

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Los Angeles Regional Water Quality Control Board (Regional Water Board)	Address: 320 West 4 th Street, Suite 200, Los Angeles, CA 90013
Agency Caseworker: David Bjostad	Case No.: I-00880

Case Information

USTCF Claim No.: 5499	Global ID: T0603702733
Site Name: Mobil #18-LDL	Site Address: 4830 Las Virgenes Road, Monte Nido, CA 91302
Responsible Party: Exxon Mobil Oil Corporation, Attn: Lee Hanley	Address: 1464 Madera Road, Suite N, #265 Simi Valley, CA 93065
USTCF Expenditures to Date: \$682,867	Number of Years Case Open: 25

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603702733

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 December 1987 following the removal of five USTs. Approximately 46 cubic yards and 600 cubic yards of contaminated soil were excavated and removed in 1986 and 1987, respectively. Since 1991, sixteen monitoring wells have been installed and monitored. Batch dual phase extraction was conducted between 1999 and 2003. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents except for benzene, methyl tert-butyl ether (MTBE), and tert-butyl alcohol (TBA).

The petroleum release is limited to the soil and shallow groundwater. According to data available in GeoTracker, there is no California Department of Public Health regulated supply wells 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 Metropolitan Water District of Southern California. 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 and stable, and concentrations are decreasing. 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 2. The contaminant plume that exceeds water quality objectives is less than 250 feet in length. There is no free product. The nearest water supply well or surface water body is greater than 1,000 feet from the defined plume boundary. The dissolved concentration of benzene is less than 3,000 µg/L, and the dissolved concentration of MTBE is less than 1,000 µg/L.
- Vapor Intrusion to Indoor Air: The case meets the Policy Exclusion for Active Station. Soil vapor evaluation is not required because Site is an active commercial petroleum fueling facility and the release characteristics do not pose an unacceptable 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. The Site is paved and accidental exposure 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

According to the GeoTracker Closure Review page, the Regional Water Board objects to UST case closure because TBA exceeds water quality objectives.

RESPONSE: The Policy does not require that water quality objectives are achieved at the time of site closure. The case meets the Policy criteria and does not pose a significant risk to human health, safety, or the environment.

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. Los Angeles County has the regulatory responsibility to supervise the abandonment of monitoring wells.



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



Date

Prepared by: Kirk Larson, P.G.

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input 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?</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>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 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

- This Site is an active commercial petroleum fueling facility and is bounded by a US Post Office across Las Virgenes Road to the west and vacant undeveloped land to the east, north and south. The nearby land use is commercial.
- Site map showing the location of the current and former USTs, monitoring wells, and groundwater level contours is provided at the end of this closure review summary (Cardno ERI, 2012).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: December 1987.
- Status of Release: USTs removed.
- Free Product: None reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/Removed/Active	Date
1	550	Waste Oil	Removed	1986
2	6,000	Gasoline	Removed	1987
3	8,000	Gasoline	Removed	1987
4,5	10,000	Gasoline	Removed	1987
6-9	10,000	Gasoline	Active	-

Receptors

- GW Basin: Unnamed.
- Watershed: Malibu – Malibu Creek – La Virgenes Canyon.
- Beneficial Uses: Regional Water Board Basin Plan lists potential use for municipal and domestic supply.
- Land Use Designation: Aerial photo shows the local land use is commercial.
- Public Water System: 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 California Department of Public Health within 1,000 feet of the defined plume. No other water supply wells were identified within 1,000 feet of the defined plume in the files reviewed.
- Distance to Nearest Surface Water: There is no identified surface water within 1,000 feet of the defined plume.

Geology/Hydrogeology

- Stratigraphy: The Site is underlain by clayey soil and fill, underlain by claystone, siltstone and sandstone.
- Maximum Sample Depth: 54 feet below ground surface (bgs).
- Minimum Groundwater Depth: 3.16 feet bgs at monitoring well MW11.
- Maximum Groundwater Depth: 29.88 feet bgs at monitoring well MW13.
- Current Average Depth to Groundwater: Approximately 22 feet bgs.
- Saturated Zones(s) Studied: Approximately 3 - 54 feet bgs.

- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: Northwest with an average gradient of 0.15 feet/foot (ERC Cardino, 2012)

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (07/26/2012)
MW1	June 1991	18-26	18.14
MW2	June 1991	18-26	Inactive
MW3	June 1991	26-36	23.56
MW5	June 1991	20-50	25.08
MW6	February 1992	35-42	24.16
MW7	February 1992	20-54	17.63
MW8	February 1992	20-54	26.02
MW9	February 1992	20-54	25.42
MW10	February 1992	20-54	21.69
MW11	February 1992	5-34	5.16
MW12	February 1993	39-50	19.54
MW13	February 1993	10-41	28.37
MW14	February 1993	15-45	26.48
MW15	February 1993	15-44	24.55
MW16	February 1993	5-15	11.71

Remediation Summary

- Free Product: None reported in GeoTracker.
- Soil Excavation: Approximately 46 cubic yards and 600 cubic yards of contaminated soil were excavated, transported and removed from the site in 1986 and 1987, respectively.
- In-Situ Soil/Groundwater Remediation: Batch dual phase extraction was conducted between 1999 and 2003.

Most Recent Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 feet bgs [mg/kg (date)]	Maximum 5-10 feet bgs [mg/kg (date)]
Benzene	NA	NA
Ethylbenzene	NA	NA
Naphthalene	NA	NA
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)
MW1	04/29/13	<50	0.4	0.49	0.51	1.6	1.7	29
MW3	04/30/13	870	<10	<10	<10	<10	<20	1,000
MW5	04/30/13	1,200	<25	<25	<25	<25	54	31,000
MW6	04/30/13	3,300	<50	<50	<50	<50	<100	76,000
MW7	04/30/13	940	<12	<12	<12	<12	120	20,000
MW8	04/30/13	650	1.8	0.92	<1	<1	4.4	4,000
MW9	04/30/13	1,900	<25	<25	<25	<25	42	48,000
MW10	04/30/13	220	<25	<25	<25	<25	1.9	4,100
MW11	04/30/13	80	<1	<1	<1	<1	1515	1,400
MW12	04/30/13	<50	<1	<1	2.9	0.9	0.71	160
MW13	04/30/13	530	<1	<1	<1	<1	0.46	250
MW14	04/30/13	<50	<1	<1	<1	<1	<1	<10
MW15	04/30/13	1,000	<1	<1	<1	<1	1.9	<500
MW16	04/30/13	<50	<1	<1	<1	<1	0.32	<10
WQOs	-	--	1	150	300	1,750	5	1,200 ^a

NA: Not Analyzed, Not Applicable or Data Not Available

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

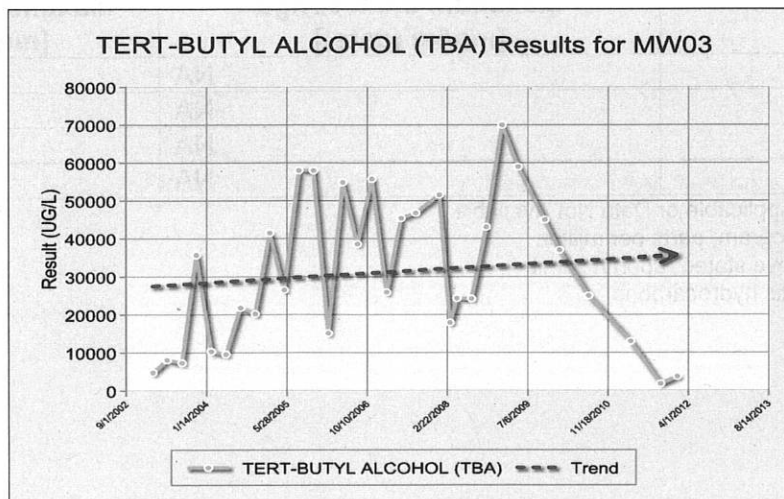
--: Regional Water Board Basin Plan does not have numeric values for TPH g

^a: California Department of Public Health, Response Level

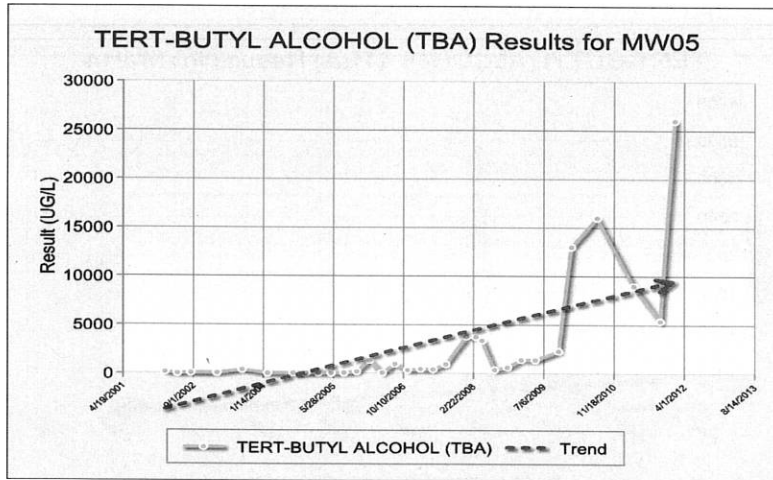
Groundwater Trends

- There are 22 years of groundwater monitoring data for this case. TBA trends are shown below: Source Area (MW3 and MW5), Near Downgradient (MW8 and MW13), and Far Downgradient (MW14).

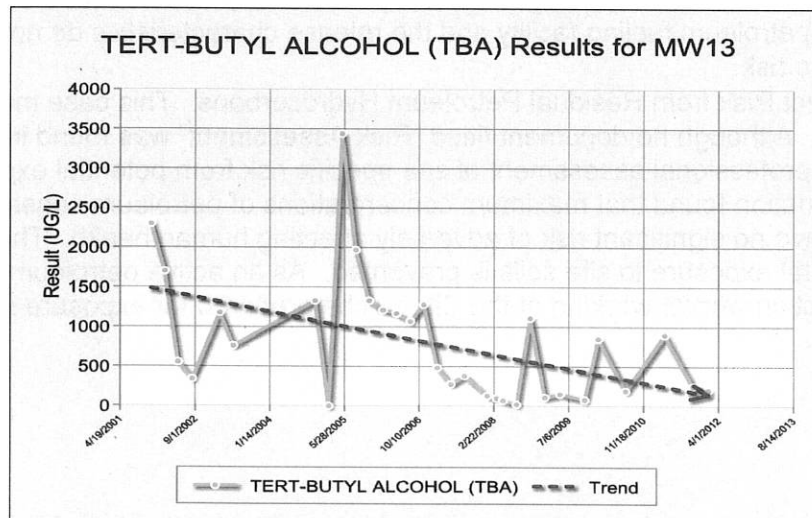
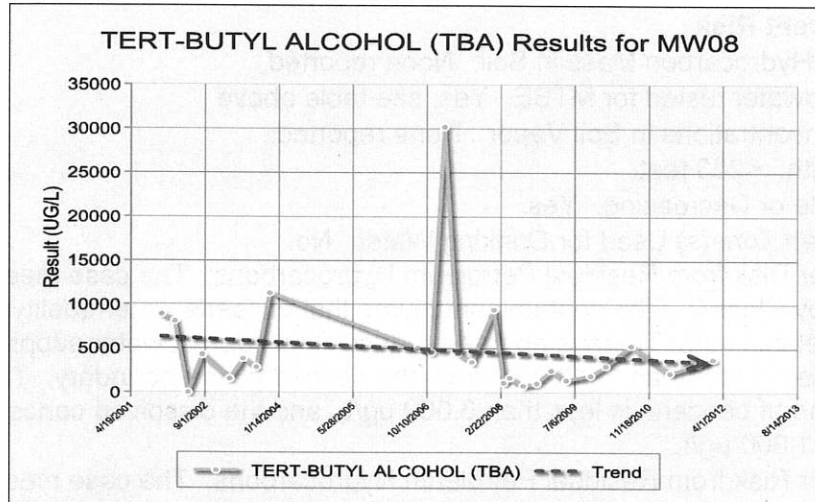
Source Area Well



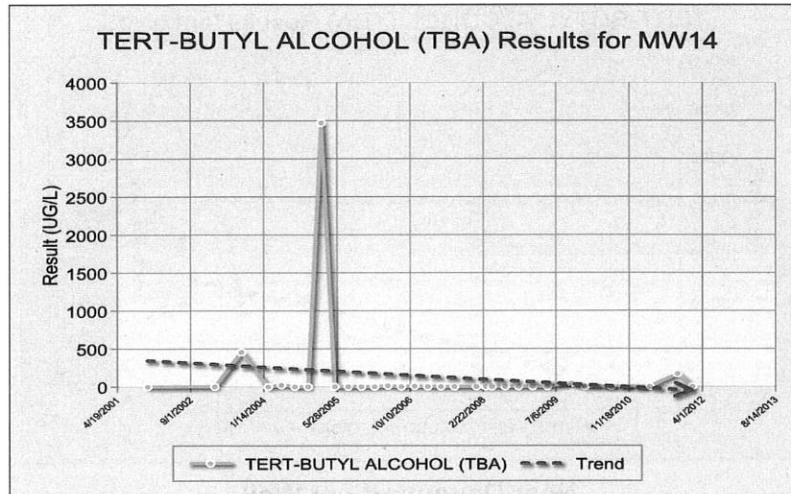
Source Area Well



Near Downgradient Well

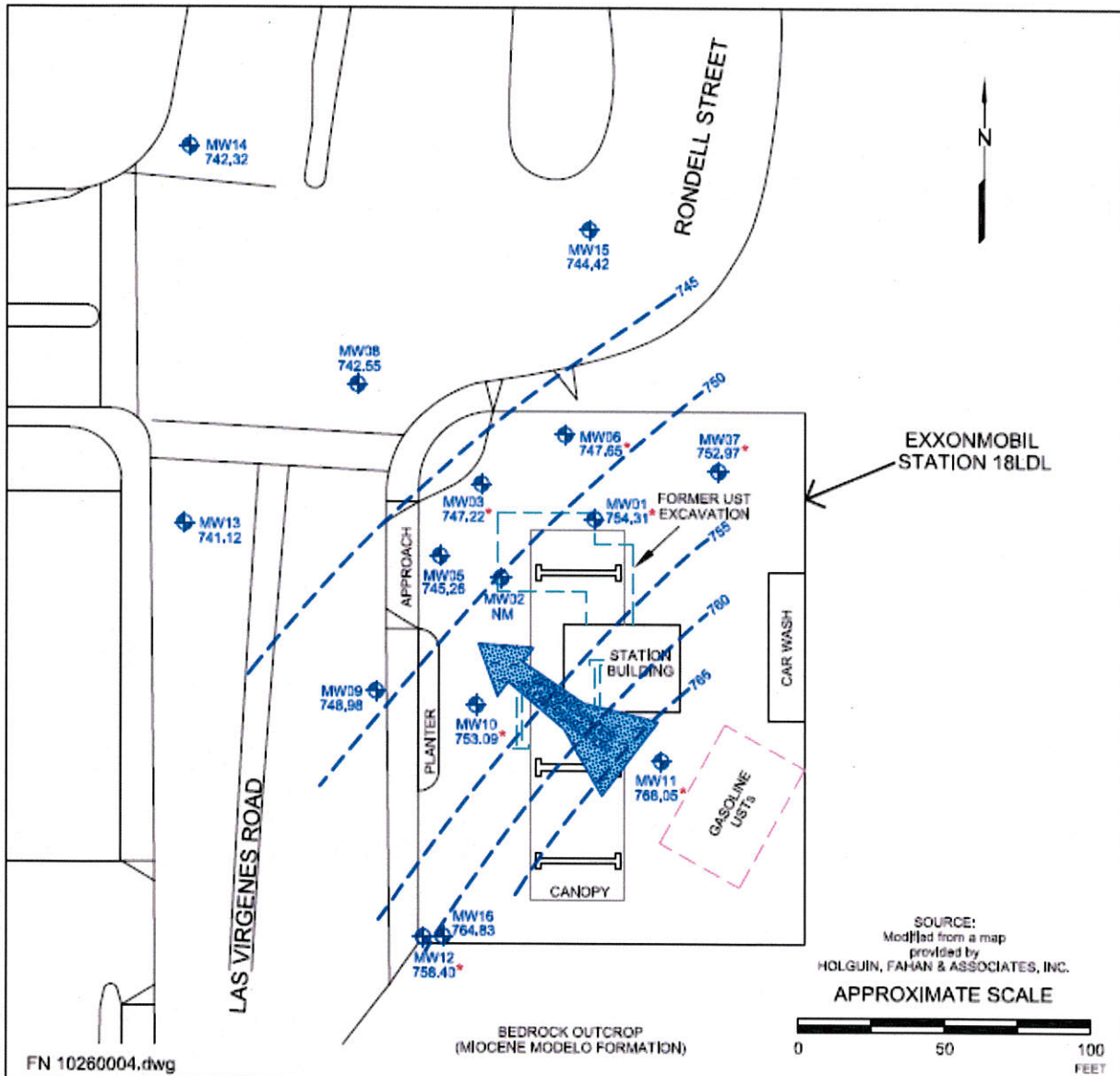


Far Downgradient Well



Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/ Groundwater tested for MTBE: Yes, see table above.
- Oxygen Concentrations in Soil Vapor: None reported.
- 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 meets Policy Criterion 1 by Class 2. The contaminant plume that exceeds water quality objectives is less than 250 feet in length. There is no free product. The nearest water supply well or surface water body is greater than 1,000 feet from the defined plume boundary. The dissolved concentration of benzene is less than 3,000 µg/L, and the dissolved concentration of MTBE is less than 1,000 µg/L.
- Indoor Vapor Risk from Residual Petroleum Hydrocarbons: The case meets the Policy Active Station Exclusion - Soil vapor evaluation is not required because Site is an active commercial petroleum fueling facility and the release characteristics do not pose an unacceptable risk.
- Direct Contact Risk from Residual Petroleum Hydrocarbons: 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. The Site is paved and accidental exposure 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.

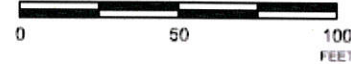


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BEDROCK OUTCROP
 (MIOCENE MODELO FORMATION)

SOURCE:
 Modified from a map
 provided by
 HOLGUIN, FAHAN & ASSOCIATES, INC.

APPROXIMATE SCALE



EXPLANATION

<p>MW16 Groundwater monitoring well</p> <p>Groundwater elevation in feet relative to mean sea level</p> <p>NM Not measured</p> <p>* Well screen submerged; analytical data may not be representative</p> <p>--- Line of equal groundwater elevation</p>	<p> Dispenser Island</p> <p> Former dispenser Island</p>
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GROUNDWATER ELEVATION CONTOUR MAP

01/23-24/12

EXXONMOBIL STATION 18LDL
 4830 Las Virgenes Road
 Calabasas, California

PROJECT NO.

1026

PLATE

3

DATE: 05/14/12

