

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Santa Clara County LOP (County)	Address: 1555 Berger Drive, Suite 300, San Jose, CA 95112
Agency Caseworker: Gerald O'Regan	Case No.: 07S1E21A07f

Case Information

USTCF Claim No.: 18497	Global ID: T0608567806
Site Name: Western States Oil	Site Address: 1790 South 10 th . Street, San Jose, CA 95112
Responsible Party (RP): The 1790 Ten Corp.	Address: 1790 South 10 th . Street, San Jose, CA 95112
USTCF Expenditures to Date: \$246,470	Number of Years Case Open: 8

URL: [https:// geotracker.waterboards.ca.gov/regulators/screens/menu.asp?global_id=T0608567806](https://geotracker.waterboards.ca.gov/regulators/screens/menu.asp?global_id=T0608567806)

Summary

The Low-Threat Underground Storage Tank Case (UST) 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 leak was reported in July 2004. The Site currently operates as a commercial petroleum fueling facility and a bulk storage plant for petroleum products. Nine underground storage tanks of various sizes were removed, and eight USTs are currently active. An unknown quantity of soil was excavated, transported and disposed offsite following the UST replacement activities in 1990. No other remediation has occurred. Five monitoring wells have been installed and monitored regularly since 1990. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents.

The petroleum release is limited to the shallow soil and 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 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 Santa Clara Valley Water District and the San Jose Water Company. 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 Specific Criteria: The case meets Policy Criterion 1 by Class 2. The contaminant plume that exceeds WQO is less than 250 feet in length. There is no identified surface water body within 1,000 feet of 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 Active Station Exclusion - 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. Maximum concentrations in soil are less than those in Policy Table 1 for Commercial/Industrial and the concentration limits for a Utility Worker are not exceeded. There are no soil sample results in the case record for naphthalene. However, the relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2 percent benzene and 0.25 percent naphthalene. Therefore, benzene can be directly substituted for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below the naphthalene thresholds in Policy Table 1. Therefore, the estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Objections to Closure and Responses

The County objects to UST case closure because the vertical extent of oxygenates including MTBE has not been evaluated.

RESPONSE: The case meets the Policy criteria. Only shallow groundwater has been impacted. There are no production wells that would provide a mechanism to draw down a lighter-than-water compound such as MTBE into deeper saturated zones. The Policy does not require water quality objectives to be achieved prior to closure.

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. Santa Clara County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock

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

5/7/13

Date

Prepared by: Sunil Ramdass/Pat G. Cullen, 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?</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 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? 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 CASE INFORMATION (Conceptual Site Model)

Site Location/History

- This Site is located at 1790 South Tenth Street in San Jose. The Site is an active commercial petroleum fueling facility and a bulk storage plant for petroleum products.
- Site map showing the location of the current USTs, monitoring wells, and groundwater gradient contours is provided at the end of this closure review summary.
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: July 2004.
- Status of Release: Nine USTs were removed and eight USTs are currently active.
- Free Product: None reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/Removed/Active	Date
1,2,3,4	12,000	Gasoline	Removed	September 1989
5	12,000	Diesel	Removed	September 1989
6,7	10,000	Diesel	Removed	March 1990
8	12,000	Diesel	Removed	March 1990
9	16,000	Diesel	Removed	March 1990
10,11	20,000	Diesel	Active	-
12,13,14	12,000	Gasoline	Active	-
15	5,000	Kerosene	Active	-
16	8,000	Diesel	Active	-
17	20,000	Segmented gasoline tank	Active	-

Receptors

- GW Basin: Santa Clara Valley – Santa Clara.
- Beneficial Uses: Municipal and Domestic Supply.
- Land Use Designation: Commercial/Industrial.
- Public Water System: San Jose Water Company, 110 West Taylor Street, San Jose, CA 95110.
- Water District: Santa Clara County Water District, PO Box 20130, San Jose, CA 95160-0130.
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no public supply wells regulated by CDPH 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.
- 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 silty clays, clayey silts, and silty sands.
- Maximum Sample Depth: 40 feet below ground surface (bgs) on 9/24/1990.
- Minimum Groundwater Depth: 12.70 feet bgs at monitoring well MW-102.
- Maximum Groundwater Depth: 16.55 feet bgs at monitoring well MW-103.
- Current Average Depth to Groundwater: 14.63 feet bgs.

- Saturated Zones(s) Studied: Approximately 15-40 feet bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: North-northeast with an average gradient of 0.0039 feet/foot (ft/ft) (Alterra's, 3rd. QMR 2012).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (10/10/2012)
B-6	September 1990	15-35	14.24
B-7	September 1990	15-35	13.63
MW-102	August 1991	14.5-29.5	12.91
MW-103	August 1991	14.5-29.5	15.33
MW-104	March 1997	10-35	15.01

Remediation Summary

- Free Product: None reported in GeoTracker.
- Soil Excavation: An unknown quantity of impacted soil was excavated, transported and disposed offsite following the 1990 UST removal activities.
- In-Situ Soil Remediation: None reported in GeoTracker.
- Groundwater Remediation None reported in GeoTracker.

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	<0.20 (03/19/04)	<0.005 (02/04/05)
Ethylbenzene	0.12 (07/09/03)	<0.005 (02/04/05)
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

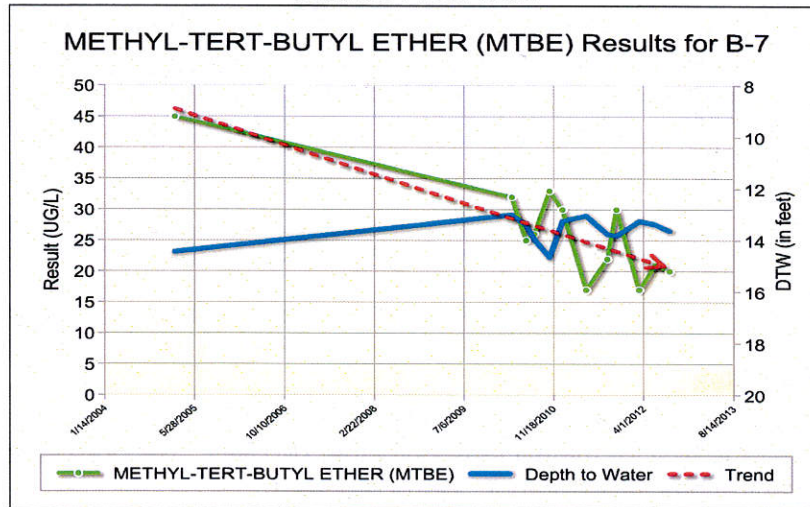
Sample	Sample Date	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
B-6	8/23/12	340	190	10	1.6	<0.5	<0.5	<10
B-7	8/23/12	68	<50	1.7	0.53	<0.5	<0.5	20
MW - 102	8/23/12	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
MW - 103	8/23/12	<50	72	<0.5	<0.5	<0.5	<.05	<0.5
MW - 104	8/23/12	<50	<50	<0.5	<0.5	<0.5	<<0.5	<5
WQOs	-	50^a	100^b	1	150	700	1750	5

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 2 Basin Plan
 a: Typical Laboratory Detection Limits
 b: Taste and Odor Threshold

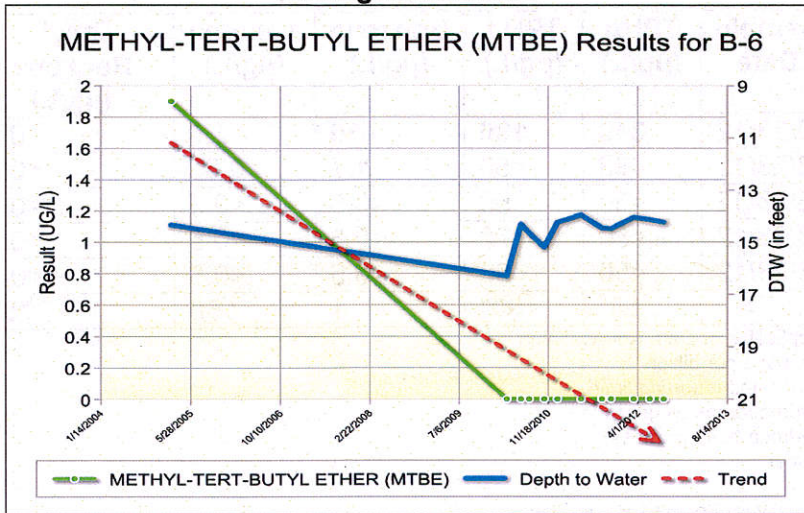
Groundwater Trends

- Groundwater has been sampled irregularly since 1990. MTBE trends are shown below: Source Area (MW-7), Downgradient (MW-6), and Far Downgradient (MW-104).

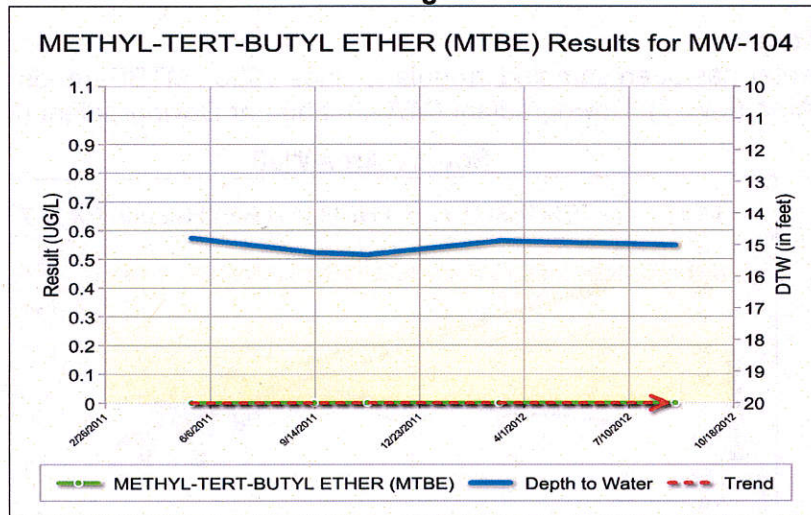
Source Area Well



Downgradient Well



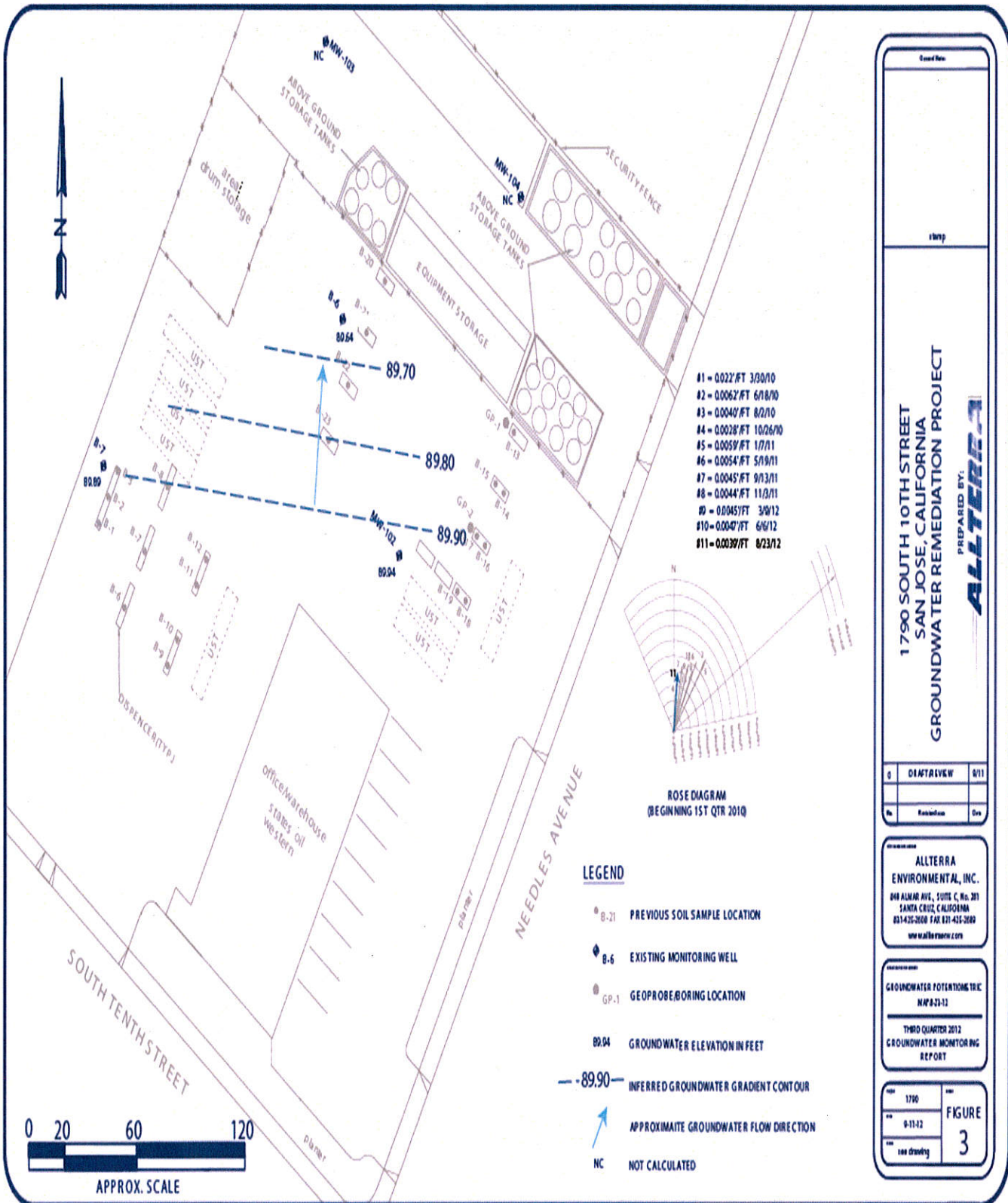
Further Downgradient Well



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: 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 WQOs 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 the Site is an active commercial petroleum fueling facility.
- Direct Contact Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 for Commercial/Industrial and the concentration limits for a Utility Worker are not exceeded. There are no soil sample results in the case record for naphthalene. However, the relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2 percent benzene and 0.25 percent naphthalene. Therefore, benzene can be directly substituted for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below the naphthalene thresholds in Policy Table 1. Therefore, the estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.



Client Name: _____

City: _____

**1790 SOUTH 10TH STREET
 SAN JOSE, CALIFORNIA
 GROUNDWATER REMEDIATION PROJECT**

PREPARED BY: **ALTERRA**

0	DATE REVIEW	9/11
1		
2		
3		

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GROUNDWATER POTENTIOMETRIC
 MAP #23-12

THIRD QUARTER 2012
 GROUNDWATER MONITORING
 REPORT

DATE	1/10	FIGURE 3
NO.	9-11-12	
ISSUE	see drawing	