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May 14, 2013

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
May 14, 2013	***Quarterly 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.**
5942 MacArthur Blvd # B
Oakland. California 94605-1698

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
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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: **Quarterly Groundwater Monitoring Report** (sampled March 2013)

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

1.0 EXECUTIVE SUMMARY

This report documents quarterly groundwater monitoring activities conducted during the first quarter of 2013 at the former Exxon Service Station located at 3055 35th Ave, Oakland, California (the "Site"; see Location Map, Figure 1). Specifically, quarterly monitoring of newly installed off-site, upgradient wells MW-5 and MW-6 has been required by Alameda County Environmental Health (ACEH) for at least one year in order to confirm initial results and to evaluate seasonal trends[1]. Quarterly monitoring tasks also included sampling of two upgradient property line wells (RW-13 & RW-14) in order to begin to build a data set for these wells that confirms off-site contaminant migration onto the Site from recently confirmed upgradient, off-site sources[2]. These upgradient property line wells have not been sampled since March 2004.

Results of groundwater samples collected from the newly installed wells MW-5 and MW-6, coupled with the consistent and dominant groundwater flow direction, confirm that significant groundwater contamination is migrating to the Site from the *active* QuikStop station and apparently to a lesser extent from the *abandoned* Texaco station. **We recommend that the ACEH identify the responsible upgradient property owners and require that they complete an assessment of soil and groundwater impacts to determine the extent of contaminant plume migration to the Site. At present, a cost effective Corrective Action Plan cannot be**

[1] Alameda County Environmental Health: Email correspondence from case officer Barbara Jakub requesting quarterly sampling of newly installed wells for the first year, dated October 26, 2012

[2] Weber, Hayes & Associates: *Limited Soil & Groundwater Data Gap Assessment*, dated December 31, 2012

Results of this investigation confirm there are petroleum hydrocarbon (TPH-gasoline, BTEX, TBA and/or MTBE) plumes flowing onto the 3055 35th Ave parcel from:

1. the *abandoned* Texaco station across school street, and
2. the *active* QuikStop station located across 35th Ave.

completed for the Site until upgradient responsible parties have been identified and these upgradient releases have been fully defined and off-site plume contribution to the Site has been quantified.

Groundwater monitoring activities have been conducted at the Site since 1994 to investigate a release of fuel hydrocarbons 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 - 2004. 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 groundwater monitoring program. Current regulatory required quarterly groundwater monitoring includes water level gauging of sixteen (16) existing monitoring wells at the Site, and groundwater sampling and laboratory analysis of: two (2) recently installed off-site, upgradient monitoring wells (i.e. MW-5 & MW-6) installed to confirm dissolved hydrocarbon plumes originating from identified upgradient sources, and two (2) upgradient property line wells (RW-13 & RW-14) in order to begin to build a data set for these wells that confirms off-site contaminant migration onto the Site from recently confirmed upgradient, off-site sources (see Site Map, Figure 2).

Overview of Quarterly Activities

Current Tasks & Reporting:	**Quarterly groundwater monitoring (MW-5 & MW-6 sampled on March 13; MW-13 & MW-14 sampled on March 26, 2013)**
Current Depth to Groundwater:	**Approx. 11.93 to 16.84 feet below ground surface (ranges from approximately 149.64 to 151.85 feet MSL across the Site)**
Current Groundwater Gradient:	**Westerly, at a grade of 0.0012 feet per foot (= 1 foot of vertical drop per 833 feet of lateral flow)**
Change $_{Avg.}$ in Groundwater elevation:	**Groundwater elevation on March 13, 2013 was an average of 1.76 feet higher at the Site compared with the previous monitoring event (November 2012).**
Frequency of Groundwater Sampling:	**Quarterly through 2013:** gauging of all site wells MW-1 through MW-6 and RW-5 through RW-14; collect and analyze samples from well MW-5, MW-6, RW-13 and RW-14.
	Annually in September: gauging of all site wells MW-1 through MW-6 and RW-5 through RW-14; collect and analyze samples from wells MW-1 through MW-6, and RW-5, 9, 13 & 14.
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 Quarterly Monitoring Results

Results of groundwater samples collected from off-site, upgradient wells MW-5 and MW-6, coupled with the consistent and dominant groundwater flow direction, continue to confirm that significant groundwater contamination is migrating from the active QuikStop station, and to a lesser extent from the abandoned Texaco station. Specifically:

- **Well MW-5 (downgradient of the active QuickStop station)** revealed elevated concentrations of TPH-gas, benzene, and MTBE at concentrations of 18,000, 2,200, and 410 ppb, respectively. These concentrations exceed their respective Water Quality Objectives (WQOs) set at 1,000, 1, and 5 ppb, respectively. These detected concentrations are greater than initial post-development results (November 2012; see Table 2).

- **Well MW-6 (downgradient of the abandoned Texaco station)** revealed elevated concentrations of TPH-gas and benzene detected at 1,800 and 230 ug/L, above their respective WQO's set at 1,000 and 1 ug/L. These detected concentrations are greater than initial post-development results (November 2012; see Table 2).

- **Wells RW-13 & RW-14 (onsite, upgradient property line wells)** were essentially free of dissolved hydrocarbons. Well RW-14 exhibited only a trace concentration of benzene at 1.5 ug/L. All other constituents were not detected in either well. Concentrations of TPH-gas and benzene detected in these wells during the only three other times they were sampled (spanning from 2002 to 2004) ranged from 150 to 830 ppb and 47 to 190 ppb (RW-13), respectively, and from 220 to 3,700 ppb and 42 to 230 ppb (RW-13), respectively. **We note that these wells have remained stagnant for nearly a decade (i.e., no purging or sampling since March 2004) and are possibly yielding non-representative results (see discussion in section 1.3 below).**

1.3 Conclusions

Current and previous groundwater monitoring results indicate:

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

- Results of groundwater samples collected from the newly installed wells MW-5 and MW-6, coupled with the consistent and dominant groundwater flow direction, confirm that significant groundwater contamination is migrating to the Site from the *active* QuikStop station and apparently to a lesser extent from the *abandoned* Texaco station.

- The non-detect results from upgradient property line wells RW-13 (situated ~90 feet downgradient of off-site impacted well MW-5) and RW-14 (situated ~65 feet down-to-side gradient of off-site impacted well MW-6) are not consistent with respect to their close proximity of the significant concentrations observed in well MW-5 and MW-6. These results are also not consistent with the increase in benzene concentrations observed for wells MW-1 through MW-4 since early 2009, which further indicate the influx of these secondary, upgradient off-site dissolved hydrocarbon plumes (see Figures 3 through 6). The observed increase of benzene in Site monitoring wells since 2009 can likely be attributed to these recently confirmed off-site releases. Based on this data it is our opinion that wells RW-13 and RW-14 may be yielding non-representative aquifer conditions due to not being purged/sampled in nearly a decade (see note below).

  Note: The current sampling of wells RW-13 and RW-14 followed the "Low-Flow/Low-Stress" purge/sampling protocol that was implemented by previous consultants for this Site (see Appendix B for sampling protocol) and only 0.7 liters of water was removed from each well casing before groundwater physical parameters had apparently stabilized and samples collected. Weber, Hayes and Associates have continued to employ this this approved sampling protocol at the Site in order to remain consistent with the Site sampling protocol. However, it is our opinion that wells RW-13 and RW-14 will require the removal of several casing volumes (i.e., essentially re-development) prior to sampling in order to be confidant that good hydraulic communication between the well and aquifer is occurring and that representative aquifer conditions are achieved prior to sample collection (*Note:* one casing volume with the current water level of ~13.5 feet below the top of well casing equates to over 16 gallons). **During the next scheduled sampling event (mid-June 2013) we will remove several casing volumes of groundwater from these two wells prior to sample collection in order to ensure that we are achieving representative aquifer conditions prior to sampling.**

- Nearly nineteen (19) years of groundwater monitoring data collected at the Site shows a gradual degradation of the chemicals of concern over time, yet the extent of groundwater degraded by hydrocarbons still exceeds regulatory threshold limits. The persistence of these elevated levels in Site groundwater after several phases of remediation provides additional evidence that the recently confirmed off-site, upgradient contaminant sources are contributing to groundwater impacts observed at the Site.

1.4 Recommendations

Based on the results of our current groundwater monitoring and recent *Data Gap Assessment* we recommend the following in order to move the Site towards regulatory case closure:

1. Investigation of Upgradient, Off-site Sources: **The mass of petroleum hydrocarbon contamination originating from the identified upgradient sources remains a significant data gap and the Site Conceptual Model is currently incomplete. At present, a cost effective Corrective Action Plan cannot be completed for the Site until upgradient responsible parties have been identified and these upgradient releases have been fully defined.** At this time it appears that a Joint Corrective Action through the State Water Resources Control Boards' Commingled Plume Account will likely be the most cost effective approach in reducing groundwater impacts in this area. **We recommend that the ACEH identify the responsible upgradient property owners and require that they complete an assessment of soil and groundwater impacts to determine the extent of contaminant plume migration to the Site.**
2. Groundwater Monitoring & Reporting: Continue quarterly sampling through 2013 of the newly installed wells MW-5 and MW-6, and upgradient property line wells RW-13 and RW-14 in order to monitor trends and begin to build a data set of off-site contaminant migration to the Site. Annual sampling of key on-site monitoring wells (MW-1 through MW-4, and RW-5 and RW-9) will continue according the approved annual schedule (i.e, in September).

This concludes the Executive Summary.

2.0 SUMMARY OF CURRENT FIELD ACTIVITIES

Current field tasks consisted of: water level gauging of sixteen (16) existing monitoring wells at the Site, and groundwater sampling and laboratory analysis of: two (2) recently installed off-site, upgradient monitoring wells (i.e. MW-5 & MW-6) installed to confirm dissolved hydrocarbon plumes originating from identified upgradient sources, and two (2) upgradient property line wells (RW-13 & RW-14) in order to begin to build a data set for these wells that confirms off-site contaminant migration onto the Site from recently confirmed upgradient, off-site sources (see Site Map, Figure 2). 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 Methodology for Groundwater Monitoring*.

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 the fuel oxygenates methyl - tert - butyl ether (MTBE), tert - butanol (tertiary butyl alcohol, TBA), di-isopropyl ether (DIPE), ethyl tert butyl ether (ETBE), tert amyl methyl ether (TAME), and the lead scavenger 1,2-dichloroethane (1,2-DCA) 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);
- Figure presenting a plan view of current groundwater gradient and analytical results at the Site (Figure 2);
- 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 3 through 8);
- 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:

As required by the ACEH, newly installed wells MW-5 and MW-6 will be sampled quarterly for one year and the may be reduced to coincide with the recently approved annual groundwater monitoring schedule. Two upgradient property line wells (RW-13 & RW-14) have also been scheduled for quarterly sampling for at least one year in order to begin to build a data set for these wells that confirms off-site contaminant migration onto the Site from recently confirmed upgradient, off-site sources. The next groundwater monitoring event scheduled for mid-June 2013 will include:

- Water level gauging and field checking water quality parameters (dissolved oxygen, ORP) in all sixteen (16) existing groundwater-monitoring wells;
- Collecting and analyzing groundwater samples from monitoring wells MW-5, MW-6, RW-13 and RW-14;
- Preparing a summary report of the collected data.

2.1.3 Groundwater Depth & Flow Direction

Groundwater is currently encountered at a depth of approximately 11.9 to 16.8 feet below the ground surface. Groundwater elevations of the surveyed 16-well network ranged from approximately 149.6 to 151.9 feet above Mean Sea Level (MSL) and flow is in a westerly direction, at a gradient of 0.0012 feet per foot (= 1 foot of vertical drop per 833 feet of horizontal flow, see Figure 2).

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

2.1.4 Dissolved Contaminants of Concern

During the current monitoring event groundwater samples were collected and analyzed from four of the sixteen wells at the Site (MW-5, MW-6, & RW-13 and RW-14). Results of the current sampling event are tabulated in Table 1, Figure 2, and in the table below.

Summary of Groundwater Sample Analytical Results

(All results are in (ug/L, parts per billion, ppb)

Well ID	*Date Sampled*	*TPH As Diesel*	*TPH As Gasoline*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*
MW-5	3/13/2013	**1,000***	**18,000****	**2,200**	54	**1,200**	116.1 J	**410**
MW-6	3/13/2013	710*	**1,800****	**230**	2.5 J	15	1.6 J	< 1.5
RW-13	3/26/2013	ND	ND	ND	ND	ND	ND	ND
RW-14	3/26/2013	ND	ND	**1.5**	ND	ND	ND	ND
Reporting Limit:		***100***	***50***	***0.5***			***1.5***	***0.5***
Water Quality Objectives (WQO's)		*1,000*		1	150	300	1,750	5

Table notes:

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

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

bgs = below ground surface
* = Laboratory report indicates that the sample chromatographic pattern does not resemble typical diesel standard pattern; unknown organics within the diesel range lighter than diesel quantified as diesel.

** = Laboratory report indicates although TPH Gasoline compounds are present, the sample pattern does not match pattern of reference Gasoline standard. Hydrocarbons within range of C5-C12 quantified as Gasoline.

J = Laboratory indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather than quantitative.

3.0 CONCLUSIONS

Results of newly installed off-site, upgradient wells MW-5 and MW-6 continue to confirm that significant groundwater contamination is migrating from the active QuikStop station, and to a lesser extent from the abandoned Texaco station. Concentrations of dissolved hydrocarbons detected in these wells during the current quarter were higher by up to one to two orders of magnitude as compared with the initial concentrations observed for the November 2012 sampling event.

The non-detect results from upgradient property line wells RW-13 (situated ~90 feet downgradient of off-site impacted well MW-5) and RW-14 (situated ~65 feet down-to-side gradient of off-site impacted well MW-6) are not consistent with respect to their close proximity of the significant concentrations observed in well MW-5 and MW-6. These results are also not consistent with the increase in benzene concentrations observed for wells MW-1 through MW-4 since early 2009, which further indicate the influx of these secondary, upgradient off-site dissolved hydrocarbon plumes (see Figures 3 through 6). The observed increase of benzene in

Site monitoring wells since 2009 can likely be attributed to these recently confirmed off-site releases.

> ***Note:*** **Wells RW-13 and RW-14 have remained stagnant for nearly a decade and it is possible that the wells yielded non-representative results**. It is our opinion that these wells will require the removal of several casing volumes (i.e., essentially re-development) prior to sampling in order to be confidant that good hydraulic communication between the well and aquifer is occurring and that representative aquifer conditions are achieved prior to sample collection. **During the next scheduled sampling event (mid-June 2013) we will remove several casing volumes of groundwater from these two wells prior to sample collection in order to ensure that we are achieving representative aquifer conditions prior to sampling.**

Nearly nineteen (19) years of groundwater monitoring data collected at the Site shows a gradual degradation of the chemicals of concern over time, yet the extent of groundwater degraded by hydrocarbons still exceeds regulatory threshold limits. The persistence of these elevated levels in Site groundwater after several phases of remediation provides additional evidence that the recently confirmed off-site, upgradient contaminant sources are contributing to groundwater impacts observed at the Site.

4.0 RECOMMENDATIONS

Based on the results of our current groundwater monitoring and recent *Data Gap Assessment* we recommend the following in order to move the Site towards regulatory case closure:

- <u>Investigation of Upgradient, Off-site Sources:</u> **The mass of petroleum hydrocarbon contamination originating from the identified upgradient sources remains a significant data gap and the Site Conceptual Model is currently incomplete. At present, a cost effective Corrective Action Plan cannot be completed for the Site until upgradient responsible parties have been identified and these upgradient releases have been fully defined.** At this time it appears that a Joint Corrective Action through the State Water Resources Control Boards' Commingled Plume Account will likely be the most cost effective approach in reducing groundwater impacts in this area. **We recommend that the ACEH identify the responsible upgradient property owners and require that they complete an assessment of soil and groundwater impacts to determine the extent of contaminant plume migration to the Site.**

- <u>Groundwater Monitoring & Reporting:</u> Continue quarterly sampling through 2013 of the newly installed wells MW-5 and MW-6, and upgradient property line wells RW-13 and

RW-14 in order to monitor trends and begin to build a data set of off-site contaminant migration to the Site. Annual sampling of key on-site monitoring wells (MW-1 through MW-4, and RW-5 and RW-9) will continue according the approved annual schedule (i.e, in September).

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 _____

Jered Chaney, PG# 8452
Project Geologist

Attachments:

Figure 1:	Location Map
Figure 2:	Laboratory Analytical Results with Groundwater Gradient & Flow Direction
Figure 3:	TPHg and Benzene Concentration Trends Well MW-1 (March 1997 to Present)
Figure 4:	TPHg and Benzene Concentration Trends Well MW-2 (March 1997 to Present)
Figure 5:	TPHg and Benzene Concentration Trends Well MW-3 (March 1997 to Present)
Figure 6:	TPHg and Benzene Concentration Trends Well MW-4 (March 1997 to Present)
Figure 7:	TPHg and Benzene Concentration Trends Well RW-5 (March 2005 to Present)
Figure 8:	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, March 13 & 26, 2013, & 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*
- 2012, May 3: *Work Plan Approval*
- 2012, Oct-26: *Data Gap Investigation Report Deadline Extension Approval*

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*

REFERENCES (Continued)

– 1992, Sept*: Work Plan for a Subsurface Petroleum Hydrocarbon Contamination Assessment*

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*

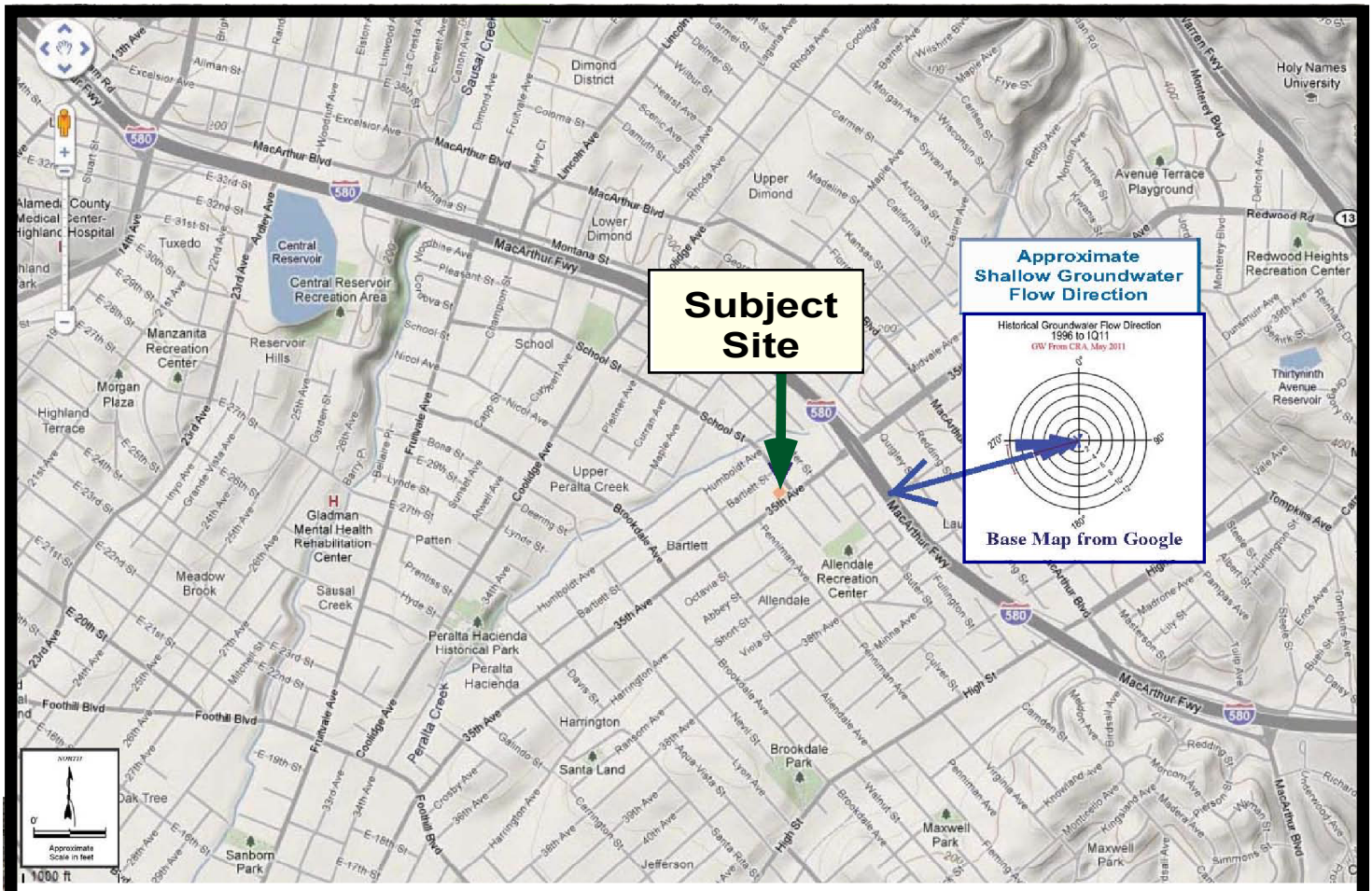
Weber, Hayes and Associates reports for: 3055 35th Avenue, Oakland:

– 2011, June-24: *Updated Site Conceptual Model – Fuel Release Investigation*
– 2012, February 21: *Workplan for Limited Soil and Groundwater Data Gap Assessment*
– 2012, February 21: *Semi-Annual Groundwater Monitoring Report (sampled September 2011)*
– 2012, August 8: *Semi-Annual Groundwater Monitoring Report (sampled March 2012)*
– 2012, October 29: *Semi-Annual Groundwater Monitoring Report (sampled September 2012)*
– 2012, December 31: *Limited Soil & Groundwater Data Gap Assessment*

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
PHC	Petroleum Hydrocarbons
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

RW-9
Elevation = 149.96'

MW-4
Elevation = 149.64'

Former Exxon Station

RW-10
Elevation = 150.21'

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

RW-14
Elevation = 150.86'
(3/13/2013)
TPH-d: ND
TPH-g: ND
B: 1.5
T: ND
E: ND
X: ND
MTBE: ND
TBA: ND
D.O.: 1.34 mg/L
Note: Sample taken on 3/26/2013

RW-8
Elevation = 149.84'

RW-7
Elevation = 149.88

Former Pump Island

MW-1
Elevation = 150.18'

Former 500 gallon Waste Oil UST Location

150.0'

MW-3
Elevation = 150.05'

RW-12
Elevation = 150.23'

RW-6
Elevation = 150.21'

Former Pump Island

RW-11
Elevation = 150.36'

MW-2
Elevation = 150.56'

RW-5
Elevation = 150.41'

150.5'

151.0'

RW-13
Elevation = 151.12'
(3/13/2013)
TPH-d: ND
TPH-g: ND
B: ND
T: ND
E: ND
X: ND
MTBE: ND
TBA: ND
D.O.: 1.95 mg/L
Note: Sample taken on 3/26/2013

SCHOOL STREET

Abandoned Texaco Station

Canopy / Former Dispenser Islands

MW-6
Elevation = 151.25'
TPH-d: 710* ppb
TPH-g: **1,800** ppb**
B: 230 ppb
T: 2.5 J ppb
E: 15 ppb
X: 1.6 J ppb
MTBE: <1.5
TBA: <14
D.O.: 6.39 mg/L

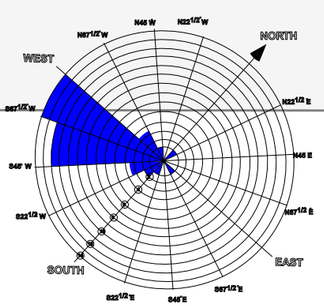
151.5'

MW-5
Elevation = 151.85'
TPH-d: 1,000* ppb
TPH-g: 18,000 ppb**
B: 2,200 ppb
T: 54 ppb
E: 1,200 ppb
X: 116.1 J ppb
MTBE: 410 ppb
TBA: <34
D.O.: 2.09 mg/L

QuikStop Station

Canopy / Dispenser Islands

35TH AVENUE



Historical Groundwater Flow Direction
(based on previous consultants 1996-2008 and WHA Results since 2011)

Explanation

MW-6
Elevation = 149.69'
TPH-d: 120* ppb
TPH-g: 540** ppb
B: 4.4 ppb
T: 0.74 ppb
E: 7.5 ppb
X: 2.3 ppb
MTBE: ND
TBA: ND ppb
D.O.: 6.63 mg/L
Sample collected November 2, 2012

Groundwater Monitoring Well Location, Designation, and groundwater elevation.

MW-5 and MW-6 were sampled on 3/13/2013.

RW-14
Elevation = 150.86'
(3/13/2013)
TPH-d: ND
TPH-g: ND
B: 1.5
T: ND
E: ND
X: ND
MTBE: ND
TBA: ND
D.O.: 1.34 mg/L
Note: Sample taken on 3/26/2013

Remediation Well Location, Designation, and groundwater elevation.

RW-13 and RW-14 were sampled on 3/26/2013. Groundwater elevations shown are from 3/13/2013 sampling event and were used to calculate the groundwater gradient.

	Laboratory Detection Limit	Water Quality Objectives (WQO's)
TPH-d:	100	1,000
TPH-g:	50	1,000
B:	0.5	1
T:	0.5	150
E:	0.5	300
X:	1.5	1,750
MTBE:	0.5	5
TBA:	5	12

BOLD: Above WQO threshold
ND: Not detected at or above the Laboratory Detection Limit
< #: Not detected at or above the elevated Laboratory Detection Limit

*: Laboratory report indicates that the sample chromatographic pattern does not resemble typical diesel standard pattern; unknown organics within the diesel range lighter than diesel quantified as diesel.
**: Laboratory report indicates although TPH Gasoline compounds are present, the sample pattern does not match pattern of reference Gasoline standard. Hydrocarbons within range of C5-C12 quantified as Gasoline.

147.80'

Interpolated Groundwater Elevation Contours & Flow Direction

The groundwater gradient measured on March 13, 2013 was 0.0012 ft/ft in a westerly direction (equivalent to approximately 1 foot of vertical drop per 833 feet of lateral flow)

2X103.Oakland-35th WP\QM\2013\1q13\Figures\2-Gradient and Results

Figure 2
Project 2X103

Laboratory Analytical Results with Groundwater Gradient & Flow Direction March 13 & 26, 2013 Former Exxon Station

3055 35th Avenue
Oakland, California

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, CA
831.722.3580 / www.weber-hayes.com

Figure 3
TPHg and Benzene Concentration Trends
Well MW-1 (March 1997 to Present)

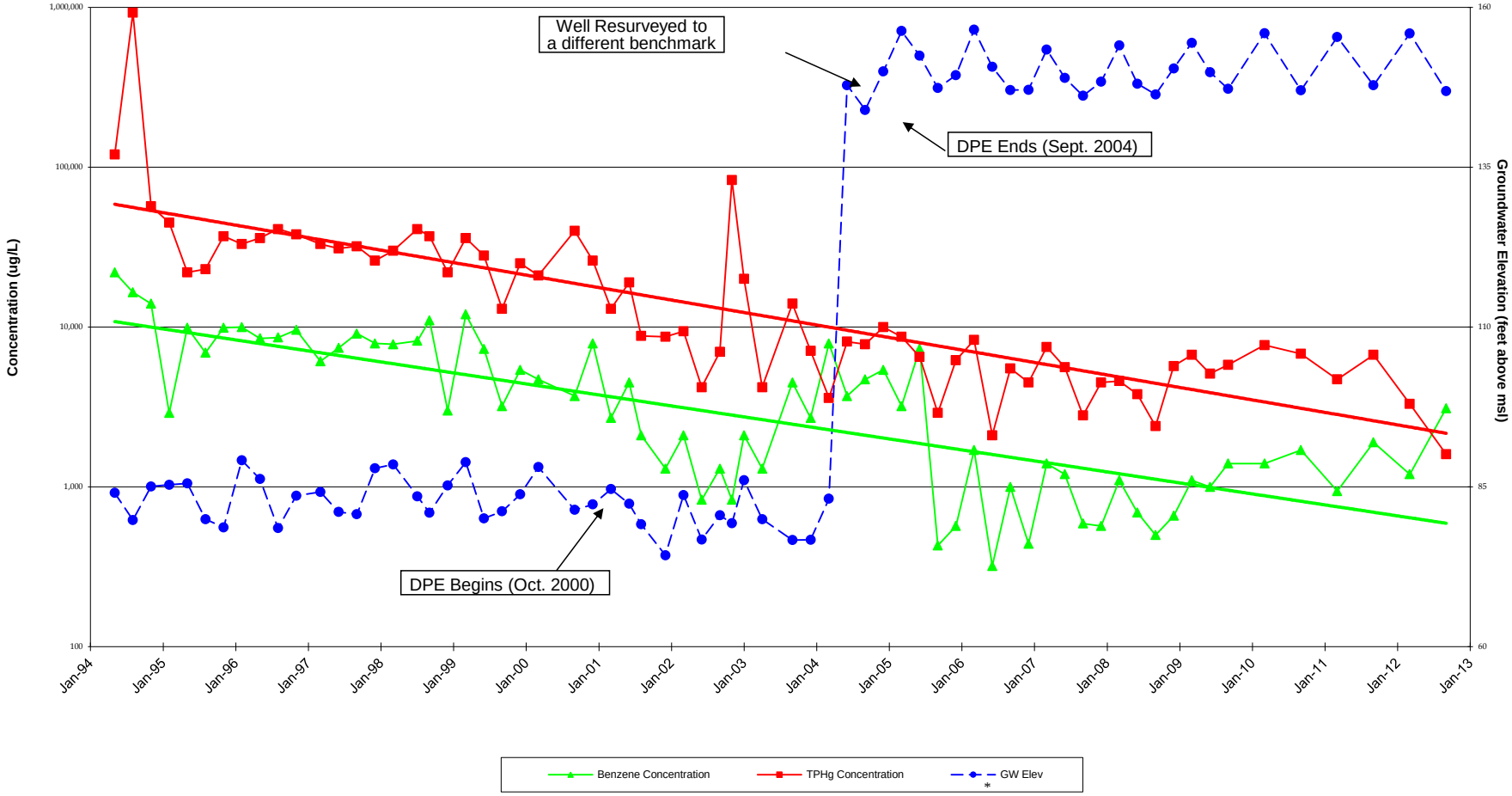


Figure 4
TPHg and Benzene Concentration Trends
Well MW-2 (March 1997 to Present)

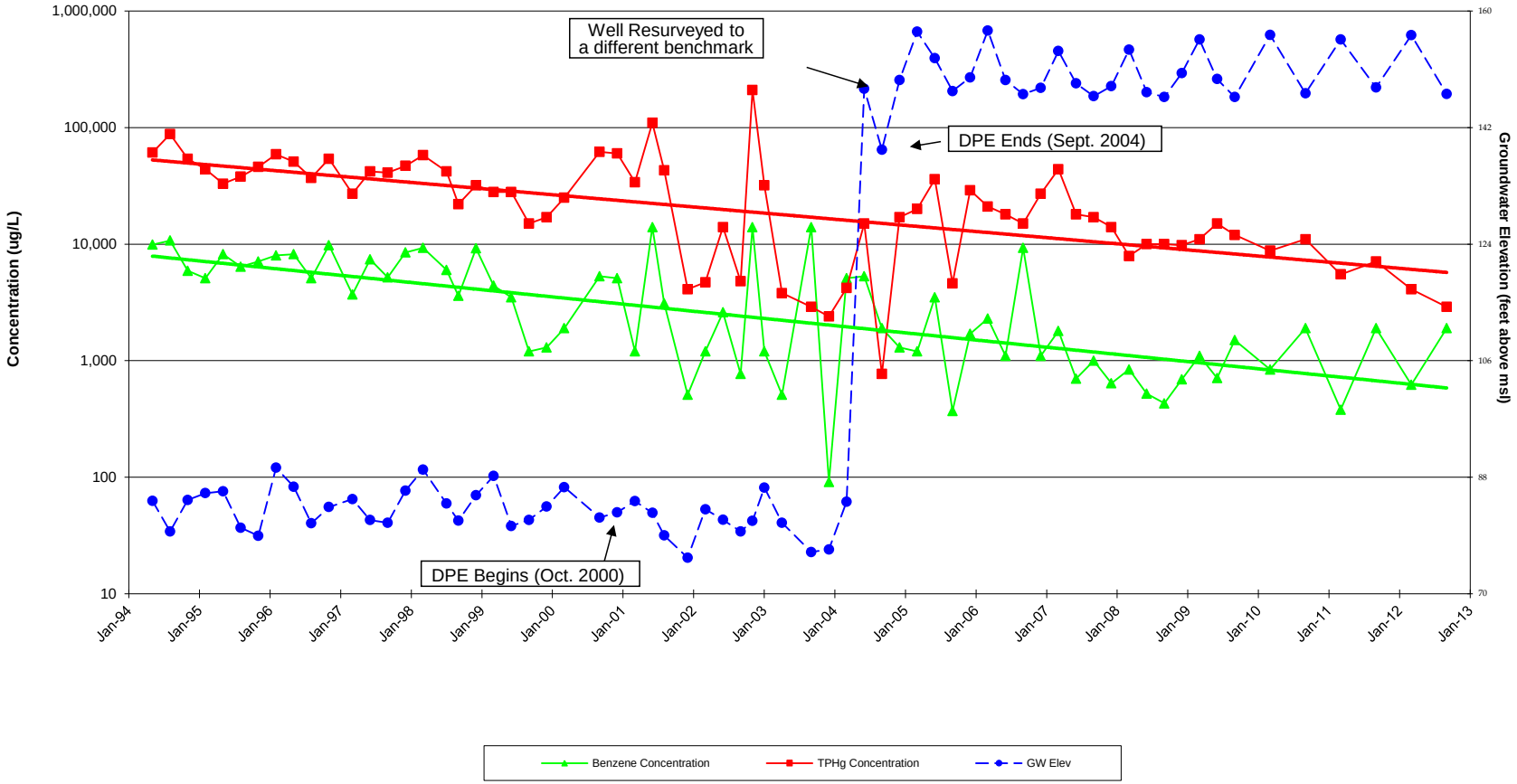


Figure 5
TPHg and Benzene Concentration Trends
Well MW-3 (March 1997 to Present)

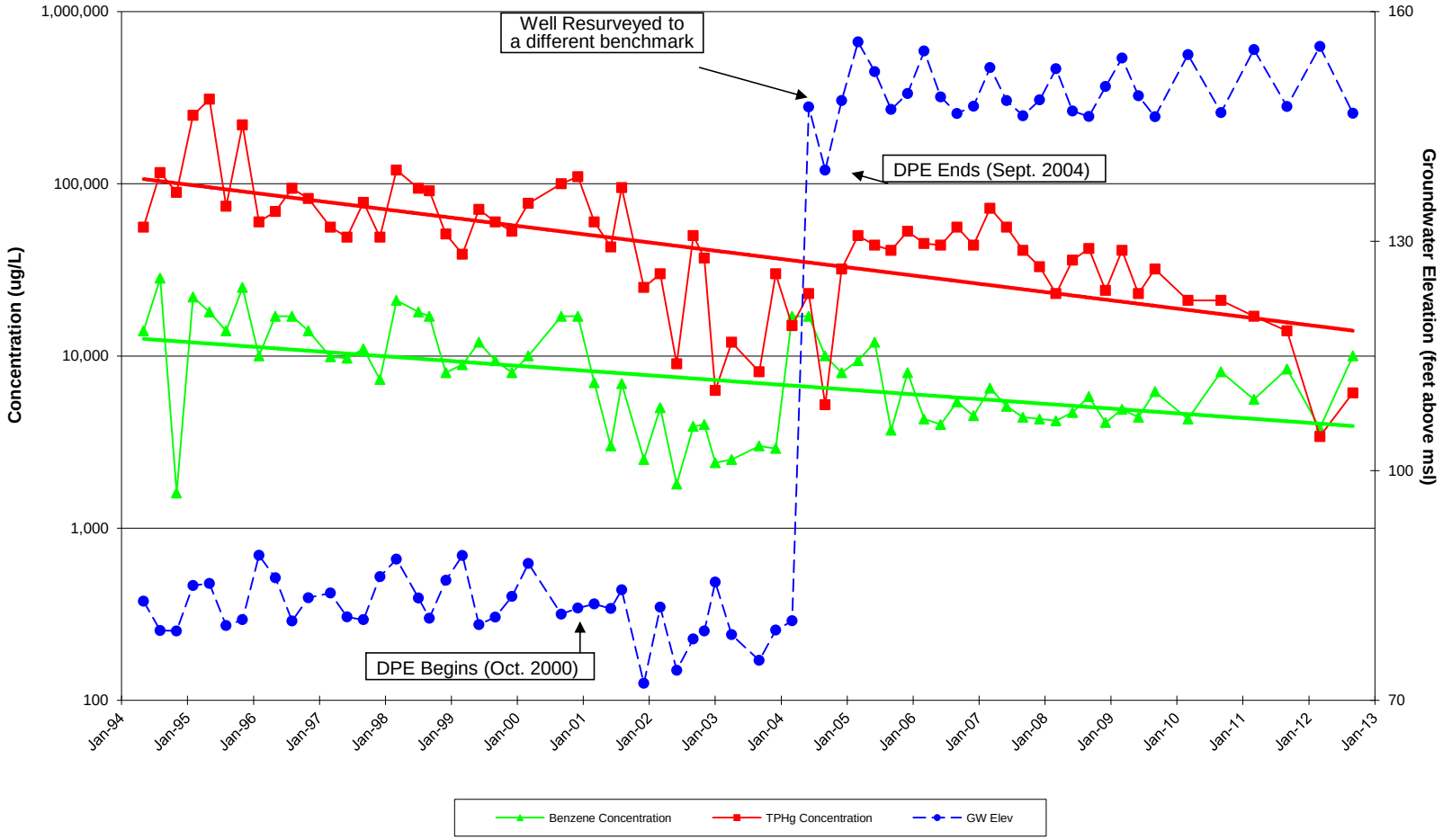
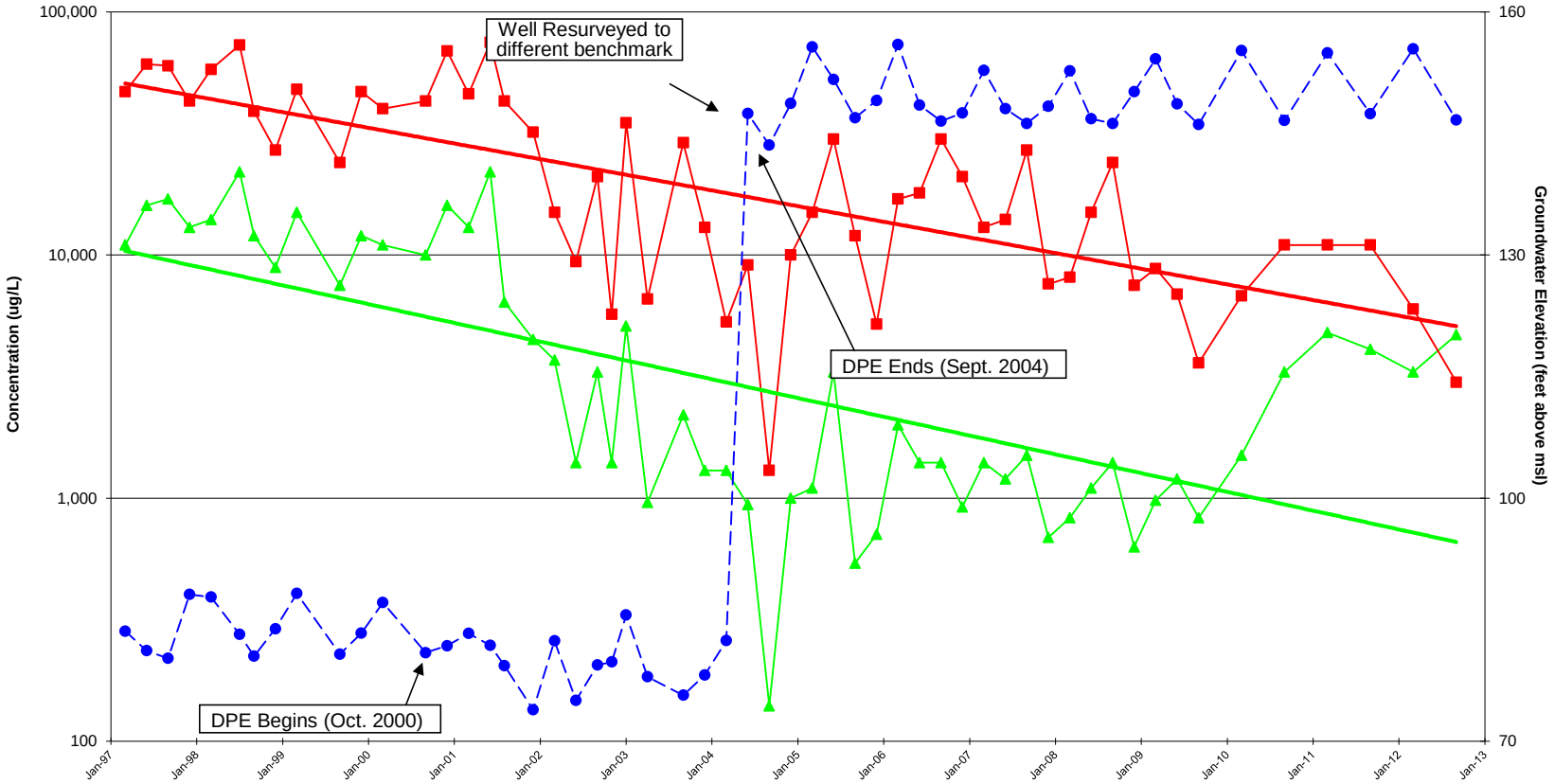


Figure 6
TPHg and Benzene Concentration Trends
Well MW-4 (March 1997 to Present)



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

Figure 7
TPHg and Benzene Concentration Trends
Well RW-5 (March 2005 to Present)

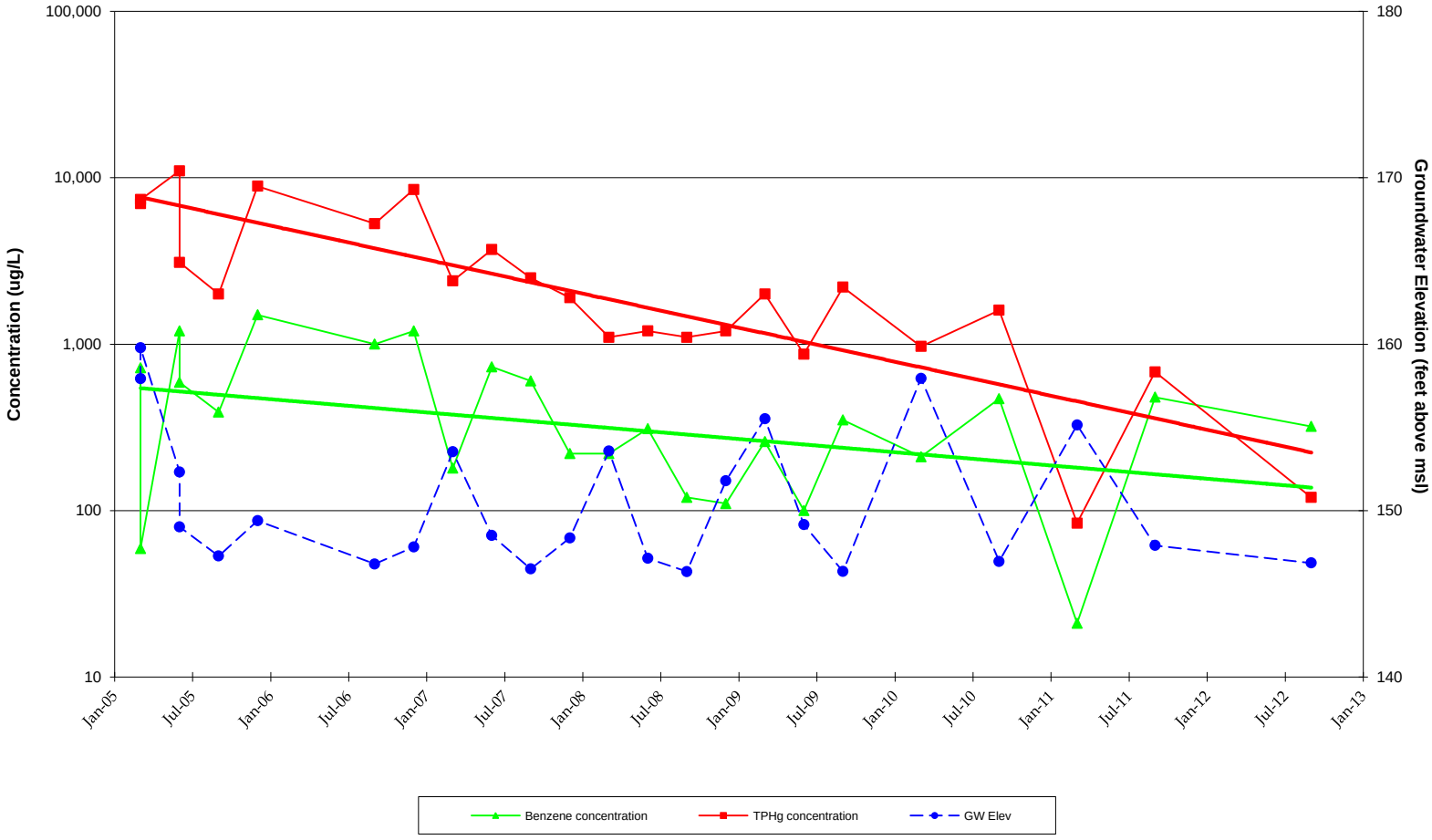
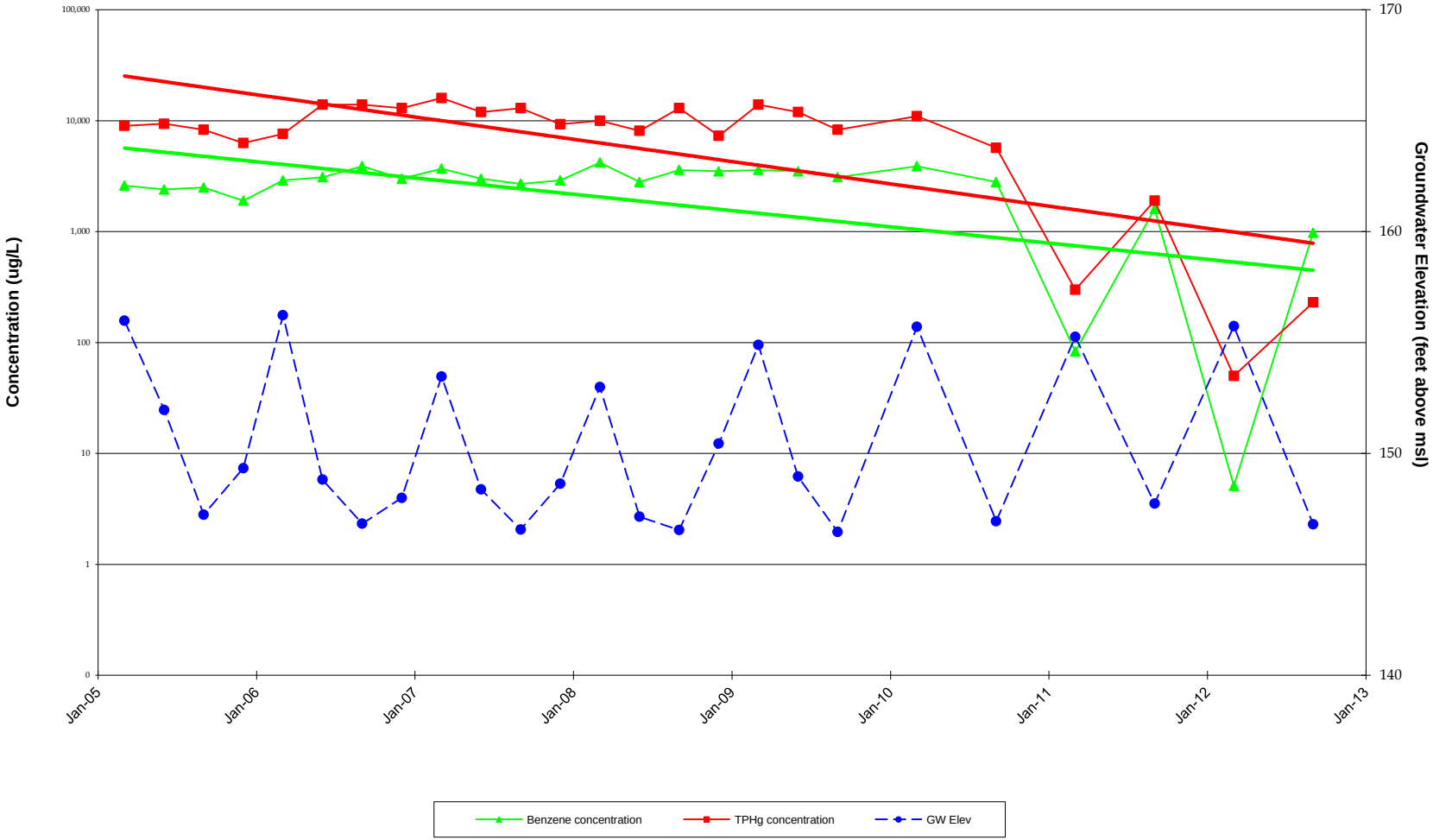


Figure 8

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



Tables

Table 1: Current 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	TOC Elevation (feet)				Diesel	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW-1	167.02	3/13/2013	16.84	150.18	--								1.28	-79
MW-2	166.14	3/13/2013	15.58	150.56	--								1.41	-82
MW-3	162.94	3/13/2013	12.89	150.05	--								2.11	-95
MW-4	163.49	3/13/2013	13.85	149.64	--								1.98	-72
MW-5	165.74	3/13/2013	13.89	151.85	**1,000****	**18,000***	**2,200**	54	**1,200**	116.1 J	**410**	< 34	2.09	11
MW-6	164.3	3/13/2013	13.05	151.25	710**	**1,800***	**230**	2.5 J	15	1.6 J	< 1.5	< 14	6.39	20
RW-5	162.34	3/13/2013	11.93	150.41	--								1.24	22
RW-6	162.36	3/13/2013	12.15	150.21	--								1.18	61
RW-7	162.72	3/13/2013	12.84	149.88	--								1.72	77
RW-8	164.13	3/13/2013	14.29	149.84	--								1.33	10
RW-9	163.86	3/13/2013	13.90	149.96	--								2.12	37
RW-10	163.02	3/13/2013	12.81	150.21	--								0.91	-12
RW-11	162.67	3/13/2013	12.31	150.36	--								2.13	-31
RW-12	163.06	3/13/20/13	12.83	150.23	--								1.96	38
RW-13	164.34	3/26/2013	13.92	150.42	ND	ND	ND	ND	ND	ND	ND	ND	1.95	70
		3/13/2013	13.22	151.12	--	--	--	--	--	--	--	--	1.13	97
RW-14	163.76	3/26/2013	13.49	150.27	ND	ND	**1.5**	ND	ND	ND	ND	ND	1.34	23
		3/13/2013	12.90	150.86	--	--	--	--	--	--	--	--	1.32	62
Laboratory Detection Limit:					**100**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**Field Instrument**	
Water Quality Objectives (WQOs):					**1,000**		**1**	**150**	**300**	**1,750**	**5**	**12**	--	--

Notes

WQG = Water Quality Goals: Goals based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits.

BOLD = Above WQG Threshold **TOC =** Top of Casing -- = Data not available / not sampled **< X =** Not detected at or above elevated reporting limit, X.

= Diesel result due to discrete unknown peaks within quantified range

***** = Laboratory report indicates although TPH Gasoline compounds are present, the sample pattern does not match pattern of reference Gasoline standard. Hydrocarbons within range of C5-C12 quantified as Gasoline.

****** = Laboratory report indicates that the sample chromatographic pattern does not resemble typical diesel standard pattern; unknown organics within the diesel range lighter than diesel quantified as diesel.

J = Laboratory indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather than quantitative.

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	TOC Elevation (feet)						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	167.02																			
		3/13/2013	--		16.84	150.18	--	--	--	--	--	--	--	--	--	--	--	--	1.28	-79
		11/9/2012	--		18.58	148.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		20.14	146.88	**1,800***	--	**1,600***	**3,100**	9	110	9.4J	< 1.5	**210**	< 0.59	< 0.99	< 0.84 - 1.4	0.85	-109
		3/30/2012	--		11.10	155.92	**1,400*****	--	**3,300★**	**1,200**	3.6J	82	8.7J	< 1.5	< 14	< 0.59	< 0.99	< 0.84 - 1.4	2.39	-100
		9/22/2011	--		19.22	147.80	690**	--	**6,700***	**1,900**	< 8.4	140	< 14.4	**23**	--	--	--	--	0.72	-91
		3/17/2011	--		11.65	155.37	**1,100** [e]	--	**4,700** [d]	**940**	17	5.7	55	**(34)**	--	--	--	--	0.69	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
		3/14/2010	--	(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
		9/5/2009	--	(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
		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
		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
		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
		9/6/2008	--	(Z[TPHd])	20.66	146.36	(420 [e])	--	**2,400** [d]	**500**	11	30	67	< 75	--	--	--	--	1.20	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
		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
		12/8/2007	Sheen [Field]		18.66	148.36	520 [e,f]	--	**4,500** [d]	**570**	13	57	200	< 120	--	--	--	--	1.24	Not operating
		9/6/2007	--		20.84	146.18	690 [e,f]	--	**2,800** [d]	**590**	17	35	100	< 80	--	--	--	--	0.90	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
		3/16/2007	--		13.62	153.40	**1,800** [e,f]	--	**7,500** [d]	**1,400**	30	100	270	< 150	--	--	--	--	0.58	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
		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
		6/30/2006	Sheen [Field]		16.33	150.69	**1,500**[m,k,f]	--	**2,100**[d,f]	**320**	6.1	< 1.0	77	< 90	--	--	--	--	0.66	Not operating
		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
		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
		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
		6/21/2005	--		14.60	152.42	930[e,k]	--	**6,500**[d]	**820**	26	57	110	< 250	--	--	--	--	--	Not operating
		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
	100.85	12/27/2004	--		17.04	83.81	**1,400**[e]	--	**10,000**[d]	**2,400**	**170**	170	1,500	< 120	--	--	--	--	0.41	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
		6/16/2004	--		19.20	81.65	**2,300**[e,f]	--	**8,100**[d]	**1,500**	69	22	1,000	< 100	--	--	--	--	--	Not operating
		3/18/2004	--		17.70	83.15	**1,100**[e,f]	--	**3,600**[d]	**650**	59	38	370	< 90	--	--	--	--	--	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
		9/3/2003	--		24.16	76.69	**36,000**[e,f]	--	**14,000**[d]	**300**	50	33	480	< 50	--	--	--	--	--	Operating
		5/30/2003	--		16.65	84.20	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		4/25/2003	--		20.90	79.95	320[e]	--	**4,200**[d]	**580**	81	59	470	< 50	--	--	--	--	--	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
		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
		9/26/2002	--		20.30	80.55	**1,300**[e,f,k]	--	**7,000**[d]	**1,300**	**190**	200	760	< 100	--	--	--	--	0.70	Operating
		6/10/2002	--		24.10	76.75	900[e,k]	--	**4,200**[d]	**830**	**170**	110	460	< 100	--	--	--	--	--	Operating
		3/11/2002	--		17.13	83.72	**1,400**[e]	--	**9,400**[d]	**2,100**	**200**	74	470	< 20	--	--	--	--	0.39	Operating
		12/7/2001	--		26.55	74.30	**1,900**[e,f]	--	**8,700**[d]	**1,300**	**160**	38	730	< 20	--	--	--	--	0.59	Operating
		8/30/2001	--		21.70	79.15	**1,400**[d]	--	**8,800**[a]	**2,100**	45	91	240	< 130	--	--	--	--	0.27	Operating
		6/6/2001	--		18.47	82.38	**4,000**	--	**19,000**	**4,500**	130	270	430	< 400	--	--	--	--	0.39	Not operating
		3/7/2001	--		16.19	84.66	**2,400**	--	**13,000**	**2,700**	43	69	300	< 100	--	--	--	--	0.49	Not operating
		12/5/2000	--		18.60	82.25	**3,400**[e]	--	**26,000**[a]	**7,900**	**150**	**580**	810	< 300	--	--	--	--	0.35	Not operating
		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	
		3/23/2000	--		12.76	88.09	**3,300**[f]	--	**21,000**[d]	**4,700**	140	**470**	1,100	< 350	--	--	--	--	--	
		12/10/1999	--		17.02	83.83	**2,900**[e,f]	--	**25,000**[d]	**5,400**	130	**620**	1,400	< 1,000	--	--	--	--	1.03	
		9/28/1999	--		19.68	81.17	**3,600**[e,f]	--	**13,000**[d]	**3,200**	130	**320**	1,100	< 210	--	--	--	--	0.55	
		6/29/1999	--		20.77	80.08	**3,500**[e]	--	**28,000**[d]	**7,300**	**420**	**810**	1,700	< 1,300	--	--	--	--	0.10	
		3/29/1999	--		11.98	88.87	**6,800**[e]	--	**36,000**[d]	**12,000**	**750**	**1,300**	**2,400**	**950**	--	--	--	--	0.50	
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued		12/8/1998	--		15.62	85.23	**3,700**	--	**22,000**	**3,000**	**1,200**	**730**	**3,100**	< 900	--	--	--	--	--	
MW-1		9/30/1998	--		19.90	80.95	**3,300**	--	**37,000**	**11,000**	**950**	**1,200**	**2,800**	< 20	--	--	--	--	2.0	
		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	
		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	
		12/22/1997	--		12.95	87.90	**5,800** [e]	--	**26,000** [d]	**7,900**	**370**	**920**	1,500	< 790	--	--	--	--	0.7	
		9/17/1997	--		20.12	80.73	**3,500** [e]	--	**32,000** [d]	**9,100**	**550**	**1,000**	**2,000**	< 1,000	--	--	--	--	2.1	
		6/25/1997	--		19.77	81.08	**7,400** [a]	--	**31,000**	**7,400**	**440**	**890**	**1,800**	< 400	--	--	--	--	3.7	
		3/20/1997	--		16.65	84.20	**10,000**	--	**33,000**	**6,100**	**560**	**970**	**2,200**	< 400	--	--	--	--	8.5	
		11/27/1996	Sheen		17.24	83.61	**6,100**	--	**38,000**	**9,600**	**950**	**1,600**	**3,100**	< 400	--	--	--	--	5.6	
		8/22/1996	--		22.30	78.55	**6,200**	--	**41,000**	**8,600**	**1,300**	**1,500**	**2,900**	< 200	--	--	--	--	8.0	
		5/21/1996	--		14.62	86.23	**8,500**	--	**36,000**	**8,500**	**1,400**	**1,300**	**2,800**	**1,900**	--	--	--	--	--	
		2/21/1996	--		11.69	89.16	**4,300**	--	**33,000**	**10,000**	**480**	**1,000**	**1,800**	**3,300**	--	--	--	--	--	
		11/29/1995	--		22.19	78.66	--	--	**37,000**	**9,900**	**530**	**1,600**	**2,900**	--	--	--	--	--	--	
		8/22/1995	--		20.90	79.95	--	--	**23,000**	**6,900**	**340**	**1,200**	**1,900**	--	--	--	--	--	--	
		5/23/1995	--		15.29	85.56	--	--	**22,000**	**9,900**	**990**	**790**	**2,000**	--	--	--	--	--	--	
		2/27/1995	--		15.53	85.32	--	--	**45,000**	**2,900**	**2,500**	**760**	**4,100**	--	--	--	--	--	--	
		11/11/1994	--		15.80	85.05	--	--	**57,000**	**14,000**	**4,400**	**1,400**	**6,400**	--	--	--	--	--	--	
		8/18/1994	Sheen		21.04	79.81	--	--	**925,000**	**16,500**	**6,200**	**1,000**	**9,400**	--	--	--	--	--	--	
		7/19/1994	--		20.77		--	--	--	--	--	--	--	--	--	--	--	--	--	
		5/25/1994	Sheen		16.79	84.06	**25,000**	< 50,000	**120,000**	**22,000**	**17,000**	**2,800**	**16,000**	--	--	--	--	--	--	
MW-2	166.14																			
		3/13/2013	--		15.58	150.56	--	--	--	--	--	--	--	--	--	--	--	--	1.41	-82
		11/9/2012	--		17.41	148.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	Sheen [Field]		18.95	147.19	**1,500*** **	--	**2,900***	**1,900**	12	270	12J	**42**	**300**	< 0.59	< 0.99	< 1.1 - 1.5	4.27	-101
		3/30/2012	--		9.84	156.30	**1,800*** **	--	**4,100★**	**620**	5.0	140	8.6J	**21**	< 9.7	< 0.43	< 0.71	< 6.0 - 0.97	2.66	-104
		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	-106
		3/17/2011	--		10.51	155.63	**2,200** [e,f]	--	**5,500** [d]	**380**	12	1.8	15	**(35)**	--	--	--	--	0.68	Not operating
		9/10/2010	--	(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
		3/14/2010	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
		9/5/2009	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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		9/27/2004	--	**	27.55	138.59	**1,000** [e,f,k]	--	770 [d]	**20**	7.9	10	140	**1,600**	--	--	--	--	0.79	Operating
		6/16/2004	--		18.15	147.99	**9,800** [e,f]	--	**15,000** [d]	**800**	**210**	290	**1,800**	**2,000**	--	--	--	--	--	Not operating
Well box)	100.00	3/18/2004	--		15.78	84.22	870 [e,f]	--	**4,200** [d]	**730**	89	< 5.0	480	**2,300**	--	--	--	--	--	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
		9/3/2003	--		23.57	76.43	**2,300** [e]	--	**2,900** [d]	**240**	57	68	380	**770**	--	--	--	--	--	Operating
		5/30/2003	--		15.23	84.77	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs): [1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds											
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		Dissolved Oxygen (mg/L)	
Continued		4/25/2003	--		19.05	80.95	310[e]	--	**3,800**[d]	**460**	78	72	410	**310**	--	--	--	--		--	Operating
MW-2		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
		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
		9/26/2002	--		20.39	79.61	660[e]	--	**4,800**[d]	**770**	**200**	140	740	< 50	--	--	--	--		0.29	Operating
		6/10/2002	--		18.59	81.41	**2,000**[e]	--	**14,000**[d]	**2,600**	**710**	150	**2,000**	< 800	--	--	--	--		--	Operating
		3/11/2002	--		16.95	83.05	590[e]	--	**4,700**[d]	**1,200**	**150**	30	310	< 50	--	--	--	--		0.24	Operating
		12/7/2001	--		24.45	75.55	750[e,f]	--	**4,100**[d]	**510**	88	8.2	580	< 20	--	--	--	--		0.47	Operating
		8/30/2001	--		21.00	79.00	**15,000**[d,h]	--	**43,000**[a,h]	**3,100**	**720**	**980**	**5,500**	< 200	--	--	--	--		--	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
		3/7/2001	--		15.68	84.32	**3,900**	--	**34,000**	**1,200**	**770**	**620**	**4,300**	< 200	--	--	--	--		0.44	Not operating
		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
		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	
		3/23/2000	--		13.56	86.44	**3,100**[i]	--	**25,000**[d]	**1,900**	**1,100**	**660**	**3,700**	< 500	--	--	--	--		--	
		12/10/1999	--		16.53	83.47	**2,500**[e,f]	--	**17,000**[d]	**1,300**	**780**	**420**	**2,700**	< 40	--	--	--	--		0.17	
		9/28/1999	--		18.61	81.39	**3,400**[e,f]	--	**15,000**[d]	**1,200**	**540**	230	**2,300**	< 36	--	--	--	--		1.18	
		6/29/1999	--		19.54	80.46	**3,300**[e]	--	**28,000**[d]	**3,500**	**1,100**	**690**	**3,100**	< 1,000	--	--	--	--		0.41	
		3/29/1999	--		11.81	88.19	**7,500**[e,f]	--	**28,000**[d]	**4,400**	**1,600**	**950**	**4,100**	**410**	--	--	--	--		1.86	
		12/8/1998	--		14.80	85.20	**3,100**	--	**32,000**	**9,200**	**680**	**1,100**	**2,300**	< 2,000	--	--	--	--		--	
		9/30/1998	--		18.71	81.29	**2,400**	--	**22,000**	**3,600**	**1,300**	**720**	**3,200**	< 30	--	--	--	--		1.8	
		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	
		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	
		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	
		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	
		6/25/1997	--		18.62	81.38	**7,800**[b]	--	**42,000**	**7,400**	**3,800**	**1,200**	**5,700**	< 200	--	--	--	--		0.9	
		3/20/1997	--		15.39	84.61	**6,100**	--	**27,000**	**3,700**	**2,300**	**580**	**2,800**	< 400	--	--	--	--		8.1	
		11/27/1996	Sheen		16.61	83.39	**10,000**	--	**54,000**	**9,800**	**7,000**	**1,800**	**7,900**	< 2,000	--	--	--	--		3.1	
		8/22/1996	--		19.12	80.88	**5,700**	--	**37,000**	**5,100**	**3,500**	**960**	**4,500**	< 200	--	--	--	--		3.0	
		5/21/1996	--		13.47	86.53	**3,400**	--	**51,000**	**8,200**	**5,200**	**1,300**	**6,600**	**2,400**	--	--	--	--		--	
		2/21/1996	--		10.53	89.47	--	--	**59,000**	**8,000**	**6,000**	**1,800**	**8,900**	**4,500**	--	--	--	--		--	
		11/29/95	--		21.05	78.95	--	--	**46,000**	**7,100**	**5,300**	**1,300**	**6,000**	--	--	--	--	--		--	
		8/22/1995	--		19.80	80.20	--	--	**38,000**	**6,400**	**5,000**	**1,100**	**5,600**	--	--	--	--	--		--	
		5/23/1995	--		14.17	85.83	--	--	**33,000**	**8,200**	**5,600**	**900**	**6,600**	--	--	--	--	--		--	
		2/27/1995	Sheen		14.46	85.54	--	--	**44,000**	**5,100**	**5,300**	**930**	**6,400**	--	--	--	--	--		--	
		11/11/94	--		15.52	84.48	--	--	**54,000**	**5,900**	**6,700**	**1,300**	**7,500**	--	--	--	--	--		--	
		8/18/1994	--		20.37	79.63	--	--	**88,000**	**10,750**	**10,500**	**1,850**	**9,600**	--	--	--	--	--		--	
		7/19/1994	--		19.81	80.19	--	--	--	--	--	--	--	--	--	--	--	--		--	
		5/25/1994	--		15.65	84.35	**6,900**	< 5,000	**61,000**	**9,900**	**7,400**	**960**	**4,600**	--	--	--	--	--		--	
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**		**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--		--	--

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
MW-3	162.94																			
		3/13/2013	--		12.89	150.05	--	--	--	--	--	--	--	--	--	--	--	--	2.11	-95
		11/9/2012	--		14.69	148.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		16.22	146.72	**2,700***	--	**6,100***	**10,000**	36	**860**	104J	**87**	**650**	< 3.0	< 5.0	< 4.2-6.8	0.75	-98
		3/30/2012	--		7.51	155.43	**2,200***	--	**3,400▲**	**3,800**	14J	**360**	57.3	**63J**	< 68	< 3.0	< 5.0	< 4.2 - 6.8	7.23	-113
		9/22/2011	--		15.34	147.60	**1,500****	--	**14,000***	**8,400**	< 17	**790**	130	**89**	< 130	< 17	< 24	< 28 - 35	1.04	-82
		3/17/2011	--		7.90	155.04	2,400 [e]	--	**17,000** [d]	**5,600**	43	**660**	210	**(83)**	--	--	--	--	0.83	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
		3/14/2010	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
		9/5/2009	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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		3/22/2006	Sheen [Field & Lab]		8.10	154.84	**15,000** [e,f,k,g]	--	**45,000** [d,g]	**4,300**	**390**	**1,100**	**5,300**	< 1,000					0.88	Not operating
		12/14/2005	Sheen [Field & Lab]		13.65	149.29	**19,000** [e,f,k,g]	--	**53,000** [d,g]	**4,700**	**350**	**1,100**	**7,400**	< 1,000	--	--	--	--	0.95	Not operating
		9/21/2005	Sheen [Field & Lab]		15.73	147.21	**16,000** [e,f,k,g]	--	**41,000** [d,g]	**3,700**	**480**	**930**	**5,700**	< 500	--	--	--	--	0.90	Not operating
		6/21/2005	Sheen [Field & Lab]		10.79	152.15	**12,000** [e,g]	--	**44,000** [d,g]	**4,900**	**870**	**1,100**	**6,500**	< 1,200	--	--	--	--	--	Not operating
		3/7/2005	Sheen [Field & Lab]		6.91	156.03	**14,000** [e,f,g]	--	**50,000** [d,g]	**6,100**	**2,100**	**1,300**	**7,400**	< 500	--	--	--	--	0.62	Not operating
		12/27/2004	Sheen [Lab]		14.58	148.36	**24,000** [e,f,g,k]	--	**32,000** [d,g]	**4,400**	**2,800**	**650**	**4,800**	< 250	--	--	--	--	0.71	Not operating
		9/27/2004	--		23.65	139.29	**1,700** [e,f]	--	**5,200** [d]	**430**	**220**	100	680	**250**	--	--	--	--	0.55	Operating
	96.87	6/16/2004	--		15.40	81.47	**8,800** [e,f]	--	**23,000** [d]	**2,100**	**1,300**	**360**	**2,800**	< 1,000	--	--	--	--	--	Operating
		3/18/2004	--		16.49	80.38	**2,300** [e,f]	--	**15,000** [d]	**2,600**	**990**	260	1,700	< 300	--	--	--	--	--	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
		9/3/2003	--		21.65	75.22	**3,300** [e]	--	**8,100** [d]	**220**	**170**	66	560	< 50	--	--	--	--	--	Operating
		5/30/2003	--		13.30	83.57	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		4/25/2003	--		18.30	78.57	**1,200** [e]	--	**12,000** [d]	**1,800**	**850**	150	1,200	< 500	--	--	--	--	--	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
		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
		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
		6/10/2002	--		22.94	73.93	990 [e,k]	--	**9,000** [d]	**1,800**	**1,300**	96	1,000	< 300	--	--	--	--	--	Operating
		3/11/2002	--		14.69	82.18	**2,800** [e,g,k]	--	**30,000** [d]	**5,000**	**2,400**	190	**1,800**	< 1,300	--	--	--	--	0.30	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
		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
		6/6/2001	--		14.88	81.99	**12,000**	--	**43,000**	**3,000**	**1,000**	**770**	**5,200**	< 400	--	--	--	--	1.71	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
		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
		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	--	--	--	--	--	
		3/23/2000	--		8.98	87.89	**11,000** [g,j]	--	**77,000** [d,g]	**10,000**	**9,400**	**1,600**	**11,000**	< 430	--	--	--	--	--	
		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	
		9/28/1999	--		15.99	80.88	**7,800** [e]	--	**60,000** [d]	**9,400**	**9,200**	**1,000**	**9,900**	**200**	--	--	--	--	0.53	
		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	
		3/29/1999	--		7.95	88.92	**4,600** [e]	--	**39,000** [d]	**8,900**	**4,400**	**940**	**4,500**	**810**	--	--	--	--	0.56	
		12/8/1998	--		11.20	85.67	**4,200**	--	**51,000**	**8,000**	**6,800**	**1,400**	**7,500**	< 1,100	--	--	--	--	--	
		9/30/1998	--		16.14	80.73	**9,800**	--	**91,000**	**17,000**	**13,000**	**2,100**	**12,000**	< 1300	--	--	--	--	2.0	
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
Continued		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	
MW-3		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	
		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	
		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	
		6/25/1997	--		15.98	80.89	**7,700**[b]	--	**49,000**	**9,700**	**7,100**	**1,300**	**7,000**	**220**	--	--	--	--	5.8	
		3/20/1997	--		12.86	84.01	**11,000**	--	**56,000**	**9,900**	**6,900**	**1,300**	**8,000**	**3,500**	--	--	--	--	9.0	
		11/27/1996	Sheen		13.47	83.40	**24,000**	--	**82,000**	**14,000**	**13,000**	**2,400**	**13,000**	< 1,000	--	--	--	--	2.4	
		8/22/1996	--		16.50	80.37	**16,000**	--	**94,000**	**17,000**	**15,000**	**2,100**	**12,000**	**330**	--	--	--	--	2.0	
		5/21/1996	Sheen		10.86	86.01	**13,000**	--	**69,000**	**17,000**	**9,400**	**1,700**	**9,400**	**2,600**	--	--	--	--	--	
		2/21/1996	--		7.92	88.95	--	--	**60,000**	**10,000**	**7,800**	**1,500**	**8,800**	**3,400**	--	--	--	--	--	
		11/29/1995	--		16.34	80.53	--	--	**220,000**	**25,000**	**25,000**	**3,500**	**19,000**	--	--	--	--	--	--	
		8/22/1995	--		17.10	79.77	--	--	**74,000**	**14,000**	**13,000**	**1,900**	**11,000**	--	--	--	--	--	--	
		5/23/1995	Sheen		11.60	85.27	--	--	**310,000**	**18,000**	**17,000**	**4,500**	**2,800**	--	--	--	--	--	--	
		2/27/1995	Sheen		11.86	85.01	--	--	**250,000**	**22,000**	**26,000**	**7,800**	**21,000**	--	--	--	--	--	--	
		11/11/94	--		17.80	79.07	--	--	**89,000**	**1,600**	**1,900**	**1,900**	**14,000**	--	--	--	--	--	--	
		8/18/1994	--		17.75	79.12	--	--	**116,000**	**28,300**	**26,000**	**2,400**	**15,000**	--	--	--	--	--	--	
		7/19/1994	--		17.04	79.83	--	--	--	--	--	--	--	--	--	--	--	--	--	
		5/25/1994	Sheen		13.93	82.94	**14,000**	< 50,000	**56,000**	**14,000**	**14,000**	**1,300**	**11,000**	--	--	--	--	--	--	
MW-4	163.49																			
		3/13/2013	--		13.85	149.64	--	--	--	--	--	--	--	--	--	--	--	--	1.98	-72
		11/9/2012	--		15.37	148.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		17.01	146.48	**2,100***		**3,000***	**4,700**	13	200	67	**34**	**220**	< 0.59	< 0.99	< 0.84 - 1.4	0.66	-108
		3/30/2012	--		8.05	155.44	**1,900***		**6,000★**	**3,300**	5.0J	95	28J	**40**	< 68	< 3.0	< 5.0	< 4.2 - 6.8	6.41	-101
		9/22/2011	--		16.05	147.44	**2,000***	--	**11,000***	**4,100**	< 17	160	100	< 33	< 130	< 17	< 24	< 28 - 35	0.69	-98
		3/17/2011	--		8.55	154.94	**1,900** [e]	--	**11,000** [d]	**4,800**	17	190	110	**(59)**	--	--	--	--	0.75	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
		3/14/2010	--	(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
		9/5/2009	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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		9/27/2004	--		19.93	143.56	980 [e,f,k]	--	**1,300** [d]	**140**	10	11	81	< 50	--	--	--	--	0.68	Not operating
		6/16/2004	--		16.02	147.47	**3,400** [e,f]	--	**9,100** [d]	**940**	96	120	800	< 50	--	--	--	--	--	Not operating
	97.34	3/18/2004	--		14.92	82.42	**1,500** [e]	--	**5,300** [d]	**1,300**	55	37	440	< 180	--	--	--	--	--	Operating
		12/2/2003	--		19.17	78.17	**5,800** [e,f]	--	**13,000** [d]	**1,300**	**180**	120	**1,900**	< 250	--	--	--	--	--	Operating
		9/3/2003	--		21.65	75.69	**27,000** [e,f]	--	**29,000** [d]	**2,200**	**380**	280	**2,300**	-	--	--	--	--	--	Operating
		5/30/2003	--		13.56	83.78	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		4/25/2003	--		19.37	77.97	**2,200** [e,f]	--	**6,600** [d]	**960**	130	100	560	< 170	--	--	--	--	--	Operating
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
Continued		1/13/2003	Sheen [1,ab]		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
MW-4		11/21/2002	--		17.55	79.79	**2,400**[e,k]	--	**5,700**[d]	**1,400**	**290**	63	640	**550**	--	--	--	--	--	Operating
		9/26/2002	--		17.93	79.41	800[e]	--	**21,000**[d]	**3,300**	**1,300**	**450**	**2,900**	< 500	--	--	--	--	0.24	Operating
		6/10/2002	--		22.30	75.04	**3,400**[e]	--	**9,400**[d]	**1,400**	50	< 5.0	690	< 200	--	--	--	--	--	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
		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
		8/30/2001	--		18.00	79.34	**3,200**[d]	--	**43,000**[a]	**6,400**	**630**	**510**	**2,600**	< 200	--	--	--	--	0.32	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
		3/20/2001	--		14.03	83.31	--	--	**46,000**	**13,000**	**1,000**	**900**	**2,800**	< 350	--	--	--	--	0.39	Not operating
		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
		9/7/2000	--		16.40	80.94	**5,900**[e]	--	**43,000**[d]	**10,000**	**1,100**	**1,100**	**3,400**	< 450	--	--	--	--	1.04	
		3/23/2000	--		10.22	87.12	**3,100**[e,f]	--	**40,000**[d]	**11,000**	**1,600**	**910**	**3,100**	**690**	--	--	--	--	--	
		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	
		9/28/1999	--		16.58	80.76	**3,200**[e,f]	--	**24,000**[d]	**7,500**	**1,200**	190	**2,200**	**210**	--	--	--	--	14.29[q]	
	*	6/29/1999	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		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	
		12/8/1998	--		13.45	83.89	**1,600**	--	**27,000**	**8,900**	**1,600**	**730**	**2,300**	< 1,500	--	--	--	--	--	
		9/30/1998	--		16.84	80.50	**2,100**	--	**39,000**	**12,000**	**2,700**	**1,000**	**3,400**	**510**	--	--	--	--	1.1	
		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	
		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	
		12/22/1997	--		9.21	88.13	**3,100**[e]	--	**43,000**[d]	**13,000**	**3,900**	**1,100**	**4,200**	< 960	--	--	--	--	3.7	
		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	
		6/25/1997	--		16.15	81.19	**5,800**[b]	--	**61,000**	**16,000**	**6,100**	**1,500**	**5,900**	**780**[c]	--	--	--	--	1.4	
		3/20/1997	--		13.75	83.59	**3,100**	--	**47,000**	**11,000**	**4,500**	**1,100**	**5,200**	3,400	--	--	--	--	8.4	
MW-5	165.74																			
		3/13/2013	--		13.89	151.85	**1,000*****| --	**18,000***	**2,200**	54	**1,200**	116.1 J	**410**	< 34	< 1.5	< 2.5	< 8.3	2.09	11
		11/9/2012	--		15.11	150.63	340***	--	**3000***	**1,300**	16	**340**	35.2	**390**	**2,300**	< 0.30	< 0.50	< 0.68	1.7	90
MW-6	164.3																			
		3/13/2013	--		13.05	151.25	710***	--	**1,800***	**230**	2.5 J	15	1.6 J	< 1.5	< 14	< 0.59	< 0.99	< 1.66	6.39	20
		11/9/2012	--		14.61	149.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		11/2/2012	--		14.23	150.07	120[#]	--	540*	44	0.74	7.5	2.3	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	6.63	62
RW-5	162.34																			
		3/13/2013	--		11.93	150.41	--	--	--	--	--	--	--	--	--	--	--	--	1.24	22
		11/9/2012	--		14.46	147.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		15.49	146.85	120^	--	120[v]	**320**	1.3	0.98	1.4	0.80	5.7	< 0.50	< 0.50	< 0.50	0.73	-78
		3/30/2012	--		0.40	161.94	< 100	--	< 50	< 0.50	< 0.50	< 0.50	< 1.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	7.31	-3
		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	-65
		3/17/2011	--		7.20	155.14	< 50	--	84[d]	**21**	< 0.5	3.9	1.2	(< 0.5)	--	--	--	--	0.79	Not operating
		9/10/2010	--	(Z[TPH#6])	15.40	146.94	270[e] (200)[e]	--	**1,600**[d]	**470**	5.1	19	21	(3.6)	--	--	--	--	0.54	Not operating
		3/14/2010	--	(Z[TPH#6])	4.40	157.94	480[e,f,k] (340)[e]	--	970[d]	**210**	5.2	12.0	13.0	**(41)**	--	--	--	--	1.03	Not operating
		9/5/2009	--	(Z[TPH#6])	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
		6/7/2009	Sheen[Field]	(Z[TPH#6])	13.19	149.15	720[m,f] (210)[e]	--	**870**[d]	**100**	4.4	1.3	2.8	**(110)**	--	--	--	--	1.13	Not operating
		3/14/2009	Sheen[Field]	(Z[TPH#6])	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
		12/28/2008	Sheen[Field]	(Z[TPH#6])	10.55	151.79	(250[m])	< 250	**1,200**[d,n]	**110**	5.6	2.5	9.8	**(81)**	--	--	--	--	1.13	Not operating
		9/6/2008	Sheen[Field]	(Z[TPH#6])	16.01	146.33	(220[e])	--	**1,100**[d]	**120**	2.6	2.2	13	**120**	--	--	--	--	1.42	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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		6/21/2005	Sheen[Field]		10.02	152.32	490[e]	--	**11,000**[d]	**1,200**	67	68	690	< 500	--	--	--	--	--	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
		12/27/2004	--		10.45	151.89	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		25.55	136.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Operating
		6/16/2004	--		14.73	147.61	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2003	--		14.48	--	--	--	**12,000**	**2,000**	**380**	190	1,500	**830**	--	--	--	--	--	
		1/13/2003	--		10.20	--	**3,000**	--	**14,000**	**2,100**	**750**	**300**	**1,800**	**950**	--	--	--	--	0.17	
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-6	162.36																			
		3/13/2013	--		12.15	150.21	--	--	--	--	--	--	--	--	--	--	--	--	1.18	61
		11/9/2012	--		14.31	148.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		15.57	146.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		6.50	155.86	--	--	--	--	--	--	--	--	--	--	--	--	3.54	70
		9/22/2011	--		14.52	147.84	--	--	--	--	--	--	--	--	--	--	--	--	0.83	-86
		3/17/2011	--		7.18	155.18	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		15.47	146.89	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		6.45	155.91	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.04	146.32	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.21	149.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		7.16	155.20	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.02	150.34	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		16.08	146.28	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.28	147.08	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		8.93	153.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.21	148.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		15.92	146.44	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		13.90	148.46	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		8.89	153.47	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		14.63	147.73	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		15.63	146.73	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		13.44	148.92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		5.85	156.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		13.02	149.34	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.13	147.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.13	152.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.05	156.31	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		9.82	152.54	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		18.46	143.90	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		14.80	147.56	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		11.47	--	--	--	**8,500**	**1,300**	**260**	71	990	**1,300**	--	--	--	--	--	
		1/13/2003	--		10.35	--	**2,900**	--	**15,000**	**2,200**	**1,200**	130	**2,200**	**440**	--	--	--	--	0.24	
		3/11/2002	--		--	--	**3,100**	--	**14,000**	**970**	**520**	170	**2,200**	< 130	--	--	--	--	--	
RW-7	162.72																			
		3/13/2013	--		12.84	149.88	--	--	--	--	--	--	--	--	--	--	--	--	1.72	77
		11/9/2012	--		14.77	147.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		18.23	144.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/22/2011	--		15.15	147.57	--	--	--	--	--	--	--	--	--	--	--	--	1.16	-69
		3/17/2011	--		7.75	154.97	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		16.04	146.68	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		8.70	154.02	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.55	146.17	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.91	148.81	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		7.94	154.78	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.62	150.10	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		16.51	146.21	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.80	146.92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.69	153.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.46	148.26	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		16.42	146.30	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		14.54	148.18	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.69	153.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.13	147.59	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		16.12	146.60	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		14.05	148.67	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
Continued		3/22/2006	--		5.75	156.97	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-7		12/14/2005	--		13.58	149.14	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.70	147.02	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.85	151.87	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		5.82	156.90	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		9.85	152.87	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		18.98	143.74	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.22	147.50	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		15.33	--	--	--	250	**66**	4.8	3.2	10	< 15	--	--	--	--	--	
		1/13/2003	--		10.95	--	67	--	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	--	--	--	--	0.22	
		3/11/2002	--		--	--	< 50	--	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	--	--	--	--	--	
RW-8	164.13																			
		3/13/2013	--		14.29	149.84	--	--	--	--	--	--	--	--	--	--	--	--	1.33	10
		11/9/2012	--		15.81	148.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		17.38	146.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		8.49	155.64	--	--	--	--	--	--	--	--	--	--	--	--	0.74	-45
		9/22/2011	--		16.40	147.73	--	--	--	--	--	--	--	--	--	--	--	--	1.22	-58
		3/17/2011	--		8.92	155.21	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		17.25	146.88	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		17.25	146.88	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		8.43	155.70	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		17.80	146.33	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		15.20	148.93	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		9.25	154.88	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		13.80	150.33	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		17.70	146.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		17.07	147.06	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		11.05	153.08	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		15.60	148.53	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		17.63	146.50	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		15.81	148.32	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		11.04	153.09	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		16.37	147.76	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		17.38	146.75	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		15.31	148.82	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		7.88	156.25	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		14.80	149.33	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		16.90	147.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		12.15	151.98	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		8.10	156.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		12.32	151.81	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.74	144.39	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		16.41	147.72	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		15.34	--	--	--	760	**310**	9.9	11	16	< 25	--	--	--	--	--	
		1/13/2003	--		12.80	--	56	--	390	**150**	11	4.1	4.1	**13**	--	--	--	--	0.31	
		3/11/2002	--		--	--	80	--	**1,300**	**620**	11	15	14	< 60	--	--	--	--	--	
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
RW-9	163.86																			
		3/13/2013	--		13.90	149.96	--	--	--	--	--	--	--	--	--	--	--	--	2.12	37
		11/9/2012	--		15.47	148.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		17.05	146.81	230^	--	230[v]	**980**	5.6	2.2	2.5	**7.4**	**110**	< 0.50	< 0.50	< 0.50	0.37	-133
		3/30/2012	--		8.12	155.74	< 100	--	< 50	**5.1**	< 0.50	< 0.50	< 1.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	6.13	20
		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	-123
		3/17/2011	--		8.60	155.26	< 50	--	300 [d]	**83**	1.6	< 0.5	< 0.5	(1.9)	--	--	--	--	0.88	Not operating
		9/10/2010	--	(Z[TPHd,g])	16.91	146.95	310 [e,f] (210) [e,f]	--	**5,700** [d]	**2,800**	16	< 2.5	37	**(20)**	--	--	--	--	0.70	Not operating
		3/14/2010	--	(Z[TPHd,g])	8.15	155.71	770 [e] (700) [e]	--	**11,000** [d]	**3,900**	80	120.0	450	**(31)**	--	--	--	--	1.10	Not operating
		9/5/2009	--	(Z[TPHd,g])	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
		6/7/2009	Sheen [Field & Lab]	(Z[TPHd,g])	14.90	148.96	**4,800** [m,f] **(910)** [e]	--	**12,000** [d]	**3,500**	87	150	330	**(30)**	--	--	--	--	1.19	Not operating
		3/14/2009	Sheen [Field]	(Z[TPHd,g])	8.97	154.89	450 [e] (440 [e])	--	**14,000** [d]	**3,600**	71	190	380	**(31)**	--	--	--	--	1.21	Not operating
		12/28/2008	Sheen [Field]	(Z[TPHd,g])	13.41	150.45	(950 [e])	< 250	**7,300** [d]	**3,500**	24	150	200	**(30)**	--	--	--	--	1.28	Not operating
		9/6/2008	Sheen [Lab]	(Z[TPHd,g])	17.31	146.55	**(1,600** [e,g]**)**	--	**13,000** [d,g]	**3,600**	52	170	220	< 350	--	--	--	--	1.22	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
		3/9/2008	--	(Z)	10.86	153.00	(570 [e])	(< 250)	**(10,000** [d]**)**	**(4,200)**	(71)	(180)	(380)	(< 35)	--	--	--	--	0.86	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
		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
		6/15/2007	--		15.48	148.38	670 [e]	--	**12,000** [d]	**3,000**	44	170	220	< 250	--	--	--	--	0.68	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
		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
		9/5/2006	--		17.02	146.84	**1,100**[e]	--	**14,000**[d]	**3,900**	39	200	230	< 330	--	--	--	--	0.69	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
		3/22/2006	--		7.63	156.23	680[e]	--	**7,600**[d]	**2,900**	59	190	310	< 200	--	--	--	--	0.95	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
		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
		6/21/2005	--		11.90	151.96	630[e]	--	**9,400**[d]	**2,400**	69	210	470	< 350	--	--	--	--	--	Not operating
		3/7/2005	--		7.87	155.99	510[e]	--	**9,000**[d]	**2,600**	69	200	550	< 500	--	--	--	--	0.91	Not operating
		12/27/2004	--		24.88	138.98	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.83	144.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		16.03	147.83	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		13.69	--	--	--	**2,300**	**770**	32	15	200	< 50	--	--	--	--	--	
		1/13/2003	--		11.85	--	**2,000**	--	**23,000**	**7,700**	**610**	**310**	310	< 500	--	--	--	--	0.39	
		3/11/2002	--		--	--	**880**	--	**12,000**	**3,400**	**230**	78	1,300	< 240	--	--	--	--	--	
RW-10	163.02																			
		3/13/2013	--		12.81	150.21	--	--	--	--	--	--	--	--	--	--	--	--	0.91	-12
		11/9/2012	--		14.52	148.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		16.01	147.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		7.02	156.00	--	--	--	--	--	--	--	--	--	--	--	--	0.79	-43
		9/22/2011	--		15.11	147.91	--	--	**1,900***	**1,600**	8.4	12	< 3.6	< 4.1	--	--	--	< 3.5 - 4.4	0.77	-104
		3/17/2011	--		7.64	155.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		15.87	147.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		6.32	156.70	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.36	146.66	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.96	149.06	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		8.02	155.00	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.42	150.60	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		16.23	146.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.64	147.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.96	153.06	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.23	148.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		16.23	146.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		14.52	148.50	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.91	153.11	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.02	148.00	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		15.98	147.04	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		14.13	148.89	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		6.53	156.49	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
Continued		12/14/2005	--		13.37	149.65	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
RW-10		9/21/2005	--		15.51	147.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.95	152.07	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.40	156.62	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		19.39	143.63	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		18.35	144.67	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.03	147.99	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		13.13	--	--	--	**5,800**	**2,400**	11	< 10	110	< 300	--	--	--	--	--	
		1/13/2003	--		10.75	--	330	--	**4,300**	**1,500**	43	98	98	< 100	--	--	--	--	0.41	
		3/11/2002	--		--	--	740	--	**12,000**	**3,900**	**150**	110	1,100	< 270	--	--	--	--	--	
RW-11	162.67																			
		3/13/2013	--		12.31	150.36	--	--	--	--	--	--	--	--	--	--	--	--	2.13	-31
		11/9/2012	--		13.91	148.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		15.61	147.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		6.51	156.16	--	--	--	--	--	--	--	--	--	--	--	--	1.32	-106
		9/22/2011	--		14.50	148.17	--	--	--	--	--	--	--	--	--	--	--	--	0.94	-96
		3/17/2011	--		7.10	155.57	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		15.42	147.25	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		6.50	156.17	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.02	146.65	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.21	149.46	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		7.14	155.53	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.01	150.66	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		15.99	146.68	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.26	147.41	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		8.81	153.86	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		13.83	148.84	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		15.84	146.83	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		13.90	148.77	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		8.85	153.82	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		14.55	148.12	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		15.56	147.11	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		13.36	149.31	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		5.70	156.97	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		12.96	149.71	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.09	147.58	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		9.96	152.71	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		5.95	156.72	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		10.07	152.60	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		18.44	144.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		14.75	147.92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		12.45	--	--	--	**9,300**	**980**	120	180	770	**2,000**	--	--	--	--	--	
		1/13/2003	--		9.80	--	**2,700**	--	**5,300**	**490**	110	120	120	**180**	--	--	--	--	0.24	
		3/11/2002	--		--	--	< 50	--	260	**34**	5.3	8.1	48	< 5.0	--	--	--	--	--	
RW-12	163.06																			
		3/13/2013	--		12.83	150.23	--	--	--	--	--	--	--	--	--	--	--	--	1.96	38
		11/9/2012	--		14.98	148.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		15.94	147.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		7.06	156.00	--	--	--	--	--	--	--	--	--	--	--	--	1.09	-8
		9/22/2011	--		15.01	148.05	--	--	--	--	--	--	--	--	--	--	--	--	0.75	-77
		3/17/2011	--		7.68	155.38	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		15.93	147.13	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		6.29	156.77	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		16.59	146.47	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		13.70	149.36	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		7.77	155.29	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		12.80	150.26	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		16.58	146.48	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		15.74	147.32	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.43	153.63	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.87	148.19	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	**--**	**--**	**--**

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds									Dissolved Oxygen (mg/L)	
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued		9/6/2007	--		16.42	146.64	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
RW-12		6/15/2007	--		14.44	148.62	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.52	153.54	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.52	153.54	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.11	147.95	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		16.11	146.95	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		13.95	149.11	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		6.35	156.71	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		13.43	149.63	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.63	147.43	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.58	152.48	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.59	156.47	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		10.85	152.21	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.09	143.97	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.30	147.76	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		13.63	--	--	--	**17,000**	**2,700**	**960**	230	1,500	**1,400**	--	--	--	--	--	
		1/13/2003	--		10.90	--	**1,800**	--	**4,100**	**1,000**	130	99	99	< 100	--	--	--	--	0.21	
		3/11/2002	--		--	--	900	--	**13,000**	**4,500**	130	130	270	< 5.0	--	--	--	--	--	
RW-13	164.34																			
		3/26/2013	--		13.92	150.42	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.95	70
		3/13/2013	--		13.22	151.12	--	--	--	--	--	--	--	--	--	--	--	--	1.13	97
		11/9/2012	--		15.11	149.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		16.39	147.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		7.45	156.89	--	--	--	--	--	--	--	--	--	--	--	--	3.65	43
		9/22/2011	--		15.55	148.79	--	--	--	--	--	--	--	--	--	--	--	--	0.78	-78
		3/17/2011	--		8.19	156.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/10/2010	--		16.45	147.89	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2010	--		7.49	156.85	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2009	--		17.10	147.24	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/2009	--		14.31	150.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/2009	--		8.16	156.18	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/2008	--		13.26	151.08	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2008	--		17.10	147.24	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/2008	--		16.32	148.02	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.85	154.49	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.97	149.37	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		16.95	147.39	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		14.98	149.36	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.93	154.41	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.70	148.64	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		16.62	147.72	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		14.44	149.90	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		6.65	157.69	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		14.11	150.23	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		16.20	148.14	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		11.05	153.29	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.90	157.44	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		18.12	146.22	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.55	144.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.83	148.51	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		13.45	--	--	--	150	**47**	1.0	2.1	1.5	< 5.0	--	--	--	--	--	
		1/13/2003	--		11.20	--	92	--	210	**54**	2.0	2.7	2.7	< 5.0	--	--	--	--	0.35	
		3/11/2002	--		--	--	79	--	830	**190**	13	13	34	< 5.0	--	--	--	--	--	
RW-14	163.76																			
		3/26/2013	--		13.49	150.27	ND	--	ND	**1.5**	ND	ND	ND	ND	ND	ND	ND	ND	1.34	23
		3/13/2013	--		12.90	150.86	--	--	--	--	--	--	--	--	--	--	--	--	1.32	62
		11/9/2012	--		14.72	149.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		9/28/2012	--		16.12	147.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		3/30/2012	--		7.11	156.65	--	--	--	--	--	--	--	--	--	--	--	--	1.43	10
		9/22/2011	--		15.22	148.54	--	--	--	--	--	--	--	--	--	--	--	--	0.80	-108
		3/17/2011	--		7.82	155.94	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
Water Quality Objectives (WQOs):[1]							**1,000**			**1**	**150**	**300**	**1,750**	**5**	**12**	**0.05**	**0.5**	--	--	--

Table 2: Current & Historic 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	Oxidation Reduction Potential (mV)
							Total Petroleum Hydrocarbons			Volatile Organic Compounds										
Well # TOC	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	Dissolved Oxygen (mg/L)	
Continued		9/10/10	--		16.10	147.66	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
RW-14		3/14/10	--		7.10	156.66	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/09	--		16.71	147.05	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/7/09	--		13.97	149.79	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/14/09	--		7.88	155.88	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/28/08	--		12.82	150.94	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/08	--		16.68	147.08	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/14/08	--		15.90	147.86	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/9/2008	--		9.60	154.16	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/8/2007	--		14.57	149.19	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/6/2007	--		16.54	147.22	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/15/2007	--		14.61	149.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/16/2007	--		9.66	154.10	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	--		15.31	148.45	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	--		16.21	147.55	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	--		14.10	149.66	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	--		6.43	157.33	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	--		13.73	150.03	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	--		15.82	147.94	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	--		10.80	152.96	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	--		6.61	157.15	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	--		12.62	151.14	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	--		19.20	144.56	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		6/16/2004	--		15.41	148.35	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
		3/18/2004	--		12.81	--	--	--	220	**42**	1.4	0.99	5.2	< 5.0	--	--	--	--	--	
		1/13/2003	--		11.00	--	**6800**	--	**3700**	**230**	77	91	91	< 50	--	--	--	--	0.38	
		3/11/2002	--		--	--	82	--	270	**44**	0.99	< 0.5	4.2	< 5.0	--	--	--	--	--	
Laboratory Detection Limit:							**100**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**0.5**	**5**	**0.5**	**0.5**	**0.5**	**Field Instrument**	
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 Previously Collected 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)

( ) = Zero 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

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

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Weber, Hayes and Associates Notes:

Newly installed wells MW-5 and MW-6 were proffesionally surveyed and tied into the existing well network by Mid-Coast Engineers on November 2, 2012.

1 = Water Quality Goals: Goals based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits.

TAME (Tert-amyl-methyl ether), TBA (tert-Butyl alcohol), EDB (1,2-Dibromoethane) , 1,2-DCE (1,2-Dichloroethene), DIPE, (Diisopropyl ether), ETBE (Ethyl Tert-Butyl Ether).

Bold Font = Detected concentration exceeds Water Quality Objectives

*** =** Laboratory report indicates that although TPH-gas results are present, sample chromatogram does not resemble pattern of reference Gasoline standard (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 indicates that the sample chromatographic pattern does not resemble typical diesel standard pattern; unknown organics within the diesel range lighter than diesel quantified as diesel.

^ = Sample chromatographic pattern does not resemblr typical diesel standard pattern; unknown organics within diesel range quantifired as diesel.

∇ = Not typical of Gasoline standard pattern. Result due to discrete peak (Benzene).

J = Laboratory indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative.

★ = Laboratory report indicates although TPH Gasoline compounds are present, the sample pattern does not match pattern of reference Gasoline standard. Hydrocarbons within range of C5-C12 quantified as Gasoline.

▲ = Laboratory reports result does not match pattern of reference Gasoline standard. Reported TPH value includes amount due to discrete peaks and non-target hydrocarbons within range of C5-C12 quantified as Gasoline.

 # = Diesel result due to discrete unknown peaks within quantified range

✠ = Wells RW-5 and RW-7 exhibited anomalously high water levels on March 30, 2012; analytical results from well MW-5 are likely not representative.

Appendix A

Site Description and Background
&
Updated Site Conceptual Model (December 2012)

Site Description and Surrounding Land Use

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[3]) San Francisco Bay RWQCB (Case #: 01-0585 [4])	Barbara Jakub Barbar.Jakub@acgov.org CherieMcCaulou cmccaulou@waterboards.ca.gov

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

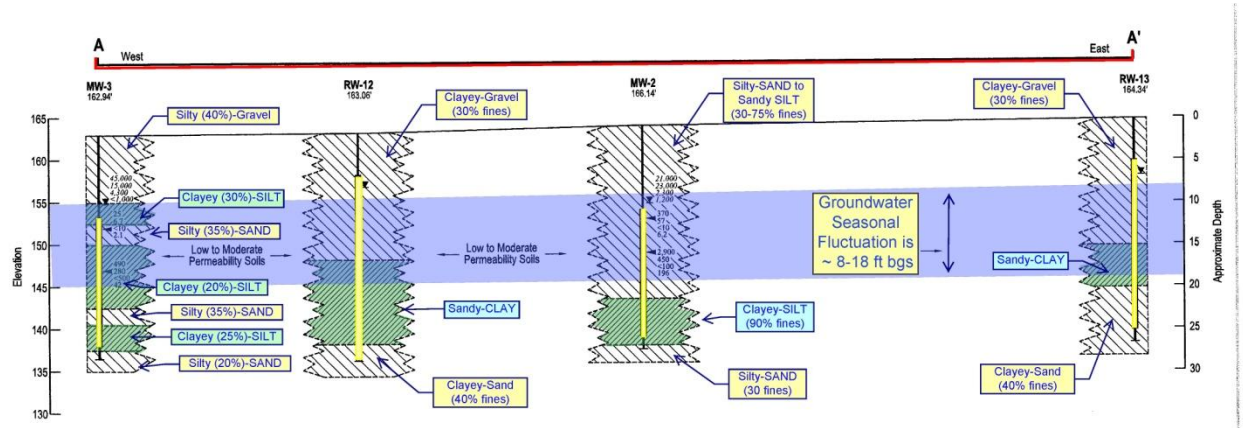
LOCAL GEOLOGY AND HYDROGEOLOGY

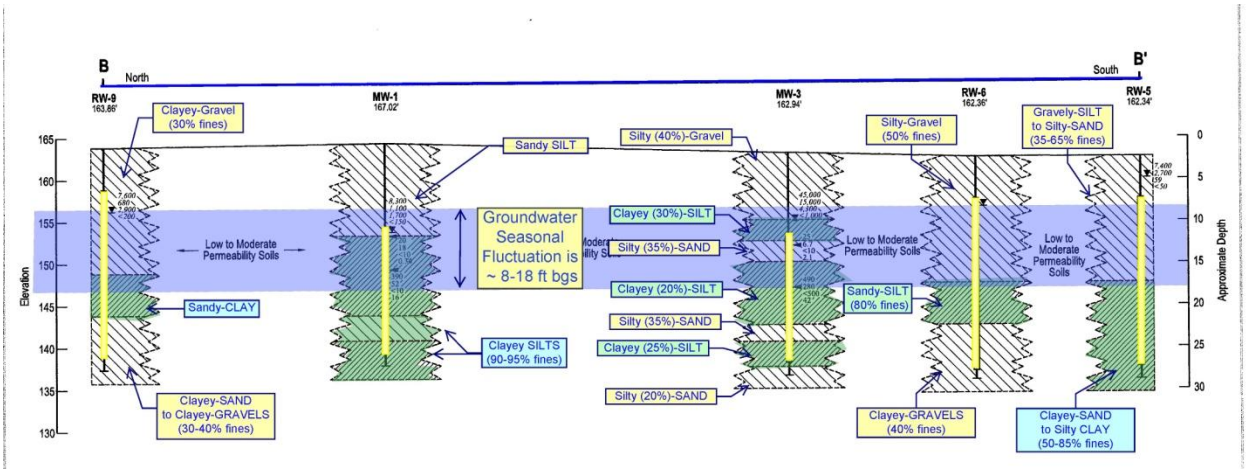
The Site is located within a large, regional, northwest-trending alluvial basin (the East Bay Plain Subbasin), that reportedly extends beneath the San Francisco Bay to the west. The Subbasin's regional aquifer in the vicinity of the Site has a westerly groundwater flow direction, towards San Francisco 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.

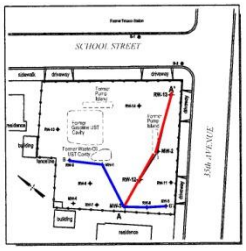
Shallow soil conditions have been logged during the installation of twenty-four (24) on-site borings and thirteen (13) off-site borings drilled to a maximum depth of 45 feet. First-encountered groundwater beneath the Site fluctuates seasonally, roughly between the depths of 8-to-18 feet below ground 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:

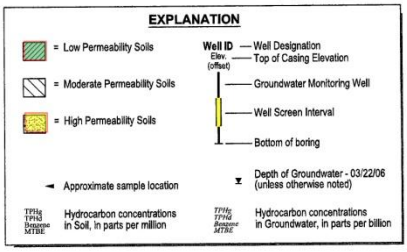
- The dominant soil type encountered consisted of low-permeability soils that included clays, clayey-mixtures (clayey-silts and clayey-sands), and silty-mixtures (sandy-silts);
- The secondary soil type encountered consisted of moderately-permeable sandy units (high silt content, fine-grained sand units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

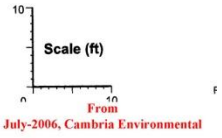
The following geologic cross-sections of soil types logged across the Site show: 1) the interbedded, heterogeneous nature of soils beneath the Site; 2) the ubiquitous presence of fine-grained clays and/or silts in the soil mixtures (low-to-moderately permeable units), which generally retard the vertical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



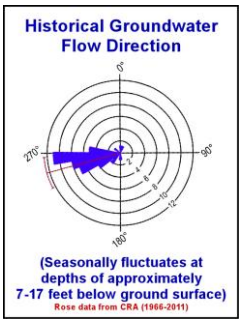








Note: Remediation feasibility testing by soil vapor extraction, air sparging, and groundwater extraction techniques showed only limited air and groundwater flow rates (no vacuum influence/easy dewatering but no groundwater drawdown at nearby wells), which confirms the low permeability conditions beneath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



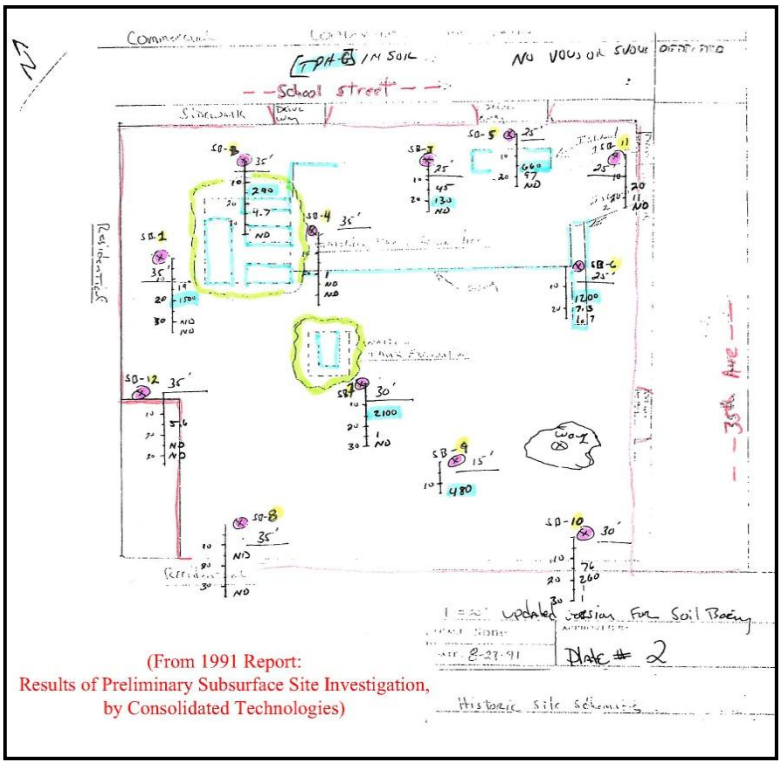
First-encountered groundwater levels in Site monitoring wells have been measured to fluctuate as much as from approximately 6 to 19-ft bgs, but seasonal

fluctuations generally fall between 8-18 feet[5]. Survey-calculated groundwater flow direction beneath the Site is primarily towards the west, as shown by the cumulative-flow, rose diagrams presented on Figures 2, 3, and 4 of this report. 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.

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].



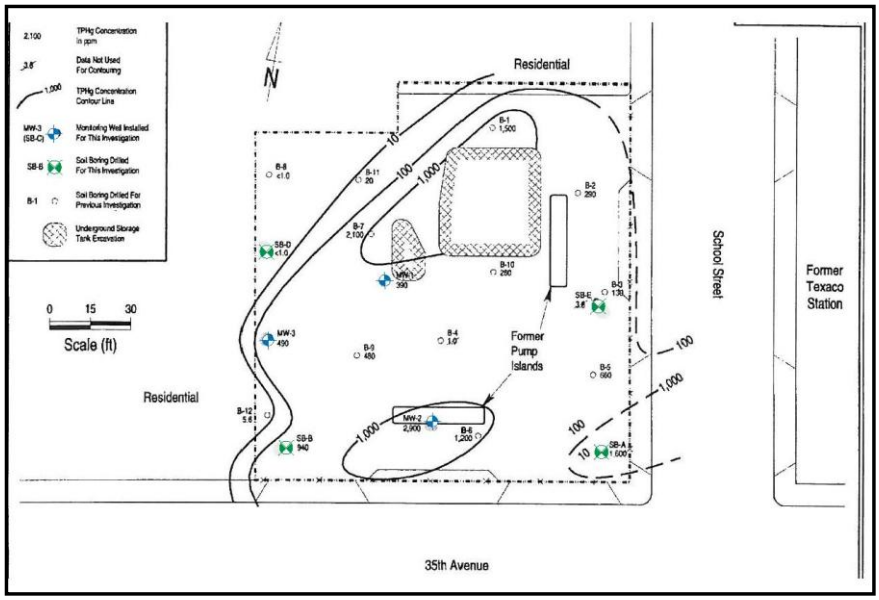
(From 1991 Report:
Results of Preliminary Subsurface Site Investigation,
by Consolidated Technologies)

The highest concentrations of TPH-gas and the volatile constituent 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

[5]: 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.

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.



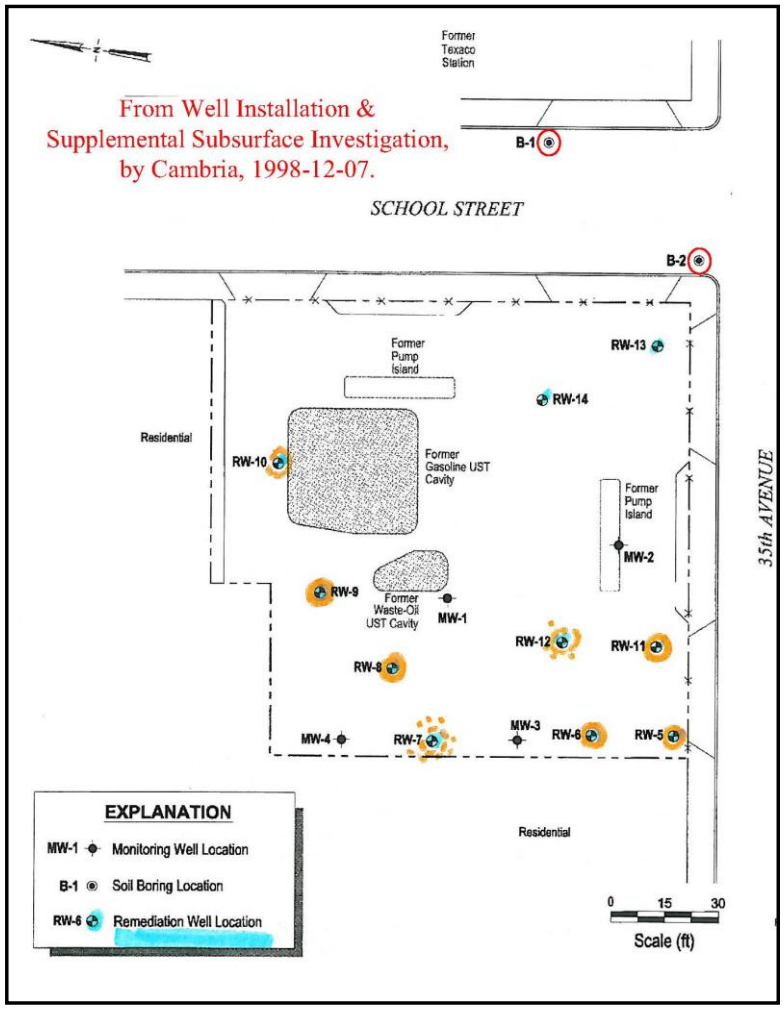
- Soil: TPH-gas concentrations were detected in soil samples collected for analysis in six of the seven soil borings, (max concentration = 2,900 ppm in MW-2 at 15-ft),

- 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 Table 4 of this report.

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.



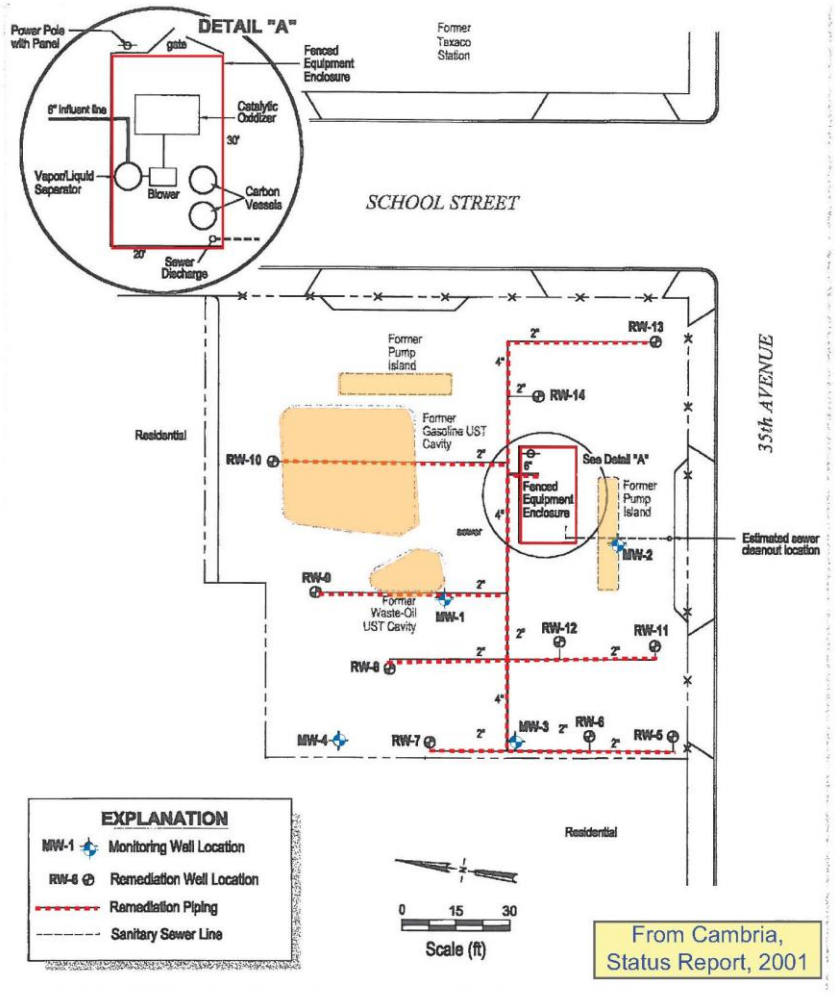
1998, Remediation Well Installation (see figure, right): In August 1998, Cambria installed ten (10), on-site, 4-inch diameter, dual-phase extraction (DPE) remediation wells (RW-5 through RW-14). Soil samples for logging were obtained from the hollow-stem augers on 5-foot intervals (5 borings) or directly 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.

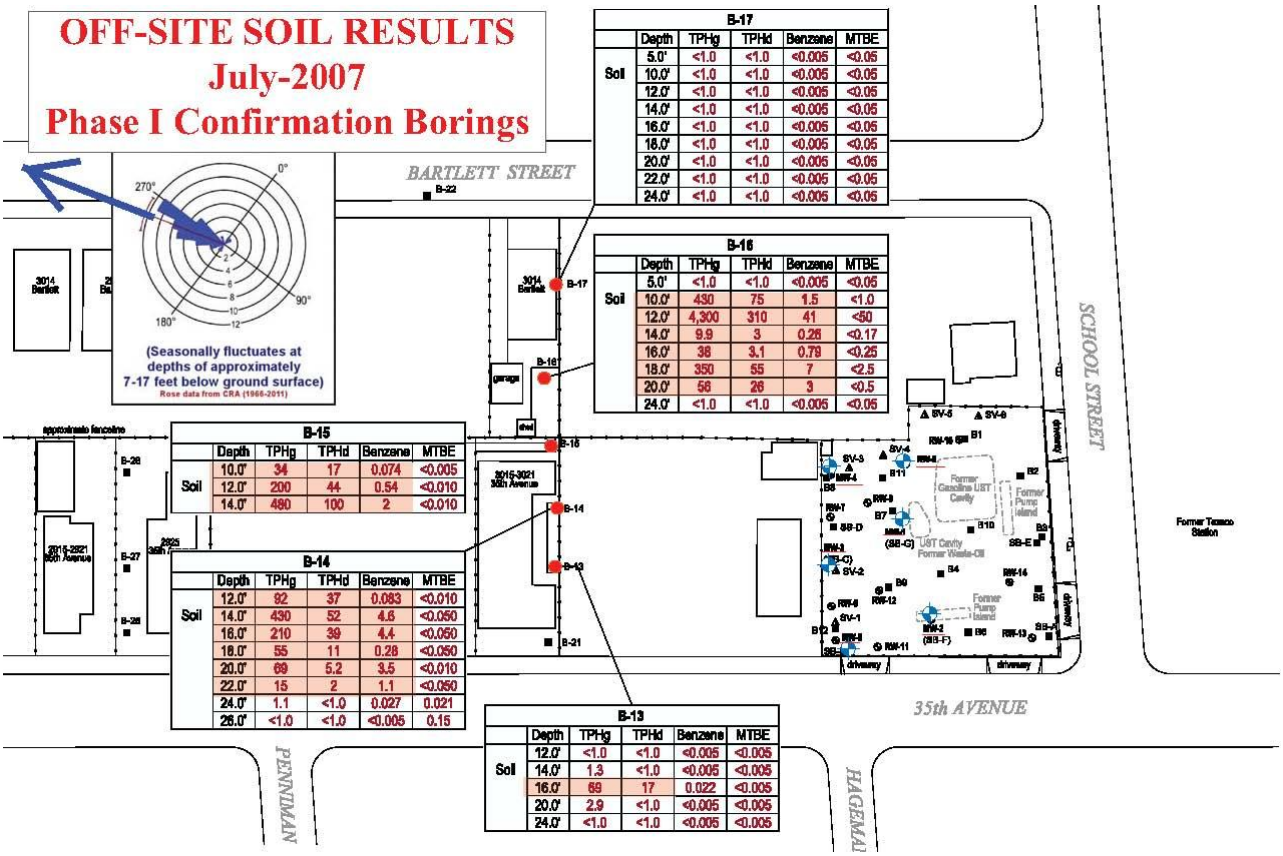
Cambria's *Revised Remediation Workplan* proposed completing interim remedial pilot testing of seven (7) sparge points in order to confirm the ability and cost-effectiveness of *In-Situ Chemical Oxidation* (ISCO) injection as an option for cleanup of residual, fuel-impacted groundwater in a low-permeability,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

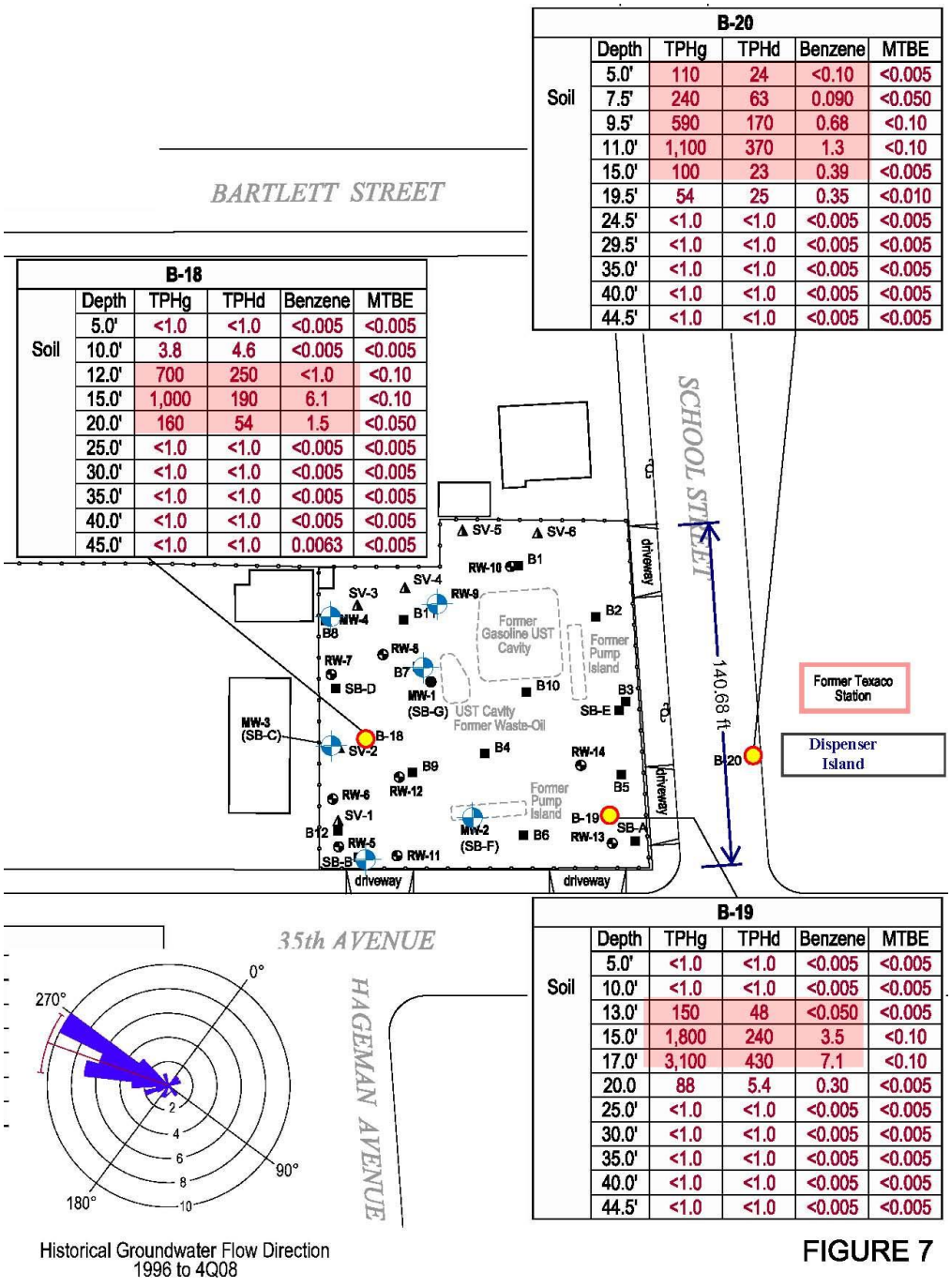
Off-site Soils: No additional off-site, smear zone gasoline contamination was observed during continuous core logging of the second, downgradient boring transect or in lab samples, which indicates smear zone impacts from lateral plume transport/fluctuating groundwater have not extended as far as the 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-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-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-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

Historical Groundwater Flow Direction
1996 to 4Q08

FIGURE 7

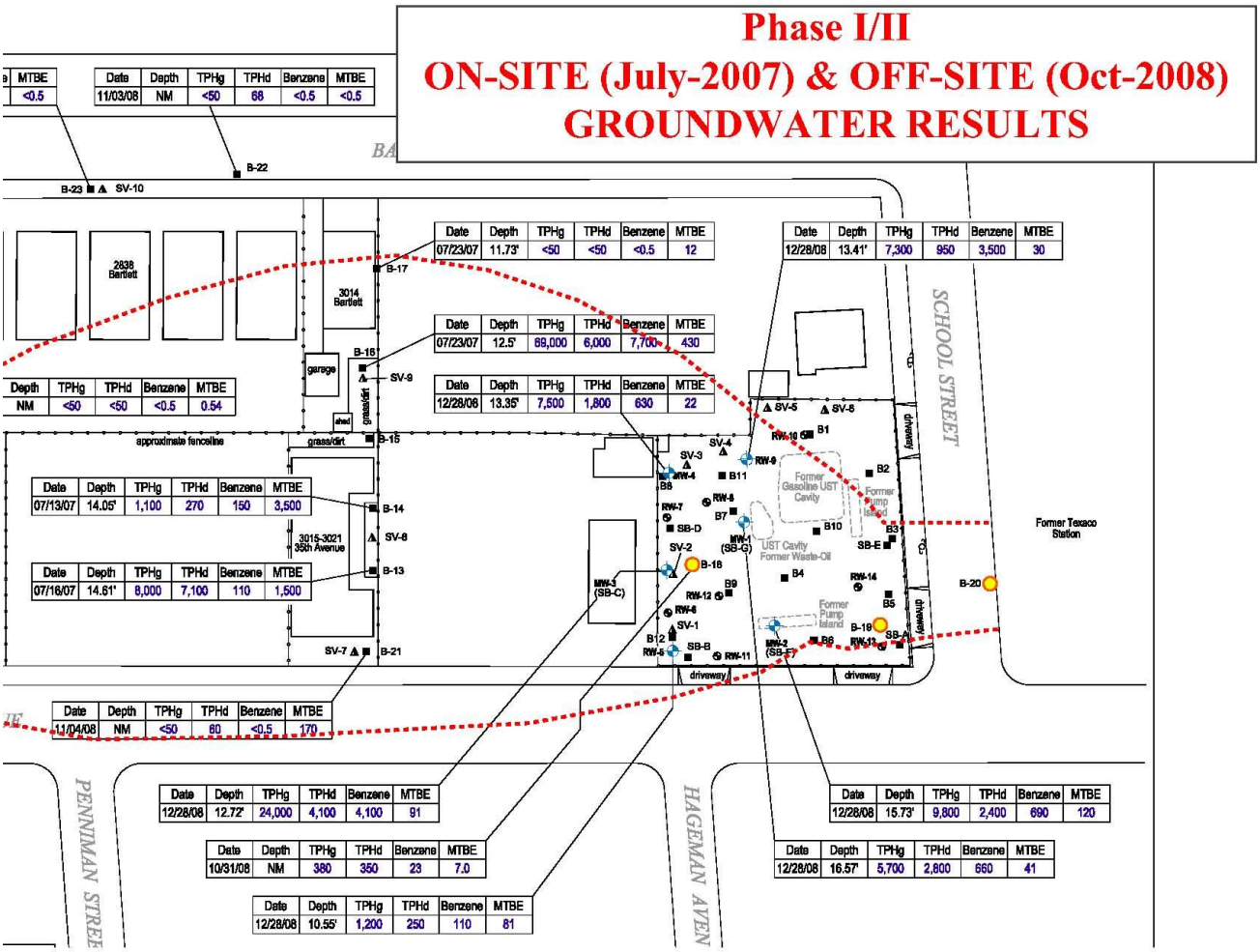
PHASE II HYDROCARBON CONCENTRATIONS in SOIL

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.

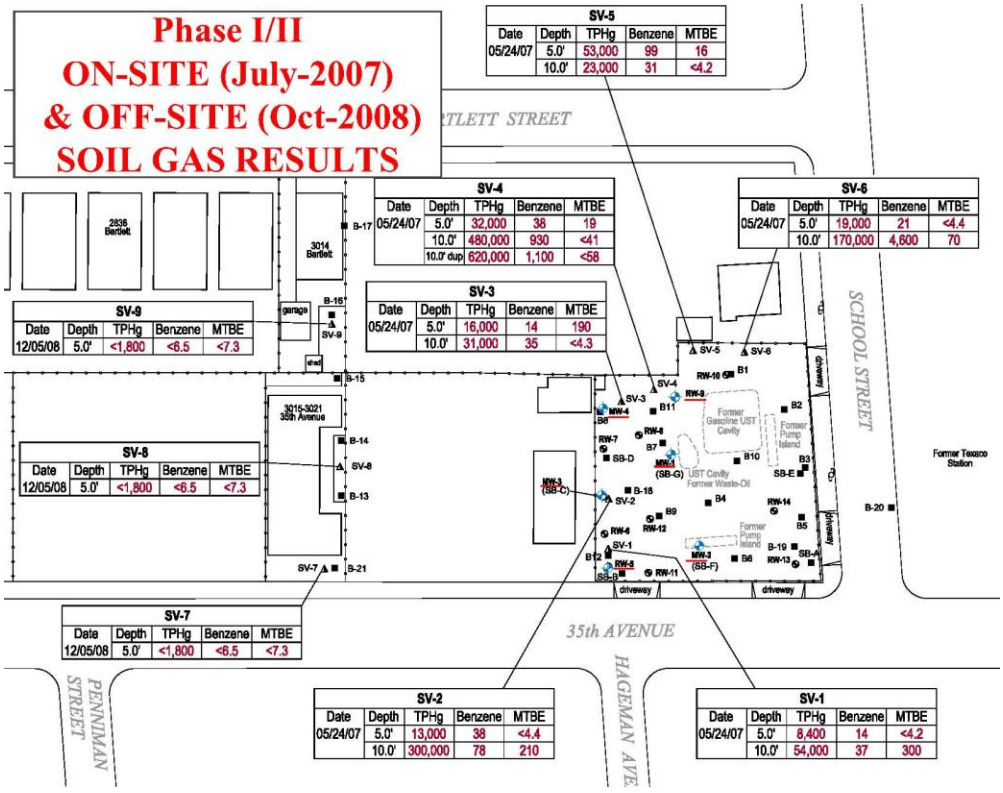
- TPH-gasoline was detected in all on-site, soil gas wells (@5-ft: 8,400-53,000 ug/m^3, max at SV-5; and increasing at the 10-ft sampling interval: 23,000-620,000 ug/m^3, max at SV-4_{dup}). No TPH-gasoline soil gas was detected in any of the seven, off-site soil gas wells (SV-7 through SV-14).
- Benzene 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[6].

[6]: 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

- 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 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.

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.

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 – DECEMBER 2012

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 recent off-site, upgradient exploratory borings confirms additional gasoline contamination has migrated onto the Site from both the *abandoned* Texaco and the *active* QuikStop stations, and appears to be feeding the plume. It is also suspected that that there may have historically been some limited migration of groundwater contaminants towards the Site from an active fuel release investigation located at 3201 35th Avenue (BP #11132; GeoTracker I.D. T0600100213) situated approximately one block (~ 300 feet) to the northeast of the Site (see Appendix D). It is currently unclear whether or not contaminates from this historic release have impacted the Site.

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[7] 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.

[7]: 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.

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 above (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) was previously very limited because only 2 of the 72 analyzed soil samples collected on-site were laboratory-analyzed. **However, results obtained during the current *Data Gap Assessment* confirm that elevated residual soil impacts are confined to depths of approximately greater than 10 feet bgs.** 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 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 confirmed contribution from secondary, upgradient sources (the *abandoned* Texaco station across School Street, and the active QuikStop station across 35th Avenue; see Figure 2).

The extent of downgradient, 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 (see Figures A-1 and A-2 in this Appendix). An increase in benzene concentrations observed for wells MW-1 through MW-4 since early 2009 indicates the potential influx of confirmed upgradient off-site dissolved hydrocarbon plumes, which have been confirmed during the recent *Data Gap Assessment.* The upward trends may also 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. Charts 4 through 7 present historical and current benzene and TPH-g concentrations versus groundwater levels for wells MW- 1 through -4 (see Charts below):

Chart 1
BENZENE Concentrations vs Time
(Post-Remediation On-Site Trends)

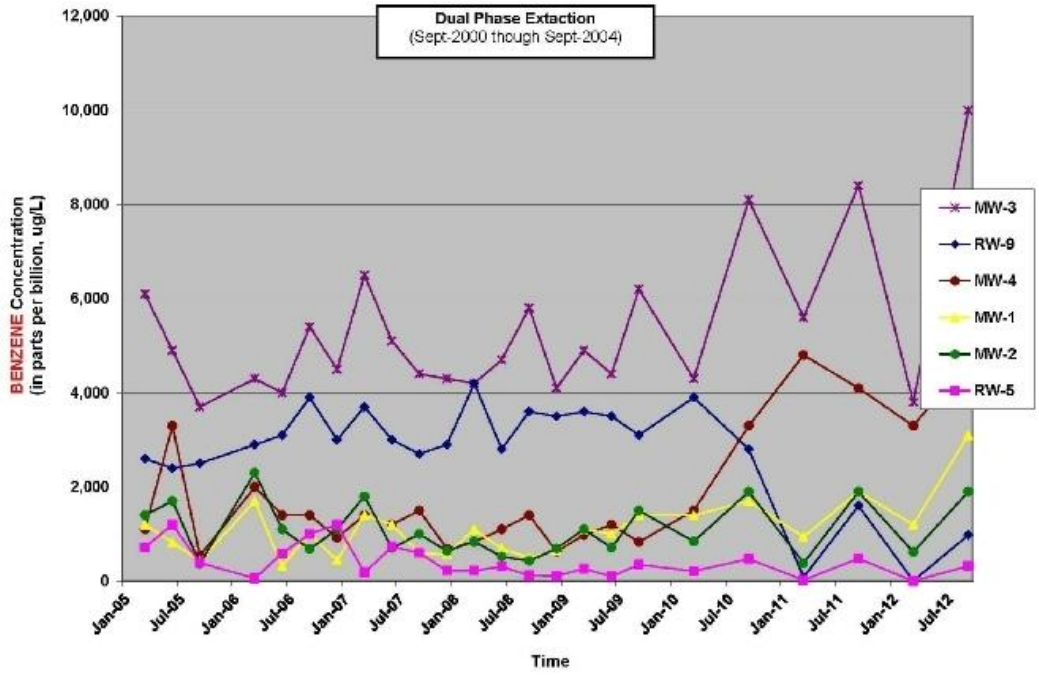
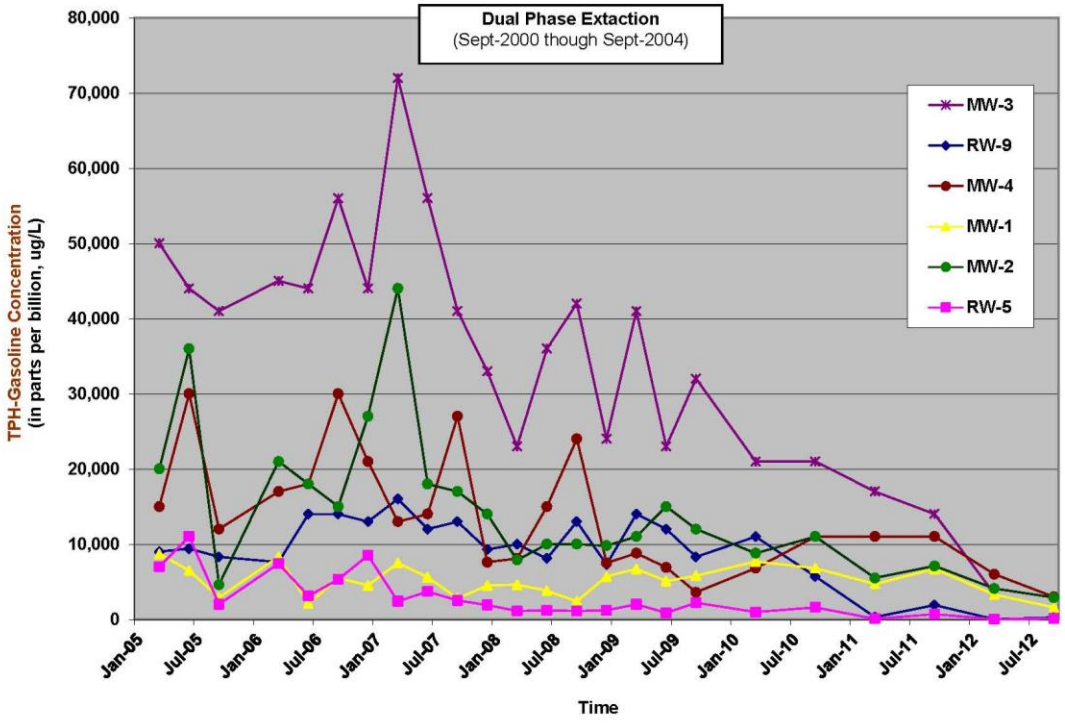
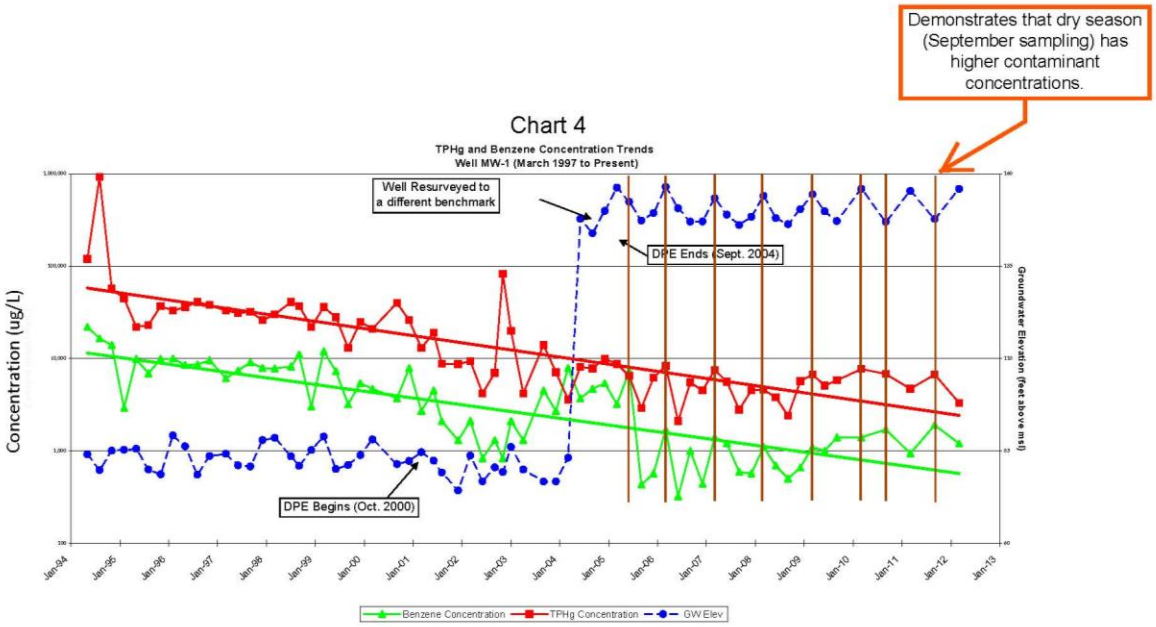
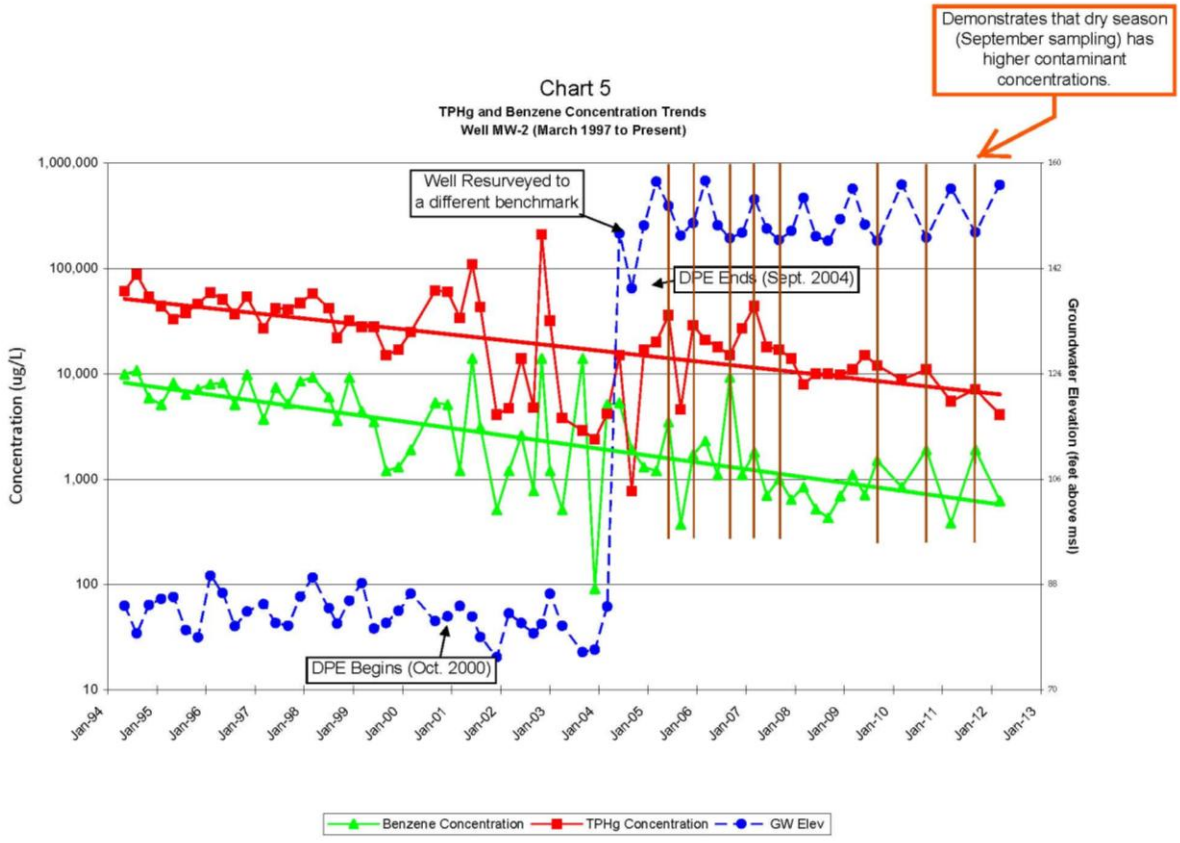
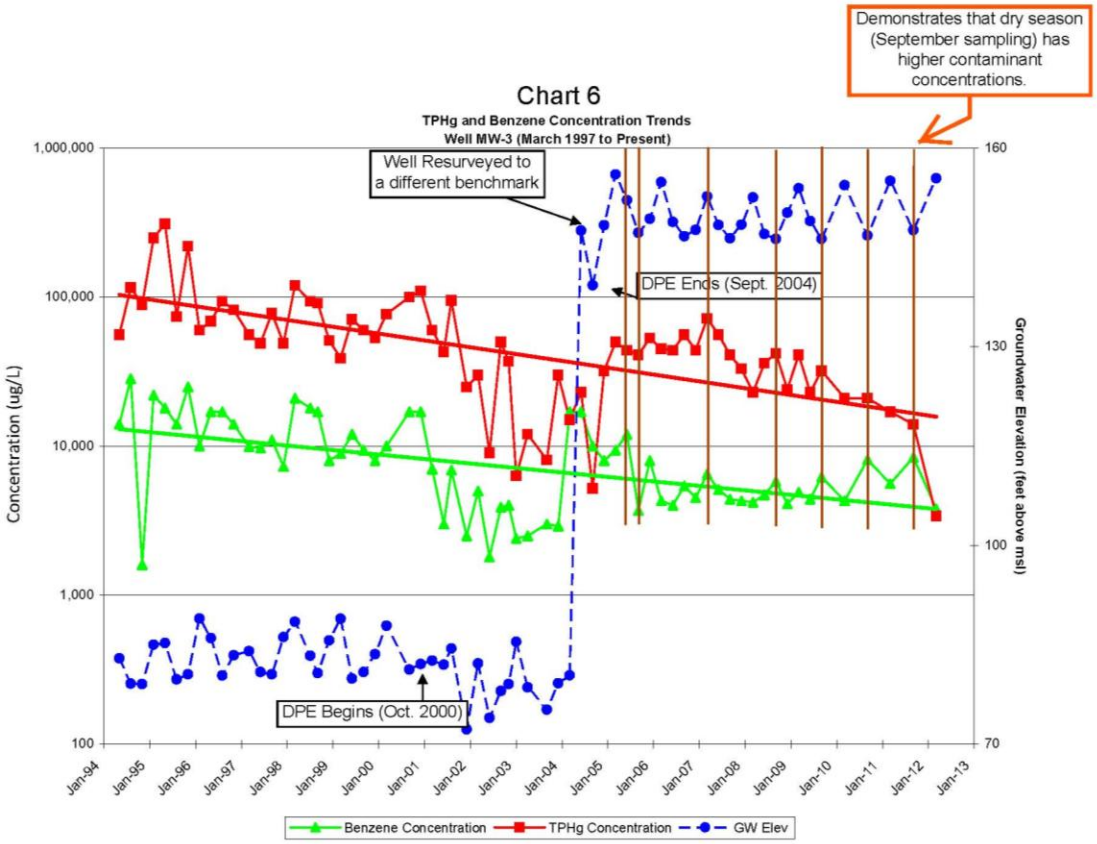


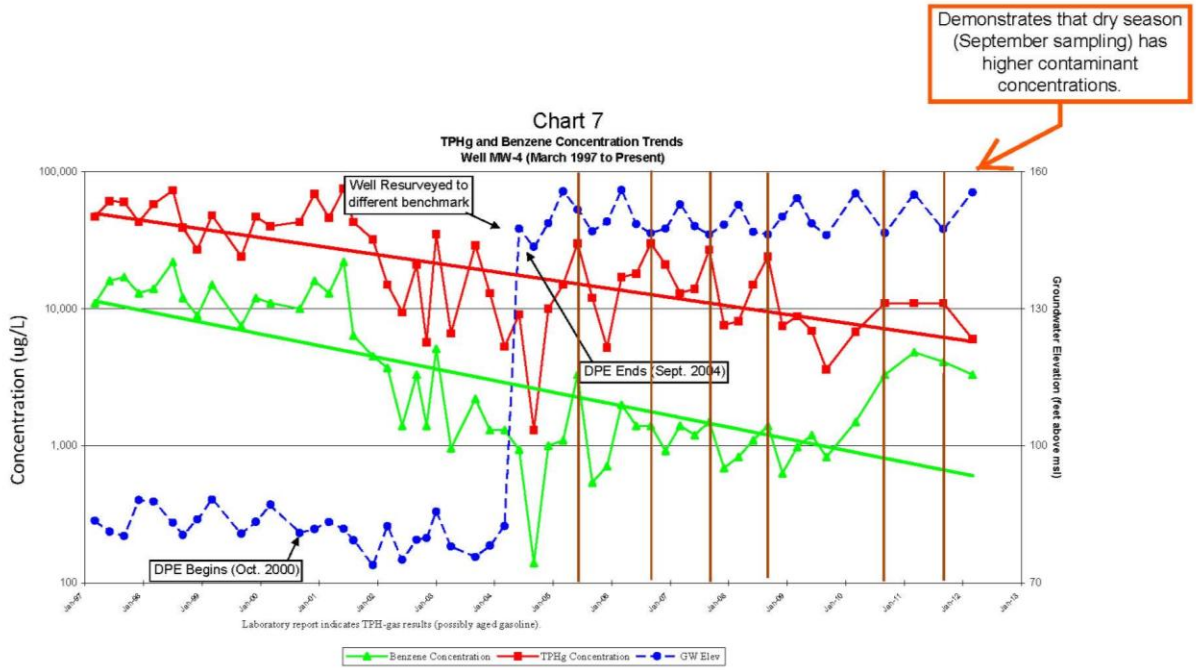
Chart 2
Total Petoleum Hydrocarbons as Gasoline
Concentrations vs Time
(Post-Remediation On-Site Trends)

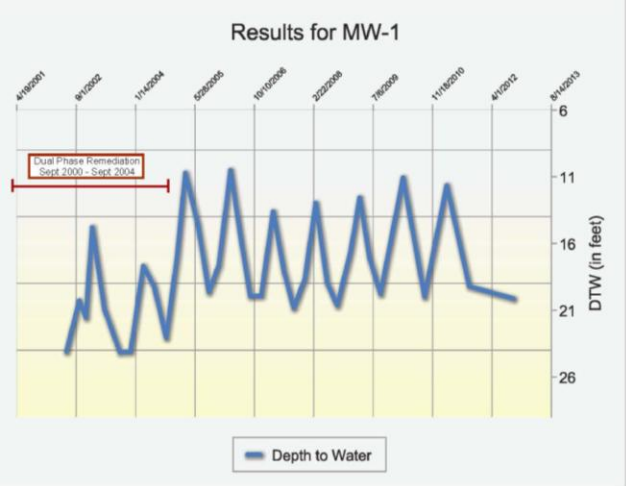



Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 4
TPHg and Benzene Concentration Trends
Well MW-1 (March 1997 to Present)
Well Resurveyed to a different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet above msl)
Benzene Concentration
TPHg Concentration
GW Elev

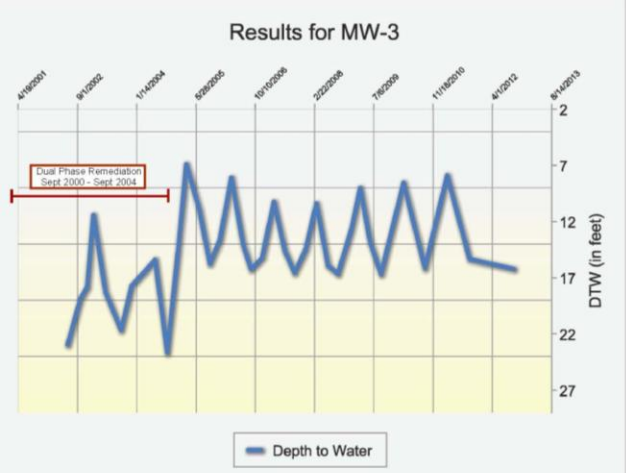

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 5
TPHg and Benzene Concentration Trends
Well MW-2 (March 1997 to Present)
Well Resurveyed to a different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
1,000,000
100,000
10,000
1,000
100
10
Groundwater Elevation (feet above msl)
160
142
124
106
88
70
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Benzene Concentration
TPHg Concentration
GW Elev

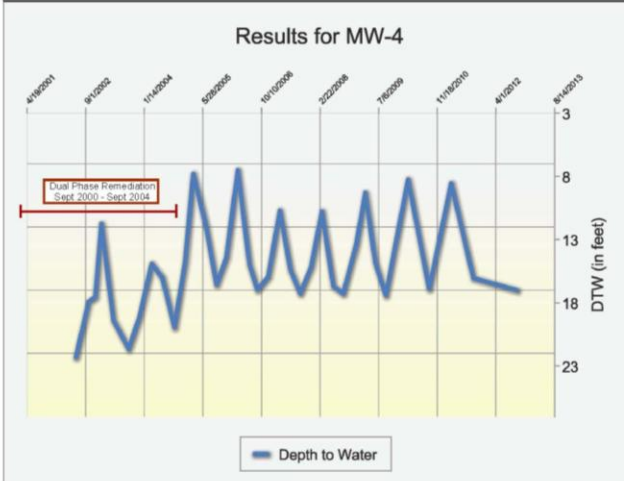

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 6
TPHg and Benzene Concentration Trends
Well MW-3 (March 1997 to Present)
Well Resurveyed to a different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet above msl)
1,000,000
100,000
10,000
1,000
100
160
130
100
70
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Benzene Concentration
TPHg Concentration
GW Elev

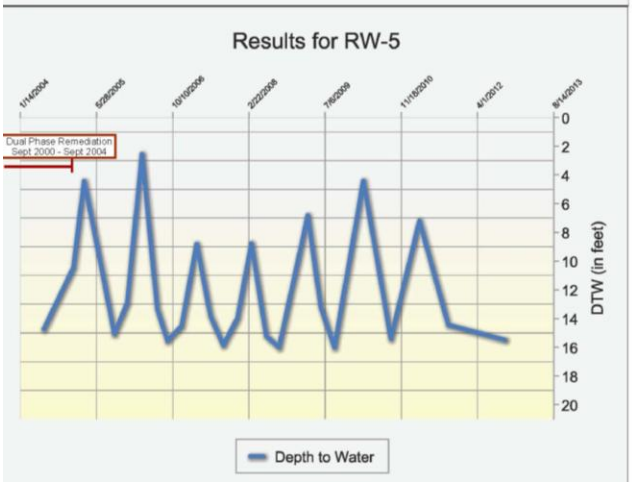

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 7
TPHg and Benzene Concentration Trends
Well MW-4 (March 1997 to Present)
Well Resurveyed to different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet above msl)
100,000
10,000
1,000
100
160
130
100
70
Laboratory report indicates TPH-gas results (possibly aged gasoline)
Benzene Concentration
TPHg Concentration
GW Elev

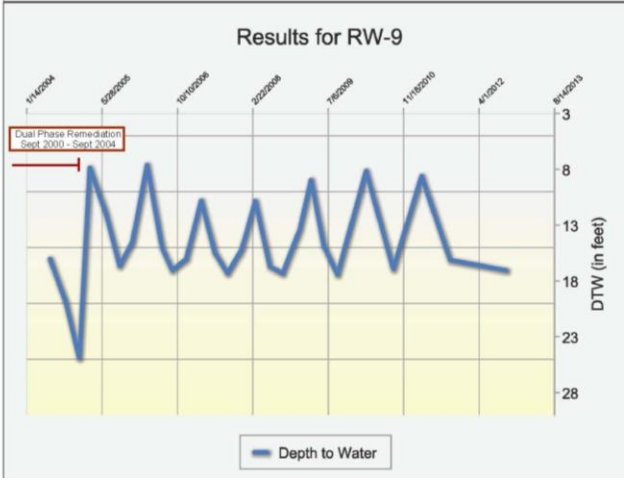

Results for MW-1
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for MW-2
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for MW-3
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for MW-4
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for RW-5
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


Results for RW-9
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water

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
- Increasing benzene concentrations in wells MW-1 through -4 since 2009, and a steady decrease in TPH-gasoline concentrations since Site monitoring began
- An inverse relationship between groundwater levels and contaminant concentrations. Groundwater concentrations are most significantly elevated when water levels are at their lowest point (i.e., September/October)

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
- An increase in benzene concentrations observed for wells MW-1 through MW-4 since early 2009 indicates the potential influx of confirmed upgradient off-site dissolved hydrocarbon plumes, which have been confirmed during the recent *Data Gap Assessment.* The upward trends may also be the result of post remediation rebound, lateral transport of source-zone mass (residual fuel release contaminants), or a combination of the two.
- 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*[8] *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.

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

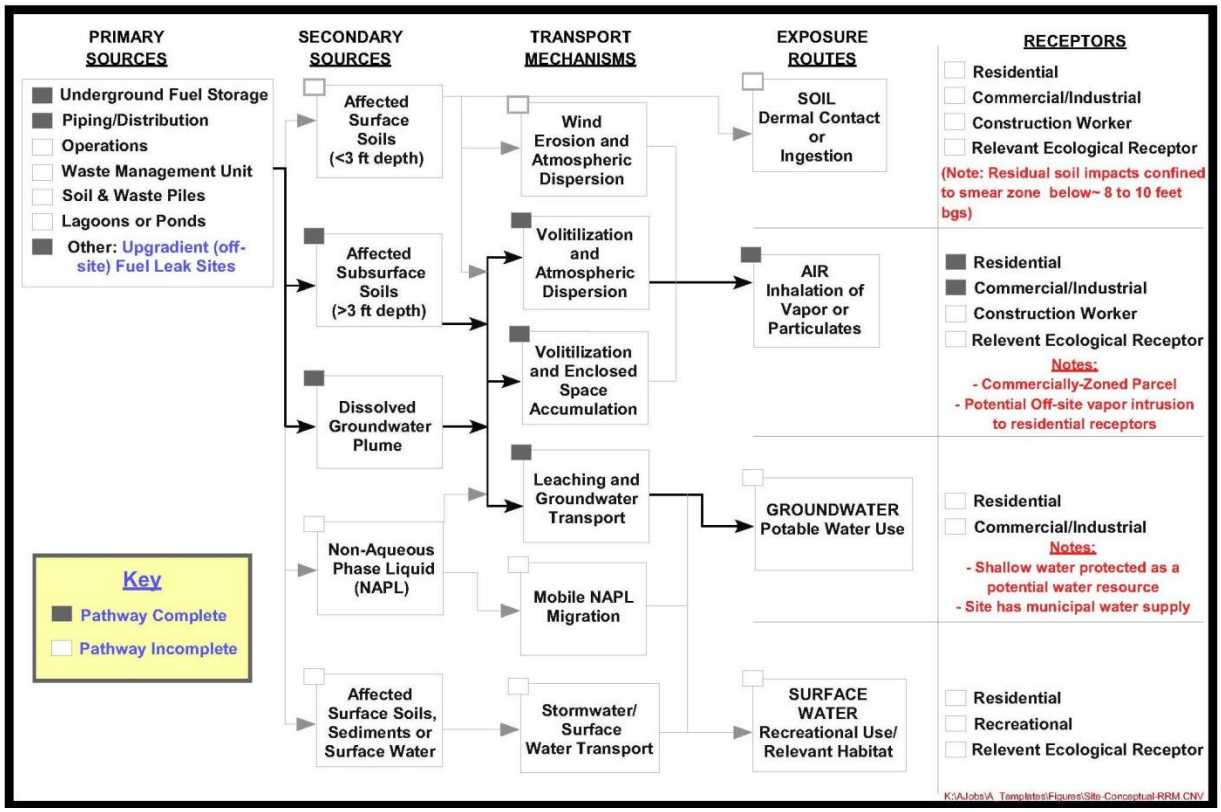
[8]: California Human Health Screening Levels for indoor air and soil gas (CHHSLs): The California Human Health Screening Levels are concentrations of 54 Hazardous Chemicals in soil or soil gas that the California Environmental Protection Agency (Cal/EPA) considers to be below thresholds of concern for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

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 / institutional controls. There is a risk of off-site soil vapor intrusion to downgradient residences. A description of potential exposure pathways follows:

- Recent shallow soil sampling was completed to confirm post remediation concentrations in shallow soils (< 10 feet bgs) at worst case locations (dispensers, product piping runs) since previously only 2 of 72 on-site shallow soil samples were laboratory-analyzed. Current data coupled with previously collected data indicates that residual soil impacts are limited to depths greater than approximately 8 to 10 feet bgs. It is unlikely that these soils would be encountered during future Site development, unless basements or sub-grade parking were proposed for the Site.

- **Exposure to soil vapors containing hydrocarbons.** The completed soil gas survey indicates the volatile constituent gasoline compound of benzene was detected at concentrations exceeding the Tier 1 threshold limits in three of the six property boundary locations (SV-4, -5, & -6). 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 feet from the Site. Elevated grab groundwater concentrations of benzene (specifically B-16) coupled with benzene soil gas

concentrations detected in SV-4, -5, and -6 indicate that there is a potential soil vapor intrusion risk to residences immediately adjacent to the west-southwest of 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.

Data Gaps

1) **The mass of petroleum hydrocarbon contamination originating from the identified upgradient sources remains a significant data gap and the *Site Conceptual Model* is currently incomplete.** At present, a cost effective *Corrective Action Plan* cannot be completed for the Site until upgradient responsible parties have been identified and these upgradient releases have been fully defined. The long term influx of dissolved contamination

onto the subject Site has likely affected the efficiency of previous remedial system operation and will affect 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) Soil results obtained from the current *Data Gap Assessment* revealed that:

- TPH-gas concentrations outside the influence of the previous dual phase extraction system have not significantly attenuated since the investigation began over 20 years ago; however, benzene appears to have decrease by several orders of magnitude during this time period, likely due to a combination of natural attenuation coupled with four years of active soil remediation.

- The unifying theme between current and historical soil analytical data collected at the Site is that soil impacts are generally encountered at depths of greater than 10 feet bgs and attenuate at depths of approximately 20 to 23 feet bgs. This impacted soil zone corresponds with seasonal groundwater fluctuations measured to be approximately 8 to 18 feet bgs. This indicates that the mechanism for persistent residual soil impacts detected within this approximate 10 foot zone at and downgradient of the Site is via groundwater transport as smear zone contamination. Therefore, off-site plume migration to the Site is also contributing to the observed smear zone soil impacts.

- Shallow soil samples collected at depths of 4 and 8 feet bgs at several impacted on-site locations generally revealed non-detectable concentrations of hydrocarbons.

Based on the results of the current *Data Gap Assessment,* construction worker *direct exposure to soil* as pathway for Site risk does not appear to be complete as residual soil impacts are encountered at depths greater than approximately 10 feet bgs. Direct exposure to residual, deeper soil contamination (i.e., greater than 10 feet bgs) is present, and would be limited to deep construction excavation (i.e., sub-grade parking garage or basement construction).

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) ongoing contribution from apparent upgradient sources (the *abandoned* Texaco station across School Street and the active QuikStop station across 35th Avenue).

At this time it appears that a *Joint Corrective Action* through the State Water Resources Control Boards' *Commingled Plume Account* will likely be the most cost effective approach in reducing groundwater impacts in this area. However, as it will likely take months, if not years for upgradient responsible parties to be identified and the necessary upgradient soil and groundwater assessments to be completed, a cost effective *Joint Corrective Action Plan* could potentially be years away. It is our opinion that the best current approach for: 1) reducing residual on-site soil impacts, and 2) reducing off-site plume migration downgradient of the Site will be to complete an *Interim Remedial Action Plan (IRAP)*. The *IRAP* will likely include:

- Targeted mass removal of source contamination (up to ~20 feet bgs) using large-diameter augers/excavation equipment;
- Multiple, high-pressure injections of specialty chemical oxidizers at the downgradient property line as a "barrier treatment", with emphasis on getting the oxidizer in contact (destroying) with the thin water bearing zone and smear zone contamination

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 over 20 years and previous efforts to develop the Site have been sidetracked out of fear of contaminant liability and risk. *Interim Remedial Action* and future *Joint Corrective Action* should be able to be completed in conjunction with redevelopment, if desired, 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: March 13 & 26, 2013
&
Field Methodology for Groundwater Sampling

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

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

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

Client	***Former Exxon Station***			Date: ***March 13, 2013***
Site Location:	***3055 35th Ave., Oakland***			Study #: ***2X103.Q***
Field Tasks:	☐ *Drilling*	☒ *Sampling*	☐ *Other (see below):*	*Weather Conditions:*
1st Quarter Groundwater Monitoring				Clear, warm
Personnel / Company On-Site:	***Josh Pritchard (Weber, Hayes and Associates: WHA)***			

FIELD WORK PLANNING: Performed on: **March 12, 2013**

Meet with Project Manager: ☒ Yes ☐ No
Number of Wells to be Gauged: **16 Wells w/ Dissolved Oxygen (D.O) & Depth to Groundwater**
Sample Wells: **MW-5 & 6**
Analyze for: **TPH-D, TPH-G, Lead Scavengers, & Fuel Oxygenates By EPA Method 8260 GC/MS**
Proposed Sampling Date: **March 13, 2013**

ON-SITE FIELD WORK:
Arrive on-site at 1130 to conduct 1st Quarter 2013 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)
JP - All sampling is conducted according to Standard Operating Procedure (SOP) 10I/
- 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 =** 13.12 **pH =** 7.00 **&** 10.00 **Electrical Conductivity =** 825 **Barometric Pressure =** 760 mmHg
D.O. % Saturation = 100 % **Oxidation Reduction Potential (ORP) =** 216

BEGIN SAMPLING WELLS:
mw-5, mw-6

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.

3-13-13

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-2100
Fax: (831) 722-1158

Location	Groundwater Depth	Total Depth of Well	D.O. (mg/L)	ORP (mV)	Floating Product (comments)
MW-1	16.84'	26.5'	1.28	-79	No FP, moderate odor
MW-2	15.58'	26.5'	1.41	-82	No FP, moderate odor
MW-3	12.89'	26.5'	2.11	-95	No FP, High odor
MW-4	13.85'	30'	1.98	-72	No FP, High odor
MW-5	13.89'	30'	2.09	11	No FP, ~~No odor~~ Trace odor
MW-6	13.05'	30'	6.39	20	No FP, ~~No odor~~ Trace odor
RW-5	11.93'	25.7'	1.24	22	No FP, No odor
RW-6	12.15'	25.5'	1.18	61	No FP, No odor
RW-7	12.84'	29.5'	1.72	77	No FP, No odor
RW-8	14.29'	25'	1.33	10	No FP, No odor
RW-9	13.90'	25'	2.12	37	No FP, No odor
RW-10	12.81'	25'	0.91	-12	No FP, No odor
RW-11	12.31'	25'	2.13	-31	No FP, No odor
RW-12	12.83'	27'	1.96	38	No FP, No odor
RW-13	13.22'	25'	1.13	97	No FP, No odor
RW-14	12.80'	25'	1.32	62	No FP, No odor
	SP 3-13-13				

HOW MANY PURGE DRUMS WERE LEFT ON-SITE: 1 APPROXIMATE VOLUME (gallons): 2

CALL PURGE WATER REMOVAL SUBCONTRACTOR ON: 3-13-13

DRUMS WILL BE PURGED ON: ? ? ?

COMMENTS:

3-13-13
Signature of Field Personel & Date

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *March 13, 2013*

Sample No.: MW-5 **Sample Location:** MW-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: MW-5
Depth to Water: 13.89' TOC
Well Depth: 30' BGS or TOC
Height W-Column: 16.11' feet (well depth - depth to water)

Pump Intake Depth: ~ 25' 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
1214	13.89'	0	0	21.85	0.759	8.96	6.74	52	Low: clear, minor	
1215	14.23'	0.34'	100	20.52	1.168	2.83	6.43	12	↓	
1216	14.51'	0.62'	200	20.65	1.173	2.31	6.42	11	↓	
1218	14.45'	0.56'	300	20.84	1.180	2.43	6.41	11	↓	
1220	14.35'	0.46'	400	20.98	1.185	2.28	6.41	11	↓	
1222	14.35'	0.46'	500	21.00	1.191	2.16	6.41	11	↓	
1224	14.35'	0.46'	600	20.98	1.191	2.10	6.40	11	↓	
1226	14.35'	0.46'	700	20.96	1.195	2.09	6.40	11	↓	X
Stop!	Purge	Complete	Parameters	Stabilized						

JP 3-13-13

Sample Well

Time: 1230 Sample ID: MW-5 Depth: ____ feet below TOC

Comments: NO FP. Trace Odor

Well Condition: Good

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *March 13, 2013*

Sample No.: MW-6 **Sample Location:** MW-6

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-6
Depth to Water: 13.05' TOC
Well Depth: 30' BGS or TOC
Height W-Column: 16.95' feet (well depth - depth to water)

Pump Intake Depth: ~25' feet
Pump Flow Rate: ~500 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
1250	13.05'	0	0	27.19	0.958	7.52	7.02	-7	Low: clear, minor	
1252	13.07'	0.02'	100	24.53	0.760	7.77	6.92	6	↓	
1254	13.07'	0.02'	200	24.10	0.740	7.89	6.91	7	↓	
1256	13.07'	0.02'	300	22.17	0.728	6.57	6.72	20	↓	
1258	13.07'	0.02'	400	22.16	0.728	6.75	6.70	19	↓	
1300	13.07'	0.02'	500	22.13	0.729	6.40	6.70	20	↓	
1302	13.07'	0.02'	600	22.09	0.727	6.29	6.70	21	↓	
1304	13.07'	0.02'	700	22.01	0.727	6.32	6.70	21	↓	
1306	13.07'	0.02'	800	21.87	0.727	6.39	6.70	20	↓	X
Stop.	Purge Complete	Parameters	Stabilized							

JP 3-13-13

Sample Well

Time: 1310 Sample ID: MW-6 Depth: — feet below TOC

Comments: NO FP, Trace odor

Well Condition: Good

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

PROJECT NAME AND NUMBER: Former Exxon / 2X103.Q

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

ELECTRONIC DELIVERABLE FORMAT: [x] YES [ ] NO

LABORATORY: Torrent

TURNAROUND TIME: (Standard 5 Day) 72hr Rush

GLOBAL I.D.: T0600100538

Sampler: *Josh Pritchard*

Date: 3-13-13

Field Point Name (Geo Tracker)	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS				REQUESTED ANALYSIS								
								Total Petroleum Hydrocarbons			Volatile Organics			Additional Analysis		
				40 mL VOAs (preserved)	250 ml Poly Bottle	1 liter Amber Jars	Liner Acetate or Brass	Motor Oil EPA Method # 8015	TPH-D EPA Method# 8015	TPH-G EPA Method# 8260	MtBE EPA Method 8260	EDB EPA Method # 8260	BTEX EPA Method# 8260	Fuel Oxygenates EPA Method# 8260	Lead Scavengers EPA Method# 8260
MW-5	MW-5	3-13-13	W	3		2			X	X			X	X	X
MW-6	MW-6	↓	↓	3		2			X	X			X	X	X

	RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time
1.)	[signature]	3-14-13 / 1000	→	WHA Fridge	3-14-13 / 1000
2.)	WHA Fridge	3-14-13 / 1119	→	[signature]	3-14-13 / [illegible]
3.)			→		
4.)			→		
5.)			→		

SAMPLE CONDITION: (circle 1)

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

NOTES:

[x] Please use MDL (Minimum Detection Limit) for any diluted samples.

- Please produce and email an EDF of these results to lab@weber-hayes.com
- Fuel Oxygenates should only include DIPE, TAME, ETBE, MTBE, & TBA

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120 Westgate Dr., Watsonville, CA 95076
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Fax: (831) 722-1158

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

Client	***Former Exxon Station***			*Date:* ***March 26, 2013***
Site Location:	***3055 35th Ave, Oakland, CA***			*Study #:* ***2X103.Q***
Field Tasks:	☐ *Drilling*	☒ *Sampling*	☐ *Other (see below):*	*Weather Conditions:*
1st Quarter Groundwater Monitoring				Clear, 70°
Personnel / Company On-Site:	***Josh Pritchard (Weber, Hayes and Associates: WHA)***			

FIELD WORK PLANNING: Performed on: **March 25, 2013**

Meet with Project Manager: ☒ Yes ☐ No
Number of Wells to be Gauged:
Sample Wells: **RW-13 & 14**
Analyze for: **TPH-D, TPH-G, BTEX, 1,2, DCA, EDB, & Fuel Oxygenates By EPA Method 8260 GC/MS**
Proposed Sampling Date: **March 26, 2013**

ON-SITE FIELD WORK:
Arrive on-site at 1200 to conduct 1st Quarter 2013 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 =** 14.03 **pH =** 7.00 & 10.00 **Electrical Conductivity =** 718 **Barometric Pressure =** 760 mmHg
D.O. % Saturation = 100% **Oxidation Reduction Potential (ORP) =** 217

BEGIN SAMPLING WELLS:
RW-13, RW-14

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 / 3-26-13

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *March 26, 2013*

Sample No.: RW-14 **Sample Location:** RW-14

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 # ____
- ✓ 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-14
Depth to Water: 13.42' TOC
Well Depth: 25' BGS or TOC
Height W-Column: 11.58' 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
1258	13.42'	0	0	21.41	0.629	2.77	6.81	50	Low; clear, minor	
1300	13.49'	0.07'	100	20.59	0.546	2.02	6.76	16	↓	
1302	13.49'	0.07'	200	20.19	0.538	1.67	6.76	14	↓	
1304	13.49'	0.07'	300	20.55	0.537	1.51	6.76	17	↓	
1306	13.49'	0.07'	400	21.13	0.537	1.45	6.76	20	↓	
1308	13.49'	0.07'	500	21.31	0.537	1.39	6.77	22	↓	
1310	13.49'	0.07'	600	21.30	0.537	1.37	6.77	22	↓	
1312	13.49'	0.07'	700	21.29	0.537	1.34	6.77	23	↓	X

JP 3-26-13

Sample Well

Time: 1315 Sample ID: RW-14 Depth: 13.49' 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:** *March 26, 2013*

Sample No.: RW-13 **Sample Location:** RW-13

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-13
Depth to Water: 13.76' TOC
Well Depth: 25' BGS or TOC
Height W-Column: 11.24' 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
1233	13.76'	0	0	20.51	0.609	5.38	7.47	111	Low: clear, minor	
1235	13.81'	0.05'	100	19.92	0.695	2.81	6.93	103	↓	
1237	13.92'	0.16'	200	19.81	0.707	2.33	6.83	94	↓	
1239	13.92'	0.16'	300	19.76	0.711	2.09	6.79	83	↓	
1241	13.92'	0.16'	400	19.59	0.712	2.10	6.77	78	↓	
1243	13.92'	0.16'	500	19.72	0.713	2.03	6.76	74	↓	
1245	13.92'	0.16'	600	19.74	0.713	2.01	6.76	72	↓	
1247	13.92'	0.16'	700	19.77	0.714	1.95	6.76	70	↓	X

JP 3-26-13

Sample Well

Time: 1250 Sample ID: RW-13 Depth: 13.92' feet below TOC

Comments: NO FP, No odor

Well Condition: Good

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

OF 1

PROJECT NAME AND NUMBER: Former Exxon / 2X103.Q

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

ELECTRONIC DELIVERABLE FORMAT: [x] YES [ ] NO

LABORATORY: Torrent

TURNAROUND TIME: Standard 5 Day 72hr Rush

GLOBAL I.D.: T0600100538

Sampler: *Josh Pritchard*

Date: 3-26-13

Field Point Name (Geo Tracker)	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS				REQUESTED ANALYSIS							
								Total Petroleum Hydrocarbons			Volatile Organics			Additional Analysis	
				40 mL VOAs (preserved)	250 ml Poly Bottle	1 liter Amber Jars	Liner Acetate or Brass	Motor Oil EPA Method # 8015	TPH-D EPA Method# 8015	TPH-G EPA Method# 8260	MtBE EPA Method 8260	EDB, & 1,2,DCA EPA Method # 8260	BTEX EPA Method# 8260	Fuel Oxygenates EPA Method# 8260	Lead Scavengers EPA Method# 8260
RW-13	RW-13	3-26-13	W	3		1			X	X		X	X	X	
RW-14	RW-14	"	"	3		1			X	X		X	X	X	

RELEASED BY: / Date & Time / RECEIVED BY: / Date & Time

1.) Josh Pritchard 3-26-13 1445 → [illegible] 3-20-13 3:45pm

2.) → 3.) → 4.) → 5.)

SAMPLE CONDITION: (circle 1)

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

NOTES:

[x] *Please use MDL (Minimum Detection Limit) for any diluted samples.*

- Please produce and email an EDF of these results to lab@weber-hayes.com
- Fuel Oxygenates should only include DIPE, TAME, ETBE, MTBE, & TBA

Appendix C

Laboratory Report & Chain of Custody Documentation
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.: 1303099

Dear Jered Chaney:

Torrent Laboratory, Inc. received 2 sample(s) on March 14, 2013 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.

Patti Sandrock
QA Officer

March 21, 2013
Date

Date: 3/21/2013

Client: Weber, Hayes & Associates

Project: Former Exxon / 2X103.Q

Work Order: 1303099

CASE NARRATIVE

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

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/14/13
Date Reported: 03/21/13

MW-5 1303099-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	22	1.9	11	2200	ug/L
Toluene	SW8260B	22	1.3	11	54	ug/L
Ethyl Benzene	SW8260B	22	1.6	11	1200	ug/L
m,p-Xylene	SW8260B	22	3.0	22	110	ug/L
o-Xylene	SW8260B	22	1.7	11	6.1	ug/L
MTBE	SW8260B	22	3.8	11	410	ug/L
TPH(Gasoline)	8260TPH	22	690	1100	18000	ug/L
TPH as Diesel	SW8015B(M)	1	40.0	100	1000	ug/L

MW-6 1303099-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	11	350	550	1800	ug/L
Benzene	SW8260B	8.8	0.77	4.4	230	ug/L
Toluene	SW8260B	8.8	0.52	4.4	2.5	ug/L
Ethyl Benzene	SW8260B	8.8	0.65	4.4	15	ug/L
m,p-Xylene	SW8260B	8.8	1.2	8.8	1.6	ug/L
TPH as Diesel	SW8015B(M)	1	40.0	100	710	ug/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/14/13
Date Reported: 03/21/13

Client Sample ID:	MW-5	**Lab Sample ID:**	1303099-001A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Water
Project Number:	2X103.Q		
Date/Time Sampled:	03/13/13 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	03/19/13	22	1.9	11	2200		ug/L	414640	NA
Toluene	SW8260B	NA	03/19/13	22	1.3	11	54		ug/L	414640	NA
Ethyl Benzene	SW8260B	NA	03/19/13	22	1.6	11	1200		ug/L	414640	NA
m,p-Xylene	SW8260B	NA	03/19/13	22	3.0	22	110		ug/L	414640	NA
o-Xylene	SW8260B	NA	03/19/13	22	1.7	11	6.1	J	ug/L	414640	NA
MTBE	SW8260B	NA	03/19/13	22	3.8	11	410		ug/L	414640	NA
Diisopropyl ether (DIPE)	SW8260B	NA	03/19/13	22	3.4	11	ND		ug/L	414640	NA
ETBE	SW8260B	NA	03/19/13	22	2.8	11	ND		ug/L	414640	NA
TAME	SW8260B	NA	03/19/13	22	2.1	11	ND		ug/L	414640	NA
tert-Butanol	SW8260B	NA	03/19/13	22	34	110	ND		ug/L	414640	NA
1,2-Dichloroethane	SW8260B	NA	03/19/13	22	2.5	11	ND		ug/L	414640	NA
1,2-Dibromoethane	SW8260B	NA	03/19/13	22	1.5	11	ND		ug/L	414640	NA
(S) Dibromofluoromethane	SW8260B	NA	03/19/13	22	61.2	131	71.1		%	414640	NA
(S) Toluene-d8	SW8260B	NA	03/19/13	22	75.1	127	84.0		%	414640	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	03/19/13	22	64.1	120	84.4		%	414640	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	3/19/13	03/19/13	22	690	1100	18000	x	ug/L	414640	8165
(S) 4-Bromofluorobenzene	8260TPH	3/19/13	03/19/13	22	41.5	125	107		%	414640	8165

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/14/13
Date Reported: 03/21/13

Client Sample ID:	MW-5	**Lab Sample ID:**	1303099-001B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Water
Project Number:	2X103.Q		
Date/Time Sampled:	03/13/13 /		
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)	3/19/13	03/19/13	1	40.0	100	1000	x	ug/L	414618	8147
Pentacosane (S)	SW8015B(M)	3/19/13	03/19/13	1	64.2	123	99.7		%	414618	8147

NOTE: x- Chromatographic pattern does not resemble typical diesel reference standard; unknown organics within diesel range lighter than diesel quantified as diesel.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/14/13
Date Reported: 03/21/13

Client Sample ID:	MW-6	**Lab Sample ID:**	1303099-002A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Water
Project Number:	2X103.Q		
Date/Time Sampled:	03/13/13 /		
Tag Number:	Former Exxon / 2X103.Q		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Benzene	SW8260B	NA	03/19/13	8.8	0.77	4.4	230		ug/L	414640	NA
Toluene	SW8260B	NA	03/19/13	8.8	0.52	4.4	2.5	J	ug/L	414640	NA
Ethyl Benzene	SW8260B	NA	03/19/13	8.8	0.65	4.4	15		ug/L	414640	NA
m,p-Xylene	SW8260B	NA	03/19/13	8.8	1.2	8.8	1.6	J	ug/L	414640	NA
o-Xylene	SW8260B	NA	03/19/13	8.8	0.67	4.4	ND		ug/L	414640	NA
MTBE	SW8260B	NA	03/19/13	8.8	1.5	4.4	ND		ug/L	414640	NA
Diisopropyl ether (DIPE)	SW8260B	NA	03/19/13	8.8	1.4	4.4	ND		ug/L	414640	NA
ETBE	SW8260B	NA	03/19/13	8.8	1.1	4.4	ND		ug/L	414640	NA
TAME	SW8260B	NA	03/19/13	8.8	0.84	4.4	ND		ug/L	414640	NA
tert-Butanol	SW8260B	NA	03/19/13	8.8	14	44	ND		ug/L	414640	NA
1,2-Dichloroethane	SW8260B	NA	03/19/13	8.8	0.99	4.4	ND		ug/L	414640	NA
1,2-Dibromoethane	SW8260B	NA	03/19/13	8.8	0.59	4.4	ND		ug/L	414640	NA
(S) Dibromofluoromethane	SW8260B	NA	03/19/13	8.8	61.2	131	67.2		%	414640	NA
(S) Toluene-d8	SW8260B	NA	03/19/13	8.8	75.1	127	77.8		%	414640	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	03/19/13	8.8	64.1	120	77.1		%	414640	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	3/19/13	03/19/13	11	350	550	1800	x	ug/L	414640	8165
(S) 4-Bromofluorobenzene	8260TPH	3/19/13	03/19/13	11	41.5	125	81.1		%	414640	8165

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/14/13
Date Reported: 03/21/13

Client Sample ID:	MW-6	**Lab Sample ID:**	1303099-002B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Water
Project Number:	2X103.Q		
Date/Time Sampled:	03/13/13 /		
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)	3/19/13	03/19/13	1	40.0	100	710	x	ug/L	414618	8147
Pentacosane (S)	SW8015B(M)	3/19/13	03/19/13	1	64.2	123	108		%	414618	8147

NOTE: x- Chromatographic pattern does not resemble typical diesel reference standard; unknown organics within diesel range lighter than diesel quantified as diesel.

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1303099	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	03/19/13	**Analytical Batch:**	414640
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.18	0.50	ND	
Chloromethane	0.16	0.50	ND	
Vinyl Chloride	0.16	0.50	ND	
Bromomethane	0.18	0.50	ND	
Trichlorofluoromethane	0.18	0.50	ND	
1,1-Dichloroethene	0.15	0.50	ND	
Freon 113	0.19	0.50	ND	
Methylene Chloride	0.23	5.0	ND	
trans-1,2-Dichloroethene	0.19	0.50	ND	
MTBE	0.17	0.50	ND	
tert-Butanol	1.5	5.0	4.0	
Diisopropyl ether (DIPE)	0.13	0.50	ND	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.17	0.50	ND	
cis-1,2-Dichloroethene	0.19	0.50	ND	
2,2-Dichloropropane	0.15	0.50	ND	
Bromochloromethane	0.20	0.50	ND	
Chloroform	0.13	0.50	ND	
Carbon Tetrachloride	0.15	0.50	ND	
1,1,1-Trichloroethane	0.097	0.50	ND	
1,1-Dichloropropene	0.15	0.50	ND	
Benzene	0.13	0.50	ND	
TAME	0.17	0.50	ND	
1,2-Dichloroethane	0.14	0.50	ND	
Trichloroethylene	0.13	0.50	ND	
Dibromomethane	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.13	0.50	ND	
cis-1,3-Dichloropropene	0.096	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.14	0.50	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
1,1,2-Trichloroethane	0.14	0.50	ND	
Dibromochloromethane	0.096	0.50	ND	
1,3-Dichloropropane	0.10	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	0.096	0.50	ND	
m,p-Xylene	0.13	1.0	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1303099	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	03/19/13	**Analytical Batch:**	414640
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	0.15	0.50	ND	
Styrene	0.21	0.50	ND	
Bromoform	0.21	1.0	ND	
Isopropyl Benzene	0.097	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.11	0.50	ND	
n-Propylbenzene	0.078	0.50	ND	
2-Chlorotoluene	0.076	0.50	ND	
1,3,5,-Trimethylbenzene	0.074	0.50	ND	
4-Chlorotoluene	0.088	0.50	ND	
tert-Butylbenzene	0.081	0.50	ND	
1,2,3-Trichloropropane	0.14	0.50	ND	
1,2,4-Trimethylbenzene	0.083	0.50	ND	
sec-Butyl Benzene	0.092	0.50	ND	
p-Isopropyltoluene	0.093	0.50	ND	
1,3-Dichlorobenzene	0.10	0.50	ND	
1,4-Dichlorobenzene	0.069	0.50	ND	
n-Butylbenzene	0.081	0.50	ND	
1,2-Dichlorobenzene	0.057	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.15	0.50	ND	
Hexachlorobutadiene	0.19	0.50	ND	
1,2,4-Trichlorobenzene	0.12	0.50	ND	
Naphthalene	0.14	1.0	ND	
1,2,3-Trichlorobenzene	0.23	0.50	ND	
(S) Dibromofluoromethane			75.0	
(S) Toluene-d8			77.5	
(S) 4-Bromofluorobenzene			76.9	
Ethanol	0.21	0.50	ND	TIC

Work Order:	1303099	**Prep Method:**	3510_TPH	**Prep Date:**	03/19/13	**Prep Batch:**	8147
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	03/19/13	**Analytical Batch:**	414618
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.0440	0.10	0.073	
TPH as Motor Oil	0.0920	0.40	0.12	
Pentacosane (S)			87.7	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1303099	**Prep Method:**	5030	**Prep Date:**	03/19/13	**Prep Batch:**	8165
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	03/19/13	**Analytical Batch:**	414640
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline)	31	50	32		
(S) 4-Bromofluorobenzene			113		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1303099	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	03/19/13	**Analytical Batch:**	414640
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	0.14	0.50	ND	17.04	97.1	100	3.23	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.04	106	111	4.78	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.04	104	106	2.18	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.04	99.5	97.7	2.04	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.04	93.0	92.4	0.935	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	75.8	79.3		61.2 - 131		
(S) Toluene-d8			ND	11.36	80.8	79.9		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	11.36	85.6	84.7		64.1 - 120		

Work Order:	1303099	**Prep Method:**	3510_TPH	**Prep Date:**	03/19/13	**Prep Batch:**	8147
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	03/19/13	**Analytical Batch:**	414618
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	0.073	1	89.6	95.4	6.31	50.3 - 125	30	
Pentacosane (S)			0.12	100	104	112		57.9 - 125		

Work Order:	1303099	**Prep Method:**	5030	**Prep Date:**	03/19/13	**Prep Batch:**	8165
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	03/19/13	**Analytical Batch:**	414640
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)	31	50	32	227.27	118	118	0.273	52.4 - 127	30	
(S) 4-Bromofluorobenzene			113	11.36	117	110		41.5 - 125		

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.

Torrent LABORATORY, INC.

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Former Exxon / 2X103.Q

Work Order No.: 1303099

Date and Time Received: 3/14/2013 12:45

Received By: ng

Physically Logged By: kb

Checklist Completed By: kb

Carrier Name: First Courier

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?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
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?	Yes	Temperature:	8	°C
Water-VOA vials have zero headspace?	Yes			
Water-pH acceptable upon receipt?	Yes			

pH Checked by: n/a

pH Adjusted by: n/a

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 # : 2X103.Q
Date Received: 3/14/2013
Report Due Date: 3/21/2013
Time Received: 12:45

Comments: 5day TAT. EDF requested. Two water samples for DRO, GRO, BTEX, fuel oxys and lead scavengers.

Please report any dilutions to the MDL.

Work Order # : ***1303099***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1303099-001A	MW-5	03/13/13	Water	04/28/13			W_8260PetWHA W_GCMS-GRO	
Sample Note:	GRO, MBTEX, Fuel oxys and Lead Scavengers. Use MDL for all diluted samples							
1303099-001B	MW-5	03/13/13	Water	04/28/13			W_TPHDO	
1303099-002A	MW-6	03/13/13	Water	04/28/13			W_8260PetWHA W_GCMS-GRO	
1303099-002B	MW-6	03/13/13	Water	04/28/13			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 1303099

1 OF 1

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

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

Sampler: Josh Pritchard
Date: 3-13-13

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: Motor Oil EPA Method # 8015	TPH-D EPA Method# 8015 PRO &	TPH-G EPA Method# 8260	Volatile Organics: MtBE EPA Method 8260	EDB EPA Method # 8260	BTEX EPA Method# 8260	Additional Analysis: Fuel Oxygenates EPA Method# 8260	Lead Scavengers EPA Method# 8260
MW-5	MW-5	3-13-13	AQ	3		2		-001A	X	X			X	X	X
MW-6	MW-6	↓	↓	3		2		-002A	X	X			X	X	X

RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)	3-14-13 / 1000	→	WHA Fridge	3-14-13 / 1000	Ambient	(Refrigerated)	Frozen
2.) WHA Fridge	3-14-13 / 1119	→	Gregg Dorado	3-14-13 / [illegible]	Ambient	(Refrigerated)	Frozen
3.) Gregg Dorado	3-14-13 / 1245	→	[illegible]	3/14/13 12:45	Ambient	(Refrigerated)	Frozen
4.)		→			Ambient	Refrigerated	Frozen
5.)		→			Ambient	Refrigerated	Frozen

NOTES:

[x] Please use MDL (Minimum Detection Limit) for any diluted samples.

- Please produce and email an EDF of these results to lab@weber-hayes.com
- Fuel Oxygenates should only include DIPE, TAME, ETBE, MTBE, & TBA

FCS ③ 8°C

KB 3/14/13

J:\Fieldog\FORMS - COC 1 of 1 Weber, Hayes and Associates

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.: 1303172

Dear Jered Chaney:

Torrent Laboratory, Inc. received 2 sample(s) on March 26, 2013 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.

Patti Sandrock
QA Officer

April 02, 2013
Date

Date: 4/2/2013

Client: Weber, Hayes & Associates

Project: Former Exxon / 2X103.Q

Work Order: 1303172

CASE NARRATIVE

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

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Analytical Comment for W_8260B, Method Blank for QC Batch ID 414793 Note:The % recovery for toluene-d8 surrogate in the Method Blank both samples is outside of laboratory control limits but within method control limits. The outliers will be considered in the next control chart update.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/26/13
Date Reported: 04/02/13

RW-13 1303172-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

RW-14 1303172-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.087	0.50	1.5	ug/L
tert-Butanol	SW8260B	1	1.5	5.0	6.0	ug/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/26/13
Date Reported: 04/02/13

Client Sample ID:	RW-13	**Lab Sample ID:**	1303172-001A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	03/26/13 /		
Tag Number:	Former Exxon		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	4/1/13	04/01/13	1	40.0	100	ND		ug/L	414784	8252
Pentacosane (S)	SW8015B(M)	4/1/13	04/01/13	1	64.2	123	72.1		%	414784	8252

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/26/13
Date Reported: 04/02/13

Client Sample ID:	RW-13	**Lab Sample ID:**	1303172-001B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	03/26/13 /		
Tag Number:	Former Exxon		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	04/01/13	1	0.087	0.50	ND		ug/L	414793	NA
Toluene	SW8260B	NA	04/01/13	1	0.059	0.50	ND		ug/L	414793	NA
Ethyl Benzene	SW8260B	NA	04/01/13	1	0.074	0.50	ND		ug/L	414793	NA
m,p-Xylene	SW8260B	NA	04/01/13	1	0.13	1.0	ND		ug/L	414793	NA
o-Xylene	SW8260B	NA	04/01/13	1	0.076	0.50	ND		ug/L	414793	NA
MTBE	SW8260B	NA	04/01/13	1	0.17	0.50	ND		ug/L	414793	NA
Diisopropyl ether (DIPE)	SW8260B	NA	04/01/13	1	0.15	0.50	ND		ug/L	414793	NA
ETBE	SW8260B	NA	04/01/13	1	0.13	0.50	ND		ug/L	414793	NA
TAME	SW8260B	NA	04/01/13	1	0.095	0.50	ND		ug/L	414793	NA
tert-Butanol	SW8260B	NA	04/01/13	1	1.5	5.0	ND		ug/L	414793	NA
1,2-Dichloroethane	SW8260B	NA	04/01/13	1	0.11	0.50	ND		ug/L	414793	NA
1,2-Dibromoethane	SW8260B	NA	04/01/13	1	0.068	0.50	ND		ug/L	414793	NA
(S) Dibromofluoromethane	SW8260B	NA	04/01/13	1	61.2	131	73.0		%	414793	NA
(S) Toluene-d8	SW8260B	NA	04/01/13	1	75.1	127	66.1	S	%	414793	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	04/01/13	1	64.1	120	66.2		%	414793	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	4/2/13	04/01/13	1	31	50	ND		ug/L	414793	8267
(S) 4-Bromofluorobenzene	8260TPH	4/2/13	04/01/13	1	41.5	125	100		%	414793	8267

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/26/13
Date Reported: 04/02/13

Client Sample ID:	RW-14	**Lab Sample ID:**	1303172-002A
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	03/26/13 /		
Tag Number:	Former Exxon		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	4/1/13	04/01/13	1	40.0	100	ND		ug/L	414784	8252
Pentacosane (S)	SW8015B(M)	4/1/13	04/01/13	1	64.2	123	86.7		%	414784	8252

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 03/26/13
Date Reported: 04/02/13

Client Sample ID:	RW-14	**Lab Sample ID:**	1303172-002B
Project Name/Location:	Former Exxon / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	03/26/13 /		
Tag Number:	Former Exxon		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	04/01/13	1	0.087	0.50	1.5		ug/L	414793	NA
Toluene	SW8260B	NA	04/01/13	1	0.059	0.50	ND		ug/L	414793	NA
Ethyl Benzene	SW8260B	NA	04/01/13	1	0.074	0.50	ND		ug/L	414793	NA
m,p-Xylene	SW8260B	NA	04/01/13	1	0.13	1.0	ND		ug/L	414793	NA
o-Xylene	SW8260B	NA	04/01/13	1	0.076	0.50	ND		ug/L	414793	NA
MTBE	SW8260B	NA	04/01/13	1	0.17	0.50	ND		ug/L	414793	NA
Diisopropyl ether (DIPE)	SW8260B	NA	04/01/13	1	0.15	0.50	ND		ug/L	414793	NA
ETBE	SW8260B	NA	04/01/13	1	0.13	0.50	ND		ug/L	414793	NA
TAME	SW8260B	NA	04/01/13	1	0.095	0.50	ND		ug/L	414793	NA
tert-Butanol	SW8260B	NA	04/01/13	1	1.5	5.0	6.0		ug/L	414793	NA
1,2-Dichloroethane	SW8260B	NA	04/01/13	1	0.11	0.50	ND		ug/L	414793	NA
1,2-Dibromoethane	SW8260B	NA	04/01/13	1	0.068	0.50	ND		ug/L	414793	NA
(S) Dibromofluoromethane	SW8260B	NA	04/01/13	1	61.2	131	74.8		%	414793	NA
(S) Toluene-d8	SW8260B	NA	04/01/13	1	75.1	127	71.5	S	%	414793	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	04/01/13	1	64.1	120	73.0		%	414793	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	4/2/13	04/01/13	1	31	50	ND		ug/L	414793	8267
(S) 4-Bromofluorobenzene	8260TPH	4/2/13	04/01/13	1	41.5	125	109		%	414793	8267

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1303172	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	04/01/13	**Analytical Batch:**	414793
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.18	0.50	ND	
Chloromethane	0.16	0.50	ND	
Vinyl Chloride	0.16	0.50	ND	
Bromomethane	0.18	0.50	ND	
Trichlorofluoromethane	0.18	0.50	ND	
1,1-Dichloroethene	0.15	0.50	ND	
Freon 113	0.19	0.50	ND	
Methylene Chloride	0.23	5.0	ND	
trans-1,2-Dichloroethene	0.19	0.50	ND	
MTBE	0.17	0.50	ND	
tert-Butanol	1.5	5.0	ND	
Diisopropyl ether (DIPE)	0.13	0.50	ND	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.17	0.50	ND	
cis-1,2-Dichloroethene	0.19	0.50	ND	
2,2-Dichloropropane	0.15	0.50	ND	
Bromochloromethane	0.20	0.50	ND	
Chloroform	0.13	0.50	ND	
Carbon Tetrachloride	0.15	0.50	ND	
1,1,1-Trichloroethane	0.097	0.50	ND	
1,1-Dichloropropene	0.15	0.50	ND	
Benzene	0.13	0.50	ND	
TAME	0.17	0.50	ND	
1,2-Dichloroethane	0.14	0.50	ND	
Trichloroethylene	0.13	0.50	ND	
Dibromomethane	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.13	0.50	ND	
cis-1,3-Dichloropropene	0.096	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.14	0.50	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
1,1,2-Trichloroethane	0.14	0.50	ND	
Dibromochloromethane	0.096	0.50	ND	
1,3-Dichloropropane	0.10	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	0.096	0.50	ND	
m,p-Xylene	0.13	1.0	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1303172	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	04/01/13	**Analytical Batch:**	414793
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	0.15	0.50	ND	
Styrene	0.21	0.50	ND	
Bromoform	0.21	1.0	ND	
Isopropyl Benzene	0.097	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.11	0.50	ND	
n-Propylbenzene	0.078	0.50	ND	
2-Chlorotoluene	0.076	0.50	ND	
1,3,5,-Trimethylbenzene	0.074	0.50	ND	
4-Chlorotoluene	0.088	0.50	ND	
tert-Butylbenzene	0.081	0.50	ND	
1,2,3-Trichloropropane	0.14	0.50	ND	
1,2,4-Trimethylbenzene	0.083	0.50	ND	
sec-Butyl Benzene	0.092	0.50	ND	
p-Isopropyltoluene	0.093	0.50	ND	
1,3-Dichlorobenzene	0.10	0.50	ND	
1,4-Dichlorobenzene	0.069	0.50	ND	
n-Butylbenzene	0.081	0.50	ND	
1,2-Dichlorobenzene	0.057	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.15	0.50	ND	
Hexachlorobutadiene	0.19	0.50	ND	
1,2,4-Trichlorobenzene	0.12	0.50	ND	
Naphthalene	0.14	1.0	ND	
1,2,3-Trichlorobenzene	0.23	0.50	ND	
(S) Dibromofluoromethane			80.5	
(S) Toluene-d8			67.6	S
(S) 4-Bromofluorobenzene			67.4	
Ethanol	0.21	0.50	ND	TIC

Work Order:	1303172	**Prep Method:**	3510_TPH	**Prep Date:**	04/01/13	**Prep Batch:**	8252
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	04/01/13	**Analytical Batch:**	414784
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.0440	0.10	0.069	
TPH as Motor Oil	0.0920	0.40	0.13	
Pentacosane (S)			84.8	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1303172	**Prep Method:**	5030	**Prep Date:**	04/02/13	**Prep Batch:**	8267
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	04/01/13	**Analytical Batch:**	414793
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline)	31	50	ND		
(S) 4-Bromofluorobenzene			92.5		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1303172	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	04/01/13	**Analytical Batch:**	414793
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	0.14	0.50	ND	17.04	80.7	87.8	8.77	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.04	92.6	96.2	3.72	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.04	99.0	99.7	0.478	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.04	89.1	83.0	7.25	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.04	84.6	79.6	5.94	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	87.0	74.0		61.2 - 131		
(S) Toluene-d8			ND	11.36	100	75.4		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	11.36	96.9	82.2		64.1 - 120		

Work Order:	1303172	**Prep Method:**	3510_TPH	**Prep Date:**	04/01/13	**Prep Batch:**	8252
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	04/01/13	**Analytical Batch:**	414784
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	0.069	1	85.7	88.3	2.94	50.3 - 125	30	
Pentacosane (S)			0.13	100	91.5	85.6		57.9 - 125		

Work Order:	1303172	**Prep Method:**	5030	**Prep Date:**	04/02/13	**Prep Batch:**	8267
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	04/01/13	**Analytical Batch:**	414793
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)	31	50	ND	227.27	119	95.4	21.8	52.4 - 127	30	
(S) 4-Bromofluorobenzene			92.5	11.36	114	114		41.5 - 125		

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.: 1303172

Date and Time Received: 3/26/2013 15:45

Received By: ps

Physically Logged By: kb

Checklist Completed By: kb

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?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Not Present
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?	No	Temperature:	18	°C
Water-VOA vials have zero headspace?	Yes			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: n/a

pH Adjusted by: n/a

Temperature upon receipt was out compliance. Chilling has begun.

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 # : 2X103.Q
Date Received: 3/26/2013
Report Due Date: 4/2/2013
Time Received: 15:45

Comments: 5day TAT. EDF requested. Two samples submitted for TPHD, GRO, BTEX, EDB, 1,2-DCA and Fuel oxys.

Work Order # : ***1303172***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1303172-001A	RW-13	03/26/13	Water	05/10/13			EDF W_TPHDO	
Sample Note:	Use MDL for all diluted samples.							
1303172-001B	RW-13	03/26/13	Water	05/10/13			W_8260PetWHA W_GCMS-GRO	
Sample Note:	BTEX, EDB, 1,2-DCA, Fuel Oxys. Use MDL for all diluted samples.							
1303172-002A	RW-14	03/26/13	Water	05/10/13			W_TPHDO	
1303172-002B	RW-14	03/26/13	Water	05/10/13			W_8260PetWHA W_GCMS-GRO	

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 1303172

1 OF 1

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

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

Sampler: Josh Pritchard
Date: 3-26-13

	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: Motor Oil EPA Method # 8015	TPH-D EPA Method# 8015	TPH-G EPA Method# 8260	Volatile Organics: MtBE EPA Method 8260	EDB, & 1,2,DCA EPA Method # 8260	BTEX EPA Method# 8260	Additional Analysis: Fuel Oxygenates EPA Method# 8260	Lead Scavengers EPA Method# 8260
001A/B	RW-13	RW-13	3-26-13	W	3		1			x	x		x	x	x	
002A/B	RW-14	RW-14	↓	↓	3		1			x	x		x	x	x	

	RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)	[signature]	3-26-13 1445	→	[signature]	3-20-13 3:45pm	Ambient	(Refrigerated)	Frozen
2.)			→			Ambient	Refrigerated	Frozen
3.)			→			Ambient	Refrigerated	Frozen
4.)			→			Ambient	Refrigerated	Frozen
5.)			→			Ambient	Refrigerated	Frozen

18°C

NOTES:

[x] Please use MDL (Minimum Detection Limit) for any diluted samples.

- Please produce and email an EDF of these results to lab@weber-hayes.com
- Fuel Oxygenates should only include DIPE, TAME, ETBE, MTBE, & TBA

KB 3/26/13

JC\Fieldog\FORMS - COC 1 of 1 Weber, Hayes and Associates