



State Water Resources Control Board

December 14, 2013

Dilan Roe
Alameda County
Environmental Health Department
1131 Harbor Bay Parkway
Alameda, CA 94502

REVIEW SUMMARY REPORT – CLOSURE – (SECOND REVIEW) FOR CLAIM NUMBER 18481; BAY COUNTIES PETROLEUM, 6310 STIRRUP COURT, DUBLIN, CA

The UST Cleanup Fund (Fund) has completed our Second Review of Alameda County Environmental Health Department Case No. RO0002862.

The 5-Year Review process, authorized in Health and Safety Code (HSC) section 25299.39.2, provides that if the Fund Manager determines the case warrants closure then a copy of a review summary report will be provided to the regulatory agency for comment. Once the Fund Manager determines that the case warrants closure, the regulatory agency is precluded from issuing a corrective action directive or enforcing an existing directive, with limited exceptions as specified in HSC 25299.39.2, subdivision (a)(4). A copy of HSC 25299.39.2 can be found at leginfo.ca.gov.

The enclosed draft review summary report which determines that closure is appropriate, "Draft Review Summary Report–Closure," is being provided to you as a courtesy draft for a 45-day review period before it is signed by the Fund Manager.

In the event your agency does not concur with the determination in the Draft Review Summary Report-Closure, you have an opportunity within the next 45 days to provide compelling information: (1) that would show the case does not meet closure criteria [UST Low Threat Closure Policy or the decisional framework for closure under Resolution 92-49] or (2) that a statutory exception exists and there should not be a stay of regulatory directives.

After reviewing your comments, the Fund Manager may either change the recommendation or, lacking compelling reasons described above and in the HSC, sign the "Review Summary Report–Closure" and send copies to you and applicable claimants after 45 days from the date of this letter. Once the Fund Manager signs the "Review Summary Report–Closure," the regulatory agency is precluded from issuing a corrective action directive or enforcing an existing directive, unless an exception applies.

In the event that your agency concurs with the determination, your agency may submit a letter or e-mail to the Cleanup Fund Manager, within 45-days of the date of this letter, stating that your agency will public notice the case for closure within 3 months and, pending public comments, order closure activities within 6 months of the date of this letter. Lacking such a commitment from your agency, the Fund Manager will recommend case closure to the State Water Board and public notice the draft proposed closure order. If the State Water Board determines that case closure is appropriate, it will order case closure for the site and issue the uniform closure letter after closure activities have been completed.

Dilan Roe
Claim No. 18481

December 14, 2013

Note that the Draft Review Summary Report–Closure is based on information currently in the GeoTracker database, in the Cleanup Fund’s case files, and any other sources of information that were readily available to Cleanup Fund staff at the time the review was conducted. Responses regarding this case may be provided by e-mail, letter, or a copy of correspondence to the Responsible Party. Please identify the case by Cleanup Fund claim number and direct your response to:

Kirk Larson
(916) 341-5663
(ktlarson@waterboards.ca.gov)
Underground Storage Tank Cleanup Fund
State Water Resources Control Board
P.O. Box 944212
Sacramento, CA 94244-2120

Sincerely,



Robert Trommer
Senior Engineering Geologist
Chief, Technical Review Unit
Underground Storage Tank Cleanup Fund

Encl. Draft Review Summary Report–Closure (Second Review) For Claim Number 18481
cc: Jerry Wickham, County, Alameda



State Water Resources Control Board

DRAFT
REVIEW SUMMARY REPORT - CLOSURE
SECOND REVIEW - DECEMBER 2013

Agency Information

Table with 2 columns: Agency Name, Address, Agency Caseworker, Case No.

Case Information

Table with 2 columns: USTCF Claim No., Site Name, Responsible Party, USTCF Expenditures to Date, GeoTracker Global ID, Site Address, Address, Number of Years Case Open

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600113164

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 warehouse. Five USTs (two gasoline, two diesel, and one waste oil) were removed in 1989. An unauthorized release was reported in January 2005 following the removal of one diesel UST. Reportedly, 156 cubic yards of impacted soil were excavated and disposed offsite in 1989. An unknown volume of impacted soil was excavated to a depth of 8 feet and disposed offsite in 2004. Since 2007, seven groundwater monitoring wells have been installed and monitored. According to groundwater data, water quality objectives have been achieved for all constituents.

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. 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 near the Site by the Zone 7 Water Agency. 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

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

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.
- **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 Responses

According to the Path to Closure page, the County opposes closure because:

- There is no conceptual site model.
RESPONSE: Adequate data is available in GeoTracker to complete a conceptual site model according to the Policy.
- Secondary source remains.
RESPONSE: Secondary source according to the Policy was removed by excavation.
- The case does not meet Policy groundwater criteria.
RESPONSE: The case meets Policy Criterion 1 by Class 1.
- The case does not meet Policy vapor criteria.
RESPONSE: The case meets Policy Criterion 2a by Scenario 3a.
- The case does not meet Policy direct contact criteria.
RESPONSE: The case meets Policy Criterion 3a.


Determination

The Fund Manager has notified the tank owners or operators and reviewed the case history of their tank case. The Fund Manager determines that closure of the tank case is appropriate based upon that review. The Fund Manager has prepared this review summary report summarizing the reasons for this determination, provided the Review Summary Report to the applicable regional


board and local agency, as appropriate, with an opportunity for comment on the Review Summary Report.

Pursuant to Health and Safety Code as of the date of the signature of the Fund Manager below, the regional board or local agency shall not issue a corrective action directive or enforce an existing corrective action directive for the tank case until the board issues a decision on the closure of the tank case, unless one of the following applies:

- (A) The regional board or local agency demonstrates to the satisfaction of the manager that there is an imminent threat to human health, safety, or the environment.
- (B) The regional board or local agency demonstrates to the satisfaction of the manager that other site-specific needs warrant additional directives during the period that the board is considering case closure.
- (C) After considering responses to the review summary report and other relevant information, the manager determines that case closure is not appropriate.
- (D) The regional board or local agency closes the tank case but the directives are necessary to carry out case-closure activities.



Kirk Larson, P.G. 12/11/2013
Engineering Geologist Date
Technical Review Unit
(916) 341-5663



Robert Trommer, C.H.G. 12/11/13
Senior Engineering Geologist Date
Chief, Technical Review Unit
(916) 341-5684

BLANK
Lisa Babcock, P.G. 3939, C.E.G. 1235
Fund Manager

Date

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>General Criteria 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 type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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 checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input 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 checked="" type="checkbox"/> 3 <input type="checkbox"/> 4</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 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>
<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

- This case is an active commercial warehouse and is bounded by residences across Houston Place to the north, and commercial businesses to the west, east and south.
- Site maps showing the location of the former USTs, monitoring wells, groundwater level contours, and petroleum hydrocarbons concentrations are provided at the end of this review summary (AEI Consultants, 2012).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: January 2005.
- Status of Release: USTs removed.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1,2	12,000	Diesel	Removed	1989
3	7,500	Gasoline/Diesel	Removed	1989
4	2,000	Gasoline	Removed	1989
5	500	Used oil	Removed	1989
6	12,000	Diesel	Removed	October 2004

Receptors

- GW Basin: Livermore Valley.
- Beneficial Uses: San Francisco Regional Water Quality Control Board (Regional Water Board) Basin Plan lists agricultural, municipal, domestic, industrial service and process supply.
- Land Use Designation: Commercial.
- Public Water System: Zone 7 Water Agency.
- 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 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: 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: 17 feet below ground surface (bgs).
- Minimum Groundwater Depth: 5.89 feet bgs at monitoring well DW-2.
- Maximum Groundwater Depth: 9.20 feet bgs at monitoring well DW-7.
- Current Average Depth to Groundwater: Approximately 7 feet bgs.
- Saturated Zones(s) Studied: Approximately 6 - 17 feet bgs.
- Appropriate Screen Interval: Yes, partially submerged.
- Groundwater Flow Direction: Southwest with an average gradient of 0.002 feet/foot (December 2012).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (12/13/12)
DW-1	March 2007	7-17	6.61
DW-2	March 2007	7-17	6.29
DW-3	March 2007	7-17	7.02
DW-4	March 2007	7-17	7.06
DW-5	March 2007	7-17	6.31
DW-6	March 2007	7-17	7.26
DW-7	March 2007	7-17	7.65

Remediation Summary

- Free Product: None reported in GeoTracker.
- Soil Excavation: Reportedly, 156 cubic yards of impacted soil were excavated and disposed offsite in 1989. An unknown volume of impacted soil was excavated to a depth of 8 feet and disposed offsite in 2004.
- In-Situ Soil/Groundwater Remediation: None conducted.

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	<0.5 (10/27/04)	<0.005 (03/14/06)
Ethylbenzene	<0.5 (10/27/04)	<0.005 (03/14/06)
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	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
DW-1	12/13/12	310	<0.5	<0.5	<0.5	<0.5	<0.5
DW-2	12/13/12	580	<0.5	<0.5	<0.5	<0.5	<0.5
DW-3	12/13/12	3,200	<0.5	<0.5	<0.5	<0.5	<0.5
DW-4	12/13/12	<50	<0.5	<0.5	<0.5	<0.5	1.4
DW-5	12/13/12	140	<0.5	<0.5	<0.5	<0.5	<0.5
DW-6	12/13/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5
DW-7	12/13/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5
WQOs	-	--	1	150	700	1,750	5^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
 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 TPHd
^a: Secondary maximum contaminant level (MCL)

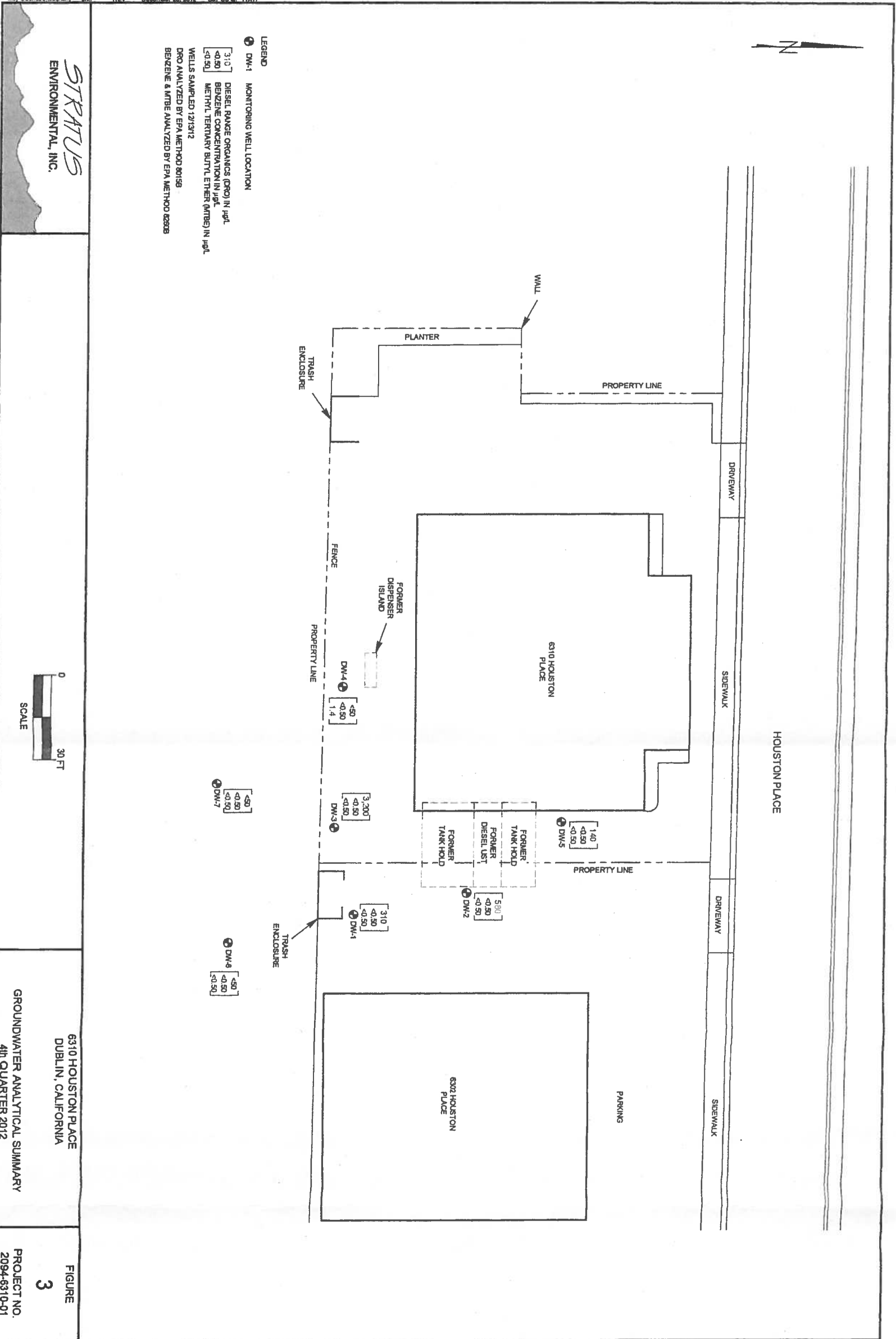
Groundwater Trends

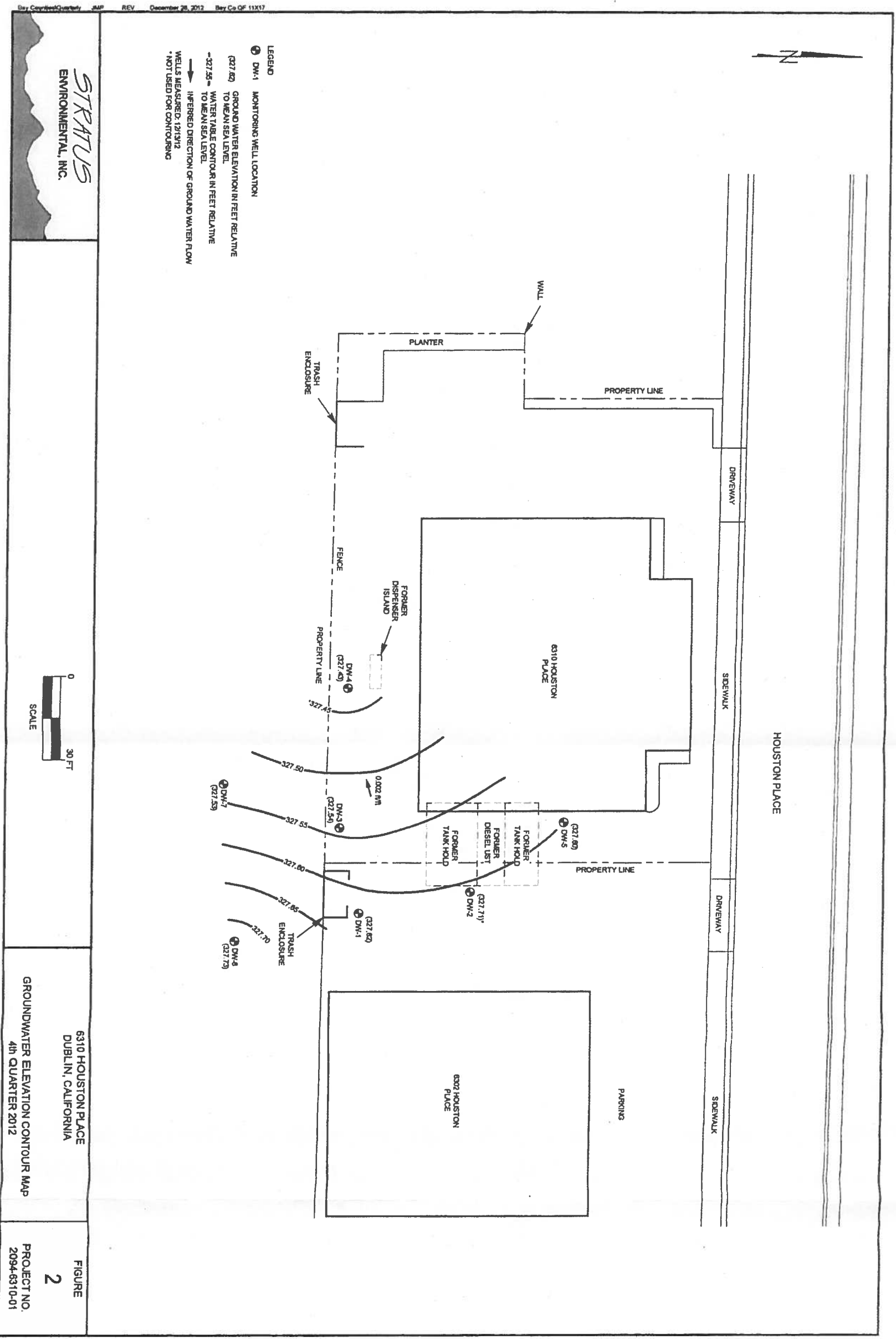
- Since 2007, seven groundwater monitoring wells have been installed and monitored. Water quality objectives have been achieved in all wells.

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, water quality objectives achieved.
- Plume Stable or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 1 by Class 1. The 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.
- Indoor Vapor Risk from Residual Petroleum Hydrocarbons: 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 Risk from Residual Petroleum Hydrocarbons: 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.

REV December 28, 2012 Bay Co QP 11X17





STRATUS
 ENVIRONMENTAL, INC.

6310 HOUSTON PLACE
 DUBLIN, CALIFORNIA
 GROUNDWATER ELEVATION CONTOUR MAP
 4th QUARTER 2012

FIGURE
2
 PROJECT NO.
 2094-6310-01

REV December 26, 2012 Bay Co Of 11X17