

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Tulare County Environmental Health Division (County)	Address: 5957 South Mooney Boulevard, Visalia, CA 93277
Agency Caseworker: Amrit Clair	Case No.: 669

Case Information

USTCF Claim No.: 8575	Global ID: T0610700291
Site Name: Gas and Goodies	Site Address: 1076 East Rankin Avenue, Tulare, CA 93274
Responsible Party: Maira Lorraine Bostard	Address: 1076 East Rankin Avenue, Tulare, CA 93274
USTCF Expenditures to Date: \$199,893	Number of Years Case Open: 18

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0610700291

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 (CSM) upon which the evaluation of the case has been made is described in **Attachment 2: Summary of Basic Site Information (Conceptual Site Model)**. Highlights of the case follow:

An unauthorized leak was identified in December 1993 after three gasoline USTs had been removed. Over-excavation was conducted in 1993 to a total depth of 38 feet. Dual phase extraction was briefly conducted in October 2007 and approximately 407 pounds of total petroleum hydrocarbons as gasoline (TPHg) were removed from the subsurface. According to groundwater data, water quality objectives (WQO) have been achieved for all constituents except for TPHg, benzene, xylenes and methyl tert-butyl ether (MTBE).

According to data available in GeoTracker, no California Department of Public Health (CDPH) regulated Public Supply Wells or surface water bodies lie within 250 feet of the defined plume boundary. No other supply wells within 250 feet of the defined plume boundary have been identified in files reviewed. Water users in the vicinity of the Site rely on the City of Tulare, Public Works Department, Water Division. The affected groundwater is not currently being used as a source of drinking water, and it is highly unlikely that the affected groundwater will be used as a source of drinking water in the foreseeable future.

Other designated beneficial uses of impacted groundwater are not threatened and it is highly unlikely that they will be considering these factors in the context of the site setting. Remaining petroleum hydrocarbon constituents are limited, stable and concentrations declining. 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:** The case meets Policy Criterion 1 by Class 1. The plume that exceeds WQO is less than 100 feet in length. No free product is present. The nearest water supply well or surface water is greater than 250 feet from the defined plume boundary.
- **Vapor Intrusion to Indoor Air:** The case meets the Policy Active Station Exemption - Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility.
- **Direct Contact and Outdoor Air Exposure:** The case meets Policy Criterion 3a. Soil removed by excavation to a depth of 38 feet and backfilled with imported fill. Since all contaminated soil was excavated, site soils are below Table 1 thresholds of the Policy. The Site is paved preventing direct contact exposure.

Objections to Closure and Responses

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

- No conceptual site model (CSM) has been completed.
RESPONSE: The Policy does not require that the supporting data and analysis used to develop a CSM be contained in a single report. The information available on GeoTracker provides a CSM which is summarized on Attachment 2 "Summary of Basic Site Information (Conceptual Site Model)".
- No risk assessment has been conducted.
RESPONSE: A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health. Soil was removed by excavation to a depth of 38 feet and backfilled with imported fill. The Site is paved preventing direct contact exposure. Indoor soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility.
- Necessary active remediation has not been conducted. (Soil vapor extraction [SVE] is planned).
RESPONSE: Limited remediation has been conducted. The case meets the Policy criteria. In addition, water quality objectives will be achieved without further active remediation.

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.

Fund Manager Recommendation for Closure

Based on available information, residual petroleum hydrocarbons at the Site do not pose significant risks 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. Tulare County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock

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

1/22/13

Date

Prepared By: Kirk Larson

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 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 case 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 site?</p> <p>If so, was the corrective action performed consistent with any order?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</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 of the release been developed?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

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 checked="" type="checkbox"/> 1 <input 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? 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 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><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

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

Site Location/History

- The Site is located at 1076 East Rankin Avenue in Tulare and is an active retail gasoline station, car wash and mini market.
- The Site is bounded by an empty lot to the north, southbound entrance to State Freeway 99 to the east, South K Street to the west and East Rankin to the south. The surrounding land use is commercial and agricultural.
- Four monitoring wells have been installed and monitored regularly for approximately 15 years.
- A Site map showing the location of the current storage tanks, monitoring wells, and groundwater level contours is provided at the end of this closure summary.
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: December 1993.
- Status of Release: USTs replaced.
- Free Product: None reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/Removed/Active	Date
1,2	10,000	Gasoline	Removed	May 93
3	7,500	Gasoline	Removed	May 93
4,5	Unknown	Gasoline	Active	-

Receptors

- GW Basin: San Joaquin Valley – Kaweah.
- Beneficial Uses: Municipal and domestic water supply.
- Land Use Designation: Commercial, industrial and public use.
- Public Water System: City of Tulare, Public Works Department, Water Division, 3981 South K Street, Tulare, CA 93274, (559-9684-4320).
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no California Department of Public Health (CDPH) regulated Public Supply Wells 250 feet of the defined plume boundary. No other supply wells within 250 feet of the defined plume boundary were identified in files reviewed.
- Distance to Nearest Surface Water: No surface water identified within 250 feet of the defined plume boundary.

Geology/Hydrogeology

- Stratigraphy: The Site is underlain by interbedded and intermixed sand, silt and clay.
- Maximum Sample Depth: 65 feet below ground surface (bgs).
- Minimum Groundwater Depth: 44.76 feet bgs at monitoring well MW-4.
- Maximum Groundwater Depth: 76.87 feet bgs at monitoring well MW-2.
- Current Average Depth to Groundwater: Approximately 57 feet bgs.
- Saturated Zones(s) Studied: 44 to 90 feet bgs.
- Groundwater Flow Direction: West northwest at approximately 0.003 feet/foot (July 2012).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (07/26/12)
MW-1	Sep 96	60-90	57.61
MW-2	Sep 96	50-80	57.55
MW-3	Sep 96	50-80	57.09
MW-4	Oct 97	50-80	56.95

Remediation Summary

- Free Product: No free product was reported in GeoTracker.
- Soil Excavation: Excavation conducted to a total depth of 38 feet in 1993 (VIER, 2011).
- In-Situ Soil/Groundwater Remediation: Dual phase extraction pilot test was conducted in October 2007, which removed approximately 407 pounds of TPHg. In October 2007, the rate of removal was 3.5 pounds of TPHg per day. Soil vapor extraction system was installed on Site in 2012 and not yet operated.

Most Recent Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 ft. bgs. (mg/kg/Date)	Maximum 5-10 ft. 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

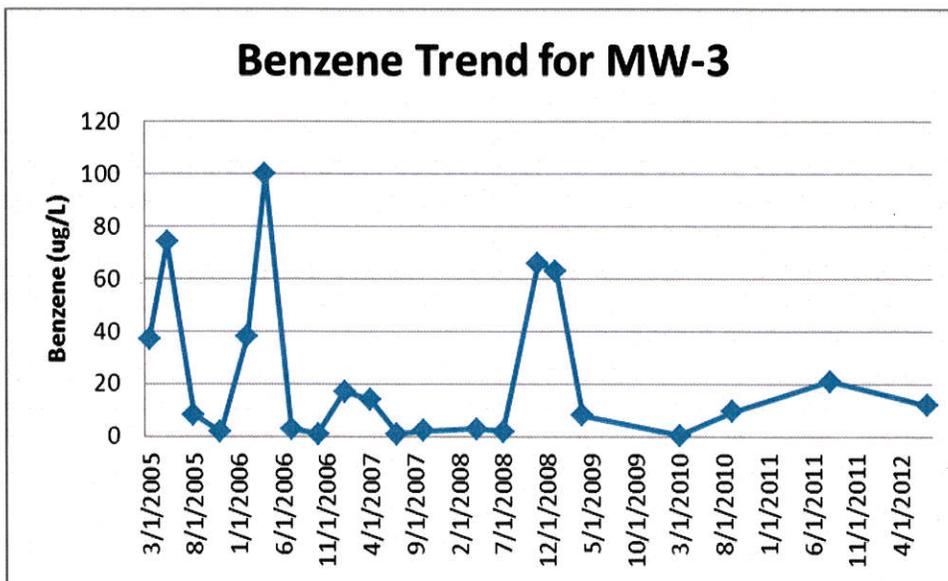
Sample	Sample Date	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	07/26/2012	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5	NA
MW-2	07/26/2012	53	NA	<0.5	<0.5	<0.5	<0.5	<0.5	NA
MW-3	07/26/2012	320	NA	12	12	1.7	37	18	NA
MW-4	07/26/2012	<50	NA	<0.5	<0.5	<0.5	0.5	<0.5	NA
WQOs	-	5	56	0.15	42	29	17	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
TPHd: Total petroleum hydrocarbons as diesel
MTBE: Methyl tert-butyl ether
TBA: Tert-butyl alcohol
WQOs: Water Quality Objectives, Region 5 Basin Plan
^a: California Department of Public Health, Response Level

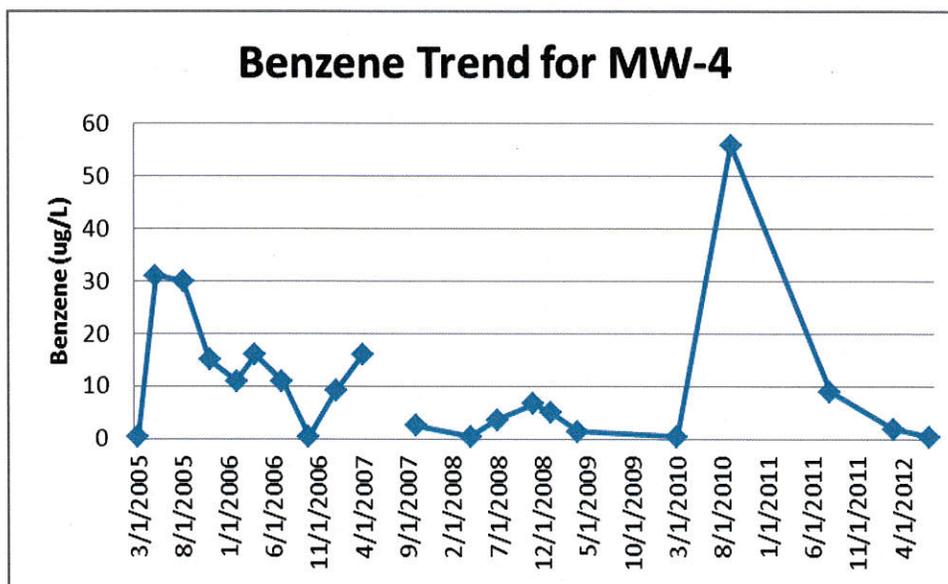
Groundwater Trends:

- This Site has been monitored regularly since 1996. Benzene trends are shown below: Source area (MW-3) and Downgradient (MW-4).

Source Area Well

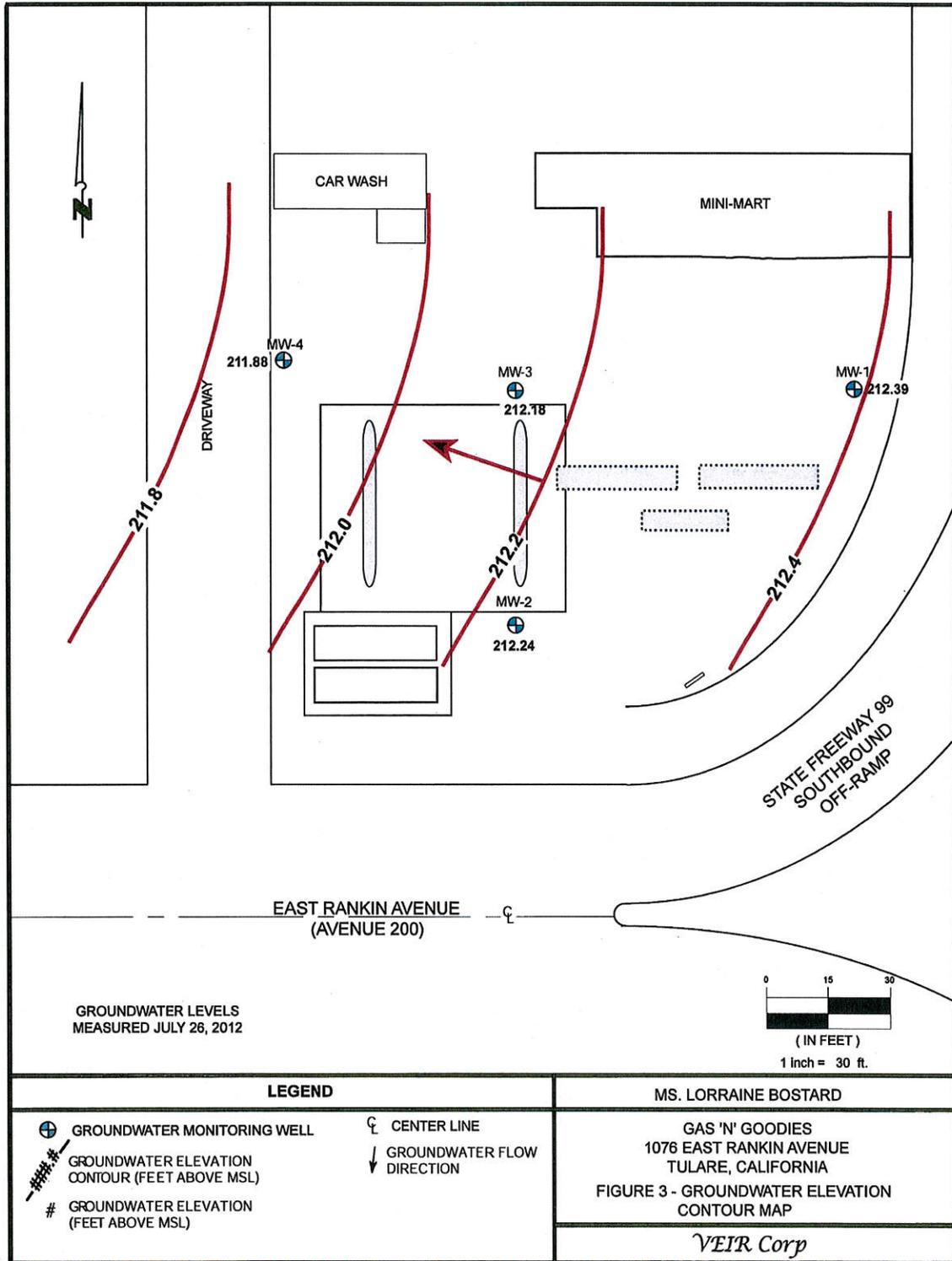


Downgradient Well



Evaluation of Current Risks

- Estimate of Hydrocarbon Mass in Soil: 391 pounds of TPHg dissolved in groundwater and 17,160 pounds TPHg in site soils (VIER, 2011).
- Soil/Groundwater Tested for MTBE: Yes, see table above.
- Plume Length: <100 feet.
- Plume Stable or Degrading: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Oxygen Concentrations in Soil Vapor: None reported.
- Groundwater Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 1 by Class 1. The plume that exceeds WQO is less than 100 feet in length. No free product is present. The nearest water supply well or surface water is greater than 250 feet from the defined plume boundary.
- Indoor Vapor Risk from Residual Petroleum Hydrocarbons: The case meets the Policy Active Station Exemption - Soil vapor evaluation is not required because Site is an active commercial petroleum fueling facility.
- Direct Contact Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 3a. Soil removed by excavation to a depth of 38 feet and backfilled with imported fill. Since all contaminated soil was excavated, site soils are below Table 1 thresholds of the Policy. The Site is paved preventing direct contact exposure.



REVISION DATE: AUGUST 28, 2012

