

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Solano County Environmental Health Department Local Oversight Program (County)	Address: 675 Texas Street, Suite 5500 Fairfield, CA 94533
Agency Caseworker: Misty C. Kaltreider	Case No.: 30091

Case Information

USTCF Claim No.: 13632	GeoTracker Global ID: T0609500317
Site Name: Star Gas and Liquor	Site Address: 1369 North Texas Street Fairfield, CA 94533
Responsible Party: Hari Kalra c/o: Star Gas Station	Address: 4251 Hilltop Drive Richmond, CA 94803
USTCF Expenditures to Date: \$207,562	Number of Years Case Open: 14

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0609500317

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 petroleum fueling facility with three operating gasoline USTs. An unauthorized leak was reported in September 1998 following the removal of three USTs (two gasoline, one diesel). An unknown volume of contaminated soil was excavated from the former tank location in September 1998. Additional contaminated soil was excavated from the areas surrounding the product line piping and former dispenser location in October 1998. All soil from both excavation events was disposed off-site. Eight groundwater monitoring wells have been installed and have been monitored regularly for more than ten years. According to groundwater data, water quality objectives have been achieved for all constituents except for methyl tert-butyl ether (MTBE) plume, and benzene and total petroleum hydrocarbons as gasoline (TPHg) in source area well MW-2.

The petroleum release is limited to the soil and shallow groundwater. According to data available in GeoTracker, there are no supply wells regulated by the California Department of Public Health or surface water bodies within 1,000 feet of the projected plume boundary. No other water supply wells have been identified within 1,000 feet of the projected plume boundary in files reviewed. Water is provided to water users near the Site by the City of Fairfield Water Department. 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.

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 4. The contaminant plume that exceeds water quality objectives is less than 1,000 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 projected plume boundary. The dissolved concentrations of benzene and MTBE are each 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 the Site is an active commercial petroleum fueling facility and the characteristics of the release do not 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. 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 LOP has no objections to closure per telephone discussion August 2, 2013.

Determination

Based on the review performed in accordance with Health and 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. Solano County has the regulatory responsibility to supervise the abandonment of monitoring wells.



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



Date

Prepared by: Kenyatta Dumisani

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?</p> <p>Does the unauthorized release consist only of petroleum?</p> <p>Has the unauthorized (“primary”) release from the UST system been stopped?</p> <p>Has free product been removed to the maximum extent practicable?</p> <p>Has a conceptual site model that assesses the nature, extent, and mobility</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>

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>of the release been developed?</p> <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 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 checked="" 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><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</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>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><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 case is an active commercial petroleum fueling facility located on the southeast corner of the intersection of North Texas Street and Wyoming Street.
- The Site is bounded by residential properties to the west, a church across Wyoming Street to the north, an automotive repair shop to the south, and a commercial warehouse across North Texas Street to the east.
- Site maps showing the location of the monitoring wells and groundwater level contours are provided at the end of this closure review summary (Central Valley Environmental, Inc., 2013).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: September 1998.
- Status of Release: USTs replaced.
- Free Product: None reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/Removed/Active	Date
1	15,000	Gasoline	Removed	September 1998
2	15,000	Gasoline	Removed	September 1998
3	15,000	Diesel	Removed	September 1998
4	10,000	Gasoline	Active	-
5	10,000	Gasoline	Active	-
6	10,000	Gasoline	Active	-

Receptors

- GW Basin: Suisun-Fairfield Valley.
- Beneficial Uses According to San Francisco Regional Water Quality Control Board (Regional Board) Basin Plan: Municipal and Domestic Supply.
- Land Use Designation: Aerial photograph available on GeoTracker indicates mixed residential and commercial land use in the vicinity of the Site.
- Public Water System: City of Fairfield Water Department.
- 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 defined plume boundary.

Geology/Hydrogeology

- Stratigraphy: The Site is underlain by interbedded and intermixed gravel, sand, silt, and clay.
- Maximum Sample Depth: 8.5 feet below ground surface (bgs).
- Minimum Groundwater Depth: 1.61 feet bgs at monitoring well MW-3.
- Maximum Groundwater Depth: 13.72 feet bgs at monitoring well MW-7.
- Current Average Depth to Groundwater: Approximately 7 feet bgs.

- Saturated Zones(s) Studied: Approximately 3 - 18 feet bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: Southwest with an average gradient of 0.034 feet/foot (December 2012).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (12/14/2012)
MW-1	May 1999	8 - 18	8.45
MW-2	May 1999	8 - 18	8.15
MW-3	May 1999	8 - 18	3.83
MW-4	July 2002	8 - 18	Destroyed
MW-5	December 2005	6 - 16	6.33
MW-6	December 2005	6 - 16	8.11
MW-7	December 2005	6 - 16	7.18
MW-8	December 2005	6 - 16	6.32

Remediation Summary

- Free Product: None reported.
- Soil Excavation: An unknown volume was excavated from the former tank location in September 1998. Additional contaminated soil was excavated from the areas surrounding the product line piping and former dispenser location, in October 1998. All soil from both excavation events was disposed off-site for remediation.
- In-Situ Soil Remediation: None reported.
- 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	NA	19 (09/1998) ¹
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

1: Central Valley Environmental Inc., 2010 Site Conceptual Model and Site Characterization Work Plan.

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	12/14/2012	<90	<0.9	<0.9	<0.9	0.91	590	5.2
MW-2	12/14/2012	4,700	360	12	110	110	2,100	480
MW-3	12/14/2012	<50	<0.5	<0.5	<0.5	<0.5	84	<5.0
MW-5	12/14/2012	<50	<0.5	<0.5	<0.5	<0.5	560	7.5
MW-6	09/29/2009	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0
MW-7	12/14/2012	<250	<2.5	<2.5	<2.5	<2.5	1,500	<15
MW-8	12/14/2012	<150	<1.5	<1.5	<1.5	<1.5	840	29
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

MTBE: Methyl tert-butyl ether

TBA: Tert-butyl alcohol

WQOs: Water Quality Objectives, San Francisco Bay Regional Water (Regional Water Board) Basin Plan

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

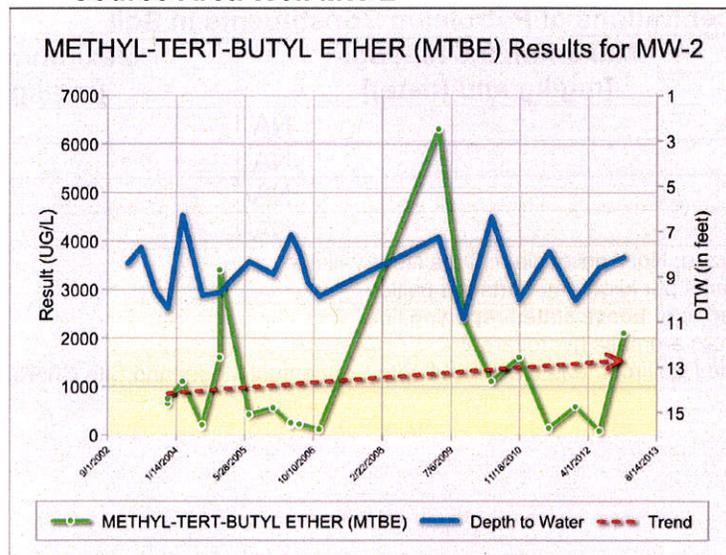
^a: Secondary maximum contaminant level (MCL)

^b: California Department of Public Health, Response Level

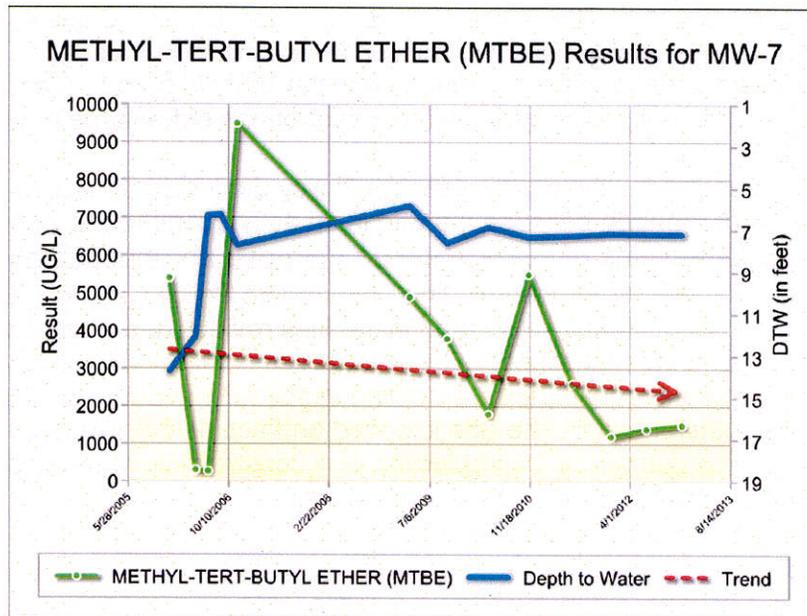
Groundwater Trends

- Since 1999, eight groundwater monitoring wells have been installed and regularly monitored for 13 years. The site has a detached MTBE plume that poses no threat to human health, the environment and no drinking water wells are present in the area. MTBE trends of select wells are shown below:

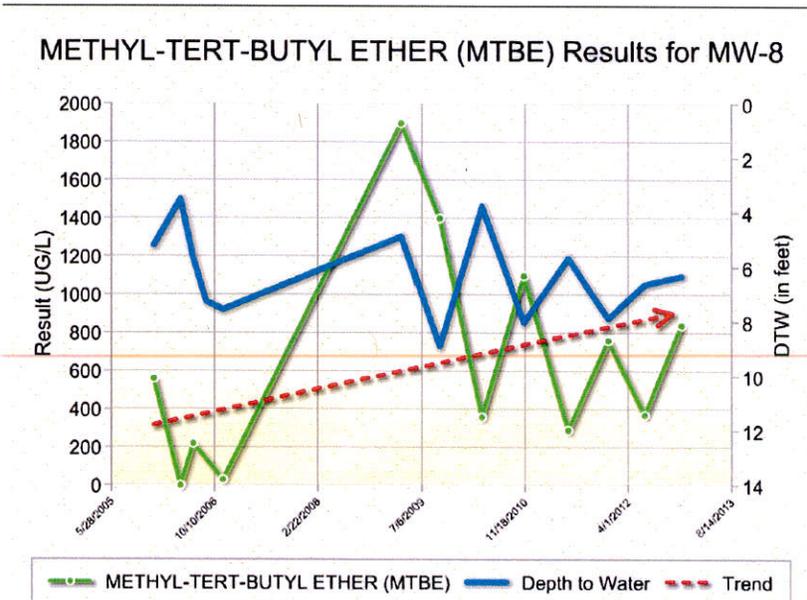
Source Area Well MW-2



Downgradient Well MW-7



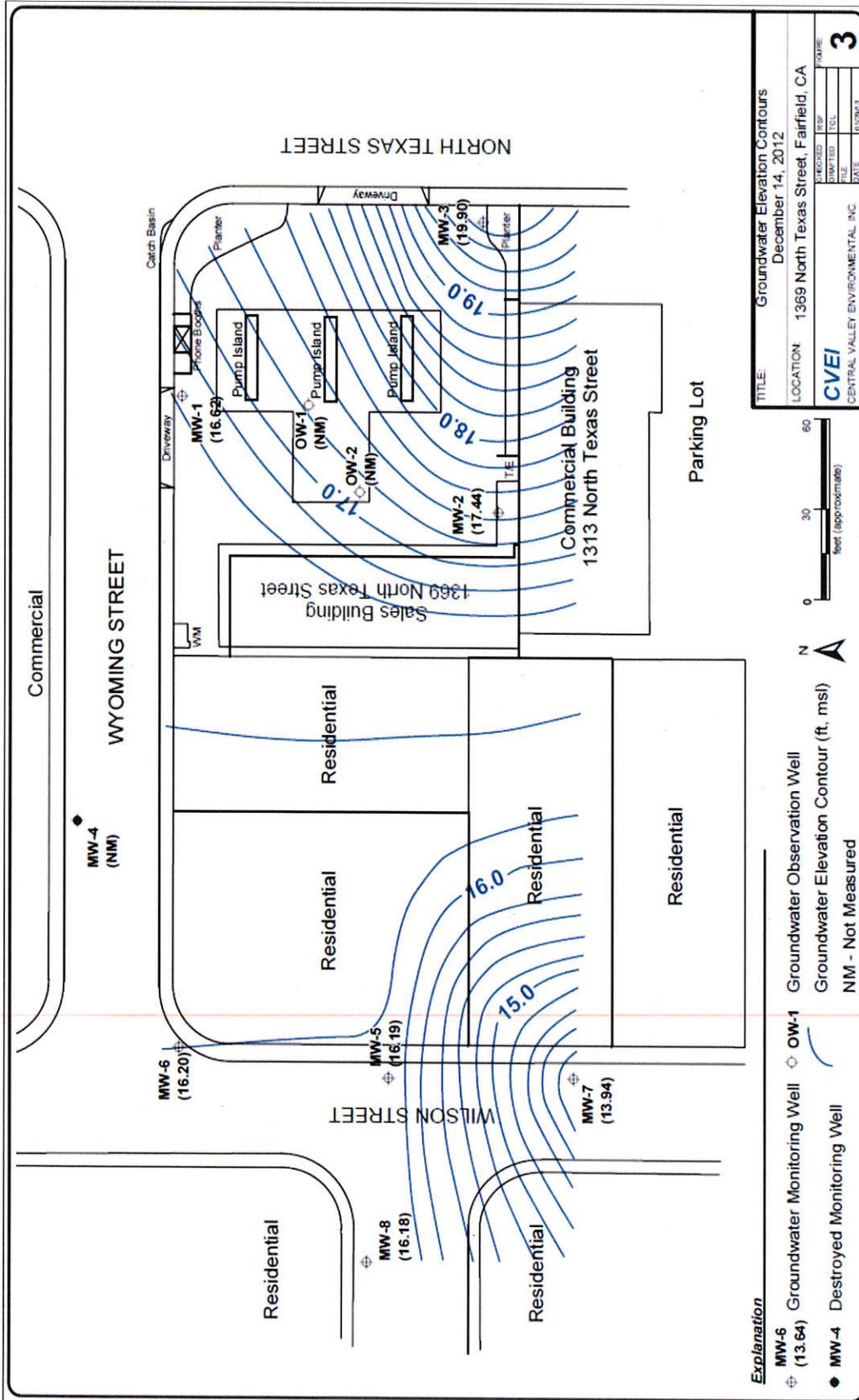
Downgradient Well MW-8

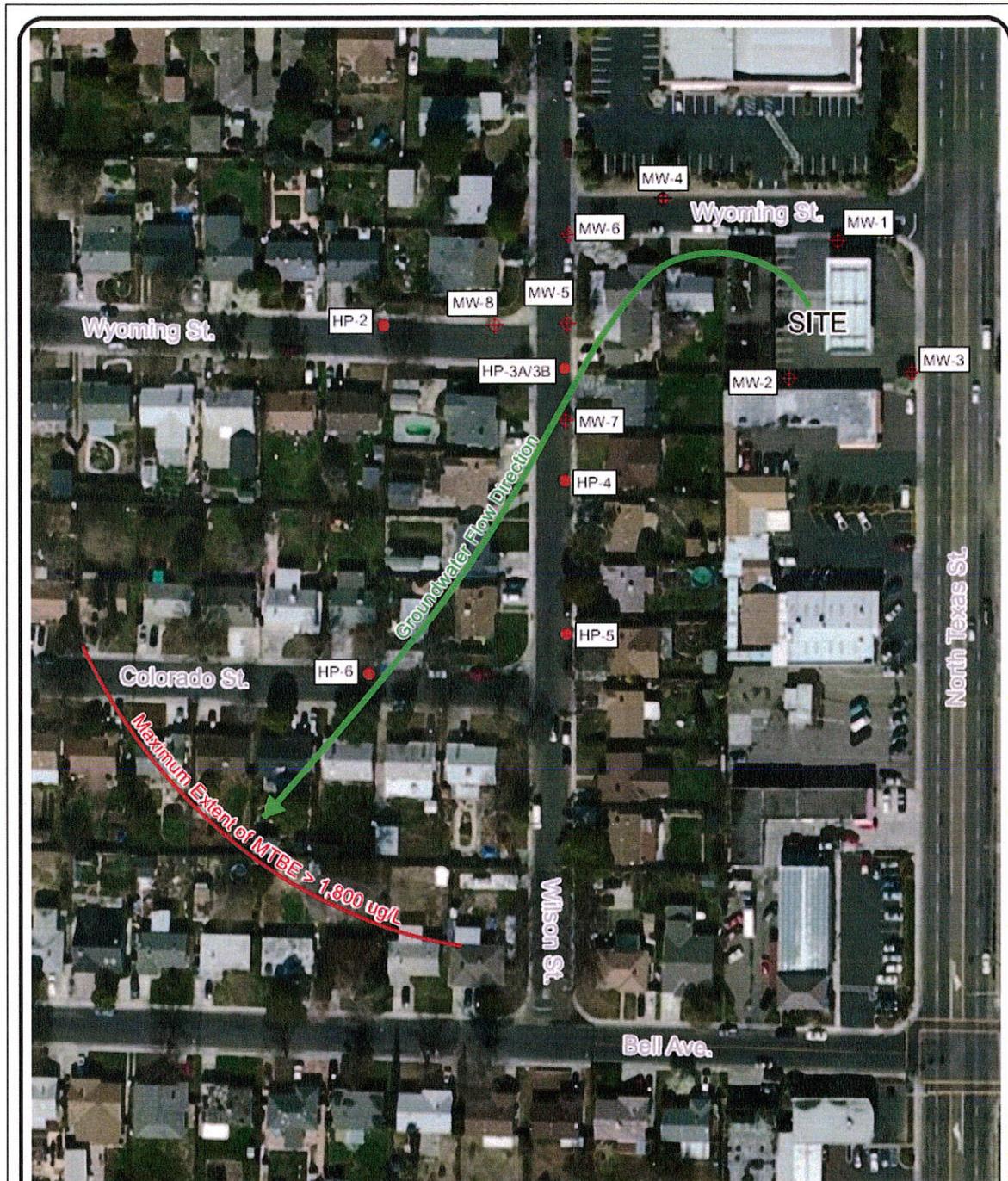


Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: 200 pounds (Central Valley Environmental, Inc., 2010)
- Soil/Groundwater tested for methyl tert-butyl ether (MTBE): Yes, see table above.
- Oxygen Concentrations in Soil Vapor: None reported.

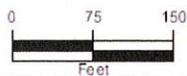
- Plume Length: <1,000 Feet.
- Plume Stable or Decreasing: Stable.
- Contaminated Zone(s) Used for Drinking Water: No.
- General Criteria: The case meets all eight Policy general criteria.
- Groundwater Specific Criteria: The case meets Policy Criterion 1 by Class 4. The contaminant plume that exceeds water quality objectives is less than 1,000 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 projected plume boundary. The dissolved concentrations of benzene and MTBE are each 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 the Site is an active commercial petroleum fueling facility and the characteristics of the release do not 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. 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.





Explanation

- ⊕ MW-1 Well Location and ID
- ⊕ MW-4 Destroyed Well Location and ID
- HP-2 Hydroponch Location and ID



TITLE: Estimated Maximum Extent MTBE Greater Than 1,800 ug/L		
LOCATION: 1369 North Texas Street, Fairfield, CA		
CHECKED	RSF	FIGURE
DRAFTED	TCL	5
FILE		
DATE	02/06/13	
CENTRAL VALLEY ENVIRONMENTAL, INC.		