State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Santa Clara County Department of Environmental Health (County)	Address: 1555 Berger Drive Suite 300 San Jose, CA 95112
Agency Caseworker: Aaron Costa	Case No: 09S3E20J01f

Case Information

USTCF Claim No.: 5128	Global ID: T0608502185
Site Name: Shell - 17905 Monterey	Site Address: 17905 Monterey Rd. Morgan Hill, CA 95037
Responsible Party 1: Sam Brenneke Shell Oil Products US	Address: 20945 S. Wilmington Ave. Carson, CA 90810
Responsible Party 2: Holly Chau Morgan Hill Gas & Food Mart	Address: Private address
Responsible Party 3: Scott Chau Morgan Hill Gas & Food Mart	Address: 556 North First ST San Jose, CA 95121
USTCF Expenditures to Date: $0	Number of Years Case Open: 29

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0608502185

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 petroleum fueling facility. An unauthorized release was reported in December 1985. Between December 1985 and January 1986 four 500-gallon gasoline USTs and one 550-gallon waste oil UST were removed. An unknown volume of contaminated soil was excavated to a depth of 12 feet beneath the former USTs and excavation beneath dispensers was conducted to a depth of 5 feet in 1997. From November 1990 to February 1993 soil vapor extraction removed an estimated 11,050 pounds of total petroleum hydrocarbons (TPHg). Between November 1999 and March 2005 a total of 1,820,239 gallons of groundwater containing an estimated 13 pounds of TPHg were removed by groundwater extraction. Active remediation has not been conducted at the Site for the past eight years. Since 1986, 24 monitoring wells were installed and sampled regularly. Of these monitoring wells, eleven were destroyed in 2004. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents.

The petroleum release is limited to the shallow soil and 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 1,000 feet of the defined plume boundary. No other water supply wells have been identified within 1,000 feet of the defined plume boundary in files reviewed. Water is provided to water users near the Site by the Santa Clara Valley Water District. The affected groundwater is not currently being used as a source of drinking water, and it is 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.
- Groundwater Specific Criteria: The case meets Policy Criterion 1 by Class 1. The contaminant plume does not exceed water quality objectives. 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.
- Direct Contact and Outdoor Air Exposure: This case meets Policy Criterion 3b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to residual soil contamination was completed by Fund staff. The results of the assessment found that maximum concentrations of petroleum constituents remaining in soil will have no significant risk of adversely affecting human health. The Site is paved and accidental exposure to site soils is prevented. Therefore, the pathway is incomplete. As an active petroleum fueling facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.

Objections to Closure and Responses

In a letter dated April 25, 2014 and in response to this Review Summary Report, the County does not object to the proposed case closure. The County indicated that the State Water Board would proceed with the case closure activities.
RESPONSE: We concur.

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 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. Santa Clara County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock

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

5/18/14
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? 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
<u>**General Criteria**</u> 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.

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?	☒ 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? 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: 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.	☒ 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?	☐ Yes ☐ No ☒ NA

If YES, check applicable scenarios: ☐ **1** ☐ **2** ☐ **3** ☐ **4**	
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 CASE INFORMATION (Conceptual Site Model)

Site Location/History

- The Site is an active commercial petroleum fueling facility located on the northwestern corner of Monterey Street and Wright Avenue in a mixed residential and commercial area.
- Site maps showing the location of the former USTs, monitoring wells, and groundwater level contours are provided at the end of this review summary (CRA, 2012).
- Nature of Contaminants of Concern: Petroleum hydrocarbons.
- Source: UST system.
- Date reported: December 1985.
- Status of Release: USTs replaced.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1-4	500	Gasoline	Removed	January 1986
5	550	Waste oil	Removed	January 1986
6-8	Unknown	Gasoline	Active	-

Receptors

- GW Basin: Gilroy-Hollister Valley - Llagas Area
- Beneficial Uses: San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Basin Plan lists municipal, domestic supply, agricultural, and industrial service and process supply.
- Land Use Designation: Commercial
- Public Water System: Santa Clara Valley Water District
- 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 1,000 feet of the defined plume boundary. No other water supply wells were identified within 1,000 feet of the defined plume boundary in the files reviewed.
- Distance to Nearest Surface Water: There is no identified water body within 1,000 feet of the defined plume boundary.

Geology/Hydrogeology

- Stratigraphy: Lithology shows interbedded clays, silts, sands and gravels to 85 feet below ground surface (bgs).
- Maximum Sample Depth: 120 feet bgs.
- Minimum Groundwater Depth: 7.30 feet bgs at monitoring well S-10.
- Maximum Groundwater Depth: 71.67 feet bgs at monitoring well S-16.
- Current Average Depth to Groundwater: Approximately 30 feet bgs.
- Saturated Zones(s) Studied: Approximately 9–120 feet bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: Easterly at 0.01 feet per foot (September 2012).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (9/19/12)
S-1	January 1986	27-47	Destroyed in 2004
S-2	January 1986	27-47	30.93
S-3	January 1986	27-47	Destroyed in 2004
S-4	January 1986	27-47	31.26
S-5	May 1986	15-45	32.13
S-6	May 1986	15-45	32.35
S-7	May 1986	15-45	Destroyed in 2004
S-8	May 1986	15-45	Destroyed in 2004
S-9	May 1986	15-45	31.02
S-10	November 1986	13.5-43.5	32.59
S-11	November 1986	15-45	32.82
S-12	January 1987	14-45	34.27
S-13	June 1988	45-85	34.14
S-14	June 1988	45-85	Destroyed in 2004
S-15	June 1988	45-85	Destroyed in 2004
S-16	June 1988	35-85	31.10
S-17	July 1989	33-49	Destroyed in 2004
S-18	August 1989	42-54	32.70
S-19	August 1989	42-54	32.26
S-20	June 2001	110-120	Destroyed in 2004
S-21	June 2001	10-30	Destroyed in 2004
S-22	June 2001	18-37	Destroyed in 2004
S-23	June 2001	10-31.5	Destroyed in 2004
S-24	June 2001	40-55	Destroyed in 2004

Remedial Action

- Free Product: None reported.
- Soil Excavation: An unknown volume of contaminated soil was excavated, removed, and replaced with clean fill.
- In-Situ Soil Remediation: From November 1990 to February 1993 soil vapor extraction is estimated to have removed 11,050 pounds of total petroleum hydrocarbons.
- Groundwater Remediation: Between November 1999 and March 2005 a total of 1,820,239 gallons of groundwater containing an estimated 13 pounds of total petroleum hydrocarbons were removed.
- Active remediation has not been conducted at the Site for the past eight years.

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	<2.5 (12/11/85) S-A	NA
Ethylbenzene	50 (12/11/85) S-A	NA
Naphthalene	NA	NA
PAHs	NA	NA

mg/kg: milligrams per kilogram, parts per million
NA: Not Analyzed, Not Applicable or Data Not Available
<: Not detected at or above stated reporting limit
PAHs: Polycyclic aromatic hydrocarbons
*Excavation was replaced with clean fill material.

Most Recent Concentrations of Petroleum Constituents in Groundwater

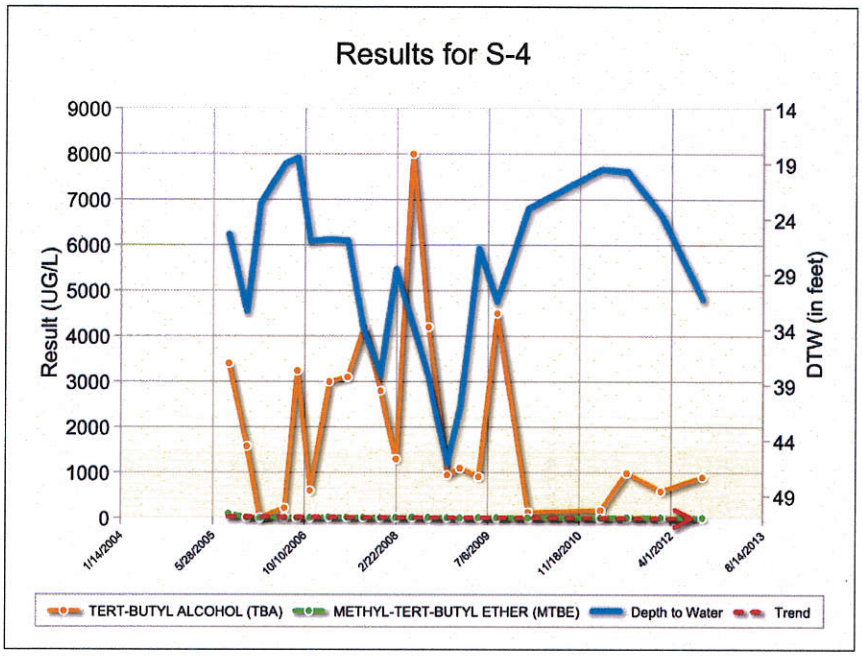
Sample	Sample Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
S-2	3/15/11	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<10
S-4	9/19/12	190	<0.5	35	<0.5	<1.0	1.7	900
S-5	3/15/11	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<10
S-6	9/19/12	<50	<0.5	<0.5	<0.5	<1.0	0.92	<10
S-9	3/15/11	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<10
S-10	3/15/11	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<10
S-11	3/15/11	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<10
S-12	3/15/11	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<10
S-13	3/15/11	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<10
S-18	3/15/11	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<10
S-19	9/19/12	<50	<0.5	<0.5	<0.5	<1.0	0.84	38
WQOs	**-**	**--**	**1**	**150**	**680**	**1,750**	**5[a]**	**--**

µg/L: micrograms per liter, parts per billion
TPHg: Total petroleum hydrocarbons as gasoline
MTBE: Methyl tert-butyl ether
TBA: Tert-butyl alcohol
WQOs: Water Quality Objectives, Regional Water Board Basin Plan
--: Regional Water Board Basin Plan does not have a numeric water quality objective for TPHg or TBA.
[a]: Secondary maximum contaminant level (MCL)
[b]: California Department of Public Health, Response Level

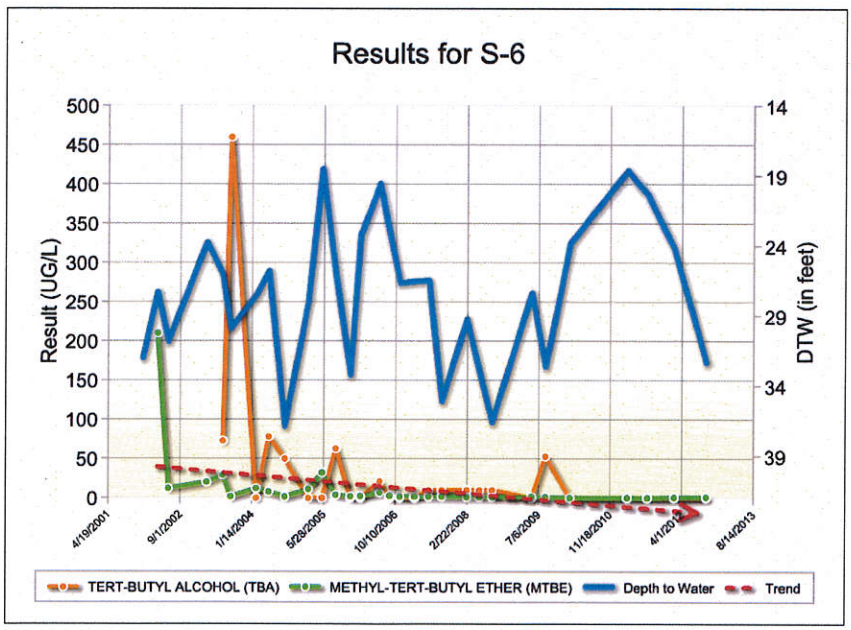
Groundwater Trends:

- Groundwater monitoring has been conducted since 1999. MTBE and TBA trends are shown below: Source Area (S-4), Near Downgradient (S-6), and Far Downgradient (S-19).

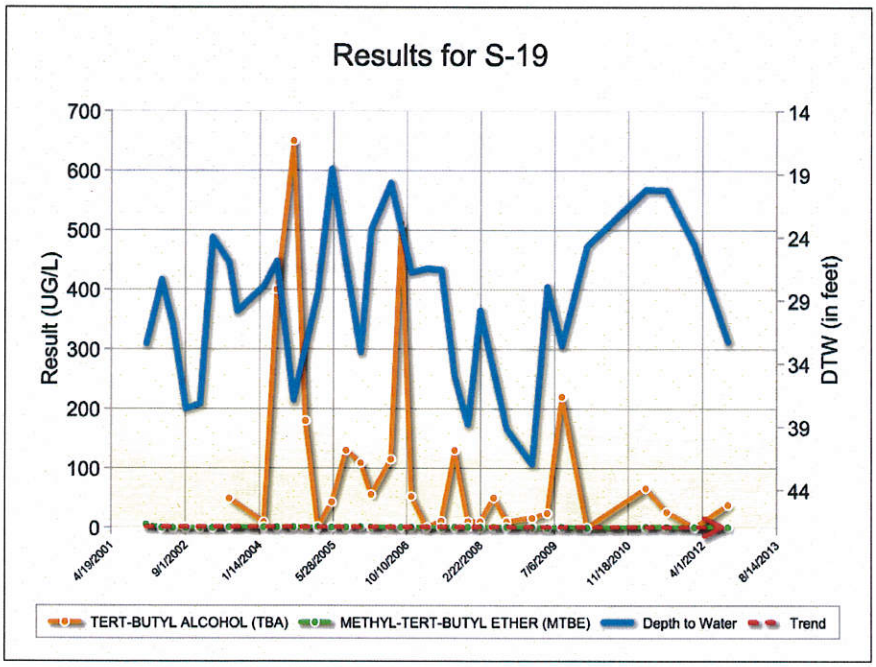
Source Area Well



Near Downgradient



Far Downgradient



Evaluation of Current Risks

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/ Groundwater tested for methyl tert-butyl ether (MTBE): Yes.
- Plume Length: <100 feet.
- Plume Stable or Degrading: 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 contaminant plume does not exceed water quality objectives. 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.
- Direct Contact and Outdoor Air Exposure: This case meets Policy Criterion 3b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to residual soil contamination was completed by Fund staff. The results of the assessment found that maximum concentrations of petroleum constituents remaining in soil will have no significant risk of adversely affecting human health. The Site is paved and accidental exposure to site soils is prevented. Therefore, the pathway is incomplete. As an active petroleum fueling facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.

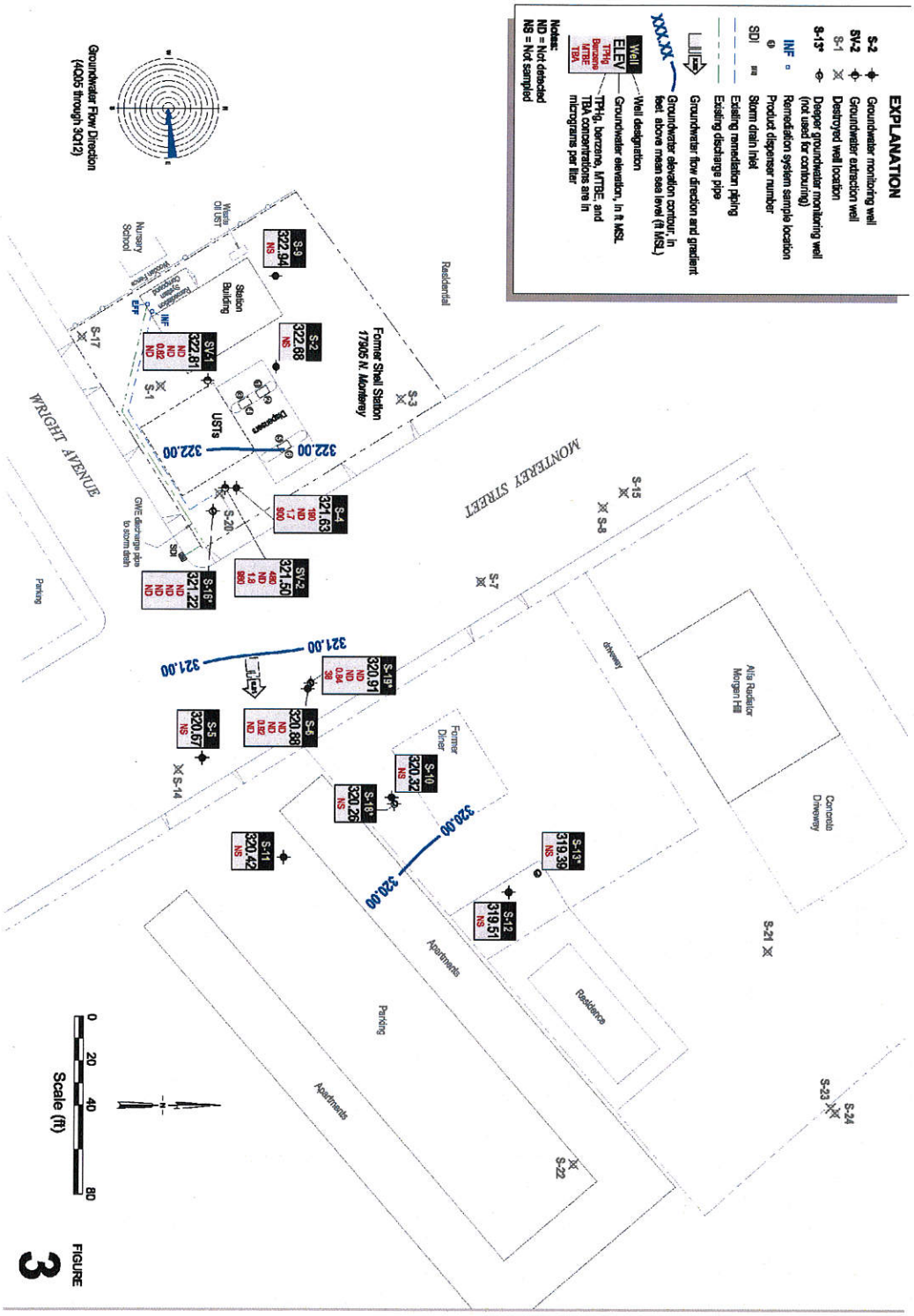


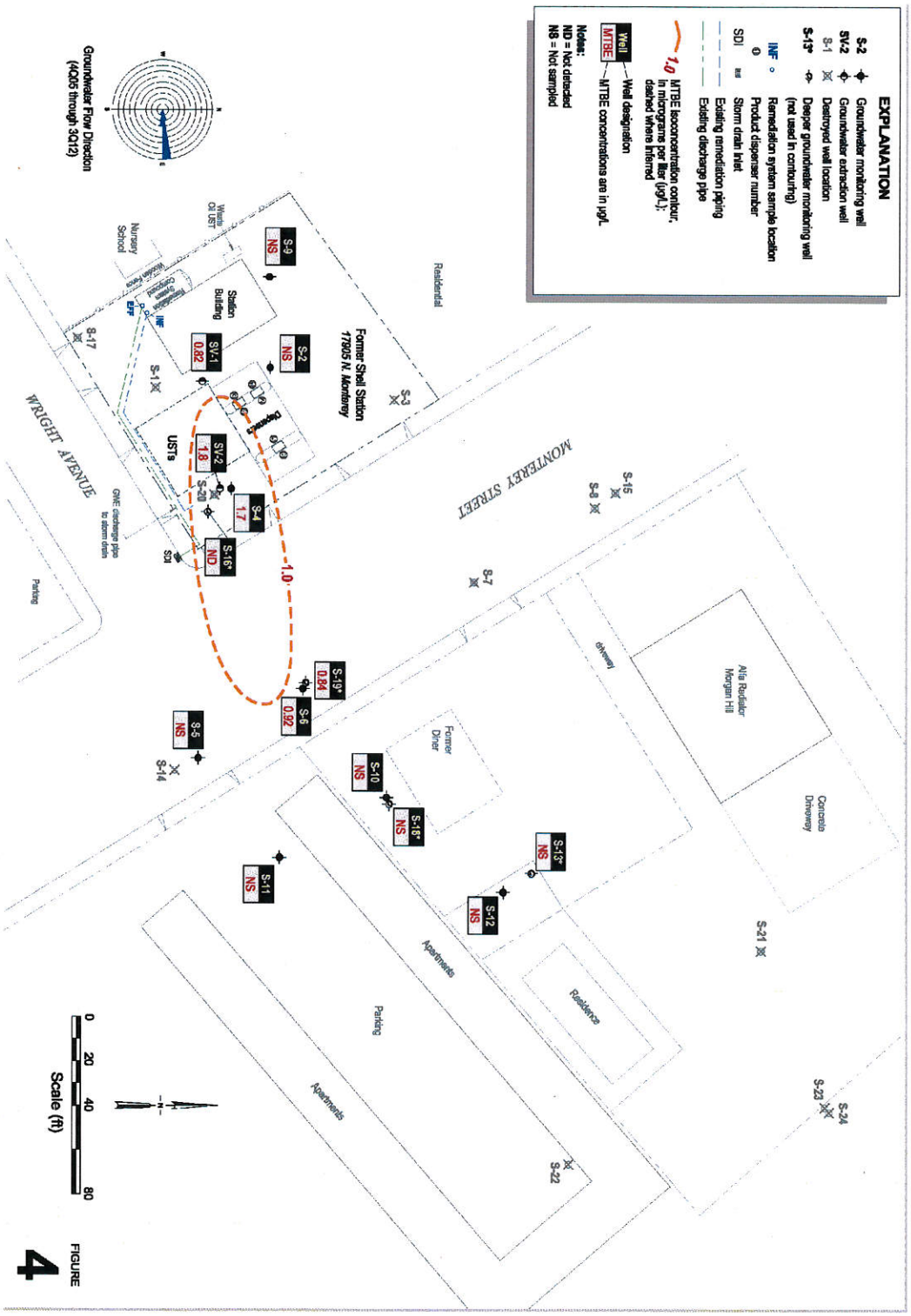
FIGURE 3

Former Shell Service Station
17905 Monterey Street
Morgan Hill, California

CONESTOGA-ROVERS & ASSOCIATES

Groundwater Contour and Chemical Concentration Map

September 19, 2012



Former Shell Service Station
17905 Monterey Street
Morgan Hill, California

CONESTOGA-ROVERS & ASSOCIATES

MTBE in Groundwater Isoconcentration Map

September 19, 2012