

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Santa Clara County Department of Environmental Health (County)	Address: 1555 Berger Drive, Suite 300 San Jose, CA 95112
Agency Caseworker: Gerald O'Regan	Case No.: 07S1E10H01f

Case Information

USTCF Claim No.: 6653	Global ID: T0605902236
Site Name: Nguyen Property	Site Address: 960 King Rd, San Jose, CA 95116
Responsible Party (RP): Liem V. Nguyen	Address: 4616 Thornton Way San Jose, CA 95111
USTCF Expenditures to Date: \$168,528	Number of Years Case Open: 21

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0608505793

Summary

The Low-Threat Underground Storage Tank 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:

The Site is an active petroleum fueling facility. An unauthorized release was reported in June 1985 during an inspection for a proposed tank reline. In 1985, three 10,000-gallon gasoline UST's were removed and replaced with three 10,000-gallon UST's. No active remediation has been conducted. Six monitoring wells have been installed since 1988. According to GeoTracker groundwater data, limited petroleum contamination consisting of total petroleum hydrocarbons as gasoline (TPH-g), methyl tert butyl ether (MTBE) and benzene, was detected in 2008 (last full round of groundwater monitoring uploaded to GeoTracker). According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents except for MTBE in one source area monitoring well.

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 250 feet of the defined plume boundary. No other water supply wells have been identified within 250 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 (GeoTracker).

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.

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 1. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product, and the nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary.
- 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.
- Direct Contact and Outdoor Air Exposure – This case meets Policy Criterion 3b. 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. 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 objects to UST case closure (April 17, 2013 letter) because:

- The horizontal and vertical extent of the petroleum hydrocarbon and MTBE plume are not defined in a downgradient direction.
RESPONSE: MTBE concentrations above water quality objectives are decreasing and limited to one source area monitoring well, MW-1, based on 2010 data (most recent). The extent of the plume with petroleum hydrocarbon constituents above water quality objectives has been defined by the analytical results of non-detect in two downgradient wells, MW-3 and MW-4.
- An active production well is located 290 feet in a westerly direction.
RESPONSE: The Policy Criterion 1 by Class 1 lists 250 feet from the defined plume boundary as the distance necessary to provide an adequate buffer. In addition, the only detection of petroleum hydrocarbons in a monitoring well is in monitoring well MW-1 in the source area.
- Soils have not been analyzed for naphthalene.
RESPONSE: The Site is an active commercial petroleum fueling facility. 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.

Furthermore, the constituents of concern at the Site are gasoline-related constituents such as benzene and MTBE. 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. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

- PAH analyses may be required if a waste oil UST was located on the Site. The County reviewed the project file and found no information to indicate a waste oil UST has been

- PAH analyses may be required if a waste oil UST was located on the Site. The County reviewed the project file and found no information to indicate a waste oil UST has been located at the Site. An evaluation of the Site and all historical documents should be completed to determine if a waste oil UST was ever located on the Site.

RESPONSE: The County reviewed the project file and found no information to indicate a waste oil UST has been located at the Site. Fund staff has also found no information to indicate that a waste oil UST has been located at the Site.

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

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

6/13/13
Date

Prepared by: Dayne Kendrick

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? There was an order issued for this case. The corrective action performed in the past is consistent with that order. Since this case meets applicable case-closure requirements, further corrective action under the order that is not necessary, unless the activity is necessary for case closure.</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><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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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>Has a conceptual site model that assesses the nature, extent, and mobility 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 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><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 Site is an active petroleum fueling facility and is located on the east corner of Lido Way and South King Road.
- The Site is bounded by South King Road to the southwest, Lido Way to the northwest, a parking lot to the northeast, and a restaurant to the southeast. Across South King Road to the southwest is Prusch Park, across Lido Way to northwest are apartments.
- A Site map showing the location of the existing USTs, monitoring wells and groundwater level contours is provided at the end of this closure review summary (WellTest, Inc., 2010).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: June 1985.
- Status of Release: USTs removed.
- Free Product: None reported since 1997. (Enviro Soil Tech Consultants, 2001, 2002)

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1 - 3	10,000	Gasoline	Removed	September 1985
4 - 6	10,000	Gasoline	Active	--

Receptors

- GW Basin: Santa Clara Valley.
- Beneficial Uses: Regional Water Board basin Plan lists groundwater recharge, municipal and domestic supply.
- Land Use Designation: None Specified. Aerial photograph available on GeoTracker suggests commercial and public space with interspersed residential in the vicinity of the Site.
- Public Water System: Santa Clara Valley Water District.
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no California Department of Public Health regulated supply wells or other supply wells within 250 feet of this site. No other water supply wells were identified within 250 feet of the site in the files reviewed.
- Distance to Nearest Surface Water: There is no identified surface water within 250 feet of the site.

Geology/Hydrogeology

- Stratigraphy: The Site is underlain by clay, silts and sand.
- Maximum Sample Depth: 30 feet below ground surface (bgs).
- Minimum Groundwater Depth: 10.20 feet bgs at monitoring well MW-1.
- Maximum Groundwater Depth: 15.67 feet bgs at monitoring well MW-1.
- Current Average Depth to Groundwater: 11.50 feet bgs.
- Saturated Zones(s) Studied: Approximately 11 - 30 bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: Northwest with an average gradient of 0.0014 feet/foot (ft/ft).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (03/10/2010)
MW-1	May 1988	10 - 30	10.98
STMW-2	November 1991	12 - 27	11.57
STMW-3	November 1991	11 - 29	10.94
STMW-4	March 1992	10 - 28	12.32
STMW-5	March 1992	9 - 27	11.71
STMW-6	March 1992	8 - 26	11.51

Remedial Summary

- Free Product: Consultant bailed approximately 50 gallons of floating product from June 1996 to June 1997 in monitoring well MW-1. (Enviro Soil Tech Consultants, 2001, 2002)
- Soil Excavation: Contaminated soil removed during tank extraction in September 1985.
- 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	NA
Ethylbenzene	NA	NA
Naphthalene	NA	NA
PAHs	NA	NA

NA: Not Analyzed, Not Applicable or Data Not Available per GeoTracker
 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

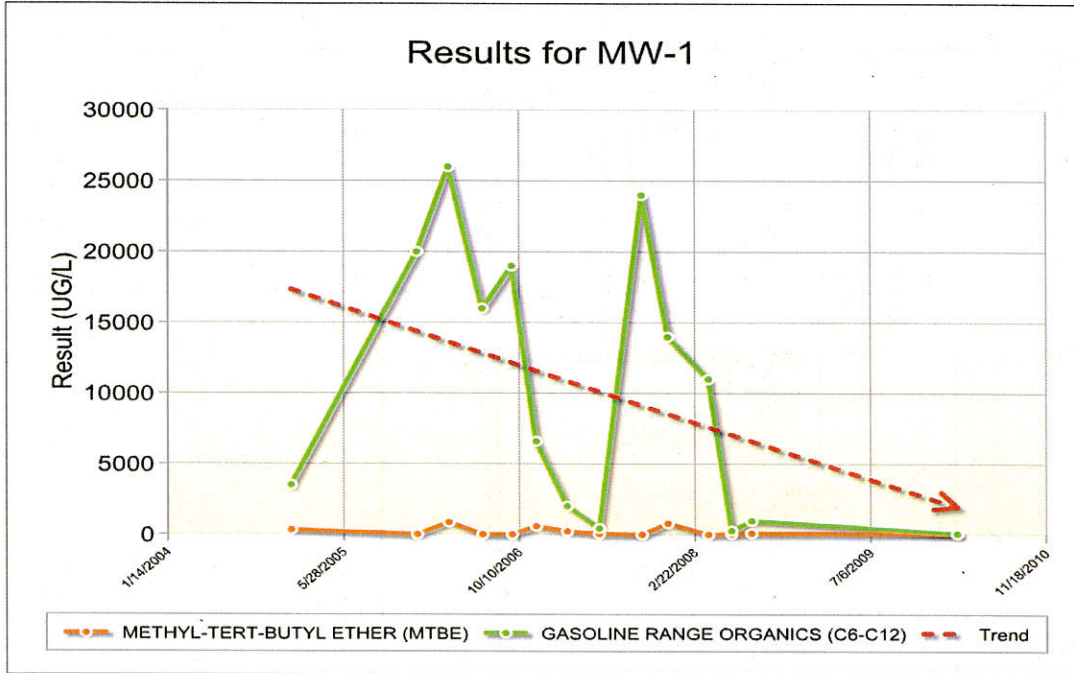
Sample	Sample Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	3/10/2010	61	<0.5	<0.5	<0.5	<1.0	53	16
STMW-2	3/31/2008	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA
STMW-3	6/5/2008	<50	<0.5	<0.5	0.73	1.9	7.1	NA
STMW-4	6/5/2008	<50	<0.5	<0.5	1.1	0.54	<5.0	NA
STMW-5	3/31/2008	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA
STMW-6	3/31/2008	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA
WQO	-	--	1	150	700	1750	5	1,200 ^a

NS: Not sampled
 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
 WQO: Regional Water Board Basin Plan
 --: Regional Water Board Basin Plan does not have numeric water quality objectives for TPHg
^a: California Department of Public Health, Response Level

Groundwater Trends

- There are nearly 20 years of irregular groundwater monitoring data for this Site that demonstrates the concentrations are decreasing and the plume is stable.

Source Area 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: <100 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 1. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product, and the nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary.
- 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. 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. Furthermore, the Site is paved and accidental access to site soils is prevented. As an active gas station, any construction worker working at the Site will be prepared for exposure in their normal daily work.

