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June 17, 2013

Ms. Donna Drogos
Alameda County Environmental Health
1131 Harbor Parkway, Suite 250
Oakland, CA 94502-6577

Subject: Second Quarter 2013 Groundwater Monitoring Report
Shore Acres Gas
403 East 12th Street, Oakland, Alameda County, California
RO #0002931
ECG # GHA.19009

Dear Ms. Drogos:

Enclosed please find a copy of the June 17, 2013 *Second Quarter 2013 Groundwater Monitoring Report* for the above referenced site prepared by our consultant Environmental Compliance Group, LLC.

I declare, under penalty and perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Respectfully,

Rashid Ghafoor

Environmental Compliance Group, LLC

270 Vintage Drive
Turlock, CA 95382
P: 209.664.1035
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SECOND QUARTER 2013 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. RO0002931

June 17, 2013

Drew Van Allen
Senior Project Manager

Michael S. Sgourakis
Principal Geologist
CA P.G. No. 7194

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INTRODUCTION

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

This report describes activities conducted during Second Quarter 2013 groundwater monitoring event. Site information is as follows:

Site Location:	403 East 12th 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 10- to 14-feet bgs. The groundwater flow direction appears to be generally toward the south or southwest.

CLEANUP CRITERIA

It is prudent to establish cleanup goals for soil and groundwater based upon reaching the residential Environmental Screening Levels (ESLs) established by Region II for sites with shallow soil where groundwater is not a current or potential drinking water source. The primary constituents of concern relative to the site appear to be total petroleum hydrocarbons as diesel (TPHd) and gasoline (TPHg) benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), and tertiary butyl alcohol (TBA). Accordingly, the following cleanup goals are proposed:

Constituent	**Soil (mg/kg)**	**Groundwater (ug/L)**
TPHd	100	210
TPHg	100	210
Benzene	0.12	46
Toluene	9.3	130
Ethylbenzene	2.3	43
Xylenes	11	100
MTBE	8.4	1,800
TBA	100	18,000

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). Results will be detailed in a separate report.

SECOND QUARTER 2013 MONITORING EVENT

ECG performed the second quarter 2013 groundwater monitoring and sampling event at the site on May 20, 2013. ECG also developed extraction wells EW-3 and EW-4 on May 16, 2013. Gauging, development, purging, and sampling were conducted in accordance with ECG's SOPs included in Appendix A. The collected groundwater samples were submitted to Argon Analytical Services, Inc. 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:	Remediation
Groundwater Sampling Schedule:	Semi-annual Wells MW-1 through MW-6, EW-1 through EW-4
Analysis:	TPHg and TPHd 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	9.18-feet below ground surface (bgs)
Average Groundwater Elevation	22.12-feet above mean sea level
Groundwater Gradient Direction	Southeast
Groundwater Gradient	0.0071 feet/foot
TPHg Detected Range	1,300 ug/L (EW-3) to 80,000 ug/L (MW-3)
Benzene Detected Range	300 ug/L (MW-2) to 9,700 ug/L (MW-3)
MTBE Detected	61 ug/L (MW-4) to 10,000 (MW-3)

Groundwater samples were not collected from well MW-5 due to the presence of free product or from well MW-6 due to an obstruction over the well. 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.

RESULTS AND CONCLUSIONS

ECG recommends discontinuing analyses for TPHd. ECG is implementing the installation of the remediation system approved by Alameda County in correspondence dated February 7, 2013. In May 2013, ECG supervised the installation of two extraction wells (EW-3 and EW-4). An Authority to Construct Application was submitted to the Bay Area Air Quality Management District on April 19, 2013. Results will be detailed in a separate report. Applications for electrical and

FIGURES

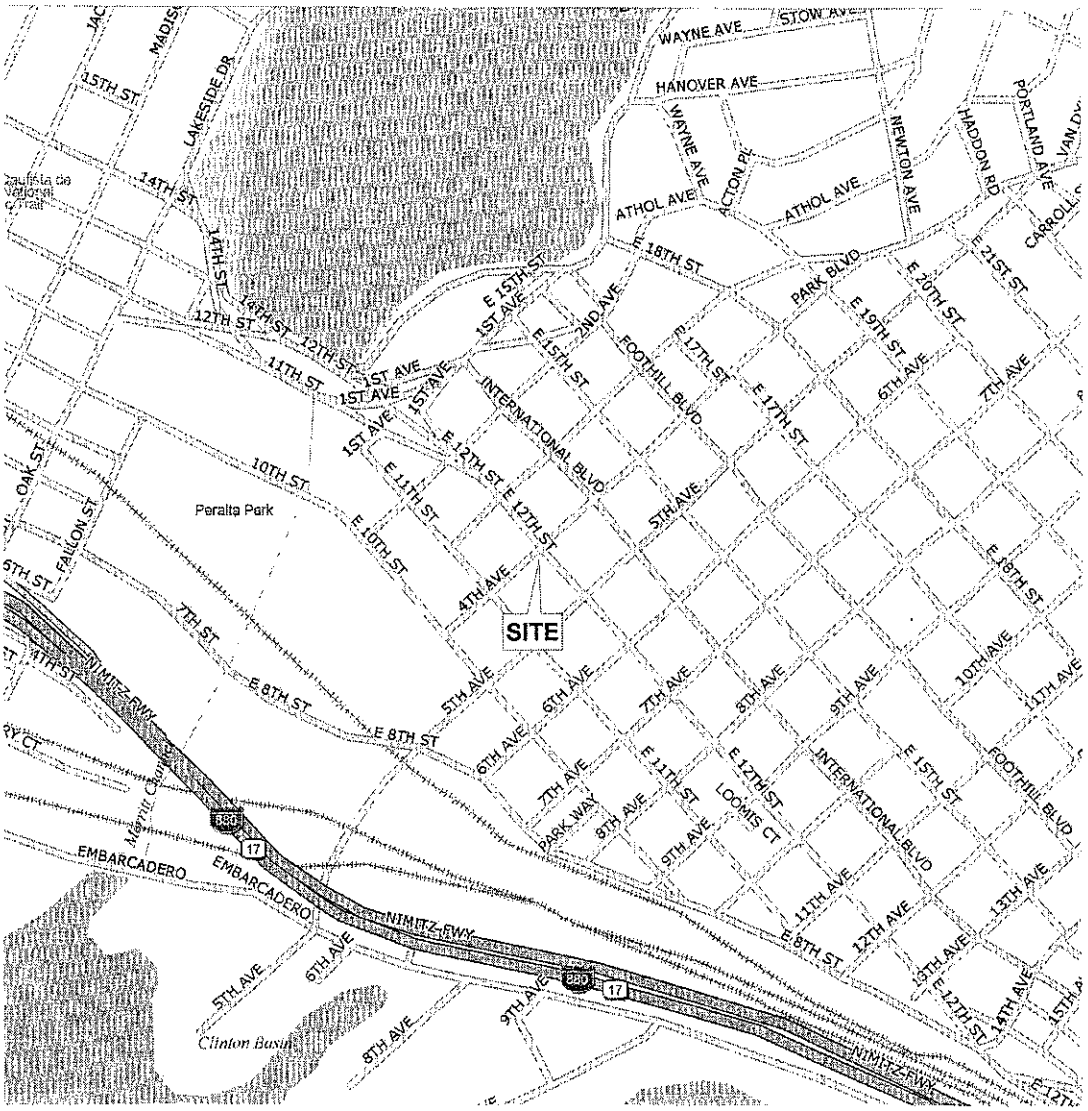

FIGURE 1 **Project Number:** GHA.19009 **Date:** February 9, 2011	**SITE LOCATION MAP** Shore Acre Gas 403 East 12th Street Oakland, California	**Environmental Compliance Group, LLC** 270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035

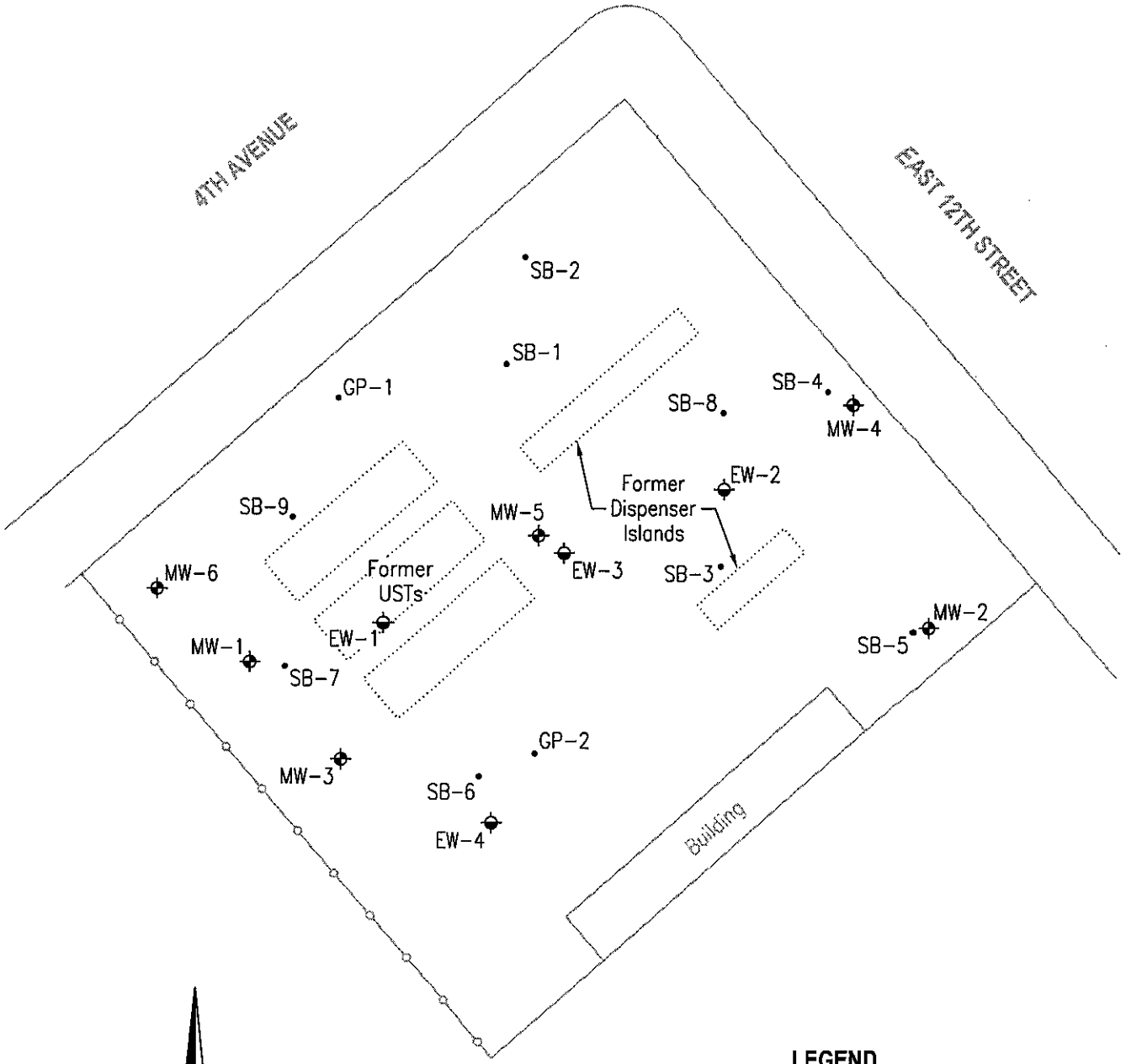

FIGURE 2	**SITE MAP**	**Environmental Compliance Group, LLC**
Project Number: GHA.19009	Shore Acre Gas 403 East 12th Street Oakland, California	270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035
Date: June 17, 2013		

LEGEND

NORTH

Monitoring Well Location

Vapor Extraction Well Location

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

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

Flow Lines

i = 0.0071 General Gradient

(NM) Not Measured

0 50 100

Approximate Scale In Feet
1 inch = 50 feet

FIGURE 3	**POTENTIOMETRIC SURFACE MAP** **MAY 20, 2013** Shore Acre Gas 403 East 12th Street Oakland, California	Environmental Compliance Group, LLC 270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035
Project Number: GHA.19009		
Date: June 17, 2013		

LEGEND

NORTH

- Monitoring Well Location
- Vapor Extraction Well Location
- (80,000) Concentration Of TPHg In Groundwater Measured In ug/L
- (50,000) Line Of Equal Concentration Of TPHg In Groundwater Measured In ug/L (Dashed Where Inferred)
- (NS) Not Sampled

0 50 100

Approximate Scale In Feet
1 inch = 50 feet

FIGURE 4 **Project Number:** GHA.19009 **Date:** June 17, 2013	**TPHg IN GROUNDWATER ISOCONCENTRATION MAP** **MAY 20, 2013** Shore Acre Gas 403 East 12th Street Oakland, California	Environmental Compliance Group, LLC 270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035

LEGEND

NORTH

Monitoring Well Location

Vapor Extraction Well Location

(9,700) Concentration Of Benzene In Groundwater Measured In ug/L

(5,000) Line Of Equal Concentration Of Benzene In Groundwater Measured In ug/L (Dashed Where Inferred)

(NS) Not Sampled

0 50 100

Approximate Scale In Feet
1 inch = 50 feet

FIGURE 5	**BENZENE IN GROUNDWATER ISOCONCENTRATION MAP MAY 20, 2013** Shore Acre Gas 403 East 12th Street Oakland, California	Environmental Compliance Group, LLC 270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035
Project Number: GHA.19009		
Date: June 17, 2013		

LEGEND

NORTH

- Monitoring Well Location
- Vapor Extraction Well Location
- (10,000) Concentration Of MTBE In Groundwater Measured In ug/L
- (5,000) Line Of Equal Concentration Of MTBE In Groundwater Measured In ug/L (Dashed Where Inferred)
- (NS) Not Sampled

0 50 100

Approximate Scale In Feet
1 inch = 50 feet

FIGURE 6	**MTBE IN GROUNDWATER ISOCONCENTRATION MAP MAY 20, 2013** Shore Acre Gas 403 East 12th Street Oakland, California	Environmental Compliance Group, LLC 270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035
Project Number: GHA.19009		
Date: June 17, 2013		

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	31.26	20	4	PVC	0.020/#3	5-20
EW-2		31.40	20	4	PVC	0.020/#3	5-20
EW-3	May 2012	---	20	4	PVC	0.020/#3	5-20
EW-4		---	20	4	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

DIC.14244

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)	Ethyl-benzene (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
VW-1-5	5		<5.0	**34**	<0.005	<0.005	**0.16**	**0.31**
VW-1-10	10		<15	**85**	<0.10	<0.10	**2.2**	**0.89**
VW-1-15	15		<15	**420**	**2.1**	**4.1**	**9.4**	**55**
VW-1-20	20		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
VW-2-5	5		<5.0	<1.0	<0.005	<0.005	<0.005	<0.010
VW-2-10	10		<5.0	**130**	<0.10	<0.10	**2.9**	**15**
VW-2-15	15		<15	**5,500**	**29**	**430**	**120**	**910**
VW-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
VW-1-5	5		<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050
VW-1-10	10		<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10
VW-1-15	15		<0.40	<0.40	**0.59**	<0.40	<4.0	<0.40	<0.40
VW-1-20	20		<0.005	<0.005	**0.009**	<0.005	**0.16**	<0.005	<0.005
VW-2-5	5		<0.005	<0.005	**0.25**	<0.005	**0.14**	<0.005	<0.005
VW-2-10	10		<0.10	<0.10	**0.33**	<0.10	<1.0	<0.10	<0.10
VW-2-15	15		<4.0	<4.0	<4.0	<4.0	<40	<4.0	<4.0
VW-2-20	20		<0.005	<0.005	**0.008**	<0.005	**0.26**	<0.005	<0.005

Notes:

mg/kg - denotes milligrams per kilogram
< - denotes less than the detection limi
--- - denotes not analyzed/applicable
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

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)	Ethyl-benzene (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**	<0.5	**2.1**	<1.0
SB-15		---	**320**	**32**	**0.7**	**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
< - 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

GHA.19009

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**
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**
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**
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**

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-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					
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					
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**
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**
EW-3	5/20/2013	8.82	---	<50	**1,300**	**430**	**540**	**280**	**1,000**
EW-4	5/20/2013	9.12	---	<50	**8,100**	**720**	**160**	**94**	**430**

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)

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
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
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
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

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						
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						
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
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
EW-3	5/20/2013	<2.5	<2.5	**140**	<2.5	**1,100**	<2.5	<2.5
EW-4	5/20/2013	<5.0	<5.0	**480**	<5.0	**1,900**	<5.0	<5.0

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)

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

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 rinseate water 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 rinseate water 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 rinseate water 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 *Advisory Active Soil Gas Investigations*, April 2012, 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 (isobutylene 100 ppm) concentration inside the shroud will be monitored frequently to verify initial concentrations. A photoionization detector will be used to monitor tracer gas concentrations.

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 Suma 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.

argon laboratories

04 June 2013

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

RE: Shore Acres Gas Project Data

Enclosed are the results for sample(s) received on 05/21/13 15:07 by Argon 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

2905 Railroad Avenue, Ceres, CA 95307 • Phone (209) 581-9280 • Fax (209) 581-9282
email: main@argonlabs.com

Argon Analytical Services, Inc.

CHAIN OF CUSTODY

Project Information:		Report To:		Samples Submitted To:	
Project No:	GHA.19009	Consultant:	Environmental Compliance Group, LLC	Laboratory:	Argon Labs
Project Title:	Shore Acres Gas	Address:	270 Vintage Drive Turlock, CA 95382	Address:	2905 Railroad Avenue Ceres, CA 95307
Location:	403 East 12th Street Oakland, CA	Contact:	Mike Sgourakis	Contact:	
Sampler's Name:		Phone:	916.800.4580	Phone:	(209) 581-9280
(print)		Fax:	209.664.1040	Fax:	(209) 581-9282
Sampler's Signature:		Bill To:		Date Results Required:	
		Client:	Environmental Compliance Group, LLC	Date Report Required:	
		Address:	270 Vintage Drive Turlock, CA		

TURN AROUND TIME

RUSH	24 Hour	48 Hour	Standard (5 days)	Special (10-14 days)
☐	☐	☐	☐	☒

ANALYSIS

Sample ID.	Date	Time	# Containers	Matrix	TPHg and TPHd by EPA Method 8015M	BTEX, 5 oxygenates, 1,2-DCA, EDB by EPA Method 8260B	EDF Reports	COMMENTS
								Preservative
MW-1	5/21/13	1105	4	water	X	X		
MW-2		0955						
MW-3		1100						
MW-4		0950						
~~MW-5~~								
~~MW-6~~								
EW-1		1040						
EW-2		1040						
EW-3		1125						
EW-4	↓	1210	↓	↓	↓	↓		

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	5/21/13	1507	[signature]	5/21/13	1507
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

SPECIAL INSTRUCTIONS:

Global ID#

T0600174667

Argon Laboratories Sample Receipt Checklist

Client Name: Environmental Compliance Grot Date & Time Received: 05/21/13 15:07

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 ☐

Argon Labs Project Number: N305030

Shipper Container in good condition? N/A____	Yes ☑	No ☐		Samples received in proper containers?	Yes ☑	No ☐	
Samples received under refrigeration?	Yes ☑	No ☐		Samples received intact?	Yes ☑	No ☐	
Chain of custody present?	Yes ☑	No ☐		Sufficient sample volume for requested tests?	Yes ☑	No ☐	
Chain of Custody signed by all parties?	Yes ☑	No ☐		Samples received within holding time?	Yes ☑	No ☐	
Chain of Custody matches all sample labels?	Yes ☑	No ☐		Do samples contain proper preservative? N/A ☐	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:

♥ ♣ ♦ ♠

argon laboratories 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

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.:
N305030

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	N305030-01	Water	05/20/13 11:05	05/21/13 15:07
MW-2	N305030-02	Water	05/20/13 09:55	05/21/13 15:07
MW-3	N305030-03	Water	05/20/13 11:00	05/21/13 15:07
MW-4	N305030-04	Water	05/20/13 09:50	05/21/13 15:07
EW-1	N305030-05	Water	05/20/13 10:40	05/21/13 15:07
EW-2	N305030-06	Water	05/20/13 10:40	05/21/13 15:07
EW-3	N305030-07	Water	05/20/13 11:25	05/21/13 15:07
EW-4	N305030-08	Water	05/20/13 12:16	05/21/13 15:07

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager: Mike Sgourakis	N305030

Total Petroleum Hydrocarbons @ Diesel

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
MW-1 (N305030-01) Water Sampled: 20-May-13 11:05 Received: 21-May-13 15:07							
Diesel	ND	100	ug/L	2	24-May-13	EPA 8015Mod	
Surr. Rec.:		*93 %*			"	"	
MW-2 (N305030-02) Water Sampled: 20-May-13 09:55 Received: 21-May-13 15:07							
Diesel	ND	100	ug/L	2	24-May-13	EPA 8015Mod	
Surr. Rec.:		*93 %*			"	"	
MW-3 (N305030-03) Water Sampled: 20-May-13 11:00 Received: 21-May-13 15:07							
Diesel	ND	250	ug/L	5	24-May-13	EPA 8015Mod	
Surr. Rec.:		*106 %*			"	"	
MW-4 (N305030-04) Water Sampled: 20-May-13 09:50 Received: 21-May-13 15:07							
Diesel	ND	250	ug/L	5	24-May-13	EPA 8015Mod	
Surr. Rec.:		*110 %*			"	"	
EW-1 (N305030-05) Water Sampled: 20-May-13 10:40 Received: 21-May-13 15:07							
Diesel	ND	100	ug/L	2	24-May-13	EPA 8015Mod	
Surr. Rec.:		*85 %*			"	"	
EW-2 (N305030-06) Water Sampled: 20-May-13 10:40 Received: 21-May-13 15:07							
Diesel	ND	50	ug/L	1	24-May-13	EPA 8015Mod	
Surr. Rec.:		*101 %*			"	"	
EW-3 (N305030-07) Water Sampled: 20-May-13 11:25 Received: 21-May-13 15:07							
Diesel	ND	50	ug/L	1	24-May-13	EPA 8015Mod	
Surr. Rec.:		*102 %*			"	"	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager: Mike Sgourakis	N305030

Total Petroleum Hydrocarbons @ Diesel

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
EW-4 (N305030-08) Water Sampled: 20-May-13 12:16 Received: 21-May-13 15:07							
Diesel	ND	50	ug/L	1	24-May-13	EPA 8015Mod	
Surr. Rec.:		*98 %*			"	"	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager: Mike Sgourakis	N305030

Total Petroleum Hydrocarbons @ Gasoline

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
MW-1 (N305030-01) Water Sampled: 20-May-13 11:05 Received: 21-May-13 15:07							
Total Petroleum Hydrocarbons @ Gasoline	**22000**	500	ug/L	10	31-May-13	8015M	
Surr. Rec.:		*92 %*			"	"	
MW-2 (N305030-02) Water Sampled: 20-May-13 09:55 Received: 21-May-13 15:07							
Total Petroleum Hydrocarbons @ Gasoline	**6600**	250	ug/L	5	31-May-13	8015M	
Surr. Rec.:		*90 %*			"	"	
MW-3 (N305030-03) Water Sampled: 20-May-13 11:00 Received: 21-May-13 15:07							
Total Petroleum Hydrocarbons @ Gasoline	**80000**	2000	ug/L	40	31-May-13	8015M	
Surr. Rec.:		*91 %*			"	"	
MW-4 (N305030-04) Water Sampled: 20-May-13 09:50 Received: 21-May-13 15:07							
Total Petroleum Hydrocarbons @ Gasoline	**18000**	500	ug/L	10	31-May-13	8015M	
Surr. Rec.:		*94 %*			"	"	
EW-1 (N305030-05) Water Sampled: 20-May-13 10:40 Received: 21-May-13 15:07							
Total Petroleum Hydrocarbons @ Gasoline	**11000**	500	ug/L	10	31-May-13	8015M	
Surr. Rec.:		*89 %*			"	"	
EW-2 (N305030-06) Water Sampled: 20-May-13 10:40 Received: 21-May-13 15:07							
Total Petroleum Hydrocarbons @ Gasoline	**10000**	250	ug/L	5	31-May-13	8015M	
Surr. Rec.:		*88 %*			"	"	
EW-3 (N305030-07) Water Sampled: 20-May-13 11:25 Received: 21-May-13 15:07							
Total Petroleum Hydrocarbons @ Gasoline	**1300**	500	ug/L	10	31-May-13	8015M	
Surr. Rec.:		*91 %*			"	"	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager: Mike Sgourakis	N305030

Total Petroleum Hydrocarbons @ Gasoline

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
EW-4 (N305030-08) Water Sampled: 20-May-13 12:16 Received: 21-May-13 15:07							
Total Petroleum Hydrocarbons @ Gasoline	**8100**	200	ug/L	4	31-May-13	8015M	
Surr. Rec.:		*86 %*			"	"	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager:Mike Sgourakis	N305030

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
MW-1 (N305030-01) Water Sampled: 20-May-13 11:05 Received: 21-May-13 15:07							
Benzene	**2800**	10	ug/L	20	31-May-13	8260B	
Toluene	**870**	10	"	"	"	"	
Xylenes, total	**2000**	20	"	"	"	"	
Ethylbenzene	**560**	10	"	"	"	"	
t-Butanol	**620**	100	"	"	"	"	
Methyl tert-Butyl Ether	**1100**	10	"	"	"	"	
Di-Isopropyl Ether	ND	10	"	"	"	"	
Ethyl tert-Butyl Ether	ND	10	"	"	"	"	
tert-Amyl Methyl Ether	ND	10	"	"	"	"	
1,2-Dichloroethane	ND	10	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	
Surr. Rec.:		*98 %*			"	"	
MW-2 (N305030-02) Water Sampled: 20-May-13 09:55 Received: 21-May-13 15:07							
Benzene	**300**	2.5	ug/L	5	31-May-13	8260B	
Toluene	**74**	2.5	"	"	"	"	
Xylenes, total	**500**	5.0	"	"	"	"	
Ethylbenzene	**190**	2.5	"	"	"	"	
t-Butanol	**1800**	25	"	"	"	"	
Methyl tert-Butyl Ether	**120**	2.5	"	"	"	"	
Di-Isopropyl Ether	ND	2.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	2.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	2.5	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	
Surr. Rec.:		*97 %*			"	"	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager: Mike Sgourakis	N305030

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
MW-3 (N305030-03) Water Sampled: 20-May-13 11:00 Received: 21-May-13 15:07							
Benzene	**9700**	25	ug/L	50	31-May-13	8260B	
Toluene	**2900**	25	"	"	"	"	
Xylenes, total	**8600**	50	"	"	"	"	
Ethylbenzene	**2400**	25	"	"	"	"	
t-Butanol	**5000**	250	"	"	"	"	
Methyl tert-Butyl Ether	**10000**	25	"	"	"	"	
Di-Isopropyl Ether	ND	25	"	"	"	"	
Ethyl tert-Butyl Ether	ND	25	"	"	"	"	
tert-Amyl Methyl Ether	ND	25	"	"	"	"	
1,2-Dichloroethane	ND	25	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	25	"	"	"	"	
Surr. Rec.:		*97 %*			"	"	
MW-4 (N305030-04) Water Sampled: 20-May-13 09:50 Received: 21-May-13 15:07							
Benzene	**1600**	10	ug/L	20	31-May-13	8260B	
Toluene	**1700**	10	"	"	"	"	
Xylenes, total	**1900**	20	"	"	"	"	
Ethylbenzene	**470**	10	"	"	"	"	
t-Butanol	**360**	100	"	"	"	"	
Methyl tert-Butyl Ether	**61**	10	"	"	"	"	
Di-Isopropyl Ether	ND	10	"	"	"	"	
Ethyl tert-Butyl Ether	ND	10	"	"	"	"	
tert-Amyl Methyl Ether	ND	10	"	"	"	"	
1,2-Dichloroethane	ND	10	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	
Surr. Rec.:		*98 %*			"	"	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager:Mike Sgourakis	N305030

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
EW-1 (N305030-05) Water Sampled: 20-May-13 10:40 Received: 21-May-13 15:07							
Benzene	**600**	5.0	ug/L	10	31-May-13	8260B	
Toluene	**28**	5.0	"	"	"	"	
Xylenes, total	**350**	10	"	"	"	"	
Ethylbenzene	**210**	5.0	"	"	"	"	
t-Butanol	**560**	50	"	"	"	"	
Methyl tert-Butyl Ether	**250**	5.0	"	"	"	"	
Di-Isopropyl Ether	ND	5.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	5.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	5.0	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	
Surr. Rec.:		*96 %*			"	"	
EW-2 (N305030-06) Water Sampled: 20-May-13 10:40 Received: 21-May-13 15:07							
Benzene	**540**	2.5	ug/L	5	31-May-13	8260B	
Toluene	**430**	2.5	"	"	"	"	
Xylenes, total	**790**	5.0	"	"	"	"	
Ethylbenzene	**220**	2.5	"	"	"	"	
t-Butanol	**2600**	25	"	"	"	"	
Methyl tert-Butyl Ether	**390**	2.5	"	"	"	"	
Di-Isopropyl Ether	ND	2.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	2.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	2.5	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	
Surr. Rec.:		*98 %*			"	"	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager: Mike Sgourakis	N305030

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
EW-3 (N305030-07) Water Sampled: 20-May-13 11:25 Received: 21-May-13 15:07							
Benzene	**430**	2.5	ug/L	5	31-May-13	8260B	
Toluene	**540**	2.5	"	"	"	"	
Xylenes, total	**1000**	5.0	"	"	"	"	
Ethylbenzene	**280**	2.5	"	"	"	"	
t-Butanol	**1100**	25	"	"	"	"	
Methyl tert-Butyl Ether	**140**	2.5	"	"	"	"	
Di-Isopropyl Ether	ND	2.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	2.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	2.5	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	
Surr. Rec.:		*98 %*			"	"	
EW-4 (N305030-08) Water Sampled: 20-May-13 12:16 Received: 21-May-13 15:07							
Benzene	**720**	5.0	ug/L	10	31-May-13	8260B	
Toluene	**160**	5.0	"	"	"	"	
Xylenes, total	**430**	10	"	"	"	"	
Ethylbenzene	**94**	5.0	"	"	"	"	
t-Butanol	**1900**	50	"	"	"	"	
Methyl tert-Butyl Ether	**480**	5.0	"	"	"	"	
Di-Isopropyl Ether	ND	5.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	5.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	5.0	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	
Surr. Rec.:		*95 %*			"	"	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager:Mike Sgourakis	N305030

Total Petroleum Hydrocarbons @ Diesel - Quality Control

Argon Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch N300596 - EPA 3510C										
Blank (N300596-BLK1)				Prepared & Analyzed: 05/24/13						
Surrogate: p-Terphenyl	*96.0*		*ug/L*	*100*		*96*	*70-130*			
Diesel	ND	50	"							
LCS (N300596-BS1)				Prepared & Analyzed: 05/24/13						
Diesel	196		ug/L	200		98	80-120			
LCS Dup (N300596-BSD1)				Prepared & Analyzed: 05/24/13						
Diesel	202		ug/L	200		101	80-120	3	20	
Matrix Spike (N300596-MS1)	**Source: N305030-08**			Prepared & Analyzed: 05/24/13						
Diesel	174		ug/L	200	ND	87	70-130			
Matrix Spike Dup (N300596-MSD1)	**Source: N305030-08**			Prepared & Analyzed: 05/24/13						
Diesel	170		ug/L	200	ND	85	70-130	2	20	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager: Mike Sgourakis	N305030

Total Petroleum Hydrocarbons @ Gasoline - Quality Control

Argon Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch N300595 - EPA 5030B										
Blank (N300595-BLK1)				Prepared & Analyzed: 05/31/13						
Surrogate: a,a,a-Trifluorotoluene	*45.0*		*ug/L*	*50*		*90*	*70-130*			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	"							
LCS (N300595-BS1)				Prepared & Analyzed: 05/31/13						
Total Petroleum Hydrocarbons @ Gasoline	1090		ug/L	1000		109	80-120			
LCS Dup (N300595-BSD1)				Prepared & Analyzed: 05/31/13						
Total Petroleum Hydrocarbons @ Gasoline	960		ug/L	1000		96	80-120	13	20	
Matrix Spike (N300595-MS1)	**Source: N305036-01**			Prepared & Analyzed: 05/31/13						
Total Petroleum Hydrocarbons @ Gasoline	940		ug/L	1000	ND	94	70-130			
Matrix Spike Dup (N300595-MSD1)	**Source: N305036-01**			Prepared & Analyzed: 05/31/13						
Total Petroleum Hydrocarbons @ Gasoline	970		ug/L	1000	ND	97	70-130	3	20	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager:Mike Sgourakis	N305030

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Argon Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch N300593 - EPA 5030B										
Blank (N300593-BLK1)				Prepared & Analyzed: 05/31/13						
Surrogate: Fluorobenzene	*47.5*		*ug/L*	*50*		*95*	*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 (N300593-BS1)				Prepared & Analyzed: 05/31/13						
1,2-Dichloroethane	23.6		ug/L	25		95	80-120			
LCS Dup (N300593-BSD1)				Prepared & Analyzed: 05/31/13						
1,2-Dichloroethane	22.6		ug/L	25		90	80-120	5	20	
Matrix Spike (N300593-MS1)		**Source: N305039-01**		Prepared & Analyzed: 05/31/13						
Toluene	22.6		ug/L	25	ND	90	70-130			
Matrix Spike Dup (N300593-MSD1)		**Source: N305039-01**		Prepared & Analyzed: 05/31/13						
Toluene	23.8		ug/L	25	ND	95	70-130	5	20	

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Environmental Compliance Group, LLC	Project Number: GHA.19009	
270 Vintage Drive	Project Name: Shore Acres Gas	Work Order No.:
Turlock, CA 95382	Project Manager: Mike Sgourakis	N305030

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
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	0922	19.90	8.57				
MW-2	0920	20.00	9.41				
MW-3	0923	17.70	9.16				
MW-4	0918	18.70	9.03				
MW-5	0932	18.50	9.17				sheen
MW-6		NM					
EW-1	0924	19.60	9.06				
EW-2	0926	19.70	9.21				
EW-3	0920	19.60	8.82				
EW-4	0930	19.50	9.12				

FIELD TECHNICIAN: MSS
DATE: 5/20/13

PURGE/DEVELOPMENT FORM

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

WELL ID: MW-4
TYPE OF WELL: Monitoring

WATER COLUMN DATA: (feet)
Well Total Depth: 19.57
Depth to Water: 9.18
Water Column Length: 10.39

WELL DIAMETER:
2-inch: ____
4-inch: ____
6-inch: ✓

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

10.39 (Water Column Length) x 1.5 (Multiplier) x 6 (No. Volumes) = 92 (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
12:15	30	7.01	17.6	252			
	40		Dry				
			recover				
13:00	50	7.55	18.0	196			
13:05	55	6.92	17.6	170			
			Dry again				

FIELD TECHNICIAN: MA
DATE: 5/16/13

PURGE/DEVELOPMENT FORM

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

WELL ID: MW-3
TYPE OF WELL: Monitoring

WATER COLUMN DATA:
Well Total Depth: 19.61 (feet)
Depth to Water: 8.83
Water Column Length: 11.78

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

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

11.78 (Water Column Length) x 1.5 (Multiplier) x 6 (No. Volumes) = 100 (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
1110	15	6.63	19.9	200			
1114	40	6.71	20.1	211			
1150	70	7.47	20.3	236			
1202	110	7.00	19.5	170			

FIELD TECHNICIAN: MA
DATE: 5/16/13

PURGE/DEVELOPMENT FORM

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

WELL ID: MW-1
TYPE OF WELL: Monitoring

WATER COLUMN DATA:
Well Total Depth: 19.90 (feet)
Depth to Water: 8.57
Water Column Length: 11.33

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

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

11.33 (Water Column Length) x 0.17 (Multiplier) x 3 (No. Volumes) = 6 (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
10:51	2	6.79	16.9	123.1			
10:57	4	6.81	17.1	125.3			
11:00	6	6.83	18.1	129			
11:03							Sample

FIELD TECHNICIAN: MES
DATE: 5/20/13

PURGE/DEVELOPMENT FORM

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

WELL ID: MW-2
TYPE OF WELL: Monitoring

WATER COLUMN DATA: (feet)
Well Total Depth: 20.00
Depth to Water: 9.41
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

10.59 (Water Column Length) x 0.17 (Multiplier) x 3 (No. Volumes) = 5.5 (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
9:38	2	6.69	18.4	171.4			
9:43	4	6.71	18.1	127.1			
9:50	6	6.79	18.7	121.8			
9:55							Sample

FIELD TECHNICIAN: JM
DATE: 5/20/17

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres
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 Total Depth: 17.70 (feet)
Depth to Water: 9.16
Water Column Length: 8.54

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

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

8.54 (Water Column Length) x 0.17 (Multiplier) x 3 (No. Volumes) = 4.5 (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
1044	1.5	6.91	16.9	176			
1053	3.0	6.94	16.7	151			
1057	4.5	6.96	17.1	(3)			
1100							SAMPLED

FIELD TECHNICIAN: MSS
DATE: 5/20/17

PURGE/DEVELOPMENT FORM

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

PROJECT NUMBER: GHA.19009
TASK NUMBER:

WELL ID: MW-4

TYPE OF WELL: Monitoring

WATER COLUMN DATA: (feet)
Well Total Depth: 18.70
Depth to Water: 9.03
Water Column Length: 9.67

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

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

9.67 (Water Column Length) x 0.17 (Multiplier) x 3 (No. Volumes) = 5 (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
0930	2	6.92	20.0	191			
0942	4	6.69	19.5	132			
0947	5.5	6.72	19.8	125			
0950							sample

FIELD TECHNICIAN: MSS
DATE: 5/20/17

PURGE/DEVELOPMENT FORM

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

WELL ID: RW-1
TYPE OF WELL: Monitoring

WATER COLUMN DATA: (feet)
Well Total Depth: 19.60
Depth to Water: 9.06
Water Column Length: 9.54

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

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

9.54 (Water Column Length) x 0.65 (Multiplier) x 3 (No. Volumes) = 19 (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
10:15	8	6.77	16.7	125			
10:25	16	6.72	18.4	134			
10:35	20	6.75	18.6	135			
10:40							Sampled

FIELD TECHNICIAN: MSS
DATE: 5/20/13

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres
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: (feet)
Well Total Depth: 19.30
Depth to Water: 9.21
Water Column Length: 10.09

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

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

10.09 (Water Column Length) x 0.65 (Multiplier) x 3 (No. Volumes) = 20 (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 ✓(2)
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
1017	7	6.69	19.6	124			
1025	14	6.77	19.6	130			
1034	20	6.80	19.0	129			
1040							sample

FIELD TECHNICIAN: DM
DATE: 5/20/17

PURGE/DEVELOPMENT FORM

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

WELL ID: SW-3
TYPE OF WELL: Monitoring

WATER COLUMN DATA: (feet)
Well Total Depth: 19.60
Depth to Water: 7.82
Water Column Length: 10.58

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

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

10.58 (Water Column Length) x 1.5 (Multiplier) x 3 (No. Volumes) = 50 (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
11:00	20	6.82	22.1	132.6			
11:10	40	6.80	20.1	133			
11:20	50	6.85	20.1	137.4			
11:25							

FIELD TECHNICIAN: [signature]
DATE: 5/20/13

PURGE/DEVELOPMENT FORM

PROJECT NAME: Shore Acres
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: (feet)
Well Total Depth: 19.50
Depth to Water: 9.12
Water Column Length: 10.38

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

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

10.38 (Water Column Length) x 1.5 (Multiplier) x 3 (No. Volumes) = 48 (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
1200	20	6.74	19.6	132			
1208	40	6.70	17.5	151			
1216	50	6.66	17.3	147			

FIELD TECHNICIAN: JVA
DATE: 5/20/19