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State Water Resources Control Board

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Environmental Health

October 24, 2013

Dillan Roe, Director
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

FOURTH REVIEW SUMMARY REPORT – CLOSURE, CLAIM 13192; RINO PACFIC/OAKLAND TRUCK STOP, 107 5TH ST, OAKLAND

The UST Cleanup Fund (Fund) has completed our review of (County) case number RO0000234. The Preliminary 5-Year 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. During our review we solicited input from your County caseworker to obtain the current status of corrective action at this site as well as information on any outstanding issues. If additional information was provided by the caseworker, it was considered by Fund staff and incorporated into our recommendations if applicable.

The Fund requests that County 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 County 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

State Water Resources Control Board

DRAFT
REVIEW SUMMARY REPORT - CLOSURE
FOURTH REVIEW – OCTOBER 2013

Agency Information

Agency Name: Alameda County LOP	Address: 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502
Agency Caseworker: Jerry Wickham	Case No.: RO0000234

Case Information

USTCF Claim No.: 13192	GeoTracker Global ID: T0600102136
Site Name: Rino Pacific/Oakland Truck Stop	Site Address: 1107 5th Street, Oakland, CA 94607
Responsible Party: Reed Rinehart	Address: PO Box 725 Ukiah, CA 95482
USTCF Expenditures to Date: $850,639	Number of Years Case Open: 18

URL:https://geotracker.waterboards.ca.gov/regulators/screens/menu.asp?global_id=T0600102136

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:

This case is an active commercial fueling facility. An unauthorized release was reported in February 1995. In March 1999, three 10,000-gallon and one 8,000-gallon USTs were removed from Rinehart Oil, Inc. Two 15,000-gallon tanks were installed. Approximately 2,100 tons of contaminated soil and approximately 33,000 gallons of petroleum hydrocarbon affected water were removed from the open tank pit, and treated and disposed off-site during UST removal activities. The Site currently has two ozone sparge systems operating on-site. Free product has been removed to the extent practicable. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents except in wells MW-1, MW-4, MW-7, and MW-14.

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 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 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 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 Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criteria 1 by Class 4 – The contaminant plume that exceeds water quality objectives (WQOs) is greater than 250 feet but less than 1,000 feet in length. The defined plume boundary is delineated by current monitoring well MW-13 and several years of monitoring in now destroyed wells MW-12 and MW-16. There is no free product and 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 Exclusion for Active Station. Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility.
- 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

The County identified the following impediments to closure in the Policy Checklist completed on July 25, 2013:

Comment 1: Sporadic and abrupt increases in groundwater concentrations.
Response: These sporadic and abrupt increases in petroleum hydrocarbon concentrations coincide with the intermittent injections of ozone used to remediate the Site.
Comment 2: Plume stability unknown.
Response: Concentrations in the plume are decreasing and the plume is stable.
Comment 3: Plume length greater than 250 feet but less than 1,000 feet in length.
Response: Agreed, therefore, the Site meets Groundwater Criteria Class 4.
Comment 4: Benzene and MTBE concentrations are greater than 1,000 µg/L.
Response: These concentrations occur in wells MW-4 and MW-7, which is at the downgradient edge of the Site. The data shows a decreasing trend for both constituents.

Determination

The Fund Manager has notified the tank owners or operators and reviewed the case history of their tank case. The Fund Manager determines that closure of the tank case is appropriate based upon that review. The Fund Manager has prepared this review summary report summarizing the reasons for this determination, provided the Review Summary Report to the applicable Regional Water Board and Local Oversight Agency Program, as appropriate, with an opportunity for comment on the Review Summary Report.

Pursuant to Health and Safety Code as of the date of the signature of the Fund Manager below, neither the Regional Water Board or the Local Oversight Program shall issue a corrective action directive or enforce an existing corrective action directive for the tank case until the board issues a decision on the closure of the tank case, unless one of the following applies:

(A) The Regional Water Board or Local Oversight Program agency demonstrates to the satisfaction of the Fund Manager that there is an imminent threat to human health, safety, or the environment;
(B) The Regional Water Board or Local Oversight Program agency demonstrates to the satisfaction of the Fund Manager that other site-specific needs warrant additional directives during the period that the State Board is considering case closure;
(C) After considering responses to the Review Summary Report and other relevant information, the Fund Manager determines that case closure is not appropriate; or
(D) The Regional Water Board or Local Oversight Program agency closes the tank case but the directives are necessary to carry out case-closure activities.

Sunil Ramdass 10/23/13
Sunil Ramdass Date
Water Resources Control Engineer
Technical Review Unit
(916) 341-5757

Robert Trommer 10/23/13
Robert Trommer, C.H.G. Date
Senior Engineering Geologist
Chief, Technical Review Unit
(916) 341-5684

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

Date

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]

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.	☒ Yes ☐ No
Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?	☐ Yes ☒ No
If so, was the corrective action performed consistent with any order?	☐ Yes ☐ No ☒ NA
General Criteria General criteria that must be satisfied by all candidate sites:	
Is the unauthorized release located within the service area of a public water system?	☒ Yes ☐ No
Does the unauthorized release consist only of petroleum?	☒ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	☒ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☒ Yes ☐ No ☐ NA
Has a conceptual site model that assesses the nature, extent, and mobility	☒ Yes ☐ No

[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

of the release been developed?	
Has secondary source been removed to the extent practicable?	☒ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?	☒ Yes ☐ No
Nuisance as defined by Water Code section 13050 does not exist at the Site?	☒ Yes ☐ No
Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ☒ No
Media-Specific Criteria Candidate sites must satisfy all three of these media-specific criteria: **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:	
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	☒ Yes ☐ No ☐ NA
Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?	☒ Yes ☐ No ☐ NA
If YES, check applicable class: ☐ **1** ☐ **2** ☐ **3** ☒ **4** ☐ **5**	
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?	☐ Yes ☐ No ☒ NA
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.	
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.	☒ Yes ☐ No
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?	☐Yes ☐ No ☒ NA

If YES, check applicable scenarios: ☐ **1** ☐ **2** ☐ **3** ☐ **4**	☐ Yes ☐ No ☒ NA
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?	☐ Yes ☐ No ☒ NA
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?	
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).	
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)?	☐ Yes ☒ No ☐ NA
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?	☒ Yes ☐ No ☐ NA
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?	☐ Yes ☐ No ☒ NA

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

Site Location/History

- The Site is located at 1107 5th Street Oakland, California, approximately 100 feet south of intersection of 5th Street and Adeline Street. The site is bordered on the north by 5th Street, on the west by Adeline Street, on the east by Chestnut Street and on the south by a restaurant (JK Brickhouse) and parking lot. (Advance GeoEnvironmental, Inc.'s CSM, June 2013)
- Site maps showing the location of the former USTs, monitoring wells, groundwater level contours, and benzene, methyl tert-butyl ether (MTBE) and tert-butyl alcohol (TBA) concentrations are provided at the end of this closure review summary (Advance GeoEnvironmental, Inc., 2013).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: February 1995.
- Status of Release: USTs removed.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1	10,000	Diesel	Removed	March 1999
2	10,000	Diesel	Removed	March 1999
3	10,000	Gasoline	Removed	March 1999
4	8,000	Gasoline	Removed	March 1999
5	15,000	Diesel	Active	-
6	15,000	Gasoline	Active	-

Receptors

- GW Basin: Santa Clare Valley - East Bay Plain.
- Beneficial Uses: GeoTracker lists municipal and domestic supply.
- Land Use Designation: Commercial.
- Public Water System: East Bay Municipal Utility District.
- 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: No surface water body identified within 1,000 feet.

Geology/Hydrogeology

- Stratigraphy: Clay to sandy clay and a saturated two foot layer of peat at approximately seven feet bgs.
- Maximum Sample Depth: 40 feet below ground surface (bgs).
- Minimum Groundwater Depth: 0.30 feet bgs at monitoring well MW-10.
- Maximum Groundwater Depth: 9.24 feet bgs at monitoring well MW-9.
- Current Average Depth to Groundwater: Approximately 4.5 feet bgs.
- Saturated Zones(s) Studied: Approximately 5-20 feet bgs.
- Appropriate Screen Interval: Yes.

- Groundwater Flow Direction: Variable flow directions. On-site the gradient was inferred to be flowing towards the north and northeast at an average hydraulic gradient ranging between 0.006 feet/foot and 0.013 ft./ft., towards a groundwater depression (possible hydraulic control is caused by dewatering of the truck scale sub-structure) located in the northern portion of the site in the area of MW-7; groundwater north of the site was inferred to be flowing towards the west-southwest at an average hydraulic gradient of 0.003 ft./ft. (Advance GeoEnvironmental, Inc., May 2013).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (May 2013)
MW-1	October 1996	10-20	4.31
MW-2	October 1996	8-13	Destroyed December 1998
MW-3	October 1996	12-17	Destroyed February 2002
MW-3N	May 2002	5-12	4.92
MW-4	August 2000	5-20.5	4.52
MW-5	August 2000	5-20.5	4.49
MW-6	August 2000	5-20.5	4.66
MW-7	August 2000	5-20.5	6.20
MW-8	August 2000	5-20.5	4.03
MW-9	August 2000	5-20.5	4.05
MW-10	May 2002	5-12	2.36
MW-11	May 2002	5-12	4.68
MW-12	October 2004	5-20	Destroyed October 2011
MW-13	October 2004	5-20	Destroyed October 2011
MW-14	October 2004	5-20	5.99
MW-15	September 2007	5-20	5.82
MW-16	September 2007	5-20	Destroyed October 2011
MW-13R	October 2011	5-20	6.20

NM: Not measured

Remediation Summary

- Free Product: In 2003 a passive skimmer was installed to remove free product.
- Soil Excavation: Approximately 2,100 tons of contaminated soil was removed during UST removal activities.
- In-Situ Soil Remediation: None reported.
- Groundwater Remediation: During the UST removal process approximately 33,000 gallons of petroleum hydrocarbon affected water was removed from open tank pit, treated and disposed off-site. Ozone Sparging between January 2006 and January 2011.

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	NA	4.8 (03/03/1999)
Ethylbenzene	NA	0.19(03/03/1999)
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

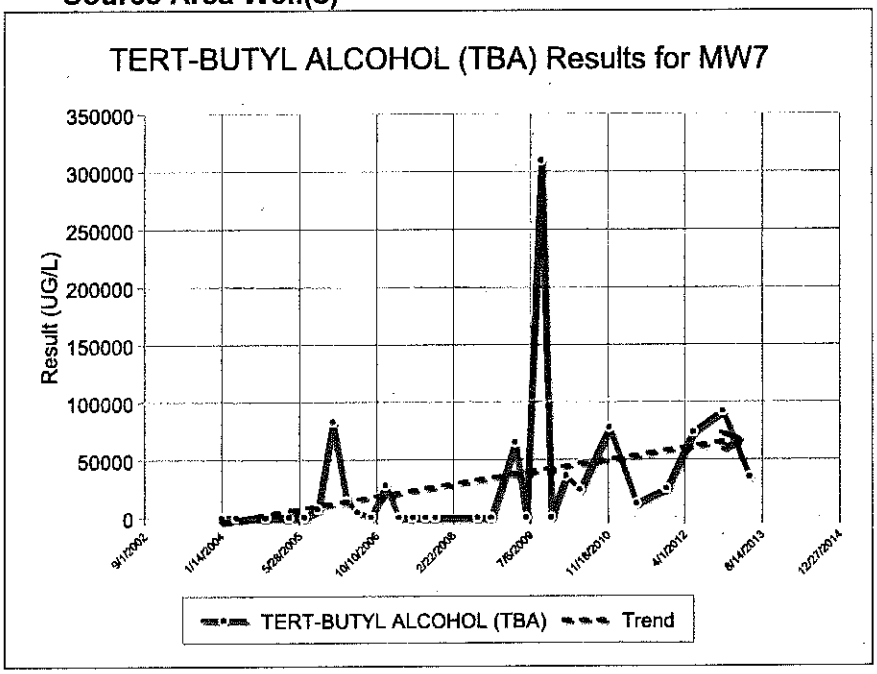
Most Recent Concentrations of Petroleum Constituents in Groundwater

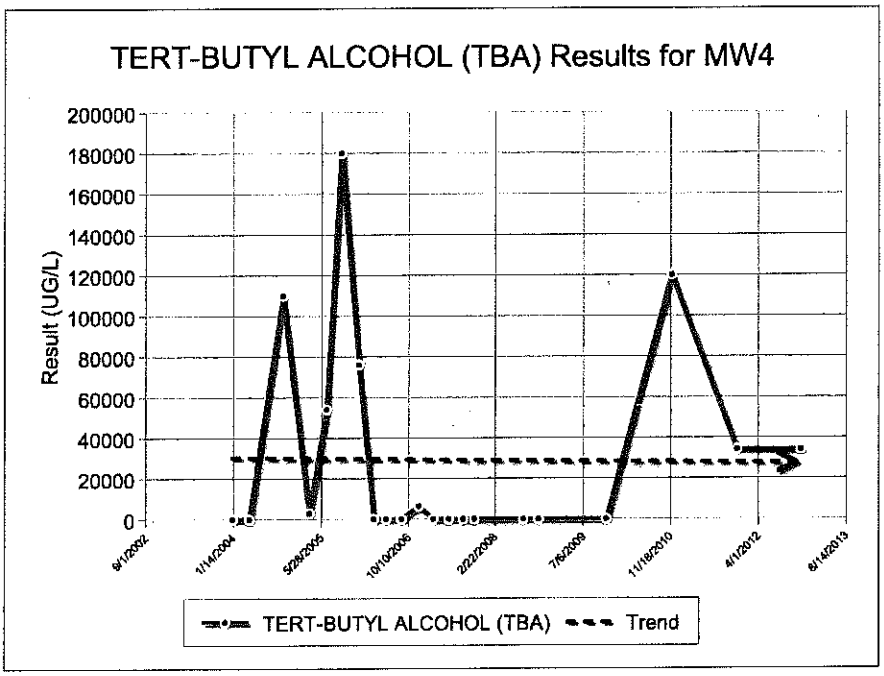
Sample	Sample Date	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	11/29/12	<50	<50	<0.5	<0.5	<0.5	<1	**15**	<10
MW-3N	11/29/12	<50	<50	<0.5	<0.5	<0.5	<1	<1	<10
MW-4	11/29/12	32,000	18,000	<0.5	<0.5	<0.5	<1	**66**	**34,000**
MW-5	05/22/13	19,000	28,000	<0.5	<0.5	<0.5	<1	2.2	**3,700**
MW-6	07/30/08	<50	<50	<0.5	<0.5	<0.5	<1	<1	<10
MW-7	05/22/13	40,000	43,000	**740**	12	7.4	48.4	**530**	**35,000**
MW-8	05/22/13	1,400	1,800	<0.5	<0.5	<0.5	<1	4.7	**2,800**
MW-9	07/30/08	<50	<50	<0.5	<0.5	<0.5	<1.2	<1	<10
MW-10	07/30/08	<50	<50	<0.5	<0.5	<0.5	<1.2	<1	<10
MW-11	07/30/08	<50	<50	<0.5	<0.5	<0.5	<1	<1	<10
MW-13R	11/29/12	<50	<50	<0.5	<0.5	<0.5	<1	<1	<10
MW-14	05/22/13	5,000	6,600	21	1.7	1.8	4.8	**62**	NA
MW-15	11/29/12	<50	<50	<0.5	<0.5	<0.5	<1	<1	<10
WQOs		--	--	**1**	**150**	**700**	**1,750**	**5[a]**	**1,200[b]**

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
TPHd: Total petroleum hydrocarbons as diesel
MTBE: Methyl tert-butyl ether
TBA: Tert-butyl alcohol
WQOs: Water Quality Objectives, San Francisco Bay Regional Water Quality Control Board, Region 2
--: Regional Water Board Basin Plan does not have a numeric water quality objective for TPHg
[a]: Secondary maximum contaminant level (MCL)
[b]: California Department of Public Health, Response Level

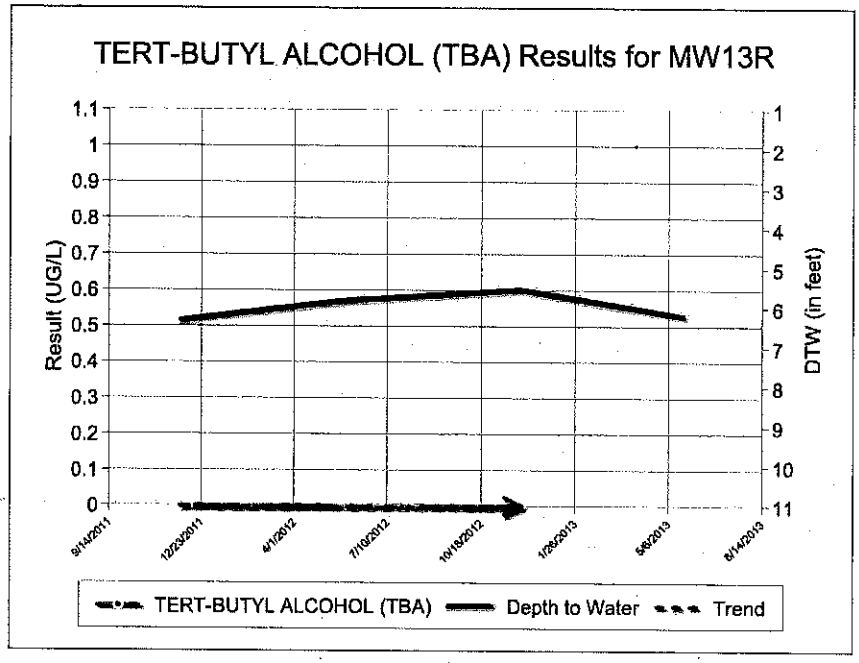
Groundwater Trends
Tert-butyl alcohol (TBA) trends of select wells are shown below:

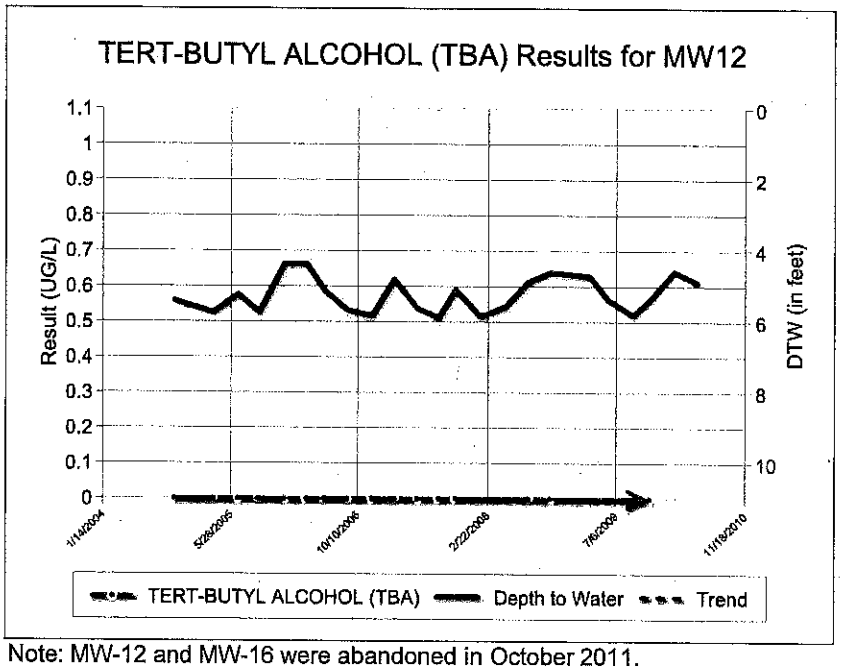
Source Area Well(s)





Downgradient Wells





Note: MW-12 and MW-16 were abandoned in October 2011.

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, confirmed by former wells MW-12 and MW-16 which were destroyed in 2011.
- Plume Stable or Decreasing: Yes.

- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criteria 1 by Class 4 – The contaminant plume that exceeds water quality objectives (WQOs) is greater than 250 feet but less than 1,000 feet in length. The defined plume boundary is delineated by current monitoring well MW-13 and several years of monitoring in now destroyed wells MW-12 and MW-16. There is no free product and 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 Exclusion for Active Station. Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility.
- 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 automotive repair facility, any construction worker working at the site will be prepared for exposure in their normal daily work.