State Water Resources Control Board

1UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Orange County Environmental Health Department (County)	Address: 1241 East Dyer Road, Suite 120 Santa Ana, CA 92705
Agency Caseworker: Julie Wozencraft	Case No.: 90UT222

Case Information

USTCF Claim No.: 10401	Global ID: T0605901300
Site Name: Fujita Farms	Site Address: 14452 Chestnut Street, Westminster, CA 92683
Responsible Party (RP1): Thao Le	Address: 8051 19th Street, Westminster, CA 92683
(RP2): Tad Fujita	Address: 14452 Chestnut Street Westminster, CA 92683
USTCF Expenditures to Date: $99,851	Number of Years Case Open: 22

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605901300

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 release of petroleum hydrocarbons was identified during the decommissioning and closure of one 500-gallon UST in October 1990. Since then the Site has undergone various site assessments between 1990 and 2005. The extent of the contamination was limited to the vicinity of the former UST location. Remedial excavation of hydrocarbon-affected soils and their replacement with engineered clean backfill was undertaken in 2008. Groundwater was evacuated from the excavation to facilitate soil removal. Minimal hydrocarbon contamination was detected in the post-removal confirmation samples from the sidewalls and bottom of the excavation. According to groundwater monitoring data, water quality objectives have been achieved or nearly achieved for all constituents. The only petroleum constituent remaining in the groundwater is total petroleum hydrocarbons as gasoline (TPHg) identified in source area monitoring well MW-3 at a concentration of 490 µg/L. Region 8 has no numeric water quality objective for TPHg.

The petroleum hydrocarbon release was limited to the shallow soil and groundwater. There are no California Department of Public Health regulated public supply wells or surface water bodies within 250 feet of the defined plume boundary. No domestic supply wells were identified in the files reviewed. Drinking water is provided to water users in the vicinity of the Site by the City of Westminster. 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 will not likely change the conceptual site model. Any remaining petroleum hydrocarbon constituents do not pose 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: The case meets Policy Criterion 1 by Class 1. The contaminant plume that exceeds water quality objectives is less than 100 feet in length (it is less than 30 feet at this site). There is no free product. The nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary.
- Vapor Intrusion to Indoor Air: This case meets Policy Criterion 2b. A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil and groundwater will have no significant risk of adversely affecting human health.
- 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 use and the concentration limits for Utility Worker are satisfied. 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.

Objection to Closure and Response

The County has not responded to the Responsible Party's 2009 request for closure.
RESPONSE: Readily available information about current conditions at the Site shows that the case meets all the Policy criteria.

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 significant risks 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. Orange County Environmental Health has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock

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

2/25/13

Date

Prepared by Ramesh Sundareswaran

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]

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 case 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.	☒ Yes ☐ No
Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this site?	☐ Yes ☒ No
If so, was the corrective action performed consistent with any order?	☐ Yes ☐ No ☒ NA
General Criteria General criteria that must be satisfied by all candidate sites:	
Is the unauthorized release located within the service area of a public water system?	☒ Yes ☐ No
Does the unauthorized release consist only of petroleum?	☒ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	☒ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☐ Yes ☐ No ☒ NA
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	☒ Yes ☐ No

[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

Has secondary source been removed to the extent practicable?	☒ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?	☒ Yes ☐ No
Nuisance as defined by Water Code section 13050 does not exist at the site?	☒ Yes ☐ No
Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ☒ No
Media-Specific Criteria Candidate sites must satisfy all three of these media-specific criteria: **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: **Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?** **Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?** If YES, check applicable class: ☒ **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5** **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?**	☒ Yes ☐ No ☐ NA ☒ Yes ☐ No ☐ NA ☐ Yes ☐ No ☒ NA
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. **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. **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: ☐ **1** ☐ **2** ☐ **3** ☐ **4**	☐ Yes ☒ No ☐Yes ☐ No ☒ NA

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?	☒Yes ☐ No ☐ NA
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?	☐Yes ☐ No ☒ NA
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).	
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)?	☒ Yes ☐ No ☐ NA
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?	☐ Yes ☐ No ☒ NA
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?	☐Yes ☐ No ☒ NA

ATTACHMENT 2: SUMMARY OF BASIC SITE INFORMATION (Conceptual Site Model)

Site Location/ History

- The Site is located at the northeast corner of Hazard Avenue and Chestnut Street in the City of Westminster. An industrial building, approximately 15,350 square feet in area, occupies the Site's eastern half. A loading dock adjoins this building's western side. Covered parking and work areas are located within the Site's southwestern portion. The areas adjoining the onsite building, loading dock, and covered areas are asphalt-paved and in use as storage and parking areas. A residential dwelling is located approximately 100 feet south (downgradient) of the Site. Willmore Elementary School is located west of the Site across Chestnut Street (crossgradient). The Site is currently owned by the City of Westminster and was last proposed to be used as an indoor law enforcement shooting range.
- A Site map illustrating current site features and monitoring well locations is provided at the end of this closure summary (A&M Environmental Contracting, 2011).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: October 5, 1990.
- Status of Release: UST removed.
- Free product: None reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1	500	Gasoline	Removed	1990

Receptors

- GW Basin: Coastal Plain of Orange County.
- Beneficial Uses: Municipal and Domestic supply.
- Land Use Designation: Commercial.
- Public Water System: City of Westminster.
- Distance to Nearest Supply Well: According to data available in GeoTracker, the nearest California Department of Public Health regulated public water supply well is greater than 250 feet from the defined plume boundary. No other water supply wells were identified within 250 feet of the defined plume boundary in the files reviewed.
- Distance to Nearest Surface Water: No surface water was identified within 250 feet of the defined plume boundary.

Geology/ Hydrogeology

- Stratigraphy: The Site is underlain by silt, clay and silty fine sand.
- Maximum Sample Depth: 15 feet below ground surface (bgs).
- Minimum Groundwater Depth: 6.3 feet bgs at monitoring well MW-1.
- Maximum Groundwater Depth: 8.8 feet bgs at monitoring well MW-3.
- Current Average Depth to Groundwater: Approximately 7 feet bgs.
- Saturated Zones(s) Studied: Approximately 6-23 feet bgs.
- Appropriate Screen Interval: Well screens submerged.
- Groundwater Flow Direction: South-southeast.

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (Feb 2011)
MW-1	1993	8-23	6.57
MW-2	1993	8-23	6.66
MW-3	1993	8-23	6.87

Remediation Summary

- Free Product: None reported in GeoTracker.
- Soil Excavation: At least 100 tons of impacted soils have been excavated and managed offsite. Excavation limits in the source area were approximately 17 feet by 22 feet with depths of 12 feet on the western side and 15 feet on the eastern side. Post-excavation confirmatory sampling indicated 170 parts per million (ppm) of TPHg, 0.036 ppm of benzene, 0.086 ppm of ethyl benzene, 0.002 ppm of toluene, 0.016 ppm of xylenes and non-detectable levels of methyl tertiary-butyl ether (MTBE) and tertiary-butyl alcohol (TBA) remaining at 12 feet bgs in the excavation.
- In-Situ Soil Remediation: None reported.
- Groundwater Remediation: Dewatering of up to 6,700 gallons of groundwater for excavation of impacted soils.

Most Recent Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 feet bgs [mg/kg (date)]	Maximum 5-10 feet bgs [mg/kg (date)]
Benzene	Clean fill (7/31/2008)	Clean fill (7/31/2008)
Ethylbenzene	Clean fill (7/31/2008)	Clean fill (7/31/2008)
Naphthalene	Clean fill (7/31/2008)	Clean fill (7/31/2008)
PAHs	Not applicable	Not applicable

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	02/21/11	<50	**<2**	<2	<2	<4	<5	<50
MW2	02/21/11	<50	**<2**	<2	<2	<4	<5	<50
MW3	02/21/11	490	**<2**	<2	70	<4	<5	<50
WQOs	**-**	**NA[a]**	**1**	**150**	**300**	**1,750**	**5**	**1,200[b]**

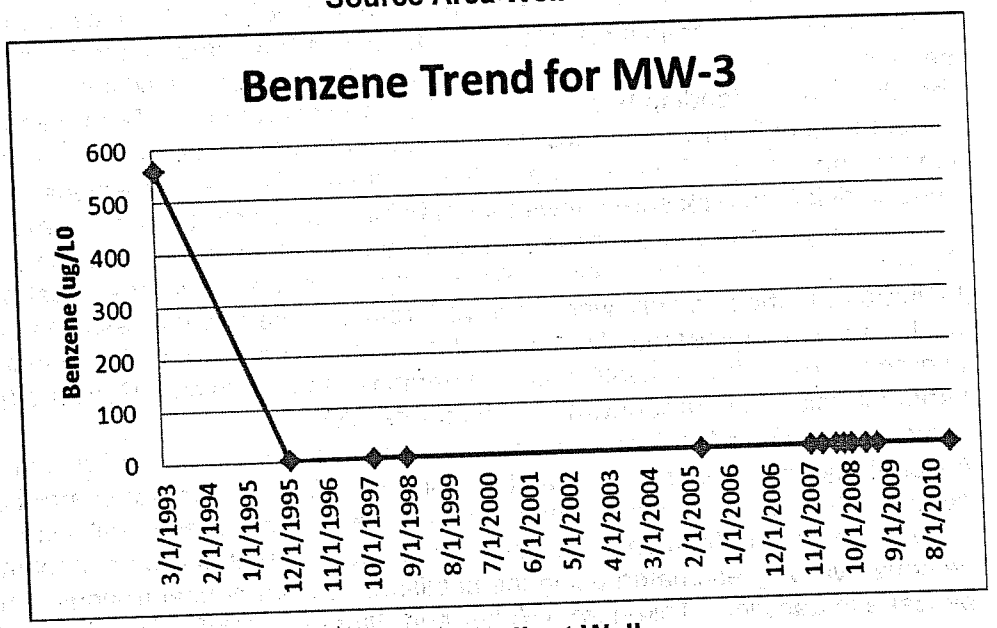
NA: Not Analyzed, Not Applicable or Data Not Available
TPHg : Total Petroleum Hydrocarbons measured as gasoline
MTBE: Methyl tertiary-butyl ether TBA: Tertiary-butyl alcohol
µg/L: micrograms per liter, parts per billion
<: Not detected at or above stated reporting limit
WQOs: Water Quality Objectives, Region 8 Basin Plan
[a]: Region 8 Basin Plan does not have a numeric water quality objective for TPHg
[b]: CDPH Response Level

Fujita Farms
14452 Chestnut Street, Westminster,
Claim No. 10401

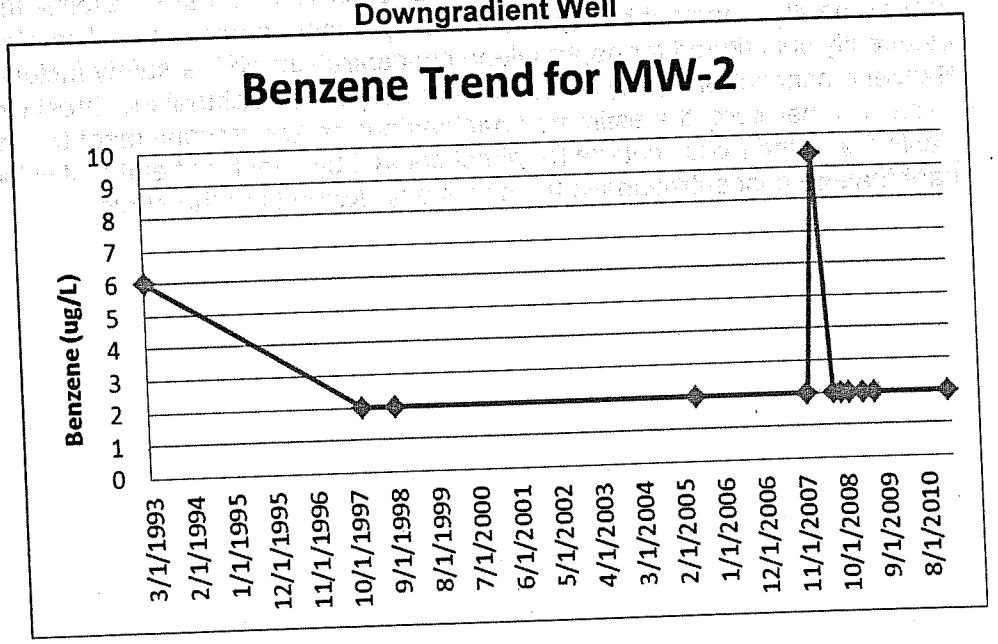
Groundwater Trends:

- There are 17 years of irregular groundwater monitoring data for this case. Benzene trends are shown below: Source Area (MW-3) and Downgradient (MW-2).

Source Area Well



Downgradient Well

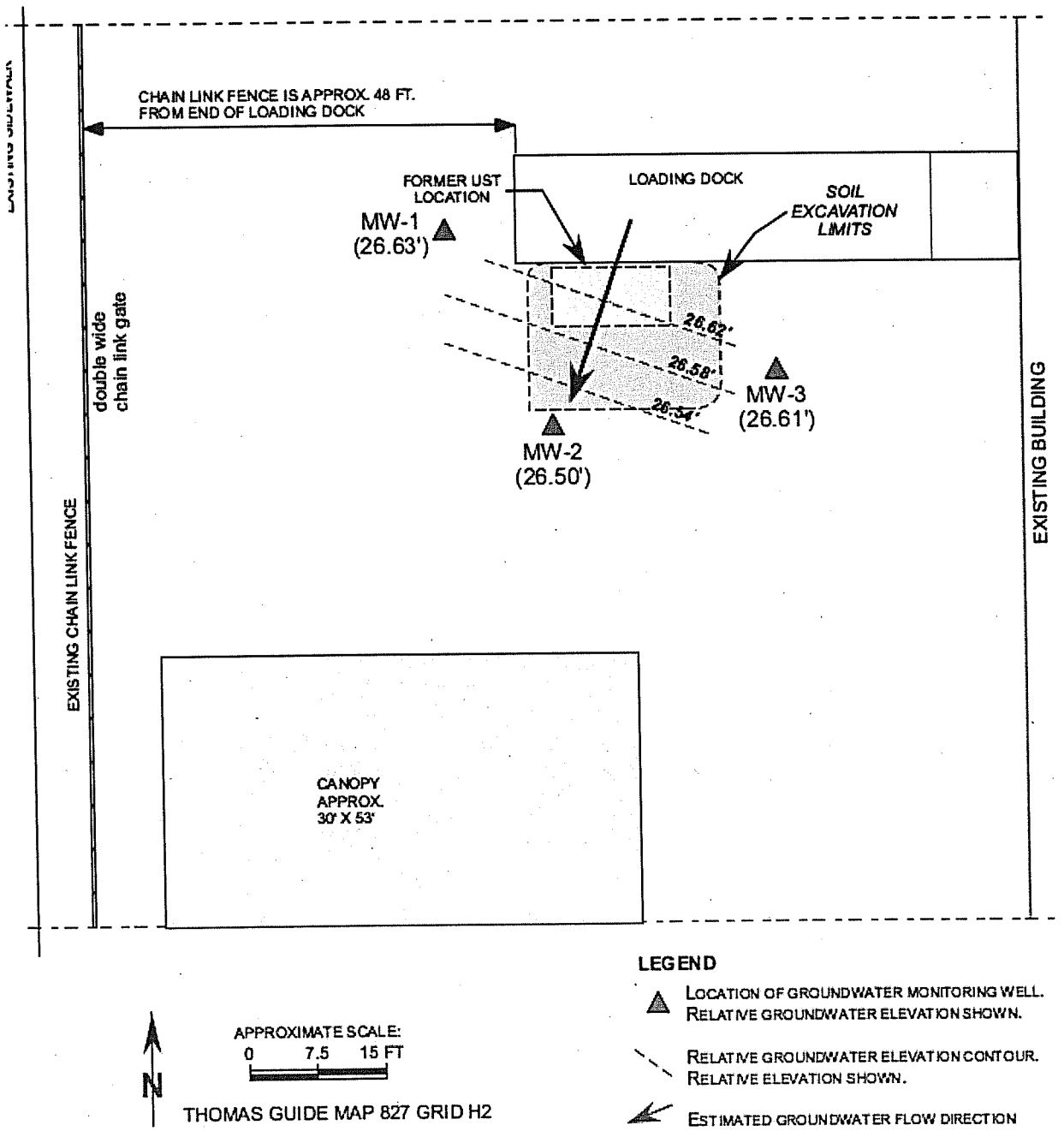


Evaluation of Current Risks

- Estimate of Petroleum Hydrocarbons Mass in Soil: No data available.
- Soil/Groundwater Tested for MTBE: Yes, see table above.
- Oxygen Concentrations in Soil Vapor: None reported.
- Plume length: <100 feet.

- Plume stable or degrading: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Risk: 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. The nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary. The plume has been defined and is clearly decreasing in aerial extent. Contaminant levels within the plume have decreased over time and the sentinel well (MW2) concentrations continue to remain below WQOs. This has resulted in the plume not extending beyond 30 feet from the source well. The nearest California Department of Public Health well is over 250 feet from the defined plume boundary.
- Indoor Vapor Risk: This case meets Policy Criterion 2b. A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil and groundwater will have no significant risk of adversely affecting human health. According to the Corrective Action Report, approximately 104 tons of petroleum hydrocarbon-affected soils were removed from the Site and the resulting excavation backfilled with engineered clean soils and crushed rock down to 12-15 feet bgs. Remaining hydrocarbons in the excavation were determined to be minimal. Benzene (primary driver for vapor intrusion from groundwater) is below its WQO.
- 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 use and the concentration limits for Utility Worker are satisfied. 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.

FORMER FUJITA FARMS
14452 CHESTNUT STREET
WESTMINSTER, CALIFORNIA 92683



A & M ENVIRONMENTAL CONTRACTING REMEDIATION AND CONSTRUCTION SERVICES 22821 BELQUEST DRIVE LAKE FOREST, CA 92630 PHN: 949-951-6236, FAX 949-837-5579	**FIGURE 2** **SITE PLAN/GROUNDWATER GRADIENT**	02/21/11