	53.87
MW-6	April 2009	58 – 73	54.37
MW-7	April 2009	58 – 73	54.00
MW-8	January 2009	60 – 75	54.98
MW-9	January 2009	60 – 75	54.75

Remedial Summary

- Free Product: None reported.
- Soil Excavation: Impacted soil was removed and disposed offsite.
- In-Situ Soil Remediation: A soil vapor extraction (SVE) test was conducted in early 2011. The 5-day test removed 1,051 pounds of TPH-g and 50 pounds of MTBE. A mobile SVE system was then planned for the site. Additional SVE wells were installed and SVE tests were conducted from September to November 2011. During these weeklong tests, 1,494 pounds of TPH-g were removed.
- Groundwater Remediation: None reported.

Most Recent Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 feet bgs [mg/kg and (date)]	Maximum 5-10 feet bgs [mg/kg and (date)]
Benzene	27.3 (03/20/03)	0.05 (05/26/05)
Ethylbenzene	99.7 (03/20/03)	0.237 (05/26/05)
Naphthalene	<2 (04/14/09)	3.66 (04/14/09)
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)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	2/24/2012	<50	<0.5	<0.5	<0.5	<1	6.9	<10
MW-2	2/24/2012	<50	<0.5	<0.5	<0.5	<1	66.4	<10
MW-3	2/24/2012	<50	<0.5	<0.5	<0.5	<1	1.2 ^J	<10
MW-4	2/24/2012	<50	<0.5	<0.5	<0.5	<1	<1	<10
MW-5	2/24/2012	<50	<0.5	<0.5	<0.5	<1	46.6	27.8
MW-6	2/24/2012	71 ^J	<0.5	<0.5	<0.5	<1	151	88.5
MW-7	2/24/2012	<50	<0.5	<0.5	<0.5	<1	10.1	<10
MW-8	2/24/2012	<50	<0.5	<0.5	<0.5	<1	<1	<10
MW-9	2/24/2012	<50	<0.5	<0.5	<0.5	<1	5.6	<10
WQOs	-	--	1	150	300	1,750	5	1,200^a

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

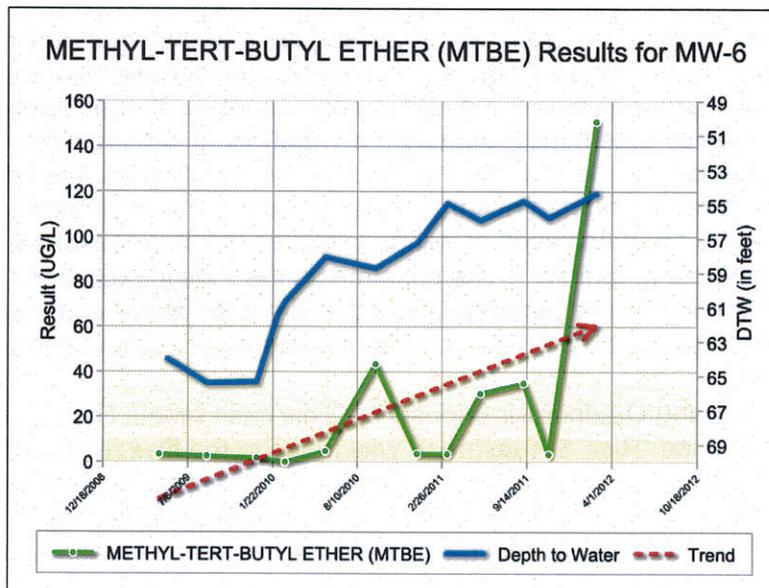
^a: California Department of Public Health, Response Level

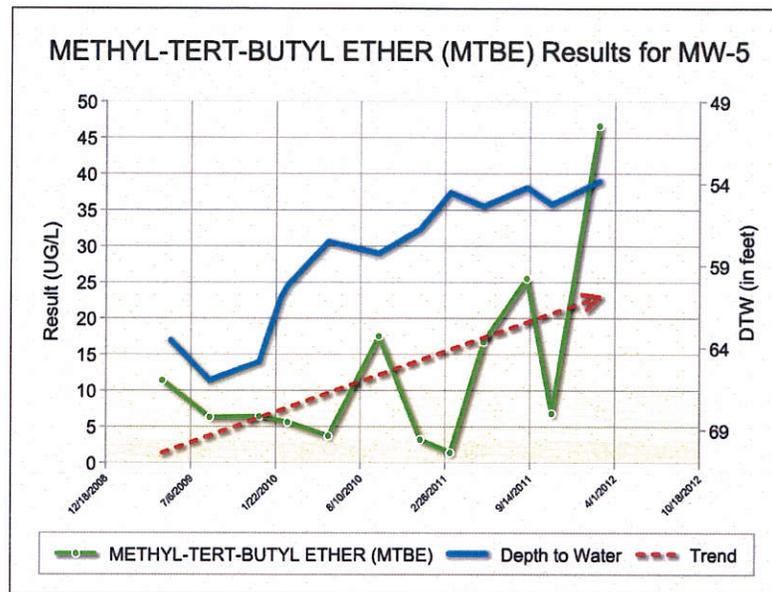
^J: Signifies that the analytical method could detect the compound but it was below the reporting limit.

--: Regional Water Board Basin Plan does not have a numeric water quality objective for TPHg.

Groundwater Trends

- There are over 5 years of regular groundwater monitoring data for this case. The graphs below show MTBE trends in groundwater in both the source area (monitoring well MW-6), and down-gradient area (monitoring well MW-5) 60 feet from MW-6. Please note that groundwater elevations are rising and may be encountering absorbed MTBE in soil at depth. The increasing MTBE levels, however, do not represent a statistical trend, since the levels remain low. In addition, the MTBE concentration in MW-5 was one-third of that in MW-6 on February 24, 2012.

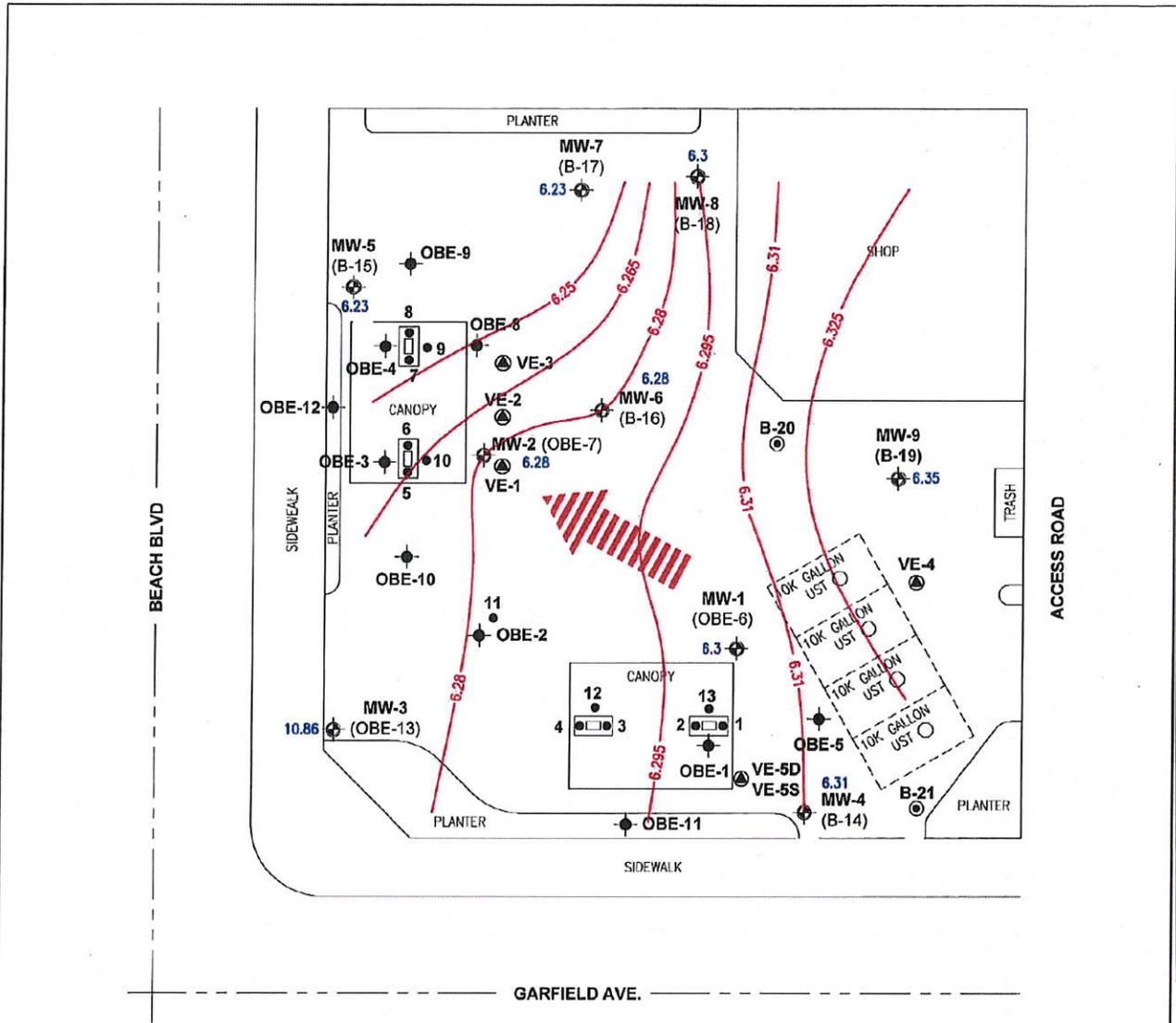




Evaluation of Current Risk

- 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: MTBE and TBA are detected in several monitoring wells at the site. The levels of MTBE and TBA continue to remain low.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Specific Criteria – The case meets Policy Criterion 1 by Class 5. The MTBE contaminant plume is degrading rapidly in the plume flow direction, and the plume is projected to be less than 250 feet in length. The MTBE contaminant plume that exceeds the water quality objective is projected a short distance past the most downgradient well MW-5, because the MTBE concentration in MW-5 was only one third of that in the source well MW-6, approximately 60 feet upgradient from MW-5 (A.C.C.E.S., March 2012). There are no water supply wells from the projected plume boundary in any direction, the nearest surface water is more than 1,000 feet northwest (downgradient) of the projected plume boundary, and groundwater at the Site is approximately 50 feet below surface. The regulatory agency determines, based on an analysis of site specific conditions, that 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. Water quality objectives have been achieved or will be achieved within a reasonable time frame.
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- Direct Contact and Outdoor Air Exposure – This case meets Policy Criterion 3b. Although no document titled “Risk Assessment” was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to residual soil contamination found that maximum concentrations of petroleum constituents remaining in soil will have no significant risk of adversely affecting human health. Concentrations of benzene and

ethylbenzene were detected in the dispenser trench during the March 20, 2003 UST closure and retrofit activities. The excavated soil was used for backfill and capped with asphalt or concrete, therefore, accidental access to Site soils is prevented. As an active petroleum fueling facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.



- 1 LOCATION OF SAMPLING POINTS DURING THE MARCH 20, 2003 INVESTIGATION
- ⊕ OBE-1 LOCATION OF PREVIOUS BOREHOLE
- ⊕ MW-1 LOCATION OF GROUNDWATER MONITORING WELLS
- UNDERGROUND STORAGE TANK
- DISPENSER ISLAND
- ⊙ B-20 LOCATION OF FEBRUARY 02, 2010 BORINGS
- 6.6— CONTOUR LINES OF GROUNDWATER, ft., AMSL
- 6.30 GROUNDWATER DEPTH
- ▨ DIRECTION OF GROUND WATER FLOW



A.C.C.E.S. INC. ENVIRONMENTAL ENGINEERING 2034 COTNER AVENUE, SUITE 408 LOS ANGELES, CA 90025 Tel 310-479-7183, Fax 310-479-1286 www.accesengineering.com	TITLE:	PLAN VIEW OF SITE GROUNDWATER CONTOUR LINES	DWN BY:	GS	SCALE:	AS SHOWN
	PROJECT:	QUARTERLY GROUNDWATER MONITORING 1st QUARTER 2012	CHK BY:	HA	DATE:	02/24/2012
	SITE:	SHARDA AM/PM 18972 BEACH BLVD. HUNTINGTON BEACH, CA 92648	PROJECT No.	20196	DWG NO:	FIGURE 5