

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Santa Ana Region Water Quality Control Board, (Regional Water Board)	Address: 3737 Main Street, Suite 500, Riverside, CA 92501
Agency Caseworker: Nancy Olson-Martin	Case No.: 83002670T

Case Information

USTCF Claim No.: 15270	Global ID: T0605901853
Site Name: Main Street Car Wash	Site Address: 1807 North Main Street, Santa Ana, CA 92706
Responsible Party: Main Street Car Wash, Inc.	Address: 1807 North Main Street, Santa Ana, CA 92706
USTCF Expenditures to Date: \$466,147	Number of Years Case Open: 17

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605901853

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:

The Site is a former commercial fueling facility currently operated as a car wash. An unauthorized leak was identified in May 1995 by inventory control. One gasoline UST and an unknown volume of affected soil were removed from the Site in December 1999 during the UST removal activities. Since 2004, fifteen monitoring wells have been installed and monitored. No active remediation has been conducted. According to groundwater data, water quality objectives have been achieved for all constituents except benzene and methyl tert-butyl ether (MTBE).

The petroleum release is limited to the shallow soil and groundwater. There are no public 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 the files reviewed. Water is provided to water users near the Site by the City of Santa Ana Public Works. 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 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: The case meets the Policy Criterion 1 by Class 1. The contaminant plume that exceeds WQO is less than 100 feet in length. No free product is present. 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 Active Station Exclusion – Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility.
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Table 1 for Commercial/Industrial land use concentration limits, and the concentration limits for a Utility Worker are not exceeded. The Site is paved preventing direct contact exposure. 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 Table 1 of the Policy. Therefore, the estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of ten. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Objections to Closure and Responses

- The Regional Board objects to UST case closure for this case because active remediation is necessary.
RESPONSE: The case meets the Policy criteria and does not pose a significant risk to human health, safety, or the environment.

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.

Main Street Car Wash
1807 North Main Street, Santa Ana
Claim No. 15270

May 2013

Fund Manager 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 Health Care Agency, Environmental Health Division has the regulatory responsibility to supervise the abandonment of monitoring wells.



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



Date

Prepared by: Kirk Larson

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 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.</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 site?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>If so, was the corrective action performed consistent with any order?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p><u>General Criteria</u> General criteria that must be satisfied by all candidate sites:</p> <p>Is the unauthorized release located within the service area of a public water system?</p> <p>Does the unauthorized release consist only of petroleum?</p> <p>Has the unauthorized (“primary”) release from the UST system been stopped?</p> <p>Has free product been removed to the maximum extent practicable?</p> <p>Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input 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 type="checkbox"/> 3 <input type="checkbox"/> 4</p> <p>b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?</p> <p>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</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><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 SITE INFORMATION (Conceptual Site Model)

Site Location/History

- The Site is located at 1807 North Main Street in Santa Ana and is an active car wash and commercial fueling facility.
- The Site is bounded by North Main Street to the west, a business to the north, residences to the east, and East 18th Street to the south. The surrounding land use is mixed residential and commercial.
- Fifteen monitoring wells have been installed and monitored regularly since 2004.
- Site maps showing the location of the former USTs, monitoring wells, groundwater contours and MTBE concentrations are provided at the end of this closure summary (The Reynolds Group, 2012).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST System.
- Date reported: May 1995.
- Status of Release: USTs replaced.
- Free Phase Hydrocarbons: None reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1	Unknown	Gasoline	Removed	December 1999
2,3	Unknown	Gasoline	Active	-

Receptors

- GW Basin: Coastal Plain of Orange County.
- Beneficial Uses: Municipal and Domestic supply.
- Land Use Designation: None specified. Aerial photo from GeoTracker shows Site land use is commercial surrounded by mixed commercial and residential.
- Public Water System: City of Santa Ana Public Works.
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no CDPH regulated water supply wells within 250 feet of the defined plume boundary. No other water supply wells within 250 feet of the defined plume boundary have been identified in files reviewed.
- Distance to Nearest Surface Water: No surface water is located within 250 feet of the defined plume boundary.

Geology/Hydrogeology

- Stratigraphy: The Site is underlain by interbedded and intermixed gravel, sand, silt and clay.
- Maximum Sample Depth: 90 feet below ground surface (bgs).
- Minimum Groundwater Depth: 74.21 feet bgs at monitoring well MW-7.
- Maximum Groundwater Depth: 91.77 feet bgs at monitoring well MW-4.
- Current Average Depth to Groundwater: Approximately 81 feet bgs.
- Saturated Zones(s) Studied: 75 to 125 feet bgs.
- Groundwater Flow Direction: Northwest at 0.0083 feet per foot (February 2012).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (09/06/2012)
MW-1	August 2004	95-125	80.58
MW-2	August 2004	85-115	80.60
MW-3	August 2004	85-115	81.01
MW-4	August 2004	85-115	80.47
MW-5	August 2005	85-105	81.24
MW-6	August 2005	85-105	80.74
MW-7	August 2005	85-105	80.27
MW-8	August 2005	85-105	80.86
MW-9	August 2005	85-105	80.84
MW-10	August 2005	85-105	80.95
MW-11	August 2007	65-100	80.65
MW-12	August 2007	65-100	80.18
MW-13	August 2007	65-100	80.73
MW-14	August 2007	65-100	80.58
MW-15	August 2007	65-100	80.77

Remediation Summary

- Free Product: No free product was documented in GeoTracker.
- Soil Excavation: Unknown volume removed from Site in December 1999 during UST removal activities.
- In-Situ Soil Remediation: No soil remediation has been conducted.
- Groundwater Remediation: No groundwater remediation has been 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	<0.002 (07/07/05)	<0.002 (07/07/05)
Ethylbenzene	<0.002 (07/07/05)	27.1 (07/07/05)
Naphthalene	NA	NA
PAHs	NA	NA

NA: Not Analyzed, Not Applicable or Data Not Available
 mg/kg: milligrams per kilogram, parts per million
 <: Not detected at or above stated reporting limit
 PAHs: Polycyclic aromatic hydrocarbons

Most Recent Concentrations of Petroleum Constituents in Groundwater

Sample	Sample Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	05/25/2010	77	1.2	3.7	8.6	22.5	2.5	<10
MW-2	09/06/2012	<50	<0.5	<0.5	<0.5	<0.5	<1.0	<10
MW-3	05/25/2010	362	9.9	23.6	38.2	84.5	<1.0	<10
MW-4	05/25/2010	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<10
MW-5	05/25/2012	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<10
MW-6	02/08/2012	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<10
MW-7	02/08/2012	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<10
MW-8	02/08/2012	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<10
MW-9	02/08/2012	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<10
MW-10	09/06/2012	<100	<0.5	<0.5	<0.5	<0.5	<1.0	<10
MW-11	05/25/2010	<100	<0.5	<0.5	<0.5	<0.5	<1.0	<10
MW-12	09/06/2012	<100	<0.5	<0.5	<0.5	<0.5	<1.0	<10
MW-13	09/06/2012	<100	<0.5	<0.5	<0.5	<0.5	<1.0	<10
MW-14	09/06/2012	4,183	161.2	61.4	156.7	425.2	2,019.3	1,009
MW-15	09/06/2012	<100	<0.5	<0.5	<0.5	<0.5	<1.0	<10
WQOs	-	-- ^a	1	150	300	1,750	5^b	1,200^c

NA: Not Analyzed, Not Applicable or Data Not Available

µg/L: micrograms per liter, parts per billion

<: Not detected at or above stated reporting limit

TPHg: Total petroleum hydrocarbons as gasoline

MTBE: Methyl tert-butyl ether

TBA: Tert-butyl alcohol

WQOs: Water Quality Objectives, Santa Ana Regional Water Board Basin Plan

^a: The Santa Ana, Regional Water Board Basin Plan does not have numeric WQO value for TPHg.

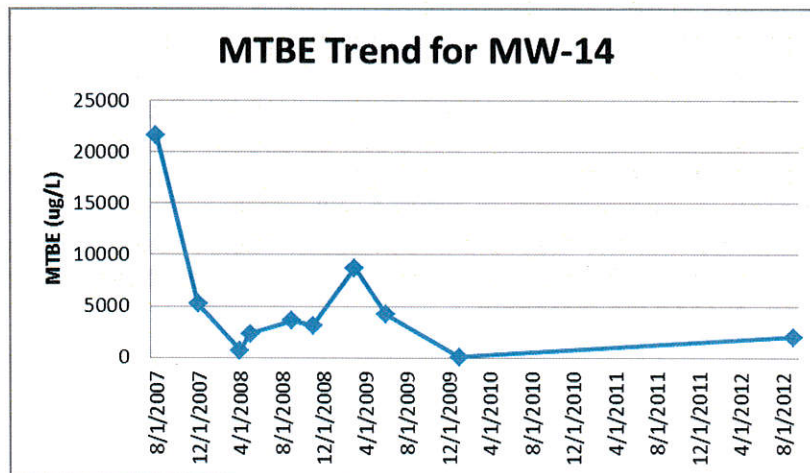
^b: Secondary maximum contaminant level (MCL)

^c: California Department of Public Health, Response Level

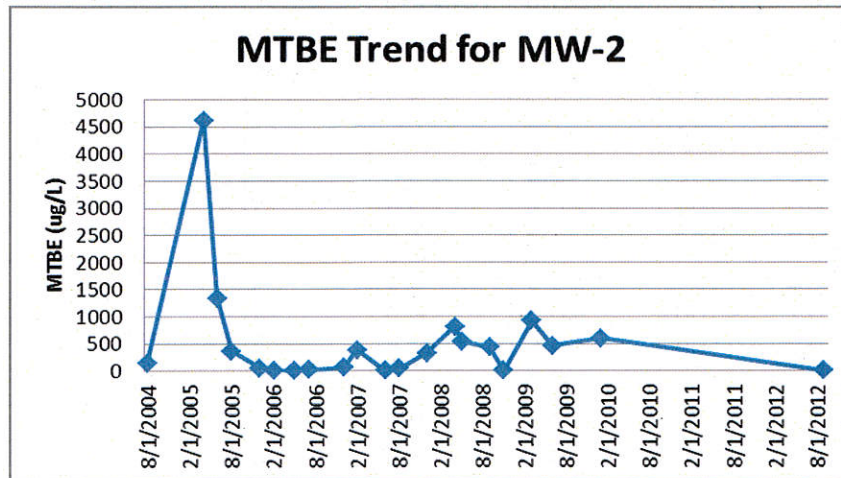
Groundwater Trends:

This Site has been monitored regularly since 2004. Most recently contaminants were only detected in three source area monitoring wells. MTBE trends are shown below: Source area (MW-14) and Downgradient (MW-2).

Source Area

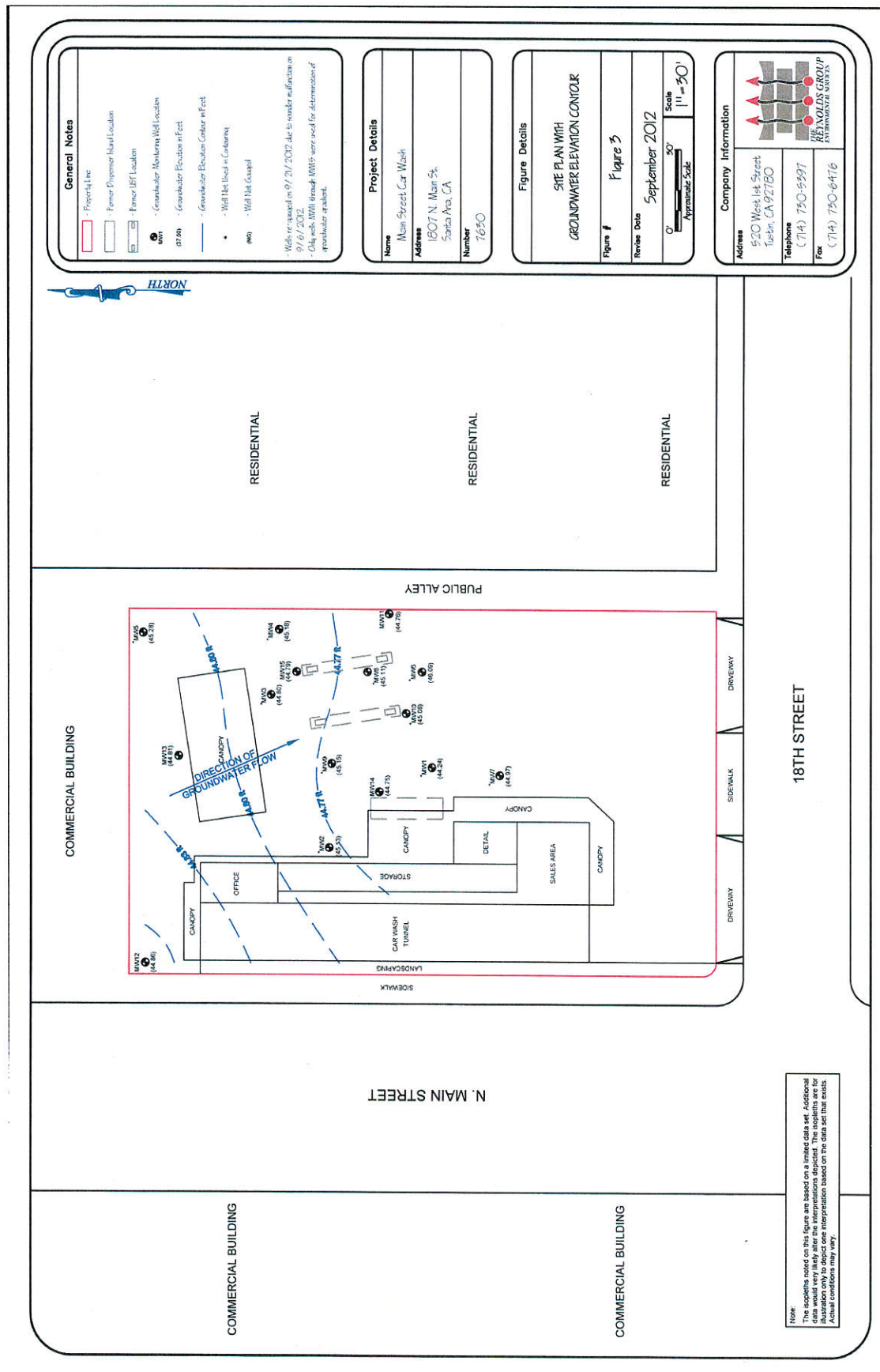


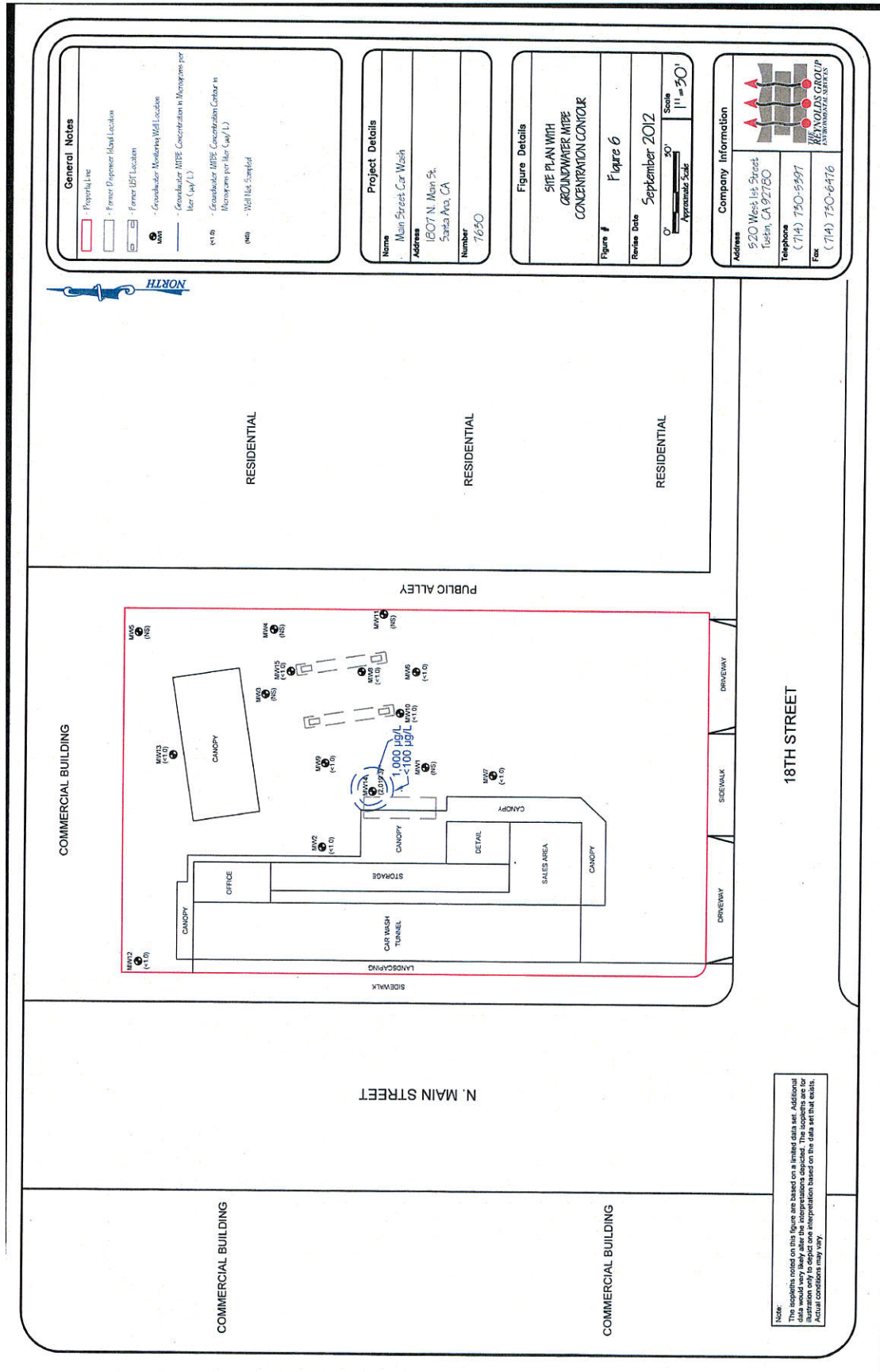
Downgradient Well



Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/Groundwater Tested for MTBE: Yes, see table above.
- Plume Length: <100 feet.
- Plume Stable or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Oxygen Concentrations in Soil Vapor: No data.
- Groundwater Risk from Residual Petroleum Hydrocarbons: The case meets the Policy Criterion 1 by Class 1. The contaminant plume that exceeds WQO is less than 100 feet in length. No free product is present. 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 the Policy Active Station Exclusion – Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility.
- Direct Contact Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Table 1 for Commercial/Industrial use concentration limits and the concentration limits for Utility Worker are not exceeded. The Site is paved preventing direct exposure. 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 Table 1 of the Policy. Therefore, the estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of ten. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.





General Notes

- Property Line
- Former Dispenser Island Location
- Former H&M Location
- Groundwater Monitoring Well Location
- Groundwater MPE Concentration in Micrograms per liter ($\mu\text{g/L}$)
- Groundwater MPE Concentration Contour in Micrograms per liter ($\mu\text{g/L}$)
- Well Not Sampled

Project Details

Name: Main Street Car Wash
 Address: 1807 N. Main St, Santa Ana, CA
 Number: 7650

Figure Details

Figure #: Figure 6
 Revision Date: September 2012
 Scale: 1" = 50'
 Approximate Scale

Company Information

Address: 520 West 1st Street, Tustin, CA 92780
 Telephone: (714) 750-9991
 Fax: (714) 750-6416

HYDROLOGICAL SERVICES

NOTE:
 The isopleth noted on this figure are based on a limited data set. Additional data would very likely alter the interpretations depicted. The isopleth are for illustration only to depict one interpretation based on the data set that exists. Actual conditions may vary.