

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

**ORDER WQ 2014-0145 – UST**

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**In the Matter of Underground Storage Tank Case Closure**

**Pursuant to Health and Safety Code Section 25296.10 and the Low Threat  
Underground Storage Tank Case Closure Policy**

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**BY THE EXECUTIVE DIRECTOR<sup>1</sup>:**

By this order, the Executive Director directs closure of the underground storage tank (UST) case at the site listed below, pursuant to section 25296.10 of the Health and Safety Code<sup>2</sup>. The name of the Underground Storage Tank Cleanup Fund (Fund) claimant, the site name, the site address, the Fund claim number, the lead agency, and case number are as follows:

**Glover Family Trust  
Fayette Manufacturing Corporation  
7675 West 11<sup>th</sup> Street, Tracy  
Fund Claim No. 8590**

**San Joaquin County Environmental Health Department  
Agency Case Number 2233**

**I. STATUTORY AND PROCEDURAL BACKGROUND**

Upon review of a UST case, the State Water Resources Control Board (State Water Board) may close or require closure of a UST case where unauthorized release has occurred, if the State Water Board determines that corrective action at the site is in compliance with all of the requirements of subdivisions (a) and (b) of section 25296.10

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<sup>1</sup> State Water Board Resolution No. 2012-0061 delegates to the Executive Director the authority to close or require the closure of any UST case if the case meets the criteria found in the State Water Board's Low Threat Underground Storage Tank Case Closure Policy adopted by State Water Board Resolution No. 2012-0016.

<sup>2</sup> Unless otherwise noted, all references are to the Health and Safety Code.

The State Water Board, or in certain cases the State Water Board Executive Director, may close a case or require the closure of a UST case. Closure of a UST case is appropriate where the corrective action ensures the protection of human health, safety, and the environment and where the corrective action is consistent with: 1) Chapter 6.7 of Division 20 of the Health and Safety Code and implementing regulations; 2) Any applicable waste discharge requirements or other orders issued pursuant to Division 7 of the Water Code; 3) All applicable state policies for water quality control; and 4) All applicable water quality control plans.

State Water Board staff has completed a review of the UST case identified above, and recommends that this case be closed. The recommendation is based upon the facts and circumstances of this particular UST case. A UST Case Closure Review Summary Report has been prepared for the case identified above and the bases for determining compliance with the Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closures (Low-Threat Closure Policy or Policy) are explained in the Case Closure Review Summary Report.

#### **A. Low-Threat Closure Policy**

In State Water Board Resolution No. 2012-0016, the State Water Board adopted the Low Threat Closure Policy. The Policy became effective on August 17, 2012. The Policy establishes consistent statewide case closure criteria for certain low-threat petroleum UST sites. In the absence of unique attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents, cases that meet the general and media-specific criteria in the Low-Threat Closure Policy pose a low threat to human health, safety and the environment and are appropriate for closure under Health and Safety Code section 25296.10. The Policy provides that if a regulatory agency determines that a case meets the general and media-specific criteria of the Policy, then the regulatory agency shall notify responsible parties and other specified interested persons that the case is eligible for case closure. Unless the regulatory agency revises its determination based on comments received on the proposed case closure, the Policy provides that the agency shall issue a closure letter as specified in Health and Safety Code section 25296.10. The uniform closure letter may only be issued after the expiration of the 60-day comment period, proper destruction or maintenance of monitoring wells or borings, and removal of waste associated with investigation and remediation of the site.

Health and Safety Code section 25299.57, subdivision (l)(1) provides that claims for reimbursement of corrective action costs that are received by the Fund more than 365 days after the date of a uniform closure letter or a Letter of Commitment, whichever occurs later, shall not be reimbursed unless specified conditions are satisfied.

## II. FINDINGS

Based upon the UST Case Closure Review Summary Report prepared for the case attached hereto, the State Water Board finds that corrective action taken to address the unauthorized release of petroleum at the UST release site identified as:

**Claim No. 8590**

**Fayette Manufacturing Corporation**

ensures protection of human health, safety and the environment and is consistent with Chapter 6.7 of Division 20 of the Health and Safety Code and implementing regulations, the Low-Threat Closure Policy and other water quality control policies and applicable water quality control plans.

The unauthorized release from the UST consisted only of petroleum. This order directs closure for the petroleum UST case at the site.<sup>3</sup>

Pursuant to the Low-Threat Closure Policy, notification has been provided to all entities that are required to receive notice of the proposed case closure, a 60-day comment period has been provided to notified parties, and any comments received have been considered by the Board in determining that the case should be closed.

Pursuant to section 21080.5 of the Public Resources Code, environmental impacts associated with the adoption of this Order were analyzed in the substitute environmental document (SED) the State Water Board approved on May 1, 2012. The SED concludes that all environmental effects of adopting and implementing the Low threat Closure Policy are less than significant, and environmental impacts as a result of complying with the Policy are no different from the impacts that are reasonably foreseen as a result of the Policy itself. A Notice of Decision was filed August 17, 2012. No new environmental impacts or any additional reasonably foreseeable impacts beyond those that were not addressed in the SED will result from adopting this Order.

The UST case identified above may be the subject of orders issued by the Regional Water Quality Control Board (Regional Water Board) pursuant to Division 7 of the Water Code. Any orders that have been issued by the Regional Water Board pursuant to Division 7 of the Water Code, or directives issued by a Local Oversight Program agency for this case should be rescinded to the extent they are inconsistent with this Order.

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<sup>3</sup> This order addresses only the petroleum UST case for the site. This order does not affect an existing order or directive requiring corrective action for non-petroleum contamination, if non-petroleum contamination is present.

### III. ORDER

**IT IS THEREFORE ORDERED that:**

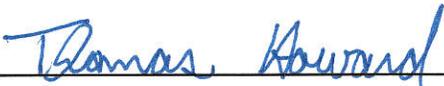
- A. The UST case identified in Section II of this Order, meeting the general and media-specific criteria established in the Low-Threat Closure Policy, be closed in accordance with the following conditions and after the following actions are complete. Prior to the issuance of a uniform closure letter, the Fund claimant is ordered to:
1. Properly destroy monitoring wells and borings unless the owner of real property on which the well or boring is located certifies that the wells or borings will be maintained in accordance with local or state requirements;
  2. Properly remove from the site and manage all waste piles, drums, debris, and other investigation and remediation derived materials in accordance with local or state requirements; and
  3. Within six months of the date of this Order, submit documentation to the regulatory agency overseeing the UST case identified on page 1 of this Order that the tasks in subparagraphs (1) and (2) have been completed.
- B. The tasks in subparagraphs (1) and (2) of paragraph (A) are ordered pursuant to Health and Safety Code section 25296.10 and failure to comply with these requirements may result in the imposition of civil penalties pursuant to Health and Safety Code section 25299, subdivision (d)(1). Penalties may be imposed administratively by the State Water Board or Regional Water Board.
- C. Within 30 days of receipt of proper documentation from the Fund claimant that requirements in subparagraphs (1) and (2) of paragraph (A) are complete, the regulatory agency that is responsible for oversight of the UST case identified in Section II of this Order shall notify the State Water Board that the tasks have been satisfactorily completed.

D. Within 30 days of notification from the regulatory agency that the tasks are complete pursuant to paragraph (C), the Deputy Director of the Division of Financial Assistance

shall issue a closure letter consistent with Health and Safety Code section 25296.10, subdivision (g) and upload the closure letter and UST Case Closure Review Summary Report to GeoTracker.

E. Pursuant to section 25299.57, subdivision (l) (1), and except in specified circumstances, all claims for reimbursement of corrective action costs must be received by the Fund within 365 days of issuance of the uniform closure letter in order for the costs to be considered.

F. Any Regional Water Board or Local Oversight Program Agency directive or order that directs corrective action or other action inconsistent with case closure for the UST case identified in Section II is rescinded, but only to the extent the Regional Water Board order or Local Oversight Program Agency directive is inconsistent with this Order.

  
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Executive Director

  
\_\_\_\_\_  
Date

**State Water Resources Control Board**

**UST CASE CLOSURE REVIEW SUMMARY REPORT**

**Agency Information**

Agency Name: San Joaquin County Environmental Health Department (County)	Address: 1868 East Hazelton Avenue, Stockton, CA 95205
Agency Caseworker: Vicki McCartney	Case No.: 2233

**Case Information**

USTCF Claim No.: 8590	Global ID: T0607700095
Site Name: Fayette Manufacturing Corp.	Site Address: 7675 West 11 <sup>th</sup> Street, Tracy, CA 95376
Responsible Party: Glover Family Trust Attn: Yvonne Miller	Address: PO Box 336, Tracy, CA 95378
USTCF Expenditures to Date: \$336,677	Number of Years Case Open: 24

**URL:** [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0607700095](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607700095)

**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 trucking facility. An unauthorized release was reported in April 1988. Two 500-gallon gasoline USTs had been removed in 1986. Dual phase extraction pilot test, conducted in August 2010, removed 4,548 gallons of contaminated groundwater. Since 1995, nine groundwater monitoring wells have been installed and monitored. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents except benzene.

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 250 feet of the defined plume boundary. An onsite industrial supply well is located 210 feet west (crossgradient) 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 at the Site by an offsite private water supply well. 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. 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. Process water for Site manufacturing use is provided by an onsite well 210 feet crossgradient from the defined plume boundary. Drinking water is provided by an offsite water supply well located greater than 250 feet crossgradient/downgradient of the defined plume boundary. Future wells necessary for water production would be regulated by the San Joaquin County Environmental Health Department, which can insure that necessary precautions are taken prior to new well installations.
- **Groundwater Specific Criteria:** The case meets Policy Criterion 1 by Class 5. The nearest water supply well (industrial supply well) is approximately 210 feet west (crossgradient) from the defined plume boundary. Other supply wells are greater than 250 feet from the defined plume boundary. There is very little petroleum mass remaining at the Site. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product. There have been at least 24 years for petroleum constituents to migrate to these wells, yet according to the DPH Water Quality Data on GeoTracker, there has been no petroleum impact to the supply wells, nor is there likely to be any impact in the future. The regulatory agency determines, based on an analysis of site specific conditions, which under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.
- **Vapor Intrusion to Indoor Air:** This case meets Policy Criterion 2b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to petroleum constituents as a result of vapor intrusion found there to be no significant risk of petroleum vapors adversely affecting human health. The Site is paved and there are no buildings within 50 feet of the former USTs where vapor could concentrate. The Site is a pallet manufacturing yard. The structure onsite is a raised warehouse that has multiple rollup doors and propane powered forklifts operate in and outside the structure during working hours. The ventilation system required to mitigate the potential buildup of carbon monoxide would also capture any petroleum vapors that could potentially intrude into the building.
- **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 use, 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, by March 18, 2013 letter, requires that indoor vapor migration is assessed before they will consider a closure review.

RESPONSE: Although one soil vapor sample collected near the former USTs contained benzene at a concentration of 5,100 µg/M<sup>3</sup> collected at a depth of 5 feet, the area is paved with asphalt and there are no buildings within 50 feet of the former USTs. The structure onsite is a raised warehouse that has multiple rollup doors and propane powered forklifts operate in and outside the structure during working hours. The ventilation system required to mitigate the potential buildup of carbon monoxide would also capture any petroleum vapors that could potentially intrude into the building.

**Determination**

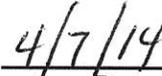
Based on the review performed in accordance with Health & Safety Code Section 25296.10 subdivision (a), the Fund Manager has determined that closure of the case is appropriate.

**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. San Joaquin 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: Kirk Larson, 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.<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>General Criteria</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 type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input checked="" 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 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

- The Site is an industrial site and is bounded by businesses to the west and east, businesses across West Eleventh Street to the south, and a train switch yard to the north.
- Nine monitoring wells have been installed since 1995 and monitored regularly.
- Site maps showing the location of the former USTs, monitoring wells, groundwater level and benzene contours are provided at the end of this closure summary (Cardno ATC, 2013).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: April 1988.
- Status of Release: USTs removed.

### Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1,2	500	Gasoline	Removed	October 1986

### Receptors

- GW Basin: San Joaquin Valley – Tracy.
- Beneficial Groundwater Uses: Central Valley Regional Water Quality Control Board (Regional Water Board) Basin Plan lists Agricultural, Municipal, Domestic, and Industrial Process Water Supply.
- Land Use Designation: Aerial photo shows site land use is commercial in the vicinity of the Site.
- Public Water System: Morehead Park Well #2 (North Well, small water system serving a population of 300).
- Distance to Nearest Supply Well: According to data available in GeoTracker, there is one California Department of Public Health regulated water supply well within 250 feet of the site; it is 210 feet west (crossgradient) of the defined plume boundary. There are no other supply wells within 250 feet of the defined plume boundary.
- Distance to Nearest Surface Water: There is no identified surface water 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: 26 feet below ground surface (bgs).
- Minimum Groundwater Depth: 5.53 feet bgs at monitoring well MW9.
- Maximum Groundwater Depth: 11.24 feet bgs at monitoring well MW8.
- Current Average Depth to Groundwater: Approximately 8 feet bgs.
- Saturated Zones(s) Studied: Approximately 5 to 26 bgs.
- Groundwater Flow Direction: North northwest at 0.002 feet per foot (December 2013).

**Monitoring Well Information**

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (01/04/13)
MW1	July 1995	5-22	6.58
MW2	July 1995	5-25	8.03
MW3	July 1995	5-25	7.65
MW4	March 1999	6-26	Not accessible
MW5	March 1999	6-26	7.56
MW6	March 1999	6-26	7.50
MW7	January 2005	10-20	7.27
MW8	January 2005	10-20	7.63
MW9	October 2009	5-25	5.95

**Remediation Summary**

- Free Product: No free product was documented in GeoTracker.
- Soil Excavation: Unknown.
- In-Situ Soil/Groundwater Remediation: Dual phase extraction pilot test was conducted in August 2010, which removed 4,548 gallons of contaminated groundwater. Ozone sparging pilot test, conducted August 2010.

**Most Recent Concentrations of Petroleum Constituents in Soil**

Constituent	Maximum 0-5 feet bgs [mg/kg, (date), sample name]	Maximum 5-10 feet bgs [mg/kg, (date), sample name]
Benzene	0.2, (09/13/07), GP5-4	4.4, (09/13/07), GP5-10
Ethylbenzene	0.2, (09/13/07), GP5-4	16, (09/13/07), GP5-10
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)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW1	12/14/12	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 <sup>b</sup>
MW2	01/04/13	<50	16	<0.5	<0.5	<0.5	3.2	<10 <sup>b</sup>
MW3	01/04/13	<50	4.7	<0.5	<0.5	<0.5	<0.5	<10 <sup>b</sup>
MW4	12/29/11	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<10 <sup>b</sup>
MW5	12/14/12	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 <sup>b</sup>
MW6	05/19/11	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 <sup>b</sup>
MW7	12/14/12	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 <sup>b</sup>
MW8	12/14/12	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 <sup>b</sup>
MW9	05/19/11	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 <sup>b</sup>
<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

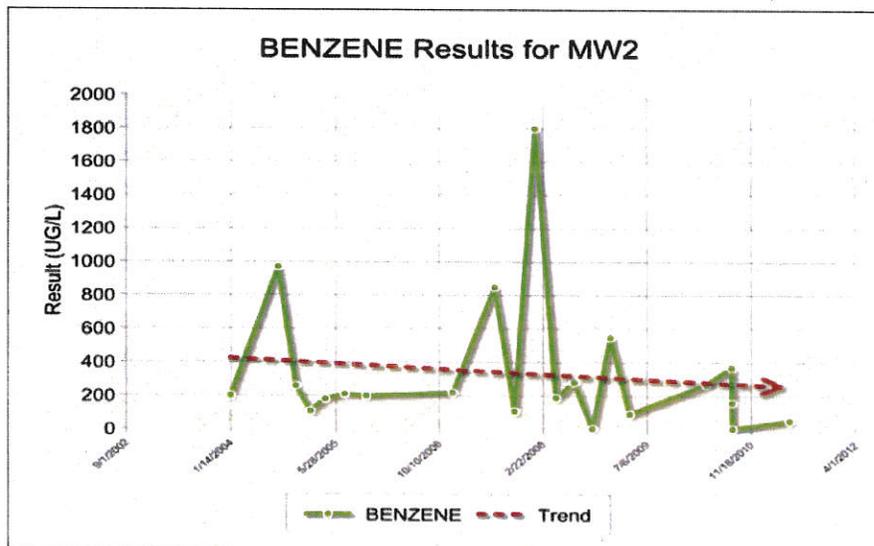
<sup>a</sup>: California Department of Public Health, Response Level

<sup>b</sup>: Sampled and analyzed in April 2009

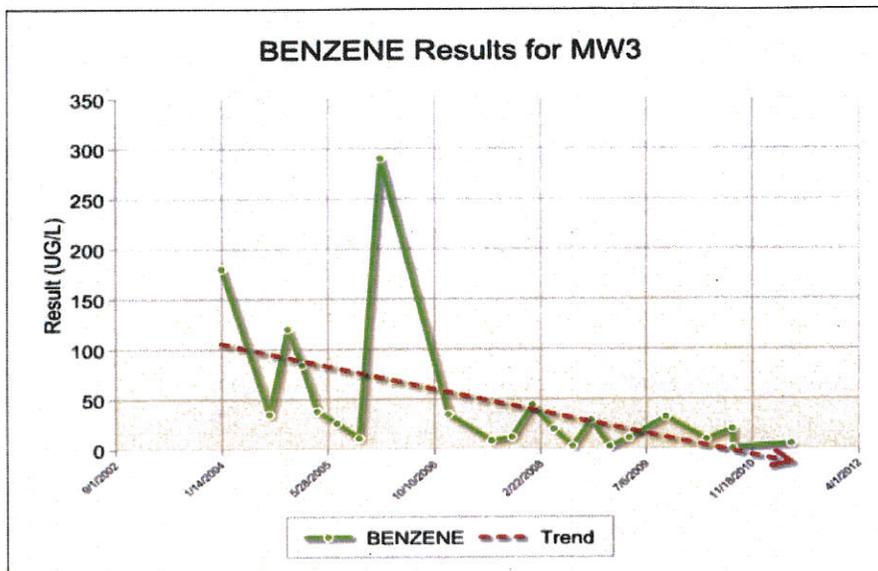
**Groundwater Trends**

- There are 18 years of groundwater monitoring data for this case. Benzene trends are shown below: Source area (MW2) and Downgradient (MW3).

**Source Area Well**



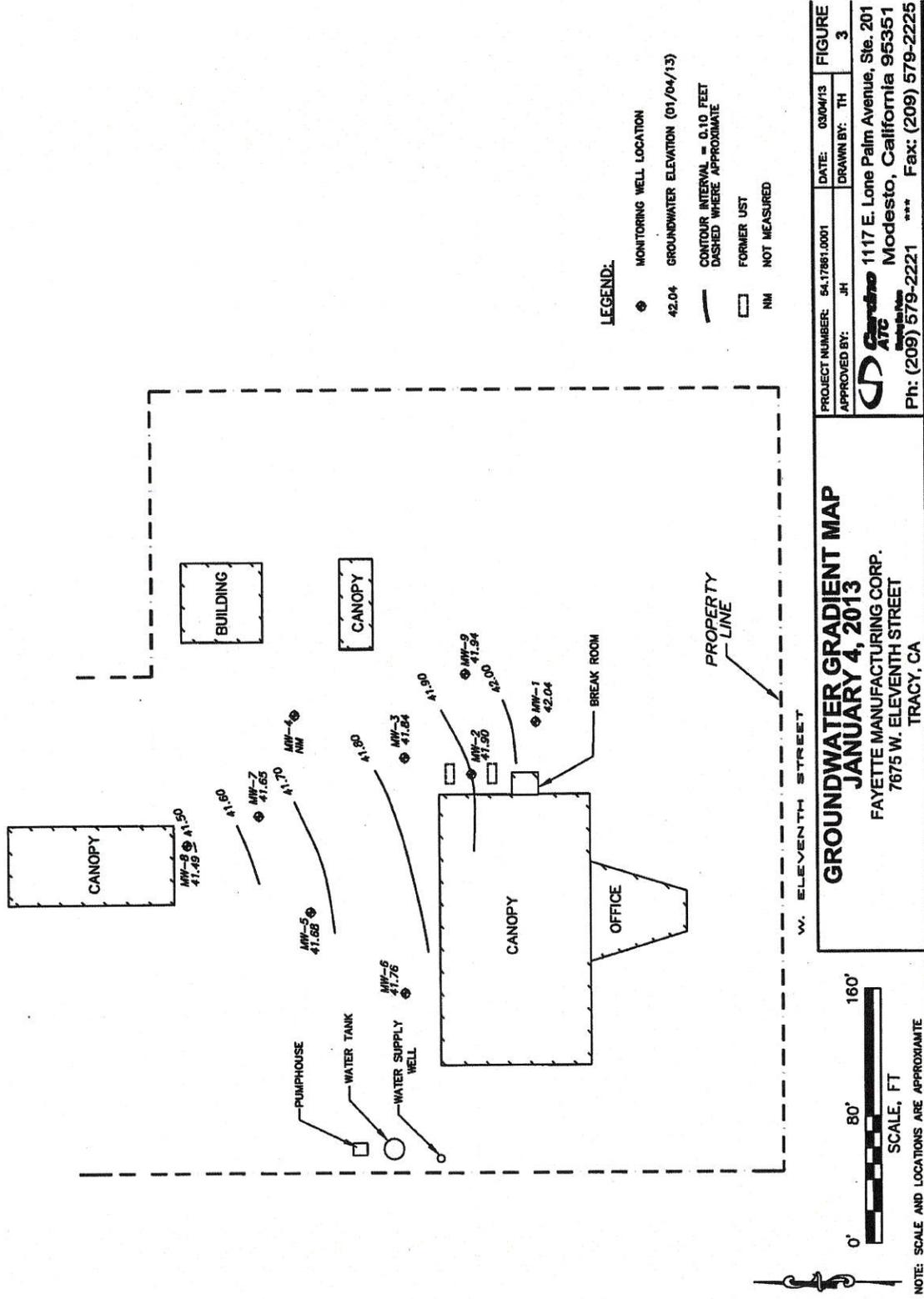
### Downgradient Well

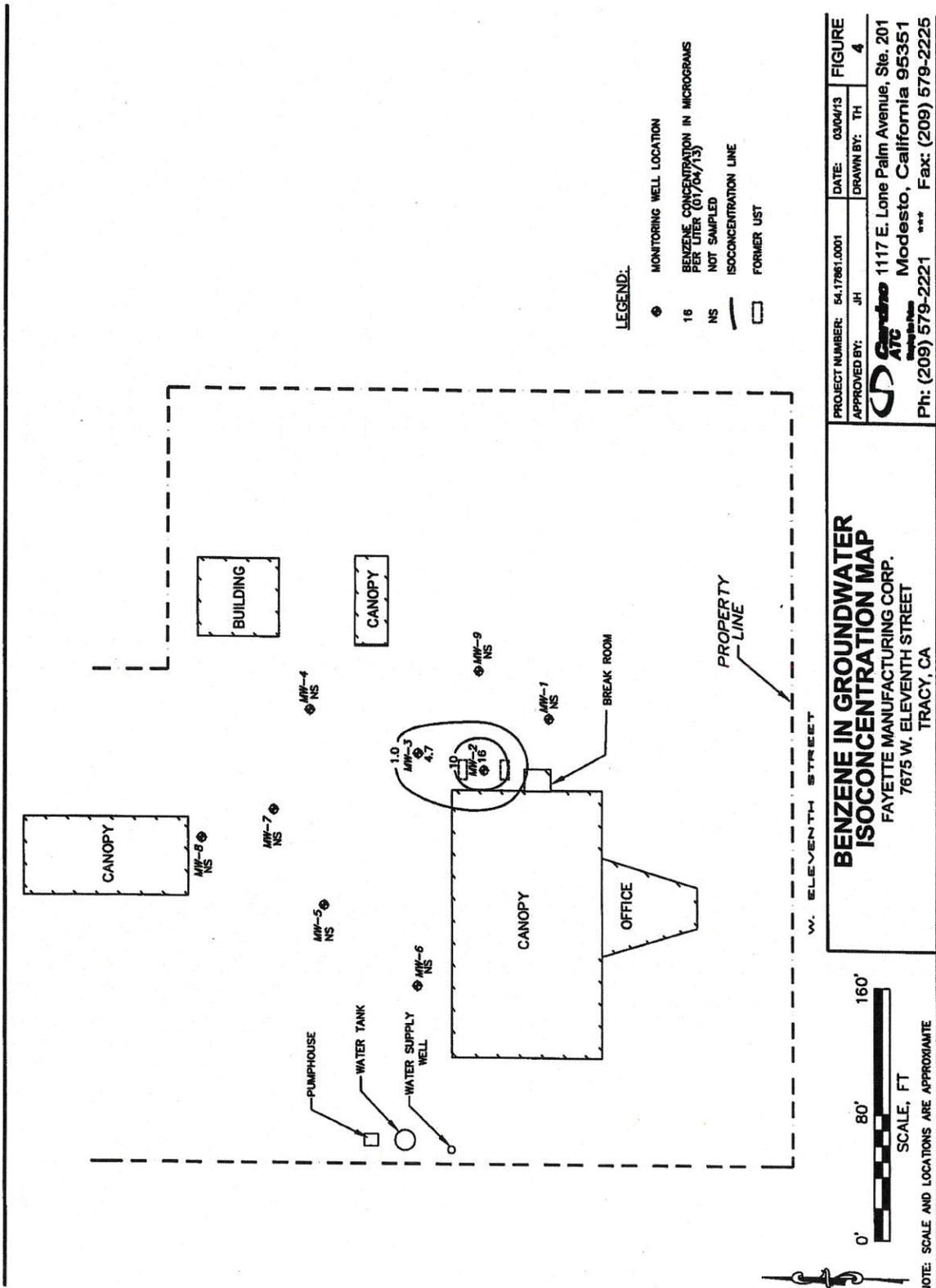


#### Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: Prior to remediation, ATC Associates estimated that approximately 54 pounds of TPHg was calculated to remain in site soils.
- Soil/Groundwater tested for MTBE: Yes.
- Oxygen Concentrations in Soil Vapor: None reported.
- Plume Length: <100 feet.
- Plume Stable or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Specific Criteria: The case meets Policy Criterion 1 by Class 5. The nearest water supply well (industrial supply well) is approximately 210 feet west (crossgradient) from the defined plume boundary. Other supply wells are greater than 250 feet from the defined plume boundary. There is very little petroleum mass remaining at the Site. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product. There have been at least 24 years for petroleum constituents to migrate to these wells, yet according to the DPH Water Quality Data on GeoTracker, there has been no petroleum impact to the supply wells, nor is there likely to be any impact in the future. The regulatory agency determines, based on an analysis of site specific conditions, which under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.
- Vapor Intrusion to Indoor Air: This case meets Policy Criterion 2b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to petroleum constituents as a result of vapor intrusion found there to be no significant risk of petroleum vapors adversely affecting human health. The Site is paved and there are no buildings within 50 feet of the former USTs where vapor could concentrate. The Site is a pallet manufacturing yard. The structure onsite is a raised warehouse that has multiple rollup doors and propane powered forklifts operate in and outside the structure during working hours. The ventilation system required to mitigate the potential buildup of carbon monoxide would also capture any petroleum vapors that could potentially intrude into the building.

- 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 use, 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.





PROJECT NUMBER: 54-17861.0001 DATE: 03/04/13 FIGURE 4  
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