**ORDER**

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

**ORDER WQ 2014-0072 – UST**

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

**Pursuant to Health and Safety Code Section 25299.39.2 and the Low Threat Underground Storage Tank Case Closure Policy**

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**BY THE EXECUTIVE DIRECTOR**[1]:

Pursuant to Health and Safety Code section 25299.39.2, the Manager of the Underground Storage Tank Cleanup Fund (Fund) recommends closure of the underground storage tank (UST) case at the site listed below.[2] The name of the Fund claimant, the Fund claim number, the site name and the applicable site address are as follows:

**General Window Corporation**
**Claim No. 3205**
**International Window Corporation**
**30526 San Antonio Street, Hayward**

**Alameda County Water District**

## I. STATUTORY AND PROCEDURAL BACKGROUND

Section 25299.39.2 directs the Fund manager to review the case history of claims that have been active for five years or more (five-year review), unless there is an objection from the UST owner or operator. This section further authorizes the Fund Manager to make recommendations to the State Water Resources Control Board (State Water Board) for closure of a five-year-review case if the UST owner or operator approves. In response to a recommendation by the Fund Manager, 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:

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[1] 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.

[2] Unless otherwise noted, all references are to the Health and Safety Code.

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.

The Fund Manager has completed a five-year 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 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 closure letter or a Letter of Commitment, whichever occurs later, shall not be reimbursed unless specified conditions are satisfied. A Letter of Commitment has already been issued on the claim subject to this order and the respective Fund claimant, so the 365-day timeframe for the submittal of claims for corrective action costs will start upon the issuance of the closure letter.

## 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. 3205**
**International Window 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.[3]

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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[3] 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 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. As specified in Health and Safety Code section 25299.39.2, subdivision (a) (2), corrective action costs incurred after a recommendation of closure shall be limited to $10,000 per year unless the Board or its delegated representative agrees that corrective action in excess of that amount is necessary to meet closure requirements, or additional corrective actions are necessary pursuant to section 25296.10, subdivisions (a) and (b). 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 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.

Thomas Howard
Executive Director

4/21/14
Date

## State Water Resources Control Board

# UST CASE CLOSURE REVIEW SUMMARY REPORT

### Agency Information

| | |
|---|---|
| Agency Name: San Francisco Regional Water Quality Control Board (Regional Water Board) | Address: 1515 Clay Street, Suite 1400 Oakland, CA 94612 |
| Agency Caseworker: Cherie McCaulou | Case No: 01-0801 |
| Agency Name: Alameda County Water District (ACWD) | Address: 43885 South Grimmer Blvd. Fremont, CA 94538 |
| Agency Caseworker: Eileen Chen | Case No: 0696 |

### Case Information

| | |
|---|---|
| USTCF Claim No.: 3205 | Global ID: T0600100737 |
| Site Name: International Window Corporation | Site Address: 30526 San Antonio Street Hayward, CA 94544 |
| Responsible Party: General Window Corporation C/O: International Aluminum Corporation Attn: Mike Norring | Address: 30526 San Antonio Street Hayward, CA 94544 |
| USTCF Expenditures to Date: $83,408 | Number of Years Case Open: 26 |

**URL:** http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100737

### 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 a former commercial manufacturing facility. An unauthorized release was reported in December 1986 following soil contamination identified during a soil investigation. In February 1990, the two diesel USTs were removed and approximately 400 cubic yards of impacted soil were removed and disposed offsite. Since 1990, six groundwater monitoring wells have been installed and sporadically monitored. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents, except ethylbenzene and possibly benzene in monitoring well MW-6.

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 plume boundary. No other water supply wells have

been identified within 250 feet of the plume boundary in files reviewed. Water is provided to water users near the Site by the City of Hayward. 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 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 not 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 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.
- Vapor Intrusion to Indoor Air: The case meets Policy Criterion 2a by Scenario 3a. The maximum benzene concentration in groundwater is less than 100 µg/L. The minimum depth to groundwater is greater than 5 feet, overlain by soil containing less than 100 mg/kg of TPH.
- 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 Response**

Alameda County Water District submitted their objections to closure in an email dated August 27, 2013;

- The case does not meet the Policy criteria because the unauthorized release consists of petroleum and chlorinated solvents.
  RESPONSE: The case meets the Policy criteria. The chlorinated solvents are unrelated to Site activities and the unauthorized release from the USTs.
- The Conceptual Site Model is incomplete:
  - The lateral extent of groundwater contamination is undefined beyond the property boundary, i.e. well MW-6, which has documented petroleum hydrocarbon constituents.

RESPONSE: The petroleum hydrocarbons identified in well MW-6 is considered to be a separate and different release not associated with the USTs because of the distinct difference in components and concentrations when compared to the data from the UST release.

- The vertical extent of groundwater contamination is undefined.
  RESPONSE: It seems an unnecessary risk to drill into the drinking water aquifer below the affected saturated zone and to the thereby install potential conduits for shallow affected groundwater to impact the deeper drinking water zone. Sufficient information has been collected to fulfill general criterion e to assess nature, extent and mobility of release.
- A potential sensitive receptor survey has not been completed; therefore, the presence of any water supply wells within 1,000 feet of the plume boundary is unknown.
  RESPONSE: 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 plume boundary. No other water supply wells have been identified within 250 feet of the plume boundary in files reviewed.

- The groundwater plume stability is unknown. Since 2009, when the most downgradient well was installed (MW-6), groundwater samples from it have consistently documented higher concentrations of petroleum hydrocarbon than any other well at the Site.
  RESPONSE: The petroleum hydrocarbons identified in well MW-6 is considered to be a separate and different release not associated with the USTs because of the distinct difference in components and concentrations when compared to the data from the UST release. In addition, there has been little or no detectable petroleum hydrocarbon constituents in the other five monitoring wells even though no remediation was conducted.

**Determination**
Based on the review performed in accordance with Health and Safety Code Section 25299.39.2 subdivision (a), the Fund Manager has determined that closure of the case is appropriate.

**Recommendation for Closure**
Based on available information, residual petroleum hydrocarbons at the Site do not pose a significant risk to human health, safety, or the environment, and the case meets the requirements of the Policy. Accordingly, the Fund Manager recommends that the case be closed. The State Water Board is conducting public notification as required by the Policy. Alameda County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock — 12/18/13

**Lisa Babcock, P.G. 3939, C.E.G. 1235** — **Date**

**Prepared by: Walter Bahm**

## 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?**<br>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. | ☒ Yes ☐ No |
| **Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?** | ☐ Yes ☒ No |
| **If so, was the corrective action performed consistent with any order?** | ☐ Yes ☐ No ☒ NA |
| **General Criteria**<br>General criteria that must be satisfied by all candidate sites:<br><br>**Is the unauthorized release located within the service area of a public water system?**<br><br>**Does the unauthorized release consist only of petroleum?**<br>Note: low levels of chlorinated hydrocarbons found in select groundwater samples, but not attributable to the unauthorized release from the USTs at this Site.<br>**Has the unauthorized ("primary") release from the UST system been stopped?**<br><br>**Has free product been removed to the maximum extent practicable?** | <br><br>☒ Yes ☐ No<br><br>☒ Yes ☐ No<br><br>☒ Yes ☐ No<br><br>☐ Yes ☐ No ☒ NA |

[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 a conceptual site model that assesses the nature, extent, and mobility of the release been developed?** | ☒ Yes ☐ No |
| **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 |
| **<u>Media-Specific Criteria</u>**<br>Candidate sites must satisfy all three of these media-specific criteria:<br><br>**1. Groundwater:**<br>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?** | ☒ Yes ☐ No ☐ NA |
| **Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?**<br>If YES, check applicable class: ☒ **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5** | ☒ Yes ☐ No ☐ NA |
| **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 |
| **2. Petroleum Vapor Intrusion to Indoor Air:**<br>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?**<br>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. | ☒ Yes ☐ No |

| | |
|---|---|
| **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?**<br>If YES, check applicable scenarios: ☐ **1** ☐ **2** ☒ **3** ☐ **4** | ☒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:**<br>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 CASE INFORMATION (Conceptual Site Model)

### Site Location/History

- The Site is a commercial property on 6 acres with one 150,000-square-foot manufacturing building, which includes a 10,000 square-foot office. The areas of the Site not occupied by the building consist of loading docks on three sides of the building, paved parking areas and a thin grassy strip along San Antonio Street.
- The Site is bounded by industrial or commercial properties on all sides.
- In December 1986, soil contamination was identified during a subsurface investigation.
- Since 2001, six monitoring wells have been installed and monitored.
- A Site map showing the location of site facilities, monitoring wells, and groundwater level contours is provided at the end of this closure review summary (URS, 2010).
- Nature of Contaminants of Concern: Petroleum hydrocarbons.
- Source: UST system.
- Date reported: December 1986.
- Status of Release: USTs removed.

### Tank Information

| Tank No. | Size in Gallons | Contents | Closed in Place/ Removed/Active | Date |
|---|---|---|---|---|
| 1 | 7,500 | Diesel | Removed | February 1990 |
| 2 | 7,500 | Gasoline/Diesel | Removed | February 1990 |
| 3 | Unknown | Diesel | Inactive | -- |

### Receptors

- GW Basin: Santa Clara Valley - East Bay Plain.
- Beneficial Uses: Regional Water Board Basin Plan lists agricultural, municipal, and industrial service and process supply.
- Land Use Designation: Commercial and Industrial.
- Public Water System: City of Hayward
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no public supply wells regulated by the California Department of Public Health within 250 feet of the plume boundary. No other water supply wells were identified within 250 feet of the plume boundary in the files reviewed.
- Distance to Nearest Surface Water: There is no identified surface water within 250 feet of the plume boundary.

### Geology/Hydrogeology

- Stratigraphy: The Site is underlain by interbedded and intermixed gravel, sand, silt, and clay.
- Maximum Sample Depth: 25 feet below ground surface (bgs).
- Minimum Groundwater Depth: 6.48 feet bgs at monitoring well MW-3.
- Maximum Groundwater Depth: 14.59 feet bgs at monitoring well MW-4.
- Current Average Depth to Groundwater: Approximately 11 feet bgs.
- Saturated Zones(s) Studied: Approximately 7–20 feet bgs.
- Groundwater Flow Direction: Southwest at a gradient of 0.019 on June 19, 2010.

**Monitoring Well Information**

| Well Designation | Date Installed | Screen Interval (feet bgs) | Depth to Water (feet bgs) (06/30/10) |
|---|---|---|---|
| MW-1 | November 2001 | NA | 9.88 |
| MW-2 | November 2001 | NA | 10.23 |
| MW-3 | November 2001 | NA | 9.21 |
| MW-4 | June 2007 | 7-13 | 11.46 |
| MW-5 | April 2009 | 10-20 | 10.63 |
| MW-6 | April 2009 | 10-20 | 12.41 |

**Remedial Action**

- Free Product: None reported in GeoTracker.
- Soil Excavation: Over-excavation in 1990 removed 400 cubic yards of contaminated soil.
- In-Situ Soil Remediation: The injection of controlled release oxygen compound with nutrients (EHC-O) was proposed in February 2010, however, never implemented.
- In-Situ Groundwater Remediation: None reported.

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

| Constituent | Maximum 0-5 feet bgs [mg/kg (date) Boring number] | Maximum 5-10 feet bgs [mg/kg (date) Boring number] |
|---|---|---|
| Benzene | <0.1 (10/29/01) MW-2-3 | 2 (6/21/90) B1-10 |
| Ethylbenzene | 2.5 (10/29/01) MW-2-3 | 22 (10/29/01) B1-10 |
| 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**

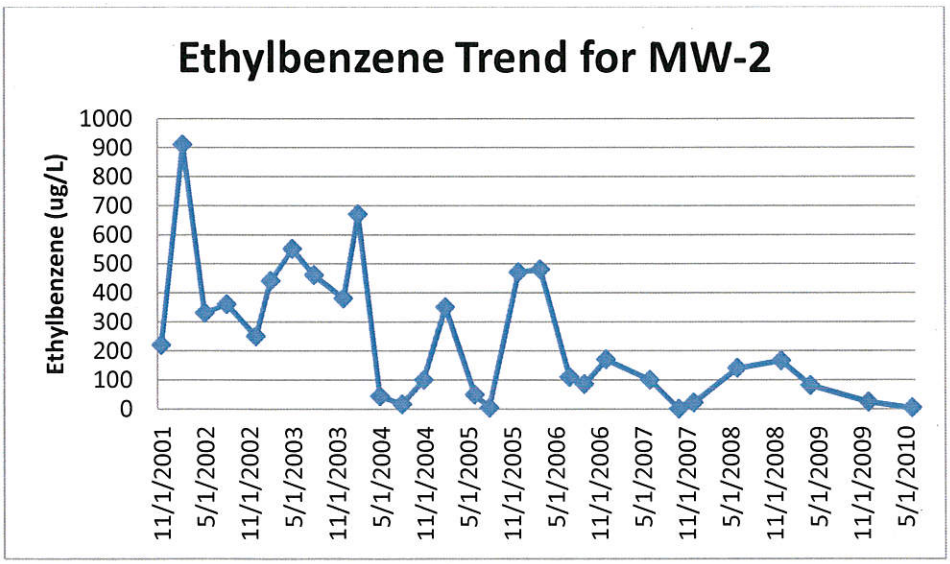
| Sample | Sample Date | TPHg (µg/L) | TPHd (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-Benzene (µg/L) | Xylenes (µg/L) | MTBE (µg/L) |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 06/30/10 | <50 | <50 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| MW-2 | 06/30/10 | 100 | 300 | <0.5 | <0.5 | 3.6 | <1 | <0.5 |
| MW-3 | 06/30/10 | <50 | <50 | <0.5 | <0.5 | <0.5 | <1 | **11** |
| MW-4 | 06/30/10 | <50 | <50 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| MW-5 | 06/30/10 | <50 | <50 | <0.5 | <0.5 | <0.5 | <1 | **7.9** |
| MW-6 | 06/30/10 | 8,400 | 1,500 | **<10** | <10 | **1,300** [a] | 1,300 | **<10** |
| **WQOs** | - | -- | -- | **1** | **150** | **300** | **1,750** | **5** [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
TPHd: Total petroleum hydrocarbons as diesel
MTBE: Methyl tert-butyl ether
WQOs: Water Quality Objectives, Regional Water Board Basin Plan
--: Regional Water Board Basin Plan does not have a numeric water quality objective for TPHg.
[a]: It is believed the petroleum hydrocarbon concentration found in well MW-6 is unrelated to the UST and more likely to be related to onsite manufacturing operations
[b]: Secondary maximum contaminant level (MCL)

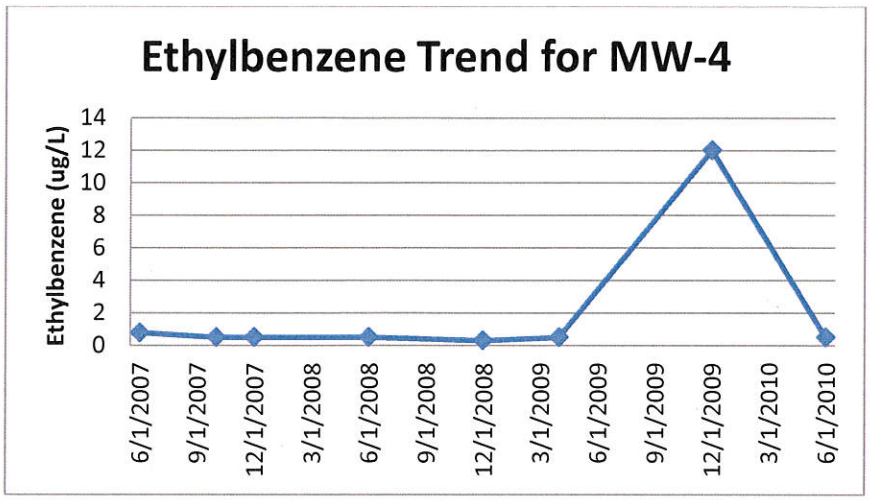
## Groundwater Trends

- This Site has been monitored sporadically since 2001. Ethylbenzene trends are shown below: Near Source Area (MW-2) and Downgradient (MW-4, MW-5, and MW-6).

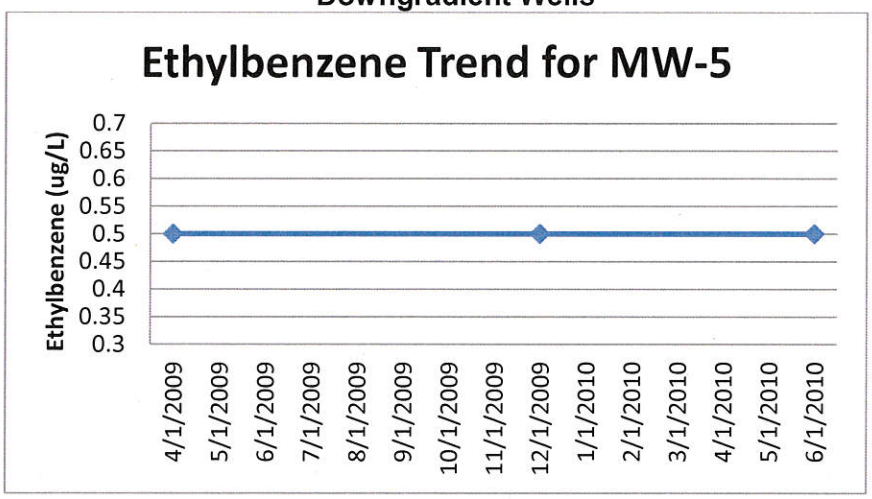
**Near Source Area Well**

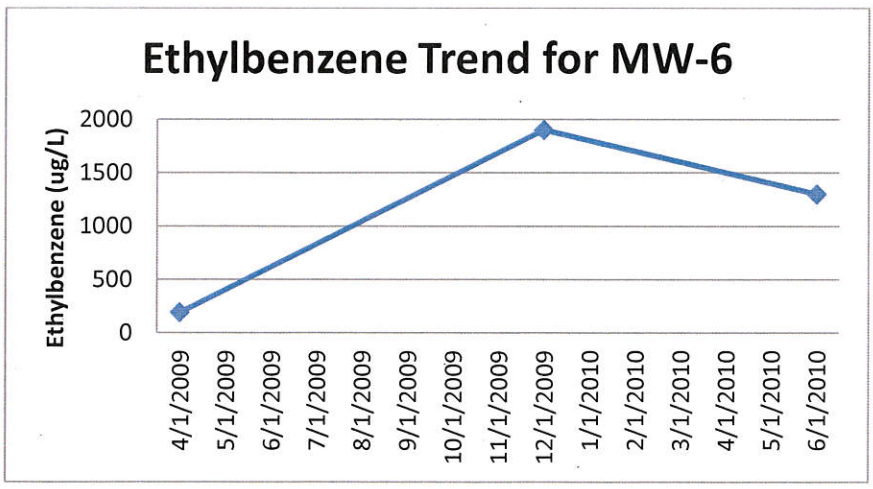



**Downgradient Well**



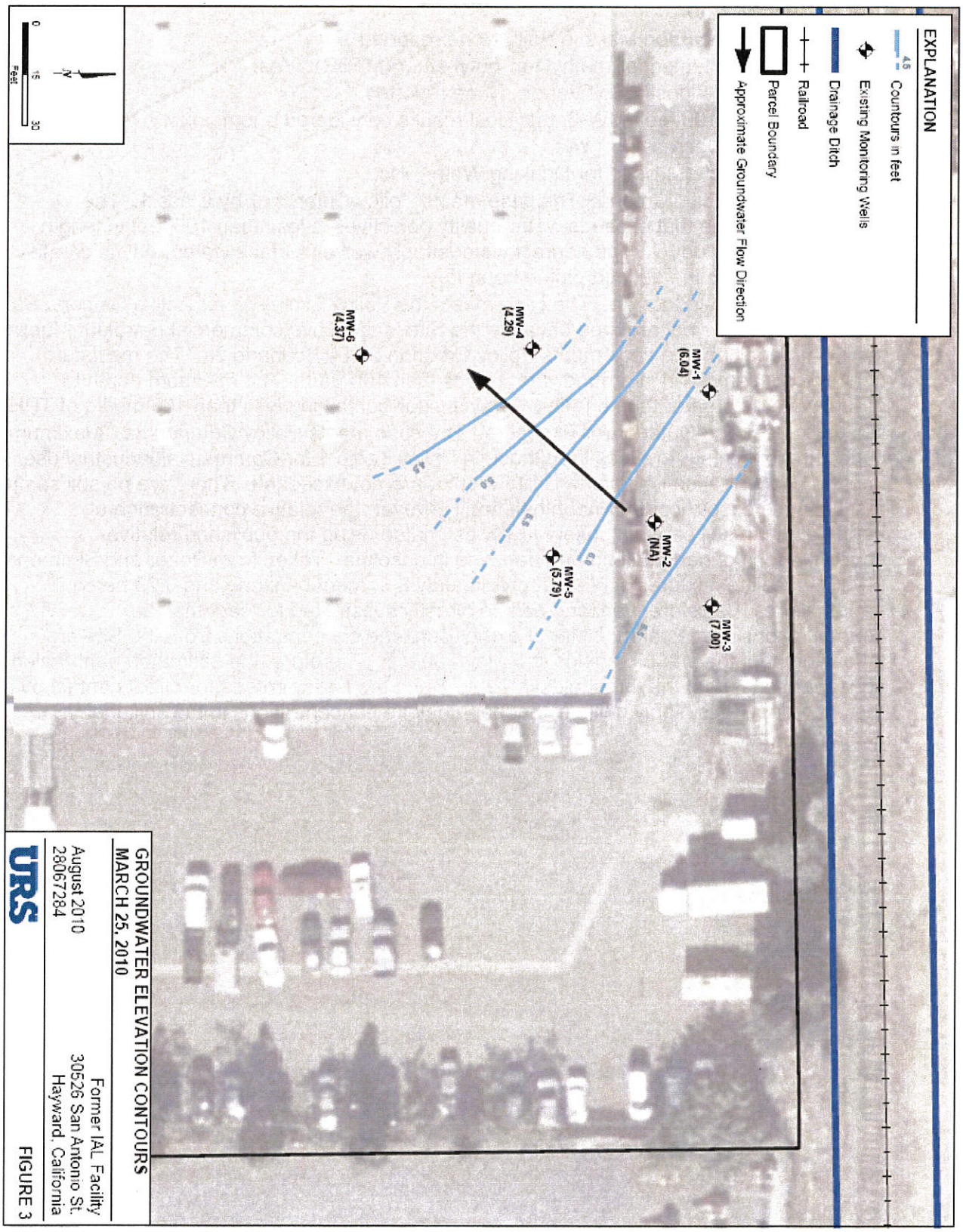

**Downgradient Wells**



**Evaluation of Current Risk**

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/Groundwater tested for methyl tert-butyl ether (MTBE): Yes.
- Oxygen Concentrations in Soil Vapor: None reported.
- Plume Length: <100 feet, MW-6 analytical results considered anomalous.
- Plume Stable or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Specific Criteria: The case meets Policy Criterion 1 by Class 1. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product. The nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary.
- Vapor Intrusion to Indoor Air: The case meets the Policy Exclusion for Active Station. Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility. In addition, the case meets Policy Criterion 2a by Scenario 3a. The maximum benzene concentration in groundwater is less than 100 µg/L. The minimum depth to groundwater is greater than 5 feet, overlain by soil containing less than 100 mg/kg of TPH.
- 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.


EXPLANATION
4.5
Countours in feet
Existing Monitoring Wells
Drainage Ditch
Railroad
Parcel Boundary
Approximate Groundwater Flow Direction
MW-1 (6.04)
MW-2 (NA)
MW-3 (7.00)
MW-4 (4.29)
MW-5 (5.79)
MW-6 (4.37)
5.0
4.5
N
0
15
30
Feet
GROUNDWATER ELEVATION CONTOURS
MARCH 25, 2010
Former IAL Facility
30526 San Antonio St.
Hayward, California
August 2010
28067284
URS
FIGURE 3