

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 th 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

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/M³ 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.

Lisa Babcock

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

4/7/14

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.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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input checked="" 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 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. 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 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>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

- 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 ^b
MW2	01/04/13	<50	16	<0.5	<0.5	<0.5	3.2	<10 ^b
MW3	01/04/13	<50	4.7	<0.5	<0.5	<0.5	<0.5	<10 ^b
MW4	12/29/11	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<10 ^b
MW5	12/14/12	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 ^b
MW6	05/19/11	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 ^b
MW7	12/14/12	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 ^b
MW8	12/14/12	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 ^b
MW9	05/19/11	<50	<0.5	<0.5	<0.5	<1	<0.5	<10 ^b
WQOs	-	5	0.15	42	29	17	5	1,200 ^a

NA: Not Analyzed, Not Applicable or Data Not Available

µg/L: Micrograms per liter, parts per billion

<: Not detected at or above stated reporting limit

TPHg: Total petroleum hydrocarbons as gasoline

MTBE: Methyl tert-butyl ether

TBA: Tert-butyl alcohol

WQOs: Water Quality Objectives, Regional Water Board Basin Plan

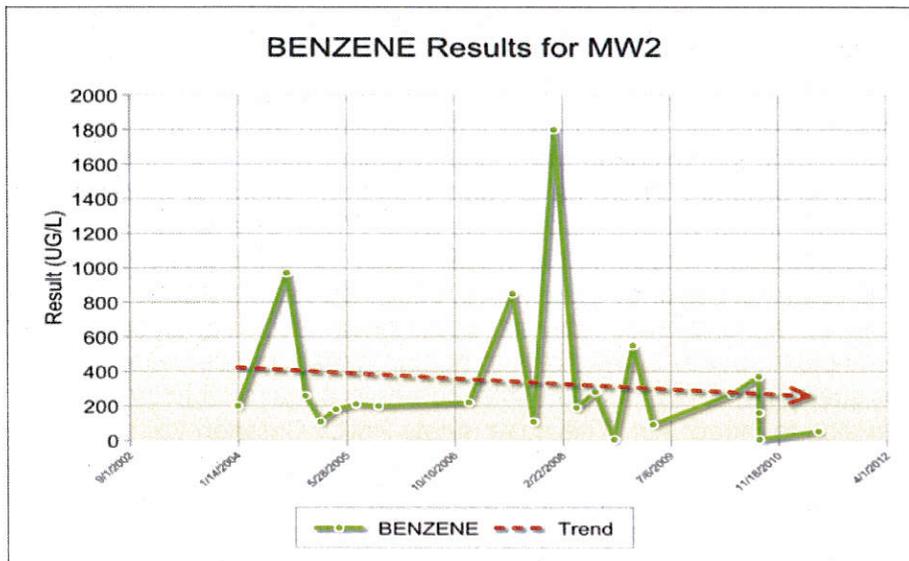
^a: California Department of Public Health, Response Level

^b: Sampled and analyzed in April 2009

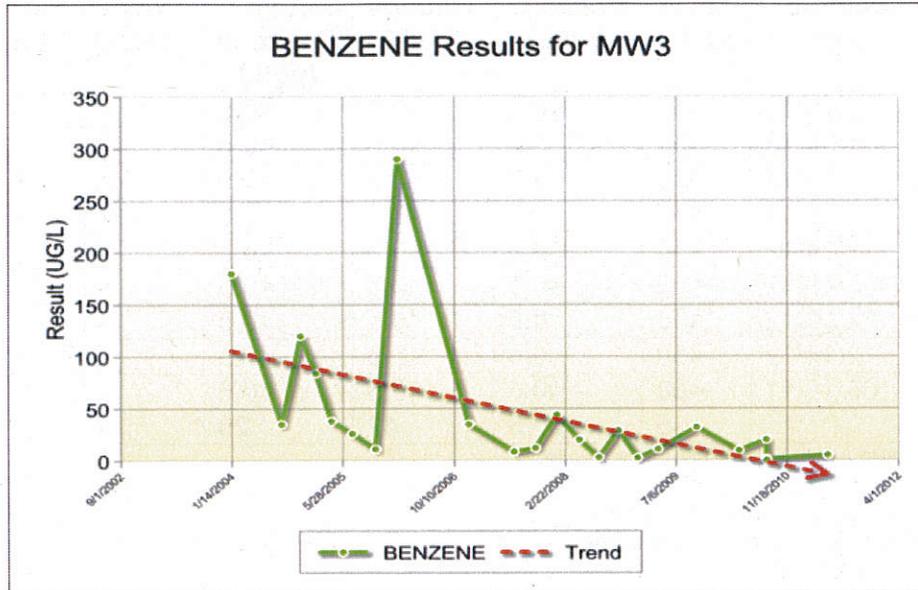
Groundwater Trends

- 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



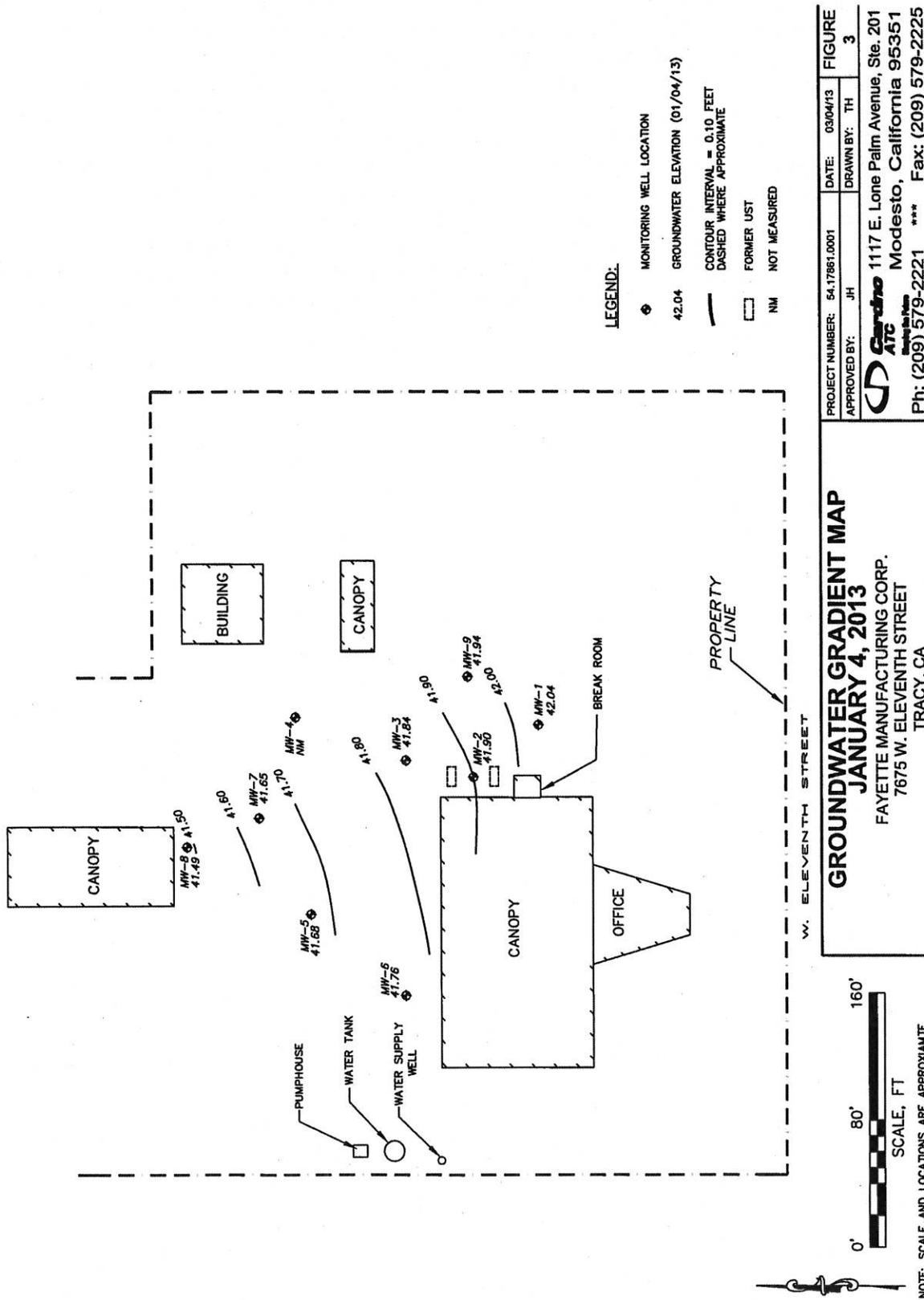
Downgradient Well

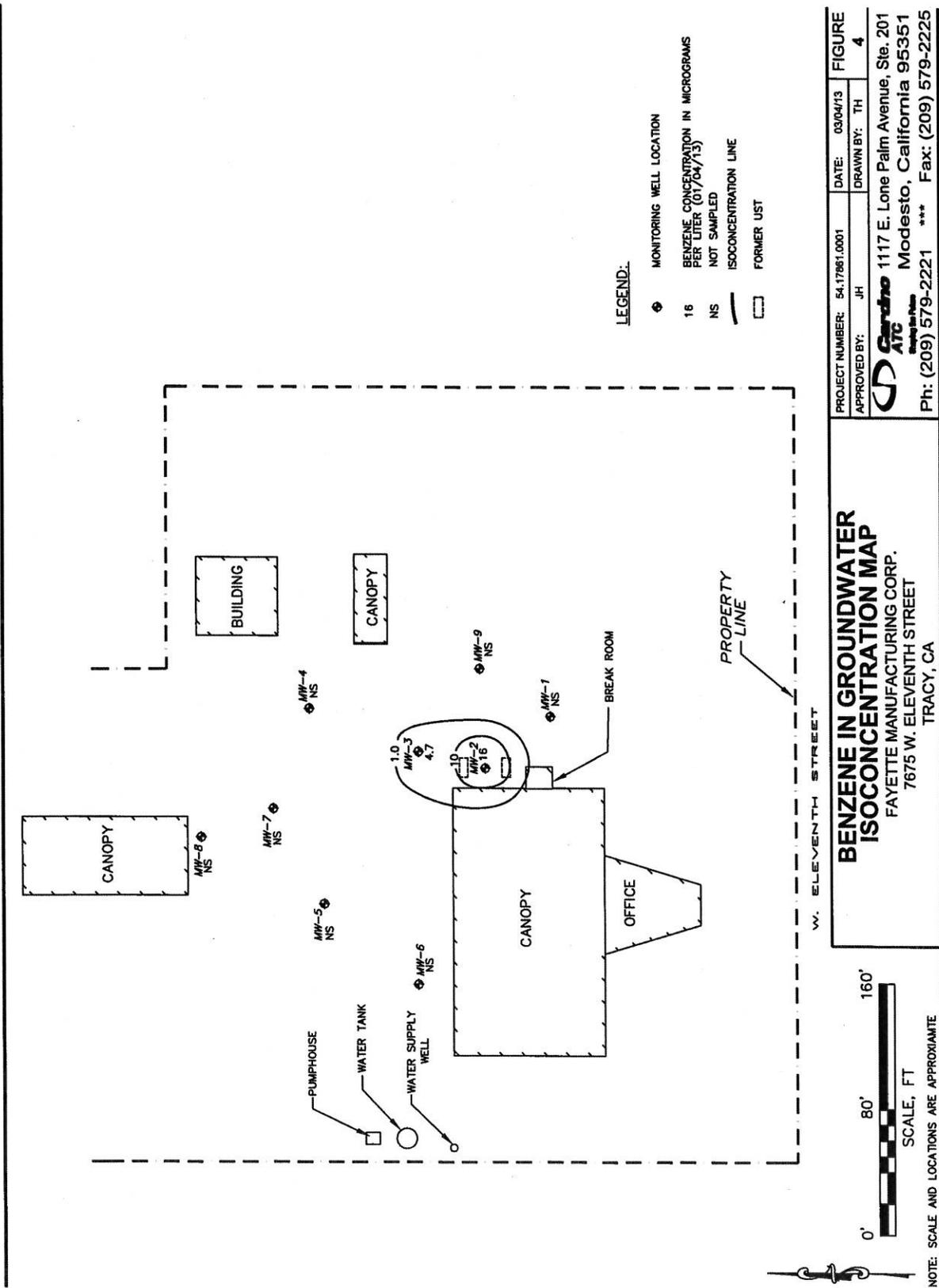


Evaluation of Current Risk

- 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.

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**BENZENE IN GROUNDWATER
 ISOCONCENTRATION MAP**
 FAYETTE MANUFACTURING CORP.
 7675 W. ELEVENTH STREET
 TRACY, CA

PROJECT NUMBER: 54-17861.0001 DATE: 03/04/13 FIGURE 4
 APPROVED BY: JH DRAWN BY: TH

GTC 1117 E. Lone Palm Avenue, Ste. 201
 Modesto, California 95351
 Ph: (209) 579-2221 *** Fax: (209) 579-2225

