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Alameda County
Environmental Health

February 21, 2012

Barbara Jakub, P.G.
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway
Alameda, California 94502

Subject: **TRANSMITTAL LETTER & CERTIFICATION STATEMENT**

Location: **Former Exxon Station, 3055 35th Avenue, Oakland ("Site")**

ACEH LOP#: **RO-0000271; GeoTracker #: T0600100538;**

Date of Report	Title of Report
February 21, 2011	*Semi-Annual Groundwater Monitoring Report*

As the legally authorized representative for the responsible party, I certify the following statement to satisfy regulatory requirements for technical report submittals:

- ***I declare, under penalty of perjury, that the information and/or recommendations contained in the aforementioned report, prepared on my behalf by WEBER, HAYES AND ASSOCIATES, are true and correct to the best of my knowledge.***

Sincerely,

Mr. Lynn Worthington

c/o: **Golden Empire Properties, Inc.**
3055 35th Avenue
Oakland, California 94605

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 Fax (831) 722-1159
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February 21, 2012

Barbara Jakub, P.G.
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway
Alameda, California 94502

Mr. Lynn Worthington
c/o: Golden Empire Properties, Inc.
5942 MacArthur Blvd # B
Oakland, CA 94605-1698

Subject: **Semi-Annual Groundwater Monitoring Report** (sampled September 2011)

Site: **Former Exxon Station, 3055 35th Avenue, Oakland ("Site")**
ACEH LOP #: RO-0000271; GeoTracker #: T0600100538

1.0 EXECUTIVE SUMMARY

This report documents semi-annual groundwater monitoring activities conducted during the third quarter of 2011 at the former Exxon Service Station located at 3055 35th Ave, Oakland, California (the "Site"; see Location Map, Figure 1). Alameda County Environmental Health (ACEH) requires these activities as part of post-remediation monitoring of a fuel discovered during the 1991 closure of an underground storage tank (UST) system at the Site. Four years of dual phase extraction occurred at the site between 2000-4.

Results of the current semi-annual groundwater monitoring event indicate that contaminant concentrations continue to exceed regulatory threshold limits. Overall concentrations show a downward trend since monitoring began over 17 years ago, which indicates the dissolved hydrocarbon plume is attenuating.

We recently submitted an updated *Site Conceptual Model* for the Site that identified several data gaps that need to be assessed in order to lay the groundwork for selecting an appropriate remedial alternative for the Site. Specifically, we recommended preparing a Work Plan for completing a data gap assessment designed to 1) confirm or deny whether or not there is contaminant contribution(s) from upgradient active and/or abandoned fueling facilities, and 2) collect current on-site soil data at previously untested, apparent release locations (i.e., former UST locations and dispensers) to assess the magnitude of current residual soil impacts. We note that the vast majority of existing soil data collected at the Site is over 17 years old. We also recommended reducing the groundwater monitoring frequency to an annual schedule based on the extensive record of groundwater analytical data collected from the Site. ACEH concurred with our recommendation of completing a *Work Plan for a Data Gap Assessment* in their letter dated September 20, 2011, and requested that we also include rationale for selecting an appropriate quarter to complete the proposed annual groundwater monitoring. We are currently preparing this Work Plan for submittal by the ACEH deadline of November 30, 2011.

A detailed description of previous environmental investigation results and subsurface conditions and the updated *Site Conceptual Model* is included as a reference (Appendix A).

1.1 Groundwater Monitoring

This report describes results of an ongoing monitoring program, which includes water level gauging in fourteen (14) existing monitoring wells at the Site, and groundwater sampling and laboratory analysis of six (6) key wells (i.e. MW-1 though 4, and RW-5 and 9) installed to monitor a plume of dissolved hydrocarbons (see Site Map, Figure 2).

Overview of Quarterly Activities

Current Tasks & Reporting:	**Semi-annual groundwater monitoring (sampled on September 22, 2011)**
Current Depth to Groundwater:	**Approx. 14 to 19 feet below the ground surface (ranges from 147 to 149 feet MSL across the Site)**
Current Groundwater Gradient:	**Westerly, at a grade of 0.009 feet per foot (= 1 foot of vertical drop per 111 feet of lateral flow)**
Change $_{Avg.}$ in Groundwater elevation:	**Groundwater elevation was an average of 7.42 feet lower at the Site compared with the previous monitoring event (March 2011).**
Frequency of Groundwater Sampling:	**Semi-annual: gauging of all site wells MW-1 through MW-4 and RW-5 through RW-14; collect an analyze samples from well MW-1 through MW-4, RW-5 and RW-9.**
Is Free Product Present On-Site?	**Currently not observed**
Current Remediation Techniques:	**None at this time**
	Previous remediation included the operation of an on-site dual phase extraction system from October 2000 to September 2004 (see Appendix A for details).

1.2 Conclusions

Current and previous groundwater monitoring results indicate:

- The groundwater gradient has consistently been measured to flow in a westerly to south-westerly direction.
- The extent of groundwater degraded by hydrocarbons still significantly exceeds regulatory threshold limits. Long term groundwater monitoring at the Site confirms plume stability and gradual degradation of the chemicals of concern over time. We note that an observed slight but consistent increase in benzene concentrations in wells MW-1 through MW-4 since early 2009 may indicate the influx of a secondary dissolved Hydrocarbon plume from an off-site, upgradient location.

- Findings from a recent *Updated Site Conceptual Model*[1] (June 2011) reveal several data gaps that need to be assessed prior to selecting an appropriate remedial alternative for the Site.

1.3 Recommendations

Based on our assessment of current and previous Site conditions, we recommend the following:

- Complete the proposed *Work Plan for a Data Gap Assessment* designed to close several data gaps that need to be assessed prior to selecting an appropriate remedial alternative for the Site. The *Work Plan* is due for submittal by the ACEH deadline of November 30, 2011.
- Semi-annual groundwater monitoring continues to show stable and declining trends of dissolved hydrocarbons. Based on the comprehensive groundwater monitoring data set we recommend reducing the monitoring frequency to an annual schedule. As noted above, ACEH has requested that we include rationale for selecting an appropriate quarter to complete the proposed annual groundwater monitoring in our forthcoming *Work Plan*.
- Eliminating the following constituents from the suite of groundwater analysis based on consistent lack of detections (see Table 2):
    - The fuel oxygenates di-isopropyl ether (DIPE), ethyl tert butyl ether (ETBE), and tert amyl methyl ether (TAME), by EPA Method 8260, and
    - The lead scavengers 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by EPA Method 8260

This concludes the Executive Summary.

2.0 SUMMARY OF CURRENT FIELD ACTIVITIES

Current field tasks consisted of: water level gauging and field checking water quality parameters (dissolved oxygen, ORP) of all 14 existing groundwater-monitoring wells (MW-1 through MW-4, RW-5 through RW-14), and sampling of 6 key groundwater-monitoring wells (MW-1 through MW-4, and RW-5 and RW-9). A summary of current groundwater monitoring and laboratory testing follows.

2.1 Groundwater Monitoring Well Sampling and Laboratory Testing

Groundwater samples were collected in appropriate sample containers and placed in a chilled cooler for transport to the testing laboratory. A copy of the field observations and field instrument recordings is included in Appendix B along with a detailed description of our *Field*

[1] Weber, Hayes & Associates: *Updated Site Conceptual Model - Fuel Release Investigation*, dated 6/24/2011.

Methodology for Groundwater Monitoring. The proper disposal of purged groundwater is currently being coordinated and documentation will be included in a subsequent monitoring report. .

Groundwater samples were collected as part of a regulatory mandated program required by Alameda County Environmental Health (ACEH) to monitor dissolved contaminant concentrations. Samples were submitted to a State-certified testing laboratory (Torrent Laboratories, CA-DHS ELAP #1991). The current results are tabulated on Table 1, and current and historical results including previous data collected by previous consultants are tabulated on Table 2, and the Laboratory Report and Chain-of-Custody documentation is included as Appendix C. We make no warranty regarding the quality or accuracy of data collected by others; it is presented solely for information purposes.

Submitted samples were tested for the following regulatory required set of analyses:

- Total Petroleum Hydrocarbons as Diesel (TPH-d) by EPA Method 8015M
- Total Petroleum Hydrocarbons as Gasoline (TPH-g) by GC/MS
- The volatile constituent compounds of benzene, toluene, ethylbenzene, xylenes (BTEX), and the fuel oxygenates Methyl tert-butyl ether (MTBE), tert-Butanol (TBA), di-isopropyl ether (DIPE), ethyl tert butyl ether (ETBE), and tert amyl methyl ether (TAME), by EPA Method 8260, and
- The lead scavengers 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by EPA Method 8260

2.1.1 Documentation Reporting – Groundwater Monitoring:

This report includes the following list of tables, figures, and supporting data for the annual groundwater monitoring program:

- Tabulated results of current and previously collected dissolved hydrocarbon concentrations and groundwater data (Tables 1 and 2);
- Figures presenting a plan view of current groundwater gradient and analytical results at the Site (Figure 2 & 3);
- Graphs presenting the temporal distribution of TPH-g and Benzene and groundwater elevations in key monitoring wells MW-1, MW-2, MW-3, MW-4, RW-5 and RW-9 (Figures 4 through 9);
- General description of subsurface conditions and summary chronology of previous environmental work, and updated *Site Conceptual Model* (Appendix A);

- Field sheets for the current round of sampling and our groundwater sampling protocol (Appendix B);
- Chain of Custody documentation and the laboratory's *Certificate of Analysis* (Appendix C).

2.1.2 Work Tasks Scheduled for the Next Groundwater Motoring Event:

We will continue to perform groundwater monitoring in accordance with the regulatory-approved annual schedule. As noted above, we have requested a reduction in sampling frequency to once annually. As requested by ACEH details of this recommended reduction will be included in our forthcoming *Work Plan*. Specifically, groundwater monitoring will include:

- Water level gauging and field checking water quality parameters (dissolved oxygen, ORP) in all fourteen existing groundwater-monitoring wells;
- Collecting groundwater samples from six key monitoring wells at the Site (MW-1 through MW-4, RW-5 and RW-9);
- Preparing a summary report of the collected data.

2.1.3 Discussion of Current Results:

Seventeen years of groundwater monitoring at the Site indicates that the dissolved hydrocarbon plume exceeds regulatory threshold limits, yet appears relatively stable and is naturally attenuating. However, we note a slight increasing trend in benzene concentrations for wells MW-1, 2, 3, and 4 since early 2009 (approximately 4 years after dual phase extraction remediation occurred at the Site). We also note that downgradient well MW-4 exhibits an approximate one year lag in this observed increase of benzene concentrations, relative to well MW-1, 2, and 3 (see Figures 4 through 9). This observed trend may indicate:

- Influx of contaminants from a secondary, upgradient release of fuel hydrocarbons

2.1.4 Groundwater Depth & Flow Direction

Groundwater is currently encountered at a depth of approximately 14 to 19 feet below the ground surface. Groundwater elevations of the surveyed 14-well network ranged from approximately 147 to 149 feet above Mean Sea Level (MSL) and flow is in a westerly direction, at a gradient of 0.009 feet per foot (= 1 foot of vertical drop per 111 feet of horizontal flow, see Figure 2).

- The groundwater gradient has consistently been measured to flow in a west to southwesterly direction.

2.1.5 Dissolved Contaminants of Concern

During the current monitoring event groundwater samples were collected and analyzed from six of the fourteen wells at the Site (MW-1 through MW-4, & RW-5 and RW-9). Results of the current sampling event are tabulated in Table 1, Figure 3, and in the table below.

Summary of Groundwater Sample Analytical Results

Sampled on September 22, 2011 ***(All results are in (ug/L, parts per billion, ppb)***

Well ID	*TPH As Diesel*	*TPH As Gasoline*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*
MW-1	690**	**6,700***	**1,900**	< 8.4	140	< 14.4	**23**
MW-2	690**	**7,100***	**1,900**	< 8.4	**350**	< 14.4	**39**
MW-3	**1,500***	**14,000***	**8,400**	< 17	**790**	130	**89**
MW-4	**2,000*****	**11,000***	**4,100**	< 17	160	100	< 33
RW-5	120**	680*	**480**	< 2.1	< 1.7	16	< 4.1
RW-9	**1,900***	230**	**1,600**	8.4	12	< 3.6	**8.3**
Reporting Limit:	***100***	***50***	***0.5***			***1.5***	***0.5***
Water Quality Objectives (WQO's)	***1,000***		***1***	***150***	***300***	***1,750***	***5***

WQO's = Water Quality Objectives = Maximum Contaminant Limits or Action Levels

BOLD =Indicates concentration exceeds WQO
< = Not detected at or above the labs reporting limit

bgs = below ground surface
* = Laboratory report indicates TPH-gas results (possibly aged gasoline).
**= Laboratory reports that result not typical of Diesel #2 standard pattern (possibly aged diesel or other fuel within the diesel quantification range such as diesel #4 or fuel oil).
***= Laboratory report that result not typical of Diesel standard pattern (possibly fuel lighter than diesel).
The constituents TAME (Tert-amyl-methyl ether), TBA (tert-Butyl alcohol), EDB (Ethylene Dibromide), 1,2-DCE (cis-1,2-Dichloroethane), DIPE, (Diisopropyl ether), ETBE (Ethyl Tert-Butyl Ether), were non-detect therefore they were not included in this table. See Table 2 and 3 for details.

2.1.6 Discussion of Results

Dissolved hydrocarbon concentrations have significantly declined since monitoring began at the site nearly seventeen years ago, however concentrations continue to exceed regulatory threshold limits. A slight increase in benzene concentrations observed for wells MW-1 through MW-4 since early 2009 may indicate the influx of a secondary, upgradient off-site dissolved hydrocarbon plume.

3.0 CONCLUSIONS

Current and previous groundwater monitoring results indicate:

- The groundwater gradient has consistently been measured to flow in a west to southwesterly direction.
- Seventeen years of groundwater monitoring data collected at the Site indicates a gradual degradation of the chemicals of concern over time, yet extent of groundwater degraded by hydrocarbons still significantly exceeds regulatory threshold limits. Observed slight but steady increases of benzene concentrations in wells MW-1 through MW-4 may indicate the influx of s secondary offsite source.

4.0 RECOMMENDATIONS

Based on our assessment of current and previous Site conditions, we recommend the following:

- Complete the proposed *Work Plan for a Data Gap Assessment* designed to close several data gaps that need to be assessed prior to selecting an appropriate remedial alternative for the Site. The *Work Plan* is due for submittal by the ACEH deadline of November 30, 2011.
- Semi-annual groundwater monitoring continues to show stable and declining trends of dissolved hydrocarbons. Based on the comprehensive groundwater monitoring data set we recommend reducing the monitoring frequency to an annual schedule. As noted above, ACEH has requested that we include rationale for selecting an appropriate quarter to complete the proposed annual groundwater monitoring in our forthcoming *Work Plan*.
- Eliminating the following constituents from the suite of groundwater analysis based on consistent lack of detections (see Table 2):
    - The fuel oxygenates di-isopropyl ether (DIPE), ethyl tert butyl ether (ETBE), and tert amyl methyl ether (TAME), by EPA Method 8260, and
    - The lead scavengers 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by EPA Method 8260

5.0 LIMITATIONS

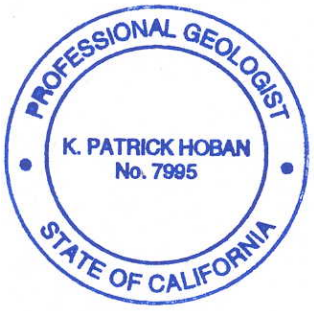
Our service consists of professional opinions and recommendations made in accordance with generally accepted geologic and engineering principles and practices. This warranty is in lieu of all others, either express or implied. The analysis and conclusions in this report are based on sampling and testing which are necessarily limited. Additional data from future work may lead to modification of the opinions expressed herein.

All work related to the UST investigation and remediation at this site is done under the direct supervision of a Professional Geologist or Engineer, registered in California, and experienced in environmental remediation.

Thank you for the opportunity to participate in the assessment and remediation of this site. If you have any questions regarding this report, or any aspect of this project, please contact us at (831) 722-3580.

Sincerely,

Weber, Hayes and Associates, Inc.



By _____ And: _____

Jered Chaney, PG# 8452
Project Geologist

Pat Hoban, PG# 7795
Senior Geologist

Attachments:

Figure 1:	Location Map
Figure 2:	Site Map with Groundwater Gradient, September 22, 2011
Figure 3:	Site Map with Groundwater Analytical Results, September 22, 2011
Figure 4:	TPHg and Benzene Concentration Trends Well MW-1 (March 1997 to Present)
Figure 5:	TPHg and Benzene Concentration Trends Well MW-2 (March 1997 to Present)
Figure 6:	TPHg and Benzene Concentration Trends Well MW-3 (March 1997 to Present)
Figure 7:	TPHg and Benzene Concentration Trends Well MW-4 (March 1997 to Present)
Figure 8:	TPHg and Benzene Concentration Trends Well RW-5 (March 2005 to Present)
Figure 9:	TPHg and Benzene Concentration Trends Well RW-9 (March 2005 to Present)
Table 1:	Current Summary of Groundwater Elevation and PHC Analytical Data
Table 2:	Current & Historical Summary of Groundwater Elevation and PHC Analytical Data
Appendix A:	Site Description and Background & Site Conceptual Model
Appendix B:	Daily Field Record (Groundwater Sampling) – Weber, Hayes & Associates, September 22, 2011, & Field Methodology for Groundwater Sampling
Appendix C:	Certificate of Analysis (Torrent Laboratory) and Chain of Custody Documentation

cc: Jeffrey S. Lawson < jsl@svlg.com >
Silicon Valley Law Group
25 Metro Drive, Suite 600
San Jose, CA 95110

6.0 References

Alameda County Environmental Health directives for: 3055 35th Avenue, Oakland**:**

- Upload/download website (site ID#:RO-0000271): http://ehgis.acgov.org/adeh/lop_results.jsp?trigger=2&enterd_search=RO0000271&searchfield=RECORD_ID
- 2005-December: *Electronic Report Upload (ftp) Instructions,* revision.
- 2006, Dec-6: *Response to Cambria Oct-17, 2006 "Request for Reconsideration of Recommendations".*
- 2007, Mar-1: *Approval of Cambria Jan-12, 2007 "Off-site and Soil Gas Work Plan".*
- 2007, Mar-1: *Approval of Conestoga-Rovers and Associates (CRA) Apr-11, 2008: "Workplan Addendum for Additional Characterization and Soil Vapor Sampling"*
- 2008, Apr-7: *Request to Present Phase I Results and Submit a Soil Vapor Workplan.*
- 2008, Jul-24: *Groundwater Monitoring Requirements: Reduction to Semi-Annual Groundwater Monitoring.*
- 2011, Jan-21: *Request for Updated Site Conceptual Model,* electronic directive
- 2011, Sept-20: *Request for Work Plan*

California Environmental Protection Agency

- 1995-July: *Guidelines for Hydrogeologic Characterization of Hazardous Substance Released Sites*

Cambria Environmental Technology (Cambria) reports for: 3055 35th Avenue, Oakland**:**

- 1996, June-20: *Investigation Work Plan*
- 1997, June-27: *Risk-Based Corrective Action Analysis*
- 1998, April 8: *Corrective Action Plan*
- 1998, May-28: *Corrective Action Plan Addendum*
- 1998, Dec-07: *Well Installation and Supplemental Subsurface Investigation Report*
- 1999, Aug-14: *Second Quarter 1999 Monitoring and Interim Remedial Action Report*
- 2004, Oct-29: *Groundwater Monitoring and System Progress Report*
- 2005, Feb-22: *Remediation Work Plan*
- 2006, Jan-30: *Revised Remediation Work Plan*
- 2006, July-13: *Site Conceptual Model and Off-site Work Plan.*
- 2007, Jan-12: *Offsite Soil Gas Workplan ,*

Conestoga-Rovers and Associates (CRA) reports for: 3055 35th Avenue, Oakland**:**

- 2008, Apr-11: *Workplan for Additional Characterization and Soil Vapor Sampling*
- 2009, Feb-28: *Site Characterization Report*
- 2010, Oct-18: *Semi-Annual Groundwater Monitoring Report (dry season)*
- 2011, May-5: *Semi-Annual Groundwater Monitoring Report (wet season).*

Consolidated Technologies reports for: 3055 35th Avenue, Oakland**:**

- 1991: *Results for Preliminary Subsurface Site Investigation*
- 1992, Sept*: Work Plan for a Subsurface Petroleum Hydrocarbon Contamination Assessment*

REFERENCES (Continued)

Leu, D. J., et al., 1989, *Leaking Underground Fuel Tank Field (LUFT) Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, State Water Resources Control Board*

State Water Resources Control Board:

- Upload/download website (site ID#:T0600100538): http://geotracker.swrcb.ca.gov/profile_report.asp?global_id=T0600100538
- 2010, Dec-28: Division of Financial Assistance *Preliminary 5-Year Review Summary Report For Claim # 1275*
- 2005, May-2008: *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*

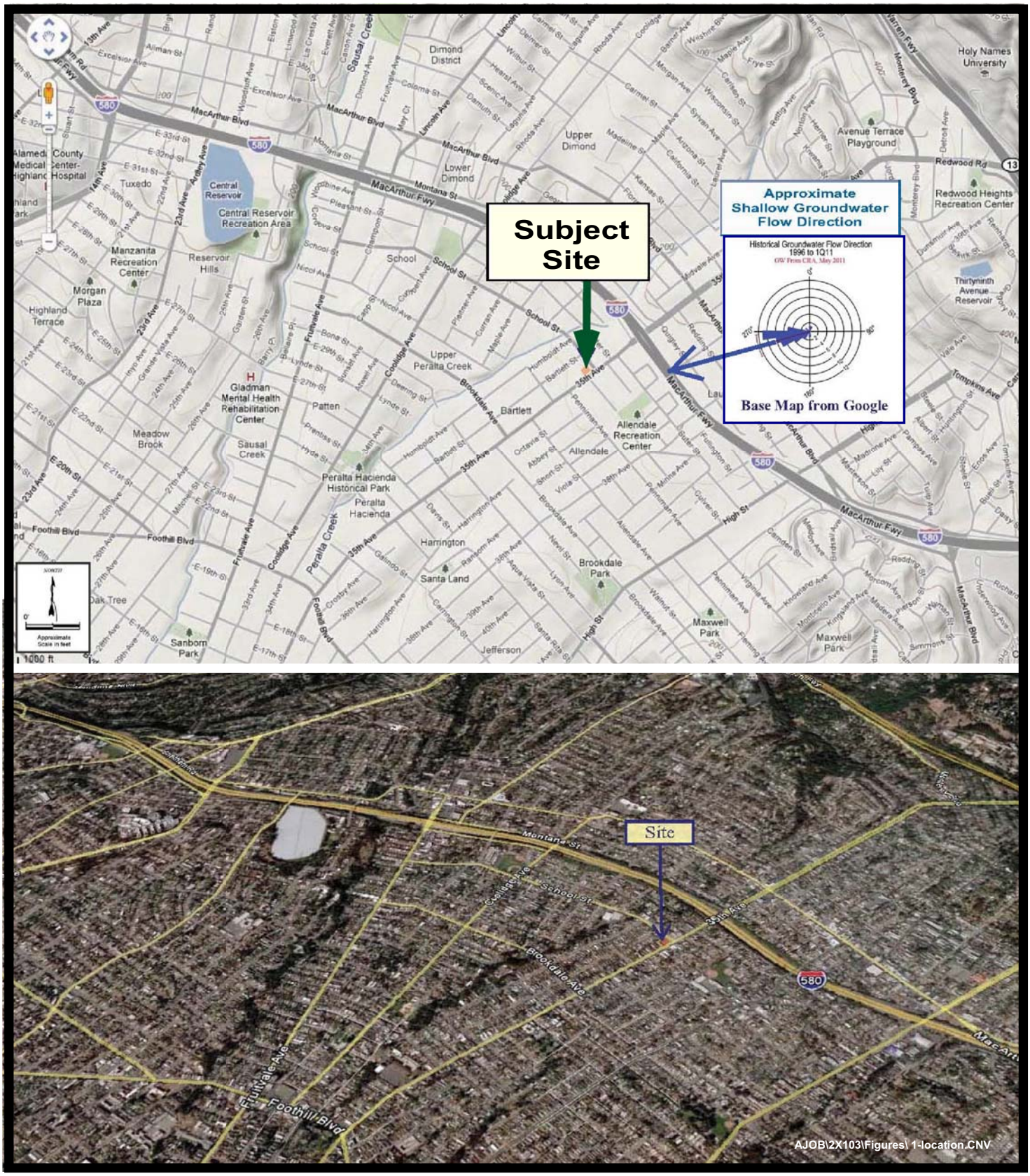
Weber, Hayes and Associates reports for: 3055 35th Avenue, Oakland:

- 2011, June-24: *Updated Site Conceptual Model – Fuel Release Investigation*

ACRONYMS

ACEH	Alameda County Environmental Health
bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CAP	Corrective Action Plan
CHHSL:	California Human Health Screening Level
COC:	Chemical of Concern
CRA	Conestoga-Rovers & Associates
CRWQCB:	California Regional Water Quality Control Board, Central Coast Region
DPE	Dual-Phase Extraction
EBMUD	East Bay Municipal Utility District
ESLs	Environmental Screening Levels
ISCO	In-Situ Chemical Oxidation
ppm_v	parts per million by volume
SCM:	Site Conceptual Model
SVE	Soil Vapor Extraction
TPH-gas	Total Petroleum Hydrocarbons as gasoline
State Cleanup Fund	State Underground Storage Tank Fund
USTs	Underground Fuel Storage Tanks
WHA:	Weber, Hayes and Associates

Figures



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Location Map
Former Exxon Station
3055 35th Avenue
Oakland, California

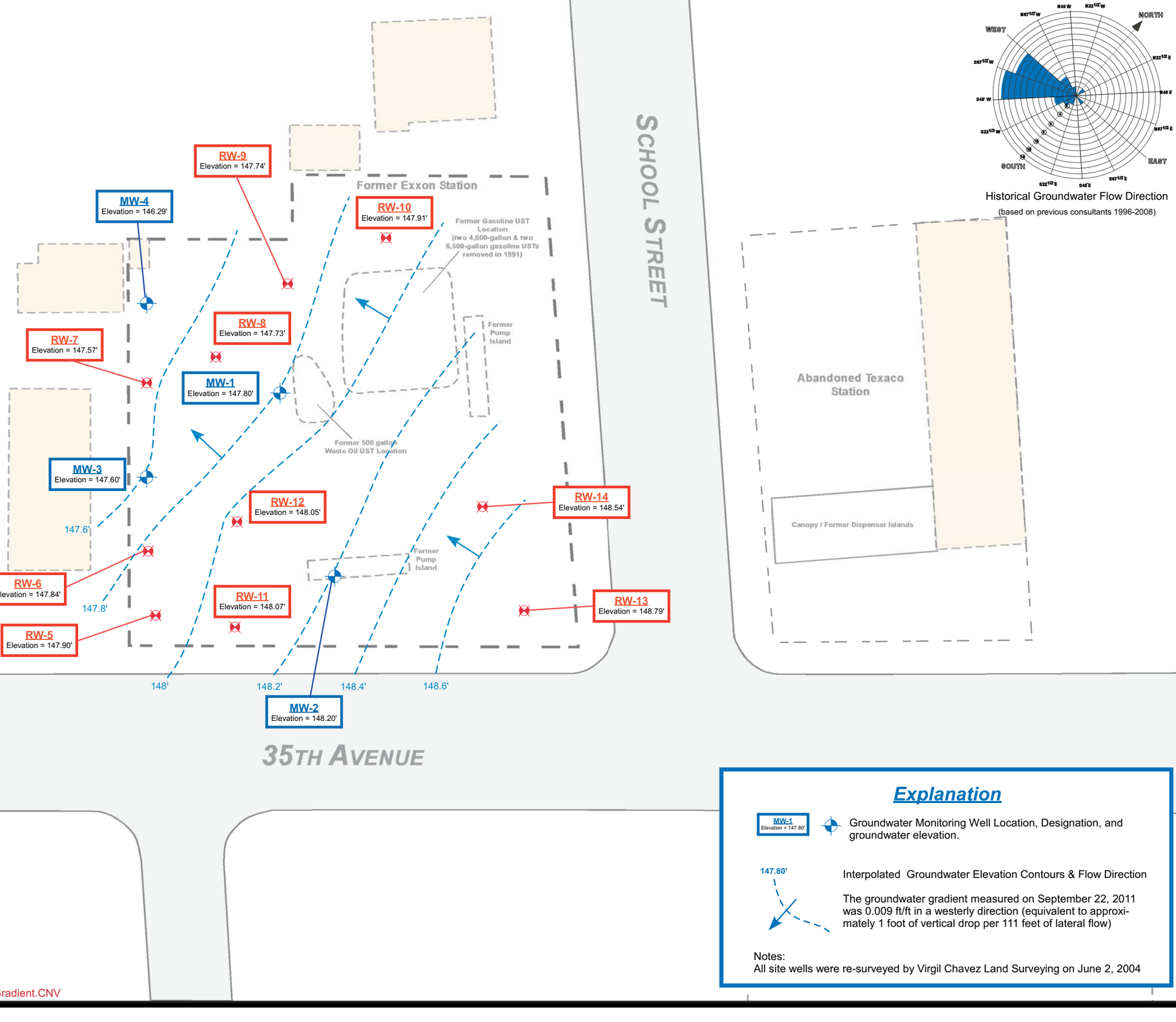
FIGURE 1
Job # 2X103

NORTH

0' 30'

Approximate Scale (in feet)

Base Map from Conestoga-Rovers & Associates & Google Earth 2011



Historical Groundwater Flow Direction

(based on previous consultants 1996-2008)

Explanation

MW-1 Elevation = 147.80' — Groundwater Monitoring Well Location, Designation, and groundwater elevation.

147.80' — Interpolated Groundwater Elevation Contours & Flow Direction

The groundwater gradient measured on September 22, 2011 was 0.009 ft/ft in a westerly direction (equivalent to approximately 1 foot of vertical drop per 111 feet of lateral flow)

Notes:
All site wells were re-surveyed by Virgil Chavez Land Surveying on June 2, 2004

2x103.Oakland-35thWP\QM\Figures\2-Gradient.CNV

Figure 2
Project 2X103

Groundwater Elevations and Gradient September 22, 2011 Former Exxon Station

3055 35th Avenue
Oakland, California

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NORTH

0' 30'

Approximate Scale (in feet)

Base Map from Conestoga-Rovers & Associates & Google Earth 2011

MW-4
TPH-d: 2,000* ppb
TPH-g: 11,000* ppb
B: 4,100 ppb
T: ND
E: 160 ppb
X: 100 ppb
MTBE: ND
TBA: < 130 ppb
EDB: < 17 ppb
1,2-DCE: < 24 ppb
All Others: < 28-35 ppb

RW-9
TPH-d: 230** ppb
TPH-g: 1,900* ppb
B: 1,600 ppb
T: 8.4 ppb
E: 12 ppb
X: < 3.6 ppb
MTBE: 8.3 ppb
TBA: < 17 ppb
EDB: < 2.1 ppb
1,2-DCE: < 3.0 ppb
All Others: < 3.5-4.4 ppb

Former Exxon Station

RW-10
Not sampled

Former Gasoline UST Location (two 4,000-gallon & two 6,500-gallon gasoline USTs removed in 1991)

RW-8
Not sampled

MW-1
TPH-d: 690** ppb
TPH-g: 6,700* ppb
B: 1,900 ppb
T: < 8.4 ppb
E: 140 ppb
X: < 14.4 ppb
MTBE: 23 ppb
TBA: < 66 ppb
EDB: < 8.6 ppb
1,2-DCE: < 12 ppb
All Others: < 14-17 ppb

Former Pump Island

RW-7
Not sampled

MW-3
TPH-d: 1,500** ppb
TPH-g: 14,000* ppb
B: 8,400 ppb
T: < 17 ppb
E: 790 ppb
X: 130 ppb
MTBE: 89 ppb
TBA: < 130 ppb
EDB: < 17 ppb
1,2-DCE: < 24 ppb
All Others: < 28-35 ppb

Former 500 gallon Waste Oil UST Location

RW-12
Not sampled

RW-14
Not sampled

Former Pump Island

RW-6
Not sampled

RW-11
Not sampled

RW-13
Not sampled

RW-5
TPH-d: 120** ppb
TPH-g: 680* ppb
B: 480 ppb
T: ND
E: ND
X: 16 ppb
MTBE: ND
TBA: < 17 ppb
EDB: < 2.1 ppb
1,2-DCE: < 3.0 ppb
All Others; < 3.5-4.4 ppb

MW-2
TPH-d: 690** ppb
TPH-g: 7,100* ppb
B: 1,900 ppb
T: < 8.4 ppb
E: 350 ppb
X: < 14.4 ppb
MTBE: 39 ppb
TBA: < 66 ppb
EDB: < 8.6 ppb
1,2-DCE: < 12 ppb
All Others: < 14-17 ppb

SCHOOL STREET

3 ENUE

Approximate Shallow Groundwater Flow Direction

Abandoned Texaco Station

EXPLANATION

All groundwater results are presented in parts per billion (ppb [ug/L]).
Samples obtained on multiple dates; see Table 1 for details

MW-1 Diesel (TPH): 2.9 ppb Toluene: 0.47 ppb — Monitoring Well Groundwater Results

RW-5 Benzene: 3.9 ppb — Remediation Monitoring Well Groundwater Results

* = Laboratory report indicates TPH-gas results (possibly aged gasoline).
** = Laboratory reports that result not typical of Diesel #2 standard pattern (possibly aged diesel or other fuel within the diesel quantification range such as diesel #4 or fuel oil).
x = Laboratory report that result not typical of Diesel standard pattern (possibly fuel lighter than diesel).

Primary Contaminants of Concern		Water Quality Goal
TPH-d =	Diesel (TPH)	1,000 ppb
TPH-g =	Gasoline (TPH)	1,000 ppb
B =	Benzene	1 ppb
T =	Toluene	150 ppb
E =	Ethylbenzene	300 ppb
X =	Xylenes	1,750 ppb
MTBE =	Methyl tert-butyl ether	5 ppb
TBA =	t-Butyl Alcohol	12 ppb
EDB =	1,2-Dibromethane	0.05 ppb
1,2-DCE =	1,2-Dichloroethane	0.5 ppb
DIPE, ETBE, TAME =	Diisopropyl ether, Ethyl tert-butyl ether, Tert-amyl methyl ether (not established)	

2x103.Oakland-35thWP\QM\2011\3q11\Figures\3-Results.CNV

Figure 3 Project 2X103

Groundwater Monitoring Results September 22, 2011 Former Exxon Station

3055 35th Avenue Oakland, California

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Figure 4

TPHg and Benzene Concentration Trends
Well MW-1 (March 1997 to Present)

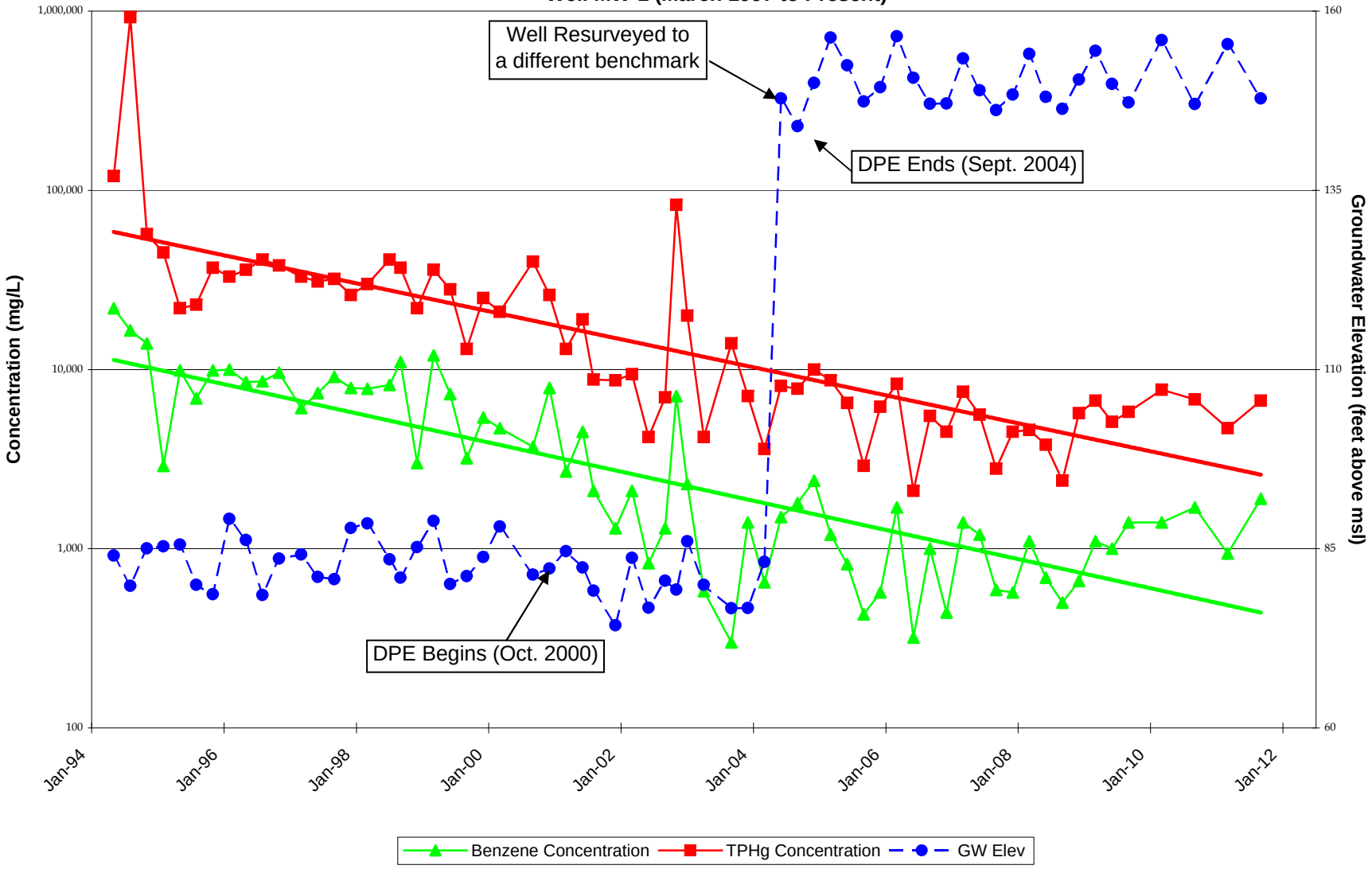


Figure 5
TPHg and Benzene Concentration Trends
Well MW-2 (March 1997 to Present)

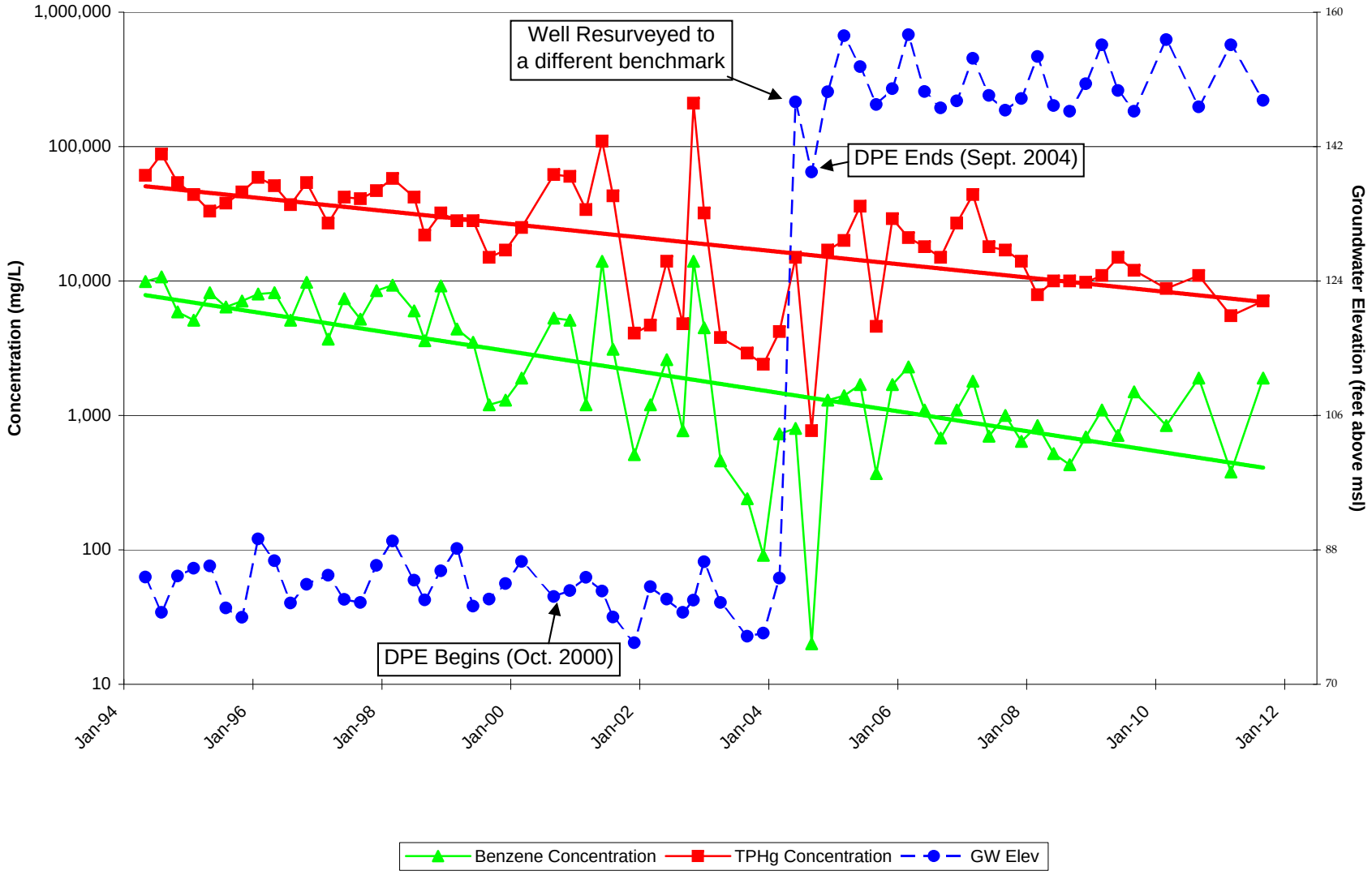


Figure 6

TPHg and Benzene Concentration Trends
Well MW-3 (March 1997 to Present)

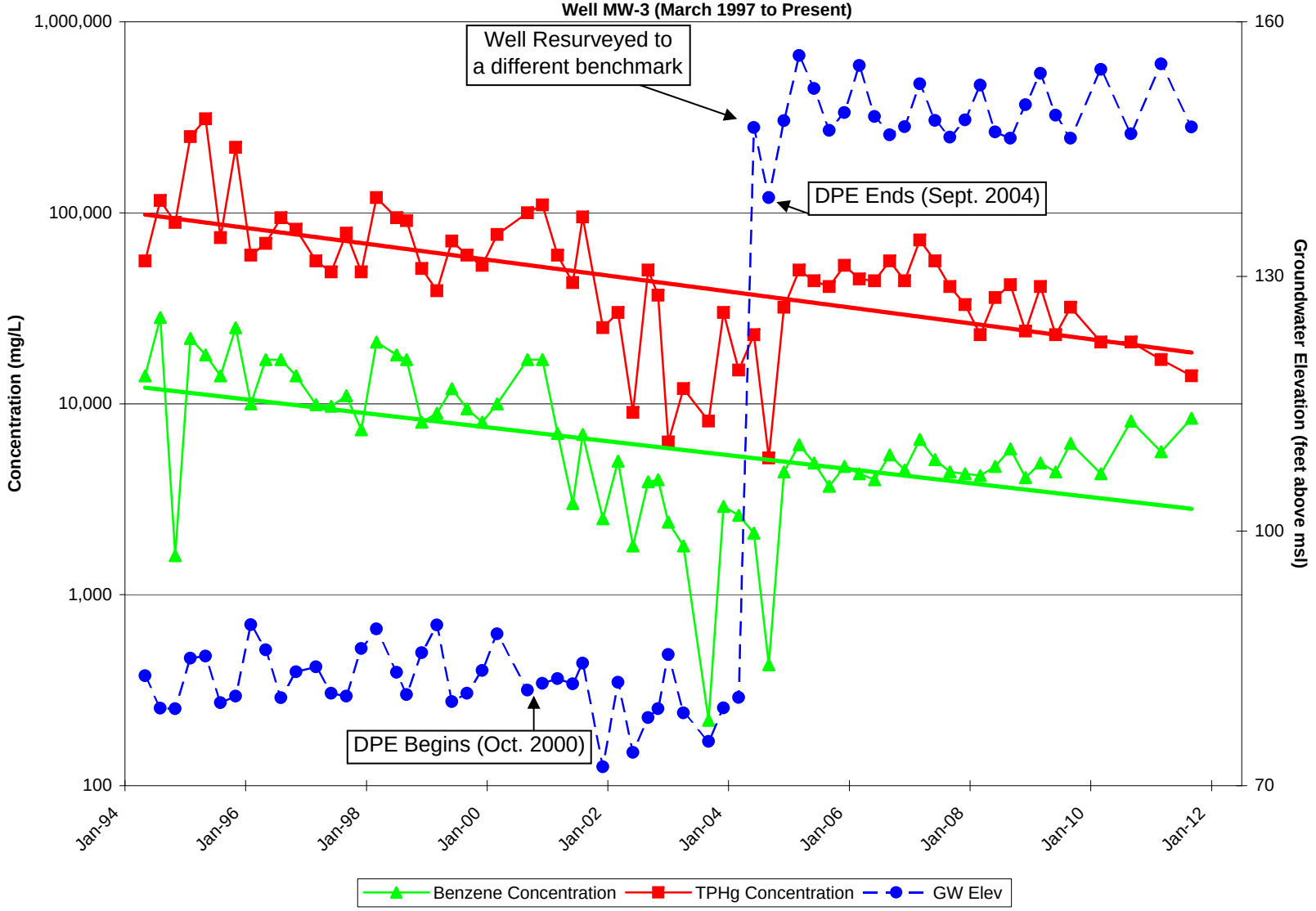


Figure 7
TPHg and Benzene Concentration Trends
Well MW-4 (March 1997 to Present)

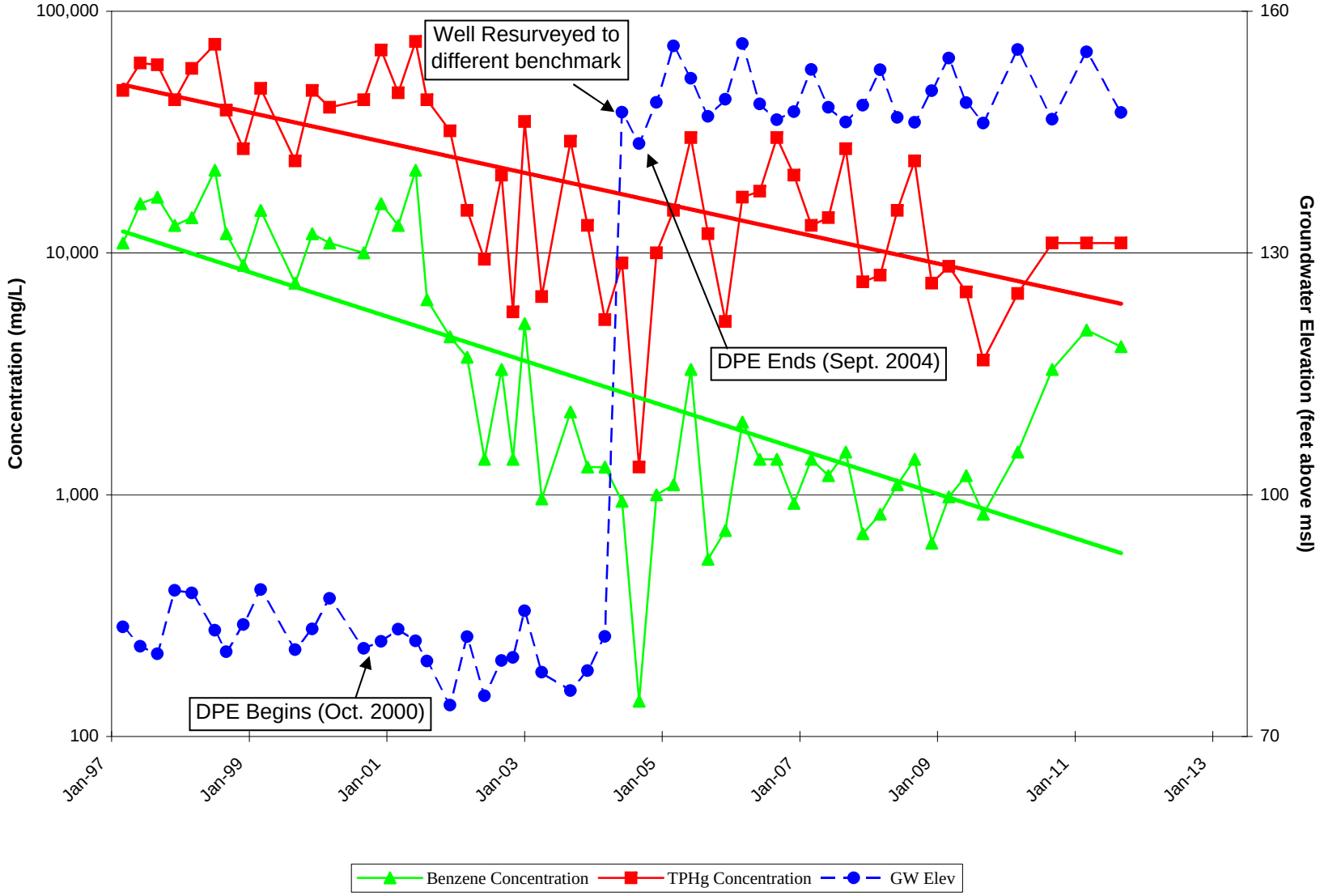


Figure 8

TPHg and Benzene Concentration Trends
Well RW-5 (March 2005 to Present)

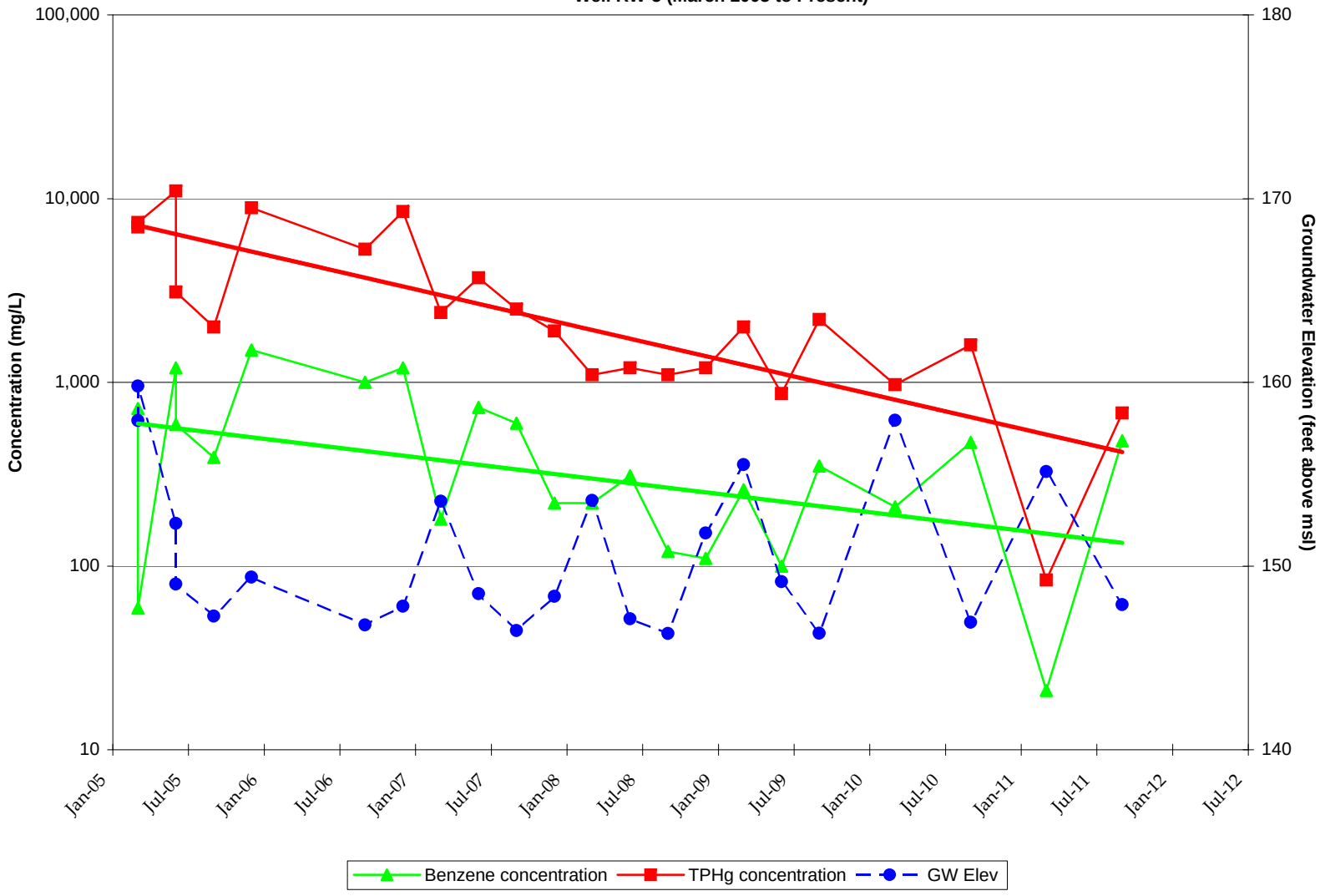
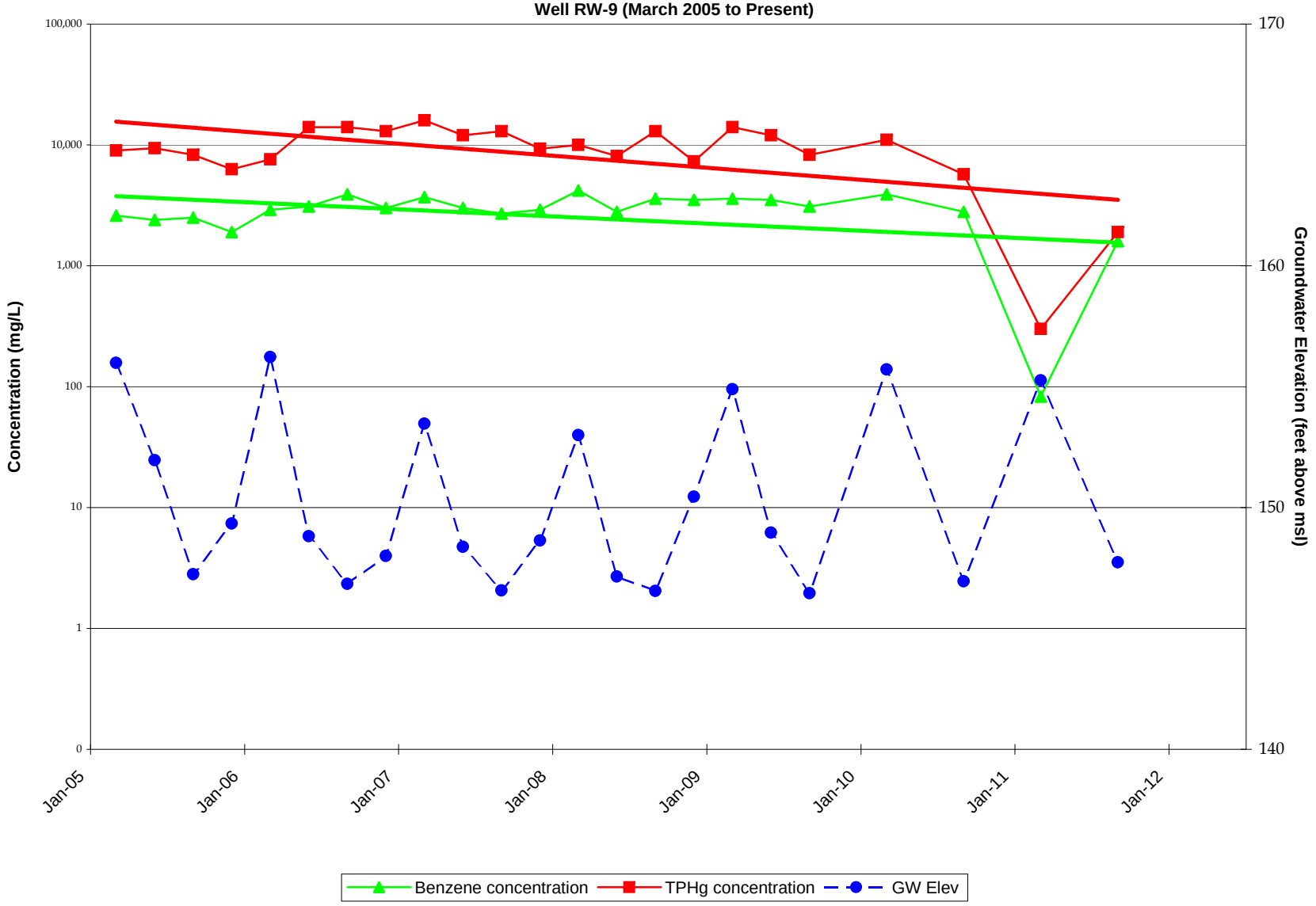


Figure 9

TPHg and Benzene Concentration Trends
Well RW-9 (March 2005 to Present)



Tables

Table 1: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information	Date	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data							Field Measurements	
				Total Petroleum Hydrocarbons		Volatile Organic Compounds						
Well # TOC				Diesel	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen (mg/L)	Redox Potential (ORP)
MW-1												
167.02	9/22/2011	19.22	147.80	690**	**6,700***	**1,900**	< 8.4	140	< 14.4	**23**	0.72	-91
MW-2												
166.14	9/22/2011	17.94	148.20	690**	**7,100***	**1,900**	< 8.4	**350**	< 14.4	**39**	0.76	-106
MW-3												
162.94	9/22/2011	15.34	147.60	**1,500****	**14,000***	**8,400**	< 17	**790**	130	**89**	1.04	-82
MW-4												
163.49	9/22/2011	16.05	147.44	**2,000*****	**11,000***	**4,100**	< 17	160	100	< 33	0.69	-98
RW-5												
162.34	9/22/2011	14.44	147.90	120**	680*	**480**	< 2.1	< 1.7	16	< 4.1	0.66	-65
RW-6												
162.36	9/22/2011	14.52	147.84	*Not sampled*							0.83	-86
RW-7												
162.72	9/22/2011	15.15	147.57	*Not sampled*							1.16	-69
Laboratory Detection Limit:				**10**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):				**1,000**		**1**	**150**	**300**	**1,750**	**5**	**--**	

Table 1: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells

FORMER EXXON SERVICE STATION

3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information	Date	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data							Field Measurements	
				Total Petroleum Hydrocarbons		Volatile Organic Compounds						
Well # TOC				Diesel	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen (mg/L)	Redox Potential (ORP)
RW-8												
164.13	9/22/2011	16.40	147.73	*Not sampled*							1.22	-58
RW-9												
163.86	9/22/2011	16.12	147.74	230**	**1,900***	**1,600**	8.4	12	< 3.6	**8.3**	1.03	-123
RW-10												
163.02	9/22/2011	15.11	147.91	*Not sampled*							0.77	-104
RW-11												
162.57	9/22/2011	14.50	148.07	*Not sampled*							0.94	-96
RW-12												
163.06	9/22/2011	15.01	148.05	*Not sampled*							0.75	-77
RW-13												
164.34	9/22/2011	15.55	148.79	*Not sampled*							0.78	-78
RW-14												
163.76	9/22/2011	15.22	148.54	*Not sampled*							0.8	-108
Laboratory Detection Limit:				**10**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):				**1,000**		**1**	**150**	**300**	**1,750**	**5**	**--**	

Notes

WQG = Water Quality Goals: Goals establised by the CRWQCB Central Coast Region based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits.**BOLD = Above WQG Threshold Limits.**

ND = Not detected at or above the lab's reporting limit.

bgs = below ground surface

< # = Reporting limit elevated due to sample dilution and compound not detected at or above reporting limit.

The constituents **TAME (Tert-amyl-methyl ether), TBA (tert-Butyl alcohol), EDB (Ethylene Dibromide) , 1,2-DCE (cis-1,2-Dichloroethane), DIPE, (Diisopropyl ether), ETBE (Ethyl Tert-Butyl Ether),** were non-detect therefore they were not included in this table. See Table 2 and 3 for details.

***** = Laboratory report indicates TPH-gas results (possibly aged gasoline).

****** = Laboratory reports that result not typical of Diesel #2 standard pattern (possibly aged diesel or other fuel within the diesel quantification range such as diesel #4 or fuel oil).

******* = Laboratory report that result not typical of Diesel standard pattern (possibly fuel lighter than diesel).

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data											Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds									
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
MW-1	5/25/1994	Sheen		16.79	84.06	25,000	< 50,000	120,000	22,000	17,000	2,800	16,000	---	--	--	--	--	---	
100.85	7/19/1994	---		20.77	80.08	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/18/1994	Sheen		21.04	79.81	---	---	925,000	16,500	6,200	1,000	9,400	---	---	---	---	---	---	
	11/11/1994	---		15.80	85.05	---	---	57,000	14,000	4,400	1,400	6,400	---	---	---	---	---	---	
	2/27/1995	---		15.53	85.32	---	---	45,000	2,900	2,500	760	4,100	---	---	---	---	---	---	
	5/23/1995	---		15.29	85.56	---	---	22,000	9,900	990	790	2,000	---	---	---	---	---	---	
	8/22/1995	---		20.90	79.95	---	---	23,000	6,900	340	1,200	1,900	---	---	---	---	---	---	
	11/29/1995	---		22.19	78.66	---	---	37,000	9,900	530	1,600	2,900	---	---	---	---	---	---	
	2/21/1996	---		11.69	89.16	4,300	---	33,000	10,000	480	1,000	1,800	3,300	---	---	---	---	---	
	5/21/1996	---		14.62	86.23	8,500	---	36,000	8,500	1,400	1,300	2,800	1,900	---	---	---	---	---	
	8/22/1996	---		22.30	78.55	6,200	---	41,000	8,600	1,300	1,500	2,900	< 200	---	---	---	---	8.0	
	11/27/1996	Sheen		17.24	83.61	6,100	---	38,000	9,600	950	1,600	3,100	< 400	---	---	---	---	5.6	
	3/20/1997	---		16.65	84.20	10,000	---	33,000	6,100	560	970	2,200	< 400	---	---	---	---	8.5	
	6/25/1997	---		19.77	81.08	7,400[a]	---	31,000	7,400	440	890	1,800	< 400	---	---	---	---	3.7	
	9/17/1997	---		20.12	80.73	3,500[e]	---	32,000[d]	9,100	550	1,000	2,000	< 1,000	---	---	---	---	2.1	
	12/22/1997	---		12.95	87.90	5,800[e]	---	26,000[d]	7,900	370	920	1,500	< 790	---	---	---	---	0.7	
	3/18/1998	Sheen		12.34	88.51	4,200[e,f]	---	30,000[d]	7,800	820	840	2,000	< 1,100	---	---	---	---	1.3	
	7/14/1998	---		17.34	83.51	8,900[e,f]	---	41,000[d]	8,200	1,100	1,200	3,000	< 200	---	---	---	---	1.8	
	9/30/1998	---		19.90	80.95	3,300	---	37,000	11,000	950	1,200	2,800	< 20	---	---	---	---	2.0	
	12/8/1998	---		15.62	85.23	3,700	---	22,000	3,000	1,200	730	3,100	< 900	---	---	---	---	---	
	3/29/1999	---		11.98	88.87	6,800[e]	---	36,000[d]	12,000	750	1,300	2,400	950	---	---	---	---	0.50	
	6/29/1999	---		20.77	80.08	3,500[e]	---	28,000[d]	7,300	420	810	1,700	< 1,300	---	---	---	---	0.10	
	9/28/1999	---		19.68	81.17	3,600[e,f]	---	13,000[d]	3,200	130	320	1,100	< 210	---	---	---	---	0.55	
	12/10/1999	---		17.02	83.83	2,900[e,f]	---	25,000[d]	5,400	130	620	1,400	< 1,000	---	---	---	---	1.03	
	3/23/2000	---		12.76	88.09	3,300[f]	---	21,000[d]	4,700	140	470	1,100	< 350	---	---	---	---	---	
	9/7/2000	---		19.45	81.40	12,000[e,g]	---	40,000[d,g]	3,700	1,400	910	4,900	< 50	---	---	---	---	0.17	
	12/5/2000	---		18.60	82.25	3,400[e]	---	26,000[a]	7,900	150	580	810	< 300	---	---	---	---	0.35	Not operating
	3/7/2001	---		16.19	84.66	2,400	---	13,000	2,700	43	69	300	< 100	---	---	---	---	0.49	Not operating
	6/6/2001	---		18.47	82.38	4,000	---	19,000	4,500	130	270	430	< 400	---	---	---	---	0.39	Not operating
	8/30/2001	---		21.70	79.15	1,400[d]	---	8,800[a]	2,100	45	91	240	< 130	---	---	---	---	0.27	Operating
	12/7/2001	---		26.55	74.30	1,900[e,f]	---	8,700[d]	1,300	160	38	730	< 20	---	---	---	---	0.59	Operating
	3/11/2002	---		17.13	83.72	1,400[e]	---	9,400[d]	2,100	200	74	470	< 20	---	---	---	---	0.39	Operating
	6/10/2002	---		24.10	76.75	900[e,k]	---	4,200[d]	830	170	110	460	< 100	---	---	---	---	---	Operating
	9/26/2002	---		20.30	80.55	1,300[e,f,k]	---	7,000[d]	1,300	190	200	760	< 100	---	---	---	---	0.70	Operating
	11/21/2002	---		21.55	79.30	200,000[e,g]	---	83,000[d,g]	7,100	1,700	3,000	13,000	< 1,000	---	---	---	---	0.49	Operating
	1/13/2003	---		14.80	86.05	5,300[e,f]	---	20,000[d]	2,300	480	300	2,100	< 500	---	---	---	---	0.33	Not operating
	4/25/2003	---		20.90	79.95	320[e]	---	4,200[d]	580	81	59	470	< 50	---	---	---	---	---	Operating
	5/30/2003	---		16.65	84.20	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/3/2003	---		24.16	76.69	36,000[e,f]	---	14,000[d]	300	50	33	480	< 50	---	---	---	---	---	Operating
	12/2/2003	Sheen [Lab]		24.12	76.73	9,300[e,f,g]	---	7,100[d,g]	1,400	230	160	820	< 100	---	---	---	---	---	Operating
	3/18/2004	---		17.70	83.15	1,100[e,f]	---	3,600[d]	650	59	38	370	< 90	---	---	---	---	---	Operating
	6/16/2004	---		19.20	81.65	2,300[e,f]	---	8,100[d]	1,500	69	22	1,000	< 100	---	---	---	---	---	Not operating
	9/27/2004	---		23.07	77.78	1,700[e]	---	7,800[d]	1,800	110	120	670	< 180	---	---	---	---	0.28	Not operating
	12/27/2004	---		17.04	83.81	1,400[e]	---	10,000[d]	2,400	170	170	1,500	< 120	---	---	---	---	0.41	Not operating
167.02	3/7/2005	---		10.73	156.29	1,300[e,f,k]	---	8,700[d]	1,200	99	140	770	< 500	---	---	---	---	0.91	Not operating
	6/21/2005	---		14.60	152.42	930[e,k]	---	6,500[d]	820	26	57	110	< 250	---	---	---	---	---	Not operating
	9/21/2005	---		19.64	147.38	860[e,k,f]	---	2,900[d]	430	19	46	150	< 50	< 66	< 8.6	< 12	< 14 - 17	1.14	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA
All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data											Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds									
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
MW-1	12/14/2005	Sheen [Field]		17.63	149.39	4,000[e,f,k]	---	6,200[d]	570	32	72	420	< 110	---	---	---	---	1.08	Not operating
Continued	3/22/2006	Sheen [Field]		10.52	156.50	1,100[e,f,k]	---	8,300[d]	1,700	100	190	660	< 150	---	---	---	---	0.84	Not operating
	6/30/2006	Sheen [Field]		16.33	150.69	1,500[m,k,l]	---	2,100[d,l]	320	6.1	< 1.0	77	< 90	---	---	---	---	0.66	Not operating
	9/5/2006	Sheen [Lab]		19.96	147.06	1,500[e,f,k,g]	---	5,500[d,g]	1,000	45	81	310	< 120	---	---	---	---	0.38	Not operating
	12/6/2006	Sheen [Lab]		19.92	147.10	760 [e,g]	---	4,500 [d,g]	440	13	42	190	< 60	---	---	---	---	0.55	Not operating
	3/16/2007	---		13.62	153.40	1,800 [e,f]	---	7,500 [d]	1,400	30	100	270	< 150	---	---	---	---	0.58	Not operating
	6/15/2007	Sheen [Field]		18.07	148.95	1,500 [e,k,f]	---	5,600 [d]	1,200	29	84	190	56	---	---	---	---	0.74	Not operating
	9/6/2007	---		20.84	146.18	690 [e,f]	---	2,800 [d]	590	17	35	100	< 80	---	---	---	---	0.90	Not operating
	12/8/2007	Sheen [Field]		18.66	148.36	520 [e,f]	--	4,500 [d]	570	13	57	200	< 120	---	---	---	---	1.24	Not operating
	3/9/2008	Sheen [Field]	(Z)	12.98	154.04	(470 [e])	(< 250)	(4,600 [d])	(1,100)	(23)	(82)	(140)	(< 50)	---	---	---	---	1.17	Not operating
	6/14/2008	---	(Z)	18.98	148.04	(410 [e])	(< 250)	(3,800 [d])	(690)	(12)	(64)	(240)	(< 80)	---	---	---	---	1.95	Not operating
	9/6/2008	---	(Z[TPHd])	20.66	146.36	(420 [e])	---	2,400 [d]	500	11	30	67	< 75	---	---	---	---	1.20	Not operating
	12/28/2008	Sheen [Field]	(Z[TPHd])	16.57	150.45	(2,800 [e])	< 250	5,700 [d]	660	17	110	320	(41)	---	---	---	---	1.06	Not operating
	3/14/2009	Sheen [Field]	(Z[TPHd])	12.57	154.45	2,000 [e,f,k] (860 [e])	---	6,700 [d]	1,100	23	100	180	(35)	---	---	---	---	1.19	Not operating
	6/7/2009	Sheen [Field]	(Z[TPHd])	17.17	149.85	1,400 [e,f,m] (690) [e]	---	5,100 [d]	1,000	9.2	35	71	(42)	---	---	---	---	0.95	Not operating
	9/5/2009	--	(Z[TPHd])	19.78	147.24	1500 [e,f,k] (1,200) [e,k]	--	5,800 [d]	1,400	21	60	150	(37)	---	---	---	---	1.22	Not operating
	3/14/2010	--	(Z[TPHd])	11.08	155.94	2,100 [e,f] (2,000) [e,f]	--	7,700[d]	1,400	22	10	210	(42)	---	---	---	---	1.64	Not operating
	9/10/2010	--	(Z[TPHd])	19.99	147.03	1,700 [e,f] (790) [e,f]	--	6,800 [d]	1,700	17	150	150	(28)	---	---	---	---	0.65	Not operating
	3/17/2011	--		11.65	155.37	1,100 [e]	--	4,700 [d]	940	17	5.7	55	(34)	---	---	---	---	0.69	Not operating
	9/22/2011	--		19.22	147.80	690**	--	**6,700***	**1,900**	< 8.4	140	< 14.4	23	---	---	---	---	0.72	
MW-2	5/25/1994	---		15.65	84.35	6,900	< 5,000	61,000	9,900	7,400	960	4,600	---	---	---	---	---	---	
100.00	7/19/1994	---		19.81	80.19	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/18/1994	---		20.37	79.63	---	---	88,000	10,750	10,500	1,850	9,600	---	---	---	---	---	---	
	11/11/94	---		15.52	84.48	---	---	54,000	5,900	6,700	1,300	7,500	---	---	---	---	---	---	
	2/27/1995	Sheen		14.46	85.54	---	---	44,000	5,100	5,300	930	6,400	---	---	---	---	---	---	
	5/23/1995	---		14.17	85.83	---	---	33,000	8,200	5,600	900	6,600	---	---	---	---	---	---	
	8/22/1995	---		19.80	80.20	---	---	38,000	6,400	5,000	1,100	5,600	---	---	---	---	---	---	
	11/29/95	---		21.05	78.95	---	---	46,000	7,100	5,300	1,300	6,000	---	---	---	---	---	---	
	2/21/1996	---		10.53	89.47	---	---	59,000	8,000	6,000	1,800	8,900	4,500	---	---	---	---	---	
	5/21/1996	---		13.47	86.53	3,400	---	51,000	8,200	5,200	1,300	6,600	2,400	---	---	---	---	---	
	8/22/1996	---		19.12	80.88	5,700	---	37,000	5,100	3,500	960	4,500	< 200	---	---	---	---	3.0	
	11/27/1996	Sheen		16.61	83.39	10,000	---	54,000	9,800	7,000	1,800	7,900	< 2,000	---	---	---	---	3.1	
	3/20/1997	---		15.39	84.61	6,100	---	27,000	3,700	2,300	580	2,800	< 400	---	---	---	---	8.1	
	6/25/1997	---		18.62	81.38	7,800[b]	---	42,000	7,400	3,800	1,200	5,700	< 200	---	---	---	---	0.9	
	9/17/1997	Sheen		19.05	80.95	8,900[e]	---	41,000[d]	5,200	3,400	1,300	5,900	< 700	---	---	---	---	1.2	
	12/22/1997	---		14.09	85.91	6,100[e]	---	47,000[d]	8,500	4,600	1,800	8,400	< 1,200	---	---	---	---	1.2	
	3/18/1998	Sheen		10.83	89.17	7,000[e,f]	---	58,000[d]	9,300	6,100	1,800	8,200	< 1,100	---	---	---	---	1.1	
	7/14/1998	---		16.07	83.93	5,300[e,f]	---	42,000[d]	6,000	3,000	1,000	4,800	< 200	---	---	---	---	1.5	
	9/30/1998	---		18.71	81.29	2,400	---	22,000	3,600	1,300	720	3,200	< 30	---	---	---	---	1.8	
	12/8/1998	---		14.80	85.20	3,100	---	32,000	9,200	680	1,100	2,300	< 2,000	---	---	---	---	---	
	3/29/1999	---		11.81	88.19	7,500[e,f]	---	28,000[d]	4,400	1,600	950	4,100	410	---	---	---	---	1.86	
	6/29/1999	---		19.54	80.46	3,300[e]	---	28,000[d]	3,500	1,100	690	3,100	< 1,000	---	---	---	---	0.41	
	9/28/1999	---		18.61	81.39	3,400[e,f]	---	15,000[d]	1,200	540	230	2,300	< 36	---	---	---	---	1.18	
	12/10/1999	---		16.53	83.47	2,500[e,f]	---	17,000[d]	1,300	780	420	2,700	< 40	---	---	---	---	0.17	
	3/23/2000	---		13.56	86.44	3,100[i]	---	25,000[d]	1,900	1,100	660	3,700	< 500	---	---	---	---	---	
	9/7/2000	---		18.25	81.75	32,000[e,g]	---	62,000[d,g]	5,300	2,300	1,500	8,400	< 100	---	---	---	---	0.39	
	12/5/2000	---		17.45	82.55	87,000[e,f,g]	---	60,000[d,g]	5,100	2,200	1,600	9,000	< 200	---	---	---	---	0.31	Not operating
	3/7/2001	---		15.68	84.32	3,900	---	34,000	1,200	770	620	4,300	< 200	---	---	---	---	0.44	Not operating
	6/6/2001	---		17.51	82.49	48,000	---	110,000	14,000	9,000	1,900	12,000	< 950	---	---	---	---	0.24	Not operating
	8/30/2001	---		21.00	79.00	15,000[d,h]	---	43,000[a,h]	3,100	720	980	5,500	< 200	---	---	---	---	---	Operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data											Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds									
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
MW-2	12/7/2001	---		24.45	75.55	750 e,f	---	4,100 d	510	88	8.2	580	< 20	---	---	---	---	0.47	Operating
Continued	3/11/2002	---		16.95	83.05	590 e	---	4,700 d	1,200	150	30	310	< 50	---	---	---	---	0.24	Operating
	6/10/2002	---		18.59	81.41	2,000 e	---	14,000 d	2,600	710	150	2,000	< 800	---	---	---	---	---	Operating
	9/26/2002	---		20.39	79.61	660 e	---	4,800 d	770	200	140	740	< 50	---	---	---	---	0.29	Operating
	11/21/2002	---		18.75	81.25	350,000 e,g	---	210,000 d,g	14,000	23,000	4,400	28,000	< 1,700	---	---	---	---	0.43	Operating
	1/13/2003	Sheen Lab		13.60	86.40	14,000 e,f,g,k	---	32,000 d,g	4,500	1,600	920	3,600	< 1000	---	---	---	---	0.39	Not operating
	4/25/2003	---		19.05	80.95	310 e	---	3,800 d	460	78	72	410	310	---	---	---	---	---	Operating
	5/30/2003	---		15.23	84.77	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/3/2003	---		23.57	76.43	2,300 e	---	2,900 d	240	57	68	380	770	---	---	---	---	---	Operating
(Monument	12/2/2003	Sheen Lab		23.17	76.83	3,300 e,f,g	---	2,400 d,g	91	20	14	250	890	---	---	---	---	---	Operating
Well box)	3/18/2004	---		15.78	84.22	870 e,f	---	4,200 d	730	89	< 5.0	480	2,300	---	---	---	---	---	Operating
166.14	6/16/2004	---		18.15	147.99	9,800 e,f	---	15,000 d	800	210	290	1,800	2,000	---	---	---	---	---	Not operating
	9/27/2004	---	**	27.55	138.59	1,000 e,f,k	---	770 d	20	7.9	10	140	1,600	---	---	---	---	0.79	Operating
	12/27/2004	---		16.81	149.33	3,800 e,f	---	17,000 d	1,300	370	540	3,800	620	---	---	---	---	0.94	Not operating
	3/7/2005	Sheen Field & Lab		9.31	156.83	8,300 e,f,k,g	---	20,000 d,g	1,400	330	430	2,600	1,100	---	---	---	---	0.88	Not operating
	6/21/2005	Sheen Lab		13.42	152.72	15,000 e,f,g	---	36,000 d,g	1,700	310	460	3,100	1,200	---	---	---	---	---	Not operating
	9/21/2005	Sheen Field		18.50	147.64	1,100 e,f	---	4,600 d	370	62	110	740	1,100	---	---	---	---	0.86	Not operating
	12/14/2005	Sheen Field & Lab		16.40	149.74	49,000 e,f,k,g	---	29,000 d,g	1,700	260	600	3,700	1,000	---	---	---	---	0.99	Not operating
	3/22/2006	Sheen Lab		9.15	156.99	23,000 e,f,k,g	---	21,000 d,g	2,300	200	550	2,800	1,200	---	---	---	---	0.91	Not operating
	6/30/2006	Sheen Field & Lab		16.78	149.36	55,000 e,f,k,g	---	18,000 d,g	1,100	71	270	1,400	1,200	---	---	---	---	0.84	Not operating
	9/5/2006	Sheen Lab		18.96	147.18	19,000 e,f,k,g	---	15,000 d,g	680	70	260	1,400	< 1,000	---	---	---	---	0.79	Not operating
	12/6/2006	Sheen Field & Lab		18.01	148.13	31,000 e,f,k,g	---	27,000 d,g	1,100	51	420	1,600	< 900	---	---	---	---	0.48	Not operating
	3/16/2007	Sheen Field & Lab		12.31	153.83	49,000 e,f,k,g	---	44,000 d,g	1,800	71	670	2,200	< 900	---	---	---	---	0.52	Not operating
	6/15/2007	Sheen Field & lab		17.31	148.83	21,000 e,k,f,g	---	18,000 d,g	700	22	290	740	< 650	---	---	---	---	0.68	Not operating
	9/6/2007	Sheen Field & Lab		19.28	146.86	8,400 e,f,g	---	17,000 a,h	1,000	53	450	1,100	< 700	---	---	---	---	0.72	Not operating
	12/8/2007	Sheen Field & Lab		17.72	148.42	3,600 e,f,g	---	14,000 d,g	640	13	220	520	< 300	---	---	---	---	0.80	Not operating
	3/9/2008	Sheen Field	(Z)	12.09	154.05	(3,100 e)	(< 250)	(7,900 d)	(840)	(24)	(280)	(380)	(< 380)	---	---	---	---	0.68	Not operating
	6/14/2008	Sheen Field	(Z)	18.66	147.48	(2,500 e)	(< 250)	(10,000 d)	(520)	(18)	(200)	(370)	(< 350)	---	---	---	---	0.97	Not operating
	9/6/2008	Sheen Field & Lab	(Z^{TPHd})	19.41	146.73	(2,500 e,g)	---	10,000 d,g	430	17	270	370	< 180	---	---	---	---	0.81	Not operating
	12/28/2008	Sheen Field	(Z^{TPHd})	15.73	150.41	(2,400 e)	< 250	9,800 d	690	19	250	180	(120)	---	---	---	---	0.63	Not operating
	3/14/2009	Sheen Field	(Z^{TPHd})	10.52	155.62	3,300 e,f,k (2,700 e)	---	11,000 d	1,100	23	23	250	(120)	---	---	---	---	0.67	Not operating
	6/7/2009	Sheen Field & Lab	(Z^{TPHd})	16.64	149.50	13,000 m,f (2,500) e	---	15,000 d	710	37	210	180	(88)	---	---	---	---	0.71	Not operating
	9/5/2009	Sheen Lab	(Z^{TPHd})	19.41	146.73	11,000 e,f,k,g (4,800) e,f,k	--	12,000 d,g	1,500	30	170	220	(77)	---	---	---	---	0.95	Not operating
	3/14/2010	Sheen Lab	(Z^{TPHd})	9.82	156.32	20,000 e,f,k,g (2,900) e,f	--	8,800 d,g	840	18	67	92	(65)	---	---	---	---	0.81	Not operating
	9/10/2010	--	(Z^{TPHd})	18.84	147.30	2,400 e,f (2,200) e,f	--	11,000 d	1,900	40	380	110	(81)	---	---	---	---	0.40	Not operating
	3/17/2011	--		10.51	155.63	2,200 e,f	--	5,500 d	380	12	1.8	15	(35)	---	---	---	---	0.68	Not operating
	9/22/2011	--		17.94	148.20	690**	--	**7,100***	**1,900**	< 8.4	**350**	< 14.4	**39**	< 66	< 8.6	< 12	< 14 - 17	0.76	
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data												Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
MW-3	5/25/1994	Sheen		13.93	82.94	14,000	< 50,000	56,000	14,000	14,000	1,300	11,000	---	---	---	---	---	---	
96.87	7/19/1994	---		17.04	79.83	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/18/1994	---		17.75	79.12	---	---	116,000	28,300	26,000	2,400	15,000	---	---	---	---	---	---	
	11/11/94	---		17.80	79.07	---	---	89,000	1,600	1,900	1,900	14,000	---	---	---	---	---	---	
	2/27/1995	Sheen		11.86	85.01	---	---	250,000	22,000	26,000	7,800	21,000	---	---	---	---	---	---	
	5/23/1995	Sheen		11.60	85.27	---	---	310,000	18,000	17,000	4,500	2,800	---	---	---	---	---	---	
	8/22/1995	---		17.10	79.77	---	---	74,000	14,000	13,000	1,900	11,000	---	---	---	---	---	---	
	11/29/1995	---		16.34	80.53	---	---	220,000	25,000	25,000	3,500	19,000	---	---	---	---	---	---	
	2/21/1996	---		7.92	88.95	---	---	60,000	10,000	7,800	1,500	8,800	3,400	---	---	---	---	---	
	5/21/1996	Sheen		10.86	86.01	13,000	---	69,000	17,000	9,400	1,700	9,400	2,600	---	---	---	---	---	
	8/22/1996	---		16.50	80.37	16,000	---	94,000	17,000	15,000	2,100	12,000	330	---	---	---	---	2.0	
	11/27/1996	Sheen		13.47	83.40	24,000	---	82,000	14,000	13,000	2,400	13,000	< 1,000	---	---	---	---	2.4	
	3/20/1997	---		12.86	84.01	11,000	---	56,000	9,900	6,900	1,300	8,000	3,500	---	---	---	---	9.0	
	6/25/1997	---		15.98	80.89	7,700[b]	---	49,000	9,700	7,100	1,300	7,000	220	---	---	---	---	5.8	
	9/17/1997	Sheen		16.34	80.53	15,000[e]	---	78,000[d]	11,000	9,900	1,800	10,000	< 1,200	---	---	---	---	0.7	
	12/22/1997	Sheen		10.71	86.16	14,000[e]	---	49,000[d]	7,300	5,300	1,400	7,500	< 1,100	---	---	---	---	3.1	
	3/18/1998	Sheen		8.41	88.46	20,000[e,f]	---	120,000[d]	21,000	19,000	2,600	15,000	< 1,600	---	---	---	---	1.6	
	7/14/1998	---		13.51	83.36	65,000[e,f,g]	---	94,000[d,g]	18,000	14,000	1,900	11,000	< 1,400	---	---	---	---	1.8	
	9/30/1998	---		16.14	80.73	9,800	---	91,000	17,000	13,000	2,100	12,000	< 1300	---	---	---	---	2.0	
	12/8/1998	---		11.20	85.67	4,200	---	51,000	8,000	6,800	1,400	7,500	< 1,100	---	---	---	---	---	
	3/29/1999	---		7.95	88.92	4,600[e]	---	39,000[d]	8,900	4,400	940	4,500	810	---	---	---	---	0.56	
	6/29/1999	---		16.98	79.89	6,900[e]	---	71,000[d]	12,000	7,300	1,400	8,400	< 1,700	---	---	---	---	0.19	
	9/28/1999	---		15.99	80.88	7,800[e]	---	60,000[d]	9,400	9,200	1,000	9,900	200	---	---	---	---	0.53	
	12/10/1999	---		13.31	83.56	5,300[e,f]	---	53,000[d]	8,000	6,400	1,100	8,100	< 200	---	---	---	---	0.48	
	3/23/2000	---		8.98	87.89	11,000[g,,j]	---	77,000[d,g]	10,000	9,400	1,600	11,000	< 430	---	---	---	---	---	
	9/7/2000	---		15.61	81.26	19,000[e,f,g]	---	100,000[d,g]	17,000	12,000	1,600	11,000	< 500	---	---	---	---	---	
	12/5/2000	---		14.80	82.07	17,000[e,g]	---	110,000[d,g]	17,000	11,000	1,900	12,000	< 750	---	---	---	---	0.37	Not operating
	3/7/2001	---		14.27	82.60	13,000	---	60,000	7,000	4,600	900	7,100	< 350	---	---	---	---	0.49	Not operating
	6/6/2001	---		14.88	81.99	12,000	---	43,000	3,000	1,000	770	5,200	< 400	---	---	---	---	1.71	Not operating
	8/30/2001	---		12.43	84.44	190,000[d,h]	---	95,000[a,h]	6,900	10,000	2,700	15,000	< 250	---	---	---	---	0.24	Operating
	12/7/2001	---		24.65	72.22	3,900[e,f]	---	25,000[d]	2,500	1,700	64	2,200	< 200	---	---	---	---	0.19	Operating
	3/11/2002	---		14.69	82.18	2,800[f,e,k]	---	30,000[d]	5,000	2,400	190	1,800	< 1,300	---	---	---	---	0.30	Operating
	6/10/2002	---		22.94	73.93	990[e,k]	---	9,000[d]	1,800	1,300	96	1,000	< 300	---	---	---	---	---	Operating
	9/26/2002	---		18.85	78.02	130,000[e,g]	---	50,000[d,g]	3,900	5,400	820	6,600	< 500	---	---	---	---	0.19	Operating
	11/21/2002	0.05		17.85	79.02	120,000[e,g]	---	37,000[d,g]	4,000	660	1,200	5,100	< 1,700	---	---	---	---	0.28	Operating
	1/13/2003	Sheen [Lab]		11.43	85.44	6,300[e,f,g,k]	---	21,000[d,g]	2,400	2,300	390	3,000	< 500	---	---	---	---	0.31	Not operating
	4/25/2003	---		18.30	78.57	1,200[e]	---	12,000[d]	1,800	850	150	1,200	< 500	---	---	---	---	---	Operating
	5/30/2003	---		13.30	83.57	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/3/2003	---		21.65	75.22	3,300[e]	---	8,100[d]	220	170	66	560	< 50	---	---	---	---	---	Operating
	12/2/2003	Sheen [Lab]		17.70	79.17	8,400[e,f,g]	---	30,000[d,g]	2,900	2,100	530	3,600	< 500	---	---	---	---	---	Operating
	3/18/2004	---		16.49	80.38	2,300[e,f]	---	15,000[d]	2,600	990	260	1,700	< 300	---	---	---	---	---	Operating
	6/16/2004	---		15.40	81.47	8,800[e,f]	---	23,000[d]	2,100	1,300	360	2,800	< 1,000	---	---	---	---	---	Operating
162.94	9/27/2004	---		23.65	73.22	1,700[e,f]	---	5,200[d]	430	220	100	680	250	---	---	---	---	0.55	Operating
	12/27/2004	Sheen [Lab]		14.58	82.29	24,000[e,f,g,k]	---	32,000[d,g]	4,400	2,800	650	4,800	< 250	---	---	---	---	0.71	Not operating
	3/7/2005	Sheen [Field & Lab]		6.91	89.96	14,000[e,f,g]	---	50,000[d,g]	6,100	2,100	1,300	7,400	< 500	---	---	---	---	0.62	Not operating
	6/21/2005	Sheen [Field & Lab]		10.79	86.08	12,000[e,g]	---	44,000[d,g]	4,900	870	1,100	6,500	< 1,200	---	---	---	---	---	Not operating
	9/21/2005	Sheen [Field & Lab]		15.73	81.14	16,000[e,f,k,g]	---	41,000[d,g]	3,700	480	930	5,700	< 500	---	---	---	---	0.90	Not operating
	12/14/2005	Sheen [Field & Lab]		13.65	83.22	19,000[e,f,k,g]	---	53,000[d,g]	4,700	350	1,100	7,400	< 1,000	---	---	---	---	0.95	Not operating
	3/22/2006	Sheen [Field & Lab]		8.10	88.77	15,000[e,f,k,g]	---	45,000[d,g]	4,300	390	1,100	5,300	< 1,000					0.88	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data											Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds									
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
MW-3	6/30/2006	Sheen [Field & Lab]		14.10	148.84	15,000 [e,f,k,g]	---	44,000 [d,g]	4,000	160	550	4,000	< 450	---	---	---	---	0.81	Not operating
Continued	9/5/2006	Sheen [Field & Lab]		16.25	146.69	16,000 [e,f,k,g]	---	56,000 [d,g]	5,400	300	1,200	6,200	< 500	---	---	---	---	0.55	Not operating
	12/6/2006	Sheen [Field & Lab]		15.25	147.69	19,000 [e,f,k,g]	---	44,000 [d,g]	4,500	110	930	3,600	< 500	---	---	---	---	0.70	Not operating
	3/16/2007	Sheen [Field & Lab]		10.25	152.69	5,300 [e,f,k,g]	---	72,000 [d,g]	6,500	420	1,200	3,900	< 1,000	---	---	---	---	0.61	Not operating
	6/15/2007	Sheen [Field & Lab]		14.57	148.37	25,000 [e,k,f,g]	---	56,000 [d,g]	5,100	200	1,100	3,200	< 1000	---	---	---	---	0.48	Not operating
	9/6/2007	Sheen [Field & Lab]		16.55	146.39	14,000 [e,f,g]	---	41,000 [d,g]	4,400	180	1,000	3,800	< 700	---	---	---	---	0.70	Not operating
	12/8/2007	Sheen [Field & Lab]		14.49	148.45	4,000 [e,f,g]	---	33,000 [d,g]	4,300	120	370	2,200	< 250	---	---	---	---	0.77	Not operating
	3/9/2008	Sheen [Field]	(Z)	10.40	152.54	(3,400 [e])	(310)	(23,000 [d])	(4,200)	(120)	(650)	(1,600)	(< 250)	---	---	---	---	0.71	Not operating
	6/14/2008	Sheen [Field]	(Z)	15.92	147.02	(4,900 [e])	(600)	(36,000 [d])	(4,700)	(140)	(830)	(1,600)	(< 500)	---	---	---	---	1.05	Not operating
	9/6/2008	Sheen [Field & Lab]	(Z[TPHd])	16.65	146.29	(7,900 [e,f,g])	---	42,000 [d,g]	5,800	190	1,100	2,400	< 800	---	---	---	---	1.03	Not operating
	12/28/2008	Sheen [Field & Lab]	(Z[TPHd])	12.72	150.22	(4,100 [e,g])	< 250	24,000 [d,g]	4,100	91	380	960	(91)	---	---	---	---	0.91	Not operating
	3/14/2009	Sheen [Field & lab]	(Z[TPHd])	9.02	153.92	8,700 [e,f,k,g] (8,100 [e,g])	---	41,000 [d,g]	4,900	140	940	1,600	(97)	---	---	---	---	1.14	Not operating
	6/7/2009	Sheen [Field & Lab]	(Z[TPHd])	13.94	149.00	6,900 [e,f,m] (3,700 [e]	---	23,000 [d]	4,400	81	710	670	(97)	---	---	---	---	1.02	Not operating
	9/5/2009	Sheen [Lab]	(Z[TPHd])	16.67	146.27	31000 [e,f,k,m,g] (11,000) [e,f,k]	--	32,000 [d,g]	6,200	120	590	1,000	(80)	---	---	---	---	0.98	Not operating
	3/14/2010	Sheen [Lab]	(Z[TPHd])	8.56	154.38	19,000 [e,f,g,k] (4,300) [e]	--	21,000 [d,g]	4,300	76	530	710	(97)	---	---	---	---	1.07	Not operating
	9/10/2010	--	(Z[TPHd])	16.14	146.80	2,500 [e,f] (2,200) [e,f]	--	21,000 [d]	8,100	59	800	300	(100)	---	---	---	---	0.91	Not operating
	3/17/2011	--		7.90	155.04	2,400 [e]	--	17,000 [d]	5,600	43	660	210	(83)	---	---	---	---	0.83	Not operating
	9/22/2011	--		15.34	147.60	**1,500****	--	**14,000***	**8,400**	< 17	790	130	**89**	< 130	< 17	< 24	< 28 - 35	1.04	
MW-4	3/20/1997	---		13.75	83.59	3,100	---	47,000	11,000	4,500	1,100	5,200	3,400	---	---	---	---	8.4	
97.34	6/25/1997	---		16.15	81.19	5,800 [b]	---	61,000	16,000	6,100	1,500	5,900	780 [c]	---	---	---	---	1.4	
	9/17/1997	---		17.10	80.24	4,400 [e]	---	60,000 [d]	17,000	4,900	1,500	5,700	< 1,500	---	---	---	---	1.5	
	12/22/1997	---		9.21	88.13	3,100 [e]	---	43,000 [d]	13,000	3,900	1,100	4,200	< 960	---	---	---	---	3.7	
	3/18/1998	---		9.54	87.80	5,500 [e,f]	---	58,000 [d]	14,000	4,700	1,400	5,700	< 1,200	---	---	---	---	0.8	
	7/14/1998	---		14.15	83.19	2,900 [e,f]	---	73,000 [d]	22,000	7,000	1,800	7,300	< 200	---	---	---	---	1.0	
	9/30/1998	---		16.84	80.50	2,100	---	39,000	12,000	2,700	1,000	3,400	510	---	---	---	---	1.1	
	12/8/1998	---		13.45	83.89	1,600	---	27,000	8,900	1,600	730	2,300	< 1,500	---	---	---	---	---	
	3/29/1999	---		9.10	88.24	2,400 [e,f,h]	---	48,000 [d]	15,000	3,000	1,300	5,000	1,300	---	---	---	---	1.32	
	06/29/99*	---		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	9/28/1999	---		16.58	80.76	3,200 [e,f]	---	24,000 [d]	7,500	1,200	190	2,200	210	---	---	---	---	14.29 [#]	
	12/10/1999	---		13.99	83.35	3,100 [e,f]	---	47,000 [d]	12,000	1,800	1,000	4,400	< 100	---	---	---	---	0.62	
	3/23/2000	---		10.22	87.12	3,100 [e,f]	---	40,000 [d]	11,000	1,600	910	3,100	690	---	---	---	---	---	
	9/7/2000	---		16.40	80.94	5,900 [e]	---	43,000 [d]	10,000	1,100	1,100	3,400	< 450	---	---	---	---	1.04	
	12/5/2000	---		15.55	81.79	2,600 [e,g]	---	69,000 [d,g]	16,000	1,300	1,300	3,400	< 200	---	---	---	---	0.35	Not operating
	3/20/2001	---		14.03	83.31	---	---	46,000	13,000	1,000	900	2,800	< 350	---	---	---	---	0.39	Not operating
	6/6/2001	---		15.49	81.85	5,400	---	75,000	22,000	1,800	1,900	6,400	< 1,200	---	---	---	---	2.22	Not operating
	8/30/2001	---		18.00	79.34	3,200 [d]	---	43,000 [a]	6,400	630	510	2,600	< 200	---	---	---	---	0.32	Operating
	12/7/2001	---		23.45	73.89	11,000 [e,f,g]	---	32,000 [d,g]	4,500	740	310	2,300	< 200	---	---	---	---	0.21	Operating
	3/11/2002	---		14.95	82.39	1,600 [e,f,k]	---	15,000 [d]	3,700	500	92	790	< 500	---	---	---	---	0.30	Operating
	6/10/2002	---		22.30	75.04	3,400 [e]	---	9,400 [d]	1,400	50	< 5.0	690	< 200	---	---	---	---	---	Operating
	9/26/2002	---		17.93	79.41	800 [e]	---	21,000 [d]	3,300	1,300	450	2,900	< 500	---	---	---	---	0.24	Operating
	11/21/2002	---		17.55	79.79	2,400 [e,k]	---	5,700 [d]	1,400	290	63	640	550	---	---	---	---	---	Operating
	1/13/2003	Sheen [Lab]		11.75	85.59	15,000 [e,f,g,k]	---	35,000 [d,g]	5,100	1,500	510	4,500	< 800	---	---	---	---	0.28	Not operating
	4/25/2003	---		19.37	77.97	2,200 [e,f]	---	6,600 [d]	960	130	100	560	< 170	---	---	---	---	---	Operating
	5/30/2003	---		13.56	83.78	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/3/2003	---		21.65	75.69	27,000 [e,f]	---	29,000 [d]	2,200	380	280	2,300	65	---	---	---	---	---	Operating
	12/2/2003	---		19.17	78.17	5,800 [e,f]	---	13,000 [d]	1,300	180	120	1,900	< 250	---	---	---	---	---	Operating
	3/18/2004	---		14.92	82.42	1,500 [e]	---	5,300 [d]	1,300	55	37	440	< 180	---	---	---	---	---	Operating
163.49	6/16/2004	---		16.02	147.47	3,400 [e,f]	---	9,100 [d]	940	96	120	800	< 50	---	---	---	---	---	Not operating
	9/27/2004	---		19.93	143.56	980 [e,f,k]	---	1,300 [d]	140	10	11	81	< 50	---	---	---	---	0.68	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data											Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds									
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
MW-4	12/27/2004	Sheen [Lab]		14.79	148.70	5,300 [e,f,g,k]	---	10,000 [d,g]	1,000	99	34	1,600	< 50	---	---	---	---	0.74	Not operating
Continued	3/7/2005	Sheen [Field & Lab]		7.81	155.68	9,300 [e,f,g]	---	15,000 [d,g]	1,100	140	88	1,900	< 100	---	---	---	---	0.65	Not operating
	6/21/2005	Sheen [Field & Lab]		11.82	151.67	12,000 [e,g]	---	30,000 [d,g]	3,300	270	250	2,800	< 500	---	---	---	---	---	Not operating
	9/21/2005	Sheen [Field & Lab]		16.55	146.94	15,000 [e,f,k,g]	---	12,000 [d,g]	540	100	54	1,800	< 50	---	---	---	---	0.89	Not operating
	12/14/2005	Sheen [Field & Lab]		14.43	149.06	9,800 [e,f,k,g]	---	5,200 [d,g]	710	41	91	540	< 50	---	---	---	---	0.91	Not operating
	3/22/2006	Sheen [Field & Lab]		7.52	155.97	9,300 [e,f,k,g]	---	17,000 [d,g]	2,000	230	150	1,900	< 50	---	---	---	---	0.80	Not operating
	6/30/2006	Sheen [Field & Lab]		15.00	148.49	19,000 [e,f,g]	---	18,000 [d,g]	1,400	50	60	1,300	< 100	---	---	---	---	0.85	Not operating
	9/5/2006	Sheen [Field & Lab]		16.96	146.53	9,400 [e,f,k,g]	---	30,000 [d,g]	1,400	180	110	4,300	< 500	---	---	---	---	0.75	Not operating
	12/6/2006	Sheen [Field & Lab]		15.95	147.54	22,000 [e,f,g]	---	21,000 [d,g]	920	56	73	1,500	< 100	---	---	---	---	0.71	Not operating
	3/16/2007	Sheen [Field & Lab]		10.71	152.78	2,700 [e,f,k,g]	---	13,000 [d,g]	1,400	32	93	740	< 100	---	---	---	---	0.65	Not operating
	6/15/2007	Sheen [Field & Lab]		15.43	148.06	7,200 [e,g]	---	14,000 [d,g]	1,200	46	63	850	< 110	---	---	---	---	0.61	Not operating
	9/6/2007	Sheen [Field & Lab]		17.25	146.24	8,400 [e,f,k,g]	---	27,000 [d,g]	1,500	150	120	4,500	< 250	---	---	---	---	0.55	Not operating
	12/8/2007	Sheen [Field & Lab]		15.15	148.34	790 [e,f,g]	---	7,600 [d,g]	690	27	39	570	< 80	---	---	---	---	0.72	Not operating
	3/9/2008	Sheen [Field]	(Z)	10.77	152.72	(3,000 [e])	(< 250)	(8,100 [d])	(830)	(7.7)	(55)	(310)	(< 50)	---	---	---	---	0.79	Not operating
	6/14/2008	Sheen [Field]	(Z)	16.68	146.81	(4,200 [e])	(< 250)	(15,000 [d])	(1,100)	(50)	(86)	(1,300)	(< 150)	---	---	---	---	1.2	Not operating
	9/6/2008	Sheen [Field & Lab]	(Z [TPHd])	17.27	146.22	(2,800 [e,g])	---	24,000 [d,g]	1,400	65	130	2,300	< 250	---	---	---	---	1.28	Not operating
	12/28/2008	Sheen [Field & Lab]	(Z [TPHd])	13.35	150.14	(1,800 [e,g])	< 250	7,500 [d,g]	630	21	40	210	(22)	---	---	---	---	1.20	Not operating
	3/14/2009	Sheen [Field]	(Z [TPHd])	9.30	154.19	2,800 [e,f,k] (3,200 [e])	---	8,800 [d]	980	23	61	220	(22)	---	---	---	---	1.27	Not operating
	6/7/2009	Sheen [Field & Lab]	(Z [TPHd])	14.83	148.66	4,200 [e,f,m] (2,000) [e]	---	6,900 [d]	1,200	23	41	190	(25)	---	---	---	---	1.05	Not operating
	9/5/2009	Sheen [Lab]	(Z [TPHd])	17.39	146.10	1,200 [e,f,m] (1,600) [e,f]	--	3,600 [d]	830	17	13	53	(30)	---	---	---	---	1.01	Not operating
	3/14/2010	--	(Z [TPHd])	8.25	155.24	2,400 [e,f] (1,800) [e]	--	6,800 [d]	1,500	21	53	120	(33)	---	---	---	---	1.13	Not operating
	9/10/2010	--	(Z [TPHd])	16.89	146.60	2,200 [e,f] (2,000) [e,f]	--	11,000 [d]	3,300	24	160	330	(46)	---	---	---	---	0.88	Not operating
	3/17/2011	--		8.55	154.94	1,900 [e]	--	11,000 [d]	4,800	17	190	110	(59)	---	---	---	---	0.75	Not operating
	9/22/2011	--		16.05	147.44	**2,000*** **	--	**11,000***	**4,100**	< 17	160	100	< 33	< 130	< 17	< 24	< 28 - 35	0.69	Not operating
RW-5	1/13/2003	---		10.20	---	3,000	---	14,000	2,100	750	300	1,800	950	---	---	---	---	0.17	
162.34	3/18/2003	---		14.48	---	--	---	12,000	2,000	380	190	1,500	830	---	---	---	---	---	
	6/16/2004	---		14.73	147.61	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		25.55	136.79	---	---	---	---	---	---	---	---	---	---	---	---	---	Operating
	12/27/2004	---		10.45	151.89	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	Sheen [Field]		4.42	157.92	6,100 [e,f,k]	---	7,000 [d]	720	63	97	670	< 400	---	---	---	---	0.93	Not operating
	6/21/2005	Sheen [Field]		10.02	152.32	490 [e]	---	11,000 [d]	1,200	67	68	690	< 500	---	---	---	---	---	Not operating
	9/21/2005	Sheen [Field & Lab]		15.07	147.27	2,500 [e,f,k,g]	---	2,000 [d,g]	390	16	24	170	1,300	---	---	---	---	0.99	Not operating
	12/14/2005	Sheen [Field & Lab]		12.95	149.39	6,200 [e,f,k,g]	---	8,900 [d,g]	1,500	92	180	750	2,300	---	---	---	---	1.03	Not operating
	3/22/2006	Sheen [Field]		2.55	159.79	2,700 [e,f,k]	---	7,400 [d]	59	76	20	120	< 50	---	---	---	---	1.10	Not operating
	6/30/2006	Sheen [Field]		13.32	149.02	3,100 [e,f,k]	---	3,100 [d]	590	15	27	88	410	---	---	---	---	0.89	Not operating
	9/5/2006	Sheen [Field & Lab]		15.55	146.79	3,200 [e,f,k,g]	---	5,300 [d,g]	1,000	31	61	230	370	---	---	---	---	0.81	Not operating
	12/6/2006	Sheen [Field & Lab]		14.53	147.81	5,500 [e,f,g]	---	8,500 [d,g]	1,200	24	91	250	< 900	---	---	---	---	0.79	Not operating
	3/16/2007	Sheen [Field & Lab]		8.81	153.53	2,500 [e,f,k,g]	---	2,400 [d,g]	180	3.3	7.3	10	< 17	---	---	---	---	0.62	Not operating
	6/15/2007	Sheen [Field & Lab]		13.84	148.50	2,000 [e,k,f,g]	---	3,700 [d,g]	730	14	36	80	< 150	---	---	---	---	0.65	Not operating
	9/6/2007	Sheen [Field]		15.85	146.49	1,000 [e,f]	---	2,500 [d]	600	12	24	92	180	---	---	---	---	0.68	Not operating
	12/8/2007	Sheen [Field]		13.99	148.35	370 [e,f]	---	1,900 [d]	220	4.0	10	38	500	---	---	---	---	0.74	Not operating
	3/9/2008	Sheen [Field]	(Z)	8.77	153.57	(90 [e])	(< 250)	(1,100 [d])	(220)	(5.3)	(4.9)	(10)	(< 90)	---	---	---	---	0.92	Not operating
	6/14/2008	Sheen [Field]	(Z)	15.21	147.13	(190 [e])	(< 250)	(1,200 [d])	(310)	(5.8)	(3.5)	(25)	(< 250)	---	---	---	---	1.73	Not operating
	9/6/2008	Sheen [Field]	(Z [TPHd])	16.01	146.33	(220 [e])	---	1,100 [d]	120	2.6	2.2	13	120	---	---	---	---	1.42	Not operating
	12/28/2008	Sheen [Field]	(Z [TPHd])	10.55	151.79	(250 [m])	< 250	1,200 [d,n]	110	5.6	2.5	9.8	(81)	---	---	---	---	1.13	Not operating
	3/14/2009	Sheen [Field]	(Z [TPHd])	6.82	155.52	2,000 [f,k,m] (750 [e])	---	2,000 [d]	260	9.8	9.5	18.0	(38)	---	---	---	---	1.15	Not operating
	6/7/2009	Sheen [Field]	(Z [TPHd])	13.19	149.15	720 [m,f] (210) [e]	---	870 [d]	100	4.4	1.3	2.8	(110)	---	---	---	---	1.13	Not operating
	9/5/2009	--	(Z [TPHd])	16.00	146.34	1,700 [f,k,m] (600) [f,m]	--	2,200 [n,p]	350	8.5	4.6	13.0	(50)	---	---	---	---	1.05	Not operating
	3/14/2010	--	(Z [TPHd])	4.40	157.94	480 [e,f,k] (340) [e]	--	970 [d]	210	5.2	12.0	13.0	(41)	---	---	---	---	1.03	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data											Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds									
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
RW-5	9/10/2010	--	(Z^{TPHd})	15.40	146.94	270 [e] (200) [e]	--	1,600 [d]	470	5.1	19	21	(3.6)	---	---	---	---	0.54	Not operating
Continued	3/17/2011	--		7.20	155.14	< 50	--	84 [d]	21	< 0.5	3.9	1.2	(< 0.5)	---	---	---	---	0.79	Not operating
	9/22/2011	--		14.44	147.90	120**	--	680*	**480**	< 2.1	< 1.7	16	< 4.1	< 17	< 2.1	< 3.0	< 3.5 - 4.4	0.66	
RW-6	3/11/2002	---		--	---	3,100	---	14,000	970	520	170	2,200	< 130	---	---	---	---	---	
162.36	1/13/2003	---		10.35	---	2,900	---	15,000	2,200	1,200	130	2,200	440	---	---	---	---	0.24	
	3/18/2004	---		11.47	---	---	---	8,500	1,300	260	71	990	1,300	---	---	---	---	--	
	6/16/2004	---		14.80	147.56	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		18.46	143.90	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	---		9.82	152.54	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		6.05	156.31	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	---		10.13	152.23	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	---		15.13	147.23	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	---		13.02	149.34	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	---		5.85	156.51	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	---		13.44	148.92	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	---		15.63	146.73	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	---		14.63	147.73	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/16/2007	---		8.89	153.47	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/15/2007	---		13.90	148.46	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2007	---		15.92	146.44	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/8/2007	---		14.21	148.15	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/9/2008	---		8.93	153.43	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/14/2008	---		15.28	147.08	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2008	---		16.08	146.28	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/28/2008	---		12.02	150.34	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/14/2009	---		7.16	155.20	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/7/2009	---		13.21	149.15	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2009	--		16.04	146.32	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/14/2010	--		6.45	155.91	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/10/2010	--		15.47	146.89	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/17/2011	--		7.18	155.18	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/22/2011	--		14.52	147.84	--	--	--	--	--	--	--	--	---	---	---	---	0.83	Not operating
RW-7	3/11/2002	---		---	---	< 50	---	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	---	---	---	---	---	
162.72	1/13/2003	---		10.95	---	67	---	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	---	---	---	---	0.22	
	3/18/2004	---		15.33	---	---	---	250	66	4.8	3.2	10	< 15	---	---	---	---	--	
	6/16/2004	---		15.22	147.50	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		18.98	143.74	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	---		9.85	152.87	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		5.82	156.90	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	---		10.85	151.87	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	---		15.70	147.02	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	---		13.58	149.14	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	---		5.75	156.97	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	---		14.05	148.67	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	---		16.12	146.60	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	---		15.13	147.59	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/16/2007	---		9.69	153.03	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/15/2007	---		14.54	148.18	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2007	---		16.42	146.30	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/8/2007	---		14.46	148.26	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA
All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
RW-7	3/9/2008	---		9.69	153.03	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Continued	6/14/2008	---		15.80	146.92	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2008	---		16.51	146.21	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/28/2008	---		12.62	150.10	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/14/2009	---		7.94	154.78	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/7/2009	---		13.91	148.81	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2009	--		16.55	146.17	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/14/2010	--		8.70	154.02	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/10/2010	--		16.04	146.68	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/17/2011	--		7.75	154.97	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/22/2011	--		15.15	147.57	--	--	--	--	--	--	--		---	---	---	---	1.16	Not operating
RW-8	3/11/2002	---		---	---	80	---	1,300	620	11	15	14	< 60	---	---	---	---	---	
164.13	1/13/2003	---		12.80	---	56	---	390	150	11	4.1	4.1	13	---	---	---	---	0.31	
	3/18/2004	---		15.34	---	---	---	760	310	9.9	11	16	< 25	---	---	---	---	---	
	6/16/2004	---		16.41	147.72	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		19.74	144.39	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	---		12.32	151.81	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		8.10	156.03	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	---		12.15	151.98	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	---		16.90	147.23	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	---		14.80	149.33	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	---		7.88	156.25	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	---		15.31	148.82	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	---		17.38	146.75	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	---		16.37	147.76	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/16/2007	---		11.04	153.09	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/15/2007	---		15.81	148.32	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2007	---		17.63	146.50	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/8/2007	---		15.60	148.53	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/9/2008	---		11.05	153.08	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/14/2008	---		17.07	147.06	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2008	---		17.70	146.43	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/28/2008	---		13.80	150.33	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/14/2009	---		9.25	154.88	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/7/2009	---		15.20	148.93	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2009	--		17.80	146.33	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/14/2010	--		8.43	155.70	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/10/2010	--		17.25	146.88	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA
All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
RW-8	9/10/2010	--		17.25	146.88	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
Continued	3/17/2011	--		8.92	155.21	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/22/2011	--		16.40	147.73	--	--	--	--	--	--	--	--	---	---	---	---	1.22	Not operating
RW-9	3/11/2002	---		---	---	880	---	12,000	3,400	230	78	1,300	< 240	---	---	---	---	---	
163.86	1/13/2003	---		11.85	---	2,000	---	23,000	7,700	610	310	310	< 500	---	---	---	---	0.39	
	3/18/2004	---		13.69	---	---	---	2,300	770	32	15	200	< 50	---	---	---	---	---	
	6/16/2004	---		16.03	147.83	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		19.83	144.03	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	---		24.88	138.98	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		7.87	155.99	510[e]	---	9,000[d]	2,600	69	200	550	< 500	---	---	---	---	0.91	Not operating
	6/21/2005	---		11.90	151.96	630[e]	---	9,400[d]	2,400	69	210	470	< 350	---	---	---	---	---	Not operating
	9/21/2005	Sheen [Lab]		16.62	147.24	820[e,f,g]	---	8,300[d,g]	2,500	36	190	310	< 170	---	---	---	---	1.04	Not operating
	12/14/2005	---		14.52	149.34	1,100[e,f]	---	6,300[d]	1,900	29	150	260	< 50	---	---	---	---	0.98	Not operating
	3/22/2006	---		7.63	156.23	680[e]	---	7,600[d]	2,900	59	190	310	< 200	---	---	---	---	0.95	Not operating
	6/30/2006	---		15.04	148.82	1,400[e]	---	14,000[d]	3,100	53	130	260	< 300	---	---	---	---	0.73	Not operating
	9/5/2006	---		17.02	146.84	1,100[e]	---	14,000[d]	3,900	39	200	230	< 330	---	---	---	---	0.69	Not operating
	12/6/2006	Sheen [Lab]		16.04	147.82	660 [e,g]	---	13,000 [d,g]	3,000	29	180	260	< 250	---	---	---	---	0.74	Not operating
	3/16/2007	Sheen [Lab]		10.83	153.03	1,200 [e]	---	16,000 [d,g]	3,700	76	230	340	< 350	---	---	---	---	0.71	Not operating
	6/15/2007	---		15.48	148.38	670 [e]	---	12,000 [d]	3,000	44	170	220	< 250	---	---	---	---	0.68	Not operating
	9/6/2007	Sheen [Field & Lab]		17.29	146.57	2,200 [e,f,g]	---	13,000 [d,g]	2,700	61	240	350	< 400	---	---	---	---	0.66	Not operating
	12/8/2007	Sheen [Field]		15.22	148.64	1,000 [e,f]	---	9,300 [d]	2,900	24	150	170	< 250	---	---	---	---	0.89	Not operating
	3/9/2008	---	(Z)	10.86	153.00	(570 [e])	(< 250)	(10,000 [d])	(4,200)	(71)	(180)	(380)	(< 35)	---	---	---	---	0.86	Not operating
	6/14/2008	---	(Z)	16.71	147.15	(610)	(< 250)	(8,100 [d])	(2,800)	(33)	(100)	(220)	(< 210)	---	---	---	---	1.29	Not operating
	9/6/2008	Sheen [Lab]	(Z^{TPHd})	17.31	146.55	(1,600 [e,g])	---	13,000 [d,g]	3,600	52	170	220	< 350	---	---	---	---	1.22	Not operating
	12/28/2008	Sheen [Field]	(Z^{TPHd})	13.41	150.45	(950 [e])	< 250	7,300 [d]	3,500	24	150	200	(30)	---	---	---	---	1.28	Not operating
	3/14/2009	Sheen [Field]	(Z^{TPHd})	8.97	154.89	450 [e] (440 [e])	---	14,000 [d]	3,600	71	190	380	(31)	---	---	---	---	1.21	Not operating
	6/7/2009	Sheen [Field & Lab]	(Z^{TPHd})	14.90	148.96	4,800 [m,f] (910) [e]	---	12,000 [d]	3,500	87	150	330	(30)	---	---	---	---	1.19	Not operating
	9/5/2009	--	(Z^{TPHd})	17.40	146.46	3,000 [f,m] (1,100) [e,f,m]	--	8,300 [d]	3,100	32	5.5	69	(25)	---	---	---	---	1.02	Not operating
	3/14/2010	--	(Z^{TPHd})	8.15	155.71	770 [e] (700) [e]	--	11,000 [d]	3,900	80	120.0	450	(31)	---	---	---	---	1.10	Not operating
	9/10/2010	--	(Z^{TPHd})	16.91	146.95	310 [e,f] (210) [e,f]	--	5,700 [d]	2,800	16	< 2.5	37	(20)	---	---	---	---	0.70	Not operating
	3/17/2011	--		8.60	155.26	< 50	--	300 [d]	83	1.6	< 0.5	< 0.5	(1.9)	---	---	---	---	0.88	Not operating
	9/22/2011	--		16.12	147.74	230**	--	**1,900***	**1,600**	8.4	12	ND	8.3	< 17	< 2.1	< 3.0	< 3.5 - 4.4	1.03	
RW-10	3/11/2002	---		---	---	740	---	12,000	3,900	150	110	1,100	< 270	---	---	---	---	---	
163.02	1/13/2003	---		10.75	---	330	---	4,300	1,500	43	98	98	< 100	---	---	---	---	0.41	
	3/18/2004	---		13.13	---	---	---	5,800	2,400	11	< 10	110	< 300	---	---	---	---	---	
	6/16/2004	---		15.03	147.99	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		18.35	144.67	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	---		19.39	143.63	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		6.40	156.62	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	---		10.95	152.07	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	---		15.51	147.51	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	---		13.37	149.65	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	---		6.53	156.49	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	---		14.13	148.89	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	---		15.98	147.04	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	---		15.02	148.00	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/16/2007	---		9.91	153.11	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/15/2007	---		14.52	148.50	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2007	---		16.23	146.79	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/8/2007	---		14.23	148.79	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/9/2008	---		9.96	153.06	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data												Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
RW-10	6/14/2008	---		15.64	147.38	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Continued	9/6/2008	---		16.23	146.79	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/28/2008	---		12.42	150.60	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/14/2009	---		8.02	155.00	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/7/2009	---		13.96	149.06	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2009	--		16.36	146.66	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/14/2010	--		6.32	156.70	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/10/2010	--		15.87	147.15	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/17/2011	--		7.64	155.38	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/22/2011	--		15.11	147.91	--	--	1,900*	1,600	8.4	12	< 3.6	< 4.1				< 3.5 - 4.4	0.77	Not operating
RW-11	3/11/2002	---		---	---	< 50	---	260	34	5.3	8.1	48	< 5.0	---	---	---	---	---	
162.57	1/13/2003	---		9.80	---	2,700	---	5,300	490	110	120	120	180	---	---	---	---	0.24	
	3/18/2004	---		12.45	---	---	---	9,300	980	120	180	770	2,000	---	---	---	---	---	
	6/16/2004	---		14.75	147.82	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		18.44	144.13	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	---		10.07	152.50	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		5.95	156.62	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	---		9.96	152.61	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	---		15.09	147.48	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	---		12.96	149.61	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	---		5.70	156.87	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	---		13.36	149.21	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	---		15.56	147.01	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	---		14.55	148.02	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/16/2007	---		8.85	153.72	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/15/2007	---		13.90	148.67	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2007	---		15.84	146.73	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/8/2007	---		13.83	148.74	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/9/2008	---		8.81	153.76	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/14/2008	---		15.26	147.31	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2008	---		15.99	146.58	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/28/2008	---		12.01	150.56	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/14/2009	---		7.14	155.43	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/7/2009	---		13.21	149.36	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2009	--		16.02	146.55	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/14/2010	--		6.50	156.07	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/10/2010	--		15.42	147.15	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/17/2011	--		7.10	155.47	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/22/2011	--		14.50	148.07	--	--	--	--	--	--	--	--	---	---	---	---	0.94	
RW-12	3/11/2002	---		---	---	900	---	13,000	4,500	130	130	270	< 5.0	---	---	---	---	---	
163.06	1/13/2003	---		10.90	---	1,800	---	4,100	1,000	130	99	99	< 100	---	---	---	---	0.21	
	3/18/2004	---		13.63	---	---	---	17,000	2,700	960	230	1,500	1,400	---	---	---	---	---	
	6/16/2004	---		15.30	147.76	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		19.09	143.97	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	---		10.85	152.21	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		6.59	156.47	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	---		10.58	152.48	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	---		15.63	147.43	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	---		13.43	149.63	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	---		6.35	156.71	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	---		13.95	149.11	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA

All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data												Field Measurements	DPE System Status
Well # TOC	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-12	9/5/2006	---		16.11	146.95	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Continued	3/16/2007	---		9.52	153.54	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	---		15.11	147.95	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/16/2007	---		9.52	153.54	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/15/2007	---		14.44	148.62	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2007	---		16.42	146.64	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/8/2007	---		14.87	148.19	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/9/2008	---		9.43	153.63	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/14/2008	---		15.74	147.32	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2008	---		16.58	146.48	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/28/2008	---		12.80	150.26	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/14/2009	---		7.77	155.29	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/7/2009	---		13.70	149.36	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2009	--		16.59	146.47	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/14/2010	--		6.29	156.77	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/10/2010	--		15.93	147.13	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/17/2011	--		7.68	155.38	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/22/2011	--		15.01	148.05	--	--	--	--	--	--	--	--	---	---	---	---	0.75	Not operating
RW-13	3/11/2002	---		---	---	79	---	830	190	13	13	34	< 5.0	---	---	---	---	---	
164.34	1/13/2003	---		11.20	---	92	---	210	54	2.0	2.7	2.7	< 5.0	---	---	---	---	0.35	
	3/18/2004	---		13.45	---	---	---	150	47	1.0	2.1	1.5	< 5.0	---	---	---	---	---	
	6/16/2004	---		15.83	148.51	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	---		19.55	144.79	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	---		18.12	146.22	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		6.90	157.44	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	---		11.05	153.29	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	---		16.20	148.14	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	---		14.11	150.23	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	---		6.65	157.69	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
RW-13	6/30/2006	---		14.44	149.90	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Continued	9/5/2006	---		16.62	147.72	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	---		15.70	148.64	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/16/2007	---		9.93	154.41	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/15/2007	---		14.98	149.36	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2007	---		16.95	147.39	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/8/2007	---		14.97	149.37	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/9/2008	---		9.85	154.49	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/14/2008	---		16.32	148.02	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2008	---		17.10	147.24	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/28/2008	---		13.26	151.08	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/14/2009	---		8.16	156.18	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/7/2009	---		14.31	150.03	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2009	--		17.10	147.24	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/14/2010	--		7.49	156.85	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/10/2010	--		16.45	147.89	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	3/17/2011	--		8.19	156.15	--	--	--	--	--	--	--	--	---	---	---	---	--	Not operating
	9/22/2011	--		15.55	148.79	--	--	--	--	--	--	--	--	---	---	---	---	0.78	Not operating
RW-14	3/11/2002	---		---	---	82	---	270	44	0.99	< 0.5	4.2	< 5.0	---	---	---	---	---	
163.76	1/13/2003	---		11.00	---	6800	---	3700	230	77	91	91	< 50	---	---	---	---	0.38	
	3/18/2004	---		12.81	---	---	---	220	42	1.4	0.99	5.2	< 5.0	---	---	---	---	---	
	6/16/2004	---		15.41	148.35	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Summary of Groundwater Elevation and Analytical Data - Monitoring Wells
FORMER EXXON SERVICE STATION
3055 35th AVENUE, OAKLAND, CALIFORNIA
All groundwater results are micrograms per liter (ug/L or ppb)

Monitoring Point Information	Date	SPH (feet)	Note	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	Petroleum Hydrocarbon Concentration Data												Field Measurements	DPE System Status
						Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
RW-14	9/27/2004	---		19.20	144.56	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
Continued	12/27/2004	---		12.62	151.14	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	---		6.61	157.15	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	---		10.80	152.96	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	---		15.82	147.94	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	---		13.73	150.03	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	---		6.43	157.33	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	---		14.10	149.66	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	---		16.21	147.55	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	---		15.31	148.45	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/16/2007	---		9.66	154.10	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/15/2007	---		14.61	149.15	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/2007	---		16.54	147.22	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/8/2007	---		14.57	149.19	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/9/2008	---		9.60	154.16	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/14/08	---		15.90	147.86	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/6/08	---		16.68	147.08	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	12/28/08	---		12.82	150.94	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	3/14/09	---		7.88	155.88	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	6/7/09	---		13.97	149.79	---	---	---	---	---	---	---	---	---	---	---	---	---	Not operating
	9/5/09	--		16.71	147.05	--	--	--	--	--	--	--	--	---	---	---	---	---	Not operating
	3/14/10	--		7.10	156.66	--	--	--	--	--	--	--	--	---	---	---	---	---	Not operating
	9/10/10	--		16.10	147.66	--	--	--	--	--	--	--	--	---	---	---	---	---	Not operating
	3/17/2011	--		7.82	155.94	--	--	--	--	--	--	--	--	---	---	---	---	---	Not operating
	9/22/2011	--		15.22	148.54	--	--	--	--	--	--	--	--	---	---	---	---	---	0.8	
Laboratory Detection Limit:						**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Central Coast Region Water Quality Objectives (WQOs):[1]						**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Notes

Tabulated data prior to September 22, 2011 was provided by Conestoga-Rovers & Associates (CRA).

Notes for Previous Data

All site wells were re-surveyed by Virgil Chavez Land Surveying on June 2, 2004 to the CA State Coordinate System, Zone III (NAD83). Benchmark elevation = 177.397 feet (NGVD 29)

SPH = Separate-phase hydrocarbons depth measured from TOC.

(Z) = Laboratory used Zemo Gravity Separation Protocol for Extractables & Purgeables

(Z^{TPHd}) = Laboratory used Zemo Gravity Separation Protocol for Extractables (TPHd)

( ) = Zemo Gravity Separation Protocol Use Prior to Analysis

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method SW8015C

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method SW8015C; with Dawn Zemo Separation in (parentheses)

TPHmo = Total petroleum hydrocarbons as motor oil by modified EPA Method SW8015C

Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method SW8021B

MTBE = Methyl tertiary butyl ether by EPA Method SW8021B, or by SW8260B (designated by parentheses)

Sheen = A sheen was observed on the water's surface.

Field = Observed in field

Lab = Observed in analytical laboratory

Lab = Observed in analytical laboratory

Notes:

a = Result has an atypical pattern for diesel analysis

b = Result appears to be a lighter hydrocarbon than diesel

Notes:

c = There is a >40% difference between primary and confirmation analysis

d = Unmodified or weakly modified gasoline is significant

e = Gasoline range compounds are significant

f = Diesel range compounds are significant; no recognizable pattern

g = Lighter than water immiscible sheen/product is present

h = One to a few isolated peaks present

i = Medium boiling point pattern does not match diesel (stoddard solvent)

j = Aged diesel is significant

k = Oil range compounds are significant

l = Liquid sample that contains greater than ~1 vol. % sediment

m = Stoddard solvent/mineral spirit

n = Strongly aged gasoline or diesel range compounds are significant in the TPHg chromatogram.

o = MTBE by EPA Method SW8260B

p = No recognizable pattern

* = Well inaccessible during site visit

** = No water in well due to system operating in well, value reflects total well depth.

= abnormally high reading due to added hydrogen peroxide

--- = Not sampled; not analyzed ; not applicable; or no SPH measured or observed

1 = Water Quality Goals: Goals establised by the CRWQCB Central Coast Region based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits.
BOLD = Above WQG Threshold Limits.

*** =** Laboratory report indicates TPH-gas results (possibly aged gasoline).

**** =** Laboratory reports that result not typical of Diesel #2 standard pattern (possibly aged diesel or other fuel within the diesel quantification range such as diesel #4 or fuel oil).

***** =** Laboratory report that result not typical of Diesel standard pattern (possibly fuel lighter than diesel).

Appendix A

Site Description and Background
&
Updated Site Conceptual Model

Appendix A

Site Description and Background

1.0 Site Description and Background

The following summary overview has been compiled from previous consultant reports (AquaGeosciences, Inc., CKC Inc., & GeoStrategies Inc.) and recent investigation and testing (Weber, Hayes and Associates). The overview includes a description of site conditions, land use, regulatory framework, subsurface conditions, an overview of previously completed environmental investigations at the subject site (Site), and a description of the fate and transport characteristics of the detected chemicals of concern.

1.1 Site Description

The vacant, undeveloped subject Site is a former Exxon Service Station located at the northeast corner of 35th Avenue and School Street, in Oakland, California (see aerial photo, right). The Site is flat-lying, but the regional topography generally slopes southwestward from the Oakland hills towards the San Francisco Bay (see regional see terrain/aerial maps, Figure 1).

Historical aerial photographs dated 1959, 1980, and 2000, agree with reports stating the Site's gas dispensing station was constructed around 1970 and was decommissioned in 1991, when the Site's five (5) underground storage tanks (USTs) were removed and the gasoline fuel release was first discovered. The Site has remained an undeveloped, unpaved vacant lot since it was decommissioned. The general area surrounding the Site is a mixture of commercial businesses along the main thoroughfares and residential neighborhoods beyond the thoroughfares. An abandoned, former Texaco gas station is located immediately upgradient of the Site, across School Street to the east. Previous reports indicate the UST's from this station were removed in approximately 1984, but there is no record that closure soil samples were collected.

Site Information Details		
Site Address:	3055 35th Avenue, Oakland -- currently a vacant lot	(APN No. 027-0890-006-02).
Owner:	Golden Empire Properties, Inc	Mr. Lynn Worthington
Agency Contacts:	Alameda County Environmental Health (Case #RO 0000271[2]) San Francisco Bay RWQCB (Case #: 01-0585[3])	Barbara Jakub Barbar.Jakub@acgov.org CherieMcCaulou cmccaulou@waterboards.ca.gov

Local Geology and Hydrogeology

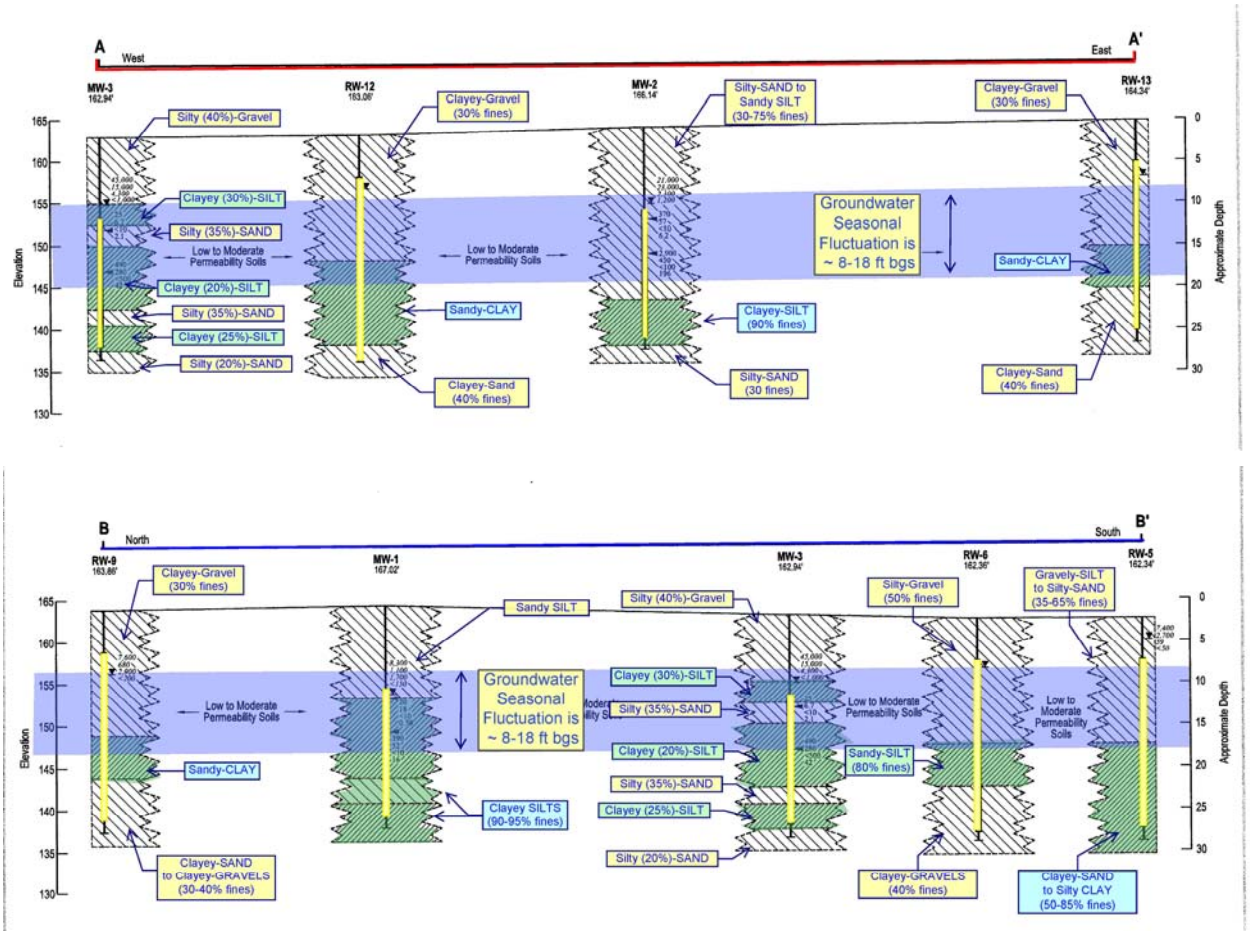
The Site is located within a large, regional, northwest-trending alluvial basin (the East Bay Plain Subbasin), that reportedly extends beneath the San Francisco Bay to the west. The Subbasin's regional aquifer in the vicinity of the Site has a westerly groundwater flow direction, towards San Francisco Bay. The East Bay Municipal Utility District (EBMUD) has provided water supply to Oakland and other communities since the 1930's because of historical over-pumping that reportedly damaged the water supply by seepage or saltwater intrusion. EBMUD obtains its drinking supply from protected Sierra runoff from the Mokelumne River watershed, which eliminated the need for local groundwater supply wells.

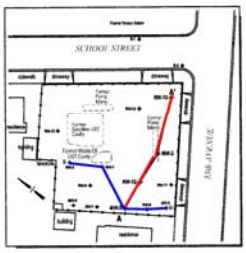
Shallow soil conditions have been logged during the installation of twenty-four (24) on-site borings and thirteen (13) off-site borings drilled to a maximum depth of 45 feet. First-encountered groundwater beneath the Site fluctuates seasonally, roughly between the depths of 8-to-18 feet below ground surface (bgs). Exploratory borings have been logged by a number of field geologists since subsurface drilling investigations were initiated in 1991. Soil samples obtained from the earlier exploratory borings and well installation borings were collected using hollow stem drill rigs (5-foot sample intervals) while more recently sampling (2007-8) was completed using driven probe rigs (continuous core sampling). Although drill logs show individual geologist variation with logging descriptions, designations, and opinions of permeability, the unifying theme is that the subsurface soils consist of an extremely heterogeneous mix of the following soil types:

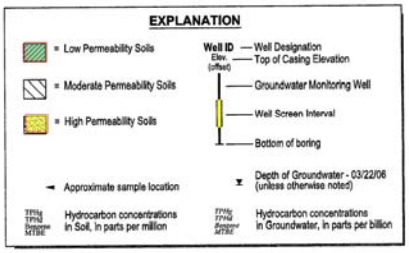
- The dominant soil type encountered consisted of low-permeability soils that included clays, clayey-mixtures (clayey-silts and clayey-sands), and silty-mixtures (sandy-silts);
- The secondary soil type encountered consisted of moderately-permeable sandy units (high silt content, fine-grained sand units identified as silty-sands with clay binder), and
- Occasionally, some relatively thin, discontinuous, highly-permeable sand lenses were encountered (low silt content silty-sands).

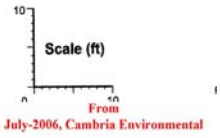
[2]: ACEH Site website: http://ehgis.acgov.org/dehpublic/dehpublic.jsp
[3]: RWQCB Site website: http://geotracker.swrcb.ca.gov/profile_report.asp?global_id=T0600100538

The following geologic cross-sections of soil types logged across the Site show: 1) the interbedded, heterogeneous nature of soils beneath the Site; 2) the ubiquitous presence of fine-grained clays and/or silts in the soil mixtures (low-to-moderately permeable units), which generally retard the vertical and lateral movement of precipitation, chemicals and groundwater, and 3) a visual, presentation of the seasonal groundwater fluctuation across these relatively low-permeability units.



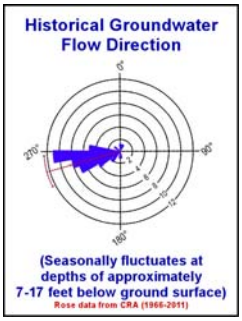






Note: Remediation feasibility testing by soil vapor extraction, air sparging, and groundwater extraction techniques showed only limited air and groundwater flow rates (no vacuum influence/easy dewatering but no groundwater drawdown at nearby wells), which confirms the low permeability conditions beneath the Site (Cambria, 1996).

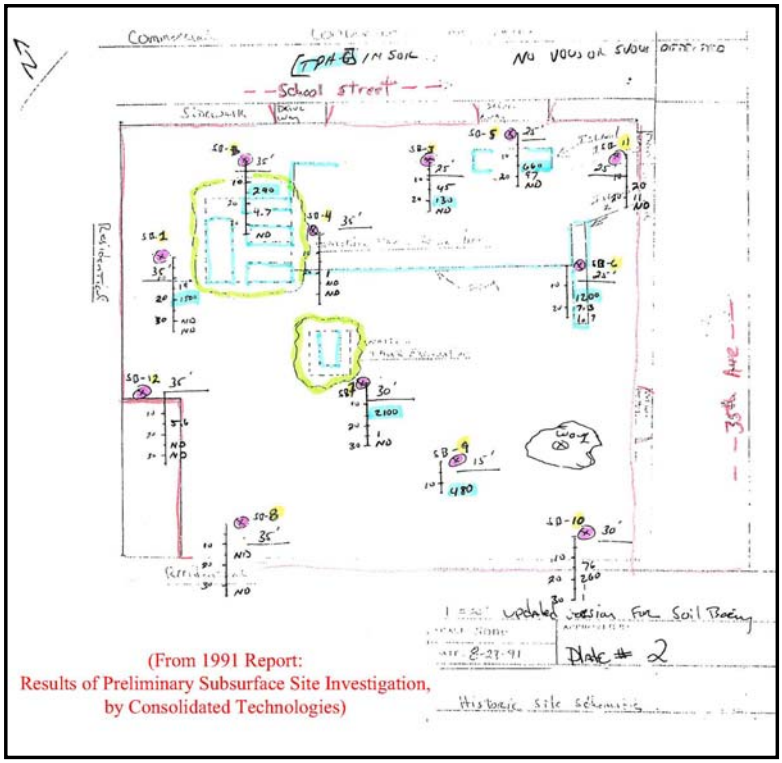
First-encountered groundwater levels in Site monitoring wells have been measured to fluctuate as much as from approximately 6 to 19-ft bgs, but seasonal fluctuations generally fall between 8-



18 feet[4]. Survey-calculated groundwater flow direction beneath the Site is primarily towards the west, as shown by the cumulative-flow, rose diagrams presented on Figures 1, 2, and 3. Gradient is approximately 0.009 ft/ft (approximately 1 foot of groundwater drop for 111 feet of lateral run).

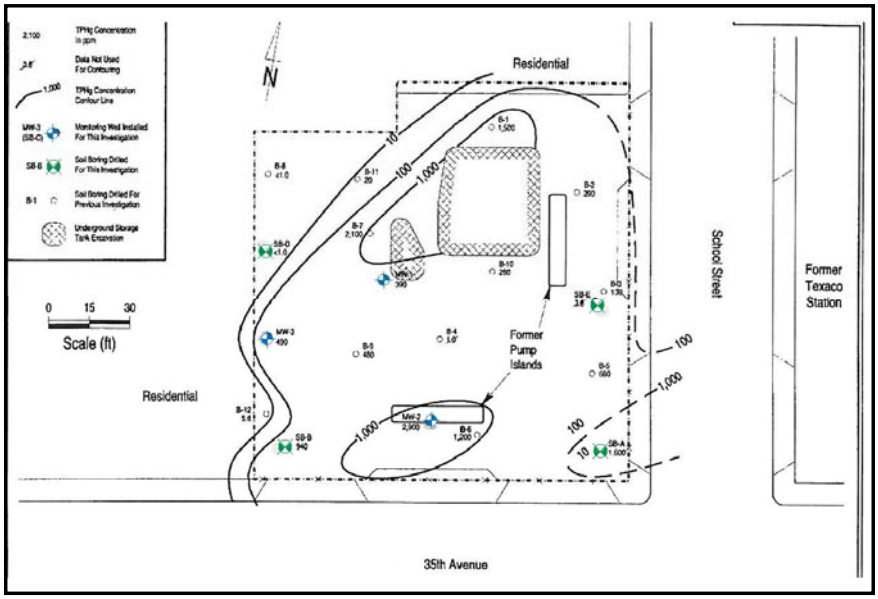
SUMMARY OF Previous Soil and Groundwater Investigations and Corrective Actions

1991, Fuel Tank Removals: In January 1991, Pacific Excavators is reported to have removed two (2) 4,000-gallon, and two (2) 6,500-gallon gasoline USTs, as well as one (1) 500-gallon waste oil UST from the Site. While there are some figures indicating soil stockpiles were present on-site, there is no record of tank pit over-excavation or off-site disposal. Figure 3 identifies tank excavation (cavity) and dispenser locations. Subsequent environmental reports indicated that no UST closure samples were analyzed.



(From 1991 Report: Results of Preliminary Subsurface Site Investigation, by Consolidated Technologies)

1991, Initial Soil Sampling Investigation: In November 1991, Consolidated Technologies drilled twelve (12) hollow stem augured soil borings (B-1 to B-12) and collected soil samples from depths of 15 to 35-ft below ground surface (bgs). Locations are shown in figure clip (right). A gasoline release was confirmed based on field observations of moderate-to-strong petroleum odors in eleven of the twelve soil borings generally encountered at depths of approximately 12-to-22 feet (in the groundwater fluctuation, "smear" zone) and confirmation laboratory detections of total petroleum hydrocarbons as gasoline (TPH-gas) concentrations in samples collected from eleven of the twelve soil borings [the maximum concentration was detected at boring B-7 = 2,100 mg/kg (or parts per million, ppm].



The highest concentrations of TPH-gas and the volatile constituent

[4]: Note: Water depths for MW-1 and MW-2 are not reflective of groundwater levels below ground surface due to their elevated casing height within monument well boxes.

compounds of benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in samples collected at 15 and 20 feet bgs. Note: A boring targeting the waste oil tank (B7), contained no additional contaminants of concern from a suite of analysis including: diesel, petroleum oil and grease, semi volatile organics (Method 8270 SVOCs), or other volatile solvent compounds aside from BTEX (Method 8010). Of note: only limited contamination was observed in the two downgradient borings, B-8 and B-12.

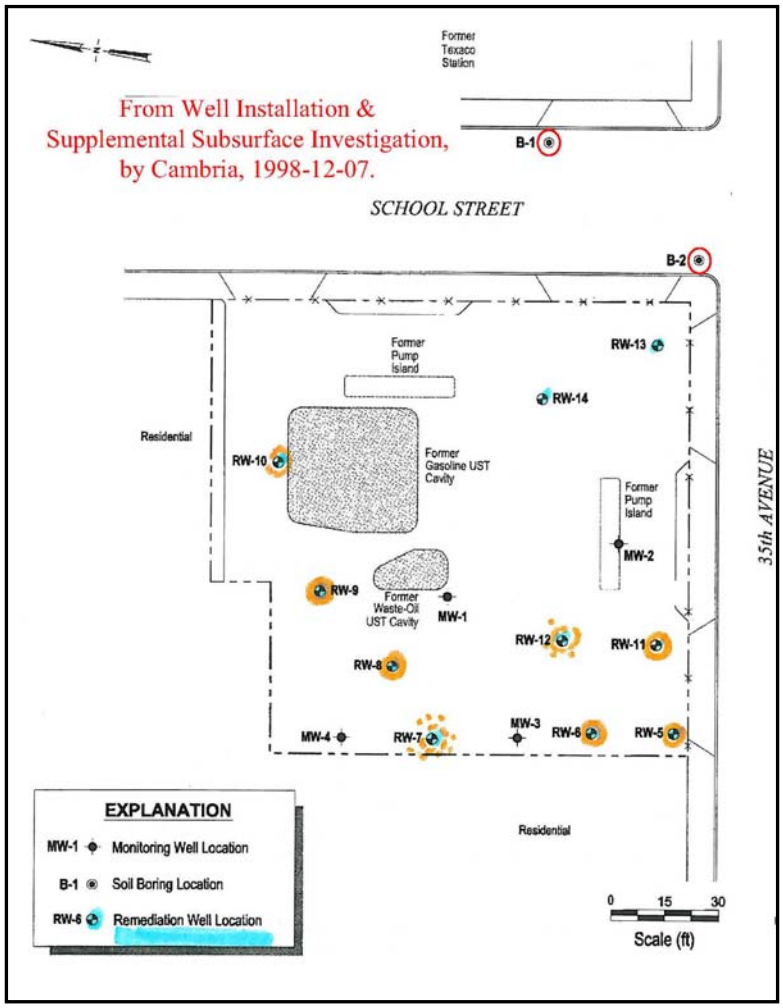
1994, Follow-up Subsurface Investigation & Monitoring Well Installations: In May 1994, Cambria drilled seven (7) hollow-stem augured soil borings (SB-A through SB-G, (see figure, right), analyzed two soil samples per boring, and converted three of the borings into on-site monitoring wells (MW-1 through MW-3, each screened from 10-25 ft bgs). Groundwater samples were analyzed from the 3 newly installed wells in addition to 3 of the exploratory borings (grab samples). Boring logs indicated moderate to very strong, weathered gasoline odors in all the borings starting a depth of eight feet below ground surface.

- Soil: TPH-gas concentrations were detected in soil samples collected for analysis in six of the seven soil borings, (max concentration = 2,900 ppm in MW-2 at 15-ft),
- Groundwater: TPH-gas/benzene concentrations were detected in all six groundwater samples. The maximum TPH-gas/benzene concentrations detected in grab groundwater samples were 120,000/10,000 ug/L (or parts per billion, ppb, in SB-B @ 15-ft), max TPH-gas/benzene concentrations in a developed monitoring well were 120,000/22,000 (MW-1 @ 16.8-ft). Tabulated analytical results are provided in Appendix B.

1996, Feasibility Testing: In July 1996, Cambria conducted a series of remediation feasibility tests involving soil vapor extraction-only (SVE), SVE/air sparging, and SVE/aquifer pumping. SVE vacuums of up to 150 inches-of-water were applied to the three monitoring wells for 20-to-45 minutes (approx. 5-ft of well screen available for SVE above groundwater). TPH-gas soil vapor concentrations collected from each well at the end of the SVE test ranged from less than 250 parts per million by volume (ppm_v) in test wells MW-1 and MW-2, to greater than 10,000 ppm_v in test well MW-3. Cambria did not note any significant increases in air flow or soil vapor concentrations when SVE was combined with air sparging (no radius of influence of vacuum or groundwater drawdown was observed in any monitored well). However, Cambria stated that they believed dewatering combined with SVE could enhance remedial efforts.

The generally low air and groundwater flow rates are indicative of low permeability soils. Results of the remedial testing indicated that SVE-alone, or SVE combined with air sparging would not be effective in removing hydrocarbons from the subsurface soils. However, it was believed that Dual Phase Extraction was a promising remedial alternative.

1997, Additional Downgradient, Monitoring Well: In February 1997, Cambria installed one additional on-site monitoring well (MW-4, screened from 10-30 ft bgs) at the downgradient (west) corner of the parcel. Soil samples for logging were obtained on 5-foot intervals using hollow-stem augers but no field measurements (photoionization meter) or contaminant observations were logged but two analyzed soil samples contained TPH-gasoline contamination The maximum concentration of TPH-gas in soil was detected at a depth of 15-ft bgs (@ 530 ppm). TPH-gas and benzene concentrations in groundwater were detected at concentrations of 47,000, and 11,000 ppb, respectively.

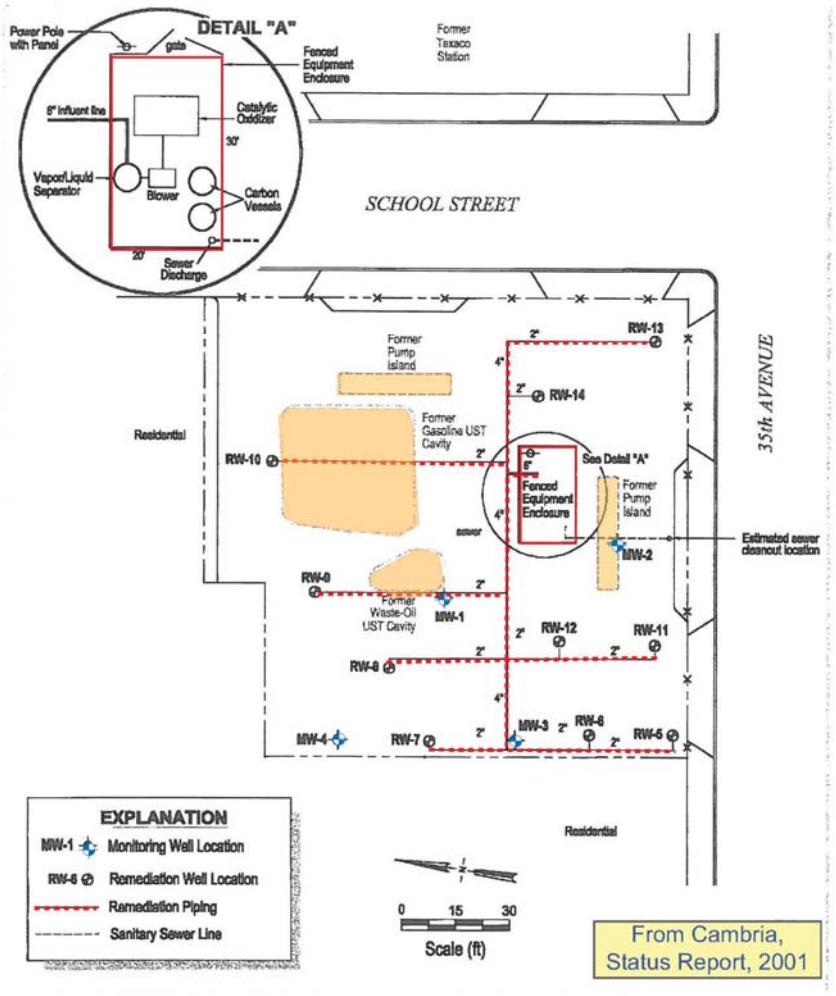


1998, Remediation Well Installation (see figure, right): In August 1998, Cambria installed ten (10), on-site, 4-inch diameter, dual-phase extraction (DPE) remediation wells (RW-5 through RW-14). Soil samples for logging were obtained from the hollow-stem augers on 5-foot intervals (5 borings) or directly from augured drill cuttings (5 borings) and the majority of borings had very similar subsurface logs (low permeability clayey sands/gravels, and sandy clays having strong to moderate petroleum hydrocarbon odors in the groundwater fluctuation, smear zone). No soil samples were laboratory analyzed.

In addition to the 10 installed remediation wells, an attempt was made to obtain upgradient, hydropunch-type, grab groundwater samples (two geoprobe borings, B-1 and B-2), on School Street. Sampling rods were advanced directly to depths of 28 and 38 feet (no soil cores collected). Apparently, the low permeability soils encountered at those depths did not produce groundwater, so no water samples could be collected.

1999, Interim Remedial Action - Injection of Hydrogen Peroxide: In August 1999, Cambria poured a limited volume (7-12 gallons) of a hydrogen peroxide solution into each of the four monitoring wells and ten remediation wells in an attempt to oxygenate impacted groundwater while Dual Phase Extraction (DPE) remediation system planning was underway. Dissolved oxygen concentrations in groundwater did not significantly increase nor did contaminant concentrations decrease following the placement of 7.5% hydrogen peroxide into all fourteen on-site wells and the results did not change ongoing plans for installing DPE remediation system.

2000-2004, Site Remediation by Dual-Phase Vacuum Extraction: In October 2000, Cambria initiated remediation by DPE which consisted of extraction from the Site's 10 remediation wells by a 200 cfm positive-displacement blower. The blower simultaneously extracted liquid/dissolved-phase contaminants to a centrally located treatment compound where vapor phase hydrocarbons were destroyed using a catalytic oxidizer; dissolved phase hydrocarbons were treated using two, 1,000-lb carbon vessels and was discharged to the sanitary sewer. In August 2002, the blower was upgraded in an effort to increase hydrocarbon removal. The positive-placement blower was replaced by a more powerful, 20-HP liquid ring vacuum pump capable of generating higher vacuums. The system design included simultaneous extraction of soil vapor and groundwater from the 4 monitoring wells (MW-1 though MW-4) and the ten, on-site, 4-inch diameter, remediation wells (RW-5 through RW-14) using 1-inch diameter suction hose stingers lowered to depths typically ranging from 16-20 feet bgs.



In September 2004, the DPE system was dismantled due to asymptotically low hydrocarbon removal rates. Approximately 6,545 pounds of vapor-phase hydrocarbons were removed after 13,965 hours of extraction and 11 pounds of dissolved-phase hydrocarbons were removed from 1,447,419 gallons of DPE pumped groundwater (equal to an average of 1.7 gal/min extracted).

2006, Proposed Additional Remedial Actions (January), and Off-site Delineation Workplan (July): Following the cessation of the DPE remediation, Alameda County Health Care Services (AC-HCS) requested that a *Workplan* be prepared to implement an alternative remedial technique (December 2004). Post-remediation monitoring (2005) of six on-site wells (MW-1 though MW-4, RW-5 and RW-9) showed sheen was present in each of the wells along with elevated concentrations of residual dissolved fuel contaminants, primarily as TPH-gas, benzene, and MTBE. Maximum 2005 concentrations detected in these 6 monitoring wells ranged from 9,400-to-53,000 ppb for TPH-gas, 1,200-to-6,100 ppb for benzene, and non-detect-to-2,300 for MTBE.

Cambria's *Revised Remediation Workplan* proposed completing interim remedial pilot testing of seven (7) sparge points in order to confirm the ability and cost-effectiveness of *In-Situ Chemical Oxidation* (ISCO) injection as an option for cleanup of residual, fuel-impacted groundwater in a low-permeability, shallow aquifer. Gaseous ozone was selected as

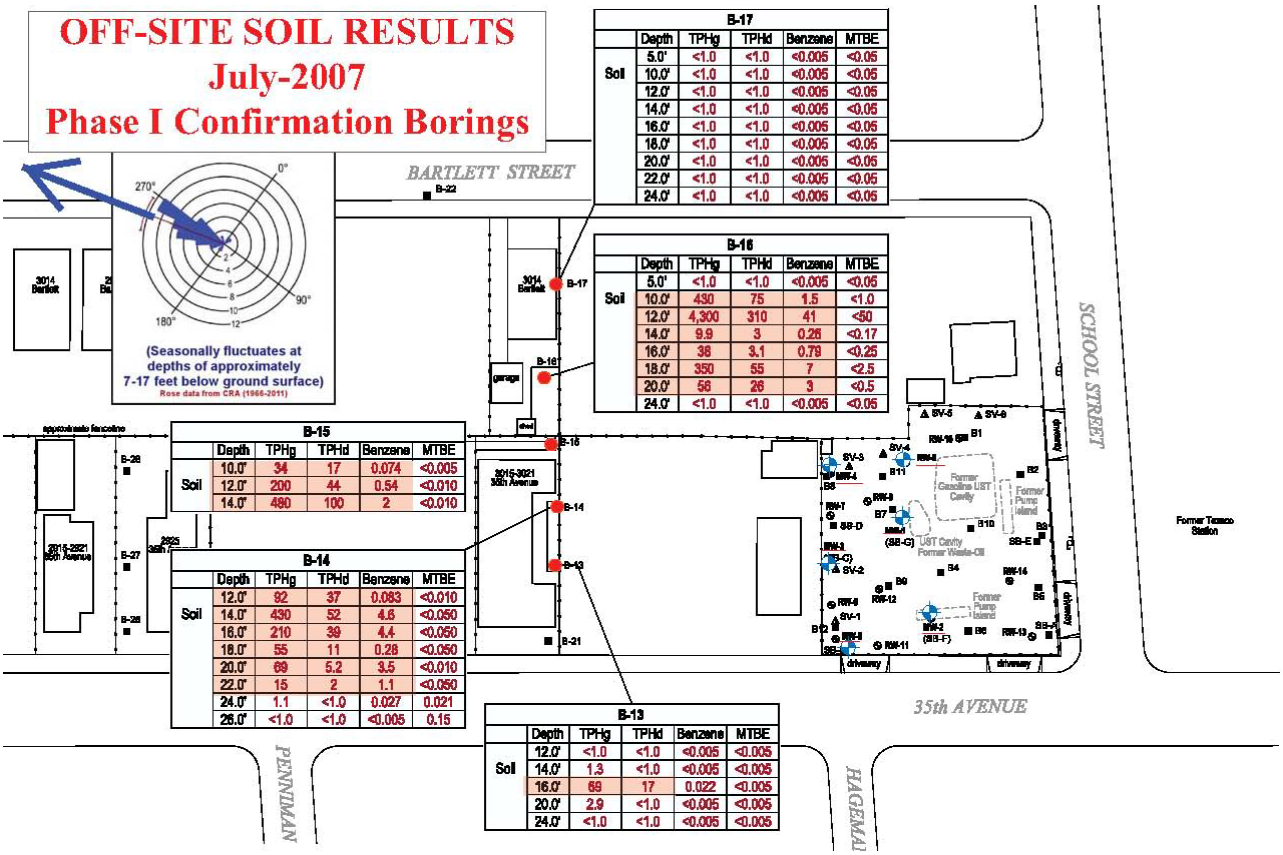
the ISCO oxidizer because of: 1) ozone gas' reported ability to transfer though fine-grained, saturated soils, and 2) ozone's ability to destroy hydrocarbons on contact.

AC-HCS determined that previous Dual Phase Extraction remediation at the Site (2000-2004) was not successful due to the low permeability restrictions that Site soils have on air and groundwater flow, and those same restrictions would likely limit the distribution of sparged ozone from coming into contact with residual contamination (May-2006). AC-HCS instead requested that: 1) the original *Corrective Action Plan* (dated 1996) be updated with new understandings of the subsurface conditions in order to better evaluate proposed remedial options, and 2) an *Off-site Soil & Groundwater Investigation Workplan/Site Conceptual Model* be submitted to delineate extent of off-site soil contamination, the extent of groundwater plume migration, and a survey of wells within 2,000 feet and other sensitive receptors.

Cambria's *Well and Sensitive Receptor Survey* (July 2006) concluded that none of the active supply wells identified within a 2,000-foot radius of the Site were likely to be impacted based on their relative upgradient/sidegradient locations. A review of other potential sensitive receptors (schools, churches, and surface water bodies) concluded there were negligible direct risks from impacted groundwater but there did exist a potential risk for plume off-gassing (vapor intrusion) if the residual hydrocarbon plume extended under residences (identified data gap). Cambria's proposed data gap sampling plan called for off-site soil and groundwater sampling of six (6) downgradient borings installed at distances ranging between ~300-600 feet off-site.

AC-HCS's response opinion was that the distance between the proposed boring locations and the source was such that collected data would not be useful for Site characterization or delineation of the dissolved plume (Oct-2006). In addition to requesting new proposed boring locations, AC-HCS requested completion of a soil gas investigation in the vicinity of the western property boundary.

2007, Phase I Off-site Characterization and On-Site Soil Gas Investigations: In May and July 2007, a preliminary round of off-site groundwater and soil samples, and on-site soil gas samples were collected and analyzed by Conestaoga-Rovers & Associates (CRA, which mergered with Cambria). The objectives of the Phase I investigation (and a follow-up Phase II characterization



Phase I Borings –

investigation completed in Nov-2008) were to: 1) investigate the extent of the dissolved petroleum hydrocarbon plume in groundwater; 2) determine the soil smear-zone impacts resulting from lateral plume migration and seasonal groundwater fluctuation; and 3) identify whether subsurface soil gas concentrations (vapor) indicated a potential vapor intrusion risk. The Phase I investigation included the collection of soil and groundwater samples from a transect of five (5) downgradient, continuously cored driven probe locations (B-13 through B-17, see figure below), and the collection of six (6) on-site soil gas sampling locations (V-1 through V-6).

Off-site, smear zone gasoline contamination was observed during continuous core logging of the Phase I transect borings, which were placed at accessible locations, approximately perpendicular to dominant groundwater flow and 150-ft downgradient of the Site . Results of laboratory-tested off-site soil samples confirmed field observations as elevated gasoline constituent concentrations were present within the initial transect borings (see shaded results, above). Results of laboratory-tested off-site groundwater grab samples from these initial Phase I transect borings contained elevated gasoline, benzene, and MTBE concentrations, indicating that a portion of the dissolved gasoline plume extended to this transect. In addition, Phase I, on-site soil gas sampling along the property line contained elevated vapor concentrations (summarized with Phase II results, below).

2008, Phase II Additional Off-Site Characterization and Limited On-Site Investigations: In October-November, 2008, a follow-up round of *Phase II Off-site Characterization Sampling* was completed to address previous detections of elevated gasoline constituent concentrations in soil,

groundwater, and soil gas. The follow-up, Phase II investigation included:

- Eight (8), continuously cored step-out soil borings (off-site), one installed as an infill boring (B-21) and the remaining seven (B-22 to B-28) positioned downgradient of the Phase I transect (the second transect was placed at accessible locations generally 230-ft downgradient of the initial, Phase I transect).
- One upgradient (off-site) and two on-site soil borings were continuously-cored to a depth of 45-ft bgs to: 1) inspect for potential upgradient contribution from an abandoned gas station site (Texaco), and 2) inspect post-remediation, on-site soil conditions.
- Eight (8), grab groundwater samples were collected from on-site boring B-18, and off-site borings B-21 through B-28.

Phase II Soil Sampling Results

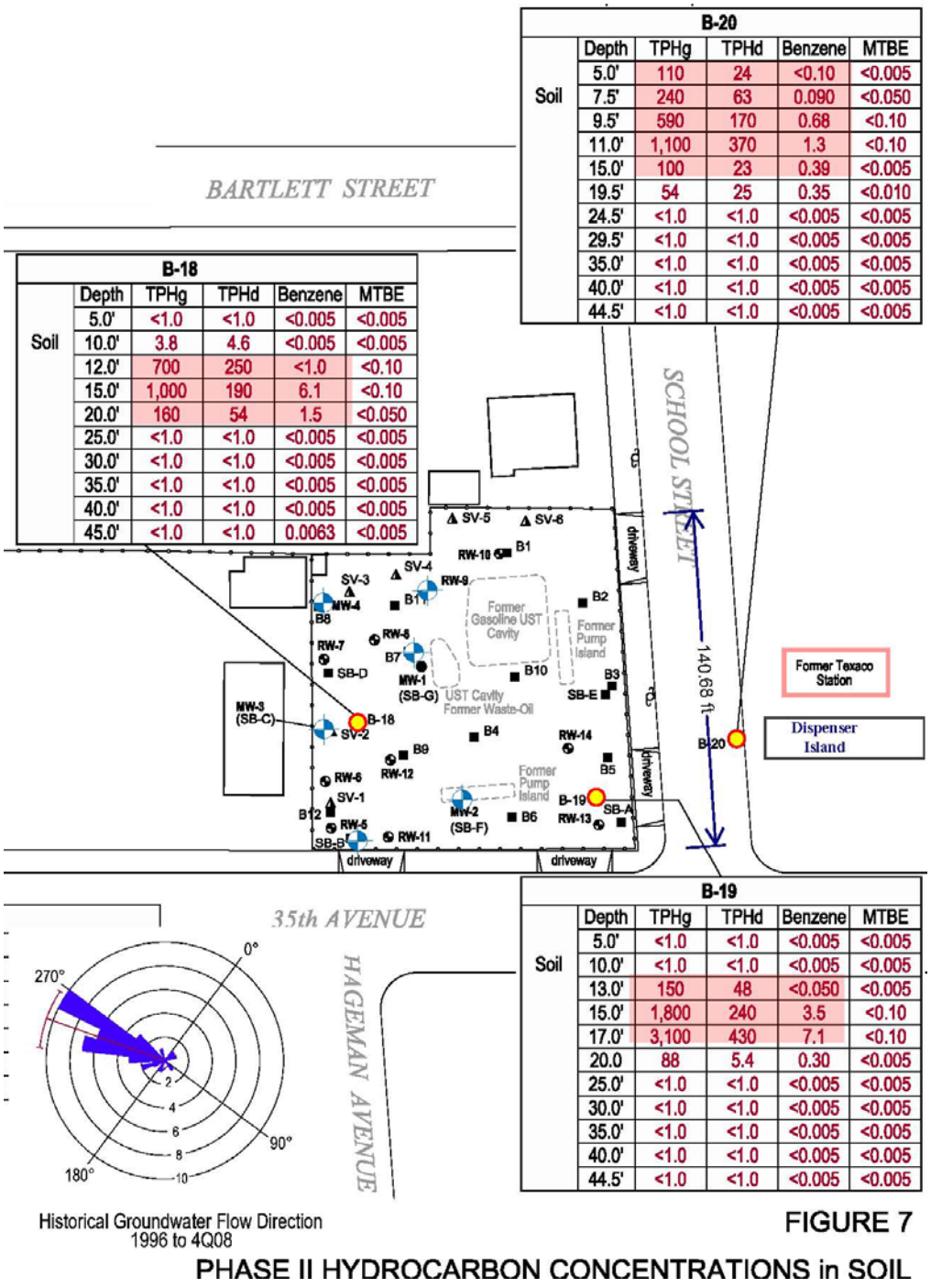
Off-site Soils: No additional off-site, smear zone gasoline contamination was observed during continuous core logging of the second, downgradient boring transect or in lab samples, which indicates smear zone impacts from lateral plume transport/fluctuating groundwater have not extended as far as the second transect. Results of laboratory-tested off-site soil samples confirmed field observations as no contaminant concentrations were detected.

On-site Soils: Smear zone gasoline contamination was observed in continuous soil cores collected from two, post-remediation borings drilled at the downgradient (B-18) and upgradient (B-19) sides of the property. Field observations and laboratory results confirm elevated concentrations of residual gasoline contamination remain within the smear zone created by fluctuating groundwater, primarily found at depths of approximately 11 to 20 feet (see highlighted impact elevations in the graphic below). Despite the removal of over 6,500 lbs of gasoline from the subsurface during four years of Dual Phase Extraction, residual constituent concentrations continue to exceed regulatory threshold limits. The lack of remedial success using Dual Phase Extraction as a cleanup technique is likely due to:

1. Dual phase extraction's inability to efficiently pull residual fuel contamination from low permeability soils present beneath the Site. And,
2. Contribution from a secondary, upgradient source (the abandoned Texaco Station across School Street). Specifically, data collected from exploratory boring B-20 (see figure on next page), which was drilled immediately adjacent to Texaco Station's former fuel dispenser islands. Field observations of soil cores and confirmation laboratory testing contained elevated gasoline contamination at very shallow depths (<5 feet below ground surface, see graphic next page). These elevated, off-site gasoline concentrations, combined with the elevated gasoline concentrations detected in borings installed along the subject Site's upgradient property line indicate the abandoned Texaco station is a secondary source of contamination (see recent boring B-19, and previous borings SB-A & B-4).

In addition to the shallow contamination detected in upgradient boring (DP-20, see figure below) indicating a nearby, off-site source, it is notable that soil and groundwater data suggest this second source has no apparent evidence of the fuel additive MTBE. Specifically:

- There were no detections of MTBE in soil samples analyzed from the upgradient Texaco Station site.
- Results of groundwater collected from upgradient property line wells (RW-13, RW-14) did not contain the fuel additive, while mid-site and downgradient property line wells (MW-1 through MW-3 and RW-6 and RW-9) have contained MTBE. These distinctively different fuel fingerprints indicate a second source originates off site and the resulting plume is migrating onto the property (discussed further below).



B-20

	Depth	TPHg	TPHd	Benzene	MTBE
Soil	5.0'	110	24	<0.10	<0.005
	7.5'	240	63	0.090	<0.050
	9.5'	590	170	0.68	<0.10
	11.0'	1,100	370	1.3	<0.10
	15.0'	100	23	0.39	<0.005
	19.5'	54	25	0.35	<0.010
	24.5'	<1.0	<1.0	<0.005	<0.005
	29.5'	<1.0	<1.0	<0.005	<0.005
	35.0'	<1.0	<1.0	<0.005	<0.005
	40.0'	<1.0	<1.0	<0.005	<0.005
	44.5'	<1.0	<1.0	<0.005	<0.005

B-18

	Depth	TPHg	TPHd	Benzene	MTBE
Soil	5.0'	<1.0	<1.0	<0.005	<0.005
	10.0'	3.8	4.6	<0.005	<0.005
	12.0'	700	250	<1.0	<0.10
	15.0'	1,000	190	6.1	<0.10
	20.0'	160	54	1.5	<0.050
	25.0'	<1.0	<1.0	<0.005	<0.005
	30.0'	<1.0	<1.0	<0.005	<0.005
	35.0'	<1.0	<1.0	<0.005	<0.005
	40.0'	<1.0	<1.0	<0.005	<0.005
	45.0'	<1.0	<1.0	0.0063	<0.005

B-19

	Depth	TPHg	TPHd	Benzene	MTBE
Soil	5.0'	<1.0	<1.0	<0.005	<0.005
	10.0'	<1.0	<1.0	<0.005	<0.005
	13.0'	150	48	<0.050	<0.005
	15.0'	1,800	240	3.5	<0.10
	17.0'	3,100	430	7.1	<0.10
	20.0	88	5.4	0.30	<0.005
	25.0'	<1.0	<1.0	<0.005	<0.005
	30.0'	<1.0	<1.0	<0.005	<0.005
	35.0'	<1.0	<1.0	<0.005	<0.005
	40.0'	<1.0	<1.0	<0.005	<0.005
	44.5'	<1.0	<1.0	<0.005	<0.005

FIGURE 7

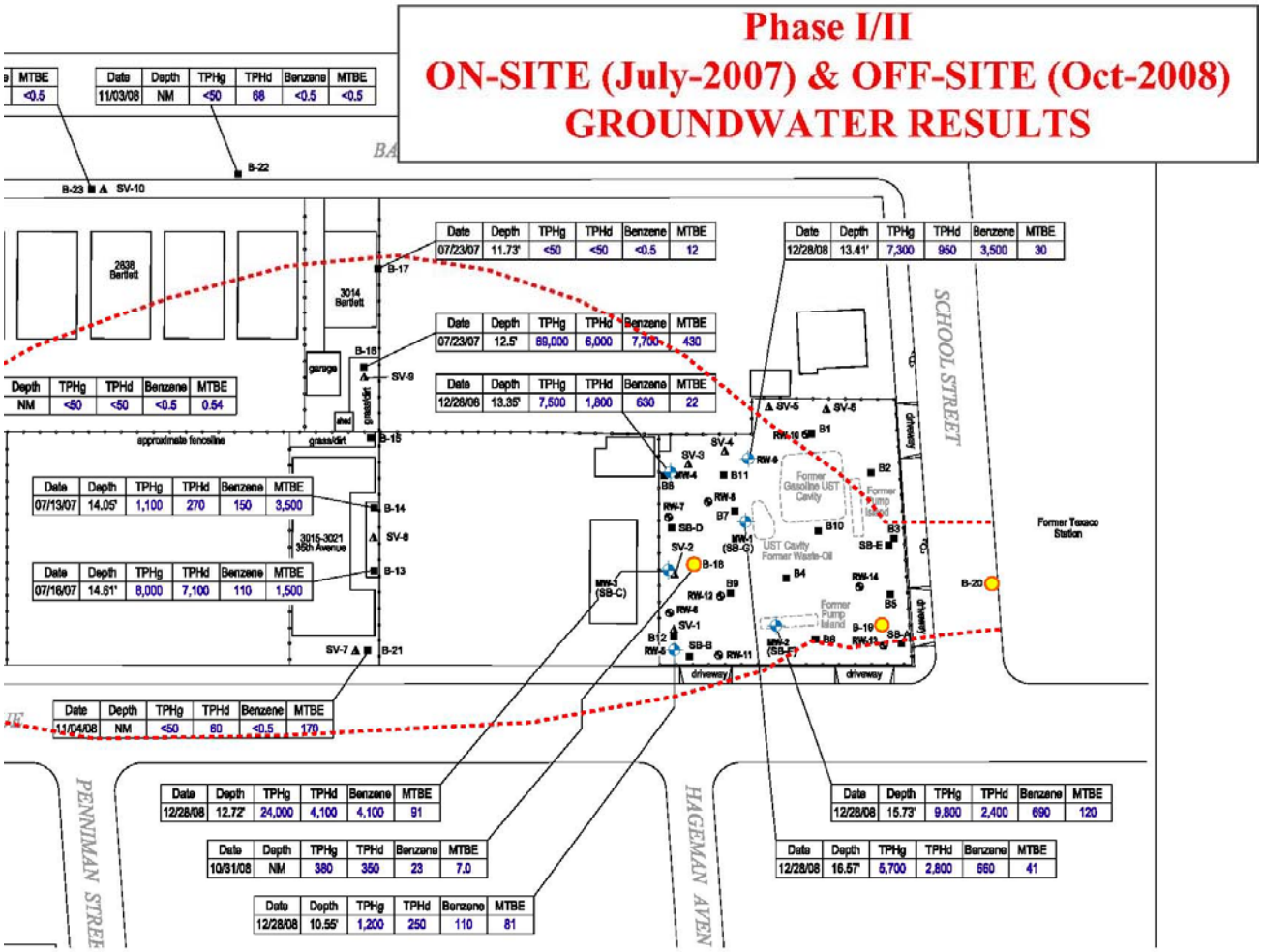
PHASE II HYDROCARBON CONCENTRATIONS in SOIL

Phase II, Post-remediation on-site borings (B-18, B-19) and upgradient boring B-20 (2008).

Phase I & II Groundwater Sampling Results:

Grab groundwater samples were collected from Phase I and Phase II transects, and from on-site boring B-18. The data was compared with monitoring well results (2008 fourth quarter event). No groundwater sample was obtained from the upgradient boring B-20.

Groundwater Results (Phase I & II borings, and monitoring wells).



- TPH-gasoline was detected in all on-site wells and borings (380-24,000 ppb, max in MW-3), and five of the six first transect borings (from "not detected" to 69,000 ppb, max. in DP-16). No TPH-gasoline was detected in the downgradient, Phase II transect borings.
- Benzene was detected in all on-site wells and borings (23-4,100 ppb, max in MW-3), and five of the six first transect borings (from "not detected" to 7,700 ppb, max. in DP-16). No benzene was detected in the downgradient, Phase II transect borings.
- MTBE, was detected in all on-site wells and borings (7-120 ppb, max in MW-2), and all the first transect borings (12 to 3,500 ppb, max. in DP-14). MTBE was detected in five of the seven downgradient, Phase II transect borings

primarily as trace to non-detectable concentrations borings (from "not detected" to 150 ppb, max. in DP-27).

- The set of groundwater data suggests two sources because results of groundwater collected from upgradient property line wells (RW-13, RW-14) did not contain the fuel additive, while mid-site and downgradient property line wells (MW-1 through MW-3 and RW-6 and RW-9) have contained MTBE. These differing fuel fingerprints indicates one source originates on-site and a second plume is migrating onto the property. It is likely that the 4 years of Dual Phase Extraction conducted at the subject Site would have also pulled residual contamination from the abandoned, upgradient Texaco Station to the on-site cleanup system.

The set of groundwater test results indicates that a thin plume of MTBE extends from the Site to the second transect (330 feet) but that the low concentrations detected in the downgradient grab samples suggests the downgradient limit of the MTBE plume is in close proximity to the Phase II transect borings. The lack of TPH-gasoline and benzene detections in the second transect indicates that TPH-gasoline and constituent compounds are attenuated and limited to a distance between the two transects (approximately 200-225 ft from the Site).

Phase I & II Soil Gas Survey Results:

A second round of vapor samples were collected in October-2008 because elevated concentrations were detected in the initial round of Phase I, on-site soil gas sampling locations positioned along the property line (July-2007). Phase II sampling was completed at accessible locations along the two previously described soil and groundwater sampling transects, positioned approximately 150 feet (V-7 through V-9), and approximately 330 feet (V-10 through V-14), from the Site in the downgradient groundwater direction.

- TPH-gasoline was detected in all on-site, soil gas wells (@5-ft: 8,400-53,000 ug/m^3, max at SV-5; and increasing at the 10-ft sampling interval: 23,000-620,000 ug/m^3, max at SV-4_{dup}). No TPH-gasoline soil gas was detected in any of the seven, off-site soil gas wells (SV-7 through SV-14).

- Benzene was also detected in all on-site, soil gas wells (@5-ft: 14-99 ug/m^3, max at SV-5; and again increasing at the 10-ft sampling interval: 31-4,600 ug/m^3, max at SV-6). No benzene was detected in soil gas from any of the seven, off-site soil gas wells (SV-7 through SV-14). The residential/commercial threshold limits for benzene in soil gas is 36/122 ug/m^3, respectively[5].

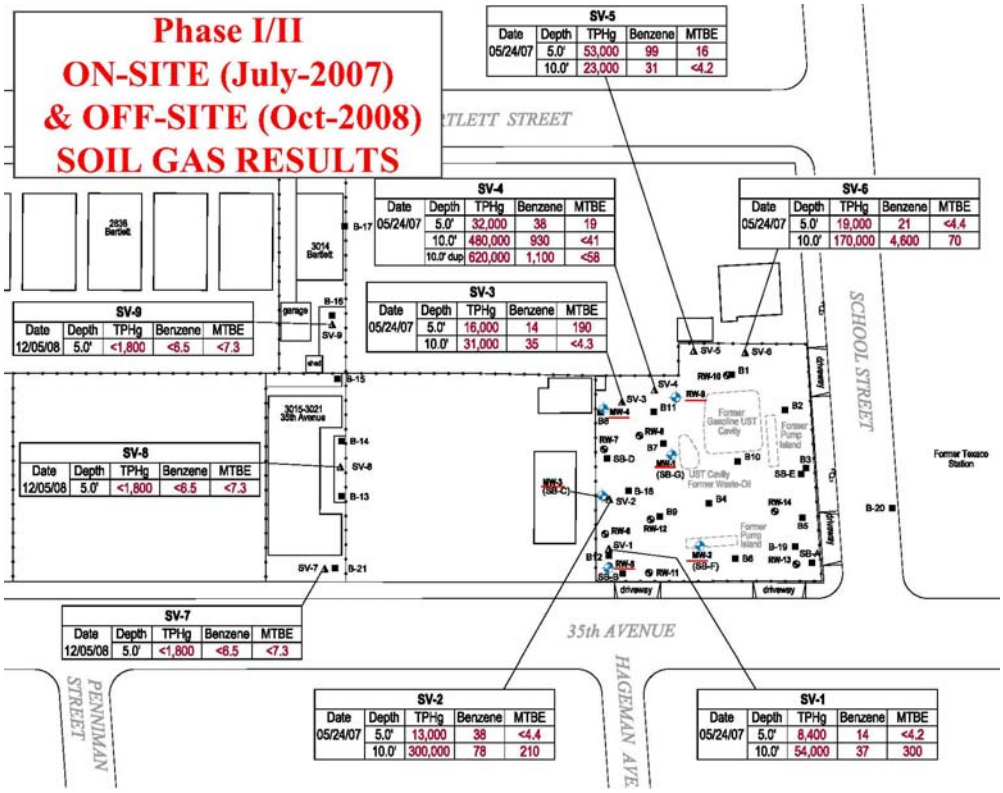
- MTBE was detected in all on-site, soil gas wells but in only three of the shallow sampling intervals (@5-ft: "not detected" to 190 ug/m^3, max at SV-3; the 10-ft sampling interval concentrations ranged from not detected in three of the soil gas wells to 300 ug/m^3, max

[5]: The California Human Health Screening Levels (CHHSLs, 2005) were developed as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. Residential and commercial/industrial land use screening levels for soil gas are based on soil gas data collected five feet below a building foundation or the ground surface. Intended for evaluation of potential vapor intrusion into buildings and subsequent impacts to indoor-air. Screening levels apply to sites that overlie plumes of VOC impacted groundwater.

at SV-1). No MTBE was detected in soil gas from any of the seven, off-site soil gas wells (SV-7 through SV-14). The residential/commercial threshold limits for MTBE in soil gas is 4,000/13,400 ug/m^3, respectively

- Toluene, Ethylbenzene, and Xylenes: Trace concentrations of these constituent gasoline compounds were detected in a few offsite soil gas wells (SV-7, -10 & -13) but at levels well below established threshold limits.

Soil Vapor Survey Results
Includes Phase I borings (SV-1 thought SV-6, July 2007) & Phase II (SV-7 through SV-14) borings.



The set of soil gas test results indicates that elevated soil gas concentrations persist at the Site, 7 years after the Dual Phase Extraction system was decommissioned. The lack of soil gas detections in any of the off-site samples indicates that dissolved plume off-gassing is not a risk at distances of 150 ft from the Site.
Documents relating to the discovery, investigation and remediation of the fuel releases release are listed in the reference section at the end of this report.

Updated SITE CONCEPTUAL MODEL

Source of Contamination: The source of on-site gasoline hydrocarbon contamination originated from multiple sources associated with the former USTs and associated appurtenances that were removed in 1991. Elevated gasoline concentrations were found at the former UST pit and dispensers locations and continue to have the highest detections during on-going groundwater monitoring. In addition, data collected from an off-site, upgradient exploratory boring indicates additional gasoline contamination is coming onto the Site from a second, gasoline release source and it appears to be feeding the plume. The upgradient off-site source is

an abandoned, former Texaco Gas Station.

Nature and Extent of Contamination:

Soils: After the initial source zone excavations in 1991, gasoline-range petroleum hydrocarbons and volatile constituent compounds were identified as the Contaminants of Concern (COCs) for the site. Specifically, Total Petroleum Hydrocarbons as gasoline [TPH-gas], benzene, toluene, ethylbenzene, and xylenes [BTEX], and Methyl tert Butyl Ether [MTBE]) were found at concentrations in excess of Tier I Environmental Screening Levels[6] for Residential/Commercial land uses (ESLs), both in on-site and off-site soils. Diesel-range Total Petroleum Hydrocarbons (TPH-diesel) were also encountered but generally identified as overlapping lighter fraction gasoline hydrocarbons detected within the diesel range.

Tier 1 Soil Screening Threshold Concentrations (mg/kg, or ppm)

(Groundwater IS a current or potential Source of Drinking Water)

Chemical of Concern	Residential		Commercial	
	Shallow (< 10 feet)	Deep (> 10 feet)	Shallow (< 10 feet)	Deep (> 10 feet)
TPH-gas TPH-diesel	83	83	83	83
Benzene	0.044	0.044	0.044	0.044
Toluene	2.9	2.9	2.9	2.9
Ethylbenzene	2.3	3.3	3.3	3.3
Xylenes	2.3	2.3	2.3	2.3
MTBE	0.023	0.023	0.023	2.3

- Reference: *Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater* (November 2007), http://www.waterboards.ca.gov/sanfranciscobay/esl.htm
- No additional fuel oxygenates or lead scavengers were detected.

As noted in Section 4 (see summary write-up of the 2007-8 Soils Investigation, above), on-site smear zone gasoline contamination was observed in two, post-remediation (2008) continuously-cored exploratory borings (B-18, and B-19). Field observations and laboratory results confirm that elevated concentrations of residual gasoline contamination remains within the smear zone created by fluctuating groundwater (e.g., observed smear zone is primarily encountered at depths of between 11 to 20 feet below ground surface). Note: confirmation lab analysis of shallow on-site soils (i.e., < 10 feet bgs) is very limited because only 2 of the 72 analyzed soil samples collected on-site were laboratory-analyzed. Despite the removal of over 6,500 lbs of gasoline from the on-site remediation wells during four years of Dual Phase Extraction, residual constituent concentrations in on-site soils continue to exceed regulatory threshold limits. The

[6]: Environmental Screening Levels (ESLs): California Regional Water Quality Control Board - San Francisco Bay Region has developed these ESLs in a document entitled: *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (interim Final, November 2007, Revised May 2008). The ESLs are intended to provide guidance on whether or not remediation of detected contamination is warranted based on conservative risk.

persistence of on-site petroleum hydrocarbon contamination appears due in part to: 1) DPE's inability to pull residual fuel contamination from low permeability soils, and 2) the apparent contribution from a secondary, upgradient source (the abandoned Texaco Station across School Street, see Figure 2).

The extent of off-site, smear zone gasoline contamination was determined by logging 13 off-site borings and laboratory-analyzing 91 discrete soil samples. Smear zone gasoline was observed during continuous core logging of the Phase I transect borings, placed at accessible locations approximately 150-ft downgradient of the Site. Laboratory-tested soil and groundwater samples confirmed field observations, indicating that a portion of the dissolved gasoline plume extended to this transect. Smear zone contamination did not extend to the second set of transect borings, placed at accessible locations approximately 330-ft downgradient of the Site.

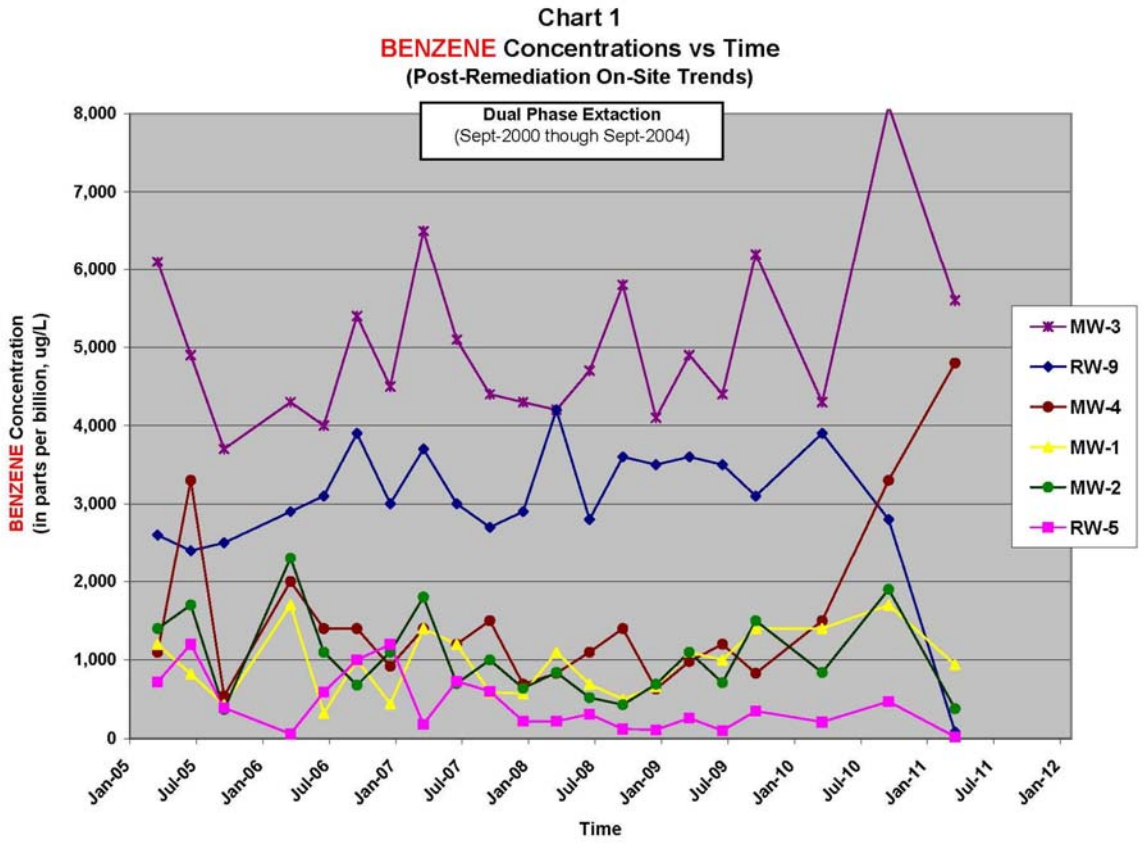
Groundwater: On-site groundwater has been sampled seasonally since 1994 and chemicals of concern have consistently been detected at concentrations in excess of ACEH groundwater quality objectives.

Chemical of Concern	Groundwater Quality Goal (µg/L)
Total Petroleum Hydrocarbons	1,000
Benzene	1
Toluene	150
Ethylbenzene	300
Xylenes	1,750
MTBE	5

Note: The East Bay Municipal Utility District (EBMUD) provides water supply to Oakland and obtains its drinking supply from Sierra runoff (Mokelumne River watershed), which eliminated the need for local groundwater wells.

Post remediation water quality monitoring (sampling, testing, and reporting) has been completed on 6 on-site wells since 2004. Individual concentration-v-time charts for benzene and TPH-gasoline have been placed on an aerial photograph of the Site to assess changes and trends. Benzene concentrations appear to be stable or deceasing in four of the monitored wells (MW-1, & -2, and RW-5, & -9), and have upward trends in two of the downgradient, property line wells (MW-3 and MW-4). The upward trends may be the result of post remediation rebound, lateral transport of source-zone mass (residual fuel release contaminants), or a combination of the two. No new source of contamination is expected since the site has remained undeveloped since 1991. TPH-gas concentrations on the other hand, have deceasing trends in most of the wells (MW-2, -3, & -4, and RW-5, & -9), and a stable trend in MW-1.

A number of additional charts have been generated to see if any other trends or conditions exist. Chart 1 presents post remediation benzene concentrations in all six monitored wells. Chart 2 presents a similar data for TPH-gas. Chart 3 presents seasonal groundwater fluctuation data. (see Chart below):



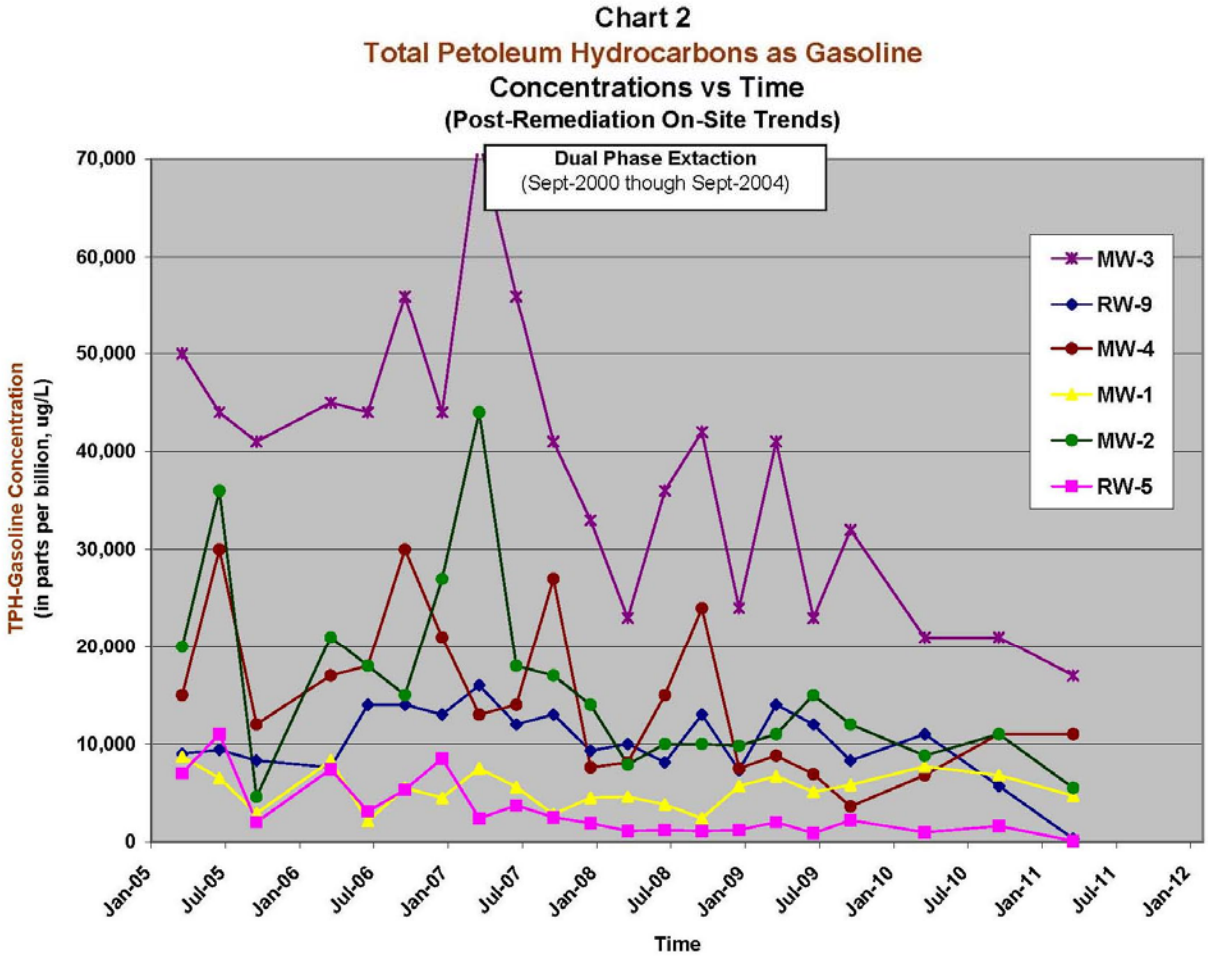
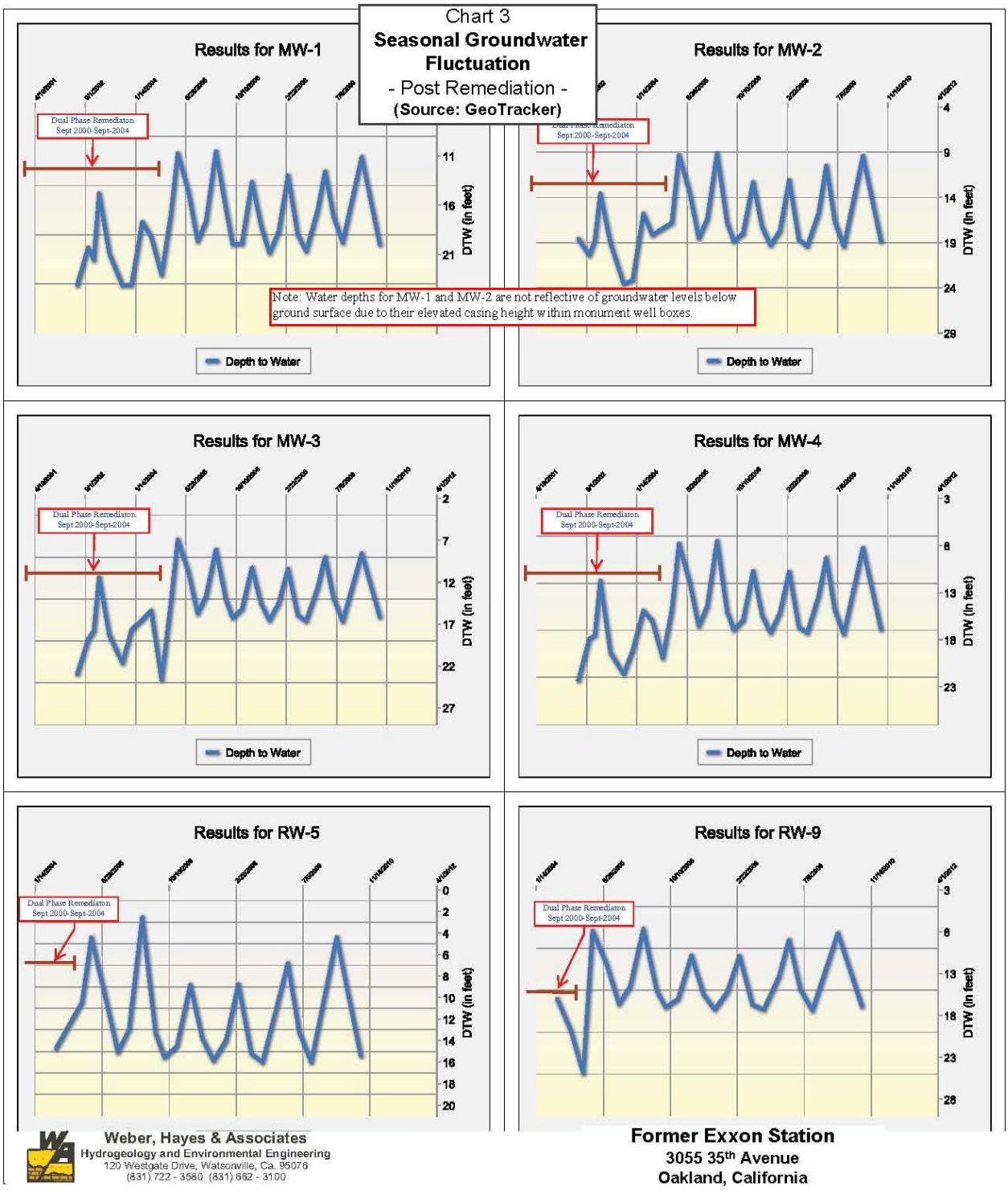


Chart 2
Total Petoleum Hydrocarbons as Gasoline
Concentrations vs Time
(Post-Remediation On-Site Trends)
Dual Phase Extaction
(Sept-2000 though Sept-2004)
TPH-Gasoline Concentration
(in parts per billion, ug/L)
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Time
MW-3
RW-9
MW-4
MW-1
MW-2
RW-5



The data suggests:

- Seasonal fluctuations in groundwater generally fall between 8-18 feet (see Chart 3). Note MW-1 and MW-2 have casing stick-up above ground surface. Gradient is approximately 0.009 ft/ft (approximately 1 foot of groundwater drop for 111 feet of lateral run) towards the west.

- The fluctuations in contaminant concentrations do not follow a consistent pattern across the Site (i.e., concentrations do not consistently rise or fall with seasonal rise/fall of groundwater).

In summary, the post-remediation set of groundwater test results (wells and groundwater grab samples) indicate:

- A thin plume of MTBE extends off-site to the second transect (330 feet).
- The low concentrations detected in to the second transect suggest the downgradient limit of the MTBE plume is in close proximity;
- The lack of TPH-gasoline and benzene detections in the second transect indicates that TPH-gasoline and constituent compounds are attenuated and limited to a distance between the two transects (i.e., approximately 200-225 ft from the Site).

Soil Gas: The completed set of soil gas test results generated during two mobilizations (on-site, off-site) indicate that elevated soil gas concentrations persist on-site, 7 years after the Dual Phase Extraction system was decommissioned

Tier 1 Shallow Soil Gas Human Health Screening Levels for Vapor Intrusion

(Concentrations in ug/m^3)

Chemical of Concern	Land Use	
	Residential	Commercial
TPH-gas TPH-diesel	Not Established	
Benzene	36.2	122
Toluene	135,000	378,000
Ethylbenzene	Not Established	
Xylenes	31,500	87,900
MTBE	4,000	13,400

- Reference: *California Human Health Screening Levels*[7] *for Indoor air and soil gas (CHHSLs)* (January 2005). Soil gas screening levels are based on soil gas data collected five feet below a building foundation or the ground surface. Intended for evaluation of potential vapor intrusion into buildings and subsequent impacts to indoor-air. For sites with significant areas of VOC-impacted soil or sites that overlie plumes of VOC-impacted groundwater.

[7]: California Human Health Screening Levels for indoor air and soil gas (CHHSLs): The California Human Health Screening Levels are concentrations of 54 Hazardous Chemicals in soil or soil gas that the California Environmental Protection Agency (Cal/EPA) considers to be below thresholds of concern for risks to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment (OEHHA) on behalf of Cal/EPA.

Benzene concentrations slightly exceeded the Tier 1 threshold limits in three of the six property boundary locations (SV-2, -4, & -5) --- no other volatile compound thresholds were exceeded. The lack of soil gas detections in any of the off-site samples indicates that dissolved plume off-gassing is not a risk at distances of 150 ft from the site.

Dominant Fate and Transport Characteristics

The dominant fate and transport characteristics of hydrocarbons released at the Site are that they drain by gravity through the low-to-moderately permeable soil matrix to groundwater. During this process a portion of the hydrocarbon mass is adsorbed onto soil particles in the unsaturated zone.

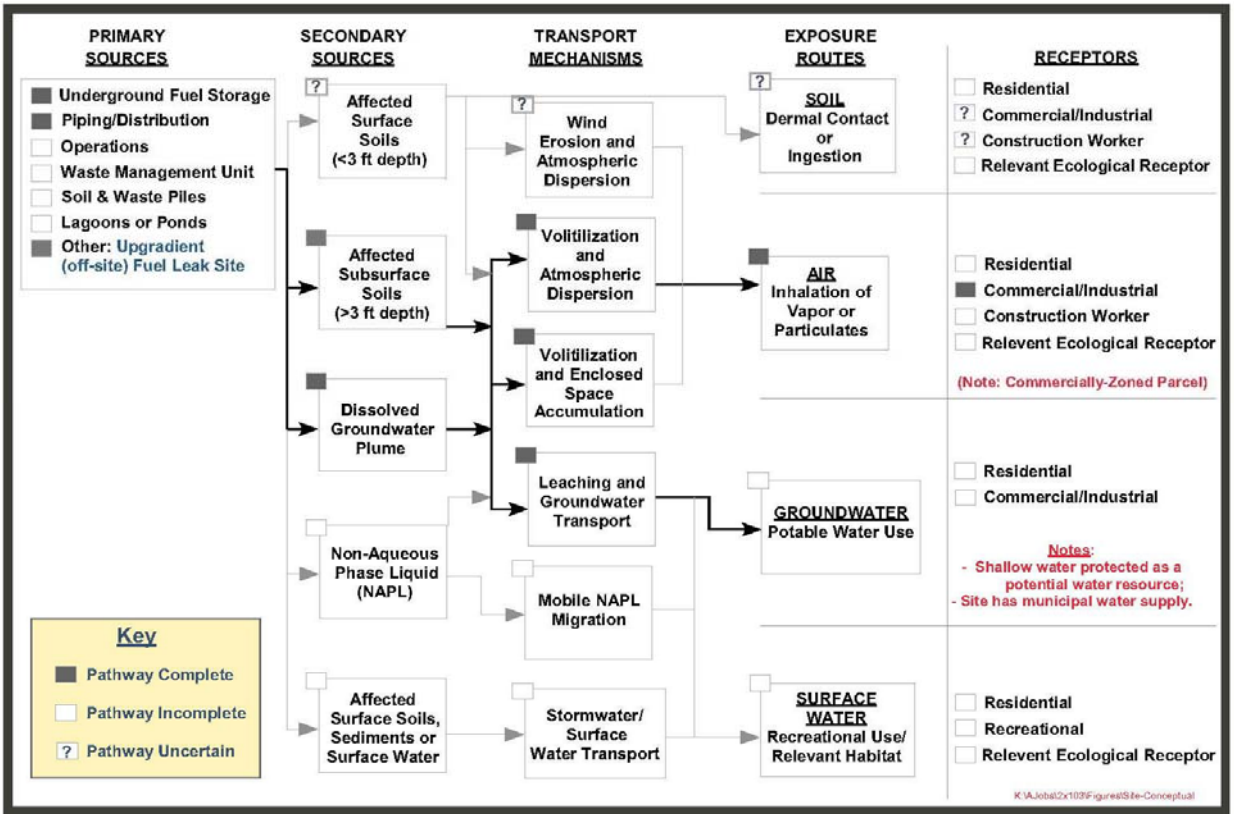
Hydrocarbons reached the saturated zone in sufficient quantity to form a sheen on top of the first encountered groundwater beneath the Site. No measurable free product has been documented during over 65 monitoring events, although sheen was observed in all 6 wells in the monitoring network.

In the saturated zone at this Site hydrocarbons have been transported by groundwater through advective and dispersive processes in the general downgradient direction (west). Off-site characterization drilling and sampling results suggest that a thin plume of MTBE extends from the Site to the second transect (330 feet); however, the low concentrations detected in the downgradient grab sample borings suggest the downgradient limit of the MTBE plume is in close proximity to the Phase II transect borings. The lack of TPH-gasoline and benzene detections in the second transect indicates that TPH-gasoline and constituent compounds are attenuated and limited to a distance between the two transects (approximately 200-225 ft from the Site). The truncated plume indicates natural attenuation processes are at equilibrium with dissolved contaminant flux at the periphery of the plume. Natural attenuation, combined with source removal of the leaking USTs/infrastructure, and four years of vapor and groundwater extraction appear to limit the advective and dispersive transport of hydrocarbons by groundwater.

When a volatile organic compound, such as gasoline's constituent compound benzene, is released to the environment, it will partition into different phases. It can: 1) be adsorbed onto soil particles, 2) be dispersed into soil vapor, 3) remain as free phase gasoline in soil interstices or floating on groundwater (this is known as "light non-aqueous phase liquid", or free product/sheen), and 4) be dissolved into groundwater. Gasoline/VOCs will reach a dynamic equilibrium between these phases, all of which have been observed at the Site.

Potential Exposure Pathways

Currently there are no buildings present on the property and groundwater is not being used for drinking water. The potential exposure pathways (the ways humans or the environment may be exposed to the hydrocarbons that have been released at the Site) are presented graphically in the flow-chart presented below.



A limited risk remains associated with on-site vapor intrusion (residual soil gas) if the site is developed without vapor intrusion mitigations. A limited risk associated with dermal contact exists because there is a shallow soil sampling data gap. A description of potential exposure pathways follows:

- Direct exposure to residual, surface soil contamination is unlikely because the Site has remained a fenced, unpaved vacant lot since the former Exxon Service Station was completely removed approximately 20 years ago. In addition, four years of soil vapor extraction removed residual impacts to shallow soils. Direct exposure to residual, deeper soil contamination would be limited to construction trenching or grading operations. If development were to occur, a *Soil Management Plan* would be put into effect for the handling of any residually impacted soils. Additional shallow soil sampling will be proposed to confirm post remediation concentrations in shallow soils (< 10 feet bgs) at worst case locations (dispensers, product piping runs) since currently only 2 of 72 on-site soil samples have been laboratory-analyzed.

- Exposure to soil vapors containing hydrocarbons. The completed soil gas survey indicates the volatile constituent gasoline compound of benzene was detected at concentrations slightly exceeded the Tier 1 threshold limits in three of the six property boundary locations (SV-2, -4, & -5) --- no other volatile compound thresholds were exceeded. The lack of soil gas detections in any of the off-site samples indicates that dissolved plume off-gassing is not a risk at distances of 150 ft from the Site.

- Ingesting (drinking) hydrocarbon contaminated groundwater. This exposure pathway is incomplete – a previously completed 2,000-ft radius well survey investigation determined there are no drinking water wells screened within or near the dissolved hydrocarbon plume.

- Groundwater quality is considered a sensitive receptor that must be protected from degradation by hydrocarbons (all State groundwaters are considered a potential water supply resource). Active remediation of groundwater impacted by hydrocarbons was undertaken with the goal of removing hydrocarbons to a point where natural processes will restore groundwater quality to what it was prior to degradation by hydrocarbons.

Potential Sensitive Receptors

A 2,000-ft radius, sensitive receptor survey was completed in 2006 (Cambria, 2006), which researched potential supply wells, schools, churches, hospitals, and known daycare facilities within the target radius. The survey concluded that within the target radius, no water supply wells existed and the residual dissolved gasoline plume was not likely to impact the three identified irrigation wells, the closest well being 750 feet away in a sidegradient direction (north). Additionally, none of the other potential sensitive receptors (schools, churches, rec-parks) are located downgradient of the plume footprint, and therefore are unlikely to be impacted by the dissolved plume.

The nearest surface water body is west-flowing Peralta Creek, located approximately 600-ft northwest of the site (see Figure 1). It is highly unlikely that dissolved gasoline plume compounds could reach Peralta Creek based on distance, attenuated plume limits (approximately 300 ft), and the low transmissivity of site soils.

Potential sensitive receptors that may be exposed to hydrocarbons from the release at the site include site users and groundwater as a potential drinking water resource. The release poses no immediate threats to site users because the Site remains undeveloped. Though groundwater is degraded by hydrocarbons at the site, there is no complete pathway for drinking water ingestion as there are no water supply wells in the immediate vicinity of the site. Protection of groundwater as a sensitive receptor, and site development vapor intrusion protection will be addressed during completion of a *Corrective Action Plan (CAP).*

Data Gaps

1) The most obvious data gap is the lack of an upgradient well(s) to confirm whether or not an abandoned Texaco Gas Station is contributing dissolved gasoline concentrations to the subject Site. The long term influx of dissolved contamination onto the subject Site would have affected the efficiency of previous remedial system operation as well as the selection of future remedial options.

2) The downgradient extent of dissolved gasoline plume has been reasonably defined using GeoProbe grab groundwater samples approximately 200-255 feet off-site.

3) Aside from samples collected from two, recent on-site borings (2007), all on-site soil data is over 14 years old, and the lab results predate active remediation at the site (2000-2004). No samples were collected from beneath the former tank pit or dispensers (known

contaminant source areas). Only two of the seventy-two laboratory-tested soil samples collected from the Site were obtained from depths shallower than 10 feet. Accordingly:

- The magnitude of known shallow sources of soil contamination (i.e., dispensers) or potential shallow sources of shallow soil contamination (i.e., product piping runs) have not been identified;
- The *Site Conceptual Model* currently does not have the data set capable of eliminating construction worker *direct exposure to soil* as pathway for site risk. As noted above, direct exposure to residual, surface soil contamination is highly unlikely because the Site has remained a fenced, unpaved vacant lot for over 20 years and four years of soil vapor extraction has actively removed residual impacts from shallow soils. Direct exposure to residual, deeper soil contamination may be present, and would be limited to construction trenching or grading operations.

As noted in this report's introduction, and described throughout, a significant effort and expense has been made to remove residual gasoline contaminants from the Site subsurface. Despite the removal of approximately 6,500 lbs of gasoline in soil-gas and in groundwater during four years of Dual Phase Extraction, residual constituent concentrations still significantly exceed regulatory threshold limits. Residual gasoline contamination remains trapped within the seasonally-submerged, smear zone where vertically fluctuating and laterally migrating groundwater has impacted low-permeability soils, primarily at depths between 11 to 20 feet (groundwater seasonally fluctuates between approximately 8-18 feet bgs).

The lack of success with the Dual Phase Extraction remediation technology appears to be due to: 1) its inability to effectively pull residual fuel contamination sorbed within low permeability soils, and 2) apparent ongoing contribution from a secondary, upgradient source (the abandoned Texaco Station across School Street).

Once current soil conditions are confirmed (ie. identify where the bulk of the residual gasoline mass resides), and contaminant contribution from an off-site source is confirmed, a Corrective Action Plan should assess the most cost effective remedial alternative that: 1) reduces residual source contamination from continuing to significantly impact on-site and off-site groundwater[8], and 2) creates an environment for natural attenuation to thrive and reduces contaminant concentrations to cleanup goals within a reasonable timeframe. Given the lack of success with Dual Phase Extraction and the remaining budget left in the State Cleanup Fund's commitment to the Site, remedial options will likely include:

1) Targeted mass removal of source contamination (up to 20 feet bgs) using large-diameter augers/excavation equipment.
2) Multiple, high-pressure injections of specialty chemical oxidizers, with emphasis on getting the oxidizer in contact (destroying) the smear zone contamination.
3) A permeable reactive barrier installed along the downgradient property boundary.

[8]: Remediation feasibility testing by soil vapor extraction, air sparging, and groundwater extraction techniques showed only limited air and groundwater flow rates (no vacuum influence/easy dewatering but no groundwater drawdown at nearby wells), which confirms the low permeability conditions beneath the Site (Cambria, 1996).

An effort should be made to select a remedial option that can be incorporated with development plans for the Site, if desired. The property has remained undeveloped for 20 years and previous efforts to develop the Site have been sidetracked out of fear of contaminant liability and risk. Remediation should be able to be completed in conjunctions with redevelopment in order to prevent loss of local property values and to prevent Brownfield blight.

Appendix B

Weber, Hayes & Associates
Daily Field Records & Sampling Protocol

Field Date: September 22, 2011
&
Field Methodology for Groundwater Sampling

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax (831) 722-1159

Text Page ___/___
INDICATE ATTACHMENTS THAT APPLY
___ Site Map
___ Data Sheets
___ Geologic Logs
___ Photo Sheets
___ COC's
___ Chargeable Materials

Client	**Former Exxon Station**			Date:	**September 22, 2011**
Site Location:	**3055 35th Ave Oakland, CA**			Study #:	**2X103.Q**
Field Tasks:	[ ] Drilling	[x] Sampling	[ ] Other (see below):	Weather Conditions:	Clear, Cool
Personnel / Company On-Site:	**Josh Pritchard (Weber, Hayes and Associates: WHA)**				

FIELD WORK PLANNING: Performed on: **September 21, 2011**

Meet with Project Manager: [X] Yes [ ] No
Number of Wells to be Gauged: **14 wells w/ Dissolved Oxygen (D.O.) & Depth to Groundwater**
Sample Wells: **MW-1 through 4, RW-5 and 9**
Analyze for: **TPH-G, BTEX, Fuel Oxygenates & Lead scavengers by EPA Method 8260, TPH-D by EPA Method 8015**
Proposed Sampling Date: **September 22, 2011**

ON-SITE FIELD WORK:
Arrive on-site at 0700 to conduct 3rd Quarter 2011 Quarterly Groundwater Monitoring Well Sampling.

LABORATORY:
(Initial) Send all analytical to: **Torrent Analytical Laboratory, 408.263.5258, 483 Sinclair Frontage Rd., Milpitas, CA**
JP

GROUNDWATER MONITORING FIELD WORK STANDARD OPERATING PROCEDURES:
(Initial)
- All sampling is conducted according to Standard Operating Procedure (SOP) 10I/
JP - All pertinant information regarding the well, including water quality physical parameters are recorded on the following pages.
- All samples are placed in a refrigerated cooler immediately after sampling.
- All groundwater monitoring/purging/sampling equipment is decontaminated according to SOP 10B/at the beginning of on-site work, in between each well, and at the end of work
- All purge water is propoerly containerized in 55-gallon drums, or another suitable container, for later removal by a licensed subcontractor
- All samples are recorded on field Chain-of-Custody sheets for documentation of proper transportation to the appropriate Laboratory.

INSTRUMENT CALIBRATION:
QED MP20 Flow Through Cell: Temperature = 13.99 pH = 7.00 & 10.00 Electrical Conductivity = 718 Barometric Pressure = 760 mmHg
D.O. % Saturation = 100% Oxidation Reduction Potential (ORP) = 217

BEGIN SAMPLING WELLS:
MW-4, MW-3, RW-9, MW-1, RW-5, MW-2

COMMENTS:
All wells will be purged until the QED MP20 unit indicates that the physical parameters of the water (pH, Conductivity, Temp, D.O., and ORP) have stabilized to within ~ 15%, or once four casing volumes in the well column requiring sampling have been removed (see Groundwater Monitoring Well Sampling Field Data Sheet(s) for details). Wells will be purged from the bottom up and in accord with all WHA SOPs. Wells will only be sampled using a Bladder Pump or a disposable bailer, as per RWQCB guidlines.

JP Pritchard / 9-22-11

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr. Watsonville CA 95076
(831) 722-3580 (831) 662-3100
ax (831) 722-1159

Location	Groundwater Depth	Total Depth of Well	D.O. (mg/L)	ORP (mV)	Floating Product (comments)
MW-1	19.22'	26.5'	0.72	-91	No FP, Moderate Odor
MW-2	17.94'	26.5'	0.76	-106	No FP, High Odor
MW-3	15.34'	26.5'	1.04	-82	No FP, High Odor
MW-4	16.05'	30'	0.69	-98	No FP, High Odor
RW-5	14.44'	25.7'	0.66	-65	No FP, No Odor
RW-6	14.52'	25.5'	0.83	-86	No FP, Moderate Odor
RW-7	15.15'	29.5'	1.16	-69	No FP, Trace Odor
RW-8	16.40'	29.5'	1.22	-58	No FP, Low Odor
RW-9	16.12'	25'	1.03	-123	No FP, Low Odor
RW-10	15.11'	25'	0.77	-104	No FP, No Odor
RW-11	14.50'	25'	0.94	-96	No FP, No Odor
RW-12	15.01'	27'	0.75	-77	No FP, No Odor
RW-13	15.55'	25'	0.78	-78	No FP, No Odor
RW-14	15.22'	25'	0.80	-108	No FP, High Odor
	JP 9-22-11				

HOW MANY PURGE DRUMS WERE LEFT ON-SITE: 1 APPROXIMATE VOLUME (gallons): 4
CALL PURGE WATER REMOVAL SUBCONTRACTOR ON: 9-26-11
DRUMS WILL BE PURGED ON: ? ? ?

COMMENTS:

M Peters / 9-22-11
Signature of Field Personel & Date

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *September 22, 2011*

Sample No.: MW-4 **Sample Location:** MW-4

Samplers Name: *Josh Pritchard* **Recorded by:** JP

Purge Equipment:
- ____ Bailer: Disposable or Acrylic
- ____ Whaler # ____
- X Peristaltic Pump
- ____ Redi-flow Pump (Grundfus)

Sample Equipment:
- ____ Disposable Bailer
- ____ Whaler # ____
- X Peristaltic Pump
- ____ Submersible Pump

Analyses Requested :
TPH-gas. BTEX. Fuel Oxygenates, Lead Scavengers by EPA Method 8260B
TPH-diesel by EPA Method 8015M

Number and Types of Bottle Used:
3 x 40 mL VOA's (HCL preservative)
2 x 1 L Amber

Well Number: MW-4
Depth to Water: 16.05' TOC
Well Depth: 30' BGS or TOC
Height W-Column: 13.95' feet (well depth - depth to water)

Pump Intake Depth: ~23 feet
Pump Flow Rate: ~~150~~ ~25 mL/min

Lab: Torrent **Transportation:** *Courier*

Time (24 hr.)	Depth to Water (TOC)	Drawdown (feet)	Volume Purged (mL)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Parameters Stabilized
0848	16.05'	0	0	17.20	1.116	2.01	6.50	-78	Low, clear, minor	
0849	16.38'	0.33'	100	17.39	1.192	0.88	6.52	-86		
0851	16.43'	0.38'	200	17.44	1.193	0.88	6.52	-87		
0854	16.53'	0.48'	300	17.51	1.197	0.84	6.53	-90		
0857	16.61'	0.56'	400	17.48	1.197	0.71	6.55	-96		
0900	16.70'	0.65'	500	17.51	1.198	0.71	6.55	-96		
0903	16.72'	0.67'	600	17.55	1.198	0.70	6.55	-97		
0906	16.75'	0.70'	700	17.54	1.198	0.69	6.56	-98		X
Stop:	Purge	Complete	Parameters	Stabilized						

SP 9-22-11

Sample Well

Time: 0907 Sample ID: MW-4 Depth: 16.75' feet below TOC

Comments: No FP, High Odor

Well Condition: No Vault, CAP on tight, Cone over top.

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *September 22, 2011*

Sample No.: MW-3 Sample Location: MW-3

Samplers Name: *Josh Pritchard* **Recorded by:** JP

Purge Equipment:
- _____ Bailer: Disposable or Acrylic
- _____ Whaler # _____
- X Peristaltic Pump
- _____ Redi-flow Pump (Grundfus)

Sample Equipment:
- _____ Disposable Bailer
- _____ Whaler # _____
- X Peristaltic Pump
- _____ Submersible Pump

Analyses Requested :
TPH-gas, BTEX, **Fuel** Oxygenates, **Lead** Scavengers by **EPA Method 8260B**
TPH-diesel by **EPA Method 8015M**

Number and Types of Bottle Used:
3 x 40 mL VOA's (HCL preservative)
2 x 1 L Amber

Well Number: MW-3
Depth to Water: 15.34' TOC
Well Depth: 26.5' BGS or TOC
Height W-Column: 11.16' feet (well depth - depth to water)

Pump Intake Depth: ~ 20 feet
Pump Flow Rate: ~~~100~~ ~ 25 mL/min

Lab: Torrent **Transportation:** *Courier*

Time (24 hr.)	Depth to Water (TOC)	Drawdown (feet)	Volume Purged (mL)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Parameters Stabilized
0932	15.34'	0	0	18.28	1.75	1.66	6.60	-79	Low: clear, minor	
0933	15.69'	0.35'	100	18.26	1.76	1.44	6.60	-79	↓	
0935	16.12'	0.78'	200	18.34	1.78	1.15	6.59	-79	↓	
0938	16.27'	0.93'	300	18.30	1.77	1.02	6.59	-79	↓	
0941	16.34	1.00'	400	18.32	1.78	1.05	6.59	-81	↓	
0944	16.42	1.08'	500	18.39	1.78	1.06	6.59	-81	↓	
0948	16.47	1.13'	600	18.39	1.78	1.04	6.59	-82	↓	X
Stop:	Purge	Complete	Parameters	Stabilized						

JP 9-22-11

Sample Well

Time: 0948 Sample ID: MW-3 Depth: 16.47' feet below TOC

Comments: NO FP, High Odor

Well Condition: Good

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *September 22, 2011*

Sample No.: RW-9 Sample Location: RW-9

Samplers Name: *Josh Pritchard* Recorded by: JP

Purge Equipment:
- ____ Bailer: Disposable or Acrylic
- ____ Whaler # ____
- X Peristaltic Pump
- ____ Redi-flow Pump (Grundfus)

Sample Equipment:
- ____ Disposable Bailer
- ____ Whaler # ____
- X Peristaltic Pump
- ____ Submersible Pump

Analyses Requested :
- TPH-gas, BTEX, Fuel Oxygenates, Lead Scavengers by EPA Method 8260B
- TPH-diesel by EPA Method 8015M

Number and Types of Bottle Used:
- 3 x 40 mL VOA's (HCL preservative)
- 2 x 1 L Amber

Well Number: RW-9

Depth to Water: 16.12' TOC

Well Depth: 25' (BGS) or TOC

Height W-Column: 8.88' feet (well depth - depth to water)

Pump Intake Depth: ~20 feet

Pump Flow Rate: ~~400~~ ~25 mL/min

Lab: Torrent Transportation: *Courier*

Time (24 hr.)	Depth to Water (TOC)	Drawdown (feet)	Volume Purged (mL)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
1010	16.12	0	0	20.98	1.043	2.05	6.85	-98	Low: clear, Minor	
1012	16.25	0.13	100	20.60	0.981	1.68	6.84	-104	↓	
1014	16.29	0.17	200	20.47	0.938	1.57	6.83	-109	↓	
1016	16.33	0.21	300	20.63	0.918	1.32	6.83	-113	↓	
1018	16.37	0.25	400	20.71	0.913	1.28	6.82	-114	↓	
1020	16.40	0.28	500	20.90	0.912	1.23	6.81	-117	↓	
1022	16.43	0.31	600	21.10	0.906	1.13	6.81	-119	↓	
1024	16.46	0.34	700	21.20	0.907	1.07	6.81	-123	↓	
1026	16.48	0.36	800	21.17	0.906	1.05	6.80	-122	↓	
1028	16.51	0.39	900	21.14	0.905	1.03	6.80	-123	↓	X
1030!	Purge	Complete	Parameters	Stabilized						

JP 9-22-11

Sample Well

Time: 1030 Sample ID: RW-9 Depth: 16.51' feet below TOC

Comments: No FP, Low odor

Well Condition: Good ~~Secure~~

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* Date: *September 22, 2011*

Sample No.: MW-1 Sample Location: MW-1

Samplers Name: *Josh Pritchard* Recorded by: JP

Purge Equipment:

_____ Bailer: Disposable or Acrylic
_____ Whaler # _____
X Peristaltic Pump
_____ Redi-flow Pump (Grundfus)

Sample Equipment:

_____ Disposable Bailer
_____ Whaler # _____
X Peristaltic Pump
_____ Submersible Pump

Analyses Requested :

TPH-gas, BTEX, Fuel Oxygenates, Lead Scavengers by EPA Method 8260B
TPH-diesel by EPA Method 8015M

Number and Types of Bottle Used:

3 x 40 mL VOA's (HCL preservative)
2 x 1 L Amber

Well Number: MW-1
Depth to Water: 19.22' TOC
Well Depth: 26.5' BGS or TOC
Height W-Column: 7.28' feet (well depth - depth to water)

Pump Intake Depth: ~22 feet
Pump Flow Rate: ~50 mL/min

Lab: Torrent **Transportation:** *Courier*

Time (24 hr.)	Depth to Water (TOC)	Drawdown (feet)	Volume Purged (mL)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
1049	19.22'	0	0	22.34	1.278	2.03	6.73	-94	Low: clear, minor	
1051	19.34'	0.12	100	21.19	1.283	1.61	6.56	-88		
1053	19.41'	0.19	200	20.71	1.286	1.42	6.52	-85		
1055	19.46'	0.24	300	20.33	1.289	1.27	6.51	-84		
1057	19.50'	0.28	400	20.23	1.288	1.16	6.50	-85		
1059	19.53'	0.31	500	20.16	1.288	1.08	6.50	-85		
1101	19.55'	0.33	600	20.16	1.288	0.95	6.51	-87		
1103	19.57'	0.35	700	20.13	1.287	0.92	6.51	-88		
1105	19.60'	0.38	800	20.13	1.288	0.85	6.52	-89		
1107	19.66'	0.44	900	20.13	1.288	0.82	6.52	-90		
1109	19.69'	0.47	1000	20.21	1.288	0.77	6.53	-90		
1111	19.71'	0.49	1100	20.16	1.289	0.75	6.53	-91		
1113	19.74'	0.52	1200	20.23	1.288	0.72	6.53	-91	V V V	X
Stop:	Purge	Complete	Parameters	Stabilized						

Sample Well

Time: 1114 Sample ID: MW-1 Depth: 19.74' feet below TOC

Comments: No FP, Moderate odor

Well Condition: Good, Standpipe

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* Date: *September 22, 2011*

Sample No.: RW-5 Sample Location: RW-5

Samplers Name: *Josh Pritchard* Recorded by: **JP**

Purge Equipment:

_____ Bailer: Disposable or Acrylic
_____ Whaler # _____
X Peristaltic Pump
_____ Redi-flow Pump (Grundfus)

Sample Equipment:

_____ Disposable Bailer
_____ Whaler # _____
X Peristaltic Pump
_____ Submersible Pump

Analyses Requested :

TPH-gas, BTEX, ~~Fuel Oxygenates~~, Lead Scavengers by EPA Method 8260B
TPH-diesel by EPA Method 8015M

Number and Types of Bottle Used:

3 x 40 mL VOA's (HCL preservative)
2 x 1 L Amber

Well Number: RW-5
Depth to Water: 14.44' TOC
Well Depth: 25.7' BGS or TOC
Height W-Column: 11.26' feet (well depth - depth to water)

Pump Intake Depth: ~20 feet
Pump Flow Rate: ~50 mL/min

Lab: Torrent **Transportation:** *Courier*

Time (24 hr.)	Depth to Water (TOC)	Drawdown (feet)	Volume Purged (mL)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
1133	14.44'	0	0	25.21	0.590	2.18	6.93	-55	Low; clear, minor	
1135	14.64'	0.20'	100	22.10	0.574	1.35	6.67	-55	↓	
1137	14.72'	0.28'	200	21.68	0.573	1.23	6.62	-54	↓	
1139	14.75'	0.31'	300	21.56	0.573	1.14	6.62	-57	↓	
1141	14.77'	0.33'	400	21.39	0.573	1.04	6.59	-58	↓	
1143	14.82'	0.38'	500	21.31	0.573	0.95	6.57	-59	↓	
1145	14.91'	0.47'	600	21.33	0.573	0.86	6.54	-61	↓	
1147	14.95'	0.51	700	21.29	0.573	0.83	6.53	-62	↓	
1149	15.01'	0.57	800	21.46	0.573	0.77	6.52	-63	↓	
1151	15.08'	0.64	900	21.41	0.572	0.70	6.51	-64	↓	
1153	15.14'	0.70	1000	21.43	0.573	0.69	6.51	-65	↓	
1155	15.19'	0.75	1100	21.38	0.573	0.66	6.51	-65	↓	X
Stop: Purge Complete Parameters Stabilized										

JP 9-22-11

Sample Well

Time: 1156 Sample ID: RW-5 Depth: 15.19' feet below TOC

Comments: No FP, No odor

Well Condition: Good

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *September 22, 2011*

Sample No.: MW-2 **Sample Location:** MW-2

Samplers Name: *Josh Pritchard* **Recorded by:** JP

Purge Equipment:

_____ Bailer: Disposable or Acrylic
_____ Whaler # _____
~ Peristaltic Pump
_____ Redi-flow Pump (Grundfus)

Sample Equipment:

_____ Disposable Bailer
_____ Whaler # _____
X Peristaltic Pump
_____ Submersible Pump

Analyses Requested :

TPH-gas, BTEX, Fuel Oxygenates, Lead Scavengers by EPA Method 8260B
TPH-diesel by EPA Method 8015M

Number and Types of Bottle Used:

3 x 40 mL VOA's (HCL preservative)
2 x 1 L Amber

Well Number: MW-2
Depth to Water: 17.94' TOC
Well Depth: 26.5 (BGS) or TOC
Height W-Column: 8.56' feet (well depth - depth to water)

Pump Intake Depth: ~22 feet
Pump Flow Rate: ~50 mL/min

Lab: Torrent **Transportation:** *Courier*

Time (24 hr.)	Depth to Water (TOC)	Drawdown (feet)	Volume Purged (mL)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Parameters Stabilized
1226	17.94'	0	0	23.93	1.350	1.62	6.56	-89	Low: Clear, Minor	
1228	18.06'	0.14'	100	23.53	1.404	1.43	6.56	-91	↓	
1230	18.12'	0.18'	200	23.45	1.431	1.25	6.56	-91	↓	
1232	18.18'	0.24'	300	23.23	1.439	1.09	6.56	-93	↓	
1234	18.19'	0.25'	400	23.08	1.442	1.01	6.56	-96	↓	
1236	18.22	0.28'	500	23.15	1.444	0.93	6.56	-98	↓	
1238	18.25	0.31'	600	23.10	1.444	0.87	6.56	-100	↓	
1240	18.28'	0.34'	700	23.05	1.445	0.80	6.57	-103	↓	
1242	18.30'	0.36'	800	23.03	1.445	0.78	6.57	-104	↓	
1244	18.33'	0.39'	900	23.05	1.445	0.76	6.57	-106	↓	X
Stop:	Purge	Complete	Parameters	Stabilized						

JP 9-22-11

Sample Well

Time: 1245 Sample ID: MW-2 Depth: 18.33' feet below TOC

Comments: NO FP, High odor

Well Condition: Good, Stand Pipe

Field Methodology for Groundwater Monitoring

Weber, Hayes and Associates' groundwater monitoring field methodology is based on procedures specified in the LUFT Field Manual and US EPA Groundwater Sampling Procedure - Low Stress (Low Flow) Purging and Sampling. The first step in groundwater well sampling is for Weber, Hayes and Associates field personnel to measure the depth-to-groundwater to the nearest hundredth (0.01) of a foot with an electric sounder. If the well appears to be pressurized, or the groundwater level is fluctuating, measurements are made until the groundwater levels stabilize, and a final depth-to groundwater measurement is taken and recorded. After the depth-to-groundwater is measured, the well is then checked for the presence of free product with a clear, disposable polyethylene bailer. If free product is present, the thickness of the layer is recorded, and the product is bailed to a sheen. All field data (depth-to-groundwater, well purge volume, physical parameters, and sampling method) is recorded on field data sheets (see attached). Because removing free product may skew the data, wells that contain free product are not used in groundwater elevation and gradient calculations.

After measuring the depth-to-groundwater, each well is purged with a low flow peristaltic pump and dedicated sample tubing at a rate of less than 500 mL/min. The sample tubing intake is positioned at the center of the water column within the screened portion of the well. During purging, the water level in the well is monitored in order to maintain a drawdown of 0.33 feet or less if possible. The flow rate is adjusted to maintain minimal drawdown. During purging the physical parameters of temperature, conductivity, pH, dissolved oxygen (D.O.) concentration, and Oxidation-Reduction Potential (ORP) of the purge water are monitored with a QED MP20 Micropurge Flow Through Cell equipped meter to insure that these parameters have stabilized (i.e. +/- 0.1 for pH, +/- 3% for specific conductance, +/- 10 mV for redox potential, and +/- 10% for D.O.). The QED MP20 meter is capable of continuously monitoring the physical parameters of the purge water via the flow through cell and providing an alarm to indicate when the physical parameters have stabilized to the users specifications. Purging is determined to be complete (stabilized aquifer conditions reached) after the removal of approximately three to five well volumes of water or when the physical parameters have stabilized. Dissolved oxygen and ORP measurements are used as an indicator of intrinsic bioremediation within the contaminant plume. All field instruments are calibrated before use.

All purge water is stored on site in DOT-approved, 55-gallon drums for disposal by a state-licensed contractor pending laboratory analysis for fuel hydrocarbons.

After purging, and when groundwater parameters have stabilized, a groundwater sample is collected from each well with the dedicated sample tubing, and decanted into the appropriate laboratory-supplied sample container(s). The sample containers at this site were three (3) 40-ml.

Vials, and two (2) 1-liter amber bottles. Vials are filled until a convex meniscus formed above the vial rim, then sealed with a Teflon®-septum cap, and inverted to insure that there were no air bubbles or headspace in the vial. All other ample containers are completely filled with no headspace. All samples are labeled in the field and transported in insulated containers cooled with blue ice to state-certified laboratories under proper chain of custody procedures.

All field and sampling equipment is decontaminated before, between, and after measurements or sampling by washing in a Liqui-Nox and tap water solution, rinsing with tap water, and rinsing with distilled water

Appendix C

Laboratory Report – Groundwater Samples

Weber, Hayes & Associates
120 Westgate Dr
Watsonville, CA 95076
Tel: 831-722-3580
Fax: 831-662-3100

RE: Former Exxon / 2X103.Q

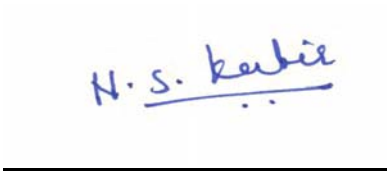
Work Order No.: 1109134 Rev: 1

Dear Jered Chaney:

Torrent Laboratory, Inc. received 6 sample(s) on September 22, 2011 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Nutan Kabir

September 29, 2011
Date

Date: 9/29/2011

Client: Weber, Hayes & Associates

Project: Former Exxon / 2X103.Q

Work Order: 1109134

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

REVISIONS:

Report revised to expand comments for both TPH as Gasoline and TPH as Diesel data.

Sample MW-4 has a fuel pattern in the DRO range that differs from all othere samples. The pattern is indicative of an actual fuel rather than carry over from the GRO range but is not heavy enough to be identified as Diesel.

No reported values were affected by this revision.

Rev 1 (10/16/11)

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

MW-1 1109134-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	44	15	22	1900	ug/L
Ethyl Benzene	SW8260B	44	6.8	22	140	ug/L
MTBE	SW8260B	44	17	22	23	ug/L
TPH(Gasoline)	8260TPH	44	950	2200	6700	ug/L
TPH as Diesel	SW8015B(M)	1	40.0	100	690	ug/L

MW-2 1109134-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	44	15	22	1900	ug/L
Ethyl Benzene	SW8260B	44	6.8	22	350	ug/L
MTBE	SW8260B	44	17	22	39	ug/L
TPH(Gasoline)	8260TPH	44	950	2200	7100	ug/L
TPH as Diesel	SW8015B(M)	1	40.0	100	690	ug/L

MW-3 1109134-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	88	29	44	8400	ug/L
Ethyl Benzene	SW8260B	88	14	44	790	ug/L
m,p-Xylene	SW8260B	88	18	88	130	ug/L
MTBE	SW8260B	88	33	44	89	ug/L
TPH(Gasoline)	8260TPH	88	1900	4400	14000	ug/L
TPH as Diesel	SW8015B(M)	1	40.0	100	1500	ug/L

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

MW-4 1109134-004

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	88	29	44	4100	ug/L
Ethyl Benzene	SW8260B	88	14	44	160	ug/L
m,p-Xylene	SW8260B	88	18	88	100	ug/L
TPH(Gasoline)	8260TPH	88	1900	4400	11000	ug/L
TPH as Diesel	SW8015B(M)	2	80.0	200	2000	ug/L

RW-5 1109134-005

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	11	3.7	5.5	480	ug/L
m,p-Xylene	SW8260B	11	2.2	11	16	ug/L
TPH(Gasoline)	8260TPH	1	22	50	680	ug/L
TPH as Diesel	SW8015B(M)	1	40.0	100	120	ug/L

RW-9 1109134-006

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	11	3.7	5.5	1600	ug/L
Toluene	SW8260B	11	2.1	5.5	8.4	ug/L
Ethyl Benzene	SW8260B	11	1.7	5.5	12	ug/L
MTBE	SW8260B	11	4.1	5.5	8.3	ug/L
TPH(Gasoline)	8260TPH	11	240	550	1900	ug/L
TPH as Diesel	SW8015B(M)	1	40.0	100	230	ug/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	MW-1	**Lab Sample ID:**	1109134-001A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	09/27/11	44	15	22	1900		ug/L	406804	NA
Toluene	SW8260B	NA	09/27/11	44	8.4	22	ND		ug/L	406804	NA
Ethyl Benzene	SW8260B	NA	09/27/11	44	6.8	22	140		ug/L	406804	NA
m,p-Xylene	SW8260B	NA	09/27/11	44	8.8	44	ND		ug/L	406804	NA
o-Xylene	SW8260B	NA	09/27/11	44	5.6	22	ND		ug/L	406804	NA
MTBE	SW8260B	NA	09/27/11	44	17	22	23		ug/L	406804	NA
Diisopropyl ether (DIPE)	SW8260B	NA	09/27/11	44	16	22	ND		ug/L	406804	NA
ETBE	SW8260B	NA	09/27/11	44	17	22	ND		ug/L	406804	NA
TAME	SW8260B	NA	09/27/11	44	14	22	ND		ug/L	406804	NA
tert-Butanol	SW8260B	NA	09/27/11	44	66	220	ND		ug/L	406804	NA
1,2-Dichloroethane	SW8260B	NA	09/27/11	44	12	22	ND		ug/L	406804	NA
1,2-Dibromoethane	SW8260B	NA	09/27/11	44	8.6	22	ND		ug/L	406804	NA
(S) Dibromofluoromethane	SW8260B	NA	09/27/11	44	61.2	131	107		%	406804	NA
(S) Toluene-d8	SW8260B	NA	09/27/11	44	75.1	127	108		%	406804	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	09/27/11	44	64.1	120	100		%	406804	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	09/27/11	44	950	2200	6700	x	ug/L	406804	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	09/27/11	44	71	131	107		%	406804	NA

NOTE: x - Although TPH as Gasoline is present the pattern does not match that of the reference Gasoline standard. Reported value includes contribution from heavy end hydrocarbons in the C5-C12 quantified as gasoline (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	MW-1	**Lab Sample ID:**	1109134-001B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	9/26/11	09/26/11	1	40.0	100	690	x	ug/L	406774	3697
Pentacosane (S)	SW8015B(M)	9/26/11	09/26/11	1	64.2	123	107		%	406774	3697

NOTE: x-Not typical of Diesel #2 standard pattern (possibly aged diesel or other fuel within the diesel quantitation range such as diesel #4 or fuel oil).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	MW-2	**Lab Sample ID:**	1109134-002A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	09/27/11	44	15	22	1900		ug/L	406804	NA
Toluene	SW8260B	NA	09/27/11	44	8.4	22	ND		ug/L	406804	NA
Ethyl Benzene	SW8260B	NA	09/27/11	44	6.8	22	350		ug/L	406804	NA
m,p-Xylene	SW8260B	NA	09/27/11	44	8.8	44	ND		ug/L	406804	NA
o-Xylene	SW8260B	NA	09/27/11	44	5.6	22	ND		ug/L	406804	NA
MTBE	SW8260B	NA	09/27/11	44	17	22	39		ug/L	406804	NA
Diisopropyl ether (DIPE)	SW8260B	NA	09/27/11	44	16	22	ND		ug/L	406804	NA
ETBE	SW8260B	NA	09/27/11	44	17	22	ND		ug/L	406804	NA
TAME	SW8260B	NA	09/27/11	44	14	22	ND		ug/L	406804	NA
tert-Butanol	SW8260B	NA	09/27/11	44	66	220	ND		ug/L	406804	NA
1,2-Dichloroethane	SW8260B	NA	09/27/11	44	12	22	ND		ug/L	406804	NA
1,2-Dibromoethane	SW8260B	NA	09/27/11	44	8.6	22	ND		ug/L	406804	NA
(S) Dibromofluoromethane	SW8260B	NA	09/27/11	44	61.2	131	104		%	406804	NA
(S) Toluene-d8	SW8260B	NA	09/27/11	44	75.1	127	106		%	406804	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	09/27/11	44	64.1	120	97.7		%	406804	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	09/27/11	44	950	2200	7100	x	ug/L	406804	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	09/27/11	44	71	131	91.5		%	406804	NA

NOTE: x - Although TPH as Gasoline is present the pattern does not match that of the reference Gasoline standard. Reported value includes contribution from heavy end hydrocarbons in the C5-C12 quantified as gasoline (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	MW-2	**Lab Sample ID:**	1109134-002B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	9/26/11	09/26/11	1	40.0	100	690	x	ug/L	406774	3697
Pentacosane (S)	SW8015B(M)	9/26/11	09/26/11	1	64.2	123	105		%	406774	3697

NOTE: x-Not typical of Diesel #2 standard pattern (possibly aged diesel or other fuel within the diesel quantitation range such as diesel #4 or fuel oil).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	MW-3	**Lab Sample ID:**	1109134-003A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	09/27/11	88	29	44	8400		ug/L	406804	NA
Toluene	SW8260B	NA	09/27/11	88	17	44	ND		ug/L	406804	NA
Ethyl Benzene	SW8260B	NA	09/27/11	88	14	44	790		ug/L	406804	NA
m,p-Xylene	SW8260B	NA	09/27/11	88	18	88	130		ug/L	406804	NA
o-Xylene	SW8260B	NA	09/27/11	88	11	44	ND		ug/L	406804	NA
MTBE	SW8260B	NA	09/27/11	88	33	44	89		ug/L	406804	NA
Diisopropyl ether (DIPE)	SW8260B	NA	09/27/11	88	32	44	ND		ug/L	406804	NA
ETBE	SW8260B	NA	09/27/11	88	35	44	ND		ug/L	406804	NA
TAME	SW8260B	NA	09/27/11	88	28	44	ND		ug/L	406804	NA
tert-Butanol	SW8260B	NA	09/27/11	88	130	440	ND		ug/L	406804	NA
1,2-Dichloroethane	SW8260B	NA	09/27/11	88	24	44	ND		ug/L	406804	NA
1,2-Dibromoethane	SW8260B	NA	09/27/11	88	17	44	ND		ug/L	406804	NA
(S) Dibromofluoromethane	SW8260B	NA	09/27/11	88	61.2	131	108		%	406804	NA
(S) Toluene-d8	SW8260B	NA	09/27/11	88	75.1	127	106		%	406804	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	09/27/11	88	64.1	120	98.2		%	406804	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	09/27/11	88	1900	4400	14000	x	ug/L	406804	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	09/27/11	88	71	131	92.4		%	406804	NA

NOTE: x - Although TPH as Gasoline is present the pattern does not match that of the reference Gasoline standard. Reported value includes contribution from heavy end hydrocarbons in the C5-C12 quantified as gasoline (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	MW-3	**Lab Sample ID:**	1109134-003B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	9/26/11	09/26/11	1	40.0	100	1500	x	ug/L	406774	3697
Pentacosane (S)	SW8015B(M)	9/26/11	09/26/11	1	64.2	123	106		%	406774	3697

NOTE: x-Not typical of Diesel #2 standard pattern (possibly aged diesel or other fuel within the diesel quantitation range such as diesel #4 or fuel oil). Discrete peaks also present within the diesel range.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	MW-4	**Lab Sample ID:**	1109134-004A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	09/27/11	88	29	44	4100		ug/L	406804	NA
Toluene	SW8260B	NA	09/27/11	88	17	44	ND		ug/L	406804	NA
Ethyl Benzene	SW8260B	NA	09/27/11	88	14	44	160		ug/L	406804	NA
m,p-Xylene	SW8260B	NA	09/27/11	88	18	88	100		ug/L	406804	NA
o-Xylene	SW8260B	NA	09/27/11	88	11	44	ND		ug/L	406804	NA
MTBE	SW8260B	NA	09/27/11	88	33	44	ND		ug/L	406804	NA
Diisopropyl ether (DIPE)	SW8260B	NA	09/27/11	88	32	44	ND		ug/L	406804	NA
ETBE	SW8260B	NA	09/27/11	88	35	44	ND		ug/L	406804	NA
TAME	SW8260B	NA	09/27/11	88	28	44	ND		ug/L	406804	NA
tert-Butanol	SW8260B	NA	09/27/11	88	130	440	ND		ug/L	406804	NA
1,2-Dichloroethane	SW8260B	NA	09/27/11	88	24	44	ND		ug/L	406804	NA
1,2-Dibromoethane	SW8260B	NA	09/27/11	88	17	44	ND		ug/L	406804	NA
(S) Dibromofluoromethane	SW8260B	NA	09/27/11	88	61.2	131	105		%	406804	NA
(S) Toluene-d8	SW8260B	NA	09/27/11	88	75.1	127	106		%	406804	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	09/27/11	88	64.1	120	99.3		%	406804	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	09/27/11	88	1900	4400	11000	x	ug/L	406804	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	09/27/11	88	71	131	109		%	406804	NA

NOTE: x - Although TPH as Gasoline is present the pattern does not match that of the reference Gasoline standard. Reported value includes contribution from heavy end hydrocarbons in the C5-C12 quantified as gasoline (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	MW-4	**Lab Sample ID:**	1109134-004B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	9/26/11	09/27/11	2	80.0	200	2000	x	ug/L	406806	3697
Pentacosane (S)	SW8015B(M)	9/26/11	09/27/11	2	64.2	123	104		%	406806	3697

NOTE: x- Not typical of Diesel standard pattern (possibly fuel lighter than diesel)

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	RW-5	**Lab Sample ID:**	1109134-005A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	09/27/11	11	3.7	5.5	480		ug/L	406804	NA
Toluene	SW8260B	NA	09/27/11	11	2.1	5.5	ND		ug/L	406804	NA
Ethyl Benzene	SW8260B	NA	09/27/11	11	1.7	5.5	ND		ug/L	406804	NA
m,p-Xylene	SW8260B	NA	09/27/11	11	2.2	11	16		ug/L	406804	NA
o-Xylene	SW8260B	NA	09/27/11	11	1.4	5.5	ND		ug/L	406804	NA
MTBE	SW8260B	NA	09/27/11	11	4.1	5.5	ND		ug/L	406804	NA
Diisopropyl ether (DIPE)	SW8260B	NA	09/27/11	11	4.0	5.5	ND		ug/L	406804	NA
ETBE	SW8260B	NA	09/27/11	11	4.4	5.5	ND		ug/L	406804	NA
TAME	SW8260B	NA	09/27/11	11	3.5	5.5	ND		ug/L	406804	NA
tert-Butanol	SW8260B	NA	09/27/11	11	17	55	ND		ug/L	406804	NA
1,2-Dichloroethane	SW8260B	NA	09/27/11	11	3.0	5.5	ND		ug/L	406804	NA
1,2-Dibromoethane	SW8260B	NA	09/27/11	11	2.1	5.5	ND		ug/L	406804	NA
(S) Dibromofluoromethane	SW8260B	NA	09/27/11	11	61.2	131	104		%	406804	NA
(S) Toluene-d8	SW8260B	NA	09/27/11	11	75.1	127	107		%	406804	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	09/27/11	11	64.1	120	96.2		%	406804	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	9/28/11	09/28/11	1	22	50	680	x	ug/L	406819	3729
(S) 4-Bromofluorobenzene	8260TPH	9/28/11	09/28/11	1	71	131	77.1		%	406819	3729

NOTE: x - Although TPH as Gasoline is present the pattern does not match that of the reference Gasoline standard. Reported value includes contribution from heavy end hydrocarbons in the C5-C12 quantified as gasoline (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	RW-5	**Lab Sample ID:**	1109134-005B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	9/26/11	09/26/11	1	40.0	100	120	x	ug/L	406774	3697
Pentacosane (S)	SW8015B(M)	9/26/11	09/26/11	1	64.2	123	106		%	406774	3697

NOTE: x-Not typical of Diesel #2 standard pattern (discrete peaks present lighter than diesel - possibly carry over from gasoline range).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	RW-9	**Lab Sample ID:**	1109134-006A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	09/27/11	11	3.7	5.5	1600		ug/L	406804	NA
Toluene	SW8260B	NA	09/27/11	11	2.1	5.5	8.4		ug/L	406804	NA
Ethyl Benzene	SW8260B	NA	09/27/11	11	1.7	5.5	12		ug/L	406804	NA
m,p-Xylene	SW8260B	NA	09/27/11	11	2.2	11	ND		ug/L	406804	NA
o-Xylene	SW8260B	NA	09/27/11	11	1.4	5.5	ND		ug/L	406804	NA
MTBE	SW8260B	NA	09/27/11	11	4.1	5.5	8.3		ug/L	406804	NA
Diisopropyl ether (DIPE)	SW8260B	NA	09/27/11	11	4.0	5.5	ND		ug/L	406804	NA
ETBE	SW8260B	NA	09/27/11	11	4.4	5.5	ND		ug/L	406804	NA
TAME	SW8260B	NA	09/27/11	11	3.5	5.5	ND		ug/L	406804	NA
tert-Butanol	SW8260B	NA	09/27/11	11	17	55	ND		ug/L	406804	NA
1,2-Dichloroethane	SW8260B	NA	09/27/11	11	3.0	5.5	ND		ug/L	406804	NA
1,2-Dibromoethane	SW8260B	NA	09/27/11	11	2.1	5.5	ND		ug/L	406804	NA
(S) Dibromofluoromethane	SW8260B	NA	09/27/11	11	61.2	131	101		%	406804	NA
(S) Toluene-d8	SW8260B	NA	09/27/11	11	75.1	127	106		%	406804	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	09/27/11	11	64.1	120	94.8		%	406804	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	09/27/11	11	240	550	1900	x	ug/L	406804	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	09/27/11	11	71	131	92.1		%	406804	NA

NOTE: x - Although TPH as Gasoline is present the pattern does not match that of the reference Gasoline standard. Reported value includes contribution from heavy end hydrocarbons in the C5-C12 quantified as gasoline (possibly aged gasoline).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 09/22/11
Date Reported: 09/29/11

Client Sample ID:	RW-9	**Lab Sample ID:**	1109134-006B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:			
Date/Time Sampled:	09/22/11 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	9/26/11	09/26/11	1	40.0	100	230	x	ug/L	406774	3697
Pentacosane (S)	SW8015B(M)	9/26/11	09/26/11	1	64.2	123	107		%	406774	3697

NOTE: x-Not typical of Diesel #2 standard pattern (discrete peaks present lighter than diesel - possibly carry over from gasoline range).

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1109134	**Prep Method:**	3510_TPH	**Prep Date:**	09/26/11	**Prep Batch:**	3697
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	09/26/11	**Analytical Batch:**	406774
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	
TPH as Motor Oil	0.0920	0.20	0.11	
Pentacosane (S)			105	

Work Order:	1109134	**Prep Method:**	3510_TPH	**Prep Date:**	09/26/11	**Prep Batch:**	3697
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	09/28/11	**Analytical Batch:**	406812
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	
TPH as Motor Oil	0.0920	0.20	ND	
Pentacosane (S)			104	

Work Order:	1109134	**Prep Method:**	5030	**Prep Date:**	09/27/11	**Prep Batch:**	3714
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	09/27/11	**Analytical Batch:**	406804
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	22	50	ND	
(S) 4-Bromofluorobenzene			89.7	

Work Order:	1109134	**Prep Method:**	5030	**Prep Date:**	09/28/11	**Prep Batch:**	3729
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	09/28/11	**Analytical Batch:**	406819
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	22	50	ND	
(S) 4-Bromofluorobenzene			71.6	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1109134	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	09/27/11	**Analytical Batch:**	406804
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.41	0.50	ND	
Chloromethane	0.41	0.50	ND	
Vinyl Chloride	0.37	0.50	ND	
Bromomethane	0.37	0.50	ND	
Trichlorofluoromethane	0.34	0.50	ND	
1,1-Dichloroethene	0.29	0.50	ND	
Freon 113	0.38	0.50	ND	
Methylene Chloride	0.18	5.0	ND	
trans-1,2-Dichloroethene	0.31	0.50	ND	
MTBE	0.38	0.50	ND	
tert-Butanol	1.5	5.0	ND	
Diisopropyl ether (DIPE)	0.36	0.50	ND	
1,1-Dichloroethane	0.28	0.50	ND	
ETBE	0.40	0.50	ND	
cis-1,2-Dichloroethene	0.33	0.50	ND	
2,2-Dichloropropane	0.37	0.50	ND	
Bromochloromethane	0.34	0.50	ND	
Chloroform	0.29	0.50	ND	
Carbon Tetrachloride	0.26	0.50	ND	
1,1,1-Trichloroethane	0.32	0.50	ND	
1,1-Dichloropropene	0.40	0.50	ND	
Benzene	0.33	0.50	ND	
TAME	0.32	0.50	ND	
1,2-Dichloroethane	0.28	0.50	ND	
Trichloroethylene	0.38	0.50	ND	
Dibromomethane	0.21	0.50	ND	
1,2-Dichloropropane	0.37	0.50	ND	
Bromodichloromethane	0.23	0.50	ND	
cis-1,3-Dichloropropene	0.30	0.50	ND	
Toluene	0.19	0.50	ND	
Tetrachloroethylene	0.15	0.50	ND	
trans-1,3-Dichloropropene	0.20	0.50	ND	
1,1,2-Trichloroethane	0.20	0.50	ND	
Dibromochloromethane	0.21	0.50	ND	
1,3-Dichloropropane	0.18	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
1,1,1,2-Tetrachloroethane	0.10	0.50	ND	
m,p-Xylene	0.20	1.0	ND	
o-Xylene	0.13	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1109134	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	09/27/11	**Analytical Batch:**	406804
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Styrene	0.20	0.50	ND		
Bromoform	0.45	1.0	ND		
Isopropyl Benzene	0.28	0.50	ND		
Bromobenzene	0.39	0.50	ND		
1,1,2,2-Tetrachloroethane	0.26	0.50	ND		
n-Propylbenzene	0.30	0.50	ND		
2-Chlorotoluene	0.33	0.50	ND		
1,3,5-Trimethylbenzene	0.20	0.50	ND		
4-Chlorotoluene	0.32	0.50	ND		
tert-Butylbenzene	0.29	0.50	ND		
1,2,3-Trichloropropane	0.59	1.0	ND		
1,2,4-Trimethylbenzene	0.33	0.50	ND		
sec-Butyl Benzene	0.24	0.50	ND		
p-Isopropyltoluene	0.25	0.50	ND		
1,3-Dichlorobenzene	0.31	0.50	ND		
1,4-Dichlorobenzene	0.37	0.50	ND		
n-Butylbenzene	0.32	0.50	ND		
1,2-Dichlorobenzene	0.39	0.50	ND		
1,2-Dibromo-3-Chloropropane	0.45	1.0	ND		
Hexachlorobutadiene	0.22	0.50	ND		
1,2,4-Trichlorobenzene	0.48	1.0	ND		
Naphthalene	0.57	1.0	ND		
1,2,3-Trichlorobenzene	0.52	1.0	ND		
Ethanol	100	100	ND	TIC	
(S) Dibromofluoromethane			94.3		
(S) Toluene-d8			97.9		
(S) 4-Bromofluorobenzene			88.9		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1109134	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	09/28/11	**Analytical Batch:**	406819
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.41	0.50	ND	
Chloromethane	0.41	0.50	ND	
Vinyl Chloride	0.37	0.50	ND	
Bromomethane	0.37	0.50	ND	
Trichlorofluoromethane	0.34	0.50	ND	
1,1-Dichloroethene	0.29	0.50	ND	
Freon 113	0.38	0.50	ND	
Methylene Chloride	0.18	5.0	ND	
trans-1,2-Dichloroethene	0.31	0.50	ND	
MTBE	0.38	0.50	ND	
tert-Butanol	1.5	5.0	ND	
Diisopropyl ether (DIPE)	0.36	0.50	ND	
1,1-Dichloroethane	0.28	0.50	ND	
ETBE	0.40	0.50	ND	
cis-1,2-Dichloroethene	0.33	0.50	ND	
2,2-Dichloropropane	0.37	0.50	ND	
Bromochloromethane	0.34	0.50	ND	
Chloroform	0.29	0.50	ND	
Carbon Tetrachloride	0.26	0.50	ND	
1,1,1-Trichloroethane	0.32	0.50	ND	
1,1-Dichloropropene	0.40	0.50	ND	
Benzene	0.33	0.50	ND	
TAME	0.32	0.50	ND	
1,2-Dichloroethane	0.28	0.50	ND	
Trichloroethylene	0.38	0.50	ND	
Dibromomethane	0.21	0.50	ND	
1,2-Dichloropropane	0.37	0.50	ND	
Bromodichloromethane	0.23	0.50	ND	
cis-1,3-Dichloropropene	0.30	0.50	ND	
Toluene	0.19	0.50	ND	
Tetrachloroethylene	0.15	0.50	ND	
trans-1,3-Dichloropropene	0.20	0.50	ND	
1,1,2-Trichloroethane	0.20	0.50	ND	
Dibromochloromethane	0.21	0.50	ND	
1,3-Dichloropropane	0.18	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
1,1,1,2-Tetrachloroethane	0.10	0.50	ND	
m,p-Xylene	0.20	1.0	ND	
o-Xylene	0.13	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1109134	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	09/28/11	**Analytical Batch:**	406819
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Styrene	0.20	0.50	ND		
Bromoform	0.45	1.0	ND		
Isopropyl Benzene	0.28	0.50	ND		
Bromobenzene	0.39	0.50	ND		
1,1,2,2-Tetrachloroethane	0.26	0.50	ND		
n-Propylbenzene	0.30	0.50	ND		
2-Chlorotoluene	0.33	0.50	ND		
1,3,5-Trimethylbenzene	0.20	0.50	ND		
4-Chlorotoluene	0.32	0.50	ND		
tert-Butylbenzene	0.29	0.50	ND		
1,2,3-Trichloropropane	0.59	1.0	ND		
1,2,4-Trimethylbenzene	0.33	0.50	ND		
sec-Butyl Benzene	0.24	0.50	ND		
p-Isopropyltoluene	0.25	0.50	ND		
1,3-Dichlorobenzene	0.31	0.50	ND		
1,4-Dichlorobenzene	0.37	0.50	ND		
n-Butylbenzene	0.32	0.50	ND		
1,2-Dichlorobenzene	0.39	0.50	ND		
1,2-Dibromo-3-Chloropropane	0.45	1.0	ND		
Hexachlorobutadiene	0.22	0.50	ND		
1,2,4-Trichlorobenzene	0.48	1.0	ND		
Naphthalene	0.57	1.0	ND		
1,2,3-Trichlorobenzene	0.52	1.0	ND		
Ethanol	100	100	ND	TIC	
(S) Dibromofluoromethane			94.4		
(S) Toluene-d8			94.1		
(S) 4-Bromofluorobenzene			82.2		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1109134	**Prep Method:**	3510_TPH	**Prep Date:**	09/26/11	**Prep Batch:**	3697
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	09/26/11	**Analytical Batch:**	406774
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	1	95.3	94.3	0.989	50.3 - 125	30	
Pentacosane (S)			0.11	100	104	104		57.9 - 125		

Work Order:	1109134	**Prep Method:**	5030	**Prep Date:**	09/27/11	**Prep Batch:**	3714
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	09/27/11	**Analytical Batch:**	406804
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	22	50	ND	227.27	99.7	97.1	2.57	52.4 - 127	30	
(S) 4-Bromofluorobenzene			89.7	11.36	96.3	87.6		71 - 131		

Work Order:	1109134	**Prep Method:**	5030	**Prep Date:**	09/28/11	**Prep Batch:**	3729
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	09/28/11	**Analytical Batch:**	406819
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	22	50	ND	227.27	95.3	105	9.24	52.4 - 127	30	
(S) 4-Bromofluorobenzene			71.6	11.36	74.0	77.5		71 - 131		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1109134	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	09/27/11	**Analytical Batch:**	406804
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.29	0.50	ND	17.04	116	117	0.920	61.4 - 129	30	
Benzene	0.33	0.50	ND	17.04	92.4	96.1	4.20	66.9 - 140	30	
Trichloroethylene	0.38	0.50	ND	17.04	106	106	0.128	69.3 - 144	30	
Toluene	0.19	0.50	ND	17.04	99.4	98.4	0.838	76.6 - 123	30	
Chlorobenzene	0.14	0.50	ND	17.04	99.1	97.2	2.00	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	89.2	93.1		61.2 - 131		
(S) Toluene-d8			ND	11.36	94.8	93.8		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	11.36	83.0	85.1		64.1 - 120		

Work Order:	1109134	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	09/28/11	**Analytical Batch:**	406819
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.29	0.50	ND	17.04	107	118	9.53	61.4 - 129	30	
Benzene	0.33	0.50	ND	17.04	85.6	92.7	7.82	66.9 - 140	30	
Trichloroethylene	0.38	0.50	ND	17.04	104	119	13.4	69.3 - 144	30	
Toluene	0.19	0.50	ND	17.04	100	113	12.0	76.6 - 123	30	
Chlorobenzene	0.14	0.50	ND	17.04	101	115	12.7	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	102	99.9		61.2 - 131		
(S) Toluene-d8			ND	11.36	111	109		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	11.36	91.5	88.1		64.1 - 120		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Former Exxon / 2X103.Q

Work Order No.: 1109134

Date and Time Received: 9/22/2011 14:50

Received By: NK

Physically Logged By: NK

Checklist Completed By: NK

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Yes

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes
Container/Temp Blank temperature in compliance?	Temperature: 9 °C
Water-VOA vials have zero headspace?	
Water-pH acceptable upon receipt?	

pH Checked by: pH Adjusted by:

All samples present.

Torrent LABORATORY, INC.

Login Summary Report

Client ID: TL5105 Weber, Hayes & Associates
QC Level:
Project Name: Former Exxon / 2X103.Q
TAT Requested: 5+ day:0
Project # :
Date Received: 9/22/2011
Report Due Date: 9/29/2011
Time Received: 14:50

Comments: 5 day TAT! Received 6 samples for TPHD,TPHg,BTEX,Fuel oxys,1,2DCA,EDB. EDF requested.

Work Order # : ***1109134***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1109134-001A	MW-1	09/22/11	Water	11/06/11			EDF W_8260PetWHA W_GCMS-GRO	
Sample Note:	TPHD,TPHg,BTEX,Fuel oxys,1,2DCA,EDB-all by GCMS. Please use MDL for any diluted sample.							
1109134-001B	MW-1	09/22/11	Water	11/06/11			W_TPHDO	
1109134-002A	MW-2	09/22/11	Water	11/06/11			W_GCMS-GRO W_8260PetWHA	
1109134-002B	MW-2	09/22/11	Water	11/06/11			W_TPHDO	
1109134-003A	MW-3	09/22/11	Water	11/06/11			W_GCMS-GRO W_8260PetWHA	
1109134-003B	MW-3	09/22/11	Water	11/06/11			W_TPHDO	
1109134-004A	MW-4	09/22/11	Water	11/06/11			W_GCMS-GRO W_8260PetWHA	
1109134-004B	MW-4	09/22/11	Water	11/06/11			W_TPHDO	
1109134-005A	RW-5	09/22/11	Water	11/06/11			W_8260PetWHA W_GCMS-GRO	
1109134-005B	RW-5	09/22/11	Water	11/06/11			W_TPHDO	
1109134-006A	RW-9	09/22/11	Water	11/06/11			W_GCMS-GRO W_8260PetWHA	
1109134-006B	RW-9	09/22/11	Water	11/06/11			W_TPHDO	

Torrent LABORATORY, INC.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1 OF 1

PROJECT NAME AND NUMBER: Former Exxon / 2X103.Q
SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney
ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

LABORATORY: Torrent
TURNAROUND TIME: Standard 5 Day 72hr Rush
GLOBAL I.D.: T0600100538

Sampler: Josh Pritchard
Date: 9-22-11

1109134

	Field Point Name (Geo Tracker)	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	250 ml Poly Bottle	1 liter Amber Jars	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-diesel range (Micro Extraction)	TPH-D EPA Method# 8015	TPH-oil range EPA Method# 8015	Volatile Organics: MtBE EPA Method 8260	TPH-g EPA Method # 8260	BTEX EPA Method# 8260	Additional Analysis: Fuel Oxygenates EPA Method 8260	1,2,DCA EDB EPA Method 8260
001	MW-1	MW-1	9-22-11	AQ	3		2			X			X	X	X	X
002	MW-2	MW-2			3		2			X			X	X	X	X
003	MW-3	MW-3			3		2			X			X	X	X	X
004	MW-4	MW-4			3		2			X			X	X	X	X
005	RW-5	RW-5			3		2			X			X	X	X	X
006	RW-9	RW-9			3		2			X			X	X	X	X

	RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time
1.)	[signature]	9-22-11/1450	→	N S Dabin	9/22/11 1450
2.)			→		
3.)			→		
4.)			→		
5.)			→		

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

☒ Please use MDL (Minimum Detection Limit) for any diluted samples.

- Please produce and email an EDF of these results to molly@weber-hayes.com
- Fuel Oxygenates should include DIPE, TAME, EtBE, MtBE, TAME

D/off. Temp 9°C