

## State Water Resources Control Board

### UST CASE CLOSURE REVIEW SUMMARY REPORT

#### Agency Information

Agency Name: Central Valley Regional Water Quality Control Board (Regional Water Board)	Address: 11020 Sun Center Drive # 200 Rancho Cordova, CA 95670
Agency Caseworker: Brian Taylor	Case No.: 570280

#### Case Information

USTCF Claim No.: 11889	Global ID: T0611300226
Site Name: Cable Car Wash	Site Address: 904 3 <sup>rd</sup> Street, Davis, CA 95616
Responsible Party: Jay Gerber	Address: 904 3 <sup>rd</sup> Street Davis, CA 95616
USTCF Expenditures to Date: \$531,071	Number of Years Case Open: 15

**URL:** [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0611300226](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611300226)

#### 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:

An unauthorized leak was reported in June 1997 followed by the removal of three 10,000 gallon gasoline USTs in 1998. An unknown amount of contaminated soil was excavated and removed from the Site. Batch groundwater extraction was conducted between November 2005 and December 2005, which removed approximately 1,650 gallons of contaminated groundwater. This Site is surrounded by chlorinated solvent sites. Twenty-six monitoring wells have been installed and monitored regularly since 1998. According to groundwater monitoring data, water quality objectives have been not yet been achieved but all contaminants exhibit decreasing trends. The current consultant estimates water quality objectives will be achieved in 12 to 22 years (Kleinfelder, June 2010).

The petroleum release is limited to the soil and shallow groundwater. No public supply wells regulated by the California Department of Public Health are located 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 files reviewed. Water is provided to water users near the Site by the City of Davis Public Works 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.

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 water quality objectives 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 methyl tert-butyl ether (MTBE) is less than 1,000 µg/L.
- Vapor Intrusion to Indoor Air: The case meets Policy Criterion 2b. 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 limiting vapor migration and no buildings are located above the former USTs.
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3b. A site-specific risk assessment demonstrates residual petroleum constituents in soil will have no significant risk of adversely affecting human health because the Site is paved and accidental access to site soils is prevented.

#### **Objections to Closure and Responses**

According to the GeoTracker Activity Report page, the Regional Water Board has directed the Responsible Party to submit a closure report.

RESPONSE: The case meets Policy criteria.

#### **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. Yolo County has the regulatory responsibility to supervise the abandonment of monitoring wells.



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



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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.<sup>1</sup>**

<p><b>Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations?</b>          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><b>Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?</b></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><b>If so, was the corrective action performed consistent with any order?</b></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p><b><u>General Criteria</u></b>          General criteria that must be satisfied by all candidate sites:</p> <p><b>Is the unauthorized release located within the service area of a public water system?</b></p> <p><b>Does the unauthorized release consist only of petroleum?</b></p> <p><b>Has the unauthorized (“primary”) release from the UST system been stopped?</b></p> <p><b>Has free product been removed to the maximum extent practicable?</b></p> <p><b>Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?</b></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> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

<sup>1</sup> 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](http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf)

<p><b>Has secondary source been removed to the extent practicable?</b></p> <p><b>Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?</b></p> <p><b>Nuisance as defined by Water Code section 13050 does not exist at the site?</b></p> <p><b>Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?</b></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><b><u>Media-Specific Criteria</u></b>                  Candidate sites must satisfy all three of these media-specific criteria:</p> <p><b>1. Groundwater:</b>                  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><b>Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?</b></p> <p><b>Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?</b></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><b>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?</b></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><b>2. Petroleum Vapor Intrusion to Indoor Air:</b>                  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><b>Is the site an active commercial petroleum fueling facility?</b>                  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><b>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?</b>                  If YES, check applicable scenarios: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4</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><b>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?</b></p> <p><b>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?</b></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><b>3. Direct Contact and Outdoor Air Exposure:</b>          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><b>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)?</b></p> <p><b>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?</b></p> <p><b>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?</b></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 car wash and is bounded by a residence across I Street to the east, a train station to the south and west, businesses to the north within a block, and residences across 3<sup>rd</sup> Street to the north.
- A Site map showing the location of the former USTs, monitoring wells, and groundwater level contours is provided at the end of this closure review summary (Kleinfelder, 2012).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: June 1997.
- Status of Release: USTs removed.
- Free Product: None reported.

**Tank Information**

Tank No.	Size in Gallons	Contents	Closed in Place/Removed/Active	Date
1	10,000	Gasoline	Removed	December 1998
2	10,000	Gasoline	Removed	December 1998
3	10,000	Gasoline	Removed	December 1998

**Receptors**

- GW Basin: Sacramento Valley - Yolo County.
- Beneficial Uses: Agricultural Supply, Commercial and Sportfishing, Freshwater Replenishment, Industrial Process and Service Supply, Groundwater Recharge, Municipal and Domestic Supply, Navigation, Water Contact Recreation, Spawning Reproduction and/or early Development, Wetland and Wildlife Habitat, Water Quality Enhancement.
- Land Use Designation: Aerial photograph available on GeoTracker shows mixed residential, commercial and adjacent to a railroad line.
- Public Water System: City of Davis Public Works Department.
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no public supply wells regulated by California Department of Public Health within 1,000 feet of the Site in files reviewed. No other water supply wells were 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 sand and silty clays.
- Maximum Sample Depth: 20 feet below ground surface (bgs).
- Minimum Groundwater Depth: 20.40 feet bgs at monitoring well MW-13.
- Maximum Groundwater Depth: 42.57 feet bgs at monitoring well DAS-4.
- Current Average Depth to Groundwater: Approximately 37 feet bgs.
- Saturated Zones(s) Studied: Approximately 20-85 feet bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: Shallow zone north-eastern at 0.002 feet/foot (ft/ft) and deep zone south at 0.004 ft/ft.

**Monitoring Well Information**

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (9/20/2012)
MW-6	December 2003	unknown - 54	38.16
MW-7	December 2003	unknown - 54	37.80
MW-8	December 2003	unknown - 40	36.47
MW-9	December 2003	unknown - 40	35.80
MW-10	December 2003	unknown - 40	38.48
MW-11	December 2003	unknown - 40	NM
MW-12	December 2003	unknown - 40	37.02
MW-13	December 2003	unknown - 40	36.09
MW-14	December 2003	75 - 85	38.05
DAS-1	December 2003	unknown - 50	39.34
DAS-2	December 2003	unknown - 52	NM
DAS-3	December 2003	unknown - 50	39.10
DAS-4	December 2003	unknown - 56	40.73
DAS-5	December 2003	unknown - 52	40.12
DAS-6	December 2003	unknown - 50	35.54
DAS-7	December 2003	unknown - 79	35.84
ISD-1	December 2003	unknown	34.50
PISD-2A	December 2003	unknown - 38	NM
PISD-2B	December 2003	unknown - 45	36.85
PISD-3A	December 2003	unknown - 39	36.82
PISD-3B	December 2003	unknown - 44	36.75
PISD-3C	December 2003	unknown - 54	36.05
PISD-4A	December 2003	unknown - 40	NM
PISD-4C	December 2003	unknown - 54	37.00
PISD-5B	December 2003	unknown - 45	36.95
PISD-5C	December 2003	unknown - 55	36.93

NM: Not Measured

**Remediation Summary**

- Free Product: None reported.
- Soil Excavation: Unknown volume was removed and disposed during UST removal.
- In-Situ Soil/Groundwater Remediation: Batch groundwater extraction was conducted between November 2005 and December 2005, which removed 1,650 gallons of contaminated groundwater. Ozone sparging proposed; system on hold pending a review of the Fund budget.

**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

mg/kg: Milligrams per kilogram, parts per million

<: Not detected at or above stated reporting limit

PAHs: Polycyclic aromatic hydrocarbons

\*No analytical soil data between 0 and 10 feet bgs

**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 <sup>a</sup> (µg/L)
MW-6	09/20/12	5,800	41	<1	640	25	ND	<5
MW-7	09/20/12	10,000	210	<0.9	1,300	<0.9	51	5.3
MW-8	09/20/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-14	09/20/12	<50	<0.5	<0.5	<0.5	<0.5	16	<5
PISD-3A	09/20/12	4,200	36	65	99	21	33	<5
PISD-3B	09/20/12	5,700	43	17	300	11	23	<5
PISD-3C	09/20/12	3,200	81	1.3	190	7.3	26	<5
PISD-5B	09/20/12	420	<0.5	<0.5	<0.5	<0.5	<0.5	<5
PISD-5C	09/20/12	240	<0.5	<0.5	<0.5	<0.5	<0.5	<5
<b>WQOs</b>	-	<b>5</b>	<b>0.15</b>	<b>42</b>	<b>29</b>	<b>17</b>	<b>5</b>	<b>1,200<sup>a</sup></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

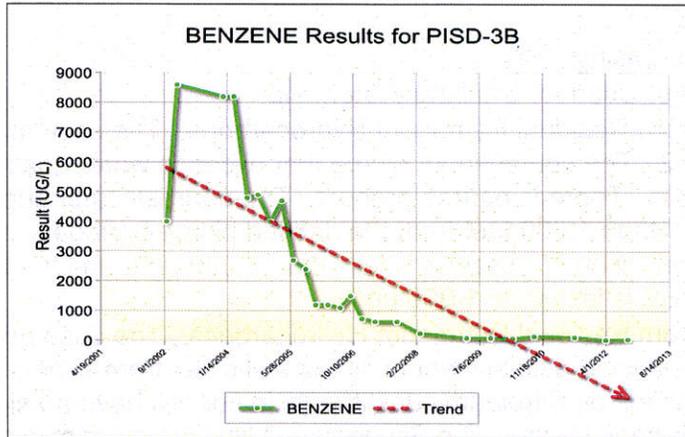
WQOs: Water Quality Objectives, Regional Water Board Basin Plan

<sup>a</sup>: California Department of Public Health, Response Level

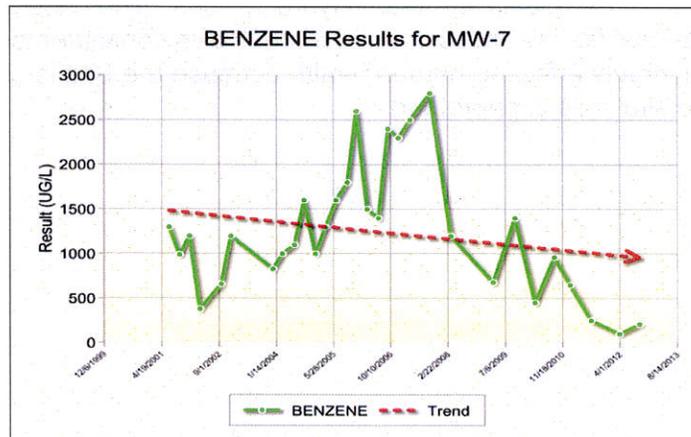
### Groundwater Trends

There are 15 years of regular groundwater monitoring data for this case. Benzene trends are shown below for the most contaminated wells: Source Area (PISD-3B), Crossgradient (MW-7), and Downgradient (PISD-5C).

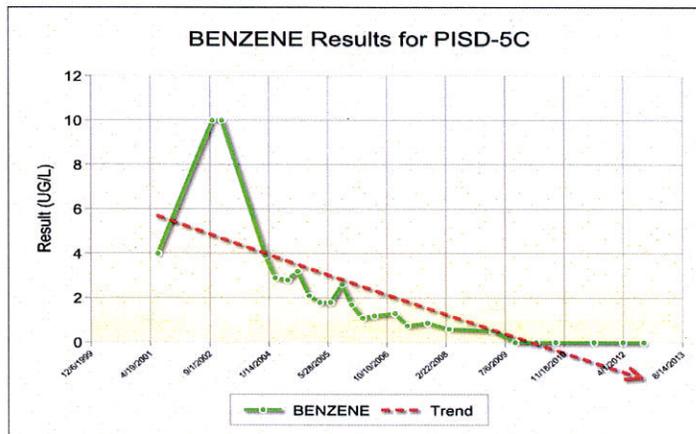
#### Source Well



#### Crossgradient Well



#### Downgradient Well



### Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/Groundwater tested for MTBE: Yes, see table above.
- Oxygen Concentrations in Soil Vapor: None reported.
- Plume Length: <250 ft.
- 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 water quality objectives 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 in files reviewed. 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 Policy Criterion 2b. 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 limiting vapor migration and no buildings are located above the former USTs.
- Direct Contact Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 3b. A site-specific risk assessment demonstrates constituents in soil will have no significant risk of adversely affecting human health because the Site is paved and accidental access to site soils is prevented.

Cable Car Wash  
904 3<sup>rd</sup> Street, Davis, CA  
Claim No: 11889

April 2013

