
FIRST QUARTER 2018 GROUNDWATER MONITORING REPORT

SHORE ACRES GAS
403 EAST 12TH STREET
OAKLAND, CALIFORNIA

Prepared for: Rashid Ghafoor

ECG Project Number: GHA.19009
Alameda County Fuel Leak Case No. R00002931

June 6, 2018



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INTRODUCTION

Environmental Compliance Group (ECG) has been authorized by Mr. Rashid Ghafoor to provide this report for the site.

This report describes activities conducted during First Quarter 2018 groundwater monitoring event. Site information is as follows:

Site Location:	403 East 12 th Street Oakland, California
Geotracker Global ID:	T0600174667

LIMITATIONS

This report has been prepared for use by Rashid Ghafoor and the relevant regulatory agencies. The conclusions in this report are professional opinions based on the data presented in this report. This report was prepared in general accordance with hydrogeologic and engineering methods and standards. No other warranties are made as to the findings or conclusions presented in this report. The work described in this report was performed under the direct supervision of the professional geologist whose signature and State of California registration are shown above.

SITE DESCRIPTION AND HYDROGEOLOGIC CONDITIONS

SITE DESCRIPTION

The site occupies a parcel on the southeast corner of 4th Avenue and East 12th Street in Oakland, Alameda County, California (Figure 1). The site is situated in a commercial and residential area in central Oakland and is currently vacant. The site was historically used as a gasoline station. The area of interest at the site is the former location of three underground storage tanks (USTs) and fuel dispensers where impacted soil and groundwater was first identified in 2006. A detailed site plan is shown on Figure 2.

HYDROGEOLOGIC CONDITIONS

The site is underlain by Quaternary-age dune sand deposits referred to as the Merritt Sand. The Merritt Sand is typically described as loose, well-sorted fine- to medium-grained sand with a large silt component. The sand is reported to reach a maximum depth of 50-feet bgs in the area.

Based on boring logs from the advancement of 11 soil borings and the installation of six monitoring wells and four extraction wells, the stratigraphy of the site and vicinity consists of silt to approximately 30-feet bgs with discontinuous thin intervals of sandy silt and clayey sand present in the area.

Depth to groundwater is shallow, ranging between 8- to 14-feet bgs. The groundwater flow direction appears to be generally toward the southeast.

PROJECT BACKGROUND

INVESTIGATIONS

In July 2006, Geofon Incorporated (Geofon) advanced soil borings GP-1 and GP-2 and collected and analyzed soil samples. Results are detailed in Geofon's report entitled *Summary of Phase II Assessment Activities*, dated July 25, 2006.

In August 2009, Wright Environmental Services, Inc. (Wright) removed three USTs, associated fuel dispensers, and all associated piping. Results are detailed in Wright's *Closure Report for Three Underground Storage Tanks*, dated September 2009.

In April 2010, Apex Envirotech, Inc. (Apex) advanced nine soil borings to evaluate the lateral extent of impacted soil and groundwater. Results are documented in Apex's *Subsurface Investigation Results Report* dated June 23, 2010.

In June 2011, ECG supervised the installation of six groundwater monitoring wells (MW-1 through MW-6) and two extraction wells (EW-1 and EW-2). Results are documented in ECG's *Off-Site Investigation and Dual Phase Pilot Test Results with Fourth Quarter 2011 Monitoring Report*, dated January 26, 2012.

RISK ASSESSMENTS

In January 2011, ECG conducted a preferential pathway study for the site. Results are detailed in ECG's *Site Assessment and Soil Vapor Extraction Pilot Test Workplan*, dated February 9, 2011.

In January 2011, ECG conducted a sensitive receptor survey for the site. Results are detailed in ECG's *Site Assessment and Soil Vapor Extraction Pilot Test Workplan*, dated February 9, 2011.

A soil vapor survey has not been completed for the site.

CORRECTIVE ACTIONS

In June 2011, ECG supervised the installation of six groundwater monitoring wells (MW-1 through MW-6) and two extraction wells (EW-1 and EW-2). ECG also performed a 5-day dual phase extraction (DPE) test in June 2011. Results are documented in ECG's *Off-Site Investigation and Dual Phase Pilot Test Results with Fourth Quarter 2011 Monitoring Report*, dated January 26, 2012.

In May 2013, ECG supervised the installation of two extraction wells (EW-3 and EW-4). In September 2013, ECG installed the subsurface piping network from the remediation wells to the remediation compound and the subsurface conduit required by PG&E to install the electrical service required to operate the remediation compound.

In April 2014, the dual phase extraction system began operation. The DPE system includes a 25-horsepower liquid-ring blower capable of up to 400 standardized cubic feet per minute (scfm) flowrate, thermal/catalytic oxidizer, a conveyance piping network, and four individual extraction wells. The blower extracts vapors and groundwater from each extraction wells and through the conveyance piping where the impacted vapor is destroyed in the thermal/catalytic oxidizer prior to

discharge to the atmosphere and the groundwater is treated with an air stripper and granular activated carbon prior to discharge to the municipal sewer system.

The remediation system was started on April 30, 2014 and shut down on June 27, 2014 due to carbon change out requirements. The system was restarted on August 15, 2014. The remediation system was shut down on February 18, 2015 due to complaints from neighbors regarding the propane tank onsite providing supplemental fuel to the remediation equipment. ECG supervised the installation of natural gas provided by PG&E to the site and the system was restarted on August 11, 2015. The system was shut down on December 16, 2015 due to contaminant breakthrough of the first carbon vessel and scheduled carbon change out. The system was restarted January 21, 2016 and shut down on April 11, 2016 due to decreasing contaminant extraction rates and pending regulatory review of ECG's *Fourth Quarter 2015 Monitoring and Remediation System Evaluation Report*, dated August 1, 2016.

The DPE system is operated under Bay Area Air Quality Management District (BAAQMD) permit number 25354 and East Bay Municipal Utility District (EBMUD) Discharge Permit No. 68508758. The DPE system has removed approximately 8,434 pounds of TPHg, 39 pounds of benzene, and 2 pounds of MTBE from the subsurface.

FIRST QUARTER 2018 MONITORING EVENT

WORK PERFORMED AND PROPOSED

The following is a summary of work performed during the first quarter 2018 and work proposed for next quarter at the site.

WORK PERFORMED FIRST QUARTER 2018

1. The first quarter 2018 groundwater monitoring event was performed on March 30, 2018.

WORK SCHEDULED FOR SECOND QUARTER 2018

1. Prepare and finalize first quarter 2018 monitoring report.
2. Prepare the Data Gap Investigation Work Plan and Site Conceptual Model requested by Alameda County in their correspondence dated August 11, 2017.

DISCUSSION OF RECENT MONITORING ACTIVITIES

ECG performed the first quarter 2018 groundwater monitoring and sampling event at the site on March 30, 2018. Gauging, development, purging, and sampling were conducted in accordance with ECG's SOPs included in Appendix A. The collected groundwater samples were submitted to CAL Labs located in Ceres, California for laboratory analysis under COC protocols (Appendix B).

The following is a summary of the current status of the groundwater monitoring program at the site:

Current Phase of Project:	Post Remediation
Groundwater Sampling Schedule:	Semi-Annual Wells MW-1 through MW-6, EW-1 through EW-4
Analysis:	TPHg by EPA Method 8015M, BTEX, 5 oxygenates, and 2 lead scavengers by EPA Method 8260B

Is Free Product Present On-Site: No

The following is a summary of recent field and analytical data:

Average Depth to Groundwater	9.14-feet below ground surface (bgs)
Average Groundwater Elevation	22.07 -feet above mean sea level
Groundwater Gradient Direction	Southeast
Groundwater Gradient	0.010
TPHg Detected Range	1,200 ug/L (MW-3) to 45,000 ug/L (MW-1)
Benzene Detected Range	13 ug/L (EW-3) to 920 ug/L (MW-1)
MTBE Detected	10 ug/L (MW-2) to 170 (MW-1)

Groundwater well MW-5 was inaccessible due to site activities. Laboratory analytical reports and COCs are provided in Appendix B. Field notes are located in Appendix C. Summaries of groundwater monitoring and analytical data are presented in Tables 4a.

DISCUSSION OF RECENT REMEDIATION ACTIVITIES

The remediation system was shut down April 11, 2016 due to decreasing contaminant extraction rates and pending regulatory review of remediation system evaluation report. Summaries of remediation system operating parameters and analytical data are presented in Tables 5a, 5b, and 5c.

RESULTS AND CONCLUSIONS

Water levels and the gradient data were consistent with historical data. Tables 2a, 2b, 3a, 3b, 4a, and 4b tabulate the analytical data for soil and monitoring well sampling data. ECG will keep the remediation system shut down pending regulatory review of the Data Gap Investigation Work Plan and Site Conceptual Model. The next groundwater monitoring event will be in third quarter 2018.

RECOMENDATIONS

Water levels and the gradient data were consistent with historical data. Tables 2a, 2b, 3a, 3b, 4a, and 4b tabulate the analytical data for soil and monitoring well sampling data.

ECG prepared 16 hydrographs comparing groundwater elevations verses time verses concentrations in groundwater of benzene and ethylbenzene. In addition, remediation system operation dates are shown on the graphs.

The graphs show the presence of a secondary source of benzene is present in shallow soil both before and after remediation at all site monitoring wells with the exception of well MW-3. DPE appears to have removed most of the secondary source at well MW-3.

The graphs show the presence of a secondary source of ethylbenzene is also present in shallow soil both before and after remediation at most site monitoring wells with the exception of wells MW-3 and MW-4. DPE appears to have removed most of the secondary source of ethylbenzene at wells MW-3 and MW-4.

The graphs at the extraction wells EW-1 and EW-2 are unclear regarding groundwater concentration trends verses time. But the graphs at all site wells with the exception of well MW-1

clearly show a reduction in concentrations over time. The operation of the remediation system showed a positive effect overall at the site.

However, concentrations remain elevated at all site wells. ECG recommends performing the limited excavation as outlined in our *Data Gap Investigation Workplan and Site Conceptual Model*, dated April 4, 2018 report.

FIGURES

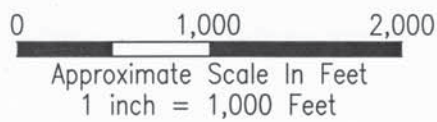


FIGURE 1

Project Number:
GHA.19009

Date:
February 9, 2011

SITE LOCATION MAP

Shore Acre Gas
403 East 12th Street
Oakland, California

**Environmental
Compliance
Group, LLC**
270 Vintage Drive, Turlock, CA 95382
Phone: (209) 664-1035

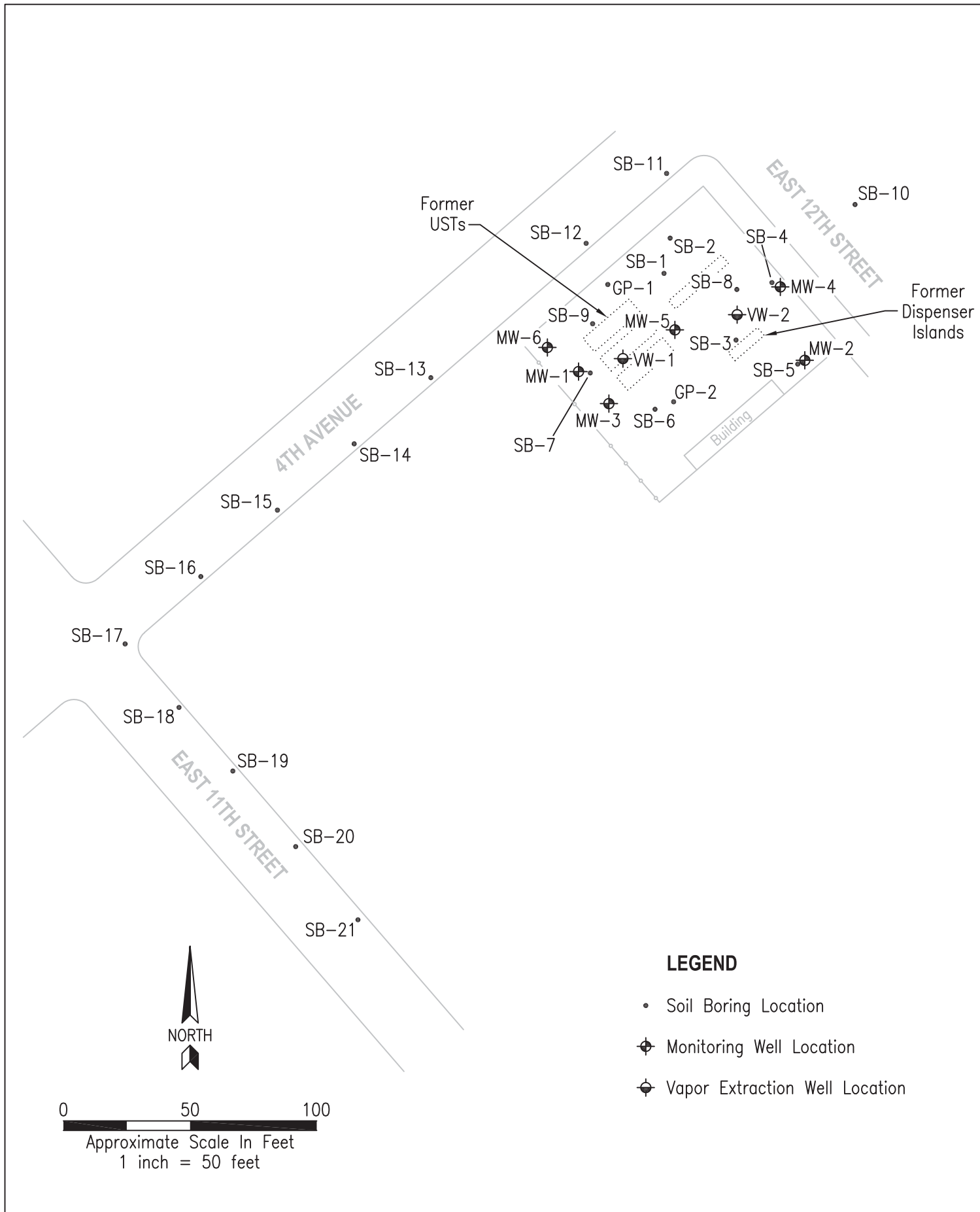


FIGURE 2

Project Number:
GHA.19009

Date:
January 4, 2012

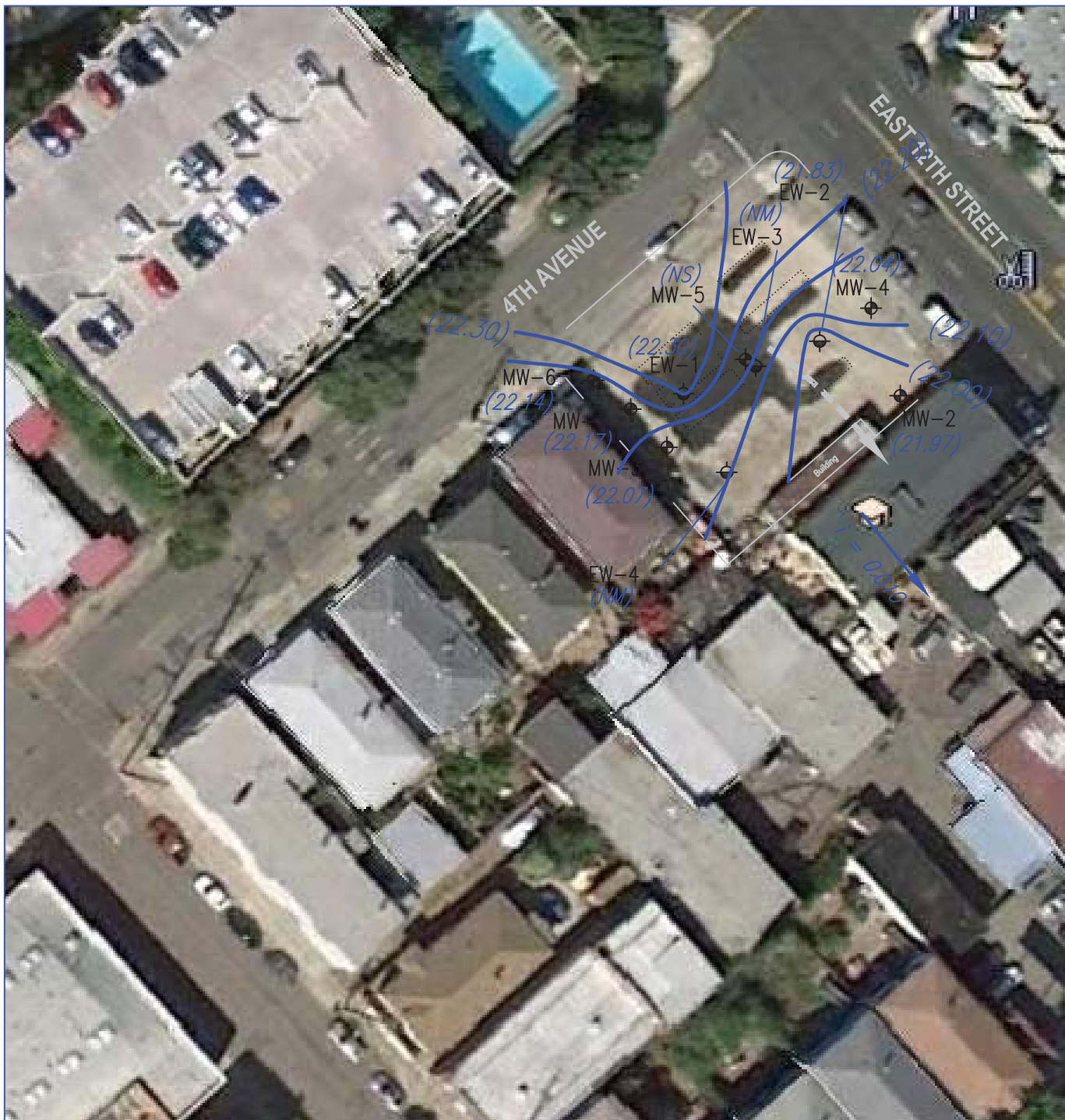
SITE MAP

Shore Acre Gas
403 East 12th Street
Oakland, California



Environmental Compliance Group, LLC

270 Vintage Drive, Turlock, CA 95382
Phone: (209) 664-1035



LEGEND



- ⊕ Monitoring Well Location
- ⊙ Vapor Extraction Well Location

(22.04) Elevation Of Groundwater Measured In Feet Above Mean Sea Level

— (22.10) — Lines Of Equipotential Measured In Feet Above Mean Sea Level (Dashed Where Inferred)

---> Flow Lines

$i = 0.010$ General Gradient

(NM) Not Measured

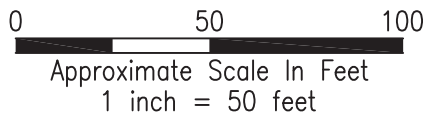
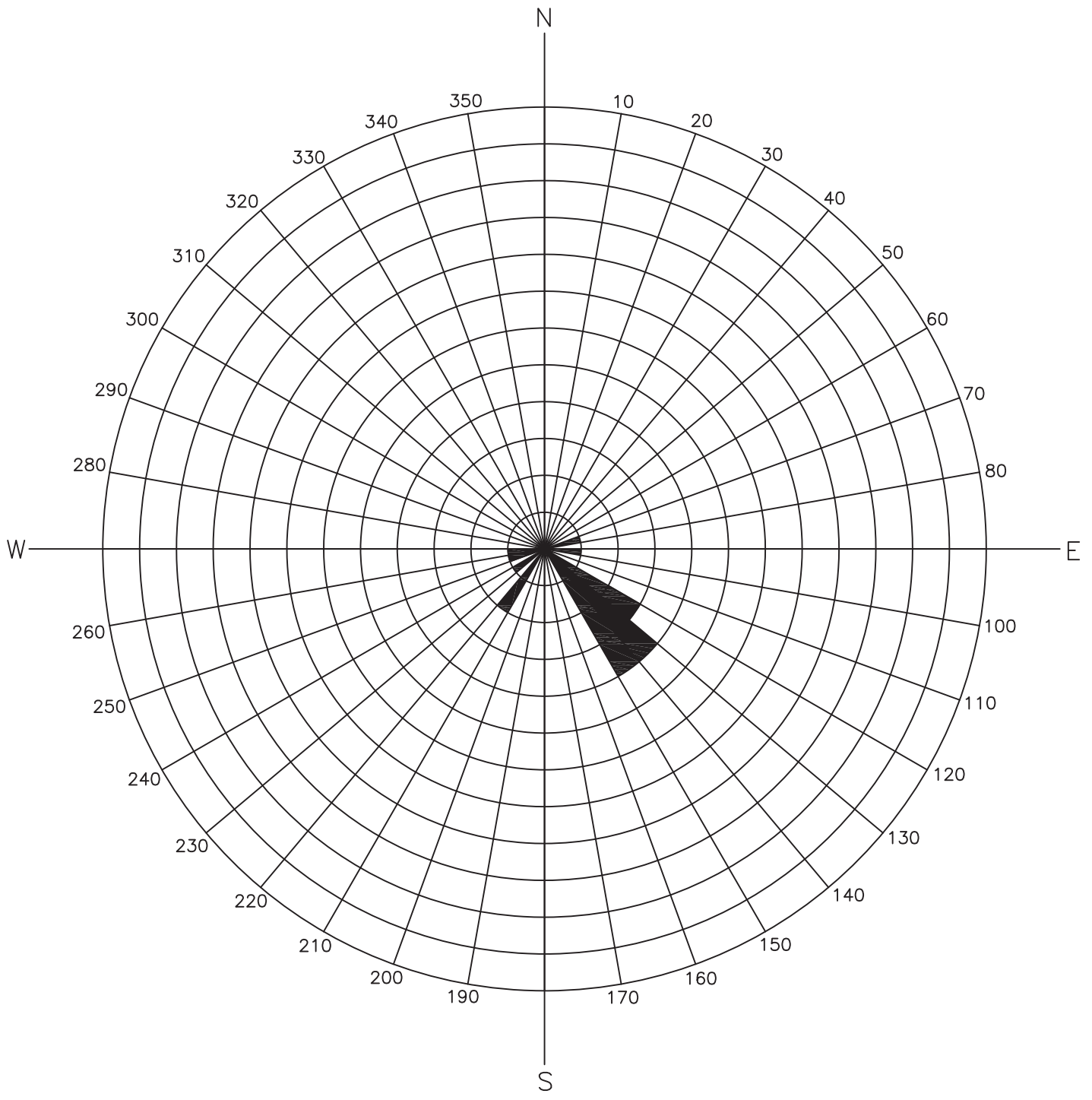


FIGURE 3	POTENTIOMETRIC SURFACE MAP MARCH 30, 2018	 Environmental Compliance Group, LLC 270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035
Project Number: GHA.19009	Shore Acre Gas 403 East 12th Street Oakland, California	
Date: May 31, 2018		



Thru 1st Quarter 2018

FIGURE 4

Project Number:
GHA.19009

Date:
May 31, 2018

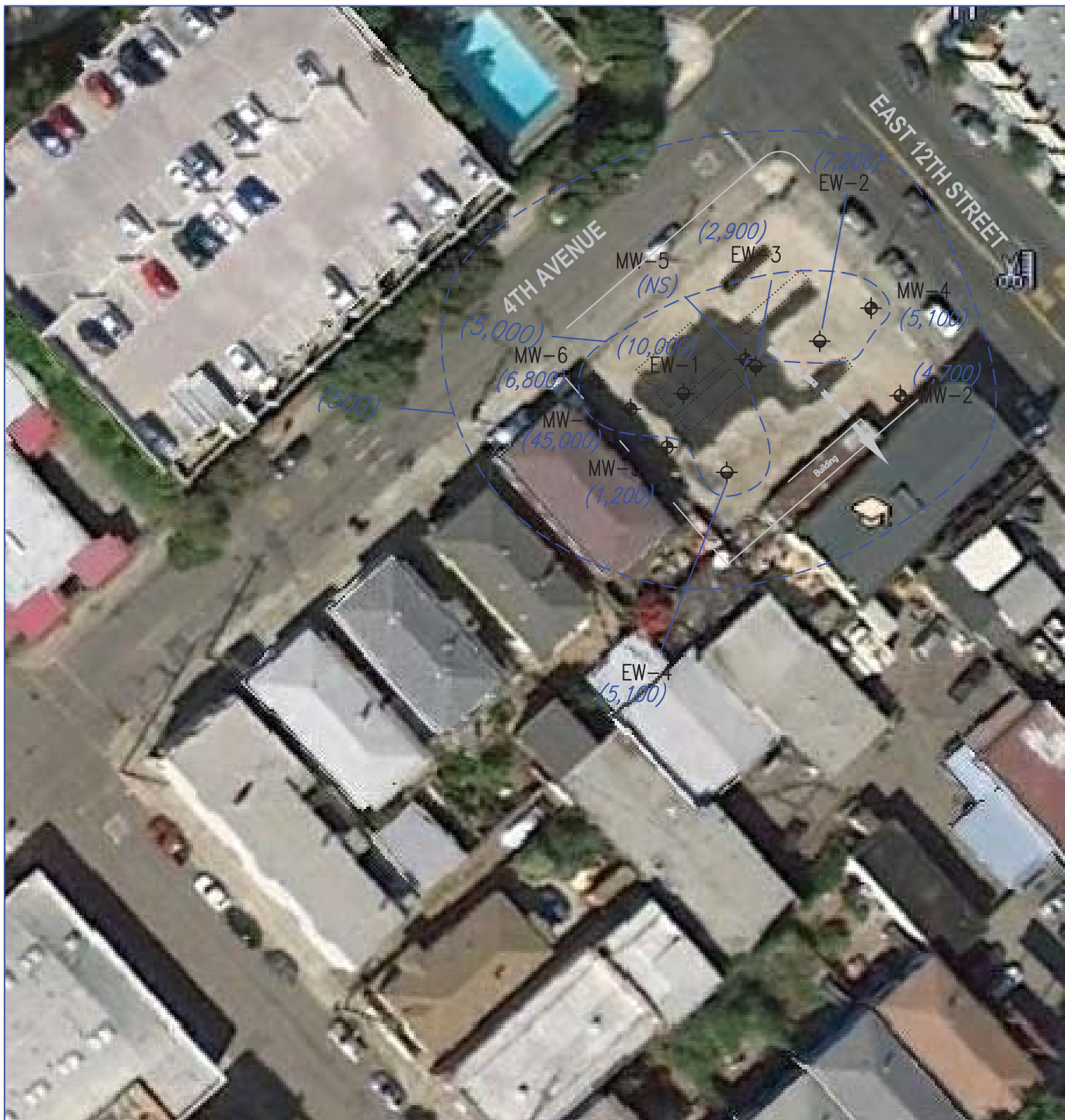
ROSE DIAGRAM

Shore Acre Gas
403 East 12th Street
Oakland, California



**Environmental
Compliance
Group, LLC**

270 Vintage Drive, Turlock, CA 95382
Phone: (209) 664-1035



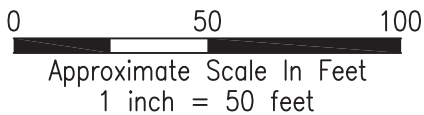
LEGEND



- ⊕ Monitoring Well Location
- ⊖ Vapor Extraction Well Location

(5,100) Concentration of TPHg In Groundwater Measured In ug/L

— 5,000 — Lines Of Equal Concentration of TPHg In Groundwater Measured In ug/L (Dashed Where Inferred)



<p>FIGURE 5</p>	<p>TPHg IN GROUNDWATER ISOCONCENTRATION MAP MARCH 31, 2018</p>	 <p>Environmental Compliance Group, LLC</p>
<p>Project Number: GHA.19009</p>	<p>Shore Acre Gas 403 East 12th Street Oakland, California</p>	<p>270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035</p>
<p>Date: May 31, 2018</p>		



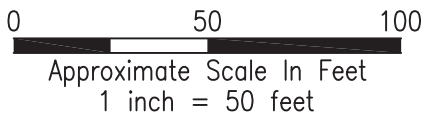
LEGEND



- ⊕ Monitoring Well Location
- ⊖ Vapor Extraction Well Location

(920) Concentration of Benzene In Groundwater Measured In ug/L

— 50 — Lines Of Equal Concentration of Benzene In Groundwater Measured In ug/L (Dashed Where Inferred)



<p>FIGURE 6</p>	<p>BENZENE IN GROUNDWATER ISOCONCENTRATION MAP</p>	 <p>Environmental Compliance Group, LLC</p>
<p>Project Number: GHA.19009</p>	<p>MARCH 30, 2018</p>	<p>270 Vintage Drive, Turlock, CA 95382</p>
<p>Date: May 31, 2018</p>	<p>Shore Acre Gas 403 East 12th Street Oakland, California</p>	<p>Phone: (209) 664-1035</p>



LEGEND



- ⊕ Monitoring Well Location
- ⊖ Vapor Extraction Well Location

(30) Concentration of MTBE In Groundwater Measured In ug/L

— 5.0 — Lines Of Equal Concentration of MTBE In Groundwater Measured In ug/L (Dashed Where Inferred)

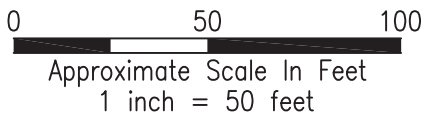


FIGURE 7	MTBE IN GROUNDWATER ISOCONCENTRATION MAP	 Environmental Compliance Group, LLC 270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035
Project Number: GHA.19009	MARCH 30, 2018 Shore Acre Gas 403 East 12th Street Oakland, California	
Date: May 31, 2018		

TABLES

Table 1
Well Construction Details
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID	Date Installed	TOC Elevation (ft amsl)	Well Depth (ft bgs)	Casing Diameter (inches)	Casing Material	Screen/Filter	Screen Interval (ft bgs)
Monitoring Wells							
MW-1	June 2011	30.81	20	2	PVC	0.020/#3	10-20
MW-2		31.29	20	2	PVC	0.020/#3	10-20
MW-3		31.30	18	2	PVC	0.020/#3	8-18
MW-4		31.21	19	2	PVC	0.020/#3	9-19
MW-5		31.35	20	2	PVC	0.020/#3	10-20
MW-6		30.79	20	2	PVC	0.020/#3	10-20
Dual Phase Extraction Wells							
EW-1	June 2011	31.46	20	4	PVC	0.020/#3	5-20
EW-2		31.43	20	4	PVC	0.020/#3	5-20
EW-3	May 2013	---	20	6	PVC	0.020/#3	5-20
EW-4		---	20	6	PVC	0.020/#3	5-20

Notes:

- TOC - denotes top of casing
- ft - denotes feet
- amsl - denotes above mean sea level
- bgs - denotes below ground surface
- PVC - denotes polyvinyl chloride

Table 2a
Historical Soil Analytical Data
TPH and BTEX
Shore Acres Gas
403 East 12th Street
Oakland, California

Boring ID	Sample Depth (feet)	Collection Date	TPHd (mg/kg)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total xylenes (mg/kg)
UST Removal Samples								
SS-D1	2	August 2009	1,800*	3,000	<0.25	0.34	39	180
SS-D2	2		900*	2,400	<0.25	<0.25	36	120
SS-D3	2		460*	1,000	<0.15	<0.15	12	14
SS-D4	2		540*	640	<0.090	1.0	6.1	51
SS-D5	2		320	140	<0.025	<0.025	1.3	3.2
SS-D6	2.0		320*	260	<0.025	0.054	1.0	8.0
SS-J1	2.0		39*	160	<0.025	<0.025	0.71	0.94
SS-Isle	4.0		560*	100	<0.025	<0.025	0.30	0.084
SS-7	18.0		310*	1,600	6.9	76	39	200
Tank 1-SS-1	14.0		830*	2,500	4.2	100	69	360
Tank 1-SS-2	14.0		62*	480	1.8	5.3	14	62
Tank 2-SS-1	14.0		120*	290	0.37	2.4	6.3	31
Tank 2-SS-2	14.0		330*	80	0.074	0.051	1.2	5.8
Tank 3-SS-1	14.0		480*	2,100	2.4	41	62	320
Tank 3-SS-2	14.0		75*	130	0.23	0.26	3.1	15
Soil Borings								
GP-1-15.5	15.5	July 2006	13.0	18.0	0.63	0.052	0.69	0.13
GP-1-18.0	18.0		<1.0	<1.0	0.0056	0.0082	<0.005	0.019
GP-2-12.0	12.0		600	3,600	17	180	98	440
GP-2-20.0	20.0		79	1,100	3.2	41	25	130
SB-1-9.5	9.5	April 2010	---	1,600	5.1	43	30	180
SB-1-24.5	24.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-1-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-2-9.5	9.5		---	2.2	0.26	<0.010	0.066	<0.020
SB-2-24.5	24.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-2-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-3-14.5	14.5		---	17	17	100	42	240
SB-3-24.5	24.5		---	<1.0	<0.005	0.005	<0.005	0.013
SB-3-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-4-14.5	14.5		---	1,700	13	79	28	170
SB-4-19.5	19.5		---	<1.0	<0.005	0.009	<0.005	0.026
SB-4-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-5-14.5	14.5		---	470	<0.20	0.45	6.2	37
SB-5-24.5	24.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-5-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-6-9.5	9.5		---	6,100	21	170	95	580
SB-6-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-6-32	32.0		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-7-9.5	9.5		---	4,000	12	46	55	360
SB-7-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-7-32	32.0	---	<1.0	<0.005	<0.005	<0.005	<0.010	

Table 2a
Historical Soil Analytical Data
TPH and BTEX
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Boring ID	Sample Depth (feet)	Collection Date	TPHd (mg/kg)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total xylenes (mg/kg)
SB-8-9.5	9.5	April 2010	---	2,500	16	110	63	370
SB-8-24.5	24.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-8-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-9-14.5	14.5		---	390	3.0	3.0	9.1	41
SB-9-29.5	29.5		---	<1.0	<0.005	<0.005	<0.005	<0.010
SB-9-32	32.0		---	<1.0	<0.005	<0.005	<0.005	<0.010
Groundwater Wells								
MW-1-5	5	June 2011	<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
MW-1-15	15		<5.0	18	0.55	<0.050	0.87	1.2
MW-1-20	20		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
MW-2-5	5		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
MW-2-10	10		<5.0	69	<0.005	<0.005	<0.005	<0.010
MW-2-15	15		<5.0	50	<0.050	0.48	3.1	19
MW-2-20	20		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
MW-3-5	5		<5.0	<1.0	<0.010	<0.010	<0.010	<0.020
MW-3-10	10		<15	840	3.4	33	20	140
MW-3-15	15		<5.0	380	3.0	4.5	7.3	41
MW-3-20	20		<5.0	<1.0	0.019	<0.005	0.006	<0.010
MW-4-5	5		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
MW-4-10	10		<15	420	1.7	2.6	9.2	51
MW-4-15	15		<5.0	3.1	0.036	0.20	0.15	0.95
MW-4-20	20		<5.0	<1.0	0.007	0.017	0.010	0.039
MW-5-5	5		<5.0	76	<0.10	<0.10	1.3	0.76
MW-5-10	10		<15	3,200	4.6	6.5	72	410
MW-5-15	15		<5.0	600	1.3	13	15	110
MW-6-5	5		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
MW-6-10	10		<5.0	5.1	0.015	<0.010	3.4	1.0
MW-6-15	15		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
MW-6-20	20		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
EW-1-5	5		<5.0	34	<0.005	<0.005	0.16	0.31
EW-1-10	10		<15	85	<0.10	<0.10	2.2	0.89
EW-1-15	15		<15	420	2.1	4.1	9.4	55
EW-1-20	20		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
EW-2-5	5		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
EW-2-10	10		<5.0	130	<0.10	<0.10	2.9	15
EW-2-15	15	<15	5,500	29	430	120	910	
EW-2-20	20	<5.0	<1.0	0.14	0.054	0.025	0.14	

Notes:

- TPHd - denotes total petroleum hydrocarbons as diesel
- TPHg - denotes total petroleum hydrocarbons as gasoline
- mg/kg - denotes milligrams per kilogram
- < - denotes less than the detection limit
- denotes no data

Table 2b
Historical Soil Analytical Data
Oxygenates and Lead Scavengers
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Boring ID	Sample Depth (feet)	Collection Date	DIPE (mg/kg)	ETBE (mg/kg)	MTBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
UST Removal Samples									
SS-D1	2	August 2009	<0.25	<0.25	<0.25	<0.25	<1.5	---	---
SS-D2	2		<0.25	<0.25	<0.25	<0.25	<1.5	---	---
SS-D3	2		<0.15	<0.15	<0.15	<0.15	<0.70	---	---
SS-D4	2		<0.090	<0.090	<0.090	<0.090	<0.50	---	---
SS-D5	2		<0.025	<0.025	<0.025	<0.025	<0.15	---	---
SS-D6	2		<0.025	<0.025	<0.025	<0.025	<0.15	---	---
SS-J1	2		<0.025	<0.025	<0.025	<0.025	<0.15	---	---
SS-Isle	4		<0.025	<0.025	<0.025	<0.025	<0.15	---	---
SS-7	18		<0.25	<0.25	<0.25	<0.25	<1.5	<0.25	<0.25
Tank 1-SS-1	14		<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50
Tank 1-SS-2	14		<0.040	<0.040	0.37	<0.040	0.51	<0.040	<0.040
Tank 2-SS-1	14		<0.050	<0.050	0.18	<0.050	0.35	<0.050	<0.050
Tank 2-SS-2	14		<0.025	<0.025	0.090	<0.025	0.16	<0.025	<0.025
Tank 3-SS-1	14		<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50
Tank 3-SS-2	14	<0.025	<0.025	0.19	<0.025	0.15	<0.025	<0.025	
Soil Borings									
GP-1-15.5	15.5	July 2006	<0.005	<0.005	0.029	<0.005	0.27	---	---
GP-1-18.0	18.0		<0.005	<0.005	0.54	<0.005	0.33	---	---
GP-2-12.0	12.0		<0.50	<0.50	<0.50	<0.50	<2.5	---	---
GP-2-20.0	20.0		<0.025	<0.025	0.041	<0.025	<0.15	---	---
SB-1-9.5	9.5	April 2010	<0.80	<0.80	<0.80	<0.80	<8.0	<0.80	<0.80
SB-1-24.5	24.5		<0.005	<0.005	0.11	<0.005	<0.050	<0.005	<0.005
SB-1-29.5	29.5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-2-9.5	9.5		<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010
SB-2-24.5	24.5		<0.005	<0.005	0.053	<0.005	<0.050	<0.005	<0.005
SB-2-29.5	29.5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-3-14.5	14.5		<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0
SB-3-24.5	24.5		<0.005	<0.005	0.10	<0.005	<0.050	<0.005	<0.005
SB-3-29.5	29.5		<0.005	<0.005	0.010	<0.005	<0.050	<0.005	<0.005
SB-4-14.5	14.5		<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
SB-4-19.5	19.5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-4-29.5	29.5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-5-14.5	14.5		<0.20	<0.20	<0.20	<0.20	<2.0	<0.20	<0.20
SB-5-24.5	24.5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-5-29.5	29.5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-6-9.5	9.5		<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0
SB-6-29.5	29.5	<0.005	<0.005	0.20	<0.005	<0.050	<0.005	<0.005	
SB-6-32	32.0	<0.005	<0.005	0.18	<0.005	<0.050	<0.005	<0.005	
SB-7-9.5	9.5	<1.0	<1.0	4.0	<1.0	<10	<1.0	<1.0	
SB-7-29.5	29.5	<0.005	<0.005	0.18	<0.005	<0.050	<0.005	<0.005	
SB-7-32	32.0	<0.005	<0.005	0.11	<0.005	<0.050	<0.005	<0.005	

Table 2b
Historical Soil Analytical Data
Oxygenates and Lead Scavengers
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Boring ID	Sample Depth (feet)	Collection Date	DIPE (mg/kg)	ETBE (mg/kg)	MTBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
SB-8-9.5	9.5	April 2010	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0
SB-8-24.5	24.5		<0.005	<0.005	0.033	<0.005	<0.050	<0.005	<0.005
SB-8-29.5	29.5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-9-14.5	14.5		<0.20	<0.20	5.5	<0.20	<2.0	<0.20	<0.20
SB-9-29.5	29.5		<0.005	<0.005	0.090	<0.005	0.15	<0.005	<0.005
SB-9-32	32.0		<0.005	<0.005	0.11	<0.005	<0.050	<0.005	<0.005
Groundwater Wells									
MW-1-5	5	June 2011	<0.005	<0.005	0.35	<0.005	0.093	<0.005	<0.005
MW-1-15	15		<0.050	<0.050	1.1	<0.050	<0.50	<0.050	<0.050
MW-1-20	20		<0.005	<0.005	0.31	<0.005	0.58	<0.005	<0.005
MW-2-5	5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-2-10	10		<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050
MW-2-15	15		<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050
MW-2-20	20		<0.005	<0.005	0.006	<0.005	<0.050	<0.005	<0.005
MW-3-5	5		<0.010	<0.010	1.5	<0.010	0.37	<0.010	<0.010
MW-3-10	10		<0.80	<0.80	1.3	<0.80	<8.0	<0.80	<0.80
MW-3-15	15		<0.20	<0.20	3.0	<0.20	<2.0	<0.20	<0.20
MW-3-20	20		<0.005	<0.005	0.036	<0.005	0.16	<0.005	<0.005
MW-4-5	5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-4-10	10		<0.40	<0.40	<0.40	<0.40	<4.0	<0.40	<0.40
MW-4-15	15		<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010
MW-4-20	20		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-5-5	5		<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10
MW-5-10	10		<4.0	<4.0	<4.0	<4.0	<40	<4.0	<4.0
MW-5-15	15		<0.40	<0.40	<0.40	<0.40	<4.0	<0.40	<0.40
MW-6-5	5		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-6-10	10		<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010
MW-6-15	15	<0.005	<0.005	0.026	<0.005	0.088	<0.005	<0.005	
MW-6-20	20	<0.005	<0.005	0.010	<0.005	0.37	<0.005	<0.005	
EW-1-5	5	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	
EW-1-10	10	<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10	
EW-1-15	15	<0.40	<0.40	0.59	<0.40	<4.0	<0.40	<0.40	
EW-1-20	20	<0.005	<0.005	0.009	<0.005	0.16	<0.005	<0.005	
EW-2-5	5	<0.005	<0.005	0.25	<0.005	0.14	<0.005	<0.005	
EW-2-10	10	<0.10	<0.10	0.33	<0.10	<1.0	<0.10	<0.10	
EW-2-15	15	<4.0	<4.0	<4.0	<4.0	<40	<4.0	<4.0	
EW-2-20	20	<0.005	<0.005	0.008	<0.005	0.26	<0.005	<0.005	

Notes:

mg/kg - denotes milligrams per kilogram	MTBE - denotes methyl tertiary butyl ether
< - denotes less than the detection limit	DIPE - denotes di-isopropyl ether
--- - denotes not analyzed/applicable	ETBE - denotes ethyl tertiary butyl ether
DCA - denotes dichloroethane	TAME - denotes tertiary amyl ether
EDB - denotes ethylene dibromide	TBA - denotes tertiary butyl alcohol

Table 3a
Grab Groundwater Sample Results
TPH and BTEX
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Sample ID	Collection Date	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
Excavation							
Pit Sample 1	August 2009	21,000	21,000	3,800	1,000	1,200	3,700
Direct Push Grab Groundwater Samples							
SB-1	April 2010	---	60	2.9	6.7	2.1	9.7
SB-2		---	<50	<0.5	<0.5	<0.5	<1.0
SB-3		---	170	1.5	11	4.8	27
SB-4		---	6,500	78	440	190	960
SB-5		---	<50	<0.5	<0.5	<0.5	<1.0
SB-6		---	440	<20	<20	<20	<40
SB-7		---	270	<12	<12	<12	<25
SB-8		---	<50	0.6	1.3	0.6	3.3
SB-9		---	<50	<10	<10	<10	<20
SB-10	December 2011	---	<50	<0.5	<0.5	<0.5	<1.0
SB-11		---	2,300	83	1.9	140	43
SB-12		---	4,700	620	290	84	400
SB-13		---	400	51	2.4	4.2	9.7
SB-14		---	<50	1.7	z	2.1	<1.0
SB-15		---	320	32	p	33	25
SB-16		---	4,800	1,600	10	49	<20
SB-17		---	990	290	7.2	27	4.3
SB-18		---	560	8.7	4.9	23	83
SB-19		---	260	7.1	<0.5	16	7.0
SB-21		---	<50	<0.5	<0.5	<0.5	<1.0

Notes:

- TPHd - denotes total petroleum hydrocarbons as diesel
- TPHg - denotes total petroleum hydrocarbons as gasoline
- ug/L - denotes micrograms per liter
- < - denotes less than the detection limit
- - denotes not analyzed/applicable

Table 3b
Grab Groundwater Sample Results
Oxygenates and Lead Scavengers
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Sample ID	Collection Date	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)
Excavation								
Water	February 2000	<10	<10	15,000	39	17,000	<10	<10
Direct Push Grab Groundwater Samples								
SB-1	April 2010	<0.5	<0.5	14	<0.5	<5.0	<0.5	<0.5
SB-2		<0.5	<0.5	45	<0.5	<5.0	<0.5	<0.5
SB-3		<0.5	<0.5	110	<0.5	32	<0.5	<0.5
SB-4		<5.0	<5.0	<5.0	<5.0	<50	<5.0	<5.0
SB-5		<0.5	<0.5	0.6	<0.5	<5.0	<0.5	<0.5
SB-6		<20	<20	4,000	<20	<200	<20	<20
SB-7		<12	<12	2,500	<12	<120	<12	<12
SB-8		<0.5	<0.5	26	<0.5	98	<0.5	<0.5
SB-9		<10	<10	1,800	<10	5,300	<10	<10
SB-10	December 2011	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
SB-11		<1.0	<1.0	22	<1.0	140	<1.0	<1.0
SB-12		<5.0	<5.0	100	<5.0	550	<5.0	<5.0
SB-13		<2.0	<2.0	39	<2.0	3,900	<2.0	<2.0
SB-14		<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
SB-15		<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
SB-16		<10	<10	<10	<10	<100	<10	<10
SB-17		<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0
SB-18		<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
SB-19		<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
SB-21		<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5

Notes:

- | | |
|--|---|
| ug/L - denotes micrograms per liter | DIPE - denotes di-isopropyl ether |
| < - denotes less than the detection limit | ETBE - denotes ethyl tertiary butyl ether |
| DCA - denotes dichloroethane | TAME - denotes tertiary amyl ether |
| EDB - denotes ethylene dibromide | TBA - denotes tertiary butyl alcohol |
| MTBE - denotes methyl tertiary butyl ether | |

Table 4a
Monitoring Well Data
Water Level, TPH, and BTEX
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)
Monitoring Wells									
MW-1	6/23/2011	10.46	20.35	<250	23,000	4,500	820	1,700	3,800
	9/22/2011	12.13	18.68	<50	21,000	4,000	1,500	980	3,000
	12/11/2011	11.69	19.12	---	23,000	2,900	1,000	720	3,000
	3/30/2012	Inaccessible							
	6/1/2012	11.04	19.77	---	40,000	4,100	800	2,700	6,100
	9/14/2012	12.96	17.85	<100	20,000	2,700	160	830	2,600
	3/27/2013	8.57	22.24	<50	15,000	1,700	150	400	830
	5/20/2013	8.57	22.24	<100	22,000	2,800	870	560	2,000
	9/4/2013	9.29	21.52	<250	12,000	2,900	130	190	370
	12/6/2013	9.11	21.70	<120	15,000	3,000	780	580	2,400
	6/27/2014	8.92	21.89	<120	15,000	2,500	280	2,400	2,400
	9/19/2014	10.98	19.83	---	11,000	530	190	460	950
	12/15/2014	7.66	23.15	---	11,000	1,100	140	310	420
	3/31/2015	8.81	22.00	---	38,000	1,200	230	810	2,600
	9/18/2015	12.23	18.58	---	7,600	890	38	240	360
	12/16/2015	12.02	18.79	---	8,900	580	16	110	110
	3/22/2016	10.48	20.33	---	18,000	690	66	540	1,900
	9/23/2016	9.01	21.80	---	20,000	1,400	90	1,100	4,500
	3/28/2017	8.73	22.08	---	47,000	1,600	270	3,600	9,000
	9/28/2017	11.50	19.31	---	22,000	660	27	700	1,600
	3/30/2018	8.64	22.17	---	45,000	920	110	3,100	10,000
MW-2	6/23/2011	10.70	20.59	<250	13,000	1,000	160	370	1,600
	9/22/2011	12.42	18.87	<50	12,000	300	130	470	1,400
	12/11/2011	11.98	19.31	---	8,300	170	120	450	1,500
	3/30/2012	8.55	22.74	<250	17,000	850	700	710	2,900
	6/1/2012	11.26	20.03	---	5,300	830	260	630	1,700
	9/14/2012	13.11	18.18	<50	10,000	260	190	600	1,900
	3/27/2013	9.43	21.86	<50	12,000	440	98	320	810
	5/20/2013	9.41	21.88	<100	6,600	300	74	190	500
	9/4/2013	10.11	21.18	<100	5,300	300	50	180	280
	12/6/2013	9.93	21.36	<50	4,300	280	39	140	160
	6/27/2014	9.93	21.36	<50	1,300	200	22	85	160
	9/19/2014	12.49	18.80	---	990	42	12	97	110
	12/15/2014	8.65	22.64	---	85	14	3.3	5.2	13
	3/31/2015	9.83	21.46	---	---	---	---	---	---
	9/18/2015	12.45	18.84	---	1,300	29	8.9	44	120
	12/16/2015	12.57	18.72	---	880	8.2	2.9	16	30
	3/22/2016	11.11	20.18	---	900	7.3	2.4	3.7	16
	9/23/2016	9.90	21.39	---	570	10	2.9	13	37
	3/28/2017	9.42	21.87	---	3,000	120	6.2	39	64
	9/28/2017	12.10	19.19	---	2,100	11	2.5	16	43
	3/30/2018	9.32	21.97	---	4,700	64	8.6	82	140

Table 4a
Monitoring Well Data
Water Level, TPH, and BTEX
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)
MW-3	6/23/2011	10.79	20.51	<250	55,000	15,000	3,600	2,000	4,300
	9/22/2011	12.60	18.70	<250	77,000	15,000	3,900	1,700	4,900
	12/11/2011	12.13	19.17	---	64,000	12,000	3,100	1,600	4,500
	3/30/2012	7.90	23.40	<120	100,000	17,000	10,000	2,000	8,400
	6/1/2012	11.47	19.83	---	83,000	15,000	6,000	2,900	10,000
	9/14/2012	13.42	17.88	<200	69,000	10,000	1,500	1,800	5,900
	3/27/2013	9.15	22.15	<200	63,000	7,100	2,100	1,900	7,700
	5/20/2013	9.16	22.14	<250	80,000	9,700	2,900	2,400	8,600
	9/4/2013	9.87	21.43	<250	47,000	7,200	470	1,200	5,000
	12/6/2013	9.69	21.61	<50	19,000	5,600	240	520	1,600
	6/27/2014	9.49	21.81	<50	12,000	5,800	240	860	760
	9/19/2014	11.62	19.68	---	9,500	610	160	220	400
	12/15/2014	8.10	23.20	---	1,300	260	69	39	120
	3/31/2015	9.37	21.93	---	13,000	1,300	270	230	700
	9/18/2015	13.13	18.17	---	8,300	1,000	150	150	440
	12/16/2015	13.09	18.21	---	11,000	1,100	130	290	350
	3/22/2016	11.39	19.91	---	1,500	230	23	14	53
	9/23/2016	9.57	21.73	---	4,200	640	51	58	140
	3/28/2017	9.20	22.10	---	1,200	47	20	11	67
	9/28/2017	11.91	19.39	---	3,400	97	56	84	190
3/30/2018	9.23	22.07	---	1,200	46	31	20	150	
MW-4	6/23/2011	10.62	20.59	<250	47,000	3,500	7,100	2,300	11,000
	9/22/2011	12.25	18.96	<250	46,000	2,000	2,400	1,100	5,300
	12/11/2011	11.89	19.32	---	46,000	2,100	3,400	1,800	7,000
	3/30/2012	8.51	22.70	<250	60,000	6,800	8,200	1,200	5,700
	6/1/2012	11.14	20.07	---	72,000	9,700	8,500	2,300	9,000
	9/14/2012	12.97	18.24	<50	15,000	940	880	450	1,700
	3/27/2013	9.05	22.16	<50	25,000	1,800	2,200	660	2,500
	5/20/2013	9.03	22.18	<250	18,000	1,600	1,700	470	1,900
	9/4/2013	9.68	21.53	<50	15,000	510	410	260	820
	12/6/2013	9.54	21.67	<50	9,600	630	650	240	970
	6/27/2014	9.58	21.63	<50	3,300	550	2,900	200	420
	9/19/2014	11.61	19.60	---	2,100	110	54	92	210
	12/15/2014	8.45	22.76	---	720	58	32	29	33
	3/31/2015	9.46	21.75	---	---	---	---	---	---
	9/18/2015	12.03	19.18	---	17,000	130	33	70	200
	12/16/2015	12.41	18.80	---	8,200	160	44	88	130
	3/22/2016	11.22	19.99	---	1,900	88	71	43	91
	9/23/2016	9.45	21.76	---	2,700	520	85	54	120
	3/28/2017	9.22	21.99	---	4,500	700	56	140	300
	9/28/2017	11.88	19.33	---	7,100	250	29	220	310
3/30/2018	9.17	22.04	---	5,100	520	25	70	110	

Table 4a
Monitoring Well Data
Water Level, TPH, and BTEX
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)		
MW-5	6/23/2011	10.12	21.23	<250	130,000	7,100	25,000	13,000	94,000		
	9/22/2011	12.53	18.82	<250	120,000	6,900	7,600	3,800	17,000		
	12/11/2011	12.09	19.26	---	110,000	7,800	14,000	4,200	20,000		
	3/30/2012	8.06	23.29	Sheen - not sampled							
	6/1/2012	11.38	19.97	Sheen - not sampled							
	9/14/2012	13.61	17.74	Free product - not sampled							
	3/27/2013	9.21	22.14	Free product - not sampled							
	5/20/2013	9.17	22.18	Free product - not sampled							
	9/4/2013	9.70	21.65	Free product - not sampled							
	12/6/2013	9.67	21.68	<250	81,000	10,000	13,000	5,500	21,000		
	6/27/2014	9.51	21.84	Free product - not sampled							
	9/19/2014	12.91	18.44	---	56,000	1,000	270	1,000	4,100		
	12/15/2014	---	---	---	13,000	840	530	450	1,700		
	3/31/2015	9.36	21.99	---	34,000	1,100	570	500	2,000		
	9/18/2015	---	---	---	9,800	290	23	140	270		
	12/16/2015	---	---	---	6,100	220	5.8	92	35		
	3/22/2016	12.26	19.09	---	6,300	320	58	190	480		
	9/23/2016	---	---	---	10,000	350	48	230	930		
	3/28/2017	---	---	---	9,700	310	68	580	1,200		
	9/28/2017	11.97	19.38	---	7,500	140	16	140	370		
3/30/2018	Inaccessible										
MW-6	6/23/2011	10.43	20.36	<250	11,000	2,400	120	480	840		
	9/22/2011	12.10	18.69	<50	15,000	1,500	270	880	2,500		
	12/11/2011	11.69	19.10	---	13,000	660	190	610	1,500		
	3/30/2012	7.50	23.29	<250	9,500	1,200	160	250	520		
	6/1/2012	11.04	19.75	---	23,000	2,200	220	1,300	3,000		
	9/14/2012	12.96	17.83	<50	14,000	1,000	86	420	1,200		
	3/27/2013	---	---	Inaccessible							
	5/20/2013	---	---	Inaccessible							
	9/4/2013	9.19	21.60	<100	9,500	1,400	120	1,400	1,600		
	12/6/2013	9.03	21.76	<100	14,000	1,200	24	1,400	810		
	6/27/2014	8.80	21.99	<100	9,800	1,200	75	2,800	530		
	9/19/2014	10.68	20.11	---	6,500	240	21	490	110		
	12/15/2014	7.62	23.17	---	4,700	520	25	110	43		
	3/31/2015	8.75	22.04	---	10,000	330	12	80	73		
	9/18/2015	11.61	19.18	---	7,000	430	24	120	110		
	12/16/2015	11.58	19.21	---	8,200	460	12	17	26		
	3/22/2016	10.10	20.69	---	5,900	380	15	87	83		
	9/23/2016	8.90	21.89	---	7,700	170	<5.0	8.0	<10		
3/28/2017	8.70	22.09	---	8,100	190	11	100	130			
9/28/2017	11.35	19.44	---	6,100	210	17	27	48			
3/30/2018	8.65	22.14	---	6,800	200	12	29	46			

Table 4a
Monitoring Well Data
Water Level, TPH, and BTEX
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)
DPE Wells									
EW-1	6/28/2011	---	---	---	20,000	2,000	490	1,000	2,400
	9/22/2011	12.55	18.71	<120	39,000	3,900	610	1,400	4,600
	12/11/2011	12.09	19.17	---	27,000	2,600	270	1,400	4,400
	3/30/2012	8.06	23.20	<120	21,000	3,100	160	910	2,300
	6/1/2012	11.42	19.84	---	21,000	2,800	100	1,200	3,100
	9/14/2012	13.37	17.89	<50	22,000	1,900	50	1,000	2,600
	3/27/2013	9.06	22.20	<50	15,000	630	36	360	590
	5/20/2013	9.06	22.20	<100	11,000	600	28	210	350
	9/4/2013	9.77	21.49	<50	9,300	610	19	170	250
	12/6/2013	9.63	21.83	<100	11,000	740	17	260	340
	6/27/2014	9.55	21.91	<100	12,000	1,400	210	1,900	2,400
	9/19/2014	12.41	19.05	---	28,000	1,000	450	1,400	3,900
	12/15/2014	8.20	23.26	---	4,000	560	29	150	150
	3/31/2015	9.30	22.16	---	---	---	---	---	---
	9/18/2015	13.25	18.21	---	6,900	370	5.5	190	210
	12/16/2015	13.22	18.24	---	6,000	250	3.3	31	31
	3/22/2016	11.54	19.92	---	3,900	200	<5.0	46	33
	9/23/2016	9.51	21.95	---	6,200	130	<5.0	35	24
	3/28/2017	9.24	22.22	---	9,000	210	3.2	55	95
	9/28/2017	11.93	19.53	---	8,200	66	2.3	49	28
3/30/2018	9.16	22.30	---	10,000	46	<2.0	32	29	
EW-2	6/28/2011	---	---	---	33,000	3,100	2,000	790	3,500
	9/22/2011	12.50	18.90	<250	66,000	2,400	4,500	2,000	11,000
	12/11/2011	12.12	19.28	---	70,000	2,800	6,900	2,700	13,000
	3/30/2012	8.48	22.92	<250	57,000	5,800	5,500	1,200	5,400
	6/1/2012	11.40	20.00	---	82,000	8,800	8,600	3,300	13,000
	9/14/2012	13.27	18.13	<100	32,000	2,600	2,400	1,000	4,500
	3/27/2013	9.24	22.16	<100	18,000	940	790	390	1,700
	5/20/2013	9.21	22.19	<50	10,000	540	430	220	790
	9/4/2013	9.88	21.52	<250	10,000	680	580	480	1,700
	12/6/2013	9.96	21.47	<50	13,000	620	380	350	1,600
	6/27/2014	9.85	21.58	<50	27,000	3,200	5,600	1,200	8,000
	9/19/2014	16.80	14.63	---	18,000	690	1,300	360	2,400
	12/15/2014	8.73	22.70	---	11,000	510	500	160	1,100
	3/31/2015	9.90	21.53	---	---	---	---	---	---
	9/18/2015	15.10	16.33	---	16,000	1,400	2,400	520	3,400
	12/16/2015	16.57	14.86	---	29,000	1,400	3,300	400	2,500
	3/22/2016	16.56	14.87	---	22,000	820	2,100	420	2,800
	9/23/2016	9.82	21.61	---	6,500	37	38	29	170
	3/28/2017	9.54	21.89	---	7,100	64	33	51	260
	9/28/2017	12.30	19.13	---	1,900	8.8	15	23	79
3/30/2018	9.60	21.83	---	7,200	43	15	50	310	

Table 4a
Monitoring Well Data
Water Level, TPH, and BTEX
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)
EW-3	5/20/2013	8.82	---	<50	1,300	430	540	280	1,000
	9/4/2013	9.49	---	<100	9,800	480	220	560	1,800
	12/6/2013	10.05	---	<50	10,000	810	580	260	1,100
	6/27/2014	9.90	---	<50	27,000	4,300	4,300	1,200	7,900
	9/19/2014	13.00	---	---	15,000	670	650	530	2,400
	12/15/2014	8.20	---	---	26,000	1,200	1,100	350	2,000
	3/31/2015	9.31	---	---	8,000	170	18	130	560
	9/18/2015	13.98	---	---	12,000	340	110	180	1,900
	12/16/2015	14.31	---	---	11,000	360	75	110	920
	3/22/2016	12.63	---	---	5,700	120	6.7	90	170
	9/23/2016	9.46	---	---	2,800	26	2.2	60	61
	3/28/2017	9.21	---	---	4,100	150	3.9	41	32
	9/28/2017	11.87	---	---	3,600	18	5.4	25	46
3/30/2018	9.15	---	---	2,900	13	2.2	9.6	27	
EW-4	5/20/2013	9.12	---	<50	8,100	720	160	94	430
	9/4/2013	9.85	---	z	11,000	990	580	310	1,200
	12/6/2013	9.62	---	w	4,400	150	170	140	670
	6/27/2014	9.47	---	<50	8,400	1,500	940	540	2,100
	9/19/2014	12.48	---	---	9,000	680	1,600	450	3,000
	12/15/2014	8.50	---	---	7,700	570	170	320	1,000
	3/31/2015	9.78	---	---	23,000	1,000	1,200	420	1,700
	9/18/2015	15.45	---	---	7,200	860	62	55	130
	12/16/2015	16.08	---	---	5,200	1,200	35	40	81
	3/22/2016	16.74	---	---	7,400	920	83	120	350
	9/23/2016	9.95	---	---	8,200	350	27	70	670
	3/28/2017	9.50	---	---	10,000	460	12	190	690
	9/28/2017	12.22	---	---	8,000	89	6.3	100	410
3/30/2018	9.36	---	---	5,100	190	10	76	250	

Notes:

- TOC - denotes top of casing elevation
- TPHg - denotes total petroleum hydrocarbons as gasoline
- TPHd - denotes total petroleum hydrocarbons as diesel
- ft bgs - denotes feet below top of casing
- ft amsl - denotes feet above mean sea level
- ug/L - denotes micrograms per liter
- < - denotes less than the detection limit
- - denotes not available/applicable
- FLH - denotes floating liquid hydrocarbons
- * - denotes less than six inches of water and considered dry

Table 4b
Monitoring Well Data
Oxygenates and Lead Scavengers
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	
Monitoring Wells									
MW-1	6/23/2011	<25	<25	3,000	<25	3,900	<25	<25	
	9/22/2011	<50	<50	2,600	<50	2,500	<50	<50	
	12/11/2011	<20	<20	1,800	<20	1,600	<20	<20	
	3/30/2012	Inaccessible							
	6/1/2012	<20	<20	2,800	<20	1,300	<20	<20	
	9/14/2012	<10	<10	2,200	<10	1,600	<10	<10	
	3/27/2013	<0.5	<0.5	590	<0.5	350	<0.5	<0.5	
	5/20/2013	<10	<10	1,100	<10	620	<10	<10	
	9/4/2013	<10	<10	240	<10	<100	<10	<10	
	12/6/2013	<5.0	<5.0	350	<50	<100	<5.0	<5.0	
	6/27/2014	<10	<10	97	<10	<100	<10	<10	
	9/19/2014	<10	<10	150	<10	<100	<10	<10	
	12/15/2014	<0.5	<0.5	310	<0.5	98	<0.5	<0.5	
	3/31/2015	<5.0	<5.0	330	<5.0	<50	<5.0	<5.0	
	9/18/2015	<5.0	<5.0	150	<5.0	<50	<5.0	<5.0	
	12/16/2015	<5.0	<5.0	57	<5.0	<50	<5.0	<5.0	
	3/22/2016	<50	<50	<50	<50	<500	<50	<50	
	9/23/2016	<0.5	<0.5	250	<0.5	250	<0.5	<0.5	
	3/28/2017	<20	<20	340	<20	470	<20	<20	
	9/28/2017	<10	<10	130	<10	290	<10	<10	
3/30/2018	<20	<20	170	<20	460	<20	<20		
MW-2	6/23/2011	<10	<10	240	<10	640	<10	<10	
	9/22/2011	<5.0	<5.0	110	<5.0	260	<5.0	<5.0	
	12/11/2011	<2.5	<2.5	45	<2.5	110	<2.5	<2.5	
	3/30/2012	<5.0	<5.0	140	<5.0	490	<5.0	<5.0	
	6/1/2012	<5.0	<5.0	180	<5.0	490	<5.0	<5.0	
	9/14/2012	<5.0	<5.0	65	<5.0	190	<5.0	<5.0	
	3/27/2013	<0.5	<0.5	120	<0.5	930	<0.5	<0.5	
	5/20/2013	<2.5	<2.5	120	<2.5	1,800	<2.5	<2.5	
	9/4/2013	<5.0	<5.0	100	<5.0	780	<5.0	<5.0	
	12/6/2013	<5.0	<5.0	63	<5.0	230	<5.0	<5.0	
	6/27/2014	<5.0	<5.0	21	<5.0	<50	<5.0	<5.0	
	9/19/2014	<5.0	<5.0	16	<5.0	<50	<5.0	<5.0	
	12/15/2014	<0.5	<0.5	7.3	<0.5	23	<0.5	<0.5	
	3/31/2015	---	---	---	---	---	---	---	
	9/18/2015	<0.5	<0.5	4.1	<0.5	<5.0	<0.5	<0.5	
	12/16/2015	<0.5	<0.5	1.0	<0.5	<5.0	<0.5	<0.5	
	3/22/2016	<0.5	<0.5	<0.5	<0.5	3.7	<0.5	<0.5	
	9/23/2016	<0.5	<0.5	5.3	<0.5	<5.0	<0.5	<0.5	
	3/28/2017	<0.5	<0.5	10	<0.5	<5.0	<0.5	<0.5	
	9/28/2017	<1.0	<1.0	3.0	<1.0	<10	<1.0	<1.0	
3/30/2018	<1.0	<1.0	10	<1.0	<10	<1.0	<1.0		

Table 4b
Monitoring Well Data
Oxygenates and Lead Scavengers
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)
MW-3	6/23/2011	<100	<100	8,200	<100	6,400	<100	<100
	9/22/2011	<100	<100	11,000	<100	2,800	<100	<100
	12/11/2011	<100	<100	7,400	<100	1,800	<100	<100
	3/30/2012	<100	<100	13,000	<100	<1,000	<100	<100
	6/1/2012	<50	<50	12,000	<50	<500	<50	<50
	9/14/2012	<50	<50	9,400	<50	<500	<50	<50
	3/27/2013	<0.5	<0.5	7,900	<0.5	3,800	<0.5	<0.5
	5/20/2013	<25	<25	10,000	<25	5,000	<25	<25
	9/4/2013	<25	<25	5,300	<25	2,100	<25	<25
	12/6/2013	<25	<25	1,400	<25	640	<25	<25
	6/27/2014	<25	<25	520	<25	260	<25	<25
	9/19/2014	<25	<25	390	<25	370	<25	<25
	12/15/2014	<0.5	<0.5	110	<0.5	140	<0.5	<0.5
	3/31/2015	<5.0	<5.0	980	<5.0	610	<5.0	<5.0
	9/18/2015	<5.0	<5.0	410	<5.0	410	<5.0	<5.0
	12/16/2015	<5.0	<5.0	290	<5.0	<50	<5.0	<5.0
	3/22/2016	<5.0	<5.0	71	<5.0	56	<5.0	<5.0
	9/23/2016	<5.0	<5.0	380	<5.0	<50	<5.0	<5.0
	3/28/2017	<5.0	<5.0	19	<5.0	95	<5.0	<5.0
	9/28/2017	<1.0	<1.0	110	<1.0	79	<1.0	<1.0
3/30/2018	<0.5	<0.5	38	<0.5	49	<0.5	<0.5	
MW-4	6/23/2011	<50	<50	<50	<50	<500	<50	<50
	9/22/2011	<25	<25	<25	<25	<250	<25	<25
	12/11/2011	<25	<25	<25	<25	<250	<25	<25
	3/30/2012	<50	<50	56	<50	<500	<50	<50
	6/1/2012	<50	<50	180	<50	<500	<50	<50
	9/14/2012	<20	<20	<20	<20	<200	<20	<20
	3/27/2013	<0.5	<0.5	77	<0.5	450	<0.5	<0.5
	5/20/2013	<10	<10	61	<10	360	<10	<10
	9/4/2013	<2.5	<2.5	17	<2.5	64	<2.5	<2.5
	12/6/2013	<2.5	<2.5	6.6	<2.5	<25	<2.5	<2.5
	6/27/2014	<2.5	<2.5	<2.5	<2.5	<25	<2.5	<2.5
	9/19/2014	<2.5	<2.5	<2.5	<2.5	<25	<2.5	<2.5
	12/15/2014	<0.5	<0.5	<0.5	<0.5	13	<0.5	<0.5
	3/31/2015	---	---	---	---	---	---	---
	9/18/2015	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
	12/16/2015	<5.0	<5.0	<5.0	<5.0	<50	<5.0	<5.0
	3/22/2016	<5.0	<5.0	<5.0	<5.0	<20	<5.0	<5.0
	9/23/2016	<5.0	<5.0	8.0	<5.0	<50	<5.0	<5.0
	3/28/2017	<5.0	<5.0	12	<5.0	<50	<5.0	<5.0
	9/28/2017	<2.0	<2.0	25	<2.0	<20	<2.0	<2.0
3/30/2018	<2.0	<2.0	22	<2.0	<20	<2.0	<2.0	

Table 4b
Monitoring Well Data
Oxygenates and Lead Scavengers
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)
MW-5	6/23/2011	<120	<120	440	<120	<1,200	<120	<120
	9/22/2011	<50	<50	670	<50	1,500	<50	<50
	12/11/2011	<120	<120	690	<120	1,600	<120	<120
	3/30/2012	Sheen - not sampled						
	6/1/2012	Sheen - not sampled						
	9/14/2012	Free product - not sampled						
	3/27/2013	Free product - not sampled						
	5/20/2013	Free product - not sampled						
	9/4/2013	Free product - not sampled						
	12/6/2013	<25	<25	270	<25	<250	<25	<25
	6/27/2014	Free product - not sampled						
	9/19/2014	<25	<25	75	<25	<250	<25	<25
	12/15/2014	<0.5	<0.5	370	<0.5	340	<0.5	<0.5
	3/31/2015	<5.0	<5.0	71	<5.0	280	<5.0	<5.0
	9/18/2015	<5.0	<5.0	15	<5.0	<50	<5.0	<5.0
	12/16/2015	<5.0	<5.0	17	<5.0	<50	<5.0	<5.0
	3/22/2016	<5.0	<5.0	26	<5.0	110	<5.0	<5.0
	9/23/2016	<5.0	<5.0	38	<5.0	<50	<5.0	<5.0
	3/28/2017	<0.5	<0.5	27	<0.5	<5.0	<0.5	<0.5
	9/28/2017	<2.0	<2.0	27	<2.0	<20	<2.0	<2.0
3/30/2018	Inaccessible							
MW-6	6/23/2011	<25	<25	1,100	<25	4,000	<25	<25
	9/22/2011	<12	<12	600	<12	2,800	<12	<12
	12/11/2011	<10	<10	290	<10	1,300	<10	<10
	3/30/2012	<10	<10	990	<10	3,500	<10	<10
	6/1/2012	<10	<10	1,400	<10	2,200	<10	<10
	9/14/2012	<10	<10	580	<10	2,000	<10	<10
	3/27/2013	Inaccessible						
	5/20/2013	Inaccessible						
	9/4/2013	<5.0	<5.0	29	<5.0	140	<5.0	<5.0
	12/6/2013	<2.5	<2.5	12	<2.5	<25	<2.5	<2.5
	6/27/2014	<2.5	<2.5	4.9	<2.5	<25	<2.5	<2.5
	9/19/2014	<2.5	<2.5	7.1	<2.5	<25	<2.5	<2.5
	12/15/2014	<0.5	<0.5	33	<0.5	88	<0.5	<0.5
	3/31/2015	<5.0	<5.0	12	<5.0	<50	<5.0	<5.0
	9/18/2015	<2.5	<2.5	9.6	<2.5	<25	<2.5	<2.5
	12/16/2015	<5.0	<5.0	10	<5.0	<50	<5.0	<5.0
	3/22/2016	<5.0	<5.0	8.7	<5.0	28	<5.0	<5.0
	9/23/2016	<5.0	<5.0	<5.0	<5.0	<50	<5.0	<5.0
	3/28/2017	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	9/28/2017	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0
3/30/2018	<2.0	<2.0	20	<2.0	<20	<2.0	<2.0	

Table 4b
Monitoring Well Data
Oxygenates and Lead Scavengers
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)
DPE Wells								
EW-1	6/28/2011	<25	<25	1,500	<25	5,300	<25	<25
	9/22/2011	<50	<50	640	<50	1,800	<50	<50
	12/11/2011	<25	<25	490	<25	1,000	<25	<25
	3/30/2012	<20	<20	370	<20	1,100	<20	<20
	6/1/2012	<25	<25	500	<25	1,700	<25	<25
	9/14/2012	<10	<10	370	<10	1,400	<10	<10
	3/27/2013	<0.5	<0.5	270	<0.5	560	<0.5	<0.5
	5/20/2013	<5.0	<5.0	250	<5.0	560	<5.0	<5.0
	9/4/2013	<2.5	<2.5	220	<2.5	590	<2.5	<2.5
	12/6/2013	<2.5	<2.5	130	<2.5	270	<2.5	<2.5
	6/27/2014	<10	<10	40	<10	<100	<10	<10
	9/19/2014	<20	<20	300	<20	<200	<20	<20
	12/15/2014	<0.5	<0.5	170	<0.5	110	<0.5	<0.5
	3/31/2015	---	---	---	---	---	---	---
	9/18/2015	<2.5	<2.5	100	<2.5	<25	<2.5	<2.5
	12/16/2015	<5.0	<5.0	24	<5.0	<50	<5.0	<5.0
	3/22/2016	<5.0	<5.0	40	<5.0	46	<5.0	<5.0
	9/23/2016	<5.0	<5.0	78	<5.0	<50	<5.0	<5.0
	3/28/2017	<0.5	<0.5	90	<0.5	<5.0	<0.5	<0.5
	9/28/2017	<2.0	<2.0	42	<2.0	<20	<2.0	<2.0
3/30/2018	<2.0	<2.0	74	<2.0	<20	<2.0	<2.0	
EW-2	6/28/2011	<25	<25	670	<25	4,100	<25	<25
	9/22/2011	<50	<50	740	<50	1,600	<50	<50
	12/11/2011	<50	<50	540	<50	880	<50	<50
	3/30/2012	<50	<50	1,800	<50	2,800	<50	<50
	6/1/2012	<50	<50	2,600	<50	3,300	<50	<50
	9/14/2012	<20	<20	1,100	<20	2,400	<20	<20
	3/27/2013	<0.5	<0.5	360	<0.5	1,800	<0.5	<0.5
	5/20/2013	<2.5	<2.5	390	<2.5	2,600	<2.5	<2.5
	9/4/2013	<5.0	<5.0	460	<5.0	1,400	<5.0	<5.0
	12/6/2013	<10	<10	210	<10	560	<10	<10
	6/27/2014	<10	<10	110	<10	<100	<10	<10
	9/19/2014	<25	<25	96	<25	<250	<25	<25
	12/15/2014	<0.5	<0.5	94	<0.5	66	<0.5	<0.5
	3/31/2015	---	---	---	---	---	---	---
	9/18/2015	<10	<10	50	<10	<100	<10	<10
	12/16/2015	<50	<50	58	<50	<500	<50	<50
	3/22/2016	<250	<250	<250	<250	<1,000	<250	<250
	9/23/2016	<5.0	<5.0	26	<5.0	<50	<5.0	<5.0
	3/28/2017	<0.5	<0.5	59	<0.5	<5.0	<0.5	<0.5
	9/28/2017	<2.0	<2.0	18	<2.0	65	<2.0	<2.0
3/30/2018	<2.0	<2.0	45	<2.0	210	<2.0	<2.0	

Table 4b
Monitoring Well Data
Oxygenates and Lead Scavengers
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Well ID TOC	Date Measured	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)
EW-3	5/20/2013	<2.5	<2.5	140	<2.5	1,100	<2.5	<2.5
	9/4/2013	<2.5	<2.5	120	<2.5	650	<2.5	<2.5
	12/6/2013	<2.5	<2.5	96	<2.5	690	<2.5	<2.5
	6/27/2014	<5.0	<5.0	150	<5.0	360	<5.0	<5.0
	9/19/2014	<25	<25	75	<25	<250	<25	<25
	12/15/2014	<0.5	<0.5	160	<0.5	700	<0.5	<0.5
	3/31/2015	<5.0	<5.0	38	<5.0	68	<5.0	<5.0
	9/18/2015	<5.0	<5.0	120	<5.0	<50	<5.0	<5.0
	12/16/2015	<5.0	<5.0	81	<5.0	<50	<5.0	<5.0
	3/22/2016	<2.5	<2.5	33	<2.5	84	<2.5	<2.5
	9/23/2016	<0.5	<0.5	32	<0.5	34	<0.5	<0.5
	3/28/2017	<0.5	<0.5	51	<0.5	130	<0.5	<0.5
	9/28/2017	<2.0	<2.0	35	<2.0	100	<2.0	<2.0
	3/30/2018	<1.0	<1.0	59	<1.0	170	<1.0	<1.0
EW-4	5/20/2013	<5.0	<5.0	480	<5.0	1,900	<5.0	<5.0
	9/4/2013	<5.0	<5.0	220	<5.0	1,300	<5.0	<5.0
	12/6/2013	<5.0	<5.0	58	<5.0	430	<5.0	<5.0
	6/27/2014	<2.5	<2.5	82	<2.5	65	<2.5	<2.5
	9/19/2014	<20	<20	120	<20	520	<20	<20
	12/15/2014	<0.5	<0.5	100	<0.5	110	<0.5	<0.5
	3/31/2015	<5.0	<5.0	140	<5.0	310	<5.0	<5.0
	9/18/2015	<5.0	<5.0	140	<5.0	420	<5.0	<5.0
	12/16/2015	<5.0	<5.0	87	<5.0	390	<5.0	<5.0
	3/22/2016	<25	<25	81	<25	250	<25	<25
	9/23/2016	<5.0	<5.0	150	<5.0	180	<5.0	<5.0
	3/28/2017	<0.5	<0.5	61	<0.5	270	<0.5	<0.5
	9/28/2017	<2.0	<2.0	46	<2.0	170	<2.0	<2.0
	3/30/2018	<2.0	<2.0	30	<2.0	200	<2.0	<2.0

Notes:

ug/L - denotes micrograms per liter

< - denotes less than the detection limit

DCA - denotes dichloroethane

EDB - denotes ethylene dibromide

MTBE - denotes methyl tertiary butyl ether

DIPE - denotes di-isopropyl ether

ETBE - denotes ethyl tertiary butyl ether

TAME - denotes tertiary amyl ether

TBA - denotes tertiary butyl alcohol

--- - denotes no data available

Table 5a
Soil Vapor Extraction System Performance Calculations
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Date	Meter* (hours)	Influent Flow Rate (scfm)	Influent Sample Results			Extraction Rates (lb/day)			Cumulative Extraction (lb)		
			TPHg (ppmv)	Benzene (ppmv)	MTBE (ppmv)	TPHg (lb/day)	Benzene (lb/day)	MTBE (lb/day)	TPHg (lb)	Benzene (lb)	MTBE (lb)
05/27/14	590.3	106.0	2,500	14	0.73	112	0.5	0.0	2,745	11.4	0.7
06/17/14	961.5	125.0	40	1.4	0.18	2.1	0.05	0.0	2,778	12.3	0.8
06/27/14	988.2	Unit shut down for Carbon Change Out									
08/15/14	988.2	Restart Unit									
08/19/14	992.6	125.0	33	0.79	0.13	1.7	0.03	0.0	2,780	12.3	0.8
09/25/14	1,535.7	163.0	2,100	15	< 0.1	144	0.77	0.0	6,042	29.7	0.9
10/28/14	1,750.4	146.0	130	2.4	0.44	8.0	0.11	0.0	6,114	30.6	1.1
12/09/14	2,142.4	154.0	610	2.6	0.23	40	0.13	0.0	6,760	32.7	1.3
02/18/15	2,708.3	System shut down, propane tank removed from site									
08/11/15	2,708.9	System restarted									
08/25/15	2,864.4	125.0	344	2.7	< 0.1	18	0.11	0.0	7,305	32.6	1.3
09/29/15	3,428.0	128.0	91	1.4	< 0.1	5	0.06	0.0	7,420	33.9	1.4
10/26/15	3,742.1	122.0	225	0.97	< 0.1	12	0.04	0.0	7,571	34.4	1.5
11/23/15	4,175.9	150.0	407	1.2	< 0.1	26	0.06	0.0	8,036	35.4	1.6
12/16/15	4,613.3	148.0	102	0.84	< 0.1	6	0.04	0.0	8,152	36.1	1.6
12/16/15	4,613.3	Unit shut down for Carbon Change Out									
01/27/16	4,761.0	146.0	23	0.73	< 0.1	1.4	0.03	0.0	8,161	36.1	1.6
03/21/16	5,797.5	138.0	20	0.86	< 0.1	1.2	0.04	0.0	8,211	37.7	1.8
04/11/16	6,279.7	135.0	43	0.86	< 0.1	2.4	0.04	0.0	8,260	38.4	1.9

MW_{TPHg} = Molecular Weight of TPHg = 105 MW_{MTBE} = Molecular Weight of Methyl tert-butyl ether = 88.15
 MW_{Benzene} = Molecular Weight of Benzene = 78.11

ft³ = cubic feet min = minutes lb/day = pounds per day days of operation during quarter 69.4
 ppmv = parts per million by volume = ft³ / 1x10⁶ ft³ scfm = standard cubic feet per minute

NS = not sampled NA = not analyzed NC = not calculated

Extraction rate = (flow rate(ft³/min) x concentration (ft³ / 1x10⁶ ft³) x MW_{TPHg}(lb/lb-mol) x 1440 min/day)/(359 ft³/lb-mol*)

* - Hour meter readings does not match field data sheets because hour meter was 5472.6 when unit was started.

Table 5b
Soil Vapor Extraction System Destruction Efficiency and Emission Calculations
 Shore Acres Gas
 403 East 12th Street
 Oakland, California

Date	Stack Flow Rate (scfm)	Stack Sample Results (ppmv)			Emission Rates (lb/day)			Destruction Efficiency (%)		
		TPHg	Benzene	MTBE	TPHg	Benzene	MTBE	TPHg	Benzene	MTBE
05/27/14	106.0	< 5.0	< 0.050	< 0.10	< 0.2	< 0.002	< 0.004	100.0	100.0	100.0
06/17/14	125.0	< 5.0	< 0.050	< 0.10	< 0.2	< 0.002	< 0.004	100.0	100.0	100.0
08/19/14	125.0	< 5.0	< 0.050	< 0.10	< 0.2	< 0.002	< 0.004	100.0	100.0	100.0
09/25/14	163.0	< 5.0	< 0.050	< 0.10	< 0.3	< 0.003	< 0.006	100.0	100.0	100.0
10/28/14	146.0	< 5.0	< 0.050	< 0.10	< 0.3	< 0.002	< 0.005	100.0	100.0	100.0
12/09/14	154.0	< 5.0	< 0.050	< 0.10	< 0.3	< 0.002	< 0.005	100.0	100.0	100.0
02/18/15	154.0	System shutdown and propane tank removed from site								
08/11/15	121.0	System restart								
08/25/15	125.0	< 5.0	< 0.050	< 0.10	< 0.2	< 0.002	< 0.004	100.0	100.0	100.0
10/26/15	122.0	< 5.0	< 0.050	< 0.10	< 0.2	< 0.002	< 0.004	100.0	100.0	100.0
11/23/15	150.0	< 5.0	< 0.050	< 0.10	< 0.3	< 0.002	< 0.005	100.0	100.0	100.0
12/16/15	148.0	< 5.0	< 0.050	< 0.10	< 0.3	< 0.002	< 0.005	100.0	100.0	100.0
12/16/15		System shutdown and propane tank removed from site								
01/27/16	146.0	< 5.0	< 0.050	< 0.10	< 0.3	< 0.002	< 0.005	100.0	100.0	100.0
03/21/16	138.0	< 5.0	< 0.050	< 0.10	< 0.2	< 0.002	< 0.005	100.0	100.0	100.0
04/11/16	135.0	< 5.0	< 0.050	< 0.10	< 0.2	< 0.002	< 0.005	100.0	100.0	100.0

Note: "<" indicates analytical method detection limit; method detection limits are used as stack concentrations to estimate emission rates. Destruction efficiency is assumed to be 100%.

Sample Calculations

Emission rate = flow rate(ft³/min) x concentration (ft³ / 1x10⁶ ft³) x MW (lb/lb-mole)/359 (ft³/lb-mole*) x 1440 min/day

Destruction Efficiency = [(Extraction rate - Emission rate)/Extraction rate] x 100%

Stack flow = Catox Influent + Natural Gas flow rate

ft³ = cubic feet

min = minutes

NA = Not applicable

lb/day = pounds per day

ppmv = parts per million by volume = ft³ / 1x10⁶ ft³

scfm = standard cubic feet per minute

NS = not sampled

APPENDICES

ENVIRONMENTAL COMPLIANCE GROUP, LLC

STANDARD OPERATING AND SAFETY AND LOSS CONTROL PROCEDURES

1.0 SOIL BORING/DRILLING SAMPLE COLLECTION AND CLASSIFICATION PROCEDURES

ECG will prepare a site-specific Health and Safety Plan as required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR.1910.120). The document will be reviewed and signed by all ECG personnel and subcontractors prior to performing work at the site.

Prior to conducting and subsurface work at the site, Underground Services Alert (USA) will be contacted to delineate subsurface utilities near the site with surface markings. In addition, the first five feet of every location will be hand cleared to a diameter larger than the diameter of the auger or probe as a further precaution against damaging underground utilities. Sites that are currently operated as gas stations will be cleared with a private utility locator prior to drilling activities.

Soil samples to be submitted for chemical analyses are collected into brass or stainless steel tubes. The tubes are placed in an 18-inch long split-barrel sampler. The split-barrel sampler is driven its entire length hydraulically or by 140-pound drop hammer. The split-barrel sampler is removed from the borehole and the tubes are removed. When the tubes are removed from the split-barrel sampler, the tubes are trimmed and capped with Teflon sheets and plastic caps or the soil is removed from the tubes and placed in other appropriate sample containers. The samples are sealed, labeled, and placed in ice under chain-of-custody to be delivered to the analytical laboratory. All samples will be kept refrigerated until their delivery to the analytical laboratory.

One soil sample collected from each split-barrel sampler is field screened with a photoionization detector (PID), flame ionization detector (FID), or other equivalent field screening meter. The soil sample is sealed in a plastic bag or other appropriate container to allow volatilization of volatile organic compounds (VOCs). The field meter is used to measure the VOC concentration in the container's headspace and is recorded on the boring logs at the appropriate depth interval.

Other soil samples collected from each split-barrel sampler are inspected and documented to identify the soil stratigraphy beneath the site and classify the soil types according to the United Soil Classification System. The soil types are recorded on boring logs with the appropriate depth interval and any pertinent field observations. Drilling and sampling equipment are steam cleaned or washed in solution and rinsed in deionized water prior to use, between sample collections and boreholes and after use.

2.0 SOIL EXCAVATION SAMPLE COLLECTION AND CLASSIFICATION PROCEDURES

Soil samples to be submitted for chemical analyses are collected into brass or stainless steel tubes or other appropriate containers. The samples are sealed, labeled, and placed in ice under chain-of-custody (COC) to be delivered to the analytical laboratory. All samples will be kept refrigerated until their delivery to the analytical laboratory.

Select soil samples are placed into a sealed plastic bag or other appropriate container and field screened using a PID, FID, or equivalent meter. Other soil samples collected are inspected and documented to identify the soil stratigraphy beneath the site and classify the soil types according to the United Soil Classification System. The soil types are recorded field notes with the appropriate depth interval and any pertinent field observations. Sampling equipment are steam cleaned or washed in solution and rinsed in deionized water prior to use, between sample collections, and after use. Soil cuttings and rinsewater are temporarily stored onsite pending laboratory analytical results and proper transport and disposal.

3.0 SAMPLE IDENTIFICATION AND COC PROCEDURES

Sample containers are labeled with job number, job name, sample collection time and date, sample collection point, and analyses requested. Sampling method, sampler's name, and any pertinent field observations are recorded on boring logs or excavation field notes. COC forms track the possession of the sample from the time of its collection until the time of its delivery to the analytical laboratory. During sample transfers, the person with custody of the samples will relinquish them to the next person by signing the COC and documenting the time and date. The analytical laboratory Quality Control/Quality Assurance (QA/QC) staff will document the receipt of the samples and confirm the analyses requested on the COC matches the sample containers and preservative used, if any. The analytical laboratory will assign unique log numbers for identification during the analyses and reporting. The log numbers will be added to the COC form and maintained in a log book maintained by the analytical laboratory.

4.0 ANALYTICAL LABORATORY QA/QC PROCEDURES

The analytical laboratory analyzes spikes, replicates, blanks, spiked blanks, and certified reference materials to verify analytical methods and results. The analytical laboratory QA/QC also includes:

- Routine instrument calibration,
- Complying with state and federal laboratory accreditation and certification programs,
- Participation in U.S. EPA performance evaluation studies,
- Standard operating procedures, and
- Multiple review of raw data and client reports

5.0 HOLLOW STEM AUGER WELL INSTALLATION

Boreholes for wells are often drilled with a truck-mounted hollow stem auger drill rig. The borehole diameter is at least 4 inches wider than the outside diameter of the well casing. Soil samples are collected and screened as described in **Section 1.0** and decontamination procedures are also the same as described in **Section 1.0**.

Wells are cased with both blank and factory-perforated Schedule 40 PVC. The factory perforations are typically 0.020 inches wide by 1.5 inch long slots, with 42 slots per foot. A PVC cap is typically installed at the bottom of the casing with stainless steel screws. No solvents or cements are used in the construction of the wells. Well stabilizers or centering devices may be installed around the casing to ensure the filter material and grout in the annulus are evenly distributed. The casing is purchased pre-cleaned or steam cleaned and washed prior to installation in the borehole.

The casing is set inside the augers and sand, gravel, or other filter material is poured into the annulus to fill the borehole from the bottom to approximately 1-2 feet above the perforations. A two foot thick bentonite plug is placed above the filter material to prevent the grout from filling the filter pack. Neat cement or sand-cement grout is poured into the annulus from the top of the bentonite plug to the surface. For wells located in parking lots or driveways, or roads, a traffic rated well box is installed around the well. For wells located in landscaped areas or fields, a stovepipe well protection device is installed around the well. Soil cuttings and rinsewater are temporarily stored onsite pending laboratory analytical results and proper transport and disposal.

6.0 MUD AND AIR ROTARY WELL INSTALLATION

Boreholes for wells can also be drilled with a truck-mounted air rotary or mud rotary drill rig. Air or mud can be used as a drill fluid to fill the borehole and prevent the borehole from caving in and remove drill cuttings. Mud or air can be chosen depending on the subsurface conditions. Soil samples are collected and screened as described in **Section 1.0** and decontamination procedures are also the same as described in **Section 1.0**.

Wells are cased with both blank and factory-perforated Schedule 40 PVC. The factory perforations are typically 0.020 inches wide by 1.5 inch long slots, with 42 slots per foot. A PVC cap is typically installed at the bottom of the casing with stainless steel screws. No solvents or cements are used in the construction of the wells. Well stabilizers or centering devices may be installed around the casing to ensure the filter material and grout in the annulus are evenly distributed. The casing is purchased pre-cleaned or steam cleaned and washed prior to installation in the borehole. Soil cuttings and drilling fluids are temporarily stored onsite pending laboratory analytical results and proper transport and disposal.

The casing is set inside the augers and sand, gravel, or other filter material is poured into the annulus to fill the borehole from the bottom to approximately 1-2 feet above the perforations. A two foot thick bentonite plug is placed above the filter material to prevent the grout from filling the filter pack. Neat cement or sand-cement grout is poured into the annulus from the top of the bentonite plug to the surface. For wells located in parking lots or driveways, or roads, a traffic rated well box is installed around the well. For wells located in landscaped areas or fields, a stovepipe well protection device is installed around the well. Soil cuttings and rinsewater are temporarily stored onsite pending laboratory analytical results and proper transport and disposal.

7.0 WELL DEVELOPMENT

After well installation, the wells are developed to remove residual drilling materials from the annulus and to improve well production by fine materials from the filter pack. Possible well development methods include pumping, surging, bailing, jetting, flushing, and air lifting. Development water is temporarily stored onsite pending laboratory analytical results and proper transport and disposal. Development equipment are steam cleaned or washed in solution and rinsed in deionized water prior to use, between sample collections and after use. After well development the wells are typically allowed to stabilize for at least 24 hours prior to purging and sampling.

8.0 LIQUID LEVEL MEASUREMENTS

Liquid level measurements are made with a water level meter and/or interface probe and disposable bailers. The probe tip attached to a measuring tape is lowered into the well and into the groundwater when a beeping tone indicates the probe is in the groundwater. The probe and measuring tape (graduated to hundredths of a foot) are slowly raised until the beeping stops and the depth to water measurement is recorded. If the meter makes a steady tone, this indicates the presence of floating liquid hydrocarbons (FLH) and the probe and measuring tape are raised until the steady tone stops and the depth to the FLH is measured. Once depth to water and depth to FLH (if present) has been recorded, the probe and measuring tape are lowered to the bottom of the well where the total depth of the well is measured. The depth to water, depth to FLH, and depth to bottom are measured again to confirm the results.

If FLH is encountered in the well, a disposable bailer is lowered into the well and brought back to the surface to confirm the thickness/presence of FLH. To minimize potential for cross contamination between wells, all measurements are done from cleanest to dirtiest well. Prior to beginning liquid level measurements, in between measurements in all wells, and at the completion of liquid level measurements, the water level probe and measuring tape is cleaned with solution (Alconox, Simple Green, or equivalent) and rinsed with deionized water.

9.0 WELL PURGING AND SAMPLING

Each well is typically purged of at least three well casing volumes of groundwater prior to collecting a groundwater sample. Purging can continue beyond three well casing volumes if field parameters including pH, temperature, electrical conductivity are not stabilizing during the purging process. If the well is purged dry before the three well casing volumes has been purged, the well is typically allowed to recharge to 80 percent of its initial water level before a groundwater sample is collected.

Purging equipment can include submersible pumps, PVC purging bailers, disposable bailers, air lift pumps, or pneumatic pumps. Prior to beginning well purging, in between each well purging, and at the completion of purging activities, all non-dedicated purging equipment is cleaned with solution (Alconox, Simple Green, or equivalent) and rinsed with deionized water.

Once the well has been purged, it will be sampled with a disposable bailer, PVC bailer, stainless steel bailer, or through a low flow groundwater pump. The groundwater sample is transferred from the bottom of the bailer to reduce volatilization to the appropriate sample container. The sample containers are specified by the analytical laboratory depending on the analyses requested. Sample containers typically include volatile organic compound (VOA) vials with septa of Teflon like materials. The groundwater sample is collected into the VOAs to minimize air bubbles and once the cap has been placed on the VOA, the VOA is tipped upside down to see if air bubbles are present in the VOA. Typically a duplicate VOA is collected from each well to be analyzed by the analytical laboratory, if warranted, to verify results.

Sample containers are labeled as described in **Section 3.0** and placed immediately in an ice chest and kept refrigerated until its delivery to the analytical laboratory. A trip blank may also be prepared by the analytical laboratory to travel with the ice chest during transport to the laboratory. Field blanks from equipment that has been decontaminated may be collected in between use in different wells to verify the decontamination procedure is effective. To minimize potential for cross contamination between wells, all wells are purged and sampled from cleanest to dirtiest well.

10.0 TEDLAR BAG SOIL VAPOR SAMPLING

Sampling equipment to collect Tedlar bag soil vapor samples includes an air pump, a Tedlar bag which can range in size from 1 to 10 liters, and 3/16-inch diameter polyethylene tubing. The air pump should be equipped with 3/16-inch hose barbs for the polyethylene tubing to attach to. The Tedlar bag must be equipped with a valve for filling and sealing the bag.

When soil vapor samples are collected from remediation equipment, the sample collection port on the remediation equipment is typically fitted with a 3/16-inch hose barb. Prior to collecting soil vapor samples from remediation equipment, air flow, temperature, and pressure or vacuum of the sampling point/remediation equipment are recorded. One end of the polyethylene tubing is connected to the sample collection port and one end is connected to the influent of the air pump, creating an air tight seal. The air pump is turned on and soil vapor from the sample collection port is pumped through the air pump for at least one minute. The air pump is turned off and one end of another piece of polyethylene tubing is connected to the effluent of the air pump and one end is connected to the valve on the Tedlar bag. The valve is opened and the air pump is turned on filling the Tedlar bag with the soil vapor sample until the bag has reached 75% capacity, when the valve on the Tedlar bag is closed and the air pump is turned off.

Tedlar bags are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory. After each soil vapor sample collection, the air pump is turned on for five minutes to allow ambient air to clear the air pump and polyethylene tubing.

11.0 SUMMA CANISTER SOIL VAPOR SAMPLING

Sampling equipment to collect Summa canister soil vapor samples includes a sterilized Summa stainless steel canister under vacuum, ¼-inch diameter polyethylene tubing, and a laboratory calibrated flow meter, if required.

When soil vapor samples are collected from remediation equipment, the sample collection port on the remediation equipment is typically fitted with brass connection with silicone septa that has been threaded into a tapped hole on the piping network. Prior to collecting soil vapor samples from remediation equipment, air flow, temperature, and pressure or vacuum of the sampling point/remediation equipment are recorded. One end of the polyethylene tubing is connected to the brass sample collection port and one end is connected to the canister valve or flow meter, creating an air tight seal. Prior to collecting the soil vapor sample, the valve on the Summa canister is opened to verify the Summa canister has the required vacuum which is recorded. Three well volumes of vapor will be purged at a rate less than 200 milliliters per minute (ml/min.), including sand pack pore volume from each soil vapor probe prior to sample collection. The sample valve or flow meter is opened and the soil vapor sample is collected into the Summa canister and the sample valve is closed and the final vacuum reading (typically greater than 5 inches per square inch) on the Summa canister is recorded.

Per the DTSC *Vapor Intrusion Guidance*, October 2011 and the DTSC Advisory – *Active Soil Gas Investigations*, dated July 2015, high quality soil gas data collection is driven by project-specific data quality objectives (DQOs) and can be enhanced by using a shroud and a gaseous tracer compound. This method of leak detection ensures that soil gas wells are properly constructed and the sample train components do not leak. Most gaseous tracer compounds do not affect target analyte measurements nor does their detection require sample dilution. Also, gaseous leak tracer compounds allow a quantitative determination of a leak either in the sampling train or from ambient air intrusion down the borehole.

The shroud will be designed to contain the entire sampling train and the soil gas well annulus. The sampling train will be constructed of material that does not react with the sample analytes and will not off gas or adsorb volatile compounds. The sampling equipment will be clean and shut-in tested prior to use. The gaseous leak tracer compound (helium at 20%) concentration inside the shroud will be monitored during purging and sampling to verify initial concentrations. A helium detector will be used to monitor tracer gas concentrations and will be recorded on field logs.

Summa canisters are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory.

12.0 SYRINGE SOIL VAPOR SAMPLING

Sampling equipment to collect syringe soil vapor samples includes a sterilized, 100 cubic centimeter, gas tight syringe and silicone septa.

When soil vapor samples are collected from remediation equipment, the sample collection port on the remediation equipment is typically fitted with brass connection with silicone septa that has been threaded into a tapped hole on the piping network. Prior to collecting soil vapor samples from remediation equipment, air flow, temperature, and pressure or vacuum of the sampling point/remediation equipment are recorded. The syringe is inserted into the silicone septa and the plunger is purged or pumped at least three times. The sample is collected the fourth time the syringe plunger is extracted and the syringe is removed from the sample collection port and the needle on the syringe is capped with a rubber stopper.

Syringes are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory.

13.0 TEMPORARY SAMPLING POINTS

A temporary borehole is advanced using either a slam bar or a direct push drill rig. In the case of the slam bar, once the borehole has been created, a temporary soil vapor probe is inserted into the borehole and advanced with a slide hammer or other physical force two additional feet. A bentonite seal is then placed in the borehole above the soil vapor probe to create an air tight seal and prevent ambient air from entering the sample collection space. In the case of the direct push drill rig, the sampling rod is advanced to the desired depth with a 6-inch retractable vapor screen at the tip. The sample screen on the 6-inch vapor screen is removed and a bentonite seal is then placed in the borehole above the soil vapor probe to create an air tight seal and prevent ambient air from entering the sample collection space.

Once the bentonite seal has set, at least one hour, the soil vapor survey samples are collected into Tedlar bags as described in **Section 10.0** or Summa canisters as described in **Section 11.0**. Samples are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory. After each soil vapor sample collection, the air pump is turned on for five minutes to allow ambient air to clear the air pump and polyethylene tubing.

14.0 REPEATABLE SAMPLING POINTS

A borehole is advanced using either a hand auger or a drill rig. A 6-inch slotted probe with caps on both ends is placed in the borehole. A Swagelok fitting is attached to one end cap and 3/16-inch diameter Nylon tubing is attached to the Swagelok fitting. A one foot sand pack is placed around the probe and the remainder of the borehole is sealed with a layer of dry bentonite powder, followed by a layer of bentonite chips, and an additional layer of dry bentonite powder. A well box is placed on the surface of the repeatable sampling point and the excess Nylon tubing is placed inside the well box.

Soil vapor survey samples will be collected at least one week after probe installation. In addition, soil vapor survey samples will only be collected after five consecutive precipitation free days and after any onsite irrigation has been suspended.

The soil vapor survey samples are collected into Tedlar bags as described in **Section 10.0** or Summa canisters as described in **Section 11.0**. Tedlar bags or Summa canisters are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory. After each soil vapor sample collection, the air pump is turned on for five minutes to allow ambient air to clear the air pump and polyethylene tubing.



California Ag & Environmental Labs

05 April 2018

Mike Sgourakis
Environmental Compliance Group, LLC
270 Vintage Drive
Turlock, CA 95382

RE: Shore Acres Gas

Enclosed are the results for sample(s) received on 04/02/18 13:15 by California Ag & Environmental Laboratories. The sample(s) were analyzed according to instructions in accompanying chain-of-custody. Results are summarized on the following pages.

Please see quality control report for a summary of QC data pertaining to this project.

The sample(s) will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Sample(s) may be archived by prior arrangement.

Thank you for the opportunity to service the needs of your company.

Sincerely,

Hiram Cueto
Lab Manager



Argon Analytical Services, Inc. CHAIN OF CUSTODY

Project Information:				Report To:				Samples Submitted To:			
Project No: GHA-19009 Project Title: Shore Acres Gas Location: 403 East 12th Street, Oakland, CA Sampler's Name: <i>Drew Van Allen</i> (print) Sampler's Signature: <i>Drew Van Allen</i>				Consultant: Environmental Compliance Group, LLC Address: 270 Vintage Drive, Turlock, CA 95382 Contact: Mike Sgourakis Phone: 916.600.4580 Fax: 209.664.1040				Laboratory: Argon Labs Address: 2905 Railroad Avenue, Ceres, CA 95307 Contact: Mike Sgourakis Phone: (209) 581-9280 Fax: (209) 581-9282			
Bill To: Client: Environmental Compliance Group, LLC Address: 270 Vintage Drive, Turlock, CA				Date Results Required: Date Report Required:							
TURN AROUND TIME				ANALYSIS				COMMENTS			
RUSH	24 Hour	48 Hour	Standard (5 days)	Special (10-14 days)	TPHg and TPHd by EPA Method 8015M	BTEX, 5 oxygenates, 1,2-DCA, EDB by EPA Method 8260B	EDF Reports				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Sample ID.	Date	Time	# Containers	Matrix							
MW-1	3/21/10	1021	3	water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
MW-2		0838			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
MW-3		1104			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
MW-4		0852			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
MW-5					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
MW-6		1006			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
EW-1		1041			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
EW-2		0915			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
EW-3		0950			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
EW-4		1130			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Relinquished By: <i>Drew Van Allen</i>				Date: 4/2/10	Time: 1315	Received By: <i>A. Hart</i>		Date: 4/2/10	Time: 13:15	SPECIAL INSTRUCTIONS: Global ID# T0600174667	
Relinquished By:				Date:	Time:	Received By:		Date:	Time:		
Relinquished By:				Date:	Time:	Received By:		Date:	Time:		

California Ag & Env Laboratory Sample Receipt Checklist

Client Name: Environmental Compliance Group Date & Time Received: 04/02/18 13:15

Project Name: Shore Acres Gas Client Project Number: GHA.19009

Received By: HC Matrix: Water Soil Sludge

Sample Carrier: Client Laboratory Fed Ex UPS Other

CAL Labs Project Number: U804001

Shipper Container in good condition? N/A Yes No Samples received in proper containers? Yes No

Samples received intact? Yes No

Samples received under refrigeration? Yes No Sufficient sample volume for requested tests? Yes No

Chain of custody present? Yes No Samples received within holding time? Yes No

Chain of Custody signed by all parties? Yes No Do samples contain proper preservative?
N/A Yes No

Chain of Custody matches all sample labels? Yes No Do VOA vials contain zero headspace?
(None submitted) Yes No

ANY "No" RESPONSE MUST BE DETAILED IN THE COMMENTS SECTION BELOW

Date Client Contacted: _____ Person Contacted: _____

Contacted By: _____ Subject: _____

Comments:

Action Taken:

ADDITIONAL TEST(S) REQUEST / OTHER

Contacted By: _____ Date: _____ Time: _____

Call Received By: _____

Comments:



Environmental Compliance Group, LLC
270 Vintage Drive
Turlock, CA 95382

Project Number: GHA.19009
Project Name: Shore Acres Gas
Project Manager: Mike Sgourakis

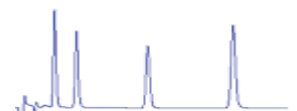
Work Order No.:
U804001

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	U804001-01	Water	03/30/18 10:21	04/02/18 13:15
MW-2	U804001-02	Water	03/30/18 08:38	04/02/18 13:15
MW-3	U804001-03	Water	03/30/18 11:04	04/02/18 13:15
MW-4	U804001-04	Water	03/30/18 08:52	04/02/18 13:15
MW-6	U804001-05	Water	03/30/18 10:06	04/02/18 13:15
EW-1	U804001-06	Water	03/30/18 10:41	04/02/18 13:15
EW-2	U804001-07	Water	03/30/18 09:15	04/02/18 13:15
EW-3	U804001-08	Water	03/30/18 09:50	04/02/18 13:15
EW-4	U804001-09	Water	03/30/18 11:30	04/02/18 13:15

Approved By

California Ag & Environmental Laboratories, Inc., California D.O.H.S. Cert. #2359



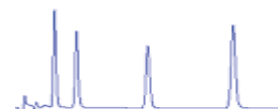
Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Total Petroleum Hydrocarbons @ Gasoline

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
MW-1 (U804001-01) Water Sampled: 30-Mar-18 10:21 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	45000	50	ug/L	1	04-Apr-18	8015M	
Surr. Rec.:		91 %			"	"	
MW-2 (U804001-02) Water Sampled: 30-Mar-18 08:38 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	4700	2000	ug/L	40	04-Apr-18	8015M	
Surr. Rec.:		87 %			"	"	
MW-3 (U804001-03) Water Sampled: 30-Mar-18 11:04 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	1200	100	ug/L	2	04-Apr-18	8015M	
Surr. Rec.:		95 %			"	"	
MW-4 (U804001-04) Water Sampled: 30-Mar-18 08:52 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	5100	50	ug/L	1	04-Apr-18	8015M	
Surr. Rec.:		94 %			"	"	
MW-6 (U804001-05) Water Sampled: 30-Mar-18 10:06 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	6800	100	ug/L	2	04-Apr-18	8015M	
Surr. Rec.:		98 %			"	"	
EW-1 (U804001-06) Water Sampled: 30-Mar-18 10:41 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	10000	200	ug/L	4	04-Apr-18	8015M	
Surr. Rec.:		90 %			"	"	
EW-2 (U804001-07) Water Sampled: 30-Mar-18 09:15 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	7200	200	ug/L	4	04-Apr-18	8015M	
Surr. Rec.:		94 %			"	"	

Approved By

California Ag & Environmental Laboratories, Inc., California D.O.H.S. Cert. #2359



Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Total Petroleum Hydrocarbons @ Gasoline

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
EW-3 (U804001-08) Water Sampled: 30-Mar-18 09:50 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	2900	200	ug/L	4	04-Apr-18	8015M	
Surr. Rec.:		85 %			"	"	
EW-4 (U804001-09) Water Sampled: 30-Mar-18 11:30 Received: 02-Apr-18 13:15							
Total Petroleum Hydrocarbons @ Gasoline	5100	100	ug/L	2	04-Apr-18	8015M	
Surr. Rec.:		88 %			"	"	

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California Ag & Environmental Laboratories, Inc., California D.O.H.S. Cert. #2359



Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
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MW-1 (U804001-01) Water Sampled: 30-Mar-18 10:21 Received: 02-Apr-18 13:15

Benzene	920	20	ug/L	40	04-Apr-18	8260B	
Toluene	110	20	"	"	"	"	
Xylenes, total	10000	40	"	"	"	"	
Ethylbenzene	3100	20	"	"	"	"	
t-Butanol	400	200	"	"	"	"	
Methyl tert-Butyl Ether	170	20	"	"	"	"	
Di-Isopropyl Ether	ND	20	"	"	"	"	
Ethyl tert-Butyl Ether	ND	20	"	"	"	"	
tert-Amyl Methyl Ether	ND	20	"	"	"	"	
1,2-Dichloroethane	ND	20	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	20	"	"	"	"	

Surr. Rec.: 85 % " "

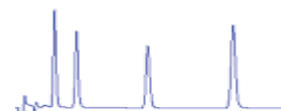
MW-2 (U804001-02) Water Sampled: 30-Mar-18 08:38 Received: 02-Apr-18 13:15

Benzene	64	1.0	ug/L	2	04-Apr-18	8260B	
Toluene	8.6	1.0	"	"	"	"	
Xylenes, total	140	2.0	"	"	"	"	
Ethylbenzene	82	1.0	"	"	"	"	
t-Butanol	ND	10	"	"	"	"	
Methyl tert-Butyl Ether	10	1.0	"	"	"	"	
Di-Isopropyl Ether	ND	1.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	1.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	1.0	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	

Surr. Rec.: 91 % " "

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California Ag & Environmental Laboratories, Inc., California D.O.H.S. Cert. #2359



Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
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MW-3 (U804001-03) Water **Sampled: 30-Mar-18 11:04** **Received: 02-Apr-18 13:15**

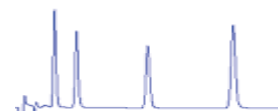
Benzene	46	0.5	ug/L	1	04-Apr-18	8260B	
Toluene	31	0.5	"	"	"	"	
Xylenes, total	150	1.0	"	"	"	"	
Ethylbenzene	20	0.5	"	"	"	"	
t-Butanol	49	5.0	"	"	"	"	
Methyl tert-Butyl Ether	38	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		92 %			"	"	

MW-4 (U804001-04) Water **Sampled: 30-Mar-18 08:52** **Received: 02-Apr-18 13:15**

Benzene	520	2.0	ug/L	4	04-Apr-18	8260B	
Toluene	25	2.0	"	"	"	"	
Xylenes, total	110	4.0	"	"	"	"	
Ethylbenzene	70	2.0	"	"	"	"	
t-Butanol	ND	20	"	"	"	"	
Methyl tert-Butyl Ether	22	2.0	"	"	"	"	
Di-Isopropyl Ether	ND	2.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	2.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	2.0	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	
Surr. Rec.:		86 %			"	"	

Approved By

California Ag & Environmental Laboratories, Inc., California D.O.H.S. Cert. #2359



Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
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MW-6 (U804001-05) Water Sampled: 30-Mar-18 10:06 Received: 02-Apr-18 13:15

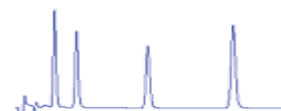
Benzene	200	2.0	ug/L	4	04-Apr-18	8260B	
Toluene	12	2.0	"	"	"	"	
Xylenes, total	46	4.0	"	"	"	"	
Ethylbenzene	29	2.0	"	"	"	"	
t-Butanol	ND	20	"	"	"	"	
Methyl tert-Butyl Ether	20	2.0	"	"	"	"	
Di-Isopropyl Ether	ND	2.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	2.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	2.0	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	
Surr. Rec.:		85 %			"	"	

EW-1 (U804001-06) Water Sampled: 30-Mar-18 10:41 Received: 02-Apr-18 13:15

Benzene	46	2.0	ug/L	4	04-Apr-18	8260B	
Toluene	ND	2.0	"	"	"	"	
Xylenes, total	29	4.0	"	"	"	"	
Ethylbenzene	32	2.0	"	"	"	"	
t-Butanol	ND	20	"	"	"	"	
Methyl tert-Butyl Ether	74	2.0	"	"	"	"	
Di-Isopropyl Ether	ND	2.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	2.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	2.0	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	
Surr. Rec.:		89 %			"	"	

Approved By

California Ag & Environmental Laboratories, Inc., California D.O.H.S. Cert. #2359



Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
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EW-2 (U804001-07) Water Sampled: 30-Mar-18 09:15 Received: 02-Apr-18 13:15

Benzene	43	2.0	ug/L	4	04-Apr-18	8260B	
Toluene	15	2.0	"	"	"	"	
Xylenes, total	310	4.0	"	"	"	"	
Ethylbenzene	50	2.0	"	"	"	"	
t-Butanol	210	20	"	"	"	"	
Methyl tert-Butyl Ether	45	2.0	"	"	"	"	
Di-Isopropyl Ether	ND	2.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	2.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	2.0	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	

Surr. Rec.: 108 % " "

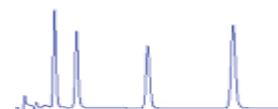
EW-3 (U804001-08) Water Sampled: 30-Mar-18 09:50 Received: 02-Apr-18 13:15

Benzene	13	1.0	ug/L	2	04-Apr-18	8260B	
Toluene	2.2	1.0	"	"	"	"	
Xylenes, total	27	2.0	"	"	"	"	
Ethylbenzene	9.6	1.0	"	"	"	"	
t-Butanol	170	10	"	"	"	"	
Methyl tert-Butyl Ether	59	1.0	"	"	"	"	
Di-Isopropyl Ether	ND	1.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	1.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	1.0	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	

Surr. Rec.: 87 % " "

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California Ag & Environmental Laboratories, Inc., California D.O.H.S. Cert. #2359



Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
EW-4 (U804001-09) Water Sampled: 30-Mar-18 11:30 Received: 02-Apr-18 13:15							
Benzene	190	2.0	ug/L	4	04-Apr-18	8260B	
Toluene	10	2.0	"	"	"	"	
Xylenes, total	250	4.0	"	"	"	"	
Ethylbenzene	76	2.0	"	"	"	"	
t-Butanol	200	20	"	"	"	"	
Methyl tert-Butyl Ether	30	2.0	"	"	"	"	
Di-Isopropyl Ether	ND	2.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	2.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	2.0	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	
Surr. Rec.:		91 %			"	"	

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Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Total Petroleum Hydrocarbons @ Gasoline - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch U800117 - EPA 5030B

Blank (U800117-BLK1)

Prepared & Analyzed: 04/04/18

<i>Surrogate: a,a,a-Trifluorotoluene</i>	53.5		ug/L	50		107	70-130			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	"							

LCS (U800117-BS1)

Prepared & Analyzed: 04/04/18

Total Petroleum Hydrocarbons @ Gasoline	1060		ug/L	1000		106	80-120			
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Matrix Spike (U800117-MS1)

Source: U803029-02

Prepared & Analyzed: 04/04/18

Total Petroleum Hydrocarbons @ Gasoline	890		ug/L	1000	ND	89	70-130			
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Matrix Spike Dup (U800117-MSD1)

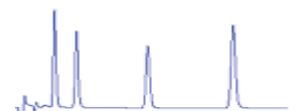
Source: U803029-02

Prepared & Analyzed: 04/04/18

Total Petroleum Hydrocarbons @ Gasoline	930		ug/L	1000	ND	93	70-130	4	20	
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California Ag & Environmental Laboratories, Inc., California D.O.H.S. Cert. #2359



Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch U800118 - EPA 5030B

Blank (U800118-BLK1)

Prepared & Analyzed: 04/04/18

<i>Surrogate: Fluorobenzene</i>	47.0		ug/L	50		94	70-130			
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Xylenes, total	ND	1.0	"							
Ethylbenzene	ND	0.5	"							
t-Butanol	ND	5.0	"							
Methyl tert-Butyl Ether	ND	0.5	"							
Di-Isopropyl Ether	ND	0.5	"							
Ethyl tert-Butyl Ether	ND	0.5	"							
tert-Amyl Methyl Ether	ND	0.5	"							
1,2-Dichloroethane	ND	0.5	"							
1,2-Dibromoethane (EDB)	ND	0.5	"							

LCS (U800118-BS1)

Prepared & Analyzed: 04/04/18

Toluene	28.0		ug/L	25		112	80-120			
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Matrix Spike (U800118-MS1)

Source: U803029-02

Prepared & Analyzed: 04/04/18

1,2-Dibromoethane (EDB)	24.2		ug/L	25	ND	97	70-130			
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Matrix Spike Dup (U800118-MSD1)

Source: U803029-02

Prepared & Analyzed: 04/04/18

1,2-Dibromoethane (EDB)	22.8		ug/L	25	ND	91	70-130	6	20	
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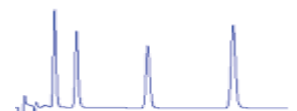


Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382	Project Number: GHA.19009 Project Name: Shore Acres Gas Project Manager: Mike Sgourakis	Work Order No.: U804001
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Notes and Definitions

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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GROUNDWATER LEVEL DATA FORM

PROJECT NAME: Shore Acres Gas
 PROJECT MANAGER: MSS
 SITE ADDRESS: 403 East 12th Street, Oakland, Ca

PROJECT NUMBER: GHA.19009
 TASK NUMBER: _____

WELL ID	TIME	DEPTH TO BOTTOM	DEPTH TO WATER	DEPTH TO PRODUCT	PRODUCT THICKNESS	PRODUCT THICKNESS X 0.8	COMMENTS
MW-1		19.96	8.64				
MW-2		19.91	9.32				
MW-3		17.84	9.23				
MW-4		18.79	9.17				
MW-5		—————					inaccessible
MW-6		19.89	8.65				
EW-1		19.64	9.16				
EW-2		19.97	9.60				
EW-3		19.87	9.15				
EW-4		19.96	8.64 9.26				
		19.95	9.76				

FIELD TECHNICIAN: Dut
 DATE: 3/20/10

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas PROJECT NUMBER: GHA.19009
 PROJECT MANAGER: MSS TASK NUMBER: _____
 SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: MW-1 TYPE OF WELL: Monitoring

WATER COLUMN DATA: (feet)
 Well Total Depth: 19.96
 Depth to Water: 8.64
 Water Column Length: 11.32

WELL DIAMETER:
 2-inch:
 4-inch: _____
 6-inch: _____

PURGE VOLUME CALCULATION:
 Water Column Length x Multiplier x No. Volumes = Purge Volume

11.32 x 0.17 x 3 = 6
 Water Column Length Multiplier No. Volumes Purge Volume

MULTIPLIER DATA:
 Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:

2-inch: 0.17
 4-inch: 0.65
 6-inch: 1.5

PURGE METHOD: _____ SAMPLE METHOD: _____
 Disposable Bailer Disposable Bailer
 PVC Bailer _____ Pump: _____
 Submersible Pump _____ Other: _____
 Other _____

TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
1014	2	7.17	18.6	786			
1017	4	7.21	18.7	778			
1020	6	7.18	18.1	780			
1021							Sample

FIELD TECHNICIAN: [Signature]
 DATE: 5/20/10

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas **PROJECT NUMBER:** GHA.19009
PROJECT MANAGER: MSS **TASK NUMBER:** _____
SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: MW-2 **TYPE OF WELL:** Monitoring

WATER COLUMN DATA: (feet)
 Well Total Depth: 19.91
 Depth to Water: 9.32
 Water Column Length: 10.59

WELL DIAMETER:
 2-inch:
 4-inch: _____
 6-inch: _____

PURGE VOLUME CALCULATION:
 Water Column Length x Multiplier x No. Volumes = Purge Volume

$$\frac{10.59}{\text{Water Column Length}} \times \frac{0.17}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \frac{5.5}{\text{Purge Volume}}$$

MULTIPLIER DATA:
 Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:

- 2-inch: 0.17
- 4-inch: 0.65
- 6-inch: 1.5

PURGE METHOD: Disposable Bailer PVC Bailer _____ Submersible Pump _____ Other _____

SAMPLE METHOD: Disposable Bailer Pump: _____ Other: _____

TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
0827	1.5	7.27	18.1	797			
0932	3.5	7.33	17.9	791			
0950	5.5	7.27	17.9	804			
0958							sample

FIELD TECHNICIAN: MSS
DATE: 5/30/10

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas **PROJECT NUMBER:** GHA.19009
PROJECT MANAGER: MSS **TASK NUMBER:** _____
SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: MW-3 **TYPE OF WELL:** Monitoring

WATER COLUMN DATA: **WELL DIAMETER:**
 Well Total Depth: 17.01 (feet) 2-inch: _____
 Depth to Water: 9.23 4-inch: _____
 Water Column Length: 8.61 6-inch: _____

PURGE VOLUME CALCULATION:
 Water Column Length x Multiplier x No. Volumes = Purge Volume

$$\frac{8.61}{\text{Water Column Length}} \times \frac{0.17}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \frac{4.5}{\text{Purge Volume}}$$

MULTIPLIER DATA:
 Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:
 2-inch: 0.17
 4-inch: 0.65
 6-inch: 1.5

PURGE METHOD: **SAMPLE METHOD:**
 Disposable Bailer _____ Disposable Bailer _____
 PVC Bailer _____ Pump: _____
 Submersible Pump _____ Other: _____
 Other _____

TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
1056	1.5	6.96	17.9	795			
1059	3	6.91	17.7	801			
1102	4.5	6.84	17.6	796			
1104							sample

FIELD TECHNICIAN: DM
DATE: 3/25/10

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas **PROJECT NUMBER:** GHA.19009
PROJECT MANAGER: MSS **TASK NUMBER:** _____
SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: MW-4 **TYPE OF WELL:** Monitoring

WATER COLUMN DATA: **WELL DIAMETER:**
 Well Total Depth: 18.79 ^(feet) 2-inch: _____
 Depth to Water: 9.17 4-inch: _____
 Water Column Length: 9.62 6-inch: _____

PURGE VOLUME CALCULATION:
 Water Column Length x Multiplier x No. Volumes = Purge Volume

$$\frac{9.62}{\text{Water Column Length}} \times \frac{0.17}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \frac{5}{\text{Purge Volume}}$$

MULTIPLIER DATA:
 Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:
 2-inch: 0.17
 4-inch: 0.65
 6-inch: 1.5

PURGE METHOD: **SAMPLE METHOD:**
 Disposable Bailer Disposable Bailer
 PVC Bailer _____ Pump: _____
 Submersible Pump _____ Other: _____
 Other _____

TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
0844	1.5	7.02	19.1	787			
0847	3.5	7.01	18.8	754			
0850	5	6.94	18.9	767			
0852							sample

FIELD TECHNICIAN: DVA
DATE: 3/20/18

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas **PROJECT NUMBER:** GHA.19009
PROJECT MANAGER: MSS **TASK NUMBER:** _____
SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: MW-6 **TYPE OF WELL:** Monitoring

WATER COLUMN DATA: **WELL DIAMETER:**
 Well Total Depth: 19.89 ^(feet) 2-inch: _____
 Depth to Water: 8.65 4-inch: _____
 Water Column Length: 11.24 6-inch: _____

PURGE VOLUME CALCULATION:
 Water Column Length x Multiplier x No. Volumes = Purge Volume

$$\frac{11.24}{\text{Water Column Length}} \times \frac{0.17}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \frac{6}{\text{Purge Volume}}$$

MULTIPLIER DATA:
 Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:
 2-inch: 0.17
 4-inch: 0.65
 6-inch: 1.5

PURGE METHOD: **SAMPLE METHOD:**
 Disposable Bailer Disposable Bailer
 PVC Bailer _____ Pump: _____
 Submersible Pump _____ Other: _____
 Other _____

TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
0959	2	7.21	17.9	717			
1001	4	7.19	17.7	719			
1004	6	7.19	17.5	725			
1006							sample

FIELD TECHNICIAN: DWA
DATE: 3/20/10

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas **PROJECT NUMBER:** GHA.19009
PROJECT MANAGER: MSS **TASK NUMBER:** _____
SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: EW-1 **TYPE OF WELL:** Monitoring

WATER COLUMN DATA: **WELL DIAMETER:**
 Well Total Depth: 19.94^(feet) 2-inch: _____
 Depth to Water: 9.16 4-inch: _____
 Water Column Length: 10.78 6-inch: _____

PURGE VOLUME CALCULATION:
 Water Column Length x Multiplier x No. Volumes = Purge Volume

$$\frac{10.78}{\text{Water Column Length}} \times \frac{\cancel{0.65}}{0.65} \times \frac{3}{\text{No. Volumes}} = \frac{\cancel{21}}{21} \text{ Purge Volume}$$

MULTIPLIER DATA:
 Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:
 2-inch: 0.17
 4-inch: 0.65
 6-inch: 1.5

PURGE METHOD: **SAMPLE METHOD:**
 Disposable Bailer _____ Disposable Bailer _____
 PVC Bailer _____ Pump: _____
 Submersible Pump _____ Other: _____
 Other _____

TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
1025	7	7.27	18.6	694			
1033	14	7.29	19.0	685			
1039	21	7.33	18.1	693			
1041							sample

FIELD TECHNICIAN: duh
DATE: 3/20/10

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas **PROJECT NUMBER:** GHA.19009
PROJECT MANAGER: MSS **TASK NUMBER:** _____
SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: EW-2 **TYPE OF WELL:** Monitoring

WATER COLUMN DATA: **WELL DIAMETER:**
 Well Total Depth: 19.97 ^(feet) 2-inch: _____
 Depth to Water: 9.60 4-inch: _____
 Water Column Length: 10.37 6-inch: _____

PURGE VOLUME CALCULATION:
 Water Column Length x Multiplier x No. Volumes = Purge Volume

$$\frac{10.37}{\text{Water Column Length}} \times \frac{0.65}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \frac{20}{\text{Purge Volume}}$$

MULTIPLIER DATA:
 Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:
 2-inch: 0.17
 4-inch: 0.65
 6-inch: 1.5

PURGE METHOD: **SAMPLE METHOD:**
 Disposable Bailer _____ Disposable Bailer _____
 PVC Bailer _____ Pump: _____
 Submersible Pump _____ Other: _____
 Other _____

TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
0859	7	7.29	18.7	841			
0907	14	7.31	18.7	847			
0910	20	7.21	18.1	856			
0915							sample

FIELD TECHNICIAN: ↓ cut
DATE: 5/20/10

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas **PROJECT NUMBER:** GHA.19009
PROJECT MANAGER: MSS **TASK NUMBER:** _____
SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: EW-3 **TYPE OF WELL:** Monitoring

WATER COLUMN DATA: (feet)
 Well Total Depth: 19.97
 Depth to Water: 9.15
 Water Column Length: 10.82

WELL DIAMETER:
 2-inch: _____
 4-inch: /
 6-inch: /

PURGE VOLUME CALCULATION:

Water Column Length x Multiplier x No. Volumes = Purge Volume

$$\frac{10.82}{\text{Water Column Length}} \times \frac{1.5}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \frac{48}{\text{Purge Volume}}$$

MULTIPLIER DATA:

Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:

2-inch: 0.17
 4-inch: 0.65
 6-inch: 1.5

PURGE METHOD:

Disposable Bailer _____
 PVC Bailer /
 Submersible Pump _____
 Other _____

SAMPLE METHOD:

Disposable Bailer /
 Pump: _____
 Other: _____

TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
0928	16	7.21	18.1	879			
0938	32	7.2	18.1	808			
0948	48	7.19	17.6	891			
0950							Sample

FIELD TECHNICIAN: AW
DATE: 3/20/10

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres Gas **PROJECT NUMBER:** GHA.19009
PROJECT MANAGER: MSS **TASK NUMBER:** _____
SITE ADDRESS: 403 East 12th Street, Oakland, Ca

WELL ID: EW-4 **TYPE OF WELL:** Monitoring

WATER COLUMN DATA: **WELL DIAMETER:**
 Well Total Depth: 19.95 ^(feet) 2-inch: _____
 Depth to Water: 9.76 4-inch: _____
 Water Column Length: 9.59 6-inch:

PURGE VOLUME CALCULATION:
 Water Column Length x Multiplier x No. Volumes = Purge Volume

$$\frac{9.59}{\text{Water Column Length}} \times \frac{1.5}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \frac{43}{\text{Purge Volume}}$$

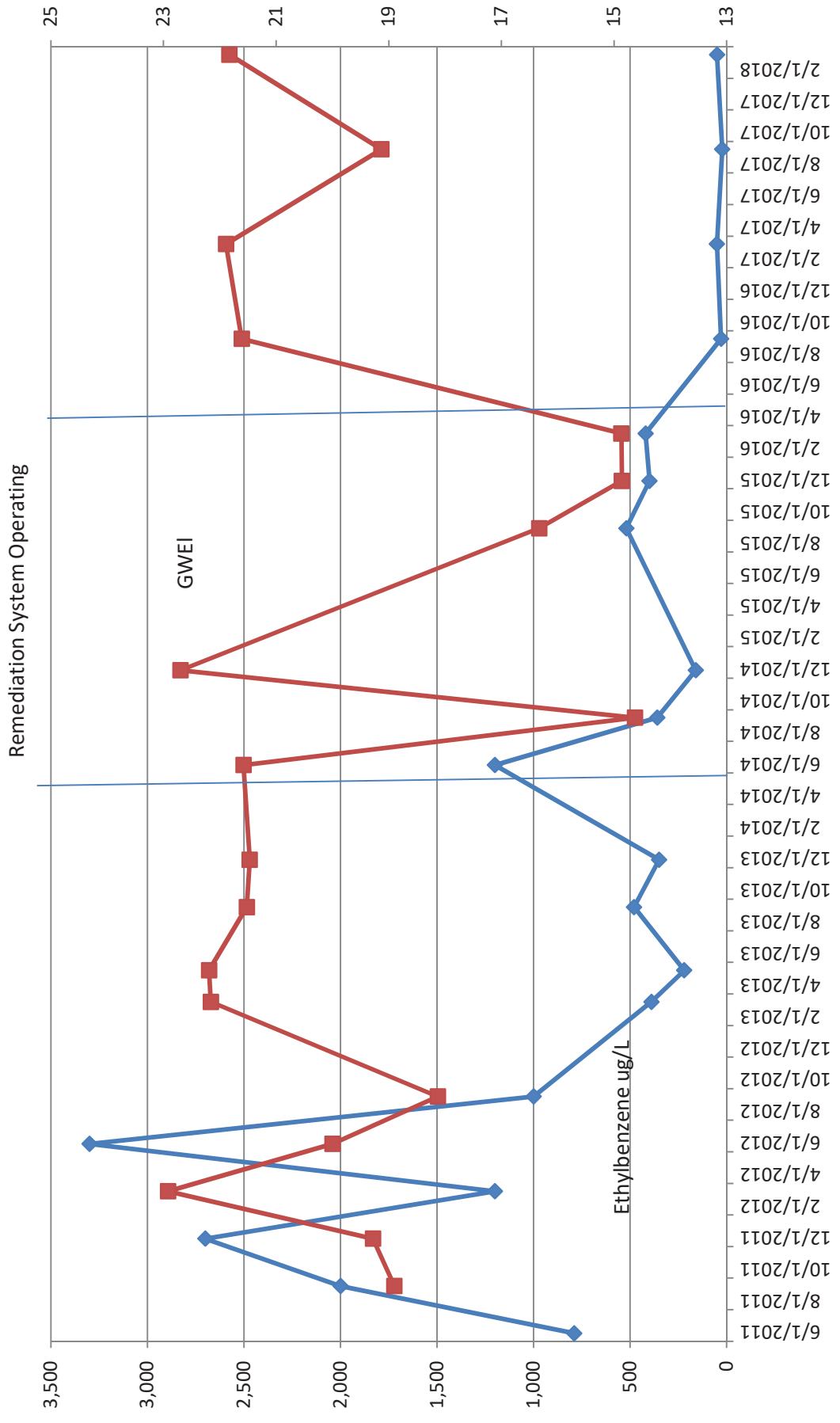
MULTIPLIER DATA:
 Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:
 2-inch: 0.17
 4-inch: 0.65
 6-inch: 1.5

PURGE METHOD: **SAMPLE METHOD:**
 Disposable Bailer _____ Disposable Bailer
 PVC Bailer Pump: _____
 Submersible Pump _____ Other: _____
 Other _____

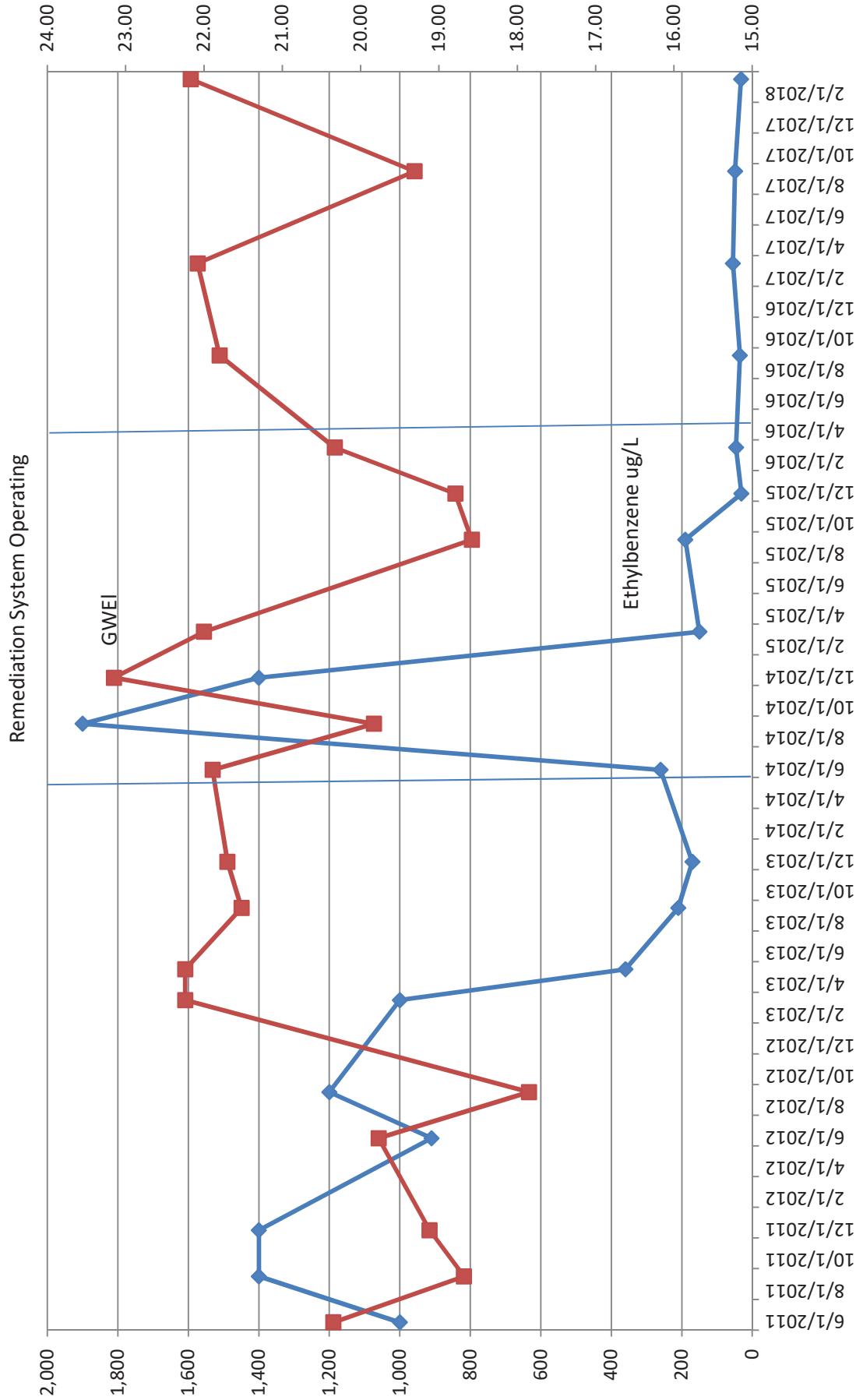
TIME	VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
1115	15	7.13	18.1	891			
1122	30	7.11	18.1	857			
1128	45	7.06	18.2	846			
1130							sample

FIELD TECHNICIAN: DW
DATE: 3/30/18

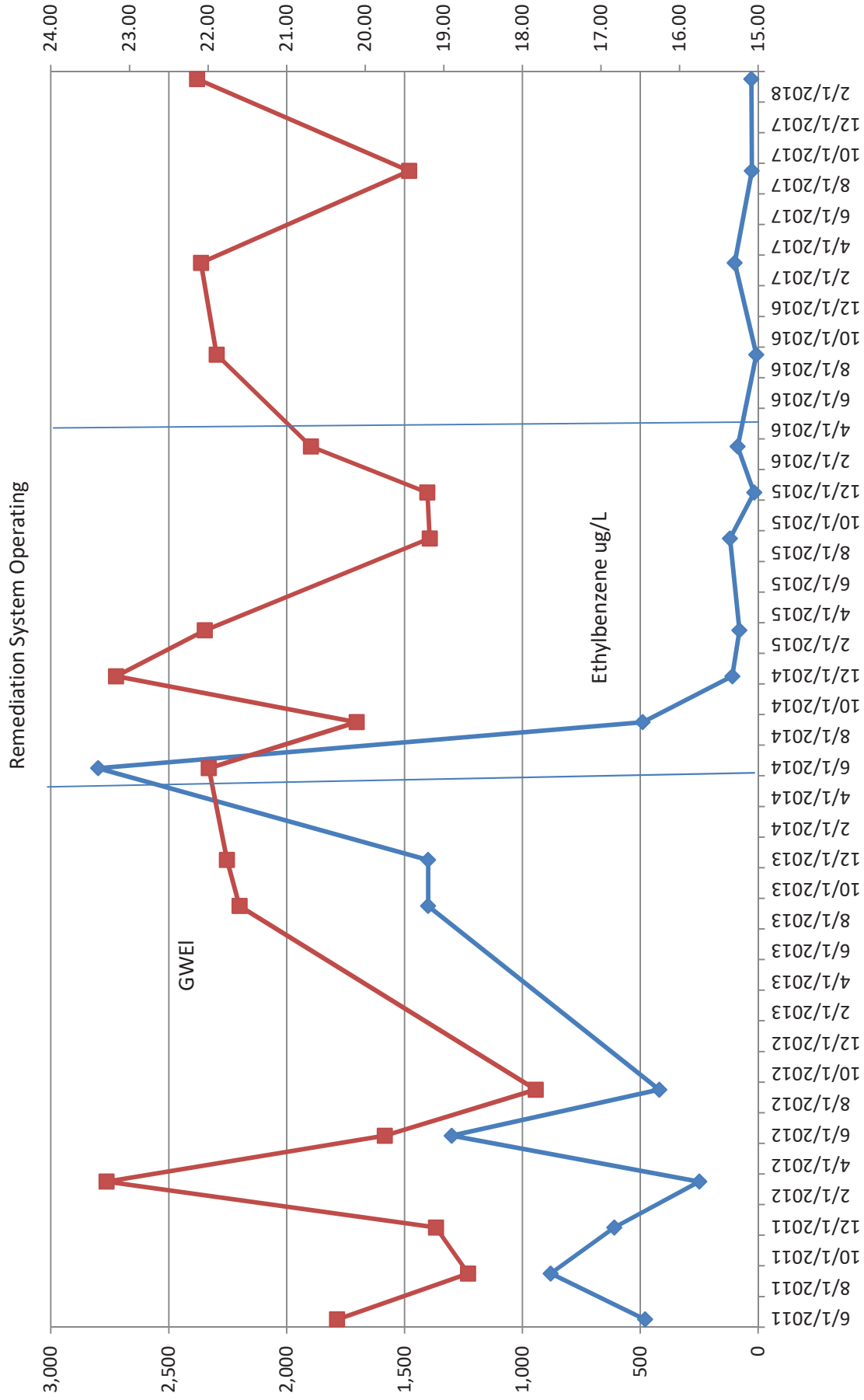
**Well EW-2
Ethylbenzene and GWEI vs. Time
Shore Acres Gas**



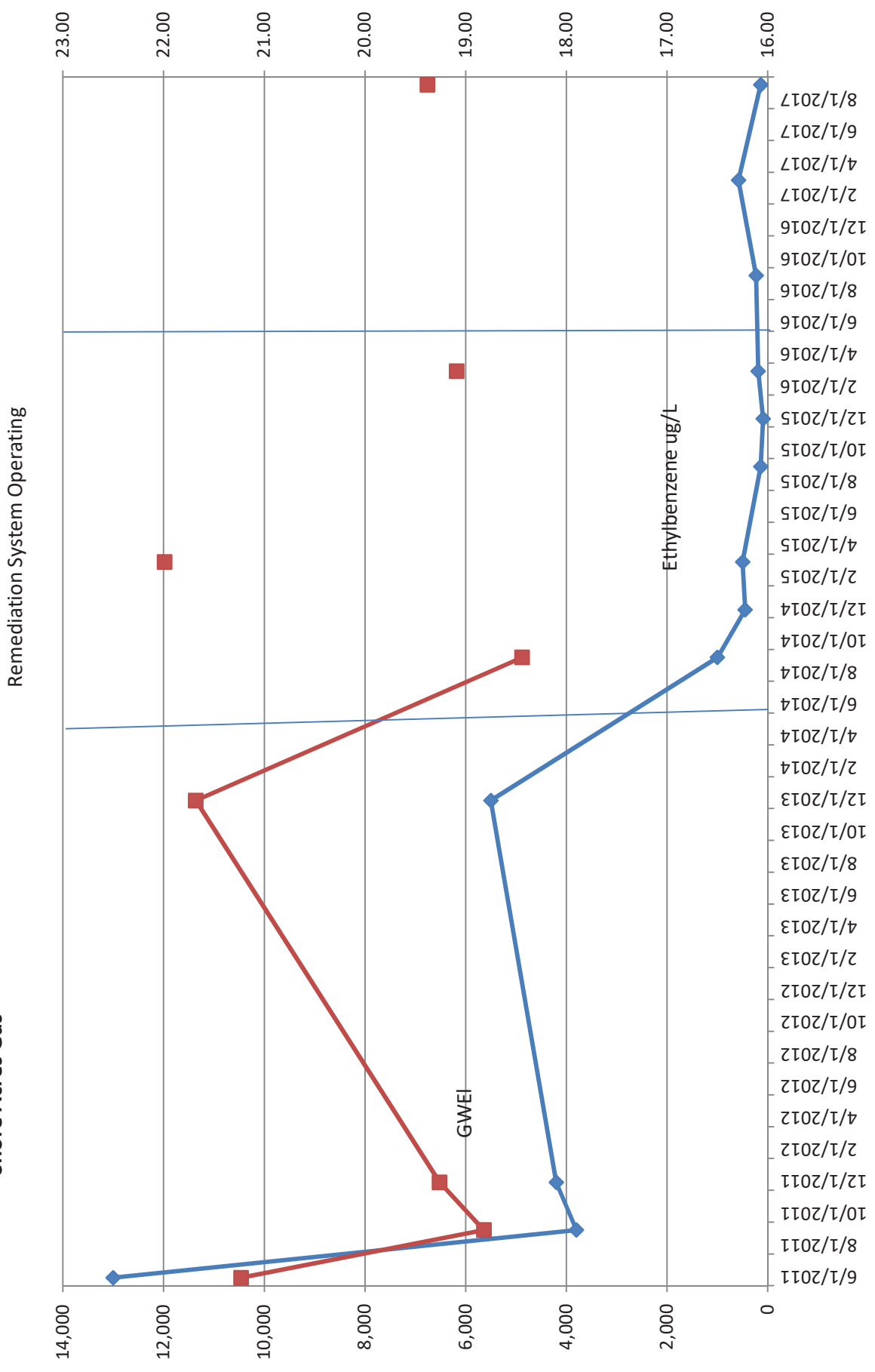
**Well EW-1
Ethylbenzene and GWEI vs. Time
Shore Acres Gas**



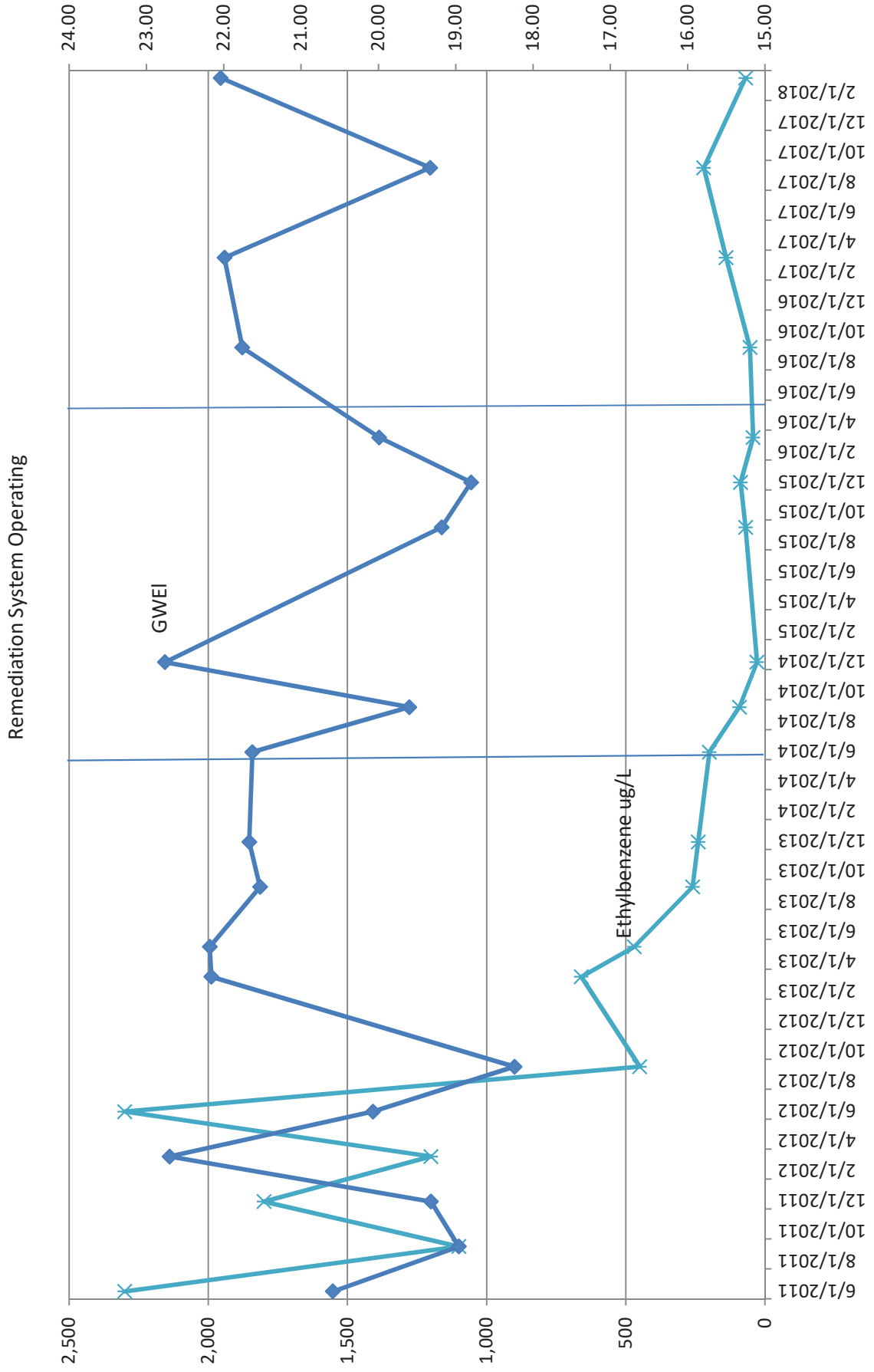
**Well MW-6
Ethylbenzene and GWEL vs. Time
Shore Acres Gas**



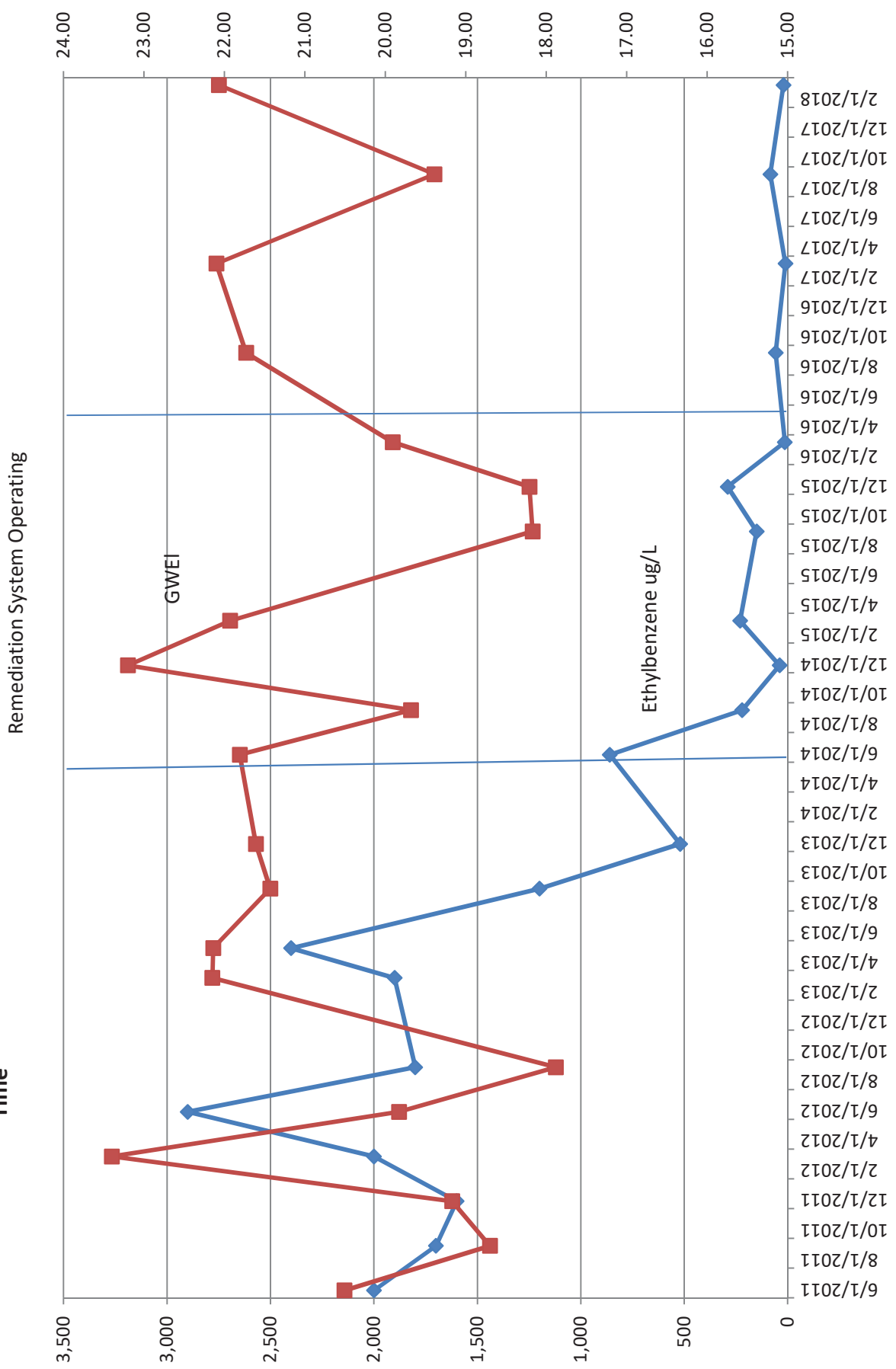
**Well MW-5
Ethylbenzene and GWEI vs. Time
Shore Acres Gas**



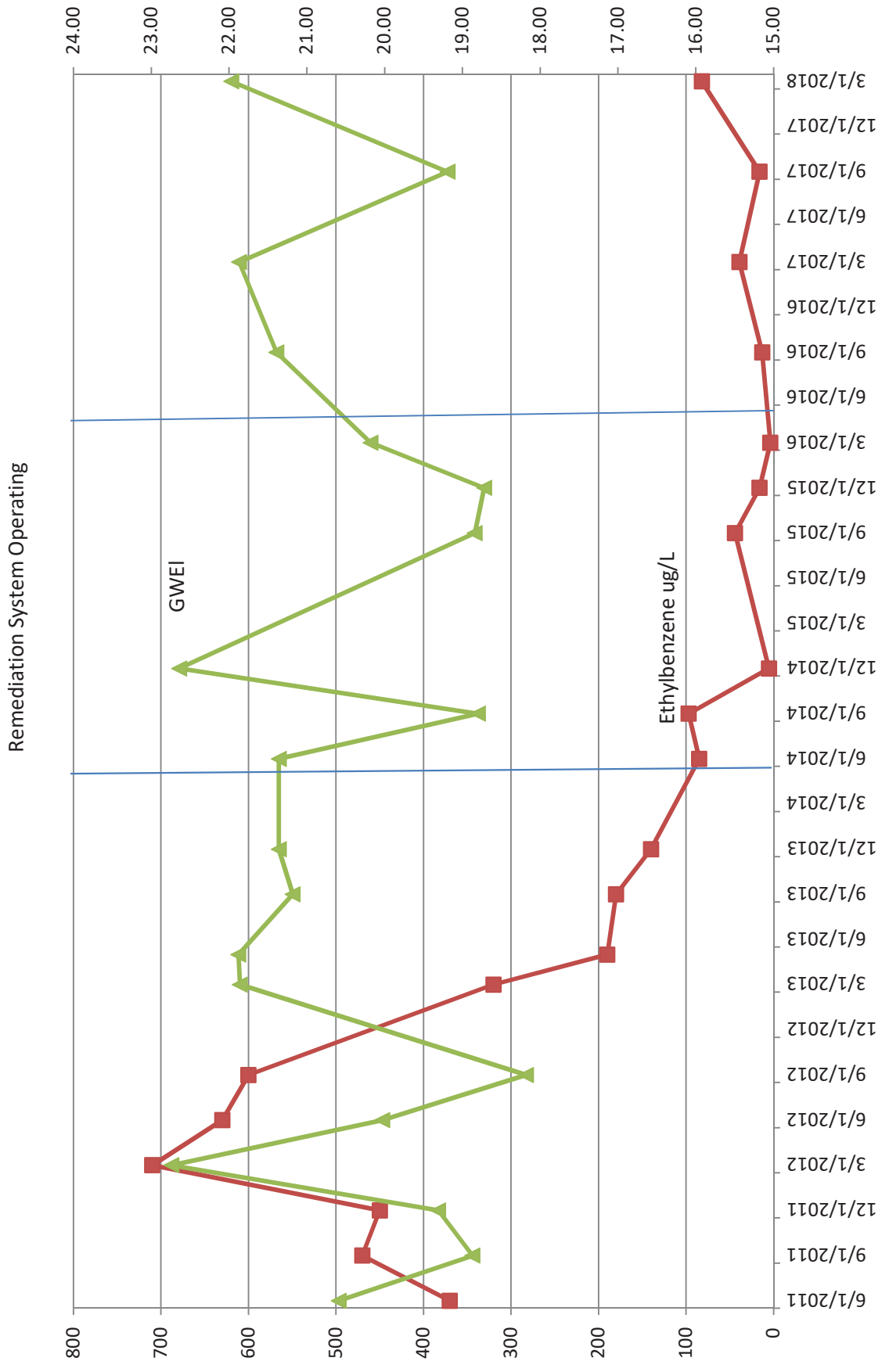
**Well MW-4
Ethylbenzene and GWEL vs. Time
Shore Acres Gas**



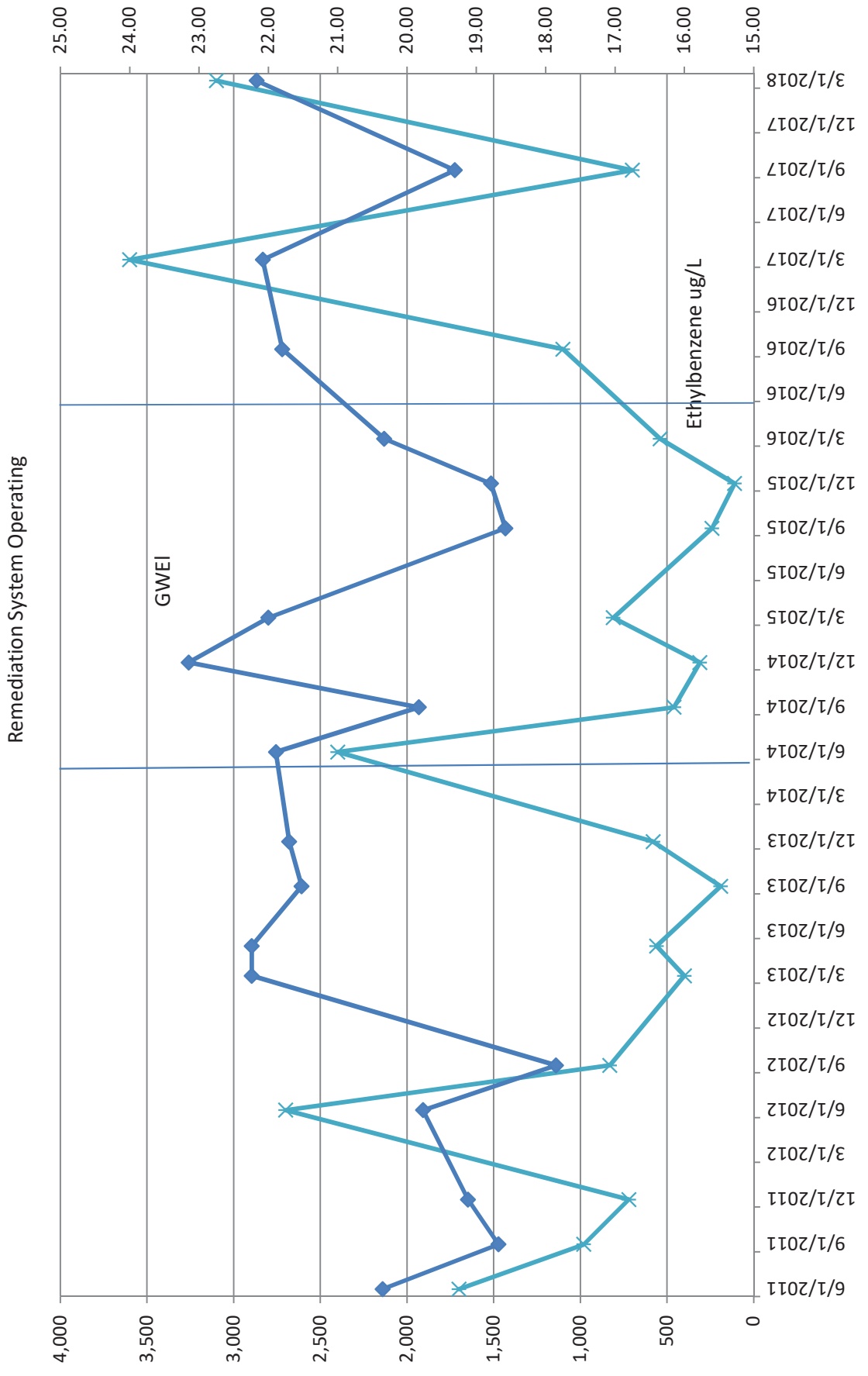
**Well MW-3
Ethylbenzene and GWEI vs.
Time**



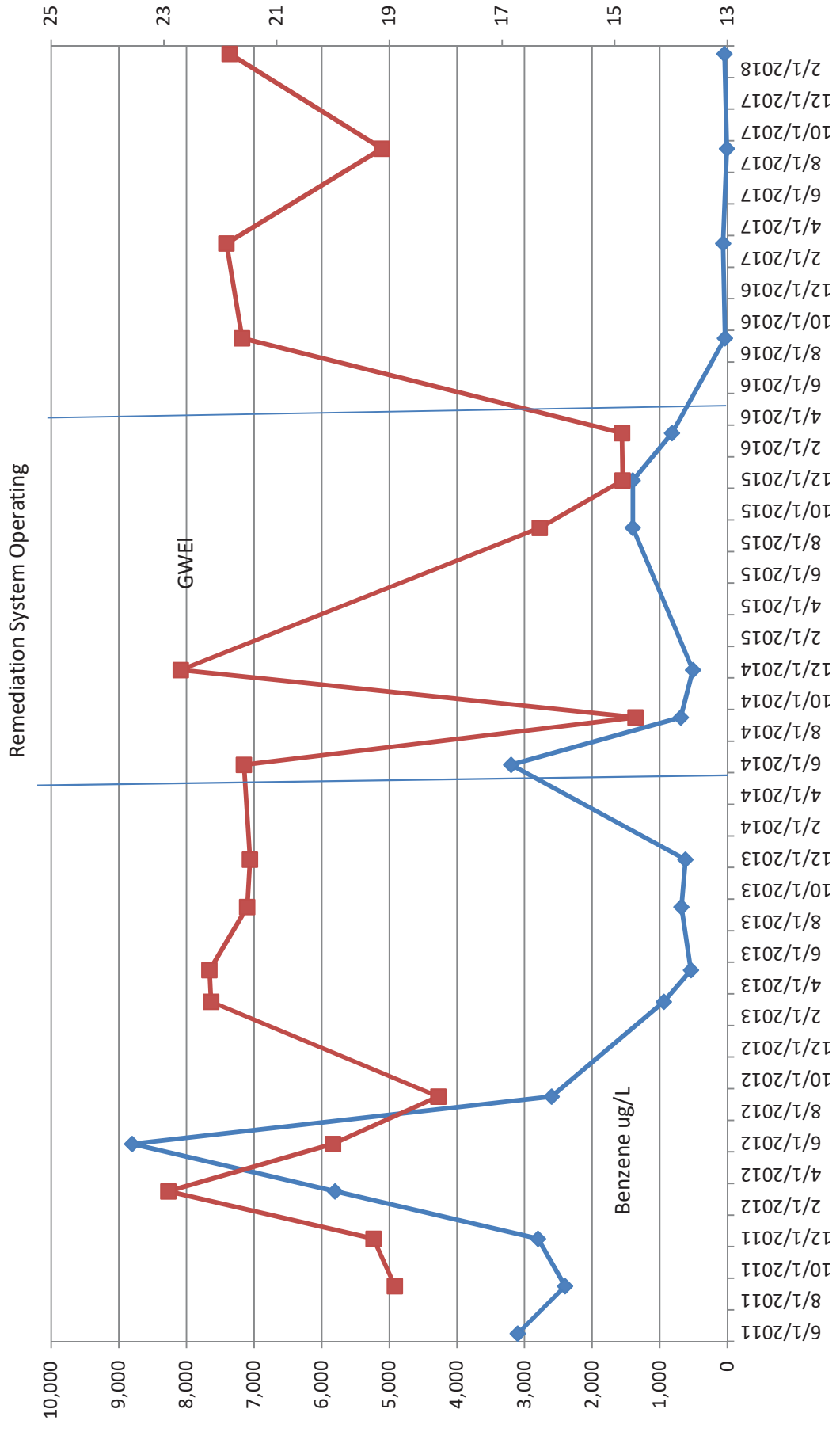
**Well MW-2
Ethylbenzene and GWEI vs. Time
Shore Acres Gas**



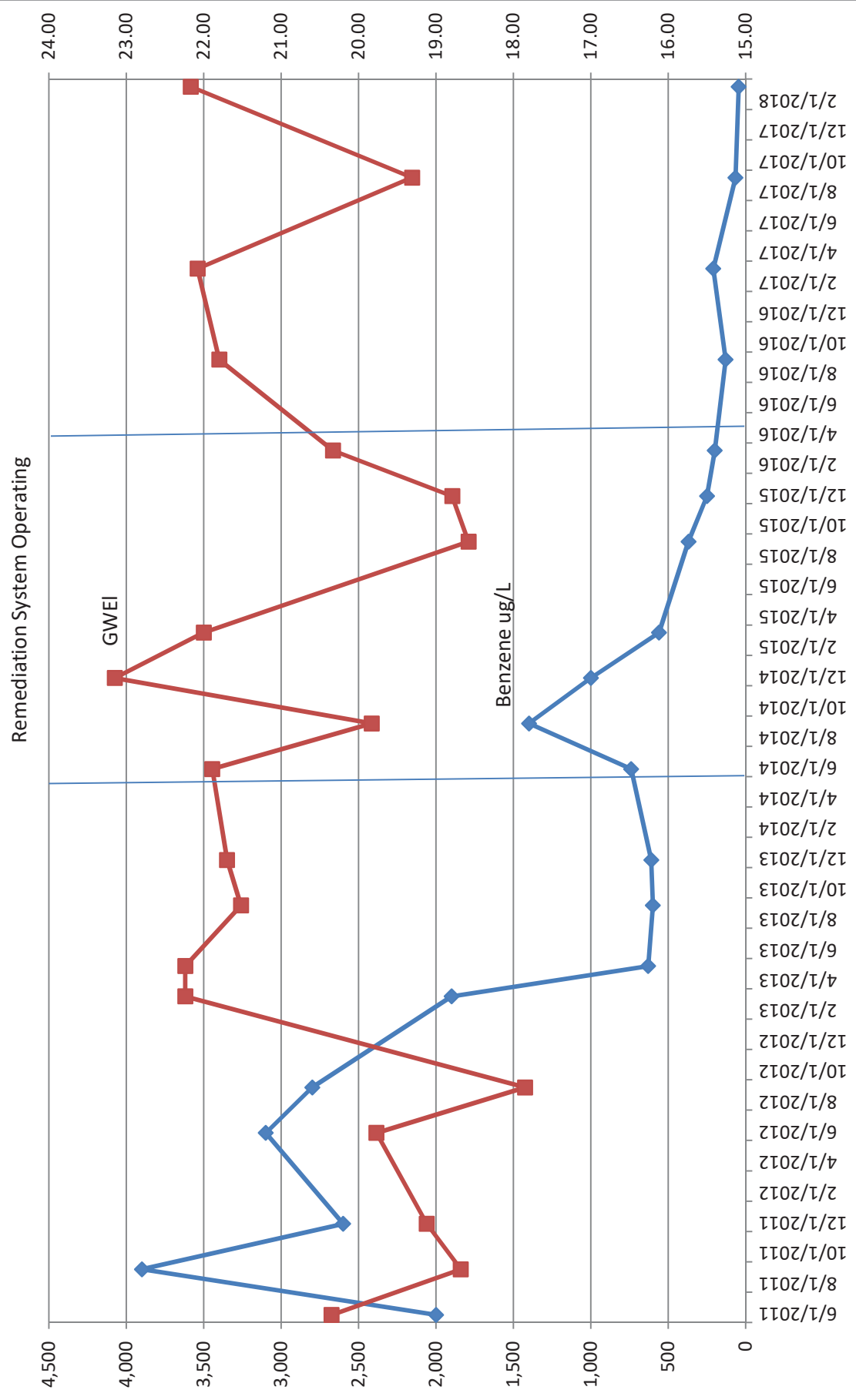
Well MW-1
Ethylbenzene and GWEI vs. Time
Shore Acres Gas



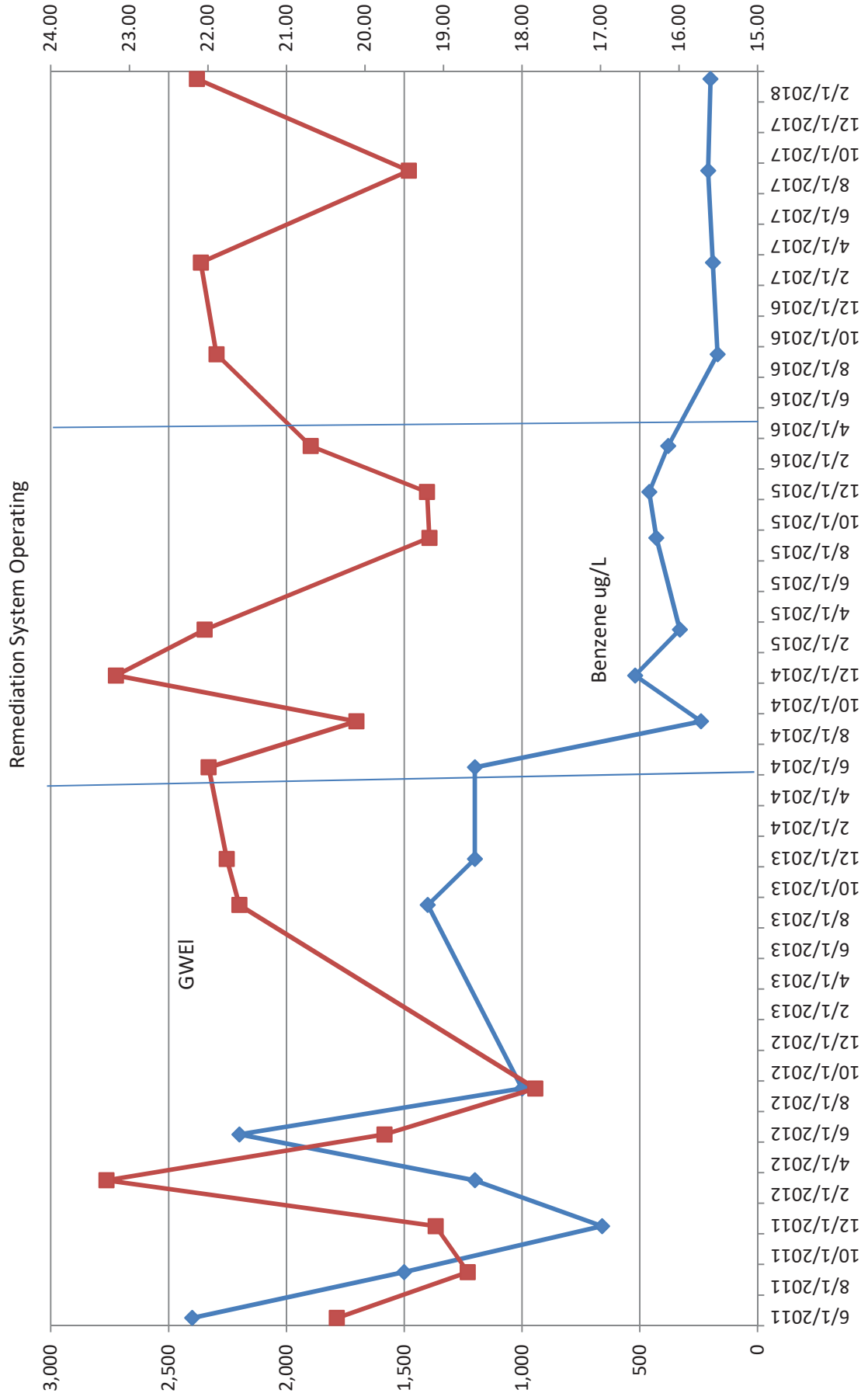
**Well EW-2
Benzene and GWEI vs. Time
Shore Acres Gas**



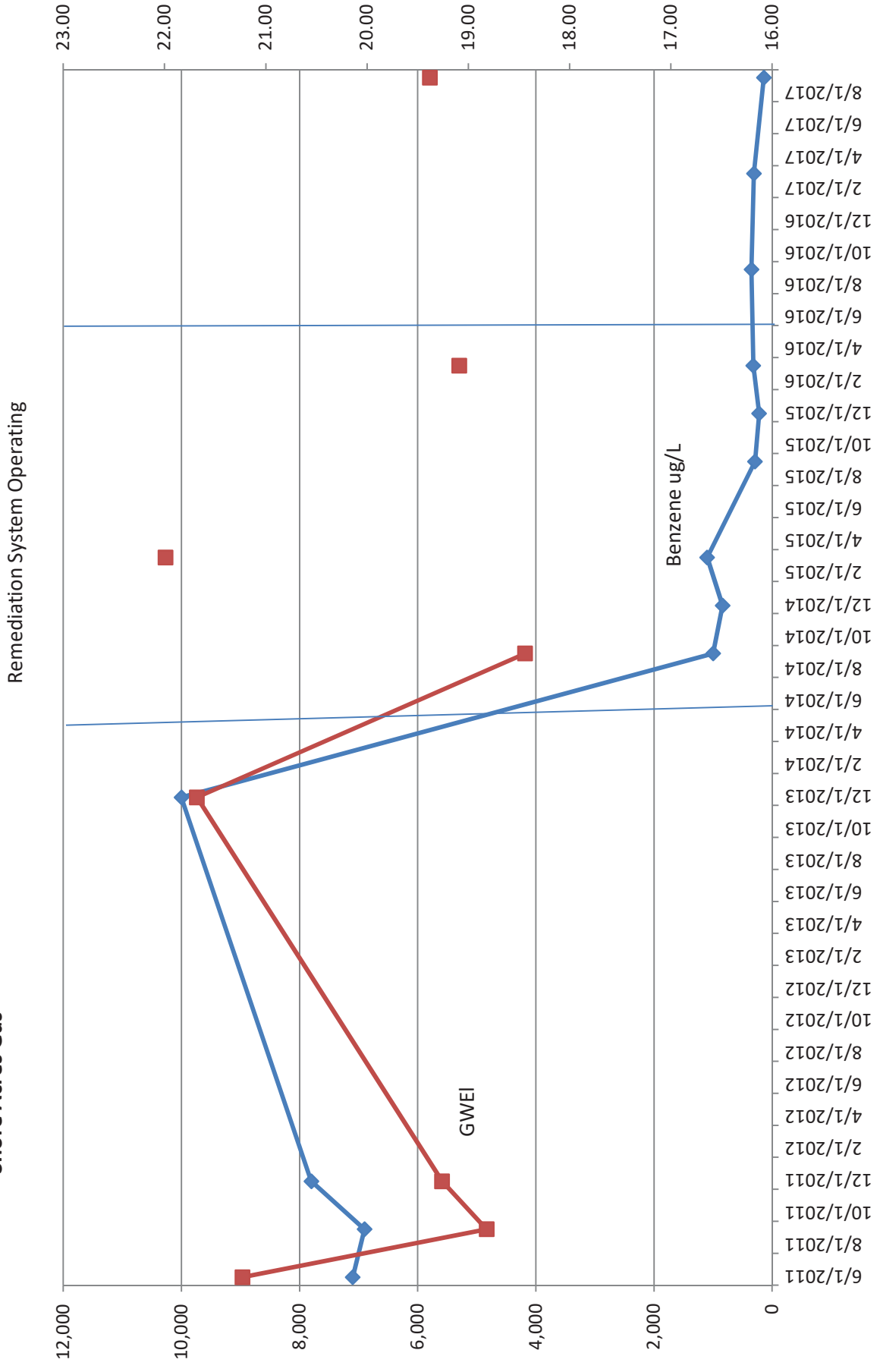
**Well EW-1
Benzene and GWEI vs. Time
Shore Acres Gas**



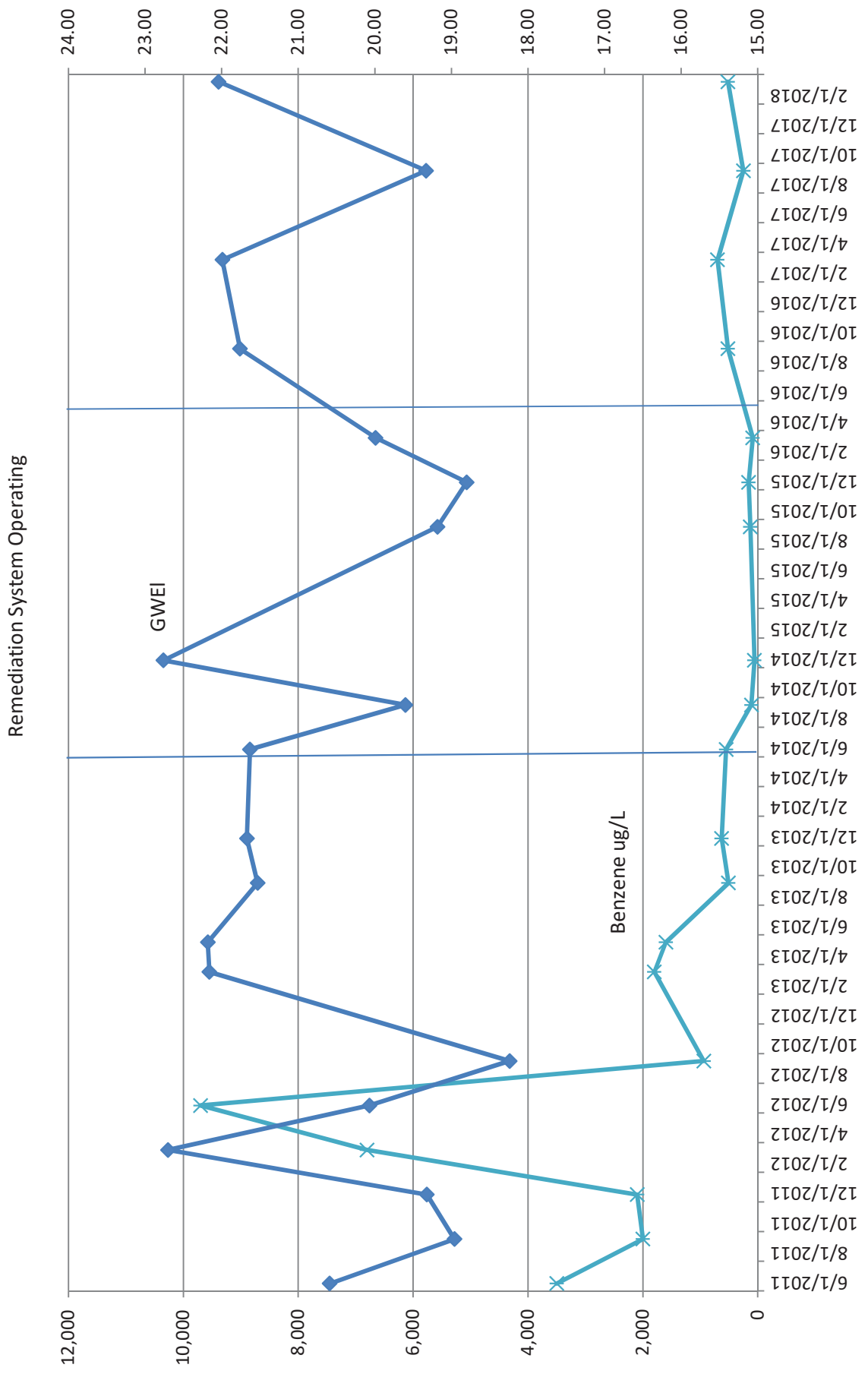
**Well MW-6
Benzene and GWEI vs. Time
Shore Acres Gas**



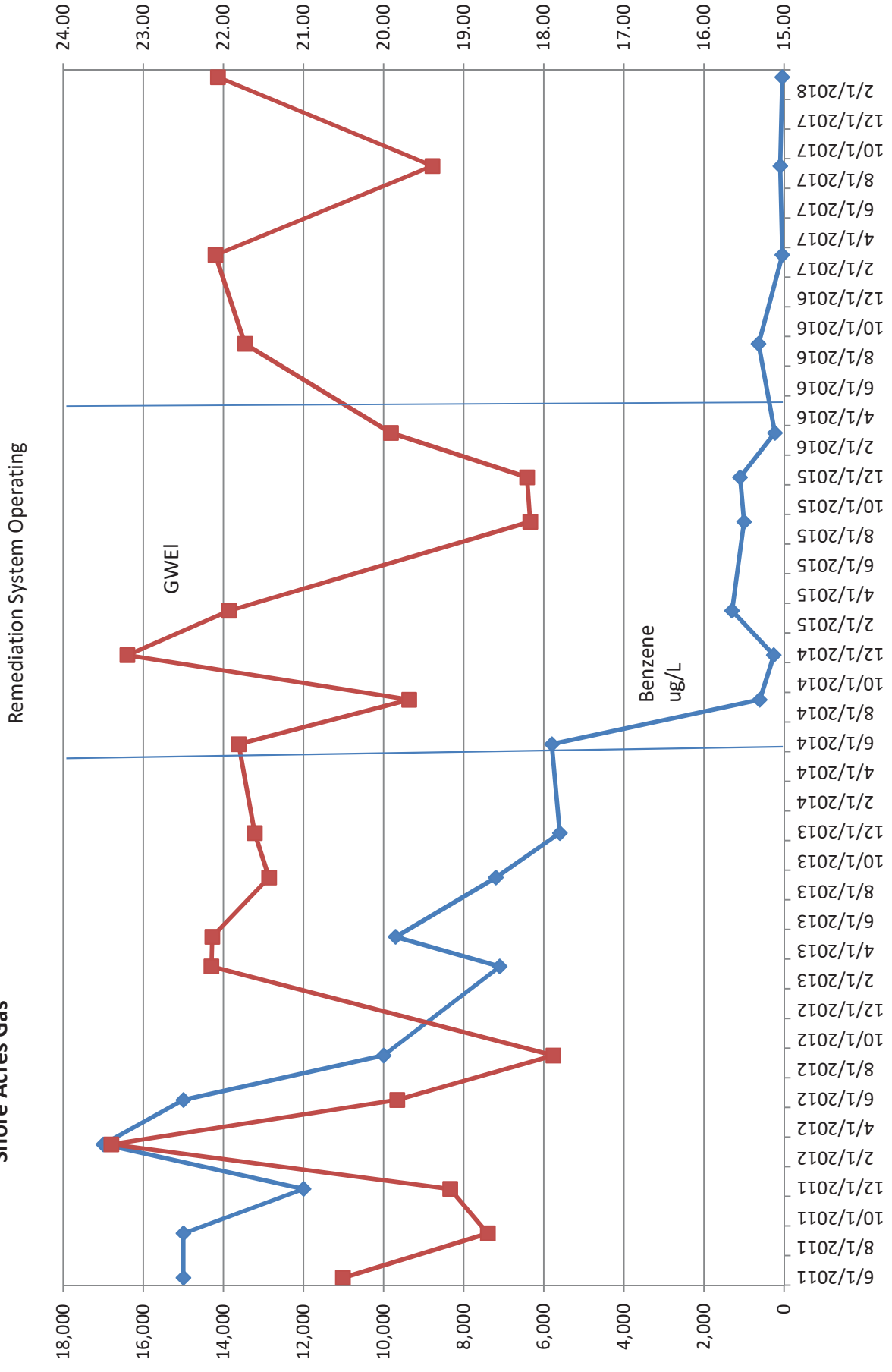
**Well MW-5
Benzene and GWEI vs. Time
Shore Acres Gas**



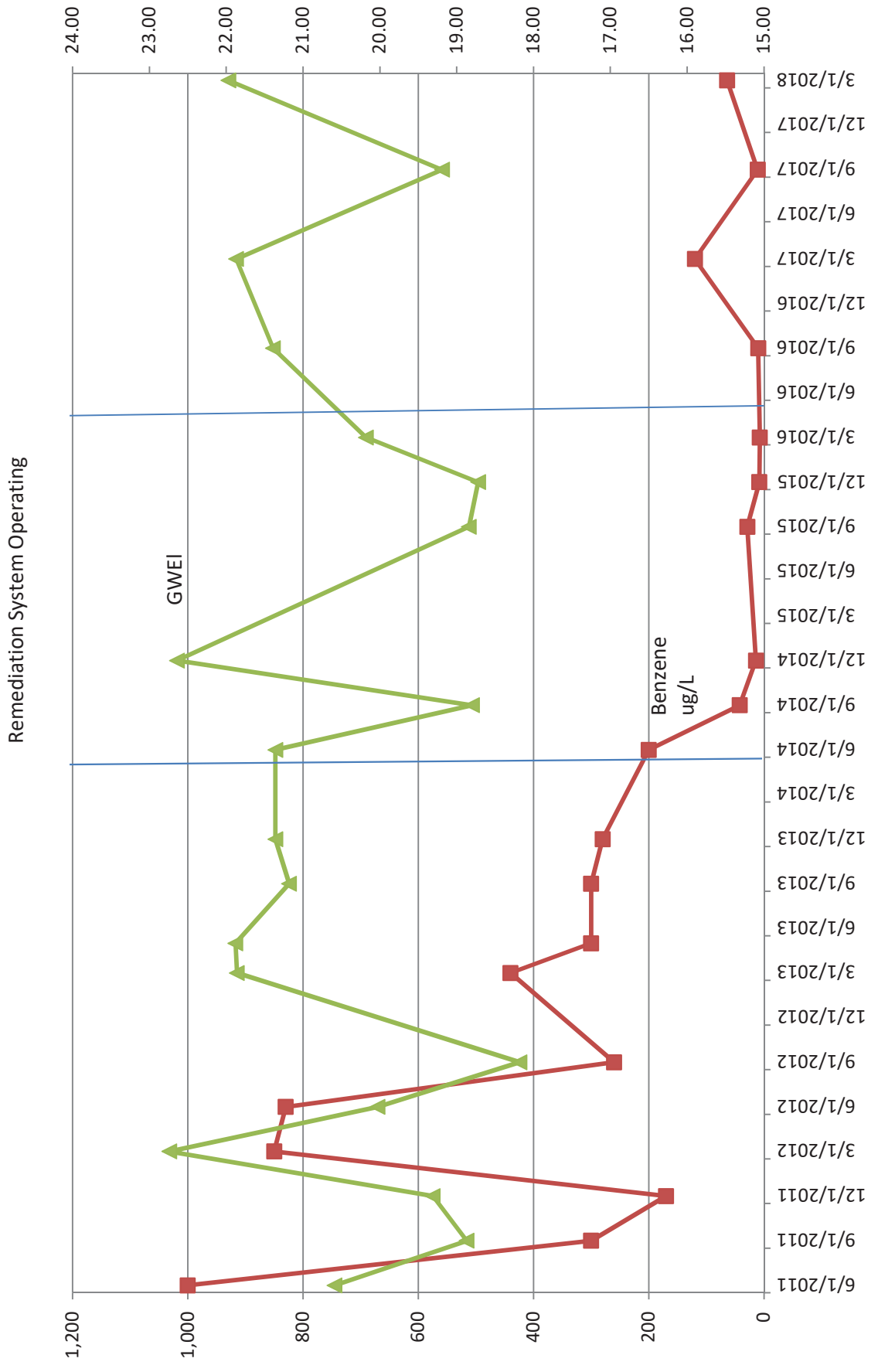
**Well MW-4
Benzene and GWEI vs. Time
Shore Acres Gas**



**Well MW-3
Benzene and GWEI vs. Time
Shore Acres Gas**



**Well MW-2
Benzene and GWEI vs. Time
Shore Acres Gas**



**Well MW-1
Benzene and GWEI vs. Time
Shore Acres Gas**

