RECEIVED
By Alameda County Environmental Health 3:19 pm, Aug 31, 2015

Keith Nowell, P.G., C.HG
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
August 18, 2015	*Annual Groundwater Monitoring Report*

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

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

Sincerely,

Mr. Lynn Worthington

c/o: **Golden Empire Properties, Inc.**
5942 MacArthur Blvd # B
Oakland. California 94605-1698

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, CA 95076
(831) 722-3580 // www.weber-hayes.com

August 18, 2015

Keith Nowell, P.G., C.HG
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway
Alameda, California 94502

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

Subject: **Annual Groundwater Monitoring Report** (sampled July 15, 2015)

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

1.0 EXECUTIVE SUMMARY

Fuel hydrocarbons were discovered in soil and groundwater beneath the subject Site during the 1991 gas station closure, which included the removal of the underground storage tank (UST) fueling system (tanks/dispensers/piping). Subsequent remedial actions included chemical oxidation injection (1999) and four years of dual phase extraction (2000–2004).

There currently is a 20-year record of seasonal groundwater testing of the Site's monitoring well network (Table 2). This long-term data set has shown a gradual degradation (attenuation) of the shallow, dissolved gasoline plume over time as evidenced by the downward trend lines shown in Figures 4-10. Evidence of attenuation was evident prior to, during, and after remedial efforts were completed. Despite the overall downward trend in contaminant concentrations, the graphs also show some late arriving spikes primarily as benzene (i.e., MW-1, 2003-2005; MW-3, 2003-2005). Since the subject Site has been fenced and vacated for over 24 years, these increases in benzene concentrations appear to be the result of off-site gasoline plumes.

The extent of groundwater impacts have been characterized and the monitoring results show gasoline compounds are present above regulatory threshold limits. A summary of the current *Site Conceptual Model*[1], including an overview of previous environmental investigation results, remedial actions, subsurface conditions, and fate and transport details is included as a reference (Appendix A).

On July 29, 2015, Weber, Hayes and Associates met with lead agency staff at Alameda County Environmental Health (ACEH) to discuss the status of the case, how to best move the case toward closure, and the investigation status of potential off-site, upgradient contaminant sources. Following discussion, it was concluded that the most appropriate course of action would be the removal of elevated concentrations of residual, secondary source contamination. The ACEH issued an email directive dated July 30, 2015 requesting completion of a *Focused Feasibility Study/Corrective Action Plan* (submittal due date of October 28, 2015).

[1]: Weber, Hayes & Associates report: *Updated Site Conceptual Model,* June 2012.
- http://www.acgov.org/MAPS/DEH/LOPDocuments/RO0000271/SCM_ADEND_R_2011-06-24.pdf

1.1 Summary of Groundwater Monitoring Program

This report documents the following groundwater monitoring activities conducted in July 15, 2015, at the former Exxon Service Station located at 3055 35th Ave in Oakland (the "Site"; see Location Map, Figure 1). Annual groundwater monitoring tasks were completed to satisfy the Site's *Monitoring & Reporting Program,* which includes annual sampling of select monitoring wells [six (6) on-site wells MW-1, -2, -3 & -4, RW-5 & -9, and two (2) off-site wells MW-5 & -6][2]. Specific monitoring tasks included:

- Field Measurements: Water level gauging and field checking water quality parameters (dissolved oxygen, ORP) in all sixteen (16) shallow groundwater wells [monitoring MW, and former remediation wells (RW)]; and
- Groundwater Sampling: Collecting and analyzing groundwater samples from six (6) on-site and two (2) off-site monitoring wells.
- Additional Groundwater Sampling: Two additional, on-site wells (RW-13 & RW-14) were sampled to evaluate potential off-site contaminant migration onto the subject Site originating from confirmed upgradient, off-site sources[3].

1.2 Summary of Annual Monitoring Results

Laboratory results of tested on-site wells continue to show downward trend lines of the dissolved gasoline plume although concentrations continue to remain above regulatory threshold limits (Figures 4-9). As mentioned above, these charts also show a late arriving, upward trend (primarily as benzene) indicative of a secondary source (i.e., likely to be the arrival of an off-site gasoline plume(s) since the subject Site has been fenced and vacated for over 24 years).

The laboratory results also continue to show that elevated fuel contaminants are present in groundwater samples collected from the nearby, upgradient wells (i.e., off-site wells MW-5 and MW-6, see Figure 3). These detections indicate that gasoline plumes are migrating onto the Site from the following two nearby and upgradient fueling locations:

- *Active* QuikStop station (~50 feet upgradient, at 3130 35th Ave): Groundwater sampled from immediately beside the active fueling station (i.e., MW-5) contains elevated TPH-gasoline and benzene at 8,800 and 2,200 µg/L (see Figure 3). The GeoTracker database does not indicate the elevated gasoline concentrations detected have been investigated.

---

[2]: Alameda County Environmental Health (ACEH) correspondence dated October 26, 2012 (case officer Barbara Jakub) agreeing that annual groundwater monitoring should occur in the 3rd quarter (i.e., September).

- http://www.acgov.org/MAPS/DEH/LOPDocuments/RO0000271/EXT_AP_L_2012-10-26.pdf

[3]: Weber, Hayes & Associates: *Limited Soil & Groundwater Data Gap Assessment*, dated December 31, 2012
Note: 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) an *abandoned* Texaco station across School Street and 2) the *active* QuikStop station located across 35th Ave (see Figure 2).

- *Abandoned* Texaco Station (25 feet upgradient, at 3101 35th Ave): The State GeoTracker database indicates that fuel contamination was detected in soils underlying Underground Fuel Storage Tanks (USTs) that were discovered and recently removed from the *abandoned* Texaco station[4].

1.3 Summary Conclusions

Current and previous groundwater monitoring results indicate:

- The groundwater gradient has consistently been measured to flow in a west-to-southwesterly direction at a relatively flat gradient.
- Laboratory results of tested on-site wells continue to document downward trend lines of the dissolved gasoline plume although concentrations continue to remain above regulatory threshold limits (Figures 4-9).
- Groundwater samples collected from off-site upgradient wells MW-5 and MW-6, coupled with the consistent and dominant groundwater flow direction indicate dissolved gasoline plumes are migrating to the subject Site from two nearby sources: 1) an operating gas station (QuikStop, located ~50 feet upgradient) and an abandoned Texaco station located across the street (see Figure 2).

This concludes the Executive Summary.

2.0 SUMMARY OF CURRENT FIELD ACTIVITIES

Overview of Groundwater Monitoring Activities [5] **Annual Sampling Event (July15, 2015)**	
Monitoring Tasks Reported:	Sampling is conducted annually. The following locations are sampled: Annual Monitoring (**July 15, 2015**): Water level gauging of all 16 monitoring network wells (MW-1 through MW-6 and RW-5 through RW-14); collection and analysis of samples from six (6) select wells (MW-1 through MW-6), and RW-5 & -9. Two additional, on-site property line wells also sampled (RW-13 & -14).

[4]: Three underground fuel storage tanks (USTs) were recently removed (Feb 2015) and fuel contaminates were detected at this abandoned Texaco Station. An *Unauthorized Release Form* was submitted and proposed remedial over-excavation tasks were approved by ACEH. See GeoTracker archive for details:
- http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006539

[5]: Most recent documentation of well sampling requirements: CRA *GW Sampling Frequency Reduction Request,* dated June 18, 2009:
- http://www.acgov.org/MAPS/DEH/LOPDocuments/RO0000271/CORRES_L_2009-06-18.pdf ; and

ACEH approval of sampling reduction, dated July 24, 2009:
- http://www.acgov.org/MAPS/DEH/LOPDocuments/RO0000271/DIR_L_2009-07-24.pdf

Groundwater Depth & Gradient: (Table 1 & Figure 2)	Groundwater was encountered at depths of approximately 13-19 feet below the ground surface. - *Gradient:* Westerly, at a relatively flat, grade of 0.008 foot per foot (equivalent to 1 foot of vertical drop per 125 feet of horizontal flow).
Presence of Free Product::	- Not observed during these sampling events.
Remedial Action:	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).

2.1 Report Documentation

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

- Tables: Tabulated results of current and previously collected dissolved hydrocarbon concentrations and groundwater data (Tables 1 and 2);
- Figures: Figure presenting a plan view of recent groundwater gradient and analytical results at the Site (Figures 2 & 3);
- Graphs/Charts: Graphs presenting the temporal distribution of TPH-gasoline and Benzene and groundwater elevations in key monitoring wells MW-1, MW-2, MW-3, MW-4, RW-5 , RW-9 (Figures 4 through 9);
- Description of Subsurface Conditions: General description of subsurface conditions and summary chronology of previous environmental work, and *Site Conceptual Model* (Appendix A);
- Field Documentation: Field sheets for the current round of sampling and our groundwater sampling protocol (Appendix B);
- Laboratory Documentation: *Chain of Custody* documentation and the laboratory's *Certificate of Analysis* (Appendix C)

2.2 Groundwater Monitoring: Well Sampling and Laboratory Testing

Groundwater samples were collected as part of a regulatory mandated program required by Alameda County Environmental Health (ACEH) to monitor dissolved contaminant concentrations. Groundwater was sampled in accordance with our *Field Methodology for Groundwater Monitoring* (Appendix B). Representative groundwater samples were collected in appropriate sample containers and placed in a chilled cooler for transport to the testing laboratory. Field notes documenting well purging and sampling are included in Appendix B.

2.2.1 Laboratory Analysis

Samples were submitted to a State-certified testing laboratory (Torrent Laboratories, CA-DHS ELAP #1991). The results of the July 2015 annual sapling events are tabulated on Table 1 and these results have also been incorporated into the chronological summary table of all current and historical results

(Table 2). The State-certified laboratory report and *Chain-of-Custody* documentation is included as Appendix C. All groundwater samples submitted for testing were analyzed for the following regulatory required set of analyses:

- Total Petroleum Hydrocarbons as Diesel (**TPH-diesel**) by EPA Method 8015M
- Total Petroleum Hydrocarbons as Gasoline (**TPH-gasoline**) by EPA Method 8260B
- 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 8260B

2.2.2 Groundwater Depth & Flow Direction

Groundwater during the most recent monitoring event (annual 2015) was encountered at depths of approximately 12.5 to 19.4 feet below the ground surface. Groundwater elevations of the surveyed 16-well network ranged from 147.4 to 151.8 feet above Mean Sea Level (MSL). Groundwater flow direction was calculated to be to the west at a relatively flat gradient of 0.008 feet per foot (= 1 foot of vertical drop per 125 feet of horizontal flow, see Figure 2). Note: The groundwater gradient has consistently been calculated to flow in a west to southwesterly direction.

2.2.3 Laboratory Results of Tested Dissolved Contaminants of Concern

Annual Groundwater Sampling Event (July 15, 2015): The Table below provides the results of the annual groundwater monitoring event conducted July 15, 2015. Table 1 provides some additional details. The results are presented on Figure 3. The annual monitoring event includes sampling six (6) on-site wells (MW-1, -2, -3, -4 & RW-5 & -9). Two additional, on-site wells (RW-13 & RW-14) and two off-site wells (MW-5 & -6) were sampled to evaluate potential off-site contaminant migration onto the subject Site originating from recently confirmed upgradient, off-site sources.

Summary of Annual Groundwater Sampling Results

Sampled on July 15, 2015 ***(All results are in ug/L, parts per billion, ppb)***

Well ID	*TPH As Diesel*	*TPH As Gasoline*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Xylenes*	*MTBE*	*TBA*
MW-1	**1,400***	**3,700****	**1,700**	2.0[J]	16	1.8[J]	**17**	**110**
MW-2	**1,700***	**2,900****	**700**	2.6[J]	33	2.7[J]	**16**	**46**
MW-3	**1,900***	**14,000****	**4,400**	11[J]	230	87[J]	**58**	**320**
MW-4	**1,800***	**6,900****	**2,300**	4.7	47	5.4[J]	**18**	**100**
MW-5 (off-site)	450*	**8,800****	**2,200**	33	**450**	34.2[J]	**850**	**6,700**
MW-6 (off-site)	310*	**3,300****	**89**	2.1	2.1	2.85	< 0.5	19.0

Summary of Annual Groundwater Sampling Results

Sampled on July 15, 2015 ***(All results are in ug/L, parts per billion, ppb)***

Well ID	*TPH As Diesel*	*TPH As Gasoline*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Xylenes*	*MTBE*	*TBA*
RW-5	150*	< 50	**1.2**	< 0.5	< 0.5	< 1.5	< 0.5	< 5.0
RW-9	450*	550**	**120**	3.2	< 0.5	2.2	**9.3**	**230**
RW-13	< 100	79**	**1.2**	< 0.5	< 0.5	< 1.5	< 0.5	**38**
RW-14	140*	78**	**1.2**	< 0.5	< 0.5	< 1.5	< 0.5	**31**
Reporting Limit:	*100*	*50*	*0.5*			*1.5*	*0.5*	*5*
Water Quality Objectives (WQO's)	***1,000***		***1***	***150***	***300***	***1,750***	***5***	12

WQO's = Water Quality Objectives based on Maximum Contaminant Levels or Taste and Odor Threshold limits
BOLD =Indicates concentration exceeds WQO. **bgs** = below ground surface

* = Sample chromatographic pattern does not resemble typical diesel standard pattern; unknown organics within diesel range 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.

The results indicate:

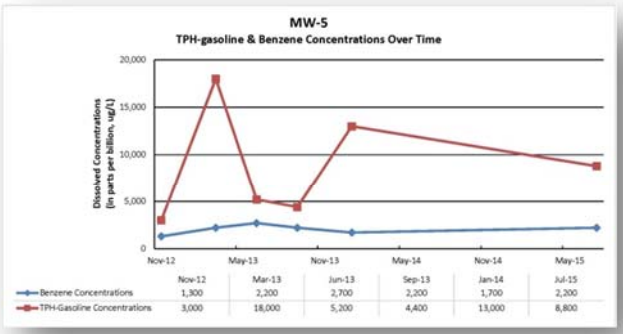
On-site Wells:

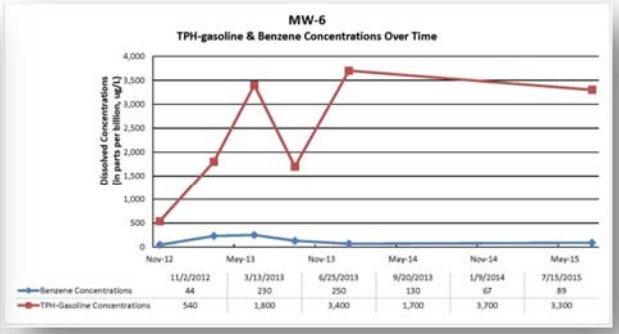
- Onsite wells **MW-1 through MW-4, RW-5 and RW-9** continue to reveal elevated concentrations of fuel hydrocarbons above Water Quality Objectives, however have significantly declined since monitoring began at the Site over 20 years ago (see time-series concentration trends - Figures 4 through 9).
- The increase of benzene concentrations, observed since early 2009, in on-site wells **MW-1 through MW-4 and RW-5** can most easily be explained as the arrival of secondary, upgradient off-site dissolved hydrocarbon plumes (see time-series concentration trends - Figures 4 through 7).

Off-site Upgradient Wells:

- **Well MW-5** (located adjacent to the operating QuikStop station, about 50 feet upgradient of the subject Site; see Figure 3). The results revealed elevated concentrations of TPH-gasoline, benzene, ethylbenzene, MTBE and TBA at concentrations of 8,800, 2,200, 450, 850 and 6,700 µg/L, respectively.

- **Well MW-6** (located downgradient of an abandoned Texaco station; about 25 feet upgradient of the subject Site; see Figure 3): The current results revealed elevated concentrations of TPH-gasoline and benzene detected at 3,300 and 89 µg/L.





These results, coupled with the site-specific groundwater gradient records (i.e., rose diagram, Figure 2) that show a consistent groundwater flow direction towards the west/southwest, indicate that elevated levels of gasoline contamination are migrating to the Site from these two upgradient gas station sites (i.e., the active QuikStop station, and apparently to a lesser extent from the abandoned Texaco station).

3.0 CONCLUSIONS

- A 20-year record of seasonal groundwater testing of the Site's monitoring well network (Table 2) has shown gradual degradation of the shallow, dissolved gasoline plume over time as evidenced by the downward trend lines shown in Figures 4-9. Evidence of attenuation was evident prior to, during, and after remedial efforts were completed. However, despite the overall downward trend in concentrations, there have been some late arriving upward trends primarily as benzene, which appear to be the result of off-site gasoline plumes since the subject Site has been fenced and vacated for over 24 years.
- Laboratory results of groundwater samples obtained from the two, upgradient off-site wells (MW-5 and MW-6) continue to confirm that up to two plumes of elevated gasoline contamination are migrating onto the site from two upgradient sources. Specifically, the active QuikStop station (located ~50 feet upgradient of the subject Site), and to a lesser extent from the abandoned Texaco station (located ~25 feet upgradient of the subject Site). Concentrations of dissolved hydrocarbons detected in these wells during the most recent sampling event (July 2015) were generally consistent with the previous sampling events since the wells were installed in November 2012.

4.0 RECOMMENDATIONS

We recommend the following in order to move the Site towards regulatory case closure:

- Complete the regulatory-requested, *Focused Feasibility Study/Corrective Action Plan* (FFS/CAP): We are completing this ACEH-requested document that will provide detailed soil excavation options for removing elevated levels of residual, secondary source contamination beneath the Site. The FFS/CAP will include an analysis the existing Site data with respect to the State Water Resources Control Board's (SWRCB's) *Low Threat Underground Storage Tank Case Closure Policy (LTCP)* in order to identify and address any impediments to case closure. This FFS/CAP is due by October 28, 2015.

- Groundwater Monitoring & Reporting: Continued annual sampling of key on-site monitoring wells [i.e., eight (8) on-site wells MW-1, -2, -3, -4, -5 & -6, RW-5 & -9], and two additional, on-site property boundary wells (RW-13 & RW-14). The next groundwater monitoring event scheduled for September 2016 and will include:
    - Field Measurements: Water level gauging and field checking water quality parameters (dissolved oxygen, ORP) in all sixteen (16) existing groundwater-monitoring wells;
    - Groundwater Sampling: Collecting and analyzing groundwater samples from monitoring wells MW-1 through MW-6, RW-5, RW-9, RW-13 and RW-14;
    - Reporting: Preparing a summary report of the collected data.

5.0 LIMITATIONS

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

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

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

Sincerely,

Weber, Hayes and Associates, Inc.

By _____ And: _____

Jered Chaney, PG# 8452
Project Geologist

Pat Hoban, PG# 7795
Senior Geologist

cc: Jeffrey S. Lawson, Silicon Valley Law Group
25 Metro Drive, Suite 600
San Jose, CA 95110

Attachments:

Figure 1: Location Map
Figure 2: Groundwater Gradient & Flow Direction – July 15, 2015
Figure 3: Groundwater Sample Analytical Results – July 15, 2015
Figure 4: Chart MW-1 (March 1997 to July 15, 2015) TPH-gas and Benzene Concentration Trends
Figure 5: Chart MW-2 (March 1997 July 15, 2015) TPH-gas and Benzene Concentration Trends
Figure 6: Chart MW-3 (March 1997 to July 15, 2015) TPH-gas and Benzene Concentration Trends
Figure 7: Chart MW-4 (March 1997 July 15, 2015) TPH-gas and Benzene Concentration Trends
Figure 8: Chart RW-5 (March 1997 to July 15, 2015) TPH-gas and Benzene Concentration Trends
Figure 9: Chart RW-9 (March 1997 to July 15, 2015) TPH-gas and Benzene Concentration Trends

Table 1: Groundwater Elevation and Analytical Data – Annual (July-2015)
Table 2: Current & Historical Summary (Groundwater Elevation and Analytical Data)

Appendix A: Site Description and Background & Site Conceptual Model

Appendix B: Daily Field Record (Groundwater Sampling) – Weber, Hayes & Associates, July 15, 2015 & *Field Methodology for Groundwater Sampling*

Appendix C: *Certificate of Analysis* (Torrent Laboratory) and *Chain of Custody* Documentation

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 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*
- *2015, July-30: Request for Focused Feasibility Study/Corrective Action Plan*

California Environmental Protection Agency

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

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

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

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

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

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

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

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*

REFERENCES (Continued)

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 For Claim # 1275*
- 2005, May-2008: *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*

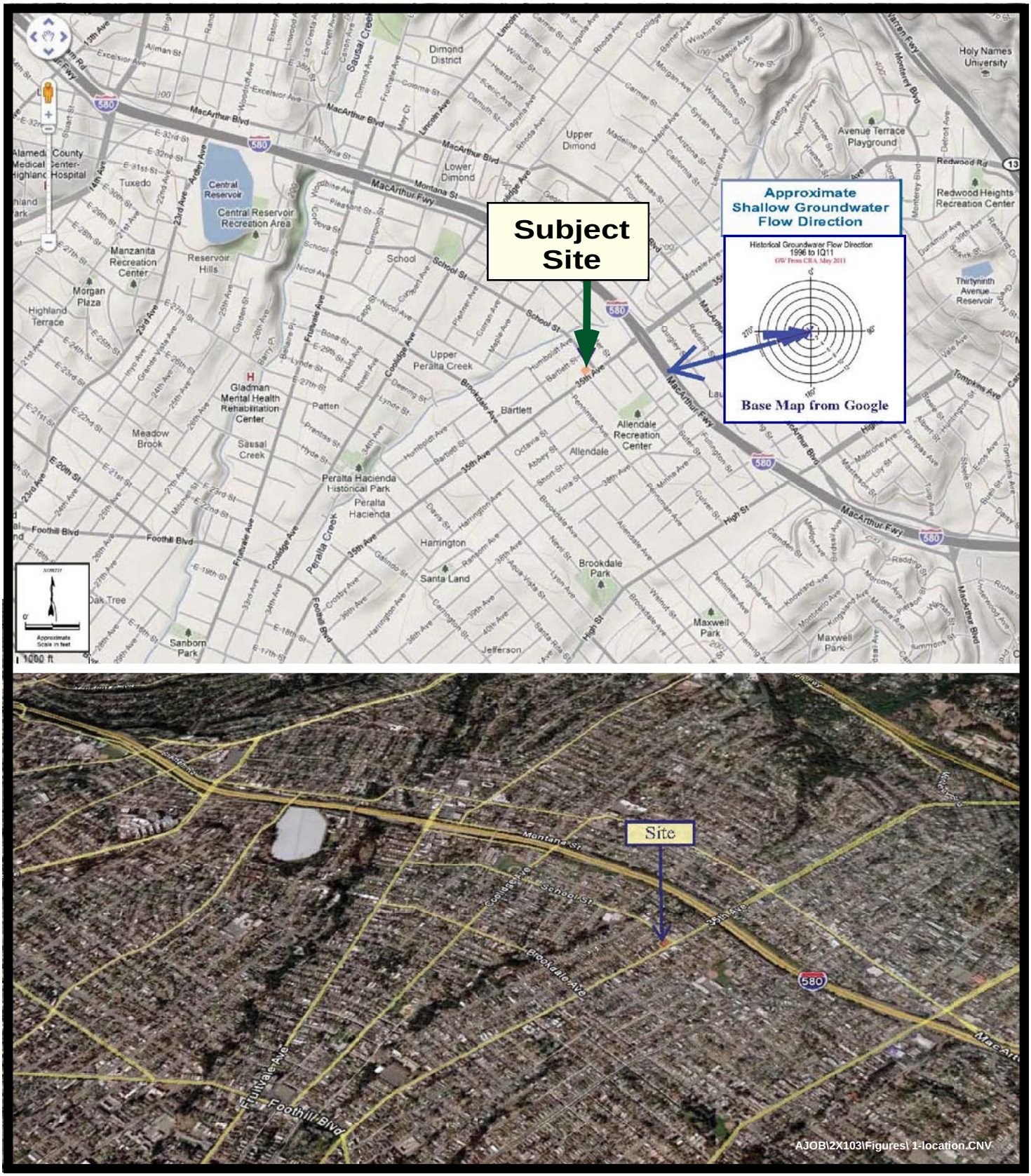
Weber, Hayes and Associates reports for: 3055 35th Avenue, Oakland:

- 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*
- 2013, May 14: *Quarterly Groundwater Monitoring Report (Sampled March 2013)*
- 2013, August 22: *Quarterly Groundwater Monitoring Report (Sampled June 2013)*
- 2014, March 31: *Annual Groundwater Monitoring Report (Sampled September 2013 & Jan 2014)*

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



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

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

Explanation

MW-6 Elevation = 149.69'

Groundwater Monitoring Well Location, Designation, and groundwater elevation.

RW-14 Elevation = 148.12'

Remediation Well Location, Designation, and groundwater elevation.

147.80'

Interpolated Groundwater Elevation Contours & Flow Direction

The groundwater gradient measured on July 15, 2015 was 0.008 ft/ft in a westerly direction (equivalent to approximately 1 foot of vertical drop per 125 feet of lateral flow)

SCHOOL STREET

Former Exxon Station

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

Former Pump Island

Former 500 gallon Waste Oil UST Location

Former Pump Island

Abandoned Texaco Station

Canopy / Former Dispenser Islands

QuikStop Station

Canopy / Dispenser Islands

35TH AVENUE

MW-4 Elevation = 147.26'

RW-9 Elevation = 147.57'

RW-10 Elevation = 147.80'

RW-7 Elevation = 147.37'

RW-8 Elevation = 147.54'

MW-1 Elevation = 147.67'

MW-3 Elevation = 147.50'

RW-12 Elevation = 147.79'

RW-6 Elevation = 147.64'

RW-14 Elevation = 148.37'

RW-11 Elevation = 147.99'

MW-2 Elevation = 148.04'

RW-13 Elevation = 148.63'

RW-5 Elevation = 147.71'

MW-6 Elevation = 151.77'

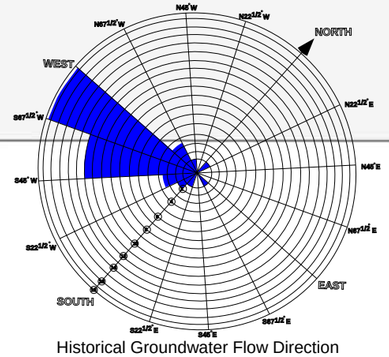
MW-5 Elevation = 149.79'

147.5'

148.0'

148.5'

149.0'



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

2X103.Oakland-35th WP\Reports (& QM)\QM\2015\2015-Annual GW Rpt\Figures

Figure 2 Project 2X103

Site Map with Groundwater Gradient & Flow Direction July 15, 2015 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

NORTH

0' 30'

Approximate Scale (in feet)

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

SCHOOL STREET

Former Exxon Station

RW-9
Elevation = 147.57'
TPH-d: 450* ppb
TPH-g: 550** ppb
B: 120 ppb
T: 3.2 ppb
E: ND
X: 2.2 ppb
MTBE: 9.3 ppb
TBA: 230 ppb
D.O.: 0.62 mg/L

RW-10
Elevation = 147.80'

MW-4
Elevation = 147.26'
TPH-d: **1,800* ppb**
TPH-g: 6,900 ppb**
B: 2,300 ppb
T: 4.7 ppb
E: 47 ppb
X: 5.4 J ppb
MTBE: **18 ppb**
TBA: **100 ppb**
D.O.: 0.83 mg/L

RW-8
Elevation = 147.54'

RW-7
Elevation = 147.37'

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

Former Pump Island

MW-1
Elevation = 147.67'
TPH-d: 1,400* ppb
TPH-g: 3,700 ppb**
B: 1,700 ppb
T: 2.0 J ppb
E: 16 ppb
X: 1.8 J ppb
MTBE: 17 ppb
TBA: 110 ppb
D.O.: 0.37 mg/L

Former 500 gallon Waste Oil UST Location

RW-14
Elevation = 148.37'
TPH-d: 140* ppb
TPH-g: 78 ppb**
B: 1.2 ppb
T: ND
E: ND
X: ND
MTBE: ND
TBA: 31 ppb
D.O.: 0.61 mg/L

MW-3
Elevation = 147.50'
TPH-d: 1,900* ppb
TPH-g: 14,000 ppb**
B: 4,400 ppb
T: 11 J ppb
E: 230 ppb
X: 87 J ppb
MTBE: 58 ppb
TBA: 320 ppb
D.O.: 0.83 mg/L

RW-12
Elevation = 147.79'

Former Pump Island

RW-6
Elevation = 147.64'

RW-11
Elevation = 147.99'

MW-2
Elevation = 148.04'
TPH-d: 1,700* ppb
TPH-g: 2,900 ppb**
B: 700 ppb
T: 2.6 J ppb
E: 33 ppb
X: 2.7 J ppb
MTBE: 16 ppb
TBA: 46 ppb
D.O.: 0.33 mg/L

RW-5
Elevation = 147.71'
TPH-d: 150* ppb
TPH-g: ND ppb
B: 1.2 ppb
T: ND
E: ND
X: ND
MTBE: ND
TBA: ND
D.O.: 0.41 mg/L

RW-13
Elevation = 148.63'
TPH-d: ND
TPH-g: 79** ppb
B: 1.2 ppb
T: ND
E: ND
X: ND
MTBE: ND
TBA: 38 ppb
D.O.: 0.35 mg/L

Abandoned Texaco Station

Canopy / Former Dispenser Islands

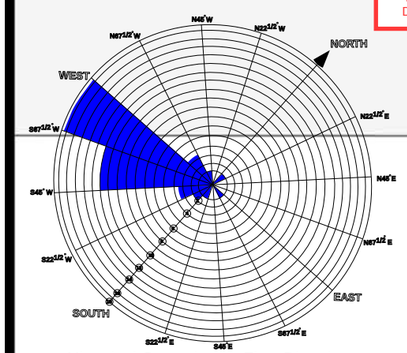
MW-6
Elevation = 151.77'
TPH-d: 310* ppb
TPH-g: 3,300 ppb**
B: 89 ppb
T: 2.1 ppb
E: 2.1 ppb
X: 2.85 ppb
MTBE: < 0.50 ppb
TBA: 19 ppb
D.O.: 0.85 mg/L

35TH AVENUE

MW-5
Elevation = 149.79'
TPH-d: 450* ppb
TPH-g: 8,800 ppb**
B: 2,200 ppb
T: 33 ppb
E: 450 ppb
X: 34.2 J ppb
MTBE: 850 ppb
TBA: 6,700 ppb
D.O.: 0.37 mg/L

QuikStop Station

Canopy / Dispenser Islands



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

2X103.Oakland-35th WP\Reports (& QM)\QM\2015\2015-Annual GW Rpt\Figures

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.

RW-14
Elevation = 148.12'
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

Remediation Well Location, Designation, and groundwater elevation.

	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

*: 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 report indicates a value between the a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather than quantitative.

Figure 3
Project 2X103

Site Map with Groundwater Sample Analytical Results July 15, 2015 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 4
TPHg and Benzene Concentration Trends
Well MW-1 (March 1997 to July 2015)

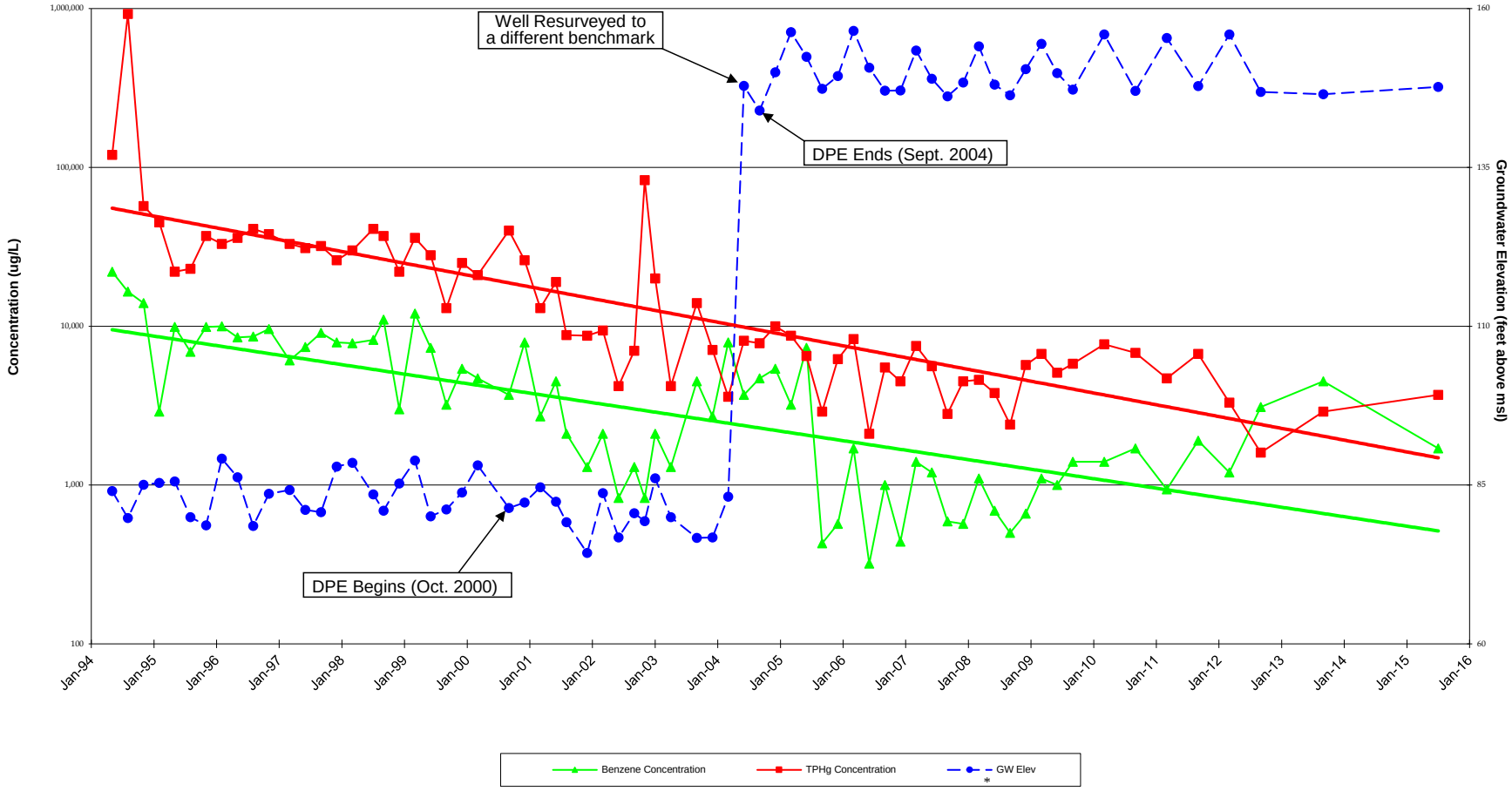


Figure 5
TPHg and Benzene Concentration Trends
Well MW-2 (March 1997 to July 2015)

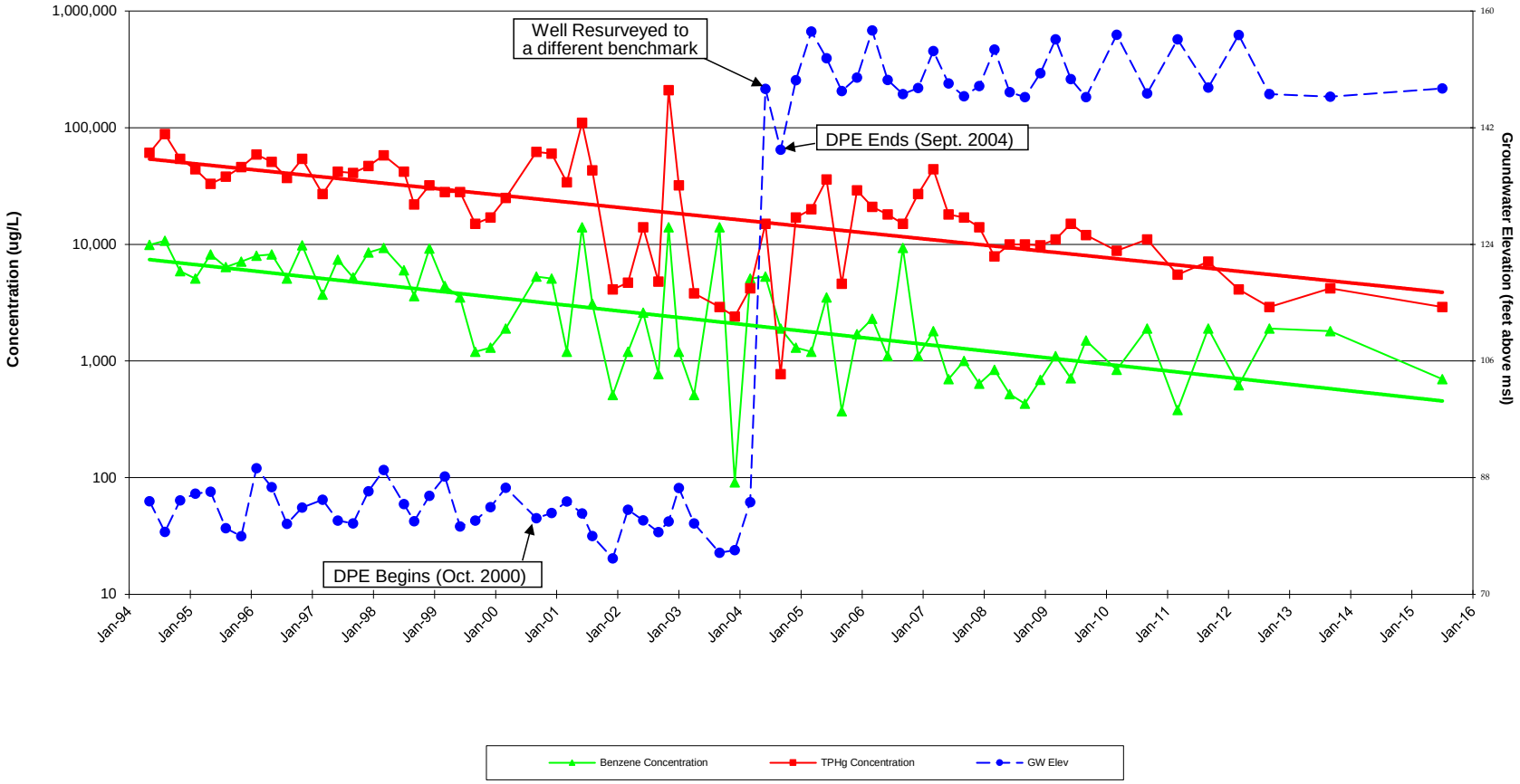


Figure 6
TPHg and Benzene Concentration Trends
Well MW-3 (March 1997 to July 2015)

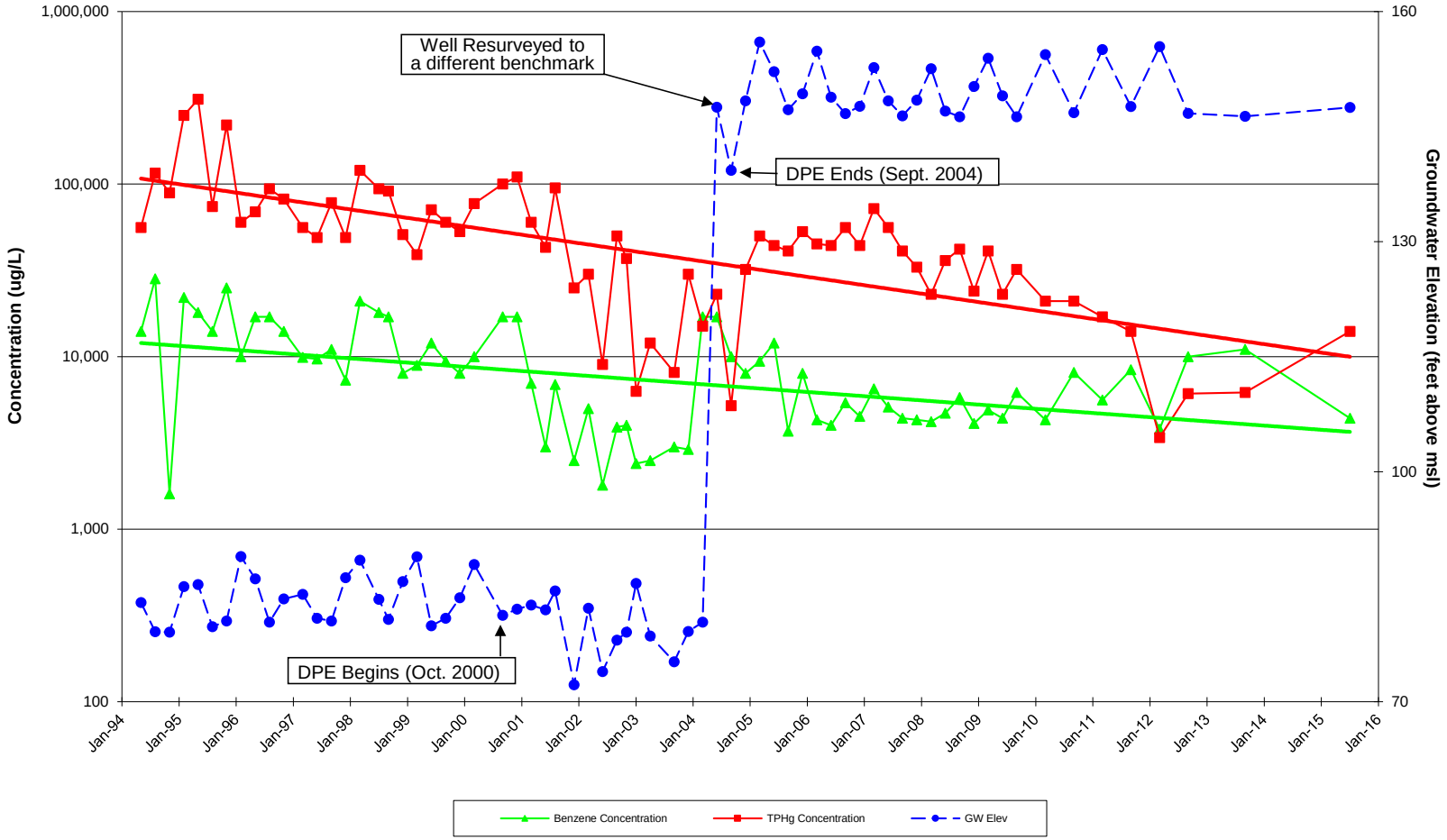
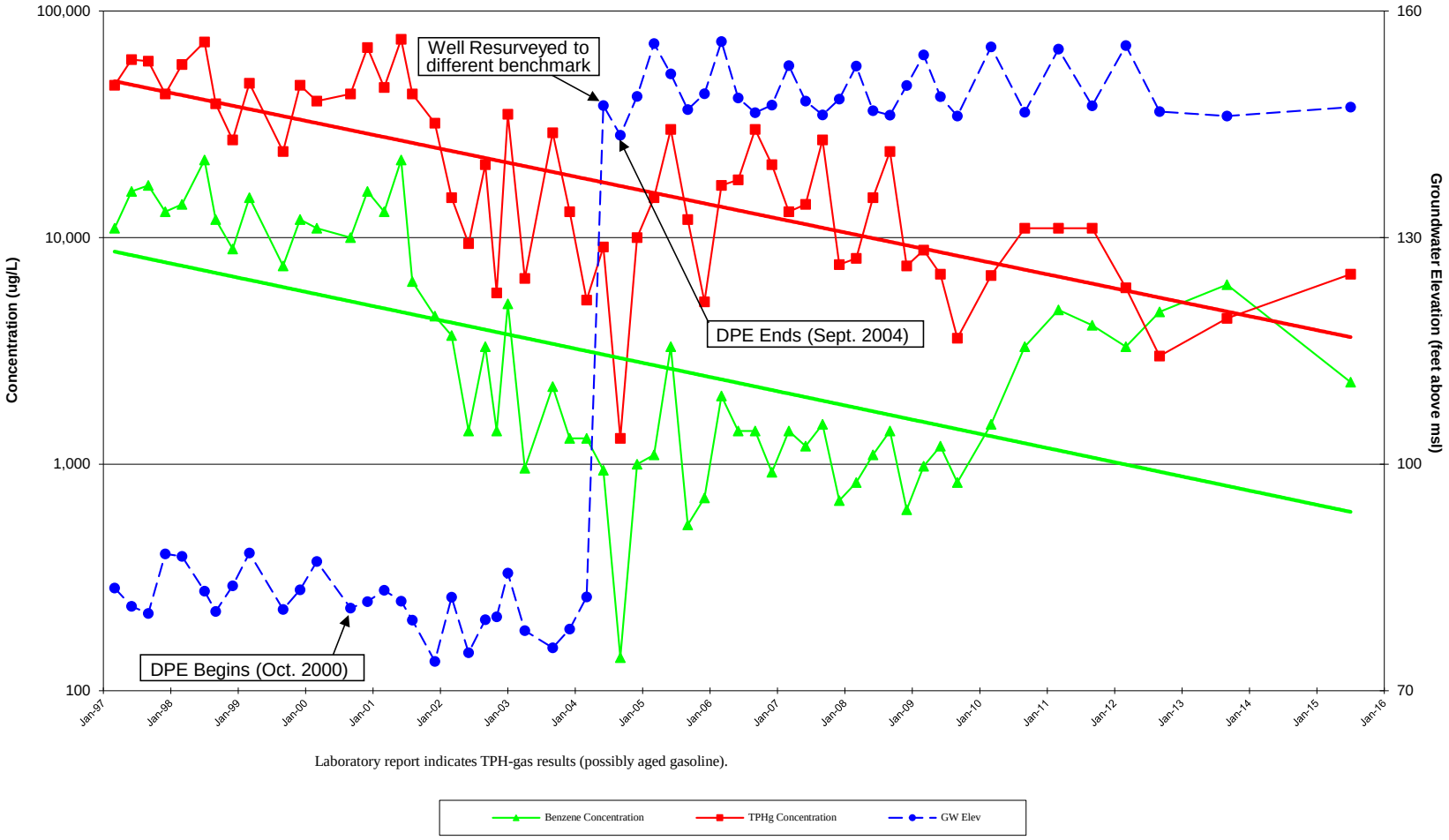


Figure 7
TPHg and Benzene Concentration Trends
Well MW-4 (March 1997 to July 2015)



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

Figure 8
TPHg and Benzene Concentration Trends
Well RW-5 (March 2005 to July 2015)

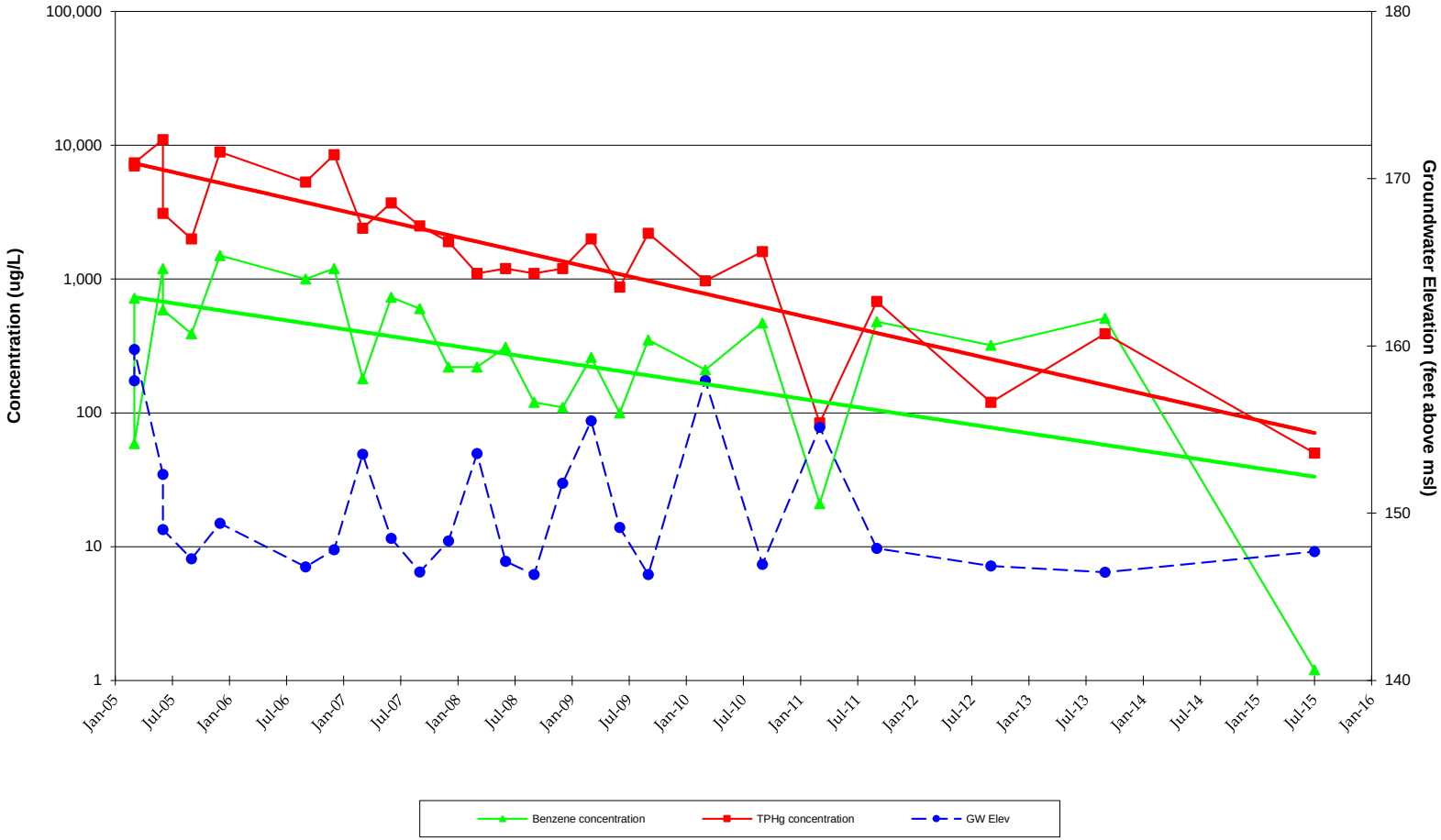
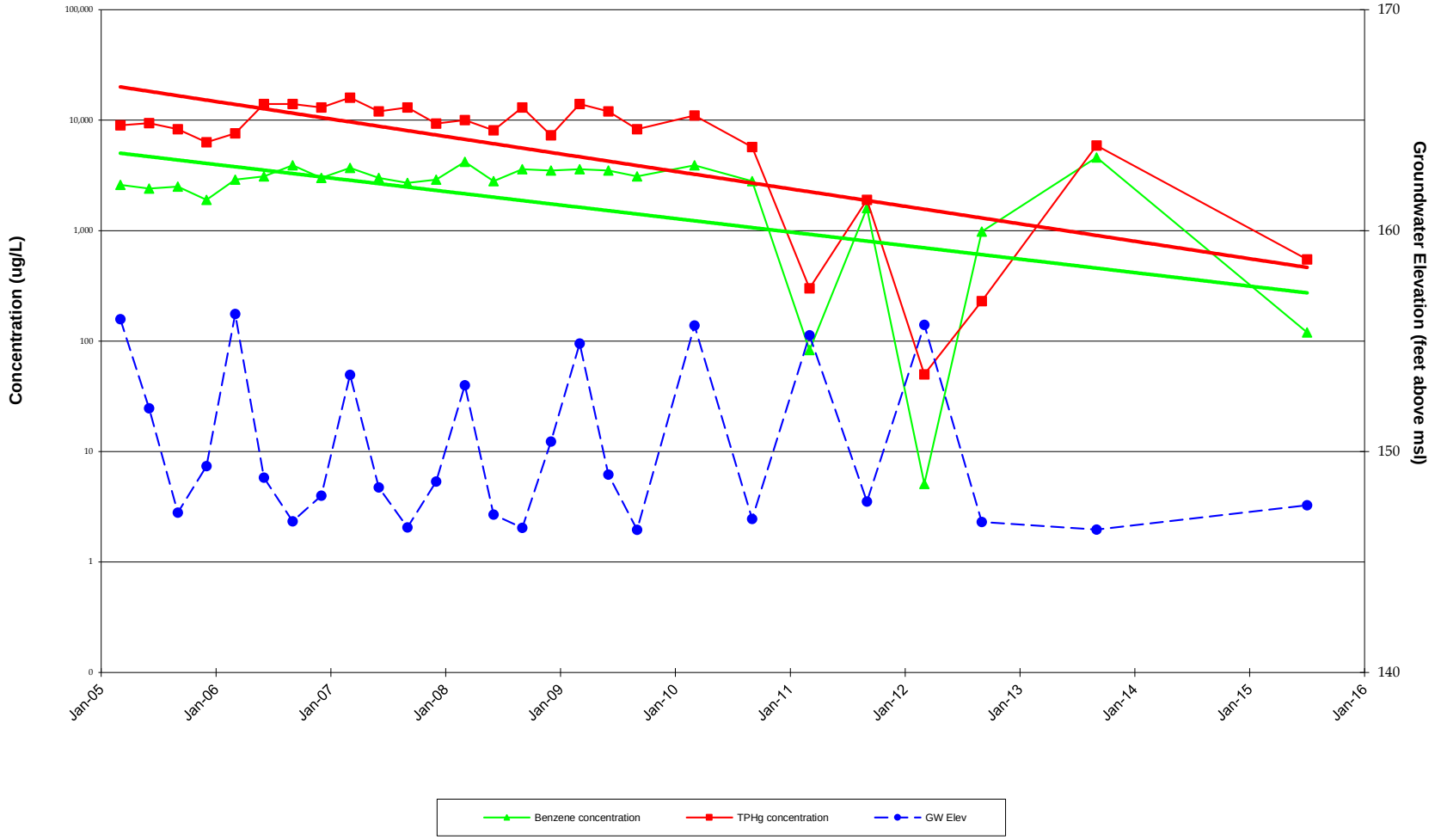


Figure 9
TPHg and Benzene Concentration Trends
Well RW-9 (March 2005 to July 2015)



Tables

Table 1: Annual 2015 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 # ***Well Diameter***	**Screen Interval (feet)**	**TOC Elevation (feet)**				**Diesel**	**Gasoline**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**MTBE**	**TBA**	**Dissolved Oxygen (mg/L)**	**Oxidation Reduction Potential (mV)**
MW-1 *4-inch*	10 - 25	167.02	7/15/2015	19.35	147.67	**1,400***	**3,700****	**1,700**	2.0[J]	16	1.8[J]	**17**	**110**	0.37	-126
MW-2 *4-inch*	10 - 25	166.14	7/15/2015	18.10	148.04	**1,700***	**2,900****	**700**	2.6[J]	33	2.7[J]	**16**	**46**	0.33	-113
MW-3 *2-inch*	10 - 25	162.94	7/15/2015	15.44	147.50	**1,900***	**14,000****	**4,400**	11[J]	230	87[J]	**58**	**320**	0.83	-100
MW-4 *2-inch*	10 - 30	163.49	7/15/2015	16.23	147.26	**1,800***	**6,900****	**2,300**	4.7	47	5.4[J]	**18**	**100**	0.83	-104
MW-5 *2-inch*	20 - 30	165.74	7/15/2015	15.95	149.79	450*	**8,800****	**2,200**	33	**450**	34.2[J]	**850**	**6,700**	0.37	-57
MW-6 *2-inch*	20 - 30	164.3	7/15/2015	12.53	151.77	310*	**3,300****	**89**	2.1	2.1	2.85	< 0.5	19	0.85	-60
RW-5 *4-inch*	5 - 25.7	162.34	7/15/2015	14.63	147.71	150*	< 50	**1.2**	< 0.5	< 0.5	< 1.5	< 0.5	< 5.0	0.41	-44
RW-6 *4-inch*	5 - 25.5	162.36	7/15/2015	14.72	147.64	--								1.42	-43
RW-7 *4-inch*	5 - 29.5	162.72	7/15/2015	15.35	147.37	--								0.79	-173
RW-8 *4-inch*	5 - 29.5	164.13	7/15/2015	16.59	147.54	--								1.18	-33
RW-9 *4-inch*	5 - 25	163.86	7/15/2015	16.29	147.57	450*	550**	**120**	3.2	< 0.5	2.2	**9.3**	**230**	0.62	-95
RW-10 *4-inch*	5 - 25	163.02	7/15/2015	15.22	147.80	--								1.29	-123
RW-11 *4-inch*	5 - 25	162.67	7/15/2015	14.68	147.99	--								1.39	-126
RW-12 *4-inch*	5 - 27	163.06	7/15/2015	15.27	147.79	--								1.15	-87
RW-13 *4-inch*	5 - 25	164.34	7/15/2015	15.71	148.63	< 100	79**	**1.2**	< 0.5	< 0.5	< 1.5	< 0.5	**38**	0.35	-107
RW-14 *4-inch*	5 - 25	163.76	7/15/2015	15.39	148.37	140*	78**	**1.2**	< 0.5	< 0.5	< 1.5	< 0.5	**31**	0.61	-122
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

WQO = Water Quality Objectives: Based on Maximum Contaminant Levels (Department of Health Services) or taste & odor threshold limits.

BOLD = Above WQO Threshold **TOC =** Top of Casing **-- =** Data not available. **< # =** Not detected at or above reporting limit.

* = Sample chromatographic pattern does not resemble typical diesel standard pattern; unknown organics within diesel range quantifired 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.

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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
MW-1 *4-inch*	10 - 25	167.02																			
			7/15/2015	--		19.35	147.67	**1,400*** **	--	**3,700***	**1,700**	2.0J	16	1.8J	**17**	**110**	< 4.2	< 4.2	< 4.2	0.37	-126
			1/9/2014	--		20.49	146.53	--	--	--	--	--	--	--	--	--	--	--	--	0.89	-110
			9/20/2013	--		20.51	146.51	**1,500*** **	--	**2,900★**	**4,500**	9.6	150	6.8J	< 1.4	**98**	< 0.57	< 0.95	< 0.80 - 1.3	0.77	-88
			6/25/2013	--		19.58	147.44	--	--	--	--	--	--	--	--	--	--	--	--	0.74	-100
			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,l]	--	**2,100** [d,l]	**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
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued			5/30/2003	--		16.65	84.20	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
MW-1			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	
			12/8/1998	--		15.62	85.23	**3,700**	--	**22,000**	**3,000**	**1,200**	**730**	**3,100**	< 900	--	--	--	--	--	
			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**	--	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
MW-2 *4-inch*	10 - 25	166.14																			
			7/15/2015	--		18.10	148.04	**1,700*** **	--	**2,900***	**700**	2.6J	33	2.7J	**16**	**46**	< 4.2	< 4.2	< 4.2	0.33	-113
			1/9/2014	--		19.37	146.77	--	--	--	--	--	--	--	--	--	--	--	--	1.17	-78
			9/20/2013	--		19.35	146.79	**2,300*** **	--	**4,200★**	**1,800**	11	**300**	8.7	< 1.4	**120**	< 0.57	< 0.95	< 0.80 - 1.3	0.44	-100
			6/25/2013	--		18.47	147.67	--	--	--	--	--	--	--	--	--	--	--	--	1.56	-94
			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:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued			4/25/2003	--		19.05	80.95	310[c]	--	**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[c]	--	**4,700**[d]	**1,200**	**150**	30	310	< 50	--	--	--	--	0.24	Operating
			12/7/2001	--		24.45	75.55	750[c,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:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
MW-3 *2-inch*	10 - 25	162.94																			
			7/15/2015	--		15.44	147.50	**1,900*** **	--	**14,000***	**4,400**	11J	230	87J	**58**	**320**	< 21	< 21	< 21	0.83	-100
			1/9/2014	--		16.50	146.44	--	--	--	--	--	--	--	--	--	--	--	--	0.69	-85
			9/20/2013	--		16.61	146.33	**3,000*** **	--	**6,200★**	**11,000**	37	**990**	118.1J	< 7.2	**350**	< 2.8	< 4.7	< 4.0 - 6.4	0.39	-79
			6/25/2013	--		15.65	147.29	--	--	--	--	--	--	--	--	--	--	--	--	0.59	-92
			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 [c]	--	**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
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued			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
MW-3			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[c,k]	--	**9,000**[d]	**1,800**	**1,300**	96	1,000	< 300	--	--	--	--	--	Operating
			3/11/2002	--		14.69	82.18	**2,800**[f,e,k]	--	**30,000**[d]	**5,000**	**2,400**	190	**1,800**	< 1,300	--	--	--	--	0.30	Operating
			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	
			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	
			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**	--	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
MW-4 *2-inch*	10 - 30	163.49																			
			7/15/2015	--		16.23	147.26	**1,800*** **	--	**6,900***	**2,300**	4.7	47	5.4J	**18**	**100**	<4.2	<4.2	< 4.2	0.83	-104
			1/9/2014	--		17.39	146.10	--	--	--	--	--	--	--	--	--	--	--	--	1.12	-31
			9/20/2013	--		17.39	146.10	**2,200*** **		**4,400★**	**6,200**	24	**420**	62	< 1.4	**160**	< 0.57	< 0.95	< 0.57 - 13	0.32	-89
			6/25/2013	--		16.48	147.01	--	--	--	--	--	--	--	--	--	--	--	--	0.73	-99
			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,f]**)**	< 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:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
Continued			1/13/2003	Sheen [Lab]		11.75	85.59	**15,000**[e,f,g,k]	--	**35,000**[d,g]	**5,100**	**1,500**	**510**	**4,500**	< 800	--	--	--	--	0.28	Not operating
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[c]	--	**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[g]	
		*	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 *2-inch*	20 - 30	165.74																			
			7/15/2015	--		15.95	149.79	450***	--	**8,800***	**2,200**	33	**450**	34.2J	**850**	**6,700**	<11	<11	<11	0.37	-57
			1/9/2014	--		17.12	148.62	**1,100***	--	**13,000****	**1,700**	33	**740**	32 J	**640**	**1,300**	< 1.4	< 2.4	< 2.0 - 3.2	1.21	-42
			9/20/2013	--		17.31	148.43	540***	--	**4,400★**	**2,200**	47	**1,200**	50.1J	**790**	**890**	< 1.4	< 2.4	< 2.0 - 3.2	0.50	-60
			6/25/2013	--		16.21	149.53	760^	--	**5,200**★	**2,700**	41	**860**	50.2 J	**980**	**7,800**	< 1.5	< 2.5	< 8.3	3.82	-26
			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 ***2-inch***	20 - 30	164.3																			
			7/15/2015	--		12.53	151.77	**310*****	--	**3,300***	**89**	2.1	2.1	2.85	<0.5	**19**	< 0.50	2.2	< 0.50	0.85	-60
			1/9/2014	--		16.18	148.12	190*	--	**3,700**+	**67**	< 0.25	3.8	1.1 J	< 0.72	< 6.5	< 0.28	< 0.47	< 0.40 - 0.64	1.24	-75
			9/20/2013	--		16.46	147.84	470***	--	**1,700★**	**130**	0.66J	4.6	< 1.74	< 1.4	< 13	< 0.57	< 0.95	< 0.80 - 1.3	0.61	-68
			6/25/2013	--		14.78	149.52	**520^**	--	**3,400**★	**250**	2.1 J	6	1.9 J	< 1.5	**88**	< 0.59	< 0.99	< 3.34	3.39	-63
			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
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-5 *4-inch*	5 - 25.7	162.34																			
			7/15/2015	--		14.63	147.71	**150*** **	--	< 50	**1.2**	< 0.50	< 0.50	< 1.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	0.41	-44
			1/9/2014	--		15.69	146.65	--	--	--	--	--	--	--	--	--	--	--	--	1.07	-52
			9/20/2013	--		15.87	146.47	160***	--	390★	**510**	3.9	11	7.28J	< 0.72	< 6.5	< 0.28	< 0.47	< 0.40 - 0.64	0.68	-49
			6/25/2013	--		14.81	147.53	--	--	--	--	--	--	--	--	--	--	--	--	0.76	-67
			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	< 0.5	< 0.5	< 0.5	0.73	-78
			3/30/2012	--		0.40	161.94	< 100	--	< 50	< 0.50	< 0.50	< 0.50	< 1.50	< 0.50	< 5.0	< 0.5	< 0.5	< 0.5	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[TPHd])	15.40	146.94	270 [c] (200) [c]	--	**1,600 [d]**	**470**	5.1	19	21	(3.6)	--	--	--	--	0.54	Not operating
			3/14/2010	--	(Z[TPHd])	4.40	157.94	480 [e,f,k] (340) [c]	--	970 [d]	**210**	5.2	12.0	13.0	**(41)**	--	--	--	--	1.03	Not operating
			9/5/2009	--	(Z[TPHd])	16.00	146.34	**1,700 [f,k,m] (600) [f,m]**	--	**2,200 [n,p]**	**350**	8.5	4.6	13.0	**(50)**	--	--	--	--	1.05	Not operating
			6/7/2009	Sheen [Field]	(Z[TPHd])	13.19	149.15	720 [m,f] (210) [c]	--	**870 [d]**	**100**	4.4	1.3	2.8	**(110)**	--	--	--	--	1.13	Not operating
			3/14/2009	Sheen [Field]	(Z[TPHd])	6.82	155.52	**2,000 [f,k,m] (750 [c])**	--	**2,000 [d]**	**260**	9.8	9.5	18.0	**(38)**	--	--	--	--	1.15	Not operating
			12/28/2008	Sheen [Field]	(Z[TPHd])	10.55	151.79	(250 [m])	< 250	**1,200 [d,n]**	**110**	5.6	2.5	9.8	**(81)**	--	--	--	--	1.13	Not operating
			9/6/2008	Sheen [Field]	(Z[TPHd])	16.01	146.33	(220 [c])	--	**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 [c])	(< 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 [c])	(< 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[c]	--	**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:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-6 *4-inch*	5 - 25.5	162.36																			
			7/15/2015	--		14.72	147.64	--	--	--	--	--	--	--	--	--	--	--	--	--	1.42	-43
			1/9/2014	--		15.84	146.52	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	-85
			9/20/2013	--		15.96	146.40	--	--	--	--	--	--	--	--	--	--	--	--	--	0.78	-79
			6/25/2013	--		14.92	147.44	--	--	--	--	--	--	--	--	--	--	--	--	--	0.57	-87
			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	--	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-7 *4-inch*	5 - 29.5	162.72																			
			7/15/2015	--		15.35	147.37	--	--	--	--	--	--	--	--	--	--	--	--	0.79	-173
			1/9/2014	--		16.43	146.29	--	--	--	--	--	--	--	--	--	--	--	--	1.02	-112
			9/20/2013	--		16.61	146.11	--	--	--	--	--	--	--	--	--	--	--	--	0.52	-83
			6/25/2013	--		15.54	147.18	--	--	--	--	--	--	--	--	--	--	--	--	0.64	-95
			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
			3/22/2006	--		5.75	156.97	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
			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	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	
RW-8 *4-inch*	5 - 29.5	164.13																		
			7/15/2015	--		16.59	147.54	--	--	--	--	--	--	--	--	--	--	--	--	1.18	-33
			1/9/2014	--		17.69	146.44	--	--	--	--	--	--	--	--	--	--	--	--	1.33	-68
			9/20/2013	--		17.95	146.18	--	--	--	--	--	--	--	--	--	--	--	--	0.52	-41
			6/25/2013	--		16.88	147.25	--	--	--	--	--	--	--	--	--	--	--	--	0.91	-59
			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:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-9 *4-inch*	5 - 25	163.86																			
			7/15/2015	--		16.29	147.57	**450*** **	--	**550***	**120**	3.2	< 0.50	2.2	9.3	**230**	< 0.50	< 0.50	< 0.50	0.62	-95
			1/9/2014	--		17.38	146.48	--	--	--	--	--	--	--	--	--	--	--	--	0.87	-64
			9/20/2013	--		17.39	146.47	370***	--	**5,900★**	**4,600**	40	8.4J	8.7J	< 7.2	< 65	< 2.8	< 4.7	< 4.0 - 6.4	0.49	-72
			6/25/2013	--		16.49	147.37	--	--	--	--	--	--	--	--	--	--	--	--	0.80	-89
			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**	< 0.5	< 0.5	< 0.5	0.37	-133
			3/30/2012	--		8.12	155.74	< 100	--	< 50	**5.1**	< 0.50	< 0.50	< 1.50	< 0.50	< 5.0	< 0.5	< 0.5	< 0.5	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])	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])	8.15	155.71	770 [c] (700) [c]	--	**11,000** [d]	**3,900**	80	120.0	450	**(31)**	--	--	--	--	1.10	Not operating
			9/5/2009	--	(Z[TPHd])	17.40	146.46	**3,000 [f,m] (1,100) [e,f,m]**	--	**8,300** [d]	**3,100**	32	5.5	69	**(25)**	--	--	--	--	1.02	Not operating
			6/7/2009	Sheen [Field & Lab]	(Z[TPHd])	14.90	148.96	**4,800 [m,f] (910) [e]**	--	**12,000** [d]	**3,500**	87	150	330	**(30)**	--	--	--	--	1.19	Not operating
			3/14/2009	Sheen [Field]	(Z[TPHd])	8.97	154.89	450 [c] (440 [c])	--	**14,000** [d]	**3,600**	71	190	380	**(31)**	--	--	--	--	1.21	Not operating
			12/28/2008	Sheen [Field]	(Z[TPHd])	13.41	150.45	(950 [c])	< 250	**7,300** [d]	**3,500**	24	150	200	**(30)**	--	--	--	--	1.28	Not operating
			9/6/2008	Sheen [Lab]	(Z[TPHd])	17.31	146.55	**(1,600 [e,g])**	--	**13,000** [d,g]	**3,600**	52	170	220	< 350	--	--	--	--	1.22	Not operating
			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 [c])	(< 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 [c]	--	**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[c]	--	**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[c,f,g]	--	**8,300[d,g]**	**2,500**	36	190	310	< 170	--	--	--	--	1.04	Not operating
			6/21/2005	--		11.90	151.96	630[c]	--	**9,400[d]**	**2,400**	69	210	470	< 350	--	--	--	--	--	Not operating
			3/7/2005	--		7.87	155.99	510[c]	--	**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	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-10 *4-inch*	5 - 25	163.02																			
			7/15/2015	--		15.22	147.80	--	--	--	--	--	--	--	--	--	--	--	--	1.29	-123
			1/9/2014	--		16.33	146.69	--	--	--	--	--	--	--	--	--	--	--	--	1.01	-115
			9/20/2013	--		16.53	146.49	--	--	--	--	--	--	--	--	--	--	--	--	0.71	-102
			6/25/2013	--		15.41	147.61	--	--	--	--	--	--	--	--	--	--	--	--	0.75	-126
			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
			12/14/2005	--		13.37	149.65	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
			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	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	
RW-11 *4-inch*	5 - 25	162.67																		
			7/15/2015	--		14.68	147.99	--	--	--	--	--	--	--	--	--	--	--	--	1.39	-126
			1/9/2014	--		15.85	146.82	--	--	--	--	--	--	--	--	--	--	--	--	0.85	-72
			9/20/2013	--		15.89	146.78	--	--	--	--	--	--	--	--	--	--	--	--	0.90	-77
			6/25/2013	--		14.98	147.69	--	--	--	--	--	--	--	--	--	--	--	--	0.68	-85
			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	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-12 *4-inch*	5 - 27	163.06																			
			7/15/2015	--		15.27	147.79	--	--	--	--	--	--	--	--	--	--	--	--	1.15	-87
			1/9/2014	--		16.35	146.71	--	--	--	--	--	--	--	--	--	--	--	--	1.37	-81
			9/20/2013	--		16.36	146.70	--	--	--	--	--	--	--	--	--	--	--	--	0.85	-90
			6/25/2013	--		15.46	147.60	--	--	--	--	--	--	--	--	--	--	--	--	1.17	-48
			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
			9/6/2007	--		16.42	146.64	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
			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	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-13 *4-inch*	5 - 25	164.34																			
			7/15/2015	--		15.71	148.63	< 100	--	79[*]	**1.2**	< 0.5	< 0.5	< 1.5	< 0.5	**38**	< 0.50	< 0.50	< 0.50	0.35	-107
			1/9/2014	--		17.01	147.33	110*	--	440**	**43**	< 0.50	2.5	< 1.5	**5.2**	**200**	< 0.5	< 0.5	< 1.5	0.74	-67
		(Split)	1/9/2014	--		17.01	147.33	< 100	--	150**	**12**	< 0.50	< 0.50	< 1.5	**5.2**	**60**	< 0.5	< 0.5	< 1.5	0.27	-61
			9/20/2013	--		17.01	147.33	< 100	--	390★	**84**	1.1	2.1	1.1	< 0.5	**10**	< 0.5	< 0.5	< 1.5	0.18	-55
			6/25/2013	--		16.01	148.33	< 100	--	210[★]	**86**	1.7	5.3	3.1	5.9	**110**	< 0.5	< 0.5	< 1.5	0.12	-86
			3/26/2013	--		13.92	150.42	< 100	--	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 5	< 0.5	< 0.5	< 1.5	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	--		--	--	--	--	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	--	--	--	--	--	
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)		
RW-14 *4-inch*	5 - 25	163.76																			
			7/15/2015	--		15.39	148.37	**140*****	--	**78***	**1.2**	< 0.5	< 0.5	< 1.5	< 0.5	**31**	< 0.50	< 0.50	< 0.50	0.61	-122
			1/9/2014	--		16.53	147.23	360*	--	**1,200****	**470**	6.1	3.4	1.2	< 0.50	**98**	< 0.50	< 0.50	DIPE = 0.71	0.63	-102
		(Split)	1/9/2014	--		16.53	147.23	**1,200***	--	720**	**130**	< 0.50	1.2	2.2	< 0.50	**85**	< 0.50	< 0.50	DIPE = 0.83	0.24	-87
			9/20/2013	--		16.64	147.12	150***	--	170★	**83**	1.6	2.4	1.1	**5.5**	**34**	< 0.50	< 0.50	< 1.5	0.15	-88
			6/25/2013	--		15.64	148.12	280^	--	**560★**	**65**	0.93	2	< 1.5	< 0.50	**34**	< 0.50	< 0.50	< 1.5	0.24	-92
			3/26/2013	--		13.49	150.27	< 100	--	< 50	**1.5**	< 0.5	< 0.5	< 1.5	< 0.5	< 5	< 0.50	< 0.5	< 1.5	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
			9/10/10	--		16.10	147.66	--	--	--	--	--	--	--	--	--	--	--	--	--	Not operating
			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
Laboratory Detection Limit:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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	Screen Interval (feet)	TOC Elevation (feet)						Diesel	Fuel Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	EDB	1,2-DCE	DIPE,ETBE,TAME (µg/L)	
Continued RW-14			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:								**10**	**20**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**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

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 Objectives: Based on Maximum Contaminant Levels (Department of Health Services) or taste & odor threshold limits.
BOLD = Above WQO Threshold Limits.

2 = "Split" sample was collected by traditional purging and sampling technique (i.e., submersible pump purging at 1 gpm; sample upon sufficient well recovery) rather than low-flow sampling technique in order to compare/contrast analytical results as a function of sample technique.

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 fuel pattern lighter than diesel possibly a type of naptha or weathered gasoline.

^ = 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

+ = Does not match pattern of reference Gasoline standard. Reported value is the result of extractable hydrobcarbons overlap.

✠ = 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[8]) San Francisco Bay RWQCB (Case #: 01-0585 [9])	Keith Nowell keith.nowell@acgov.org CherieMcCaulou cmccaulou@waterboards.ca.gov

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

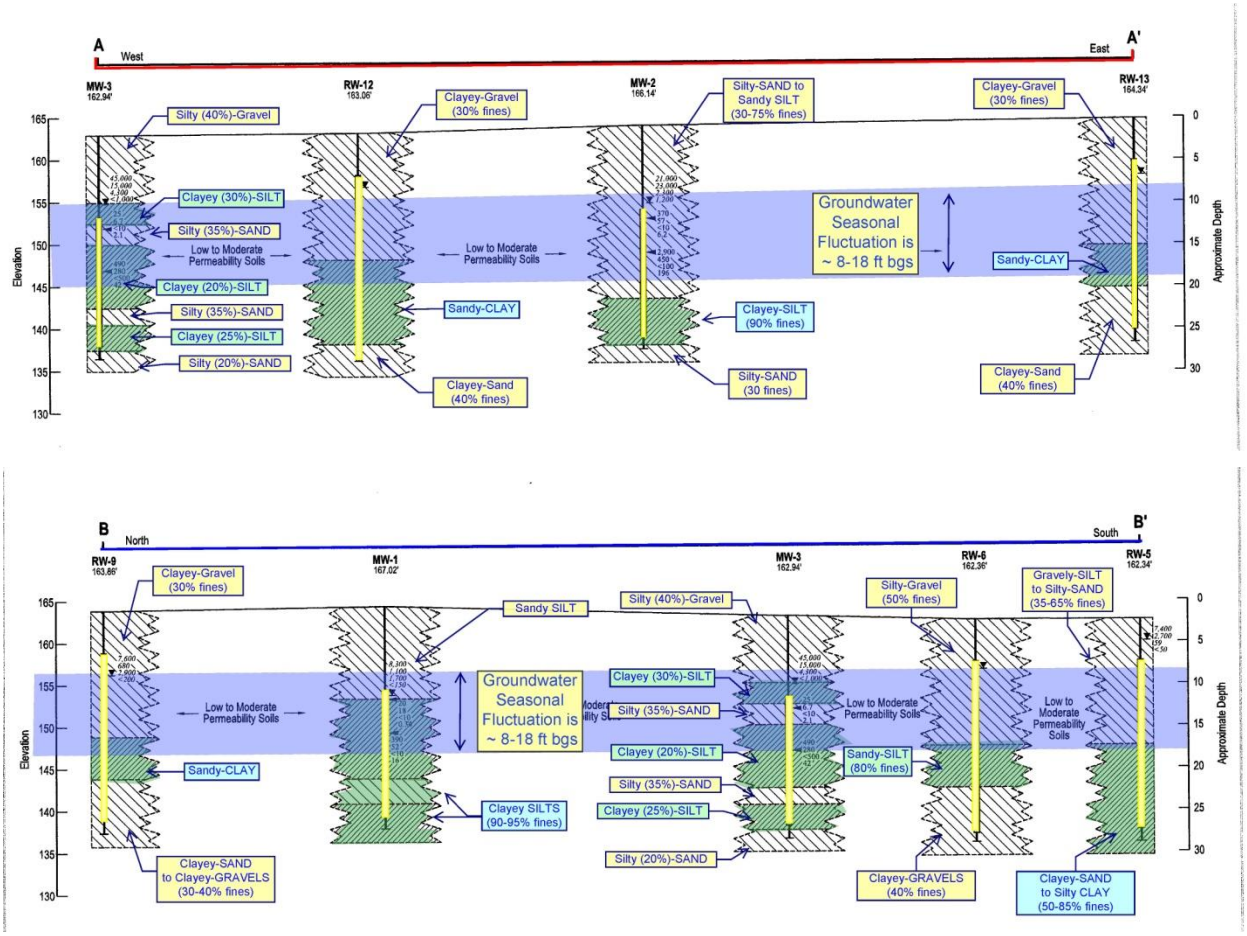
LOCAL GEOLOGY AND HYDROGEOLOGY

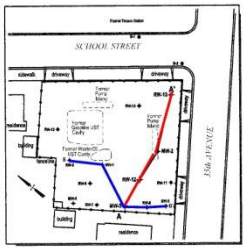
The Site is located within a large, regional, northwest-trending alluvial basin (the East Bay Plain Subbasin), that reportedly extends beneath the San Francisco Bay to the west. The Subbasin's regional aquifer in the vicinity of the Site has a westerly groundwater flow direction, towards San Francisco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

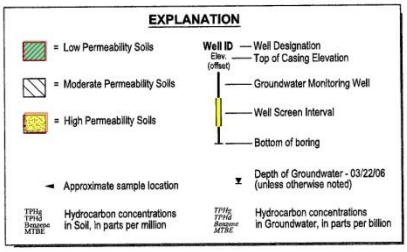
Shallow soil conditions have been logged during the installation of twenty-four (24) on-site borings and thirteen (13) off-site borings drilled to a maximum depth of 45 feet. First-encountered groundwater beneath the Site fluctuates seasonally, roughly between the depths of 8-to-18 feet below ground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

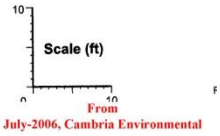
- The dominant soil type encountered consisted of low-permeability soils that included clays, clayey-mixtures (clayey-silts and clayey-sands), and silty-mixtures (sandy-silts);
- The secondary soil type encountered consisted of moderately-permeable sandy units (high silt content, fine-grained sand units 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.

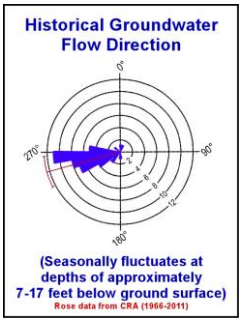








Note: Remediation feasibility testing by soil vapor extraction, air sparging, and groundwater extraction techniques showed only limited air and groundwater flow rates (no vacuum influence/easy dewatering but no groundwater drawdown at nearby wells), which confirms the low permeability conditions beneath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



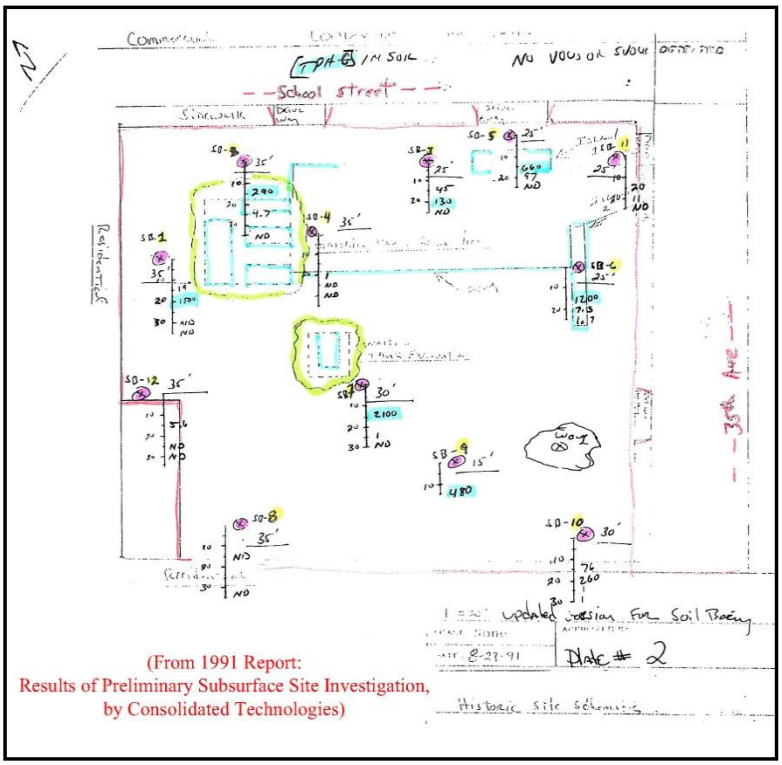
First-encountered groundwater levels in Site monitoring wells have been measured to fluctuate as much as from approximately 6 to 19-ft bgs, but

seasonal fluctuations generally fall between 8-18 feet[10]. 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].



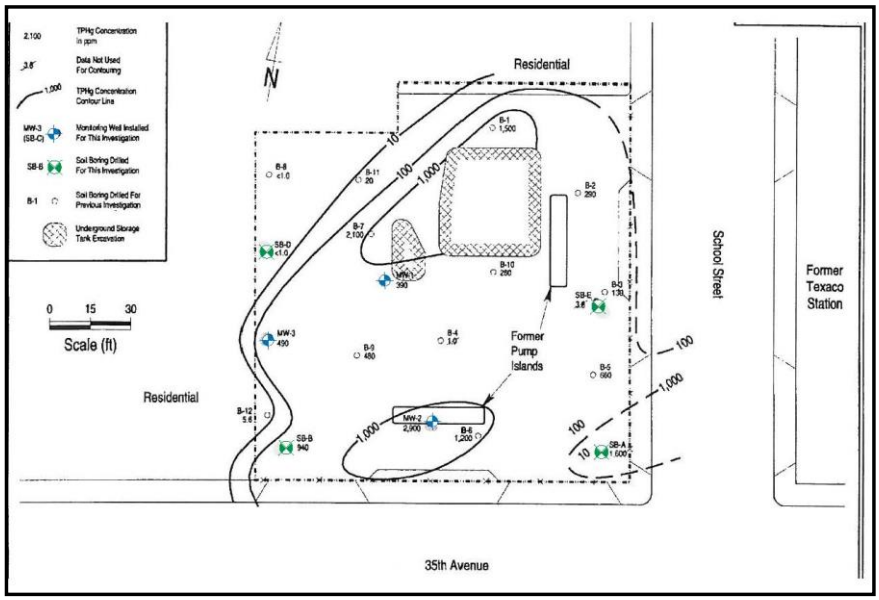
(From 1991 Report:
Results of Preliminary Subsurface Site Investigation,
by Consolidated Technologies)

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

[10]: 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.

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

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



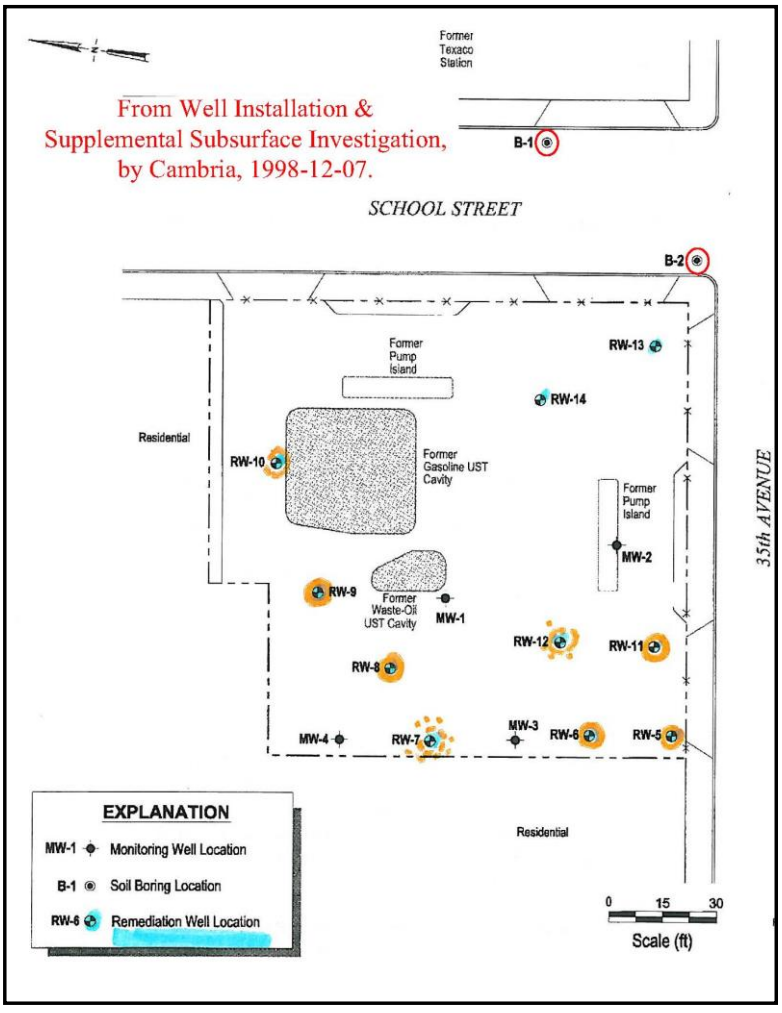
- Soil: TPH-gas concentrations were detected in soil samples collected for analysis in six of the seven soil borings, (max concentration = 2,900 ppm in MW-2 at 15-ft),
- Groundwater: TPH-gas/benzene concentrations were detected in all six groundwater samples. The maximum TPH-gas/benzene concentrations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



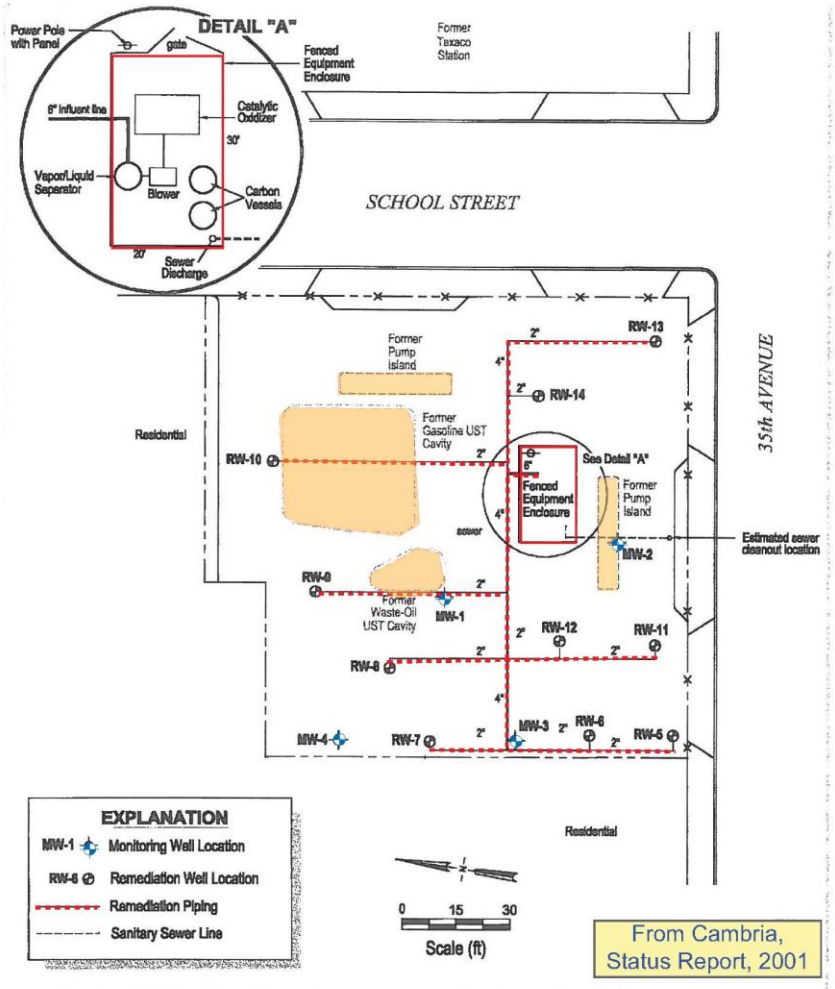
1998, Remediation Well Installation (see figure, right): In August 1998, Cambria installed ten (10), on-site, 4-inch diameter, dual-phase extraction (DPE) remediation wells (RW-5 through RW-14). Soil samples for logging were obtained from the hollow-stem augers on 5-foot intervals (5 borings) or directly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

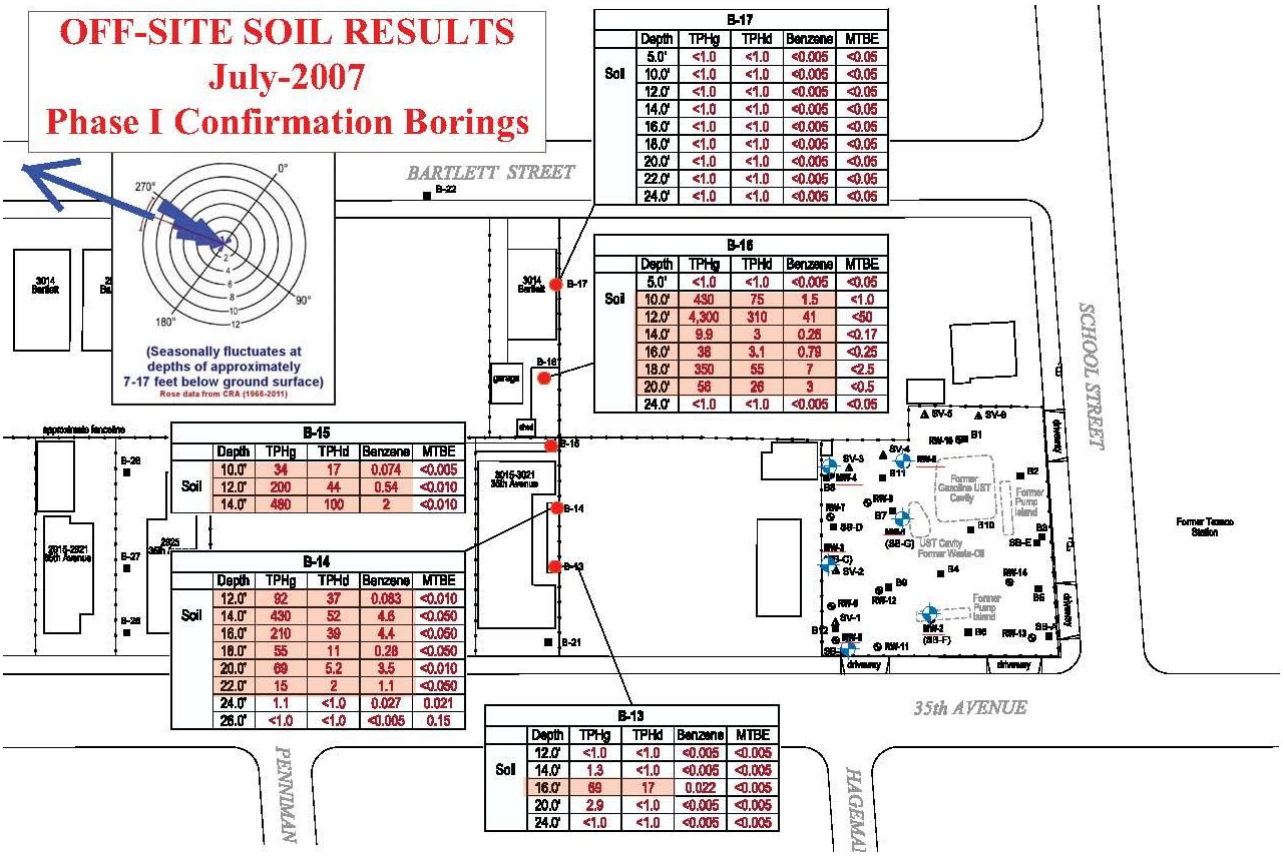
AC-HCS determined that previous Dual Phase Extraction remediation at the Site (2000-2004) was not successful due to the low permeability restrictions that Site soils have on air and groundwater flow, and those same restrictions would likely limit the distribution of sparged ozone from coming into contact 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).

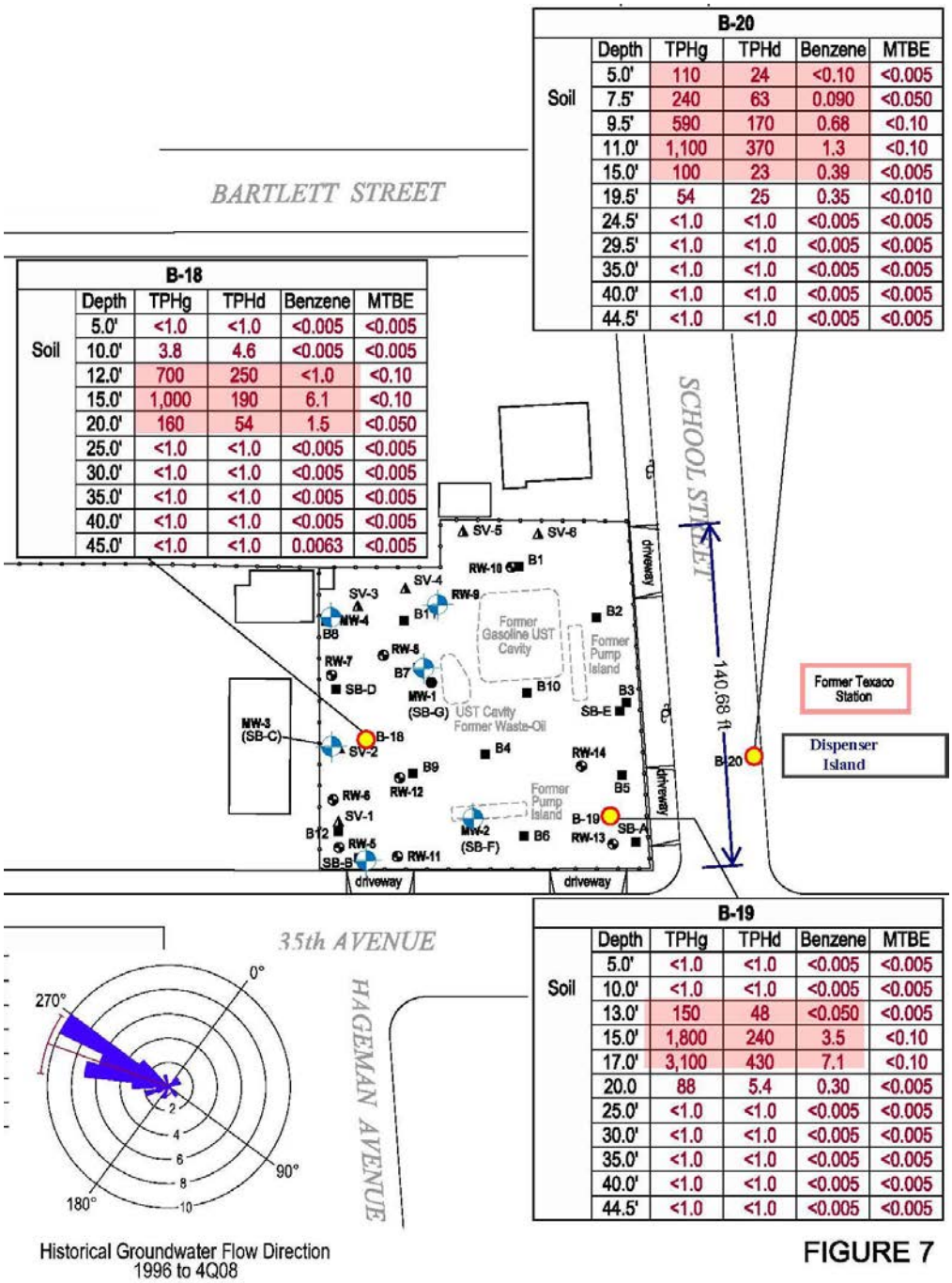


FIGURE 7

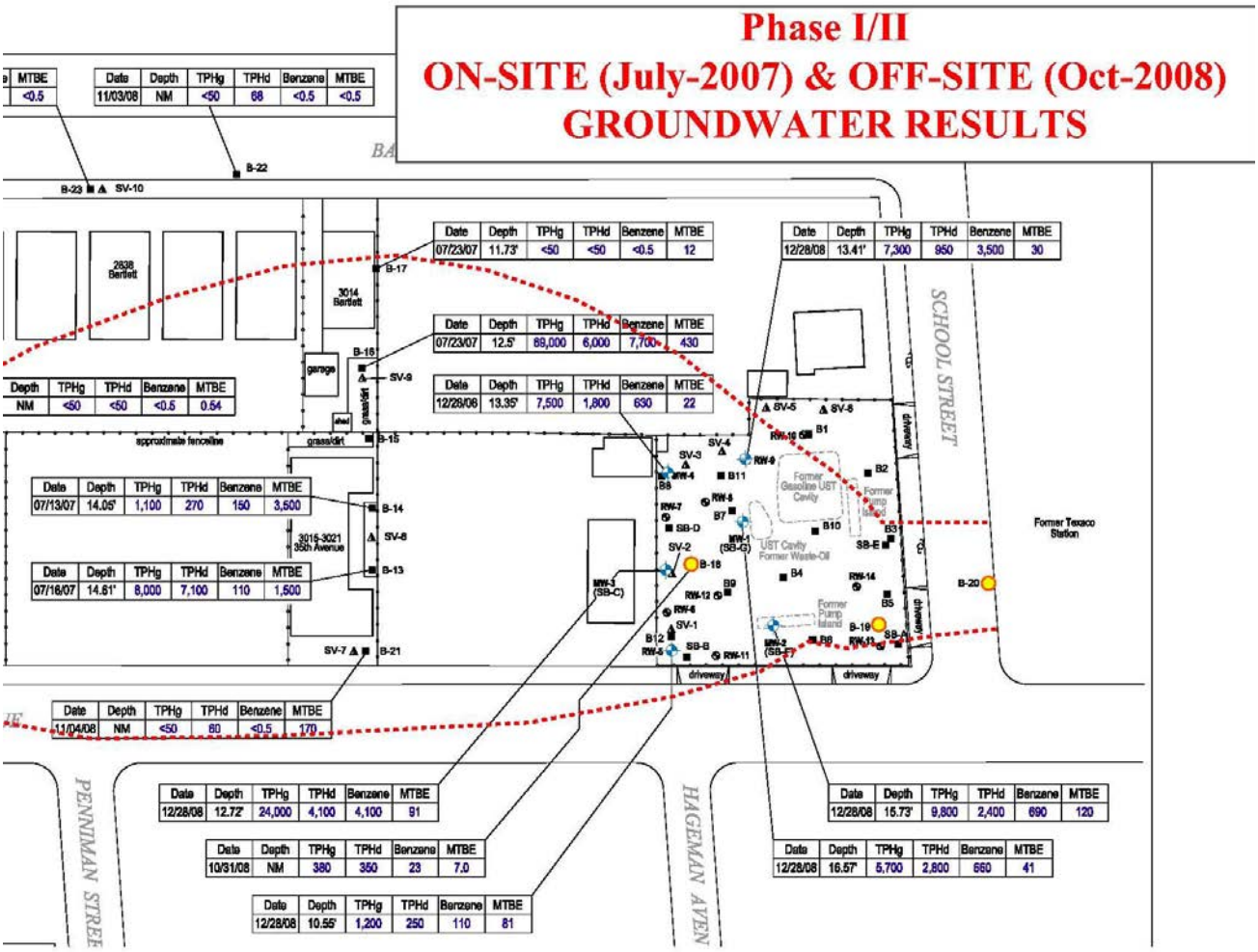
PHASE II HYDROCARBON CONCENTRATIONS in SOIL

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.

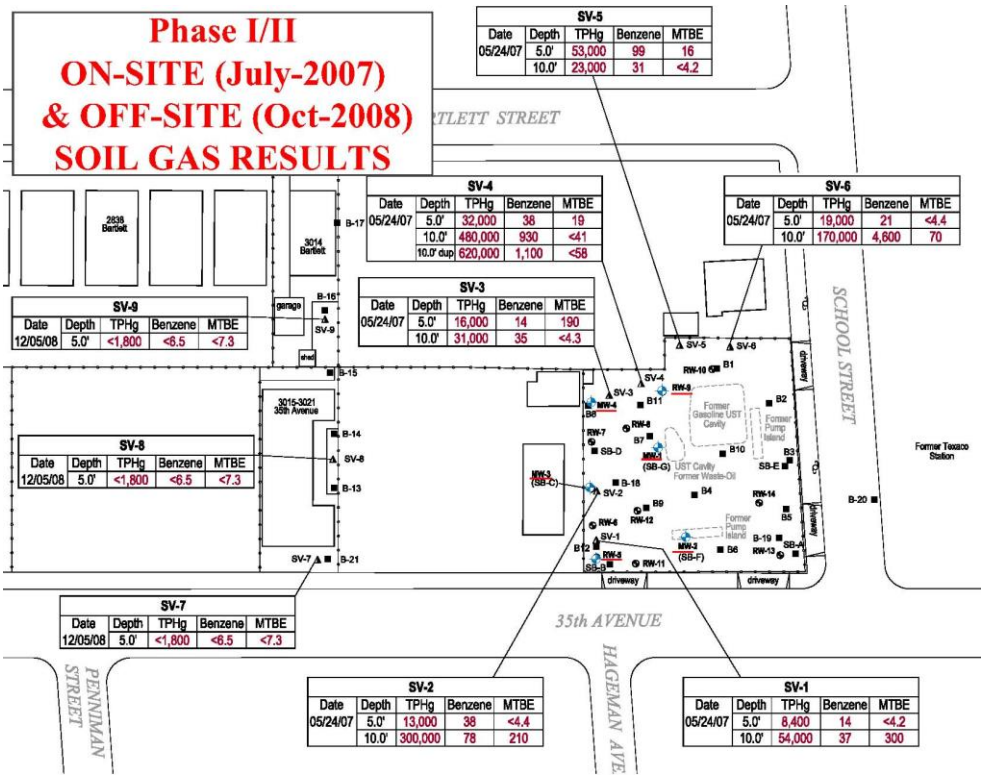
- TPH-gasoline was detected in all on-site, soil gas wells (@5-ft: 8,400-53,000 ug/m^3, max at SV-5; and increasing at the 10-ft sampling interval: 23,000-620,000 ug/m^3, max at SV-4_{dup}). No TPH-gasoline soil gas was detected in any of the seven, off-site soil gas wells (SV-7 through SV-14).
- Benzene 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[11].

- 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.



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

The set of soil gas test results indicates that elevated soil gas concentrations persist at the Site, 7 years after the Dual Phase Extraction system was decommissioned. The lack of soil gas detections in any of the off-site samples indicates that dissolved plume off-gassing is not a risk at distances of 150 ft from the Site.

Documents relating to the discovery, investigation and remediation of the fuel releases release are listed in the reference section at the end of this report.

UPDATED SITE CONCEPTUAL MODEL – 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[12] for Residential/Commercial land uses (ESLs), both in on-site and off-site soils. Diesel-range Total Petroleum Hydrocarbons (TPH-diesel) were also encountered but generally identified as overlapping lighter fraction gasoline hydrocarbons detected within the diesel range.

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

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

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

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

As noted 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**

[12]: 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.

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):

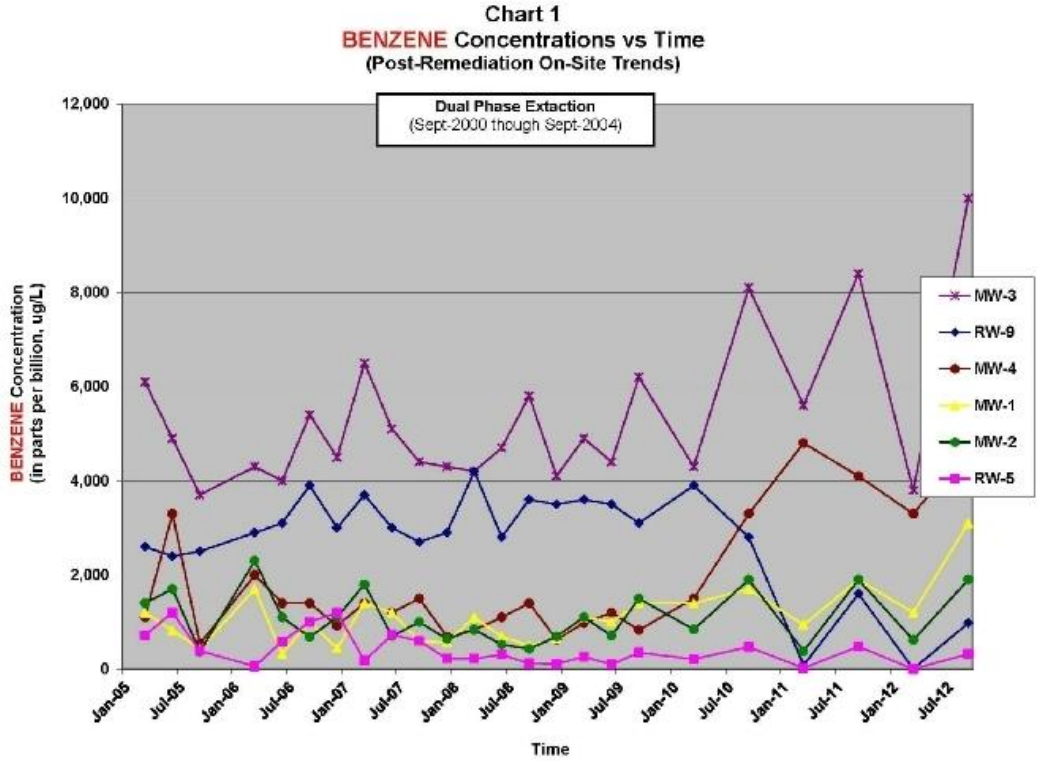
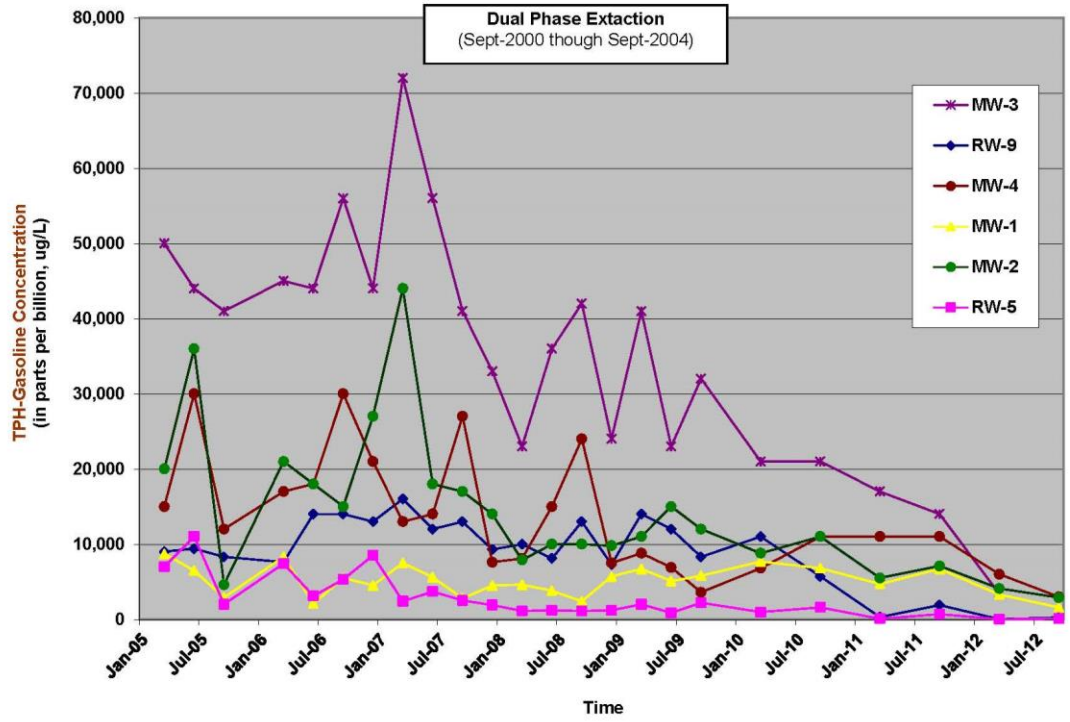
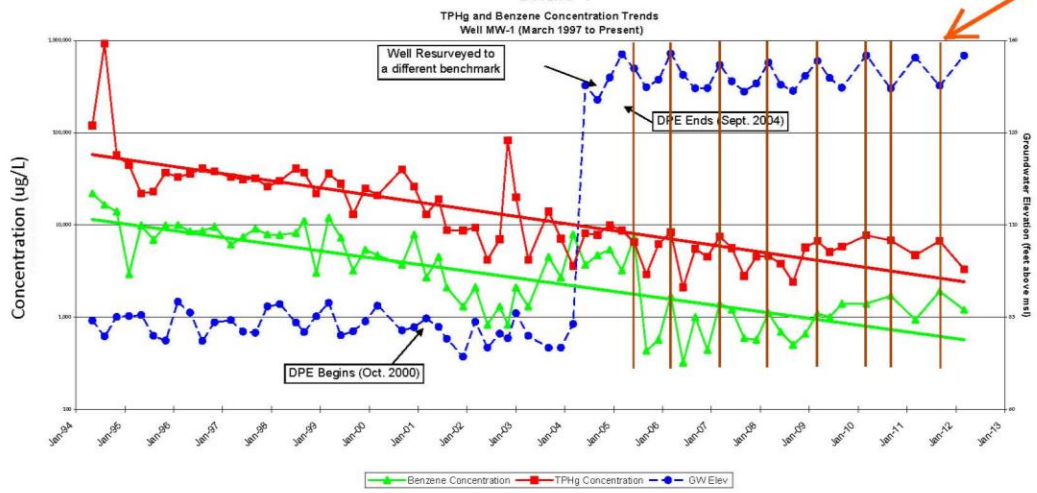


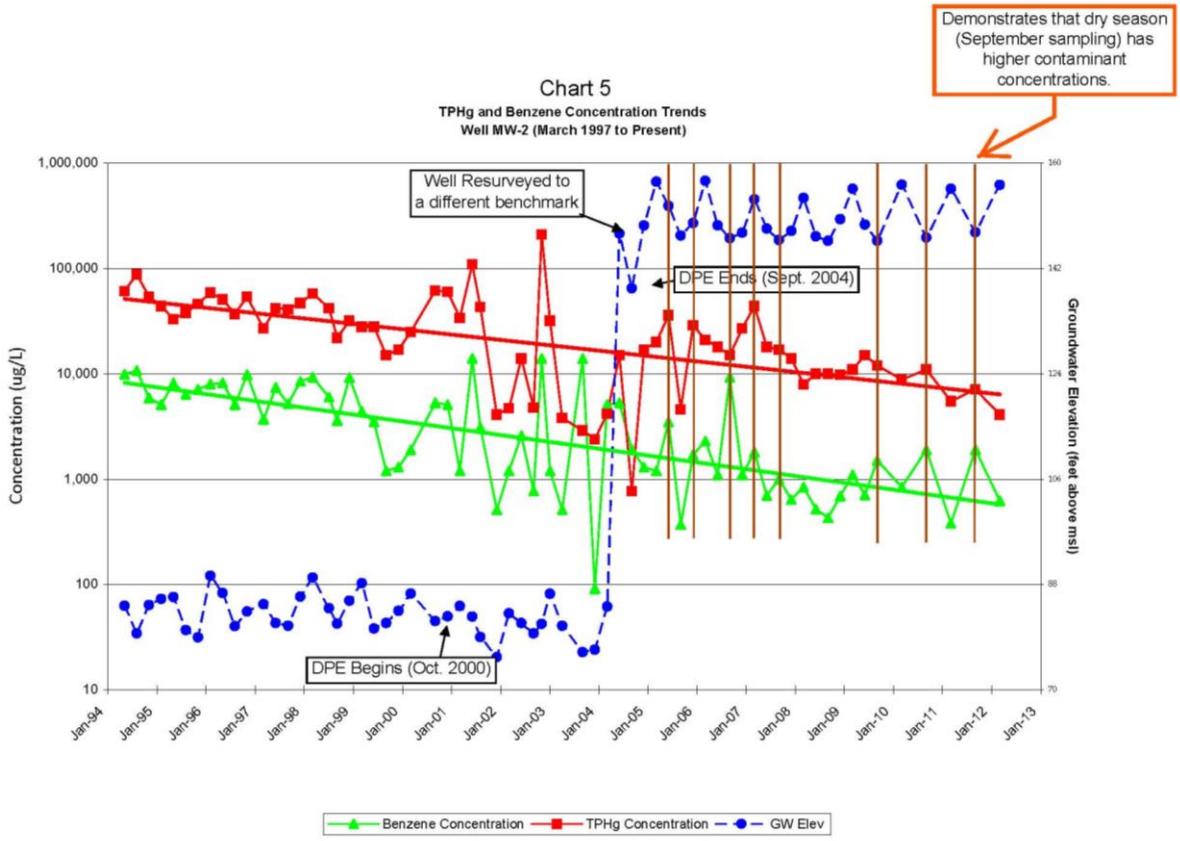
Chart 2
Total Petoleum Hydrocarbons as Gasoline
Concentrations vs Time
(Post-Remediation On-Site Trends)

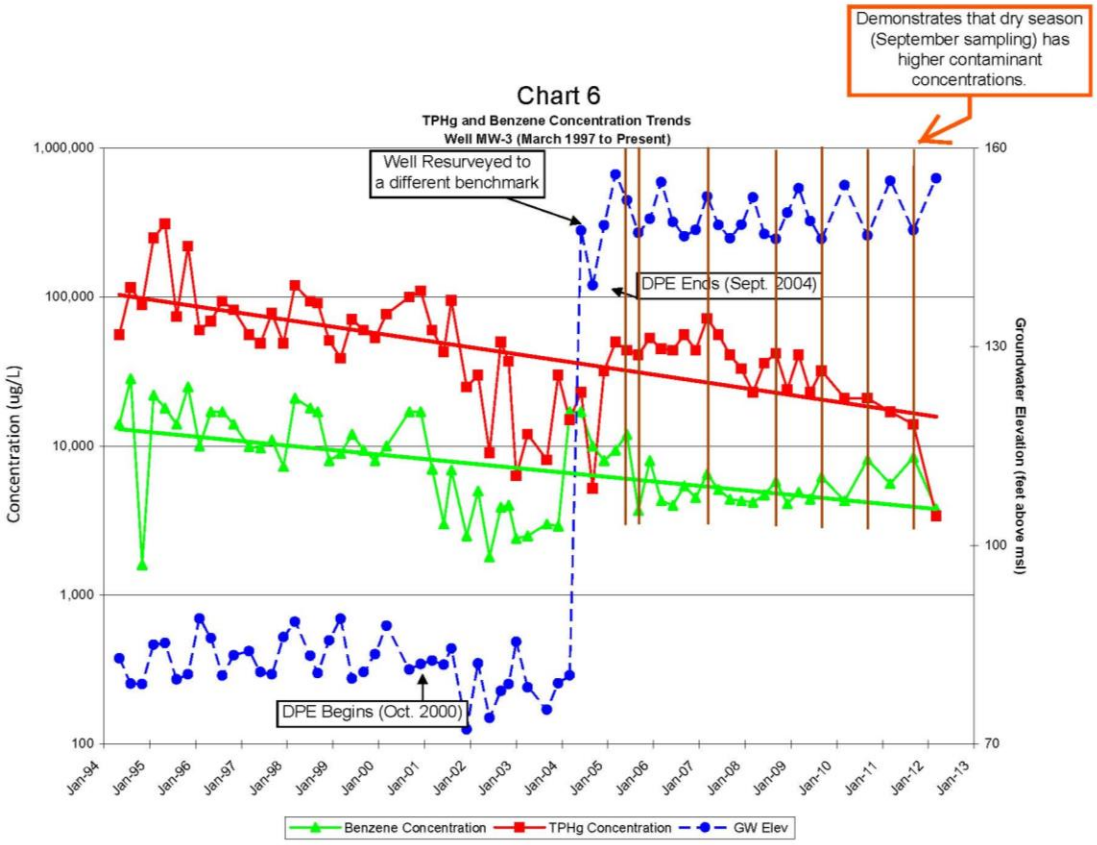


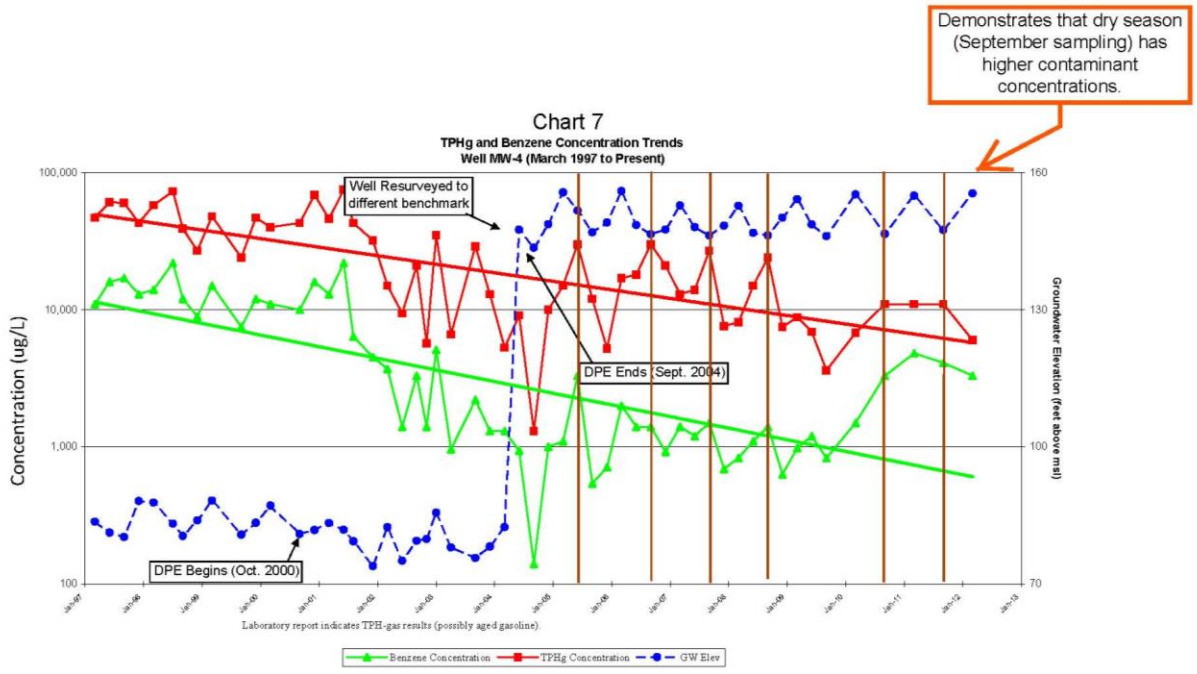
Demonstrates that dry season (September sampling) has higher contaminant concentrations.

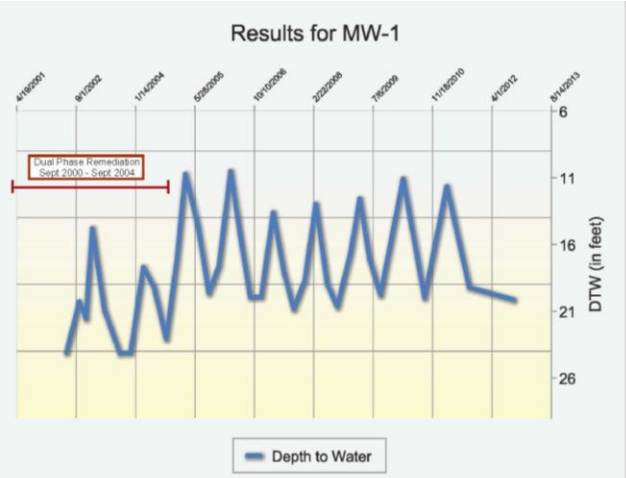
Chart 4

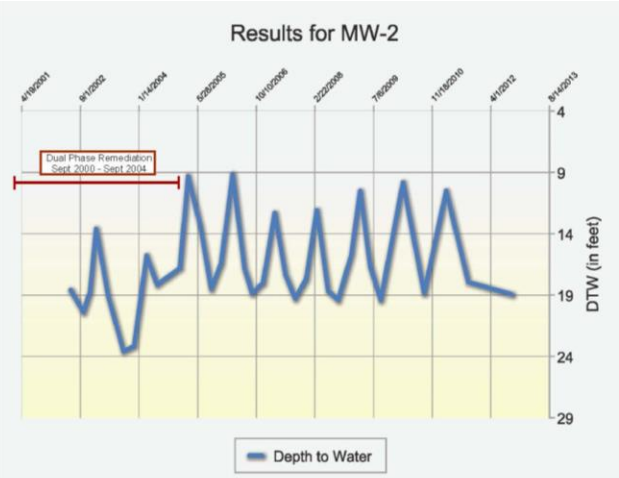


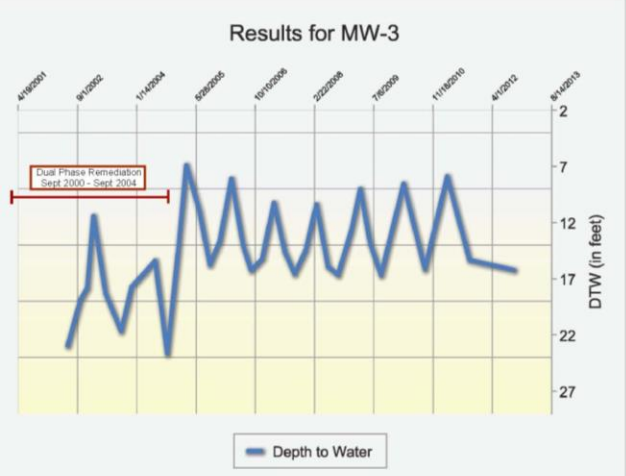

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 5
TPHg and Benzene Concentration Trends
Well MW-2 (March 1997 to Present)
Well Resurveyed to a different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet above msl)
1,000,000
100,000
10,000
1,000
100
10
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

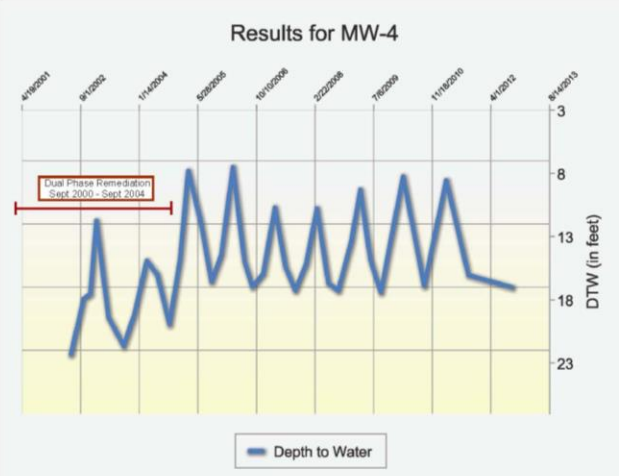

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 6
TPHg and Benzene Concentration Trends
Well MW-3 (March 1997 to Present)
Well Resurveyed to a different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet 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

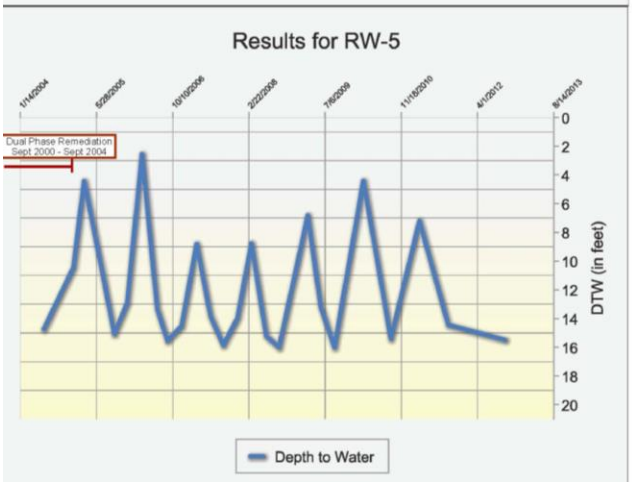

Demonstrates that dry season (September sampling) has higher contaminant concentrations.
Chart 7
TPHg and Benzene Concentration Trends
Well MW-4 (March 1997 to Present)
Well Resurveyed to different benchmark
DPE Ends (Sept. 2004)
DPE Begins (Oct. 2000)
Concentration (ug/L)
Groundwater Elevation (feet 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

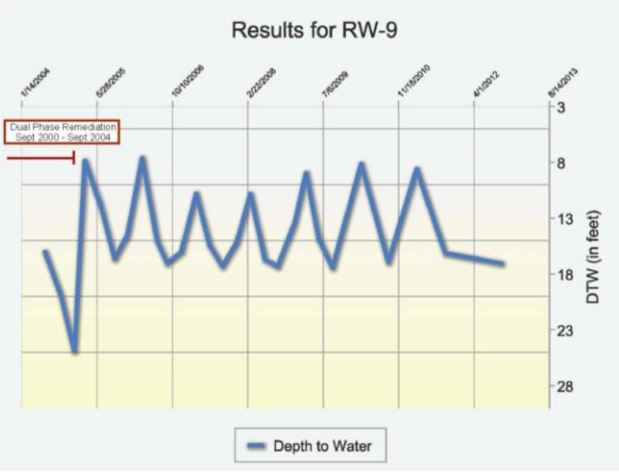

Results for MW-1
Dual Phase Remediation Sept 2000 - Sept 2004
DTW (in feet)
Depth to Water


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*[13] *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.

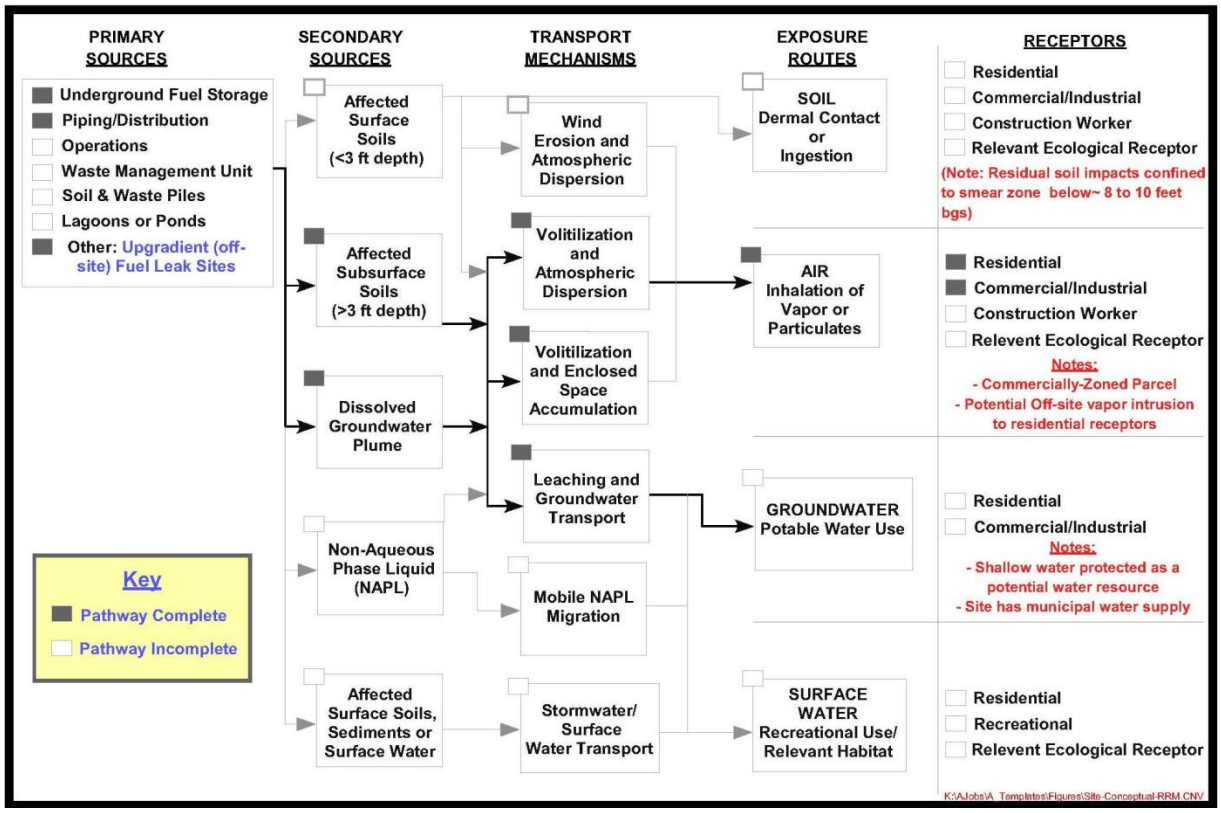
[13]: California Human Health Screening Levels for indoor air and soil gas (CHHSLs): The California Human Health Screening Levels are concentrations of 54 Hazardous Chemicals in soil or soil gas that the California Environmental Protection Agency (Cal/EPA) considers to be below thresholds of concern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

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

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

Potential Exposure Pathways

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



A limited risk remains associated with on-site vapor intrusion (residual soil gas) if the Site is developed without vapor intrusion mitigations / 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 Dates: July 15, 2015

&

Field Methodology for Groundwater Sampling

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

Text Page 1 / 13
INDICATE ATTACHMENTS THAT APPLY
___ Site Map
12 Data Sheets
___ Geologic Logs
___ Photo Sheets
___ COC's
___ Chargeable Materials

Client	***Former Exxon Station***			Date:	***July 15, 2015***
Site Location:	***3055 35th Avenue, Oakland, CA***			Study #:	***2X103.Q***
Field Tasks:	☐ Drilling	☒ Sampling	☐ Other (see below):	Weather Conditions:	SUNNY, HOT
3rd Quarter 2015 Groundwater Monitoring					
Personnel / Company On-Site:	***Dan Kocher (Weber, Hayes and Associates: WHA)***				

FIELD WORK PLANNING:

Performed on: **July 14, 2015**

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-1 Through -6, RW-5,-9,-13,-14**
Analyze for: **TPH-G, TPH-D, BTEX, Fuel Oxygenates, & Lead Scavengers by EPA Method #8260 GC/MS**
Proposed Sampling Date: **July 15, 2015**

ON-SITE FIELD WORK:

Arrive on-site at 0820 to conduct 3rd Quarter ___ ~~Quarterly~~ ANNUAL Groundwater Monitoring Well Sampling.

LABORATORY:

(Initial) Send all analytical to: **Torrent Laboratories**
DK

GROUNDWATER MONITORING FIELD WORK STANDARD OPERATING PROCEDURES:

(Initial)
DK - 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 =** 67.1°F **pH =** 4.0 & 7.0 **Electrical Conductivity =** 1,000 us/cm **Barometric Pressure =** 760 mmHg
D.O. % Saturation = 100 **Oxidation Reduction Potential (ORP) =** 240

BEGIN SAMPLING WELLS:

MW-1 THROUGH MW-6, RW-5, RW-9, 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.

07/15/2015

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

Location	Groundwater Depth	Total Depth of Well	D.O. (mg/L)	ORP (mV)	Floating Product (comments)
MW-1	19.35'	26.5'	0.37	-126	NO FP, HIGH ODOR
MW-2	18.10'	26.5'	0.33	-113	NO FP, TRACE ODOR
MW-3	15.44'	26.5'	0.83	-100	NO FP, TRACE ODOR
MW-4	16.23'	30'	0.83	-104	NO FP, HIGH ODOR
MW-5	15.95'	30'	0.37	-57	NO FP, VERY TRACE ODOR
MW-6	12.53'	30'	0.85	-60	NO FP, MODERATE ODOR
RW-5	14.63'	25.7'	0.41	-44	NO FP, TRACE ODOR
RW-6	14.72'	25.5'	1.42	-43	NO FP, MODERATE ODOR
RW-7	15.35'	29.5'	0.79	-173	NO FP, NO ODOR
RW-8	16.59'	25'	1.18	-33	NO FP, NO ODOR
RW-9	16.29'	25'	0.62	-95	NO FP, TRACE ODOR
RW-10	15.22'	25'	1.29	-123	NO FP, NO ODOR
RW-11	14.68'	25'	1.39	-126	NO FP, MODERATE ODOR
RW-12	15.27'	27'	1.15	-87	NO FP, NO ODOR
RW-13	15.71'	25'	0.35	-107	NO FP, TRACE ODOR
RW-14	15.39'	25'	0.61	-122	NO FP, TRACE ODOR

HOW MANY PURGE DRUMS WERE LEFT ON-SITE: 0 APPROXIMATE VOLUME (gallons): ~~110~~ 7 Gal
CALL PURGE WATER REMOVAL SUBCONTRACTOR ON: **
DRUMS WILL BE PURGED ON: 7/17/2015

COMMENTS: ** CALLED BAYSIDE OIL IN SANTA CRUZ → WILL TAKE TO THEIR OFFICE ON 7/17/2015 FOR DISPOSAL

DAN 07/15/2015
Signature of Field Personel & Date

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

Purge Equipment:

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

Sample Equipment:

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

Analyses Requested :

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

Number and Types of Bottle Used:

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

Well Number: MW-4
Depth to Water: 16.23 TOC
Well Depth: ~~36~~ 30' BGS or TOC
Height W-Column: 13.77' feet (well depth - depth to water)

Pump Intake Depth: ~25 feet
Pump Flow Rate: ~200 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
1020	16.23	—	—	74.3	1.398	5.68	6.78	-82	LOW: CLEAR, MINOR	
1022	16.66	0.43	~~0~~500	67.8	1.419	2.42	6.73	-96		
1024	16.87	0.21	1000	67.6	1.436	1.45	6.75	-102		
1026	16.97	0.10	1600	67.8	1.434	1.13	6.75	-102		
1028	17.11	0.14	2000	67.7	1.418	1.05	6.75	-102		
1030	17.23	0.13	2500	67.8	1.412	0.91	6.75	-102		
1032	17.34	0.11	3000	67.8	1.424	0.83	6.75	-104		✓
STOP: PURGE COMPLETE PARAMETERS STABILIZED										
						D.K.				

Sample Well

Time: 1034 Sample ID: MW-4 Depth: 17.37 feet below TOC

Comments: NO FP, HIGH ODOR

Well Condition: GOOD

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

Purge Equipment:

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

Sample Equipment:

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

Analyses Requested :

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

Number and Types of Bottle Used:

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

Well Number: RW-9
Depth to Water: 16.29 TOC
Well Depth: 25' BGS or TOC
Height W-Column: 8.71 feet (well depth - depth to water)

Pump Intake Depth: ~20 feet
Pump Flow Rate: 233.3 mL/min

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

Time (24 hr.)	Depth to Water (TOC)	Drawdown (feet)	Volume Purged (mL)	Temperature (°F)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
1106	16.29	0	0	73.3	1.200	1.53	6.84	-77	LOW: CLEAR, MINOR	
1108	16.49	0.20	500	69.9	1.164	0.80	6.82	-89	↓	
1110	16.59	0.10	1000	70.0	1.166	0.66	6.82	-93		
1112	16.64	0.05	1400	70.2	1.165	0.62	6.82	-95	↓	X
STOP: PURGE COMPLETE: PARAMETERS STABILIZED										
				DxEx						

Sample Well

Time: 1115 Sample ID: RW-9 Depth: 16.64 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:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

Purge Equipment:

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

Sample Equipment:

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

Analyses Requested :

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

Number and Types of Bottle Used:

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

Well Number: MW-3
Depth to Water: 15.44 TOC
Well Depth: 26.5' BGS or TOC
Height W-Column: 11.06' feet (well depth - depth to water)

Pump Intake Depth: ~20 feet
Pump Flow Rate: 160 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
1142	15.44	0	0	76.7	1.97	2.37	6.88	-86	LOW: CLEAR, MINOR	
1144	15.98	0.54	400	72.7	2.20	1.50	6.78	-92	↓	
1146	16.08	0.64	700	72.5	2.23	1.09	6.76	-93	↓	
1148	16.42	0.98	1000	72.9	2.23	0.95	6.75	-98	↓	
1150	16.63	1.19	1350	73.7	2.24	0.86	6.75	-99	↓	
1152	16.74	1.30	1600	73.9	2.23	0.83	6.75	-100	↓	X
STOP: PURGE COMPLETE - PARAMETERS STABILIZED										
							Dx Ex			

Sample Well

Time: 1157 Sample ID: MW-3 Depth: 16.74 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:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

Purge Equipment:

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

Sample Equipment:

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

Analyses Requested :

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

Number and Types of Bottle Used:

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

Well Number: MW-1
Depth to Water: 19.35 TOC
Well Depth: 26.5 BGS or TOC
Height W-Column: 7.15 feet (well depth - depth to water)

Pump Intake Depth: ~22 feet
Pump Flow Rate: 150 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
1228	19.35	0	0	75.8	1.74	1.75	7.20	-109	LOW: CLEAR, MINOR	
1230	19.49	0.14	300	73.2	1.58	0.83	6.99	-119		
1232	19.54	0.19	600	72.5	1.56	0.54	6.96	-122		
1234	19.61	0.26	900	72.4	1.55	0.44	6.95	-124		
1236	19.66	0.31	1200	72.2	1.55	0.39	6.94	-125		
1238	19.72	0.37	1500	72.2	1.55	0.37	6.94	-126	↓	X
STOP:	PURGE COMPLETE - PARAMETERS STABILIZED									

Sample Well

Time: 1245 Sample ID: MW-1 Depth: 19.72 feet below TOC

Comments: NO FP, STRONG - HIGH ODOR

Well Condition: GOOD

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

Purge Equipment:

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

Sample Equipment:

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

Analyses Requested :

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

Number and Types of Bottle Used:

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

Well Number: RW-5
Depth to Water: 14.63' TOC
Well Depth: 25.7' BGS or TOC
Height W-Column: 11.07 feet (well depth - depth to water)

Pump Intake Depth: ~20 feet
Pump Flow Rate: 133.3 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
1304	~~14.63~~	0	0	77.4	0.870	2.22	7.19	-82	~~LOW~~: CLEAR, MINOR	
1306	14.79	0.12	400	74.0	0.658	0.79	6.93	-56		
1308	14.83	0.16	700	74.0	0.640	0.65	6.88	-48		
1310	14.88	0.21	900	74.1	0.635	0.55	6.86	-45		
1312	14.92	0.25	1100	73.9	0.635	0.49	6.84	-41		
1314	14.98	0.31	1400	73.6	0.635	0.43	6.82	-40		
1316	15.03	0.36	1600	73.6	0.636	~~0.41~~	6.81	-44	↓	X
STOP: PARAMETERS STABILIZED PURGE COMPLETE										
						DUP X				

Sample Well

Time: 1322 Sample ID: RW-5 Depth: 15.03' 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:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

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-2
Depth to Water: 18.10 TOC
Well Depth: 26.5 BGS or TOC
Height W-Column: 8.4 feet (well depth - depth to water)

Pump Intake Depth: ~22 feet
Pump Flow Rate: 142 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
1340	18.10	0	0	78.0	1.322	2.10	6.93	-80	LOW: CLEAR, MINOR	
1342	18.23	0.13	350	76.0	1.730	1.01	6.93	-106	LOW: CLEAR, MODERATE	
1344	18.28	0.18	600	75.5	1.770	0.61	6.95	-107		
1346	18.31	0.21	900	75.5	1.770	0.50	6.95	-110		
1348	18.34	0.24	1200	75.2	1.780	0.40	6.95	-112		
1350	18.38	0.28	1500	74.8	1.770	0.36	6.95	-113		
1352	18.41	0.31	1700	74.8	1.770	0.33	6.95	-113		X
STOP: PURGE COMPLETE PARAMETERS STABILIZED										
						DK				

Sample Well

Time: 1400 Sample ID: MW-2 Depth: 18.41 feet below TOC

Comments: NOPP, TRACE ODOR

Well Condition: GOOD

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

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-14
Depth to Water: 15.39 TOC
Well Depth: 25' BGS or TOC
Height W-Column: 9.61 feet (well depth - depth to water)

Pump Intake Depth: ~20 feet
Pump Flow Rate: 175 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
1419	15.39	Ø	Ø	75.5	1.062	1.62	7.11	-104	LOW: CLEAR MINOR	
1421	15.54	0.15	400	74.7	0.924	0.79	7.05	-112	↓	
1423	15.58	0.19	800	74.9	0.931	0.70	7.04	-117		
1425	15.62	0.23	1200	74.7	0.929	0.64	7.04	-120		
1427	15.64	0.25	1400	75.0	0.928	0.61	7.03	-122	↓	X
STOP: PURGE COMPLETE: PARAMETERS STABILIZED										
					DxKx					

Sample Well

Time: 1437 Sample ID: RW-14 Depth: 15.64 feet below TOC

Comments: NO FP, TRACE ODOR

Well Condition: FAIR

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

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: 15.71 TOC
Well Depth: 25' BGS or TOC
Height W-Column: 9.29 feet (well depth - depth to water)

Pump Intake Depth: ~20 feet
Pump Flow Rate: 150 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
1451	15.71	0	0	77.0	0.914	1.95	7.19	-95	MED: CLEAR, MODERATE	
1453	15.83	0.12	300	72.9	0.911	0.66	7.02	-107	LOW: CLEAR, MINOR	
1455	15.87	0.16	600	72.5	0.908	0.48	7.00	-108	↓	
1457	15.93	0.22	900	72.2	0.903	0.38	6.99	-108	↓	
1459	15.98	0.27	1200	72.2	0.901	0.35	6.99	-107	↓	X
	STOP: PURGE COMPLETE - PARAMETERS STABILIZED									

DK

Sample Well

Time: 1507 Sample ID: RW-13 Depth: 15.98 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:** *July 15, 2014*

Sample No.: MW-5 **Sample Location:** MW-5

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

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: 15.95 TOC
Well Depth: 30' BGS or TOC
Height W-Column: 14.05 feet (well depth - depth to water)

Pump Intake Depth: ~20 feet
Pump Flow Rate: 150 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
1527	15.95	Ø	Ø	76.6	1.325	2.44	7.07	-53	LOW: CLEAR, MINOR	
1529	16.33	0.48	400	72.8	1.54	0.86	6.75	-55	↓	
1531	16.39	0.48	650	72.3	1.55	0.62	6.72	-57		
1533	16.41	0.50	1000	72.2	1.55	0.50	6.72	-56		
1535	16.43	0.52	1200	72.2	1.55	0.45	6.71	-56		
1537	16.44	0.53	1500	72.1	1.54	0.39	6.71	-56		
1539	16.47	0.56	1800	71.9	1.54	0.37	6.71	-57	↓	X
STOP:	PURGE	COMPLETE -	PARAMETERS	STABILIZED						
					D x Gr					

Sample Well

Time: 1547 Sample ID: MW-5 Depth: 16.47 feet below TOC

Comments: NO FP, VERY TRACE ODOR

Well Condition: GOOD

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *Former Exxon Station / 2X103.Q* **Date:** *July 15, 2014*

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

Samplers Name: *Dan Kocher (Weber, Hayes, & Associates)* **Recorded by:** DK

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: 12.53 TOC
Well Depth: 30' BGS or TOC
Height W-Column: 17.47 feet (well depth - depth to water)

Pump Intake Depth: ~22 feet
Pump Flow Rate: 156 mL/min

Lab: Torrent

Transportation: *Courier*

Time (24 hr.)	Depth to Water (TOC)	Drawdown (feet)	Volume Purged (mL)	Temperature (°F)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
1606	12.53	Ø	Ø	74.4	0.909	2.23	6.94	-61	LOW; CLEAR, MINOR	
1608	15.32	2.79	400	73.3	0.798	1.47	6.85	-54		
1610	15.33	~~2.81~~ 2.80	500	73.5	0.798	1.10	6.83	-54		
1612	15.52	2.99	800	72.1	0.780	1.17	6.80	-55		
1614	15.64	3.11	1200	71.6	0.787	1.01	6.79	-56		
1616	15.73	3.20	1600	71.6	0.787	0.93	6.79	-58		
1618	15.79	3.26	1800	71.4	0.787	0.85	6.79	-60		X
STOP:	PURGE	COMPLETE -	PARAMETERS	STABILIZED						

Sample Well

Time: 1625 Sample ID: MW-6 Depth: 15.79 feet below TOC

Comments: NO FP, MODERATE ODOR

Well Condition: GOOD

Field Methodology for Groundwater Monitoring

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

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

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

After purging, and when groundwater parameters have stabilized, a groundwater sample is collected from each well with the dedicated sample tubing, and decanted into the appropriate laboratory-supplied sample container(s). The sample containers at this site were three (3) 40-ml. Vials, and two (2) 1-liter amber bottles. Vials are filled until a convex meniscus formed above the vial rim, then sealed with a Teflon®-septum cap, and inverted to insure that there were no air bubbles or headspace in the vial. All other ample containers are completely filled with no headspace. All samples are labeled in the field and transported in insulated containers cooled with blue ice to state-certified laboratories under proper chain of custody procedures.

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

Appendix C

Laboratory Report & Chain of Custody Documentation

Groundwater Sample Results

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

RE: Former Exxon Station / 2X103.Q

Work Order No.: 1507071

Dear Jered Chaney:

Torrent Laboratory, Inc. received 10 sample(s) on July 16, 2015 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.

Yelena Brodskaya
Technical Manager

July 21, 2015
Date

Date: 7/21/2015

Client: Weber, Hayes & Associates

Project: Former Exxon Station / 2X103.Q

Work Order: 1507071

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: 07/16/15
Date Reported: 07/21/15

MW-1 1507071-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	42	3.7	21	1700	ug/L
Toluene	SW8260B	8.4	0.50	4.2	2.0	ug/L
Ethyl Benzene	SW8260B	8.4	0.62	4.2	16	ug/L
m,p-Xylene	SW8260B	8.4	1.1	8.4	1.8	ug/L
MTBE	SW8260B	8.4	1.4	4.2	17	ug/L
tert-Butanol	SW8260B	8.4	13	42	110	ug/L
TPH as Gasoline	8260TPH	8.4	260	420	3700	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	1.4	mg/L

MW-2 1507071-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	8.4	0.73	4.2	700	ug/L
Toluene	SW8260B	8.4	0.50	4.2	2.6	ug/L
Ethyl Benzene	SW8260B	8.4	0.62	4.2	33	ug/L
m,p-Xylene	SW8260B	8.4	1.1	8.4	2.7	ug/L
MTBE	SW8260B	8.4	1.4	4.2	16	ug/L
tert-Butanol	SW8260B	8.4	13	42	46	ug/L
TPH as Gasoline	8260TPH	8.4	260	420	2900	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	1.7	mg/L

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

MW-3 1507071-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	42	3.7	21	4400	ug/L
Toluene	SW8260B	42	2.5	21	11	ug/L
Ethyl Benzene	SW8260B	42	3.1	21	230	ug/L
m,p-Xylene	SW8260B	42	5.6	42	77	ug/L
o-Xylene	SW8260B	42	3.2	21	10	ug/L
MTBE	SW8260B	42	7.2	21	58	ug/L
tert-Butanol	SW8260B	42	65	210	320	ug/L
TPH as Gasoline	8260TPH	84	2600	4200	14000	ug/L
TPH as Diesel	SW8015B(M)	2	0.0800	0.20	1.9	mg/L

MW-4 1507071-004

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	42	3.7	21	2300	ug/L
TPH as Gasoline	8260TPH	42	1300	2100	6900	ug/L
Toluene	SW8260B	8.4	0.50	4.2	4.7	ug/L
Ethyl Benzene	SW8260B	8.4	0.62	4.2	47	ug/L
m,p-Xylene	SW8260B	8.4	1.1	8.4	3.4	ug/L
o-Xylene	SW8260B	8.4	0.64	4.2	2.0	ug/L
MTBE	SW8260B	8.4	1.4	4.2	18	ug/L
tert-Butanol	SW8260B	8.4	13	42	100	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	1.8	mg/L

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

MW-5 1507071-005

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	21	1.8	11	2200	ug/L
Toluene	SW8260B	21	1.2	11	33	ug/L
Ethyl Benzene	SW8260B	21	1.6	11	450	ug/L
m,p-Xylene	SW8260B	21	2.8	21	31	ug/L
o-Xylene	SW8260B	21	1.6	11	3.2	ug/L
MTBE	SW8260B	21	3.6	11	850	ug/L
tert-Butanol	SW8260B	21	32	110	6700	ug/L
TPH as Gasoline	8260TPH	21	660	1100	8800	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	0.45	mg/L

MW-6 1507071-006

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.087	0.50	89	ug/L
Toluene	SW8260B	1	0.059	0.50	2.1	ug/L
Ethyl Benzene	SW8260B	1	0.074	0.50	2.1	ug/L
m,p-Xylene	SW8260B	1	0.13	1.0	2.3	ug/L
o-Xylene	SW8260B	1	0.076	0.50	0.55	ug/L
tert-Butanol	SW8260B	1	1.5	5.0	19	ug/L
1,2-Dichloroethane	SW8260B	1	0.11	0.50	2.2	ug/L
TPH as Gasoline	8260TPH	4.2	130	210	3300	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	0.31	mg/L

RW-5 1507071-007

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.087	0.50	1.2	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	0.15	mg/L

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

RW-9 1507071-008

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Toluene	SW8260B	1	0.059	0.50	3.2	ug/L
m,p-Xylene	SW8260B	1	0.13	1.0	2.2	ug/L
MTBE	SW8260B	1	0.17	0.50	9.3	ug/L
tert-Butanol	SW8260B	1	1.5	5.0	230	ug/L
TPH as Gasoline	8260TPH	1	31	50	550	ug/L
Benzene	SW8260B	21	1.8	11	120	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	0.45	mg/L

RW-13 1507071-009

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.087	0.50	1.2	ug/L
tert-Butanol	SW8260B	1	1.5	5.0	38	ug/L
TPH as Gasoline	8260TPH	1	31	50	79	ug/L

RW-14 1507071-010

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Benzene	SW8260B	1	0.087	0.50	1.2	ug/L
tert-Butanol	SW8260B	1	1.5	5.0	31	ug/L
TPH as Gasoline	8260TPH	1	31	50	78	ug/L
TPH as Diesel	SW8015B(M)	1	0.0400	0.10	0.14	mg/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-1	**Lab Sample ID:**	1507071-001A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 12:45		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	07/17/15	42	3.7	21	1700		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	42	61.2	131	101		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	42	75.1	127	108		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	42	64.1	120	107		%	426244	NA
The results shown below are reported using their MDL.											
Toluene	SW8260B	NA	07/17/15	8.4	0.50	4.2	2.0	J	ug/L	426244	NA
Ethyl Benzene	SW8260B	NA	07/17/15	8.4	0.62	4.2	16		ug/L	426244	NA
m,p-Xylene	SW8260B	NA	07/17/15	8.4	1.1	8.4	1.8	J	ug/L	426244	NA
o-Xylene	SW8260B	NA	07/17/15	8.4	0.64	4.2	ND		ug/L	426244	NA
MTBE	SW8260B	NA	07/17/15	8.4	1.4	4.2	17		ug/L	426244	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/17/15	8.4	1.3	4.2	ND		ug/L	426244	NA
ETBE	SW8260B	NA	07/17/15	8.4	1.1	4.2	ND		ug/L	426244	NA
TAME	SW8260B	NA	07/17/15	8.4	0.80	4.2	ND		ug/L	426244	NA
tert-Butanol	SW8260B	NA	07/17/15	8.4	13	42	110		ug/L	426244	NA
1,2-Dichloroethane	SW8260B	NA	07/17/15	8.4	0.95	4.2	ND		ug/L	426244	NA
1,2-Dibromoethane	SW8260B	NA	07/17/15	8.4	0.57	4.2	ND		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	8.4	61.2	131	101		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	8.4	75.1	127	106		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	8.4	64.1	120	109		%	426244	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/17/15	07/17/15	8.4	260	420	3700	x	ug/L	426244	14876
(S) 4-Bromofluorobenzene	8260TPH	7/17/15	07/17/15	8.4	41.5	125	119		%	426244	14876

NOTE: x - Does not match pattern of reference Gasoline standard. Reported TPH value includes amount due to discrete peak and non-target hydrocarbons within range of C5-C12 quantified as gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-1	**Lab Sample ID:**	1507071-001B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 12:45		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	1.4	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	76.2		%	426217	14846

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-2	**Lab Sample ID:**	1507071-002A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 14:00		
Tag Number:	Former Exxon Station		

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	07/17/15	8.4	0.73	4.2	700		ug/L	426244	NA
Toluene	SW8260B	NA	07/17/15	8.4	0.50	4.2	2.6	J	ug/L	426244	NA
Ethyl Benzene	SW8260B	NA	07/17/15	8.4	0.62	4.2	33		ug/L	426244	NA
m,p-Xylene	SW8260B	NA	07/17/15	8.4	1.1	8.4	2.7	J	ug/L	426244	NA
o-Xylene	SW8260B	NA	07/17/15	8.4	0.64	4.2	ND		ug/L	426244	NA
MTBE	SW8260B	NA	07/17/15	8.4	1.4	4.2	16		ug/L	426244	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/17/15	8.4	1.3	4.2	ND		ug/L	426244	NA
ETBE	SW8260B	NA	07/17/15	8.4	1.1	4.2	ND		ug/L	426244	NA
TAME	SW8260B	NA	07/17/15	8.4	0.80	4.2	ND		ug/L	426244	NA
tert-Butanol	SW8260B	NA	07/17/15	8.4	13	42	46		ug/L	426244	NA
1,2-Dichloroethane	SW8260B	NA	07/17/15	8.4	0.95	4.2	ND		ug/L	426244	NA
1,2-Dibromoethane	SW8260B	NA	07/17/15	8.4	0.57	4.2	ND		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	8.4	61.2	131	107		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	8.4	75.1	127	107		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	8.4	64.1	120	113		%	426244	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/17/15	07/17/15	8.4	260	420	2900	x	ug/L	426244	14876
(S) 4-Bromofluorobenzene	8260TPH	7/17/15	07/17/15	8.4	41.5	125	120		%	426244	14876

NOTE: x - 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.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-2	**Lab Sample ID:**	1507071-002B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 14:00		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	1.7	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	116		%	426217	14846

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-3	**Lab Sample ID:**	1507071-003A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 11:57		
Tag Number:	Former Exxon Station		

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	07/17/15	42	3.7	21	4400		ug/L	426244	NA
Toluene	SW8260B	NA	07/17/15	42	2.5	21	11	J	ug/L	426244	NA
Ethyl Benzene	SW8260B	NA	07/17/15	42	3.1	21	230		ug/L	426244	NA
m,p-Xylene	SW8260B	NA	07/17/15	42	5.6	42	77		ug/L	426244	NA
o-Xylene	SW8260B	NA	07/17/15	42	3.2	21	10	J	ug/L	426244	NA
MTBE	SW8260B	NA	07/17/15	42	7.2	21	58		ug/L	426244	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/17/15	42	6.4	21	ND		ug/L	426244	NA
ETBE	SW8260B	NA	07/17/15	42	5.3	21	ND		ug/L	426244	NA
TAME	SW8260B	NA	07/17/15	42	4.0	21	ND		ug/L	426244	NA
tert-Butanol	SW8260B	NA	07/17/15	42	65	210	320		ug/L	426244	NA
1,2-Dichloroethane	SW8260B	NA	07/17/15	42	4.7	21	ND		ug/L	426244	NA
1,2-Dibromoethane	SW8260B	NA	07/17/15	42	2.8	21	ND		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	42	61.2	131	103		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	42	75.1	127	109		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	42	64.1	120	109		%	426244	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/17/15	07/17/15	84	2600	4200	14000	x	ug/L	426244	14876
(S) 4-Bromofluorobenzene	8260TPH	7/17/15	07/17/15	84	41.5	125	121		%	426244	14876

NOTE: x - 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.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-3	**Lab Sample ID:**	1507071-003B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 11:57		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	2	0.0800	0.20	1.9	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	2	64.2	123	70.4		%	426217	14846

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-4	**Lab Sample ID:**	1507071-004A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 10:34		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	07/17/15	42	3.7	21	2300		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	42	61.2	131	102		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	42	75.1	127	108		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	42	64.1	120	106		%	426244	NA
The results shown below are reported using their MDL.											
Toluene	SW8260B	NA	07/17/15	8.4	0.50	4.2	4.7		ug/L	426244	NA
Ethyl Benzene	SW8260B	NA	07/17/15	8.4	0.62	4.2	47		ug/L	426244	NA
m,p-Xylene	SW8260B	NA	07/17/15	8.4	1.1	8.4	3.4	J	ug/L	426244	NA
o-Xylene	SW8260B	NA	07/17/15	8.4	0.64	4.2	2.0	J	ug/L	426244	NA
MTBE	SW8260B	NA	07/17/15	8.4	1.4	4.2	18		ug/L	426244	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/17/15	8.4	1.3	4.2	ND		ug/L	426244	NA
ETBE	SW8260B	NA	07/17/15	8.4	1.1	4.2	ND		ug/L	426244	NA
TAME	SW8260B	NA	07/17/15	8.4	0.80	4.2	ND		ug/L	426244	NA
tert-Butanol	SW8260B	NA	07/17/15	8.4	13	42	100		ug/L	426244	NA
1,2-Dichloroethane	SW8260B	NA	07/17/15	8.4	0.95	4.2	ND		ug/L	426244	NA
1,2-Dibromoethane	SW8260B	NA	07/17/15	8.4	0.57	4.2	ND		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	8.4	61.2	131	104		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	8.4	75.1	127	108		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	8.4	64.1	120	109		%	426244	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/17/15	07/17/15	42	1300	2100	6900	x	ug/L	426244	14876
(S) 4-Bromofluorobenzene	8260TPH	7/17/15	07/17/15	42	41.5	125	104		%	426244	14876

NOTE: x - 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.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-4	**Lab Sample ID:**	1507071-004B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 10:34		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	1.8	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	86.1		%	426217	14846

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-5	**Lab Sample ID:**	1507071-005A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 15:47		
Tag Number:	Former Exxon Station		

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	07/17/15	21	1.8	11	2200		ug/L	426244	NA
Toluene	SW8260B	NA	07/17/15	21	1.2	11	33		ug/L	426244	NA
Ethyl Benzene	SW8260B	NA	07/17/15	21	1.6	11	450		ug/L	426244	NA
m,p-Xylene	SW8260B	NA	07/17/15	21	2.8	21	31		ug/L	426244	NA
o-Xylene	SW8260B	NA	07/17/15	21	1.6	11	3.2	J	ug/L	426244	NA
MTBE	SW8260B	NA	07/17/15	21	3.6	11	850		ug/L	426244	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/17/15	21	3.2	11	ND		ug/L	426244	NA
ETBE	SW8260B	NA	07/17/15	21	2.7	11	ND		ug/L	426244	NA
TAME	SW8260B	NA	07/17/15	21	2.0	11	ND		ug/L	426244	NA
tert-Butanol	SW8260B	NA	07/17/15	21	32	110	6700		ug/L	426244	NA
1,2-Dichloroethane	SW8260B	NA	07/17/15	21	2.4	11	ND		ug/L	426244	NA
1,2-Dibromoethane	SW8260B	NA	07/17/15	21	1.4	11	ND		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	21	61.2	131	103		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	21	75.1	127	112		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	21	64.1	120	109		%	426244	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 as Gasoline	8260TPH	7/17/15	07/17/15	21	660	1100	8800	x	ug/L	426244	14876
(S) 4-Bromofluorobenzene	8260TPH	7/17/15	07/17/15	21	41.5	125	97.0		%	426244	14876

NOTE: x - Although TPH as Gasoline constituents are present, sample chromatogram does not resemble pattern of reference Gasoline standard.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-5	**Lab Sample ID:**	1507071-005B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 15:47		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	0.45	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	67.8		%	426217	14846

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-6	**Lab Sample ID:**	1507071-006A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 16:25		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	07/20/15	1	0.087	0.50	89		ug/L	426248	NA
Toluene	SW8260B	NA	07/20/15	1	0.059	0.50	2.1		ug/L	426248	NA
Ethyl Benzene	SW8260B	NA	07/20/15	1	0.074	0.50	2.1		ug/L	426248	NA
m,p-Xylene	SW8260B	NA	07/20/15	1	0.13	1.0	2.3		ug/L	426248	NA
o-Xylene	SW8260B	NA	07/20/15	1	0.076	0.50	0.55		ug/L	426248	NA
MTBE	SW8260B	NA	07/20/15	1	0.17	0.50	ND		ug/L	426248	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/20/15	1	0.15	0.50	ND		ug/L	426248	NA
ETBE	SW8260B	NA	07/20/15	1	0.13	0.50	ND		ug/L	426248	NA
TAME	SW8260B	NA	07/20/15	1	0.095	0.50	ND		ug/L	426248	NA
tert-Butanol	SW8260B	NA	07/20/15	1	1.5	5.0	19		ug/L	426248	NA
1,2-Dichloroethane	SW8260B	NA	07/20/15	1	0.11	0.50	2.2		ug/L	426248	NA
1,2-Dibromoethane	SW8260B	NA	07/20/15	1	0.068	0.50	ND		ug/L	426248	NA
(S) Dibromofluoromethane	SW8260B	NA	07/20/15	1	61.2	131	99.1		%	426248	NA
(S) Toluene-d8	SW8260B	NA	07/20/15	1	75.1	127	122		%	426248	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/20/15	1	64.1	120	110		%	426248	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/17/15	07/17/15	4.2	130	210	3300	x	ug/L	426244	14876
(S) 4-Bromofluorobenzene	8260TPH	7/17/15	07/17/15	4.2	41.5	125	120		%	426244	14876

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

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	MW-6	**Lab Sample ID:**	1507071-006B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 16:25		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	0.31	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	69.5		%	426217	14846

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	RW-5	**Lab Sample ID:**	1507071-007A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 13:22		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	07/17/15	1	0.087	0.50	1.2		ug/L	426244	NA
Toluene	SW8260B	NA	07/17/15	1	0.059	0.50	ND		ug/L	426244	NA
Ethyl Benzene	SW8260B	NA	07/17/15	1	0.074	0.50	ND		ug/L	426244	NA
m,p-Xylene	SW8260B	NA	07/17/15	1	0.13	1.0	ND		ug/L	426244	NA
o-Xylene	SW8260B	NA	07/17/15	1	0.076	0.50	ND		ug/L	426244	NA
MTBE	SW8260B	NA	07/17/15	1	0.17	0.50	ND		ug/L	426244	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/17/15	1	0.15	0.50	ND		ug/L	426244	NA
ETBE	SW8260B	NA	07/17/15	1	0.13	0.50	ND		ug/L	426244	NA
TAME	SW8260B	NA	07/17/15	1	0.095	0.50	ND		ug/L	426244	NA
tert-Butanol	SW8260B	NA	07/17/15	1	1.5	5.0	ND		ug/L	426244	NA
1,2-Dichloroethane	SW8260B	NA	07/17/15	1	0.11	0.50	ND		ug/L	426244	NA
1,2-Dibromoethane	SW8260B	NA	07/17/15	1	0.068	0.50	ND		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	1	61.2	131	107		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	1	75.1	127	110		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	1	64.1	120	108		%	426244	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/17/15	07/17/15	1	31	50	ND		ug/L	426244	14876
(S) 4-Bromofluorobenzene	8260TPH	7/17/15	07/17/15	1	41.5	125	103		%	426244	14876

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	RW-5	**Lab Sample ID:**	1507071-007B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 13:22		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	0.15	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	113		%	426217	14846

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	RW-9	**Lab Sample ID:**	1507071-008A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 11:15		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Toluene	SW8260B	NA	07/20/15	1	0.059	0.50	3.2		ug/L	426248	NA
Ethyl Benzene	SW8260B	NA	07/20/15	1	0.074	0.50	ND		ug/L	426248	NA
m,p-Xylene	SW8260B	NA	07/20/15	1	0.13	1.0	2.2		ug/L	426248	NA
o-Xylene	SW8260B	NA	07/20/15	1	0.076	0.50	ND		ug/L	426248	NA
MTBE	SW8260B	NA	07/20/15	1	0.17	0.50	9.3		ug/L	426248	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/20/15	1	0.15	0.50	ND		ug/L	426248	NA
ETBE	SW8260B	NA	07/20/15	1	0.13	0.50	ND		ug/L	426248	NA
TAME	SW8260B	NA	07/20/15	1	0.095	0.50	ND		ug/L	426248	NA
tert-Butanol	SW8260B	NA	07/20/15	1	1.5	5.0	230		ug/L	426248	NA
1,2-Dichloroethane	SW8260B	NA	07/20/15	1	0.11	0.50	ND		ug/L	426248	NA
1,2-Dibromoethane	SW8260B	NA	07/20/15	1	0.068	0.50	ND		ug/L	426248	NA
(S) Dibromofluoromethane	SW8260B	NA	07/20/15	1	61.2	131	102		%	426248	NA
(S) Toluene-d8	SW8260B	NA	07/20/15	1	75.1	127	105		%	426248	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/20/15	1	64.1	120	106		%	426248	NA
Benzene	SW8260B	NA	07/17/15	21	1.8	11	120		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	21	61.2	131	117		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	21	75.1	127	108		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	21	64.1	120	110		%	426244	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/20/15	07/20/15	1	31	50	550	x	ug/L	426248	14879
(S) 4-Bromofluorobenzene	8260TPH	7/20/15	07/20/15	1	41.5	125	95.4		%	426248	14879

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

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	RW-9	**Lab Sample ID:**	1507071-008B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 11:15		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	0.45	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	96.6		%	426217	14846

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	RW-13	**Lab Sample ID:**	1507071-009A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 15:05		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	07/17/15	1	0.087	0.50	1.2		ug/L	426244	NA
Toluene	SW8260B	NA	07/17/15	1	0.059	0.50	ND		ug/L	426244	NA
Ethyl Benzene	SW8260B	NA	07/17/15	1	0.074	0.50	ND		ug/L	426244	NA
m,p-Xylene	SW8260B	NA	07/17/15	1	0.13	1.0	ND		ug/L	426244	NA
o-Xylene	SW8260B	NA	07/17/15	1	0.076	0.50	ND		ug/L	426244	NA
MTBE	SW8260B	NA	07/17/15	1	0.17	0.50	ND		ug/L	426244	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/17/15	1	0.15	0.50	ND		ug/L	426244	NA
ETBE	SW8260B	NA	07/17/15	1	0.13	0.50	ND		ug/L	426244	NA
TAME	SW8260B	NA	07/17/15	1	0.095	0.50	ND		ug/L	426244	NA
tert-Butanol	SW8260B	NA	07/17/15	1	1.5	5.0	38		ug/L	426244	NA
1,2-Dichloroethane	SW8260B	NA	07/17/15	1	0.11	0.50	ND		ug/L	426244	NA
1,2-Dibromoethane	SW8260B	NA	07/17/15	1	0.068	0.50	ND		ug/L	426244	NA
(S) Dibromofluoromethane	SW8260B	NA	07/17/15	1	61.2	131	112		%	426244	NA
(S) Toluene-d8	SW8260B	NA	07/17/15	1	75.1	127	108		%	426244	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/17/15	1	64.1	120	107		%	426244	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/17/15	07/17/15	1	31	50	79	x	ug/L	426244	14876
(S) 4-Bromofluorobenzene	8260TPH	7/17/15	07/17/15	1	41.5	125	105		%	426244	14876

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	RW-13	**Lab Sample ID:**	1507071-009B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 15:05		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	ND		mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	81.7		%	426217	14846

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jered Chaney
Weber, Hayes & Associates

Date Received: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	RW-14	**Lab Sample ID:**	1507071-010A
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 14:33		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Benzene	SW8260B	NA	07/20/15	1	0.087	0.50	1.2		ug/L	426248	NA
Toluene	SW8260B	NA	07/20/15	1	0.059	0.50	ND		ug/L	426248	NA
Ethyl Benzene	SW8260B	NA	07/20/15	1	0.074	0.50	ND		ug/L	426248	NA
m,p-Xylene	SW8260B	NA	07/20/15	1	0.13	1.0	ND		ug/L	426248	NA
o-Xylene	SW8260B	NA	07/20/15	1	0.076	0.50	ND		ug/L	426248	NA
MTBE	SW8260B	NA	07/20/15	1	0.17	0.50	ND		ug/L	426248	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/20/15	1	0.15	0.50	ND		ug/L	426248	NA
ETBE	SW8260B	NA	07/20/15	1	0.13	0.50	ND		ug/L	426248	NA
TAME	SW8260B	NA	07/20/15	1	0.095	0.50	ND		ug/L	426248	NA
tert-Butanol	SW8260B	NA	07/20/15	1	1.5	5.0	31		ug/L	426248	NA
1,2-Dichloroethane	SW8260B	NA	07/20/15	1	0.11	0.50	ND		ug/L	426248	NA
1,2-Dibromoethane	SW8260B	NA	07/20/15	1	0.068	0.50	ND		ug/L	426248	NA
(S) Dibromofluoromethane	SW8260B	NA	07/20/15	1	61.2	131	103		%	426248	NA
(S) Toluene-d8	SW8260B	NA	07/20/15	1	75.1	127	105		%	426248	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/20/15	1	64.1	120	106		%	426248	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Gasoline	8260TPH	7/20/15	07/20/15	1	31	50	78	x	ug/L	426248	14879
(S) 4-Bromofluorobenzene	8260TPH	7/20/15	07/20/15	1	41.5	125	99.1		%	426248	14879

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: 07/16/15
Date Reported: 07/21/15

Client Sample ID:	RW-14	**Lab Sample ID:**	1507071-010B
Project Name/Location:	Former Exxon Station / 2X103.Q	**Sample Matrix:**	Aqueous
Project Number:	2X103.Q		
Date/Time Sampled:	07/15/15 / 14:33		
Tag Number:	Former Exxon Station		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	7/16/15	07/17/15	1	0.0400	0.10	0.14	x	mg/L	426217	14846
Pentacosane (S)	SW8015B(M)	7/16/15	07/17/15	1	64.2	123	112		%	426217	14846

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:	1507071	**Prep Method:**	3510_TPH	**Prep Date:**	07/16/15	**Prep Batch:**	14846
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	07/17/15	**Analytical Batch:**	426217
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	
TPH as Motor Oil	0.0920	0.40	ND	
Pentacosane (S)			105	

Work Order:	1507071	**Prep Method:**	5030	**Prep Date:**	07/17/15	**Prep Batch:**	14876
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/17/15	**Analytical Batch:**	426244
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Gasoline	31	50	ND	
(S) 4-Bromofluorobenzene			103	

Work Order:	1507071	**Prep Method:**	5030	**Prep Date:**	07/20/15	**Prep Batch:**	14879
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/20/15	**Analytical Batch:**	426248
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Gasoline	31	50	ND	
(S) 4-Bromofluorobenzene			101	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1507071	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/17/15	**Analytical Batch:**	426244
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	2.4	
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	0.48	
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	
o-Xylene	0.15	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1507071	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/17/15	**Analytical Batch:**	426244
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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	0.35		
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	0.18		
Naphthalene	0.14	1.0	0.31		
1,2,3-Trichlorobenzene	0.23	0.50	ND		
(S) Dibromofluoromethane			103		
(S) Toluene-d8			110		
(S) 4-Bromofluorobenzene			108		
Ethanol	0.21	0.50	ND	TIC	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1507071	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/20/15	**Analytical Batch:**	426248
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	0.47		
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		
o-Xylene	0.15	0.50	ND		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1507071	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/20/15	**Analytical Batch:**	426248
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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	0.33		
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			103		
(S) Toluene-d8			105		
(S) 4-Bromofluorobenzene			103		
Ethanol	0.21	0.50	ND	TIC	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1507071	**Prep Method:**	3510_TPH	**Prep Date:**	07/16/15	**Prep Batch:**	14846
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	07/17/15	**Analytical Batch:**	426217
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	1	63.1	79.8	23.4	50.3 - 125	30	
Pentacosane (S)			ND	200	88.8	97.7		57.9 - 125		

Work Order:	1507071	**Prep Method:**	5030	**Prep Date:**	07/17/15	**Prep Batch:**	14876
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/17/15	**Analytical Batch:**	426244
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 as Gasoline	31	50	ND	238.1	112	117	5.07	52.4 - 127	30	
(S) 4-Bromofluorobenzene			103	11.9	116	105		41.5 - 125		

Work Order:	1507071	**Prep Method:**	5030	**Prep Date:**	07/20/15	**Prep Batch:**	14879
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/20/15	**Analytical Batch:**	426248
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 as Gasoline	31	50	ND	238.1	115	117	2.42	52.4 - 127	30	
(S) 4-Bromofluorobenzene			101	11.9	109	105		41.5 - 125		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1507071	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/17/15	**Analytical Batch:**	426244
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	17.86	110	111	0.762	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.86	101	102	0.990	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.86	98.3	99.1	0.567	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.86	91.3	92.7	1.52	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.86	91.9	93.3	1.57	73.9 - 137	30	
(S) Dibromofluoromethane			ND	17.86	105	108		61.2 - 131		
(S) Toluene-d8			ND	17.86	99.1	99.3		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	17.86	103	104		64.1 - 120		

Work Order:	1507071	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/20/15	**Analytical Batch:**	426248
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	17.86	85.2	86.3	1.37	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.86	83.1	83.7	0.335	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.86	88.5	88.3	0.190	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.86	84.4	86.1	1.84	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.86	87.3	89.3	2.22	73.9 - 137	30	
(S) Dibromofluoromethane			ND	17.86	90.1	93.4		61.2 - 131		
(S) Toluene-d8			ND	17.86	93.5	95.3		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	17.86	97.7	102		64.1 - 120		

Laboratory Qualifiers and Definitions

DEFINITIONS:

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

LABORATORY QUALIFIERS:

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

Sample Receipt Checklist

Client Name: Weber, Hayes & Associates

Project Name: Former Exxon Station / 2X103.Q

Work Order No.: 1507071

Date and Time Received: 7/16/2015 10:45

Received By: ng

Physically Logged By: ng

Checklist Completed By: ng

Carrier Name: FedEx

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: 7	°C
Water-VOA vials have zero headspace?	Yes		
Water-pH acceptable upon receipt?	N/A		

pH Checked by: na

pH Adjusted by: na

Torrent LABORATORY, INC.

Login Summary Report

Client ID: TL5105 Weber, Hayes & Associates
Project Name: Former Exxon Station / 2X103.Q
Project # : 2X103.Q
Report Due Date: 7/21/2015

QC Level:
TAT Requested: 3 day:25
Date Received: 7/16/2015
Time Received: 10:45

Comments:

Work Order # : ***1507071***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1507071-001A	MW-1	07/15/15 12:45	Water	08/30/15			EDF W_8260PetWHA W_GCMS-GRO	
Sample Note:	Standard 3-Day TAT. Please use MDL for any diluted samples. TPHg, BTEX, Lead Scavengers, DIPE, TAME, ETBE, MTBE & TBA.							
1507071-001B	MW-1	07/15/15 12:45	Water	08/30/15			W_TPHDO	
Sample Note:	Standard 3-day TAT. TPHd.							
1507071-002A	MW-2	07/15/15 14:00	Water	08/30/15			W_GCMS-GRO W_8260PetWHA	
1507071-002B	MW-2	07/15/15 14:00	Water	08/30/15			W_TPHDO	
1507071-003A	MW-3	07/15/15 11:57	Water	08/30/15			W_GCMS-GRO W_8260PetWHA	
1507071-003B	MW-3	07/15/15 11:57	Water	08/30/15			W_TPHDO	
1507071-004A	MW-4	07/15/15 10:34	Water	08/30/15			W_GCMS-GRO W_8260PetWHA	
1507071-004B	MW-4	07/15/15 10:34	Water	08/30/15			W_TPHDO	
1507071-005A	MW-5	07/15/15 15:47	Water	08/30/15			W_GCMS-GRO W_8260PetWHA	
1507071-005B	MW-5	07/15/15 15:47	Water	08/30/15			W_TPHDO	
1507071-006A	MW-6	07/15/15 16:25	Water	08/30/15			W_GCMS-GRO W_8260PetWHA	
1507071-006B	MW-6	07/15/15 16:25	Water	08/30/15			W_TPHDO	
1507071-007A	RW-5	07/15/15 13:22	Water	08/30/15			W_GCMS-GRO	

Login Summary Report

Client ID: TL5105 Weber, Hayes & Associates

Project Name: Former Exxon Station / 2X103.Q

Project # : 2X103.Q

Report Due Date: 7/21/2015

QC Level:

TAT Requested: 3 day:25

Date Received: 7/16/2015

Time Received: 10:45

Comments:

Work Order # : ***1507071***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1507071-007B	RW-5	07/15/15 13:22	Water	08/30/15			W_8260PetWHA W_TPHDO	
1507071-008A	RW-9	07/15/15 11:15	Water	08/30/15			W_GCMS-GRO W_8260PetWHA	
1507071-008B	RW-9	07/15/15 11:15	Water	08/30/15			W_TPHDO	
1507071-009A	RW-13	07/15/15 15:05	Water	08/30/15			W_GCMS-GRO W_8260PetWHA	
1507071-009B	RW-13	07/15/15 15:05	Water	08/30/15			W_TPHDO	
1507071-010A	RW-14	07/15/15 14:33	Water	08/30/15			W_GCMS-GRO W_8260PetWHA	
1507071-010B	RW-14	07/15/15 14:33	Water	08/30/15			W_TPHDO	

Torrent LABORATORY, INC.

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

CHAIN -OF-CUSTODY RECORD

1507071

1 OF 1

PROJECT NAME AND JOB #: Former Exxon Station/ 2X103.Q

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

ELECTRONIC DELIVERABLE FORMAT: [X] YES [ ] NO

LABORATORY: Torrent

TURNAROUND TIME: Standard 48hr Rush

GLOBAL I.D.: T0600100538

Sampler: Dan Kocher

Date: ~~MM/DD/YYYY~~ 07/16/2015

	Field Point Name (Geo Tracker)	Sample Identification	Date Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	50 mL plastic (preserved)	1 Liter Amber	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-diesel w/ silica gel cleanup EPA Method# 8015M	TPH-D EPA Method 8015	TPH-Gas by EPA Method 8260	VOCs: BTEX by EPA Method 8260B	TBA by EPA Method 8260	Low-Level Semi-VOCs by EPA Method 8270 SIM	Additional Analysis: Fuel Oxygenates EPA Method # 8260	Lead Scavengers EPA Method # 8260
001A/B	MW-1	MW-1	7/15/2015	Aq	3		1			x	x	x			x	x
002A/B	MW-2	MW-2														
003A/B	MW-3	MW-3														
004A/B	MW-4	MW-4														
005A/B	MW-5	MW-5														
006A/B	MW-6	MW-6														
007A/B	RW-5	RW-5														
008A/B	RW-9	RW-9														
009A/B	RW-13	RW-13														
010A/B	RW-14	RW-14														

3 DAY STANDARD

3 DAY STANDARD

	RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)	[illegible]	07/16/15	→	[illegible]	7/16 9:25AM	Ambient	Refrigerated	Frozen
2.)	Caley Block	7/16/15 1642	→	[illegible]	7/16 10:45AM	Ambient	Refrigerated	Frozen
3.)			→			Ambient	Refrigerated	Frozen
4.)			→			Ambient	Refrigerated	Frozen
5.)			→			Ambient	Refrigerated	Frozen

NOTES:

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

ADDITIONAL COMMENTS

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

Temp - 7°C.

FedEx City

JC\Fieldlog\COC-GW VOCs - COC REC'D LINED LABLINED LIR

1 of 1

Weber, Hayes and Associates