

## State Water Resources Control Board

### UST CASE CLOSURE REVIEW SUMMARY REPORT

#### Agency Information

Agency Name: North Coast Regional Water Quality Control Board (Regional Water Board)	Address: 5550 Skyline Blvd., Suite A Santa Rosa, CA 95403
Agency Caseworker: Janice Goebel	Case No.: 1TSO660

#### Case Information

USTCF Claim No.: 13759	GeoTracker Global ID: T0609700470
Site Name: J & W Foreign Auto Service	Site Address: 401 South Main Street, Sebastopol, CA 95472
Responsible Party 1: Gertrude H. Jahn	Address: Private Address
Responsible Party 2: Louise E. York	Address: Private Address
USTCF Expenditures to Date: \$138,668	Number of Years Case Open: 15

URL: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0609700470](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0609700470)

#### 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:

In 1970, the business was converted from a gasoline service station to an automotive repair garage. The fuel dispensers were removed and the underground piping was decommissioned in compliance with Fire Department requirements. Three 550-gallon USTs located partially under the office building remained in place. In October 1997, these USTs were abandoned in place by uncovering the tanks and filling them with concrete slurry. An unauthorized release was reported in December 1997. Since 2001, eight monitoring wells have been installed and monitored intermittently. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents except for MTBE in well MW-5.

The petroleum release is limited to the shallow soil and groundwater. According to data available in GeoTracker, there are no California Department of Public Health regulated supply wells or surface water bodies within 250 feet of the defined plume boundary. Water is provided to water users near the Site by the City of Sebastopol 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 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 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 2b. A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health. Based on the GeoTracker records, benzene in groundwater is below detection limit, and groundwater is over 40 feet below ground surface. Therefore the groundwater plume does not pose significant risk of vapor intrusion to indoor air. The Site is paved, and as an active automotive repair shop, any worker working at the Site will be prepared for potential exposure in their normal daily work. Necessary measures required to abate risk from indoor automotive exhaust and other indoor emission sources, will more than sufficient to minimize the risk of indoor vapor intrusion from petroleum impact in the shallow soil.
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3b. A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health. With the exception of benzene concentration in one soil sample, maximum concentrations in soil are less than those in Policy Table 1. The Site is paved and accidental access to Site soils is prevented. As a result, the benzene impact to the shallow soil at the Site does not pose significant risk for direct contact and outdoor air exposure.

#### **Objections to Closure and Response**

The Regional Water Board expressed concerns regarding the UST case closure because:

- Elevated soil and groundwater grab sample results have been identified in soil borings B-4 and B-20 at the subject site.  
RESPONSE: This case meets all Policy criteria and the residual petroleum hydrocarbon constituents do not pose a significant risk to human health.
- This site is part of a commingled plume with the adjacent sites, and wells on this property are needed to help define the plume.  
RESPONSE: Based on the most recent monitoring data, the petroleum hydrocarbon release from the UST system at the subject Site does not present any significant measure of groundwater contamination. For any monitoring well required to define the extent of adjacent site contaminant plumes the appropriate Responsible Party can transfer the responsibility or ownership of those wells with the County.

#### **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.

401 South Main Street, Sebastopol, CA  
J & W Foreign Auto Repair  
Claim No: 13759

May 2013

**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. Sonoma County has the regulatory responsibility to supervise the abandonment of monitoring wells.

*Lisa Babcock*

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

*5/30/13*

\_\_\_\_\_  
Date

Prepared by: Annette Poteracke

**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.<sup>1</sup>**

<p><b>Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations?</b>                  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><b>Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?</b></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><b>If so, was the corrective action performed consistent with any order?</b></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p><b><u>General Criteria</u></b>                  General criteria that must be satisfied by all candidate sites:</p> <p><b>Is the unauthorized release located within the service area of a public water system?</b></p> <p><b>Does the unauthorized release consist only of petroleum?</b></p> <p><b>Has the unauthorized (“primary”) release from the UST system been stopped?</b></p> <p><b>Has free product been removed to the maximum extent practicable?</b></p> <p><b>Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?</b></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>

<sup>1</sup> 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](http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf)

<p><b>Has secondary source been removed to the extent practicable?</b></p> <p><b>Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?</b></p> <p><b>Nuisance as defined by Water Code section 13050 does not exist at the site?</b></p> <p><b>Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?</b></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><b><u>Media-Specific Criteria</u></b>          Candidate sites must satisfy all three of these media-specific criteria:</p> <p><b>1. Groundwater:</b>          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><b>Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?</b></p> <p><b>Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?</b></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><b>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?</b></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><b>2. Petroleum Vapor Intrusion to Indoor Air:</b>          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><b>Is the site an active commercial petroleum fueling facility?</b>          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><b>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?</b>          If YES, check applicable scenarios: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

<p><b>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?</b></p> <p><b>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?</b></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><b>3. Direct Contact and Outdoor Air Exposure:</b>          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><b>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)?</b></p> <p><b>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?</b></p> <p><b>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?</b></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 <input 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

- The Site is auto service facility and is bounded by South Main Street to the west, Fannen Avenue to the north, a residence to the east, and a retail clothing store to the south. Across South Main Street to the west is residential area.
- Site map showing the location of the abandoned in-place USTs, monitoring wells and groundwater level contours, is provided at the end of this closure review summary.
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: December 1997.
- Status of Release: USTs abandoned in-place.
- Free Product: None reported.

### Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1	550	Gasoline	Closed in Place	October 1997
2	550	Gasoline	Closed in Place	October 1997
3	550	Gasoline	Closed in Place	October 1997

### Receptors

- GW Basin: North Coastal.
- Beneficial Uses: Agricultural, Industrial Services, Municipal, and Domestic Supply (GeoTracker).
- Land Use Designation: None Specified. Aerial photograph available on GeoTracker shows mixed residential and commercial land use in the vicinity of the Site.
- Public Water System: City of Sebastopol Public Works.
- 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, located within 250 feet east-northeast of the Site. A sensitive receptor survey identified no other supply wells within 250 feet of the defined plume boundary.
- Distance to Nearest Surface Water: There is no identified surface water within 250 feet of the Site.

### Geology/Hydrogeology

- Stratigraphy: The Site is underlain by silty, clayey and gravelly sand.
- Maximum Sample Depth: 36 feet below ground surface (bgs).
- Minimum Groundwater Depth: 34.22 bgs at monitoring well MW-1.
- Maximum Groundwater Depth: 44.00 feet bgs at monitoring well MW-4.
- Current Average Depth to Groundwater: 41 feet bgs.
- Saturated Zones(s) Studied: Approximately 30-50 bgs.
- Appropriate Screen Interval: Yes, except MW-1 that is generally dry.
- Groundwater Flow Direction: Southeast with an average gradient of 0.007 feet/foot (October 2011).

**Monitoring Well Information**

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (10/22/2011)
MW-1	December 2001	25-40	Dry
MW-2	September 2004	29-49	41.52
MW-3	September 2004	29-49	39.56
MW-4	September 2004	29-49	43.19
MW-5	September 2004	29-49	40.49
MW-6	May 2006	30-50	40.08
MW-7	May 2006	30-50	38.75
MW-8	January 2008	27-47	41.80

**Remediation Summary**

- Free Product: None reported.
- Soil Excavation: None reported.
- In-Situ Soil Remediation: None reported.
- Groundwater Remediation: None reported.

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

Constituent	Maximum 0-5 ft. bgs. [mg/kg (date)]	Maximum 5-10 ft. bgs [mg/kg (date)]
Benzene	<0.10 (1/16/2002)	22 (9/02/2004)
Ethylbenzene	4.2 (1/16/2002)	69 (9/02/2004)
Naphthalene	2.9 (1/16/2002)	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)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	10/22/2011*	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-2	10/22/2011*	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-3	10/22/2011*	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-4	10/22/2011*	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-5	10/22/2011*	180	<1.0	<1.0	<1.0	<1.0	<b>160</b>	<12
MW-6	10/22/2011*	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-7	10/22/2011*	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<12
MW-8	10/22/2011*	<50	<1.0	<1.0	<1.0	<1.0	2	<12
<b>WQOs</b>	-	--	<b>1</b>	<b>150</b>	<b>680</b>	<b>1,750</b>	<b>5</b>	<b>1,200<sup>a</sup></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

MTBE: Methyl tert-butyl ether

TBA: Tert-butyl alcohol

WQOs: Water Quality Objectives, Regional Water Board Basin Plan

\*: G&E Consulting, 2<sup>nd</sup> ½ 2011 Monitoring Report, not uploaded to GeoTracker.

--: Regional Water Board Basin Plan does not have a numeric water quality objective for TPHg.

<sup>a</sup>: Department of Public Health, Response Level

**Groundwater Trends**

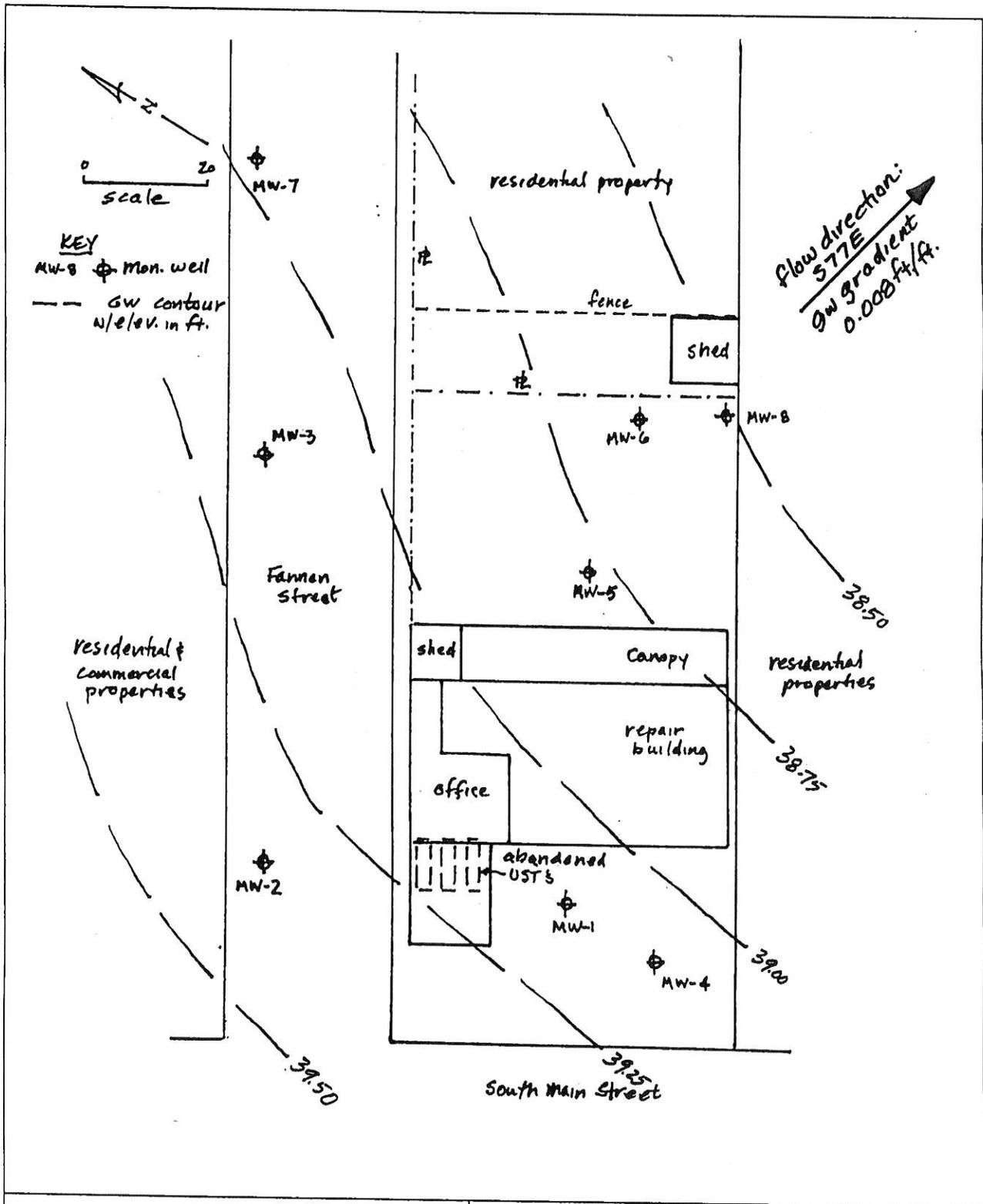
- There are 8 years of irregular groundwater monitoring data for this case. The latest groundwater monitoring conducted in October 2011 indicated that without active groundwater remediation, the groundwater concentrations of TPHg, BTEX, MTBE and TBA have reduced to below the water quality objectives, with the exception of MTBE remaining in onsite well MW-5.

**Evaluation of Current Risk**

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/Groundwater tested for methyl tert-butyl ether (MTBE): Yes, see table above.
- Oxygen Concentrations in Soil Vapor: None reported.
- Plume Length: <100 feet.
- 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 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.
- Indoor Vapor Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 2b. A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health. Based on the GeoTracker records, benzene in groundwater is below detection limit, and groundwater is over 40 feet below ground surface. Therefore the groundwater plume does not pose significant risk of vapor intrusion to indoor air. The Site is paved, and as an active automotive repair shop, any worker working at the Site will be prepared for potential exposure in their normal daily work. Necessary measures required to abate risk from indoor automotive exhaust and other indoor emission sources,

are sufficient to minimize the risk of indoor vapor intrusion from petroleum impact in the shallow soil.

- Direct Contact Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 3b. A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health. With the exception of benzene concentration in one soil sample, maximum concentrations in soil are less than those in Policy Table 1. The Site is paved and accidental access to Site soils is prevented. As a result, the benzene impact to the shallow soil at the Site does not pose significant risk for direct contact and outdoor air exposure.



<p>Jim Glomb                  Geotechnical and Environmental Consulting, Inc.                  152 Weeks Way, Sebastopol CA 95472</p>	<p>J&amp;W Foreign Auto Repair                  Project 1288      November 2011</p>	<p>Plate                  1</p>
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