

Ms. Karel Detterman
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Alaska Gas Service Station, 6211 San Pablo Avenue, Oakland, California (Fuel Leak Case No. RO0000127)

Dear Ms. Detterman:

I have read and acknowledged the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker Website.

Sincerely,



Pritpal Sappal



January 15, 2018
Project No. 2192-6211-01

Ms. Karel Detterman
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Groundwater Monitoring and Sampling Results Report, Fourth Quarter 2017
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, California
Fuel Leak Case No. RO0000127

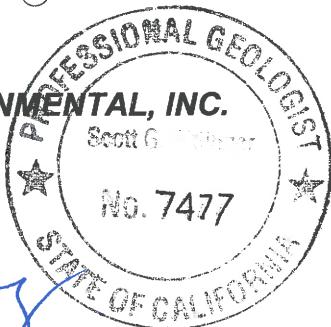
Dear Ms. Detterman:

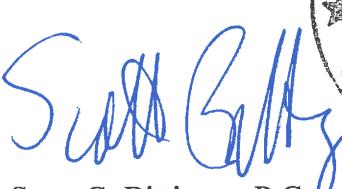
Stratus Environmental, Inc. (Stratus) is submitting the attached report, on behalf of Pritpal Sappal, for the Alaska Gas Service Station underground storage tank fuel leak case, located at 6211 San Pablo Avenue, Oakland, California. This report presents a summary of recent groundwater monitoring and sampling activities performed at the subject property. This report has been prepared in compliance with Alameda County Environmental Health Department and California Regional Water Quality Control Board (CRWQCB) requirements for underground storage tank (UST) investigations.

If you have any questions regarding this report, please contact Scott Bittinger at (530) 676-2062 or via email at sbittinger@stratusinc.net.

Sincerely,

STRATUS ENVIRONMENTAL, INC.




Scott G. Bittinger, P.G.
Project Manager


Gowri S. Kowtha, P.E.
Principal Engineer

Attachment: Groundwater Monitoring and Sampling Results Report, Fourth Quarter 2017

cc: Mr. Pritpal Sappal, Alaska Gas Service Station

**ALASKA GAS SERVICE STATION
GROUNDWATER MONITORING AND SAMPLING RESULTS REPORT**

Facility Address: 6211 San Pablo Avenue, Oakland, California

Consulting Co. / Contact Person: Stratus Environmental, Inc. / Scott Bittinger, P.G.

Consultant Project No: 2192-6211-01

Primary Agency/Regulatory ID No: Ms. Karel Detterman, Alameda County Environmental Health Department (ACEHD), Fuel Leak Case No. RO0000127

WORK PERFORMED THIS PERIOD (Fourth Quarter 2016 through Fourth Quarter 2017):

1. Stratus conducted a groundwater monitoring and sampling event on October 24, 2017. At this time, 10 monitoring wells were gauged for depth to groundwater levels. Purge groundwater samples were collected from each of these wells and submitted to a state-certified analytical laboratory for chemical analysis.
2. Mr. Sappal requested acceptance into the UST Cleanup Fund's Expedited Claim Account Program (ECAP).

WORK PROPOSED FOR NEXT PERIOD (First Quarter 2018):

1. Stratus anticipates that a Joint Execution Team (JET) will be created to manage the environmental case through ECAP. This will likely require a conference call to identify future work tasks, and preparation of a Project Execution Plan (PEP) to cover anticipated project expenditures for these work tasks.

Current Phase of Project:	Verification Monitoring (VM), Potential Environmental Case Closure
Frequency of Groundwater Monitoring:	All monitoring wells = Semi-annually (2 nd and 4 th calendar quarters)
Frequency of Groundwater Sampling:	All monitoring wells = Semi-annually (2 nd and 4 th calendar quarters)
Groundwater Sampling Date:	October 24, 2017
Are Free Phase Petroleum Hydrocarbons Present:	Intermittently at offsite well MW-7; 0.24 feet measured on 10/24/17
Depth to Groundwater:	6.29 to 10.30 feet below the top of the well casing
Groundwater Flow Direction:	Southwest
Groundwater Gradient:	0.013 ft/ft

Stratus conducted fourth quarter 2017 groundwater monitoring and sampling activities on October 24, 2017. During this event, wells MW-1R, MW-2, MW-3R, MW-4R, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-10 were gauged for depth to groundwater and evaluated for the presence of free phase petroleum hydrocarbons (free product). After well gauging, purge groundwater samples were collected from these monitoring wells. Table 1 presents a summary of information pertaining to construction of the site's monitoring well network.

Groundwater samples were forwarded to a state-certified analytical laboratory to be analyzed for gasoline range organics (GRO) by EPA Method 8015C, for benzene, toluene, ethylbenzene, and xylene (BTEX compounds), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), and tertiary butyl alcohol (TBA) using EPA Method 8260B. Table 2 provides depth to water measurements and groundwater elevations. Table 3 presents a summary of groundwater analytical data collected for the site's monitoring well network.

Field data sheets documenting measurements and observations collected by Stratus personnel are provided in Appendix A. A description of sampling and analysis procedures used by Stratus/laboratory personnel are provided in Appendix B. Certified analytical results provided by the analyzing laboratory (Alpha Analytical, Inc.) are presented in Appendix C. Analytical results of sampled wells and depth to groundwater measurements have been uploaded to the State of California's GeoTracker database. Documentation of these data uploads is attached in Appendix D.

FINDINGS:

Groundwater levels beneath the property are relatively shallow, ranging from 6.29 to 10.30 feet below the top of the well casing on October 24, 2017. Using the available data, groundwater levels were corrected to elevation mean sea level and used to prepare a groundwater elevation contour map (Figure 3). On October 24, 2017, southwest groundwater flow, at an average gradient of approximately 0.013 ft/ft, was observed.

Figure 4 presents a summary of GRO, benzene, MTBE, and TBA concentrations in shallow groundwater using the October 2017 well sampling results. Free product (0.24 feet) was observed in offsite well MW-7. GRO was detected in two onsite wells samples, at concentrations of 84 micrograms per liter [$\mu\text{g}/\text{L}$] and 530 $\mu\text{g}/\text{L}$, and at offsite well MW-7 (16,000 $\mu\text{g}/\text{L}$). Benzene was also detected in two onsite well samples, at concentrations of 0.59 $\mu\text{g}/\text{L}$ and 48 $\mu\text{g}/\text{L}$, and also at offsite well MW-7 (25 $\mu\text{g}/\text{L}$). MTBE was detected in 7 of the 10 well samples; onsite MTBE concentrations ranged from 3.0 $\mu\text{g}/\text{L}$ to 26 $\mu\text{g}/\text{L}$ and offsite MTBE concentrations ranged from 8.6 $\mu\text{g}/\text{L}$ to 150 $\mu\text{g}/\text{L}$. TBA was detected in five of the ten well samples, at maximum concentrations of 5,800 $\mu\text{g}/\text{L}$ onsite (well MW-3R) and 4,600 $\mu\text{g}/\text{L}$ offsite (well MW-8).

LIMITATIONS:

This document was prepared in general accordance with accepted standards of care that existed at the time this work was performed. No other warranty, expressed or implied, is made. Conclusions and recommendations are based on field observations and data obtained from this work and previous investigations. It should be recognized that definition and evaluation of geologic conditions is a difficult and somewhat inexact science. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface conditions present. More extensive studies may be performed to reduce uncertainties. This document is solely for the use and information of our client unless otherwise noted.

ATTACHMENTS:

- Table 1 Monitoring Well Construction Detail Summary
- Table 2 Groundwater Elevation Data
- Table 3 Groundwater Analytical Data
- Figure 1 Site Location Map
- Figure 2 Site Vicinity Map
- Figure 3 Groundwater Elevation Contour Map, Fourth Quarter 2017
- Figure 4 Groundwater Analytical Summary, Fourth Quarter 2017
- Appendix A Field Data Sheets
- Appendix B Sampling and Analyses Procedures
- Appendix C Laboratory Analytical Reports and Chain-of-Custody Documentation
- Appendix D GeoTracker Electronic Submittal Confirmations

TABLE 1
MONITORING WELL CONSTRUCTION DETAIL
SUMMARY

Alaska Gas Service Station
 6211 San Pablo Avenue, Oakland, CA

Well I.D.	Installation Date	Well Diameter (inches)	Well Depth (feet)	Screen Interval (feet bgs)
MW-1*	Oct-1999	2	23	3-23
MW-1R	Jan-2004	2	23	3-23
MW-2	Oct-1999	2	21	6-21
MW-3**	Oct-1999	2	21	6-21
MW-3R	June-2011	2	15	5-15
MW-4**	Nov-2001	2	20	5-20
MW-4R	June-2011	2	15	5-15
MW-5	Nov-2001	2	25	5-25
MW-6	Nov-2001	2	25	5-25
MW-7	Feb-2010	2	16	6-16
MW-8	Feb-2010	2	15	5-15
MW-9	Feb-2010	2	15	5-15
MW-10	Feb-2010	2	15	5-15
EX-1**	Jan-2004	4	30	5-30

Notes:

bgs = below ground surface

* = Monitoring well destroyed approximately 2004

** = Monitoring well was destroyed on May 17, 2011

Information from the AEI Consultants, *Remedial Action Report / Groundwater Monitoring Report - 2nd Semester 2011*, dated October 6, 2011.

TABLE 2
GROUNDWATER ELEVATION DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date of Measurement	Well Casing Elevation (feet-MSL)	Depth to Groundwater (feet bgs)	Product Thickness (feet)	Groundwater Elevation* (feet-MSL)
MW-1	11/07/99	34.70	8.53		
	03/08/01		6.32		28.38
	11/17/01		8.09		26.61
	03/31/02		7.18		27.52
	09/09/03		8.54		26.16
	12/09/03		7.50		27.20
	<i>Well Destroyed May 17, 2011</i>				
MW-1R	02/19/04	36.67	5.45		31.22
	05/24/04		8.58		28.09
	09/03/04		9.15		27.52
	02/17/05		6.57		30.10
	08/15/05		8.55		28.12
	11/17/05		8.41		28.26
	02/08/06		6.81		29.86
	05/05/06		7.46		29.21
	08/18/06		8.58		28.09
	12/01/06		6.56		30.11
	08/16/07		9.33		27.34
	11/08/07		8.83		27.84
	02/14/08		6.89		29.78
	05/15/08		8.53		28.14
	09/10/08		9.36		27.31
	11/18/08		8.82		27.85
	02/17/09		5.67		31.00
	05/15/09		7.79		28.88
	08/13/09		9.20		27.47
	02/23/10		6.67		30.00
	08/12/10		8.74		27.93
	02/17/11		6.51		30.16
	08/17/11		8.78		27.89
	03/28/14		8.18		28.49
	08/14/14		9.70		26.97
	01/28/15		8.86		27.81
	07/09/15		9.63		27.04
	01/18/16		6.86		29.81
	07/18/16		9.46		27.21
	10/24/17		10.30		26.37

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6211 San Pablo Avenue, Oakland, CA

Well ID	Date of Measurement	Well Casing Elevation (feet-MSL)	Depth to Groundwater (feet bgs)	Product Thickness (feet)	Groundwater Elevation* (feet-MSL)
MW-2	11/07/99	34.94	8.26		26.68
	03/08/01		5.89		29.05
	11/17/01		7.75		27.19
	03/31/02		6.68		28.26
	09/09/03		8.26		26.68
	12/09/03		7.20		27.74
	02/19/04		5.81		29.13
	05/24/04		7.79		27.15
	09/03/04		8.43		26.51
	11/02/04		7.65		27.29
	02/17/05		5.86		29.08
	05/26/05		6.39		28.55
	08/17/05		7.99		26.95
	11/17/05		7.88		27.06
	02/08/06		6.24		28.70
	05/05/06		6.89		28.05
	08/18/06		8.05		26.89
	12/01/06		7.58		27.36
	08/16/07		7.26		27.68
	11/08/07		7.81		27.13
	02/14/08		5.90		29.04
	05/15/08	36.33	7.63		28.70
	09/10/08		8.43		27.90
	11/18/08		7.83		28.50
	02/17/09		4.92		31.41
	05/15/09		6.81		29.52
	08/13/09		8.23		28.10
	02/23/10		6.06		30.27
	08/12/10		7.70		28.63
	02/17/11		6.16		30.17
	08/17/11		7.16		29.17
	03/28/14		7.60		28.73
	08/14/14		8.72		27.61
	01/28/15		7.97		28.36
	07/09/15		8.75		27.58
	01/18/16		6.50		29.83
	07/18/16		8.57		27.76
	10/24/17		9.30		27.03

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GROUNDWATER ELEVATION DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date of Measurement	Well Casing Elevation (feet-MSL)	Depth to Groundwater (feet bgs)	Product Thickness (feet)	Groundwater Elevation* (feet-MSL)
MW-3	11/07/99	33.74	7.55		26.19
	03/08/01		5.36		28.38
	11/17/01		7.18		26.56
	03/31/02		6.27		27.47
	09/09/03		7.52		26.22
	12/09/03		6.45		27.29
	02/19/04		5.56		28.18
	05/24/04		6.99		26.75
	09/03/04		7.53		26.21
	11/02/04		6.88		26.86
	02/17/05		5.01		28.73
	08/15/05		7.71		26.03
	11/17/05		7.56		26.18
	02/08/06		6.00		27.74
	05/05/06		6.65		27.09
	08/18/06		7.73		26.01
	12/01/06		8.51		25.23
	08/16/07		7.62		26.12
	11/08/07		7.52		26.22
	02/14/08		5.60		28.14
	05/15/08	35.12	7.23		27.89
	09/10/08		8.08		27.04
	11/18/08		7.52		27.60
	02/17/09		4.36		30.76
	05/15/09		6.50		28.62
	08/13/09		7.96		27.16
	02/23/10		5.10		30.02
	08/12/10		7.40		27.72
<i>Well Destroyed May 17, 2011</i>					
MW-3R	07/14/11	--	7.01		--
	08/17/11		7.48		--
	3828/14		7.68		--
	08/14/14		8.98		--
	01/28/15		8.15		--
	07/09/15		8.89		--
	01/18/16		6.54		--
	07/18/16		8.66		--
	10/24/17		9.84		--

TABLE 2
GROUNDWATER ELEVATION DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date of Measurement	Well Casing Elevation (feet-MSL)	Depth to Groundwater (feet bgs)	Product Thickness (feet)	Groundwater Elevation* (feet-MSL)
MW-4	11/17/01	32.38	5.75		26.63
	03/31/02		5.40		26.98
	12/09/03		--		--
	09/09/03		--		--
	05/24/04		5.70	0.33	26.91
	02/19/04		3.56	0.25	29.00
	05/05/06		5.60		26.78
	08/18/06		6.45		25.93
	12/01/06		5.95		26.43
	11/18/07		6.60		25.78
	02/14/08		4.28		28.10
	05/15/08	34.11	5.43		28.68
	09/10/08		7.26		26.85
	11/18/08		5.84		28.27
	02/17/09		2.67		31.44
	05/15/09		4.90		29.21
	08/13/09		6.02		28.09
	02/23/10		3.84		30.27
	08/12/10		5.65		28.46
	02/17/11		3.19		30.92
<i>Well Destroyed May 17, 2011</i>					
MW-4R	07/14/11	--	5.31		--
	08/17/11		5.78		--
	03/28/14		5.90		--
	08/14/14		7.28		--
	01/28/15		6.46		--
	07/09/15		7.20		--
	01/18/16		4.86		--
	07/18/16		6.97		--
	10/24/17		8.16		--

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Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date of Measurement	Well Casing Elevation (feet-MSL)	Depth to Groundwater (feet bgs)	Product Thickness (feet)	Groundwater Elevation* (feet-MSL)
MW-5	11/17/01	33.75	6.22		27.53
	03/31/02		6.35		27.40
	09/09/03		7.08		26.67
	12/09/03		6.13		27.62
	02/19/04		5.11		28.64
	05/24/04		6.57		27.18
	09/03/04		7.01		26.74
	11/02/04		6.43		27.32
	05/24/05		6.02		27.73
	08/17/05		6.75		27.00
	11/17/05		6.47		27.28
	02/08/06		5.53		28.22
	05/05/06		6.10		27.65
	08/18/06		6.77		26.98
	12/01/06		6.47		27.28
	08/16/07		6.79		26.96
	11/08/07		6.43		27.32
	02/14/08		5.31		28.44
	05/15/08	35.17	6.29		28.88
	09/10/08		6.99		28.18
	11/18/08		6.41		28.76
	02/17/09		4.07		31.10
	05/15/09		5.59		29.58
	08/13/09		6.81		28.36
	02/23/10		5.05		30.12
	08/12/10		6.61		28.56
	02/17/11		5.03		30.14
	08/17/11		6.59		28.58
	03/28/14		6.97		28.20
	08/14/14		8.32		26.85
	01/28/15		7.62		27.55
	07/09/15		8.19		26.98
	01/18/16		5.62		29.55
	07/18/16		7.99		27.18
	10/24/17		9.30		25.87

TABLE 2
GROUNDWATER ELEVATION DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date of Measurement	Well Casing Elevation (feet-MSL)	Depth to Groundwater (feet bgs)	Product Thickness (feet)	Groundwater Elevation* (feet-MSL)
MW-6	11/17/01	34.68	7.19		27.49
	03/31/02		6.58		28.10
	09/09/03		8.21		26.47
	12/09/03		7.11		27.57
	02/19/04		5.61		29.07
	05/24/04		--		--
	09/03/04		8.25		26.43
	11/02/04		7.57		27.11
	02/17/05		5.70		28.98
	08/15/05		7.91		26.77
	11/17/05		7.80		26.88
	02/08/06		6.16		28.52
	05/05/06		6.81		27.87
	08/18/06		7.97		26.71
	12/01/06		7.60		27.08
	08/16/07		7.94		26.74
	11/08/07		7.71		26.97
	02/14/08		5.83		28.85
	05/15/08	36.07	7.51		28.56
	09/10/08		8.32		27.75
	11/18/08		7.73		28.34
	02/17/09		4.64		31.43
	05/15/09		6.89		29.18
	08/13/09		8.26		27.81
	02/23/10		5.76		30.31
	08/12/10		7.71		28.36
	02/17/11		4.89		31.18
	08/17/11		7.78		28.29
	03/28/14		7.20		28.87
	08/14/14		8.67		27.40
	01/28/15		7.88		28.19
	07/09/15		8.65		27.42
	01/18/16		5.92		30.15
	07/18/16		8.49		27.58
	10/24/17		9.28		26.79

TABLE 2
GROUNDWATER ELEVATION DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date of Measurement	Well Casing Elevation (feet-MSL)	Depth to Groundwater (feet bgs)	Product Thickness (feet)	Groundwater Elevation* (feet-MSL)
MW-7	02/23/10	31.16	2.09		29.07
	08/12/10		4.14		27.02
	02/17/11		1.68		29.48
	08/17/11		4.01		27.15
	03/28/14		4.48	0.03	26.70
	05/28/14		5.07	0.01	26.10
	08/14/14		5.54		25.62
	01/28/15		4.95		26.21
	07/09/15		5.40		25.76
	01/18/16		2.41	0.01	28.76
	07/18/16		5.22		25.94
	10/24/17		7.10	0.24	24.06
MW-8	02/23/10	30.92	2.66		28.26
	08/12/10		4.16		26.76
	02/17/11		1.01		29.91
	08/17/11		4.41		26.51
	03/28/14		3.87		27.05
	08/14/14		5.41		25.51
	01/28/15		4.70		26.22
	07/09/15		5.31		25.61
	01/18/16		<i>RV Parked Over Well Unable to Gauge</i>		
	07/18/16		5.22		25.70
	10/24/17		6.29		24.63
MW-9	02/23/10	28.90	2.84		26.06
	08/12/10		4.53		24.37
	02/17/11		1.93		26.97
	08/17/11		4.82		24.08
	03/28/14		4.65		24.25
	08/14/14		6.67		22.23
	01/28/15		5.96		22.94
	07/09/15		6.62		22.28
	01/18/16		3.10		25.80
	07/18/16		7.78		21.12
	10/24/17		7.70		21.20

TABLE 2
GROUNDWATER ELEVATION DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date of Measurement	Well Casing Elevation (feet-MSL)	Depth to Groundwater (feet bgs)	Product Thickness (feet)	Groundwater Elevation* (feet-MSL)
MW-10	02/23/10	30.28	0.98		29.30
	08/12/10		3.47		26.81
	02/17/11		0.95		29.33
	08/17/11		3.39		26.89
	03/28/14		2.50		27.78
	08/14/14		4.65		25.63
	01/28/15		3.87		26.41
	07/09/15		4.41		25.87
	01/18/16		<i>Car Parked Over Well Unable to Gauge</i>		
	07/18/16		<i>Car Parked Over Well Unable to Gauge</i>		
	10/24/17		7.22		23.06
EX-1	02/19/04	33.28	3.96		29.32
	05/24/04		5.56	0.76	28.25
	02/08/06		4.92		28.36
	05/05/06		5.15		28.13
	08/18/06		5.85		27.43
	12/01/06		4.96		28.32
	11/08/07		5.10		28.18
	02/14/08		3.51		29.77
	05/15/08		4.69		28.59
	09/10/08		5.46		27.82
	11/18/08		4.79		28.49
	02/17/09		1.86		31.42
	05/15/09		4.16		29.12
	08/13/09		8.36		24.92
	02/23/10		3.09		30.19
	08/12/10		4.91		28.37
	02/17/11		2.53		30.75
<i>Well Destroyed May 17, 2011</i>					

Notes:

* = Groundwater Elevation is corrected for the presence of free phase petroleum hydrocarbons by the following formula: casing elevation - depth to water + (0.7 * free phase petroleum hydrocarbon thickness)

-- = Not measured or Not Available

MSL = mean sea level

bgs = below ground surface

Information prior to February 2014, taken from the AEI Consultants, *Remedial Action Report / Groundwater Monitoring Report - 2nd Semester 2011*, dated October 6, 2011.

TABLE 3
GROUNDWATER ANALYTICAL DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date Collected	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	
		µg/L												
MW-1	11/07/99	5,700	170	59	22	85	20,000	--	--	--	--	--	--	--
	03/08/01	17,000	480	150	52	170	38,000	--	--	--	--	--	--	--
	11/17/01	10,000	230	210	60	250	22,000	--	--	--	--	--	--	--
	03/31/02	12,000	61	ND	ND	29	35,000	--	--	--	--	--	--	--
	11/09/03	19,000	ND	ND	ND	ND	50,000	--	--	--	--	--	--	--
	12/09/03	22,000	150	ND	ND	ND	66,000	--	--	--	--	--	--	--
	<i>Well Destroyed May 17, 2011</i>													
MW-1R	11/17/01	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/31/02	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/09/03	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/09/03	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/19/04	1,800	95	130	44	200	220	--	--	--	--	--	--	--
	05/24/04	210	12	10	5.4	23	79	ND	ND	2.1	37	ND	ND	--
	09/03/04	300	1.5	7.1	9.4	42	81	ND	ND	1.6	ND	ND	ND	--
	11/02/04	290	14	30	9.5	45	45	ND	ND	1.1	ND	--	--	--
	02/17/05	530	3.4	ND	ND	2.6	1,000	ND	ND	100	ND	--	--	--
	05/24/05	--	--	--	--	--	--	ND	ND	610	ND	ND	ND	--
	08/15/05	2,500	64	240	61	210	2,300	ND	ND	210	ND	ND	ND	--
	11/17/05	2,500	66	290	75	290	1,300	ND	ND	110	1,600	ND	ND	--
	02/08/06	3,300	100	310	86	470	1,400	ND	ND	130	1,400	ND	ND	--
	05/05/06	3,400	170	350	97	550	1,100	ND	ND	100	2,400	ND	ND	--
	08/18/06	5,800	190	1,000	230	1,000	490	ND	ND	36	2,900	ND	ND	--
	12/01/06	410	1.7	6.3	1.2	47	100	ND	ND	4.7	100	ND	ND	--
	02/23/07	ND	ND	0.51	ND	1.4	3	ND	ND	ND	ND	ND	ND	--
	05/10/07	ND	ND	ND	ND	2.0	5.9	ND	ND	ND	ND	ND	ND	--
	08/16/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	11/08/07	1,300	11	82	54	270	1.4	ND	ND	ND	ND	ND	ND	--
	02/14/08	800	7.6	31	23	150	1.7	ND	ND	ND	ND	ND	ND	--
	05/15/08	3,200	20	200	110	550	4.2	<0.50	<0.50	1.0	<20	<0.50	<0.50	--
	09/10/08	1,000	6.5	22	19	120	2.3	<0.50	<0.50	<0.50	4.0	<0.50	<0.50	--
	11/18/08	430	4.1	18	12	100	1.8	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	--
	02/17/09	220	3.6	6.1	2.0	41	1.3	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	--
	05/15/09	890	6.0	17	27	110	1.8	<0.50	<0.50	<0.50	3.9	<0.50	<0.50	--
	08/13/09	2,000	17	23	73	350	2.1	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	--
	02/23/10	3,200	31	77	120	810	3.9	<1.7	<1.7	<1.7	<6.7	<1.7	<1.7	--
	08/12/10	1,300	13	16	40	280	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	--
	02/17/11	210	4.0	1.7	13	21	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	--
	08/17/11	670	6.1	13	26	200	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	--
	03/28/14	1,200	3.7	11	34	299	1.2	--	--	<2.0[1]	<20	--	--	--
	08/14/14	560	1.9	0.83	3.9	20	0.79	--	--	<1.0	<10	--	--	--
	01/28/15	1,900	6.4	9.3	36	285	1.0	--	--	<2.0[1]	<20[1]	--	--	--
	07/09/15	360	1.4	0.51	1.9	6.0	<0.50	--	--	<1.0	<10	--	--	--
	01/18/16	200	1.0	0.60	2.0	17.6	<0.50	--	--	<1.0	<10	--	--	--
	07/18/16	740	2.7	2.3	11	67	0.74	--	--	<1.0	<10	--	--	--
	10/24/17	84	0.59	<0.50	0.82	1.8	<0.50	--	--	<1.0	<10	--	--	--
MW-2	11/07/99	6,000	1,300	92	50	400	6,800	--	--	--	--	--	--	--
	03/08/01	41,000	8,100	870	2,000	4,100	26,000	--	--	--	--	--	--	--
	11/17/01	18,000	3,700	180	610	640	16,000	--	--	--	--	--	--	--
	03/31/02	32,000	6,500	270	1,700	2,700	19,000	--	--	--	--	--	--	--
	09/09/03	24,000	4,600	ND	1,200	440	19,000	--	--	--	--	--	--	--
	12/09/03	31,000	6,200	170	1,600	2,700	19,000	--	--	--	--	--	--	--
	02/19/04	21,000	4,600	120	970	2,000	15,000	--	--	--	--	--	--	--
	05/24/04	1,200	120	3	63	67	1,900	ND	ND	ND	ND	ND	ND	--
	09/03/04	2,300	120	ND	51	70	1,700	ND	ND	26	ND	ND	ND	--
	11/02/04	530	35	ND	17	30	520	ND	ND	28	100	--	--	--
	02/17/05	18,000	2,100	31	800	680	20,000	ND	ND	1,000	ND	--	--	--
	05/24/05	22,000	3,200	52	1,400	1,700	16,000	ND	ND	95	880	ND	ND	--
	08/15/05	2,000	66	ND	46	47	2,400	ND	ND	26	810	ND	ND	--
	11/17/05	760	19	0.64	15	13	1,000	ND	ND	26	810	ND	ND	--
	02/08/06	10,000	1,500	8	660	380	4,300	ND	ND	120	2,800	ND	ND	--
	05/05/06	15,000	1,800	ND	1,200	1,200	5,800	ND	ND	150	4,300	ND	ND	--
	08/18/06	360	11	ND	13	9.7	160	ND	ND	4.6	600	ND	ND	--
	12/01/06	11,000	1,000	ND	990	910	2,100	ND	ND	87	2,000	ND	ND	--
	02/23/07	3,200	210	ND	270	85	900	ND	ND	33	1,400	ND	ND	--
	05/10/07	590	31	ND	39	22	200	ND	ND	5.9	250	ND	ND	--
	08/16/07	650	49	ND	71	49	100	ND	ND	3.5	82	ND	ND	--
	11/08/07	110	1.6	ND	1.9	1.6	23	ND	ND	0.64	48	ND	ND	--
	02/14/08	350	24	ND	12	5.9	190	ND	ND	7.7	320	ND	ND	--
	05/15/08	81	0.59	<0.50	0.71	0.66	38	<0.50	<0.50	1.4	54	<0.50	<0.50	--
	09/10/08	150	6.4	<0.50	8.4	5.1	14	<0.50	<0.50	0.55	38	<0.50	<0.50	--
	11/18/08	420	25	0.70	46	47	29	<0.50	<0.50	1.3	60	<0.50	<0.50	--
	02/17/09	460	23	0.96	51	37	26	<0.50	<0.50	1.4	61	<0.50	<0.50	--
	05/15/09	220	13	0.93	26	13	21	<0.50	<0.50	0.87	60	<0.50	<0.50	--
	08/13/09	110	7.0	<0.50	13	5.0	7.7	<0.50	<0.50	<0.50	26	<0.50	<0.50	--
	02/23/10	170	9.4	0.65	27	5.6	14	<0.50	<0.50	<0.50	36	<0.50	<0.50	--
	08/12/10	<50	1.1	<0.50	1.8	0.63	3.7	<0.50	<0.50	<0.50	6.3	<0.50	<0.50	--
	02/17/11	<50	<0.5	<0.5	<0.5	<0.5	8.3	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	--
	08/17/11	<50	<0.5	<0.5	<0.5	<0.5	150	<2.5	<2.5	<2.5	<10	<2.5	<2.5	--
	03/28/14	<50	<0.50	<0.50	<0.50	0.51	--	--	--	<1.0	<10	--	--	--
	08/14/14	<50	<0.50	<0.50	<0.50	<0.50	--	--	--	<1.0	<10	--	--	--
	01/28/15	<50	<0.50	<0.50	<0.50	<0.50	--	--	--	<1.0	<10	--	--	--
	07/09/15	<50	<0.50	<0.50	<0.50	<0.50	--	--	--	<1.0	<10	--	--	--
	01/18/16	<50	<0.50	<0.50	<0.50	<0.50	--	--	--	<1.0	<10	--	--	--
	07/18/16	<50	<0.50	<0.50	<0.50	<0.50	--	--	--	<1.0	<10	--	--	--
	10/24/17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	<1.0	<10	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

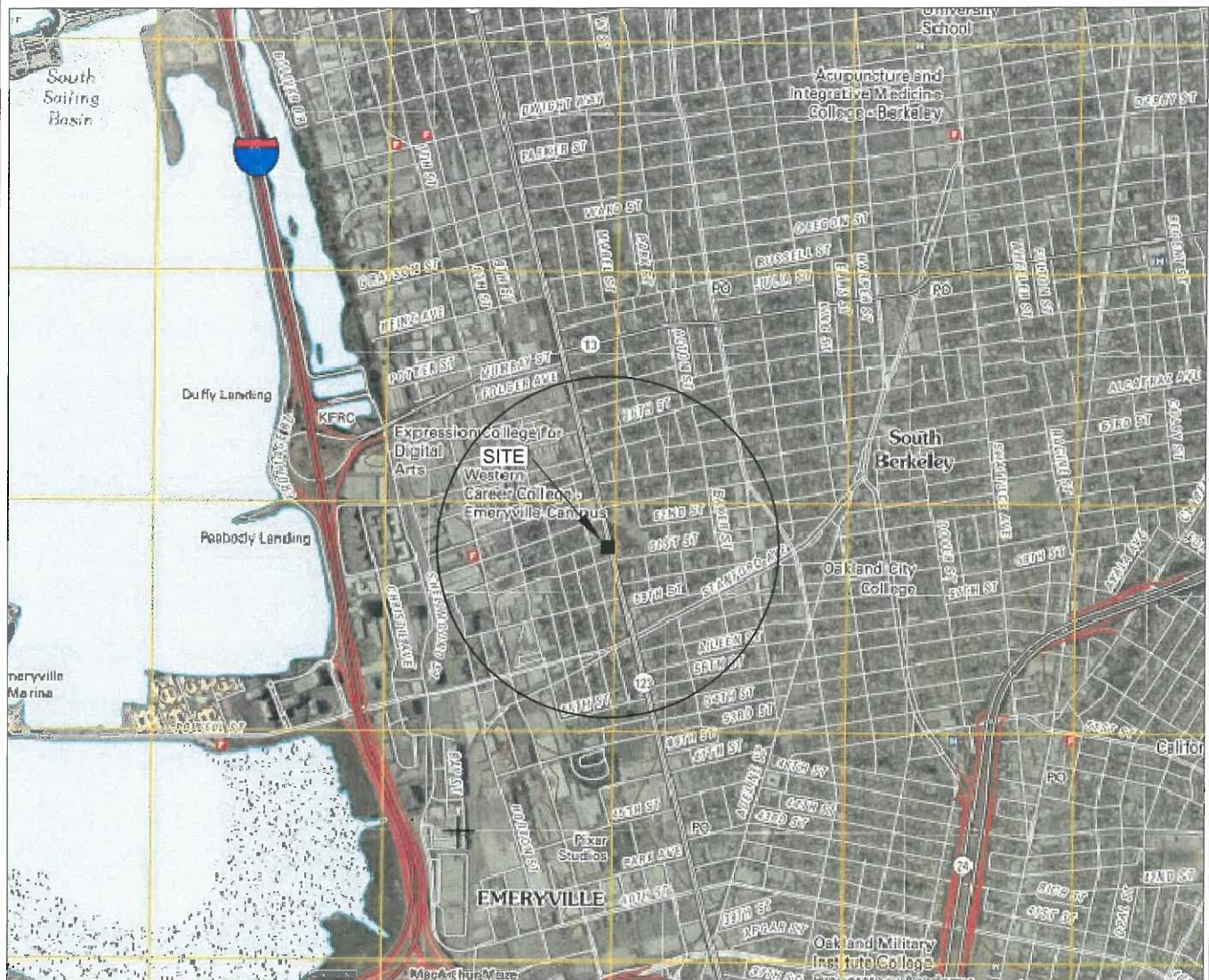
Well ID	Date Collected	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA	I,2-DCA	EDB	
		µg/L												
MW-3	11/07/99	43,000	860	70	ND	65	120,000	--	--	--	--	--	--	--
	03/08/01	90,000	1,800	ND	ND	ND	210,000	--	--	--	--	--	--	--
	11/17/01	110,000	1,600	ND	ND	ND	300,000	--	--	--	--	--	--	--
	03/31/02	130,000	2,400	670	300	390	300,000	--	--	--	--	--	--	--
	09/09/03	190,000	1,600	ND	ND	ND	420,000	--	--	--	--	--	--	--
	12/09/03	170,000	2,000	ND	ND	ND	4,500,000	--	--	--	--	--	--	--
	02/19/04	86,000	1,800	630	ND	ND	160,000	--	--	--	--	--	--	--
	05/24/04	120,000	2,200	ND	180	220	400,000	ND	ND	15,000	ND	ND	ND	ND
	09/03/04	180,000	2,000	ND	ND	ND	510,000	ND	ND	14,000	ND	ND	ND	ND
	11/02/04	150,000	1,700	ND	ND	ND	350,000	ND	ND	31,000	140,000	--	--	--
	02/17/05	130,000	2,100	420	210	730	290,000	ND	ND	11,000	ND	--	--	--
	05/24/05	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/05	110,000	1,500	ND	ND	ND	260,000	ND	ND	21,000	25,000	ND	ND	ND
	11/17/05	200,000	2,400	ND	ND	ND	580,000	ND	ND	24,000	49,000	ND	ND	ND
	02/08/06	470,000	3,800	660	ND	790	490,000	ND	ND	26,000	49,000	ND	ND	ND
	05/05/06	400,000	3,300	ND	ND	ND	590,000	ND	ND	21,000	86,000	ND	ND	ND
	08/18/06	310,000	1,800	ND	ND	ND	440,000	ND	ND	23,000	79,000	ND	ND	ND
	12/01/06	270,000	ND	ND	ND	ND	290,000	ND	ND	11,000	90,000	ND	ND	ND
	02/23/07	220,000	ND	ND	ND	ND	260,000	ND	ND	15,000	33,000	ND	ND	ND
	05/10/07	140,000	ND	ND	ND	ND	180,000	ND	ND	7,100	80,000	ND	ND	ND
	08/16/07	69,000	ND	ND	ND	ND	85,000	ND	ND	3,400	180,000	ND	ND	ND
	11/08/07	34,000	ND	ND	ND	ND	38,000	ND	ND	1,400	140,000	ND	ND	ND
	02/14/08	41,000	ND	ND	ND	ND	44,000	ND	ND	1,900	110,000	ND	ND	ND
	05/15/08	43,000	<100	<100	<100	<100	62,000	<100	<100	1,100	200,000	<100	<100	<100
	09/10/08	1,600	14	8.6	7.7	23	21,000	<1,000	<1,000	<1,000	290,000	<1,000	<1,000	<1,000
	11/18/08	4,500	86	150	100	590	29,000	<1,000	<1,000	<1,000	290,000	<1,000	<1,000	<1,000
	02/17/09	2,500	45	53	35	160	16,000	<1,000	<1,000	<1,000	190,000	<1,000	<1,000	<1,000
	05/15/09	2,000	15	21	13	35	13,000	<1,000	<1,000	<1,000	260,000	<1,000	<1,000	<1,000
	08/13/09	1,300	10	11	4.1	14	7,900	<1,200	<1,200	<1,200	250,000	<1,200	<1,200	<1,200
	02/23/10	1,700	22	21	11	38	4,700	<1,700	<1,700	<1,700	260,000	<1,700	<1,700	<1,700
	08/12/10	1,600	5.8	16	5.8	16	4,200	<1,200	<1,200	<1,200	250,000	<1,200	<1,200	<1,200
	02/17/11	290	1.0	5.5	6.5	8.1	73	<50	<50	<50	8,500	<50	<50	<50
	<i>Well Destroyed May 17, 2011</i>													
MW-3R	07/14/11	130	3.2	0.97	<0.5	1.2	1,200	<250	<250	<250	35,000	<250	<250	<250
	08/17/11	64	<0.5	<0.5	<0.5	<0.5	260	<50	<50	<50	3,800	<50	<50	<50
	03/28/14	<200[1]	<1.0[1]	<1.0[1]	<1.0[1]	<1.0[1]	28	--	--	5.3	1,400	--	--	--
	08/14/14	<800[1]	<4.0[1]	<4.0[1]	<4.0[1]	<4.0[1]	5.2	--	--	<8.0[1]	5,200	--	--	--
	01/28/15	140	<0.50	<0.50	<0.50	<0.50	23	--	--	4.1	6,500	--	--	--
	07/09/15	<200[1]	<1.0[1]	<1.0[1]	<1.0[1]	<1.0[1]	2.5	--	--	<2.0[1]	2,100	--	--	--
	01/18/16	<3,000[1]	<15[1]	<15[1]	<15[1]	<15[1]	78	--	--	<30[1]	30,000	--	--	--
	07/18/16	<800[1]	<4.0[1]	<4.0[1]	<4.0[1]	<4.0[1]	6.6	--	--	<8.0[1]	13,000	--	--	--
	10/24/17	<400[1]	<2.0[1]	<2.0[1]	<2.0[1]	<2.0[1]	3.0	--	--	<4.0[1]	5,800	--	--	--
	<i>Well Destroyed May 17, 2011</i>													
MW-4	11/17/01	64,000	960	1,400	360	1,600	140,000	--	--	--	--	--	--	--
	03/31/02	78,000	4,400	4,700	690	2,700	150,000	--	--	--	--	--	--	--
	09/06/07	49,000	710	840	ND	10,000	3,600	ND	ND	510	32,000	ND	ND	ND
	11/08/07	64,000	1,300	2,600	1,000	8,500	1,500	ND	ND	360	14,000	ND	ND	ND
	02/14/08	60,000	390	460	230	2,000	52,000	ND	ND	2,000	58,000	ND	ND	ND
	05/15/08	22,000	670	130	740	2,700	3,300	<5.0	<5.0	340	35,000	<5.0	<5.0	<5.0
	09/10/08	16,000	500	150	730	2,500	2,000	<250	<250	65,000	<250	<250	<250	<250
	11/18/08	24,000	820	190	1,200	5,000	1,400	<50	<50	260	9,300	<50	<50	<50
	02/17/09	17,000	350	170	620	2,600	360	<10	<10	82	2,100	<10	<10	<10
	05/15/09	32,000	300	190	880	3,200	470	<10	<10	95	380	<10	<10	<10
	08/13/09	29,000	320	250	980	3,400	350	<50	<50	61	10,000	<50	<50	<50
	02/23/10	15,000	250	77	580	2,200	180	<5.0	<5.0	41	400	<5.0	<5.0	<5.0
	08/12/10	17,000	200	47	580	1,400	150	<10	<10	28	1,800	<10	<10	<10
	02/17/11	7,600	190	15	260	440	130	<5.0	<5.0	29	790	<5.0	<5.0	<5.0
	<i>Well Destroyed May 17, 2011</i>													
MW-4R	07/14/11	1,000	210	3.6	<2.5	32	7,800	<200	<200	390	41,000	<200	<200	<200
	08/17/11	840	9.1	<5.0	<5.0	<5.0	4,500	<250	<250	310	26,000	<250	<250	<250
	03/28/14	<50	<0.50	<0.50	<0.50	<0.50	3.6	--	--	<1.0	110	--	--	--
	08/14/14	<50	<0.50	<0.50	<0.50	<0.50	4.7	--	--	<1.0	<10	--	--	--
	01/28/15	<100[2]	<0.50	<0.50	<0.50	<0.50	8.8	--	--	1.4	190	--	--	--
	07/09/15	<50	<0.50	<0.50	<0.50	<0.50	3.9	--	--	<1.0	<10	--	--	--
	01/18/16	620	0.60	1.2	8.0	23	11	--	--	3.0	750	--	--	--
	07/18/16	140	<0.50	<0.50	<0.50	<0.50	7.5	--	--	2.6	14	--	--	--
	10/24/17	530	48	9.1	9.0	35.2	26	--	--	11	480	--	--	--
	<i>Well Destroyed May 17, 2011</i>													

TABLE 3
GROUNDWATER ANALYTICAL DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date Collected	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	
		µg/L												
MW-5	11/17/01	210	15	12	11	23	4.8	--	--	--	--	--	--	--
	03/31/02	120	11	7.4	6.1	16	4.2	--	--	--	--	--	--	--
	09/09/03	ND	1.5	ND	ND	1.7	--	--	--	--	--	--	--	--
	12/09/03	130	32	ND	2.6	0.57	5	--	--	--	--	--	--	--
	02/19/04	ND	ND	ND	ND	1.5	--	--	--	--	--	--	--	--
	05/24/04	ND	ND	ND	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND
	09/03/04	100	6.4	ND	ND	0.79	4.2	ND	ND	ND	ND	ND	ND	ND
	11/02/04	ND	2.6	ND	1.7	0.87	1	ND	ND	ND	ND	ND	ND	ND
	02/17/05	51	0.74	ND	0.94	ND	1.5	ND	ND	ND	ND	ND	ND	ND
	05/24/05	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
	08/15/05	ND	ND	ND	ND	ND	0.88	ND	ND	ND	ND	ND	ND	ND
	11/17/05	71	0.81	ND	1.1	ND	1.4	ND	ND	ND	ND	ND	ND	ND
	02/08/06	50	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
	05/05/06	ND	ND	ND	ND	ND	0.93	ND	ND	ND	ND	ND	ND	ND
	08/18/06	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
	12/01/06	ND	0.69	ND	ND	0.52	0.97	ND	ND	ND	ND	ND	ND	ND
	02/23/07	73	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND
	05/10/07	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND
	08/16/07	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND
	11/08/07	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND
	02/14/08	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND
	05/15/08	<50	<0.50	<0.50	<0.50	<0.50	1.7	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50
	09/10/08	480	17	1.8	2.7	0.59	12	<0.50	<0.50	<0.50	4.4	<0.50	<0.50	<0.50
	11/18/08	130	2.3	1.6	<0.50	<0.50	7.3	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
	02/17/09	170	<0.50	2.7	<0.50	<0.50	4.2	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
	05/15/09	<50	<0.50	<0.50	<0.50	<0.50	7.6	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
	08/13/09	380	19	2.1	3.8	0.88	11	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
	02/23/10	<50	<0.50	0.87	<0.50	<0.50	1.9	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
	08/12/10	120	1.5	2.9	0.74	3.5	13	<0.50	<0.50	<0.50	3.0	<0.50	<0.50	<0.50
	02/17/11	<50	<0.5	<0.5	<0.5	<0.5	3.7	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
	08/17/11	160	2.3	1.1	<0.5	<0.5	5.4	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
	03/28/14	77	0.52	<0.50	<0.50	<0.50	5.2	--	--	<1.0	<10	--	--	--
	08/14/14	<50	<0.50	<0.50	<0.50	<0.50	3.7	--	--	<1.0	<10	--	--	--
	01/28/15	<50	<0.50	<0.50	<0.50	<0.50	16	--	--	2.8	57	--	--	--
	07/09/15	<50	<0.50	<0.50	<0.50	<0.50	3.0	--	--	<1.0	<10	--	--	--
	01/18/16	52	<0.50	<0.50	<0.50	<0.50	5.0	<0.50	<0.50	<1.0	<10	--	--	--
	07/18/16	200	0.57	<0.50	<0.50	<0.50	12	--	--	4.1	<10	--	--	--
	10/24/17	<50	<0.50	<0.50	<0.50	<0.50	6.4	--	--	1.0	<10	--	--	--
MW-6	11/17/01	3,500	160	260	95	420	1,500	--	--	--	--	--	--	--
	03/31/02	3,200	410	170	82	280	3,000	--	--	--	--	--	--	--
	09/09/03	800	49	ND	7.4	ND	1,700	--	--	--	--	--	--	--
	12/09/03	970	150	9.9	31	83	1,200	--	--	--	--	--	--	--
	02/19/04	1,900	280	58	17	160	2,700	--	--	--	--	--	--	--
	09/03/04	1,100	27	ND	14	27	2,200	ND	ND	85	ND	ND	ND	ND
	11/02/04	1,800	32	ND	5	11	4,100	ND	ND	170	270	ND	ND	ND
	02/17/05	5,600	190	34	41	110	10,000	ND	ND	780	2,000	ND	ND	ND
	08/15/05	1,800	27	ND	6	23	3,800	ND	ND	300	3,500	ND	ND	ND
	11/17/05	1,100	30	ND	4	9	2,400	ND	ND	190	9,500	ND	ND	ND
	02/08/06	3,600	220	43	66	160	2,700	ND	ND	180	7,800	ND	ND	ND
	05/05/06	1,600	130	21	37	65	1,400	ND	ND	53	3,100	ND	ND	ND
	08/18/06	270	27	ND	3	4	240	ND	ND	11	2,400	ND	ND	ND
	12/01/06	1,700	ND	ND	ND	ND	1,700	ND	ND	92	800	ND	ND	ND
	02/23/07	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND
	05/10/07	ND	3.0	ND	ND	1.9	26	ND	ND	2	48	ND	ND	ND
	08/16/07	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND
	11/08/07	ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND	ND
	02/14/08	ND	ND	ND	ND	ND	11	ND	ND	0.94	220	ND	ND	ND
	05/15/08	<50	<0.50	<0.50	<0.50	<0.50	13	<0.50	<0.50	1.0	130	<0.50	<0.50	<0.50
	09/10/08	78	1.4	0.60	0.94	1.3	71	<1.0	<1.0	6.2	160	<1.0	<1.0	<1.0
	11/18/08	<50	2.4	<0.50	<0.50	0.70	72	<1.2	<1.2	7.2	180	<1.2	<1.2	<1.2
	02/17/09	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
	05/15/09	53	3.2	<0.50	<0.50	1.7	44	<1.0	<1.0	4.3	89	<1.0	<1.0	<1.0
	08/13/09	74	5.9	0.57	0.97	5.0	27	<0.50	<0.50	2.2	140	<0.50	<0.50	<0.50
	02/23/10	<50	0.66	<0.50	<0.50	0.57	5.7	<0.50	<0.50	<0.50	15	<0.50	<0.50	<0.50
	08/12/10	92	7.5	0.94	<0.50	1.0	32	<1.0	<1.0	2.7	180	<1.0	<1.0	<1.0
	02/17/11	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
	08/17/11	<50	<0.5	<0.5	<0.5	73	<1.2	<1.2	<1.2	7.7	130	<1.2	<1.2	<1.2
	03/28/14	110	6.0	<0.50	2.2	1.1	14	--	--	2.0	36	--	--	--
	08/14/14	<50	0.56	<0.50	<0.50	<0.50	1.5	--	--	<1.0	14	--	--	--
	01/28/15	90	4.6	<0.50	3.0	0.88	5.5	--	--	1.0	12	--	--	--
	07/09/15	<50	0.52	<0.50	<0.50	<0.50	1.5	--	--	<1.0	<10	--	--	--
	01/18/16	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<10	--	--	--
	07/18/16	430	8.9	<0.50	1.6	<0.50	7.7	--	--	4.1	21	--	--	--
	10/24/17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<10	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
Alaska Gas Service Station
6211 San Pablo Avenue, Oakland, CA

Well ID	Date Collected	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	
		µg/L												
MW-7	02/23/10	29,000	410	380	2,100	6,100	410	<10	<10	19	1,500	<10	<10	
	08/12/10	2,000	26	17	140	250	2,400	<50	<50	75	9,600	<50	<50	
	02/17/11	2,400	35	17	160	190	670	<10	<10	24	1,300	<10	<10	
	08/17/11	320	4.3	4.0	5.7	11	3.0	<0.5	<0.5	<0.5	110	<0.5	<0.5	
	03/28/14	--	--	--	--	--	--	--	--	--	--	--	--	
	05/28/14	8,300	43	8.5	520	490	340	--	--	9.7	420	--	--	
	08/14/14	8,800	25	<5.0[1]	400	460	99	--	--	<10[1]	1,200	--	--	
	01/28/15	28,000	140	<40[1]	1,600	1,542	<40[1]	--	--	<80[1]	<800[1]	--	--	
	07/09/15	10,000	47	6.4	410	225.5	130	--	--	7.3	830	--	--	
	01/18/16	33,000	110	<10[1]	1,200	570	10	--	--	<20[1]	930	--	--	
	07/18/16	12,000	30	4.1	350	100	98	--	--	<40[1]	930	--	--	
	10/24/17	16,000	25	<10[1]	1,100	300	150	--	--	50	820	--	--	
MW-8	02/23/10	690	3.5	2.8	29	40	1,600	<100	<100	<100	24,000	<100	<100	
	08/12/10	260	4.1	1.4	6.9	7.2	2,100	<170	<170	<170	25,000	<170	<170	
	02/17/11	500	3.6	5.1	7.8	2.1	1,300	<100	<100	<100	25,000	<100	<100	
	08/17/11	3,000	30	23	96	85	320	<100	<100	<100	19,000	<100	<100	
	03/28/14	<4,000[1]	<20[1]	<20[1]	<20[1]	<20[1]	200	--	--	<40[1]	33,000	--	--	
	08/14/14	<3,000[1]	<15[1]	<15[1]	<15[1]	<15[1]	160	--	--	<30[1]	20,000	--	--	
	01/28/15	<2,000[1]	<10[1]	<10[1]	<10[1]	<10[1]	93	--	--	<20[1]	15,000	--	--	
	07/09/15	<1,000[1]	<5.0[1]	<5.0[1]	<5.0[1]	<5.0[1]	44	--	--	<10[1]	10,000	--	--	
	01/18/16	<i>Unable to Sample - RV Parked Over Well</i>												
	07/18/16	<800[1]	<4.0[1]	<4.0[1]	<4.0[1]	<4.0[1]	29	--	--	<8.0[1]	9,400	--	--	
	10/24/17	<400[1]	<2.0[1]	<2.0[1]	<2.0[1]	<2.0[1]	15	--	--	<4.0[1]	4,600	--	--	
MW-9	02/23/10	<50	<0.50	0.70	<0.50	<0.50	260	<10	<10	<10	1,600	<10	<10	
	08/12/10	<50	<0.50	1.6	<0.50	<0.50	85	<10	<10	<10	880	<10	<10	
	02/17/11	<50	<0.5	<0.5	<0.5	<0.5	160	<5.0	<5.0	<5.0	1,300	<5.0	<5.0	
	08/17/11	170	<0.5	7.0	<0.5	<0.5	10	<5.0	<5.0	<5.0	650	<5.0	<5.0	
	03/28/14	55	<0.50	<0.50	<0.50	<0.50	74	--	--	<1.0	15	--	--	
	08/14/14	64	<0.50	<0.50	<0.50	<0.50	130	--	--	3.5	<10	--	--	
	01/28/15	<50	<0.50	<0.50	<0.50	<0.50	62	--	--	1.0	<10	--	--	
	07/09/15	68	<0.50	<0.50	<0.50	<0.50	86	--	--	1.8	<10	--	--	
	01/18/16	51	<0.50	<0.50	<0.50	<0.50	28	--	--	<1.0	<10	--	--	
	07/18/16	<50	<0.50	<0.50	<0.50	<0.50	62	--	--	1.6	<10	--	--	
	10/24/17	<50	<0.50	<0.50	<0.50	<0.50	8.6	--	--	<1.0	<10	--	--	
MW-10	02/23/10	1,300	<0.50	11	3.1	2.6	2.8	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	
	08/12/10	61	<0.50	0.72	<0.50	<0.50	39	<0.50	<0.50	1.8	<2.0	<0.50	<0.50	
	02/17/11	150	<0.5	1.6	<0.5	<0.5	6.9	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	
	08/17/11	<50	<0.5	<0.5	<0.5	<0.5	6.9	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	
	03/28/14	95	<0.50	<0.50	<0.50	<0.50	24	--	--	<1.0	<10	--	--	
	08/14/14	<50	<0.50	<0.50	<0.50	<0.50	21	--	--	<1.0	<10	--	--	
	01/28/15	<50	<0.50	<0.50	<0.50	<0.50	23	--	--	<1.0	<10	--	--	
	07/09/15	<50	<0.50	<0.50	<0.50	<0.50	17	--	--	<1.0	<10	--	--	
	01/18/16	<i>Unable to Sample - Car Parked Over Well</i>												
	07/18/16	<i>Unable to Sample - Car Parked Over Well</i>												
	10/24/17	<50	<0.50	<0.50	<0.50	<0.50	64	--	--	2.0	11	--	--	
<i>Well Destroyed May 17, 2011</i>														
Notes:														
1 = Reporting limits were increased due to high concentrations of target analytes.														
2 = Reporting limits were increased due to sample foaming.														
Information prior to February 2014, taken from the AEI Consultants, <i>Remedial Action Report / Groundwater Monitoring Report - 2nd Semester 2011</i> , dated October 6, 2011.														
Analytical Methods:														
GRO = EPA Method SW8015B/SW8260B														
All other analytes by EPA Method SW8260B.														



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
OAKLAND WEST, CA.
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 2012



QUADRANGLE LOCATION

0 2000 FT
SCALE 1:24,000

STRATUS
ENVIRONMENTAL, INC.

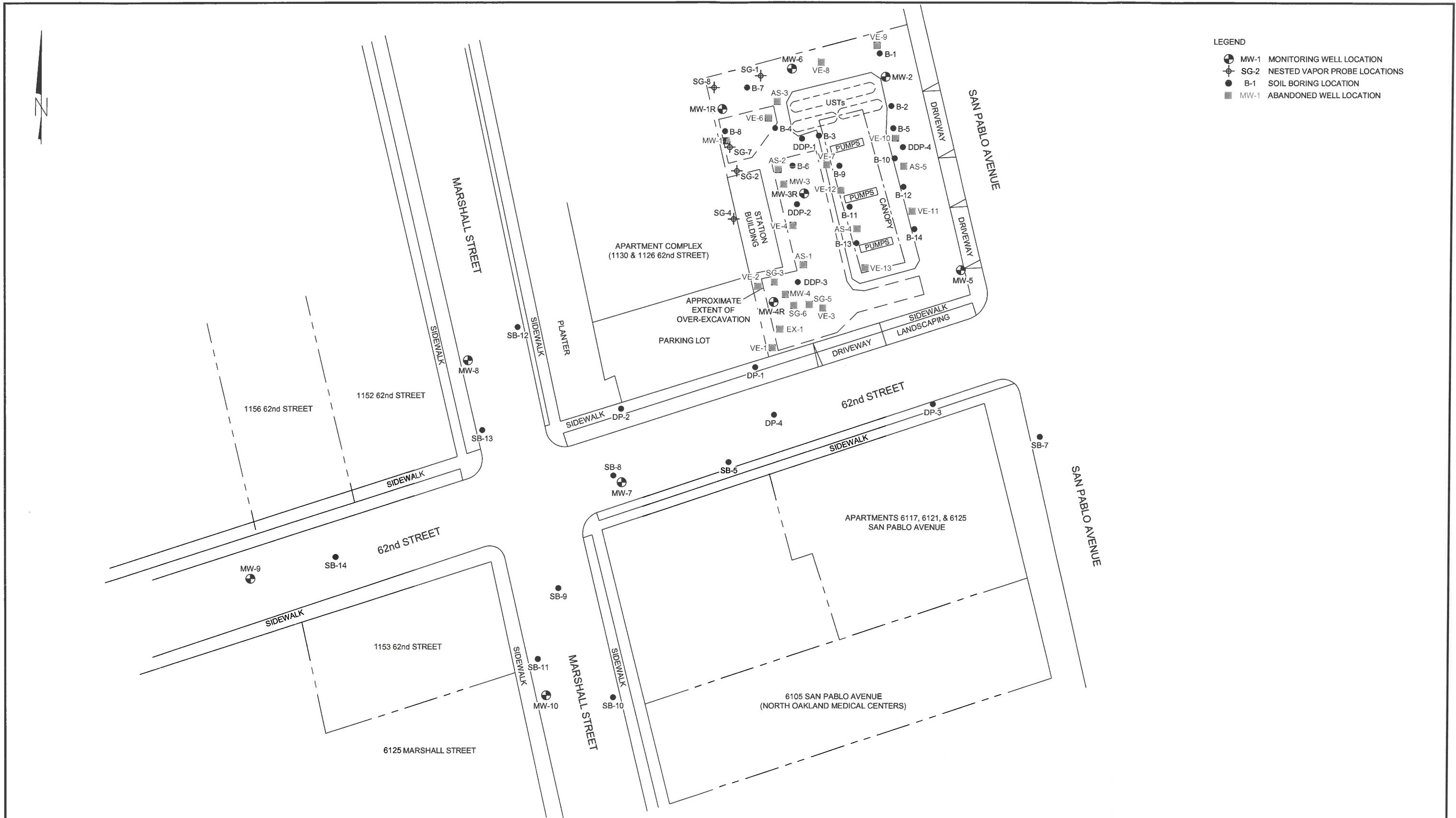
ALASKA GAS SERVICE STATION
6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

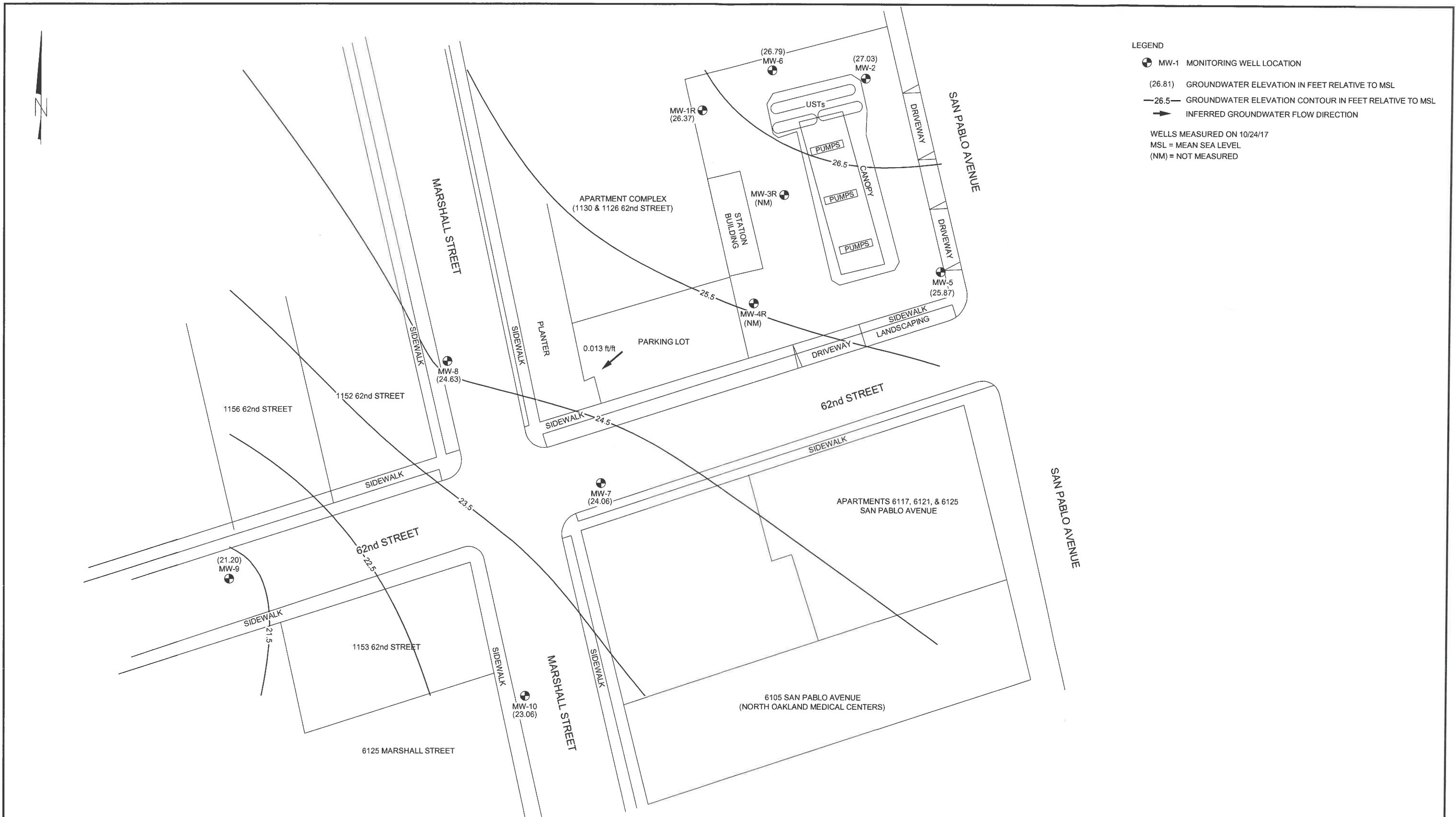
SITE LOCATION MAP

FIGURE

1

PROJECT NO.
2192-6211-01





**STRATUS
ENVIRONMENTAL, INC.**

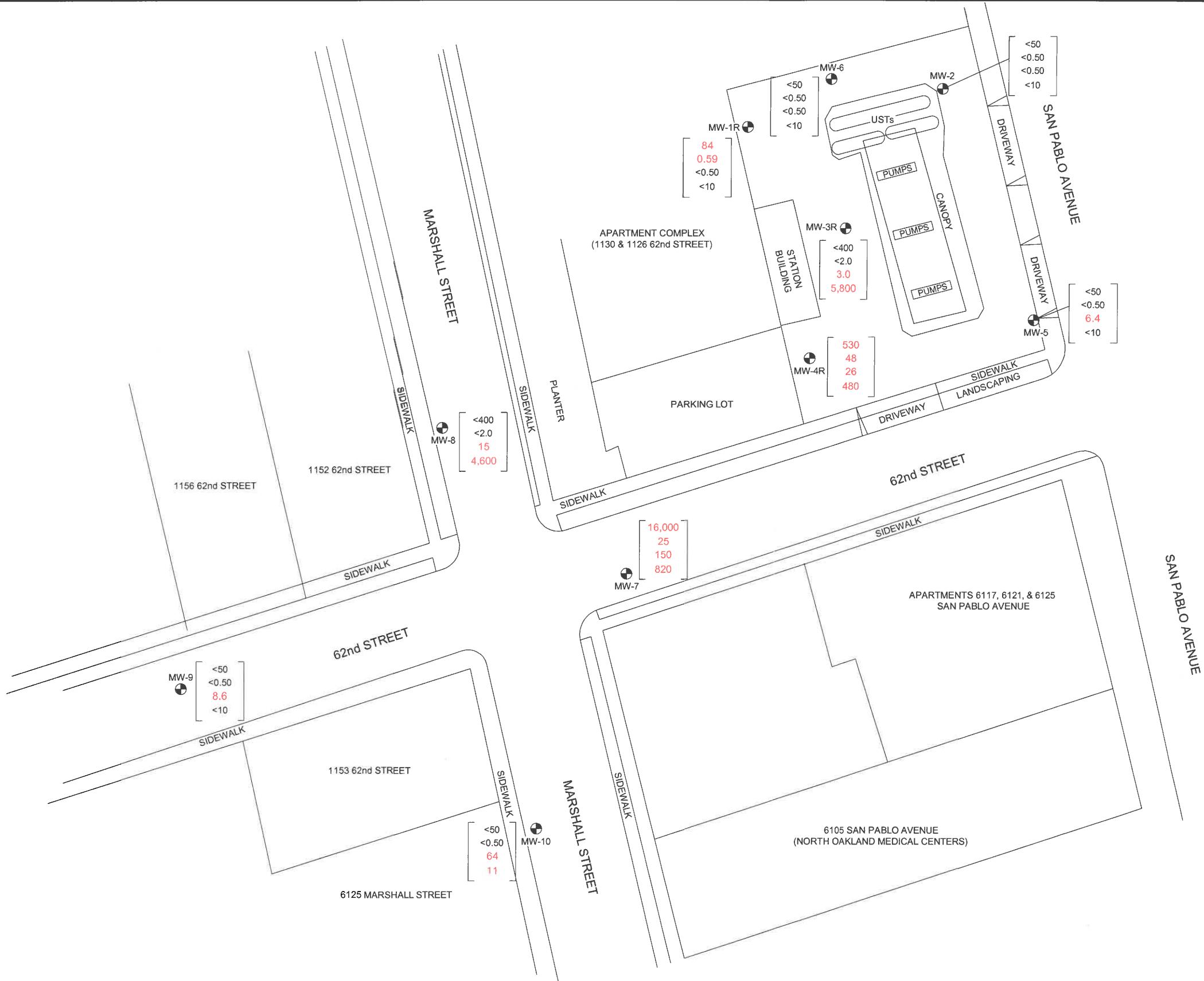
PATH NAME: Alaska Gas\Quarterly Figures
DRAFTER INITIALS: DMG
DATE LAST REVISED: November 02, 2017
FILENAME: Alaska Quarterly Figures



ALASKA GAS SERVICE STATION
6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

**GROUNDWATER ELEVATION CONTOUR MAP
4th QUARTER 2017**

**FIGURE
3**



STRATUS ENVIRONMENTAL, INC.	PATH NAME: Alaska Gas\Quarterly Figures DRAFTER INITIALS: DMG DATE LAST REVISED: November 02, 2017 FILENAME: Alaska Quarterly Figures	 APPROXIMATE SCALE	ALASKA GAS SERVICE STATION 6211 SAN PABLO AVENUE OAKLAND, CALIFORNIA	FIGURE 4
			GROUNDWATER ANALYTICAL SUMMARY 4th QUARTER 2017	PROJECT NO. 2192-6211-01

APPENDIX A

FIELD DATA SHEETS



Site Address 6211 Hwy Pablo Ave.
City Chesapeake
Sampled by: CHL
Signature CHL

Site Number Alaska GAS
Project Number
Project PM Scott
DATE 10 24 17

Multiplier

$$2'' = 0.5 \quad 3'' = 1.0 \quad 4'' = 2.0 \quad 6'' = 4.4$$

11.0 12.0 13.0 14.0

T:\Forms

Please refer to groundwater sampling field procedures
pH/Conductivity/temperature Meter - Oakton Model PC-10
DO Meter - Oakton 300 Series (DO is always measured before purge)

۴

CALIBRATION DATE

pH 10.2317

Conductivity

DQ



Site Address 6211 Sun Publ Ave
 City Oakland
 Sampled By OTTER
 Signature
 Site Number Aluster GAS
 Project Number
 Project PM SCOTT
 DATE 40 29-15
 Weather Conditions CHM

Well ID <u>MW 5</u>		Comments: <u>7</u>				Well ID <u>MW 4R</u>		Comments: <u>3</u>			
Purge start time		Sheen Y <u>N</u>	Odor Y <u>N</u>			Purge start time		Sheen Y <u>N</u>	Odor Y <u>N</u>		
	Temp C	pH	cond		gallons		Temp C	pH	cond		gallons
time <u>0337</u>	<u>22.2</u>	<u>6.56</u>	<u>500.6</u>		<u>0</u>	time <u>0355</u>	<u>23.2</u>	<u>6.62</u>	<u>430.0</u>		<u>0</u>
time <u>0341</u>	<u>21.4</u>	<u>6.65</u>	<u>443.4</u>		<u>3.0</u>	time <u>0400</u>	<u>23.3</u>	<u>6.69</u>	<u>423.4</u>		<u>3</u>
time <u>0349</u>	<u>21.3</u>	<u>6.67</u>	<u>442.3</u>		<u>7</u>	time					
time <u>0350</u>						time <u>0405</u>					
purge stop time		DO <u>2</u>	ORP <u>7.9</u>	purge stop time		DO <u>1.20</u>	ORP <u>4.9</u>				
Well ID <u>MW 3R</u>		Comments: <u>2</u>				Well ID <u>MW 1R</u>		Comments: <u>6</u>			
Purge start time		Sheen Y <u>N</u>	Odor Y <u>N</u>			Purge start time		Sheen Y <u>N</u>	Odor Y <u>N</u>		
	Temp C	pH	cond		gallons		Temp C	pH	cond		gallons
time <u>0411</u>	<u>22.3</u>	<u>6.63</u>	<u>462.9</u>		<u>8</u>	time <u>0424</u>	<u>21.7</u>	<u>6.51</u>	<u>408.4</u>		<u>2</u>
time <u>0414</u>	<u>22.3</u>	<u>6.64</u>	<u>463.4</u>		<u>2</u>	time <u>0428</u>	<u>20.7</u>	<u>6.60</u>	<u>405.11</u>		<u>3</u>
time						time <u>0432</u>	<u>20.6</u>	<u>6.62</u>	<u>399.6</u>		<u>6</u>
time <u>0419</u>						time <u>0437</u>					
purge stop time		DO <u>1.60</u>	ORP <u>5.5</u>	purge stop time		DO <u>1.35</u>	ORP <u>17.1</u>				
Well ID <u>MW 6</u>		Comments: <u>7</u>				Well ID <u>MW 2</u>		Comments: <u>6</u>			
Purge start time		Sheen Y <u>N</u>	Odor Y <u>N</u>			Purge start time		Sheen Y <u>N</u>	Odor Y <u>N</u>		
	Temp C	pH	cond		gallons		Temp C	pH	cond		gallons
time <u>0446</u>	<u>21.3</u>	<u>6.62</u>	<u>322.1</u>		<u>8</u>	time <u>0500</u>	<u>22.8</u>	<u>6.60</u>	<u>384.8</u>		<u>2</u>
time <u>0448</u>	<u>20.2</u>	<u>6.63</u>	<u>326.8</u>		<u>3.5</u>	time <u>0503</u>	<u>21.7</u>	<u>6.63</u>	<u>384.3</u>		<u>3</u>
time <u>0451</u>	<u>20.3</u>	<u>6.64</u>	<u>377.3</u>		<u>7</u>	time <u>0507</u>	<u>21.1</u>	<u>6.66</u>	<u>391.9</u>		<u>6</u>
time <u>0456</u>						time <u>0511</u>					
purge stop time		DO <u>1.65</u>	ORP <u>3.7</u>	purge stop time		DO <u>1.70</u>	ORP <u>6.0</u>				
Well ID		Comments:				Well ID		Comments:			
Purge start time		Sheen Y <u>N</u>	Odor Y <u>N</u>			Purge start time		Sheen Y <u>N</u>	Odor Y <u>N</u>		
	Temp C	pH	cond		gallons		Temp C	pH	cond		gallons
time						time					
time						time					
time						time					
time						time					
purge stop time		DO	ORP	purge stop time		DO	ORP				



Site Address
City
Sampled By:
Signature

624
San Pablo Oil
Oakland
Coffey

Site Number
Project Number
Project PM
DATE

Alaska gas

Suey
10/24/17

Well ID MW 9					Well ID MW 8				
Purge start time			Odor Y N		Purge start time			Odor Y N	
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time 0518	22.3	6.70	407.3	0	time 0534	22.5	6.54	511.3	8
time 0521	22.2	6.77	407.8	3	time 0537	22.5	6.60	509.9	2
time					time 0539	22.2	6.57	503.7	4
time 0527					time 0543				
purge stop time	1.50		ORP 8.8		purge stop time	1.62		ORP 10.8	
Well ID MW 10					Well ID MW 7				
Purge start time			Odor Y N		Purge start time			Odor Y N	
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time 0551	20.3	6.67	431.0	0	time	No Purge			
time 0553	20.1	6.74	436.7	2	time	Purge			
time 0556	19.8	6.74	435.9	4	time				
time 0600					time 0604				
purge stop time	1.60		ORP 2.1		purge stop time			ORP	
Well ID					Well ID				
Purge start time			Odor Y N		Purge start time			Odor Y N	
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time					time				
time					time				
time					time				
time					time				
purge stop time			ORP		purge stop time			ORP	
Well ID					Well ID				
Purge start time			Odor Y N		Purge start time			Odor Y N	
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time					time				
time					time				
time					time				
time					time				
purge stop time			ORP		purge stop time			ORP	

APPENDIX B

SAMPLING AND ANALYSES PROCEDURES

SAMPLING AND ANALYSIS PROCEDURES

The sampling and analysis procedures as well as the quality assurance plan are contained in this appendix. The procedures and adherence to the quality assurance plan will provide for consistent and reproducible sampling methods; proper application of analytical methods; accurate and precise analytical results; and finally, these procedures will provide guidelines so that the overall objectives of the monitoring program are achieved.

Ground Water and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the ground water depth in monitoring wells that do not contain LPH. Depth to ground water or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typical a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Ground Water

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Purging and Sampling

Monitoring wells are purged using a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water have been removed. If three well volumes can not be removed in one half hour's time the well is allowed to recharge to 80% of original level. After recharging, a ground water sample is then removed from each of the wells using a disposable bailer.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These bottles will be filled completely to prevent air from remaining in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped.

The water sample is collected, labeled, and handled according to the Quality Assurance Plan. Water generated during the monitoring event is disposed of accruing to regulatory accepted method pertaining to the site.

QUALITY ASSURANCE PLAN

Procedures to provide data quality should be established and documented so that conditions adverse to quality, such as deficiencies, deviations, nonconformities, defective material, services, and/or equipment, can be promptly identified and corrected.

General Sample Collection and Handling Procedures

Proper collection and handling are essential to ensure the quality of a sample. Each sample is collected in a suitable container, preserved correctly for the intended analysis, and stored prior to analysis for no longer than the maximum allowable holding time. Details on the procedures for collection and handling of samples used on this project can be found in this section.

Soil and Water Sample Labeling and Preservation

Label information includes a unique sample identification number, job identification number, date, and time. After labeling all soil and water samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Upon recovery, the sample container is sealed to minimize the potential of volatilization and cross-contamination prior to chemical analysis. Soil sampling tubes are typically closed at each end with Teflon® sheeting and plastic caps. The sample is then placed in a Ziploc® type bag and sealed. The sample is labeled and refrigerated at approximately 4° Celsius for delivery, under strict chain-of-custody, to the analytical laboratory.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded on the borehole log or in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and

noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

Equipment Cleaning

Sample bottles, caps, and septa used in sampling for volatile and semivolatile organics will be triple rinsed with high-purity deionized water. After being rinsed, sample bottles will be dried overnight at a temperature of 200°C. Sample caps and septa will be dried overnight at a temperature of 60°C. Sample bottles, caps, and septa will be protected from solvent contact between drying and actual use at the sampling site. Sampling containers will be used only once and discarded after analysis is complete.

Plastic bottles and caps used in sampling for metals will be soaked overnight in a 1-percent nitric acid solution. Next, the bottles and caps will be triple rinsed with deionized water. Finally, the bottles and caps will be air dried before being used at the site. Plastic bottles and caps will be constructed of linear polyethylene or polypropylene. Sampling containers will be used only once and discarded after analysis is complete. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Before the sampling event is started, equipment that will be placed in the well or will come in contact with groundwater will be disassembled and cleaned thoroughly with detergent water, and then steam cleaned with deionized water. Any parts that may absorb contaminants, such as plastic pump valves, etc. will be cleaned as described above or replaced.

During field sampling, equipment surfaces that are placed in the well or contact groundwater will be steam cleaned with deionized water before the next well is purged or sampled. Equipment blanks will be collected and analyzed from non-disposable sampling equipment that is used for collecting groundwater samples at the rate of one blank per twenty samples collected.

Internal Quality Assurance Checks

Internal quality assurance procedures are designed to provide reliability of monitoring and measurement of data. Both field and laboratory quality assurance checks are necessary to evaluate the reliability of sampling and analysis results. Internal quality assurance procedures generally include:

- Laboratory Quality Assurance

- Documentation of instrument performance checks
- Documentation of instrument calibration
- Documentation of the traceability of instrument standards, samples, and data
- Documentation of analytical and QC methodology (QC methodology includes use of spiked samples, duplicate samples, split samples, use of reference blanks, and check standards to check method accuracy and precision)

- Field Quality Assurance

- Documentation of sample preservation and transportation
- Documentation of field instrument calibration and irregularities in performance

Internal laboratory quality assurance checks will be the responsibility of the contract laboratories. Data and reports submitted by field personnel and the contract laboratory will be reviewed and maintained in the project files.

Types of Quality Control Checks

Samples are analyzed using analytical methods outlined in EPA Manual SW 846 and approved by the California Regional Water Quality Control Board-Central Valley Region in the Leaking Underground Fuel Tanks (LUFT) manual and appendices. Standard contract laboratory quality control may include analysis or use of the following:

- Method blanks – reagent water used to prepare calibration standards, spike solutions, etc. is analyzed in the same manner as the sample to demonstrate that analytical interferences are under control.
- Matrix spiked samples – a known amount of spike solution containing selected constituents is added to the sample at concentrations at which the accuracy of the analytical method is to satisfactorily monitor and evaluate laboratory data quality.
- Split samples – a sample is split into two separate aliquots before analysis to assess the reproducibility of the analysis.
- Surrogate samples – samples are spiked with surrogate constituents at known concentrations to monitor both the performance of the analytical system and the effectiveness of the method in dealing with the sample matrix.
- Control charts – graphical presentation of spike or split sample results used to track the accuracy or precision of the analysis.
- Quality control check samples – when spiked sample analysis indicates atypical instrument performance, a quality check sample, which is prepared independently of the calibration standards and contains the constituents of interest, is analyzed to confirm that measurements were performed accurately.

- Calibration standards and devices – traceable standards or devices to set instrument response so that sample analysis results represent the absolute concentration of the constituent.

Field QA samples will be collected to assess sample handling procedures and conditions. Standard field quality control may include the use of the following, and will be collected and analyzed as outlined in EPA Manual SW 846.

- Field blanks – reagent water samples are prepared at the sampling location by the same procedure used to collect field groundwater samples and analyzed with the groundwater samples to assess the impact of sampling techniques on data quality. Typically, one field blank per twenty groundwater samples collected will be analyzed per sampling event.
- Field replicates – duplicate or triplicate samples are collected and analyzed to assess the reproducibility of the analytical data. One replicate groundwater sample per twenty samples collected will be analyzed per sampling event, unless otherwise specified. Triplicate samples will be collected only when specific conditions warrant and generally are sent to an alternate laboratory to confirm the accuracy of the routinely used laboratory.
- Trip blanks – reagent water samples are prepared before field work, transported and stored with the samples and analyzed to assess the impact of sample transport and storage for data quality. In the event that any analyte is detected in the field blank, a trip blank will be included in the subsequent groundwater sampling event.

Data reliability will be evaluated by the certified laboratory and reported on a cover sheet attached to the laboratory data report. Analytical data resulting from the testing of field or trip blanks will be included in the laboratory's report. Results from matrix spike, surrogate, and method blank testing will be reported, along with a statement of whether the samples were analyzed within the appropriate holding time.

Stratus will evaluate the laboratory's report on data reliability and note significant QC results that may make the data biased or unacceptable. Data viability will be performed as outlined in EPA Manual SW 846. If biased or unacceptable data is noted, corrective actions (including re-sample/re-analyze, etc.) will be evaluated on a site-specific basis.

APPENDIX C

**LABORATORY ANALYTICAL REPORTS AND
CHAIN-OF-CUSTODY DOCUMENTATION**



Alpha Analytical, Inc
255 Glendale Ave, #21
Sparks, Nevada 89431
TEL: (775) 355-1044 FAX: (775) 355-0406
Website: www.alpha-analytical.com

October 31, 2017

Scott Bittinger
Stratus Environmental
3330 Cameron Park Drive
Cameron Park, CA 956828861
TEL: (530) 676-6001
FAX (530) 676-6005

RE: 2192-6211-01/Alaska Gas

Dear Scott Bittinger:

Order No.: STR1710189

There were no problems with the analytical events associated with this report unless noted.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Roger Scholl". The signature is fluid and cursive, with a large, stylized "R" at the beginning.

Roger Scholl
Laboratory Director
255 Glendale Ave, #21
Sparks, Nevada 89431



Alpha Analytical, Inc.

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225 Glendale Ave. - Suite 21 - Sparks, Nevada 89431-5578

Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 4:37:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-01 **Matrix:** AQUEOUS
Client Sample ID MW-1R

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	84	50		µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	107	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	98	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	99	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	ND	10		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	0.59	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	ND	1.0		µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	0.82	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	1.8	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	107	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	98	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	99	70-130	%Rec		10/27/2017	VOCs by EPA 8260B



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Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 5:11:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-02 **Matrix:** AQUEOUS
Client Sample ID MW-2

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	ND	50		µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	110	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	98	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	98	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	ND	10		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	ND	1.0		µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	110	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	98	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	98	70-130	%Rec		10/27/2017	VOCs by EPA 8260B



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Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 4:18:00 AM

Project: 2192-6211-01/Alaska Gas

Lab ID: 1710189-03

Matrix: AQUEOUS

Client Sample ID: MW-3R

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	ND	400	V	µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	%Rec	10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	99	70-130	%Rec	%Rec	10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	%Rec	10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	5,800	40		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	3.0	2.0		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	ND	4.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	%Rec	10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	99	70-130	%Rec	%Rec	10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	%Rec	10/27/2017	VOCs by EPA 8260B



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Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 4:05:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-04 **Matrix:** AQUEOUS
Client Sample ID MW-4R

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	530	50		µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	108	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	97	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	99	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	480	10		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	26	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	48	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	11	1.0		µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	9.1	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	9.0	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	28	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	7.2	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	108	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	97	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	99	70-130	%Rec		10/27/2017	VOCs by EPA 8260B



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Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 3:50:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-05 **Matrix:** AQUEOUS
Client Sample ID MW-5

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	ND	50		µg/L	10/27/2017	TPH-P by EPA 8015C
Surrogate: 1,2-Dichloroethane-d4	107	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surrogate: Toluene-d8	98	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surrogate: 4-Bromofluorobenzene	98	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	ND	10		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	6.4	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	1.0	1.0		µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Surrogate: 1,2-Dichloroethane-d4	107	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surrogate: Toluene-d8	98	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surrogate: 4-Bromofluorobenzene	98	70-130	%Rec		10/27/2017	VOCs by EPA 8260B



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Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 4:56:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-06 **Matrix:** AQUEOUS
Client Sample ID MW-6

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	ND	50		µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	99	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	98	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	ND	10		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	ND	1.0		µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	99	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	98	70-130	%Rec		10/27/2017	VOCs by EPA 8260B



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Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 6:15:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-07 **Matrix:** AQUEOUS
Client Sample ID MW-7

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	16,000	2,000		µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	97	70-130		%Rec	10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	820	200		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	150	10		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	25	10		µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	50	20		µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	10	V	µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	1,100	10		µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	300	10		µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	10	V	µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	97	70-130		%Rec	10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	10/27/2017	VOCs by EPA 8260B



Alpha Analytical, Inc.

(775) 355-1044 / (775) 355-0406 FAX / 1-800-283-1183
225 Glendale Ave. - Suite 21 - Sparks, Nevada 89431-5578

Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 5:43:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-08 **Matrix:** AQUEOUS
Client Sample ID MW-8

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	ND	400	V	µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	98	70-130		%Rec	10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	99	70-130		%Rec	10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	4,600	40		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	15	2.0		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	ND	4.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	2.0	V	µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	98	70-130		%Rec	10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	99	70-130		%Rec	10/27/2017	VOCs by EPA 8260B



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Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 5:27:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-09 **Matrix:** AQUEOUS
Client Sample ID MW-9

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	ND	50		µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	105	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	98	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	101	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	ND	10		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	8.6	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	ND	1.0		µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	105	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	98	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	101	70-130	%Rec		10/27/2017	VOCs by EPA 8260B



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Analytical Report

WO#: STR1710189
Report Date: 10/31/2017

CLIENT: Stratus Environmental **Collection Date:** 10/24/2017 6:00:00 AM
Project: 2192-6211-01/Alaska Gas
Lab ID: 1710189-10 **Matrix:** AQUEOUS
Client Sample ID MW-10

Analyses	Result	PQL	Qual	Units	Date Analyzed	Method
TPH-P (GRO)	ND	50		µg/L	10/27/2017	TPH-P by EPA 8015C
Surr: 1,2-Dichloroethane-d4	107	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: Toluene-d8	99	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Surr: 4-Bromofluorobenzene	99	70-130	%Rec		10/27/2017	TPH-P by EPA 8015C
Tertiary Butyl Alcohol (TBA)	11	10		µg/L	10/27/2017	VOCs by EPA 8260B
Methyl tert-butyl ether (MTBE)	64	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Benzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Tertiary Amyl Methyl Ether (TAME)	2.0	1.0		µg/L	10/27/2017	VOCs by EPA 8260B
Toluene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Ethylbenzene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
m,p-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
o-Xylene	ND	0.50		µg/L	10/27/2017	VOCs by EPA 8260B
Surr: 1,2-Dichloroethane-d4	107	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: Toluene-d8	99	70-130	%Rec		10/27/2017	VOCs by EPA 8260B
Surr: 4-Bromofluorobenzene	99	70-130	%Rec		10/27/2017	VOCs by EPA 8260B



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QC SUMMARY REPORT

WO#: 1710189
31-Oct-17

Client: Stratus Environmental
Project: 2192-6211-01/Alaska Gas

TestCode: TPH/P_W

Sample ID: MB-2476		SampType: MBLK			TestCode: TPH/P_W			Units: µg/L		
Client ID: PBW		Batch ID: A2476B			TestNo: SW8015					
Prep Date: 10/27/2017		RunNo: 2017			SeqNo: 49654					
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit Qual
TPH-P (GRO)	ND	50								
Surr: 1,2-Dichloroethane-d4	0.01		10		105	69.51	130.49			
Surr: Toluene-d8	0.0099		10		99.1	69.51	130.49			
Surr: 4-Bromofluorobenzene	0.01		10		101	69.51	130.49			

Sample ID: GLCS-2476		SampType: GLCS			TestCode: TPH/P_W			Units: µg/L		
Client ID: BatchQC		Batch ID: A2476B			TestNo: SW8015					
Prep Date: 10/27/2017		RunNo: 2017			SeqNo: 49653					
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit Qual
TPH-P (GRO)	397	50	400	0	99.1	69.51	130.49			
Surr: 1,2-Dichloroethane-d4	10.4		10		104	69.51	130.49			
Surr: Toluene-d8	9.9		10		99.0	69.51	130.49			
Surr: 4-Bromofluorobenzene	10.3		10		103	69.51	130.49			

Sample ID: 1710189-01AGSD		SampType: GSD			TestCode: TPH/P_W			Units: µg/L		
Client ID: MW-1R		Batch ID: A2476B			TestNo: SW8015					
Prep Date: 10/27/2017		RunNo: 2017			SeqNo: 49644					
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit Qual
TPH-P (GRO)	2100	250	2000	0	101	53.51	143.49	1.97	6.2	23
Surr: 1,2-Dichloroethane-d4	52.8		50		106	69.51	130.49	0.0515	0	0
Surr: Toluene-d8	48.8		50		97.5	69.51	130.49	0.0492	0	0
Surr: 4-Bromofluorobenzene	49.6		50		99.1	69.51	130.49	0.0502	0	0

Sample ID: 1710189-01AGS		SampType: GS			TestCode: TPH/P_W			Units: µg/L		
Client ID: MW-1R		Batch ID: A2476B			TestNo: SW8015					
Prep Date: 10/27/2017		RunNo: 2017			SeqNo: 49643					
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit Qual
TPH-P (GRO)	1970	250	2000	0	94.3	53.51	143.49			
Surr: 1,2-Dichloroethane-d4	51.5		50		103	69.51	130.49			
Surr: Toluene-d8	49.2		50		98.5	69.51	130.49			
Surr: 4-Bromofluorobenzene	50.2		50		100	69.51	130.49			

Qualifiers: B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits



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QC SUMMARY REPORT

WO#: 1710189
31-Oct-17

Client: Stratus Environmental
Project: 2192-6211-01/Alaska Gas

TestCode: TPH/P_W

Sample ID: 1710189-01AGS	SampType: GS	TestCode: TPH/P_W	Units: µg/L								
Client ID: MW-1R	Batch ID: A2476B	TestNo: SW8015									
Prep Date: 10/27/2017	RunNo: 2017	SeqNo: 49643									
Analysis Date: 10/27/2017											
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits



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QC SUMMARY REPORT

WO#: 1710189
31-Oct-17

Client: Stratus Environmental
Project: 2192-6211-01/Alaska Gas

TestCode: VOC_W

Sample ID: MB-2476		SampType: MBLK			TestCode: VOC_W			Units: µg/L				
Client ID: PBW		Batch ID: A2476			TestNo: SW8260B							
Prep Date: 10/27/2017		RunNo: 2017			SeqNo: 49640							
Analysis Date: 10/27/2017		Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tertiary Butyl Alcohol (TBA)		ND	10									
Methyl tert-butyl ether (MTBE)		ND	0.25									
Benzene		ND	0.25									
Tertiary Amyl Methyl Ether (TAME)		ND	1									
Toluene		ND	0.25									
Ethylbenzene		ND	0.25									
m,p-Xylene		ND	0.25									
o-Xylene		ND	0.25									
Surr: 1,2-Dichloroethane-d4		10		10		105	69.51	130.49				
Surr: Toluene-d8		9.9		10		99.1	69.51	130.49				
Surr: 4-Bromofluorobenzene		10		10		101	69.51	130.49				

Sample ID: LCS-2476		SampType: LCS			TestCode: VOC_W			Units: µg/L				
Client ID: LCSW		Batch ID: A2476			TestNo: SW8260B							
Prep Date: 10/27/2017		RunNo: 2017			SeqNo: 49639							
Analysis Date: 10/27/2017		Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tertiary Butyl Alcohol (TBA)		73.5	10	100	0	73.5	69.51	130.49				
Methyl tert-butyl ether (MTBE)		10.7	0.25	10	0	107	68.51	134.49				
Benzene		9.85	0.25	10	0	98.5	69.51	130.49				
Tertiary Amyl Methyl Ether (TAME)		9.81	1	10	0	98.1	47.51	148.49				
Toluene		8.88	0.25	10	0	88.8	69.51	132.49				
Ethylbenzene		9.01	0.25	10	0	90.1	69.51	136.49				
m,p-Xylene		9.34	0.25	10	0	93.4	62.51	137.49				
o-Xylene		9.21	0.25	10	0	92.1	69.51	132.49				
Surr: 1,2-Dichloroethane-d4		11.8		10		118	69.51	130.49				
Surr: Toluene-d8		9.75		10		97.5	69.51	130.49				
Surr: 4-Bromofluorobenzene		10.3		10		103	69.51	130.49				

Sample ID: 1710189-01AMSD		SampType: MSD			TestCode: VOC_W			Units: µg/L				
Client ID: MW-1RMSD		Batch ID: A2476			TestNo: SW8260B							
Prep Date: 10/27/2017		RunNo: 2017			SeqNo: 49630							
Analysis Date: 10/27/2017		Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tertiary Butyl Alcohol (TBA)		507	50	500	0	101	43.51	155.49	478	5.8	30	
Methyl tert-butyl ether (MTBE)		58.1	1.25	50	0	116	55.51	140.49	55.1	5.3	30	

- Qualifiers: B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits



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QC SUMMARY REPORT

WO#: 1710189
31-Oct-17

Client: Stratus Environmental
Project: 2192-6211-01/Alaska Gas

TestCode: VOC_W

Sample ID: 1710189-01AMSD			SampType: MSD			TestCode: VOC_W			Units: µg/L		
Client ID: MW-1RMSD			Batch ID: A2476			TestNo: SW8260B					
Prep Date: 10/27/2017			RunNo: 2017			SeqNo: 49630					
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	54.3	1.25	50	0	108	66.51	134.49	52.3	3.9	30	
Tertiary Amyl Methyl Ether (TAME)	52.3	5	50	0	105	63.51	135.49	50.5	3.5	30	
Toluene	47.4	1.25	50	0	94.8	37.51	130.49	45.4	4.2	30	
Ethylbenzene	47.6	1.25	50	0	93.5	69.51	130.49	46.4	2.5	30	
m,p-Xylene	49.8	1.25	50	1.77	96.0	64.51	139.49	48.6	2.5	30	
o-Xylene	48.9	1.25	50	0	97.9	68.51	130.49	46.8	4.5	30	
Surr: 1,2-Dichloroethane-d4	55.9		50		112	69.51	130.49	52.4	0	0	
Surr: Toluene-d8	49		50		98.1	69.51	130.49	48.5	0	0	
Surr: 4-Bromofluorobenzene	51.6		50		103	69.51	130.49	51.1	0	0	

Sample ID: 1710189-01AMS			SampType: MS			TestCode: VOC_W			Units: µg/L		
Client ID: MW-1RMS			Batch ID: A2476			TestNo: SW8260B					
Prep Date: 10/27/2017			RunNo: 2017			SeqNo: 49629					
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tertiary Butyl Alcohol (TBA)	478	50	500	0	95.6	43.51	155.49				
Methyl tert-butyl ether (MTBE)	55.1	1.25	50	0	110	55.51	140.49				
Benzene	52.3	1.25	50	0	103	66.51	134.49				
Tertiary Amyl Methyl Ether (TAME)	50.5	5	50	0	101	63.51	135.49				
Toluene	45.4	1.25	50	0	90.9	37.51	130.49				
Ethylbenzene	46.4	1.25	50	0	91.1	69.51	130.49				
m,p-Xylene	48.6	1.25	50	1.77	93.6	64.51	139.49				
o-Xylene	46.8	1.25	50	0	93.6	68.51	130.49				
Surr: 1,2-Dichloroethane-d4	52.4		50		105	69.51	130.49				
Surr: Toluene-d8	48.5		50		96.9	69.51	130.49				
Surr: 4-Bromofluorobenzene	51.1		50		102	69.51	130.49				

Qualifiers: B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits



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Definition Only

WO#: 1710189
Date:

Definitions:

ND = Not Detected

C = Reported concentration includes additional compounds uncharacteristic of common fuels and lubricants.

D = Reporting Limits were increased due to high concentrations of non-target analytes.

H = Reporting Limits were increased due to the hydrocarbons present in the sample.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

K = DRO concentration may include contributions from lighter-end hydrocarbons (e.g. gasoline) that elute in the DRO range.

L = DRO concentration may include contributions from heavier-end hydrocarbons (e.g. motor oil) that elute in the DRO range.

O = Reporting Limits were increased due to sample foaming.

V = Reporting Limits were increased due to high concentrations of target analytes.

X = Reporting Limits were increased due to sample matrix interferences.

Z = DRO concentration may include contributions from lighter-end (e.g. gasoline) and heavier-end (e.g. motor oil) hydrocarbons that elute in the DRO range.

S50 = The analysis of the sample required a dilution such that the surrogate concentration was diluted below the laboratory acceptance criteria. The laboratory control sample was acceptable.

S51 = Surrogate recovery could not be determined due to the presence of co-eluting hydrocarbons.

S52 = Surrogate recovery was above laboratory acceptance limits. Probable matrix effect.

S53 = Surrogate recovery was below laboratory acceptance limits. Probable matrix effect.

S54 = Surrogate recovery was below laboratory acceptance limits.

S55 = Surrogate recovery was above laboratory acceptance limits.



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Definition Only

WO#: **1710189**

Date:

Definitions:

Report CC's Allan Dudding
 Cory Gutierrez
 Dominick Gillespie
 Gowri Kowtha
 Robert Kull
 Scott Bittinger

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Ave, #21 Sparks, Nevada 89431
 TEL: (775) 355-1044 FAX: (775) 355-0406

Report Attention: Scott Bittinger

CA

WorkOrder: STR1710189
 Report Due By: 01-Nov-17
 EDD Required: YES

Client:

Stratus Environmental
 3330 Cameron Park Drive
 Cameron Park, CA 956828861

TEL: 5306766001
 FAX: 5306766005
 ProjectNo: 2192-6211-01/Alaska Gas

Date Received: 25-Oct-17

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles			Requested Tests						Sample Remarks
				Alpha	Sub	TAT	TPHP_W	VOC_W					
STR1710189-01	MW-1R	AQ	10/24/2017 4:37:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-02	MW-2	AQ	10/24/2017 5:11:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-03	MW-3R	AQ	10/24/2017 4:18:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-04	MW-4R	AQ	10/24/2017 4:05:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-05	MW-5	AQ	10/24/2017 3:50:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-06	MW-6	AQ	10/24/2017 4:58:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-07	MW-7	AQ	10/24/2017 6:15:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-08	MW-8	AQ	10/24/2017 5:43:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-09	MW-9	AQ	10/24/2017 5:27:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					
STR1710189-10	MW-10	AQ	10/24/2017 6:00:00 AM	3	0	5	A - GAS-C	A - BTXE/M/TAME/TBA_C					

Comments:

Logged in by:	Signature	Print Name	Company	Date/Time
	Elisabet Hernandez	Elisabet Hernandez	Alpha Analytical, Inc.	10/25/17 10:16

NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
 Company: Stratus Environmental, Inc.
 Attn: Accounts Payable
 Address: 3330 Cameron Park Drive, Suite 550
 City, State, Zip: Cameron Park, CA 95682
 Phone Number: (530) 676-6004 Fax: (530) 676-6005



Alpha Analytical, Inc.
 Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431

Phone: 775-355-1044
 Fax: 775-355-0406

Satellite Service Centers:
 Northern CA: 9891 Horn Road, Suite C, Rancho Cordova, CA 95827
 Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120
 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746
 Northern NV: 1250 Lemhi Hwy, #310 Elko, NV 89801

Phone: 916-366-9089
 Phone: 702-281-4848
 Phone: 714-386-2901
 Phone: 775-388-7043

Page # 1 of 1

Consultant/ Client Info:

Company: Alaska Gas
 Address: 6211 San Pablo Avenue
 City, State, Zip: Oakland, CA

Job and Purchase Order Info:

Job # 2192-6211-01
 Job Name: Alaska Gas
 P.O. #: _____

Report Attention/Project Manager:

Name: Scott Bittinger
 Email Address: SBittinger@stratusinc.net
 Phone #: (530) 676-2062
 Cell #: (916) 601-9756

QC Deliverable Info:

EDD Required? Yes / No EDF Required? (Yes) / No
 Global ID: T0600100667
 Data Validation Packages: III or IV

Samples Collected from which State? (circle one) AR (CA) KS NV OR WA DOD Site Other

Time Sampled (HH:MM)	Date Sampled (MM/DD)	Matrix* (See Key Below)	Lab ID Number (For Lab Use Only)	Sample Description	TAT	Field Filtered?	# Containers** (See Key Below)	Analysis Requested					Remarks
								GRO	BTX	MTBE	TAME	TBA	
0437	10/24/17	AQ	STR1710189-01	MW-1R	STD	NO	1	X	X	X	X	X	
0511		AQ		02	MW-2	STD	NO	1	X	X	X	X	
0418		AQ		03	MW-3R	STD	NO	3	X	X	X	X	
0403		AQ		04	MW-4R	STD	NO	3	X	X	X	X	
0350		AQ		05	MW-5	STD	NO	3	X	X	X	X	
0456		AQ		06	MW-6	STD	NO	3	X	X	X	X	
0615		AQ		07	MW-7	STD	NO	3	X	X	X	X	
0543		AQ		08	MW-8	STD	NO	3	X	X	X	X	
0527		AQ		09	MW-9	STD	NO	3	X	X	X	X	
0600	10/24/17	AQ		10	MW-10	STD	NO	3	X	X	X	X	

ADDITIONAL INSTRUCTIONS:

I (field sampler) attest to the validity and authenticity of this sample(s). I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. NAC 445.0636 (c) (2).

Sampled By: <i>John Stater</i>	Date: <u>10/24/17</u>	Time: <u>1100</u>	Received by: (Signature/Affiliation): <i>Alpha</i>	Date: <u>10/24/17</u>	Time: <u>1100</u>
Relinquished by: (Signature/Affiliation):	Date:	Time:	Received by: (Signature/Affiliation): <i>Elizabeth Hernandez</i>	Date: <u>10/25/17</u>	Time: <u>10:16</u>
Relinquished by: (Signature/Affiliation):	Date:	Time:	Received by: (Signature/Affiliation):	Date:	Time:

* Key: AQ - Aqueous WA - Waste OT - Other SO - Soil **: L - Liter V - VOA S - Soil Jar O - Orbq T - Tedlar B - Brass P - Plastic OT - Other

NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

APPENDIX D

**GEOTRACKER ELECTRONIC SUBMITTAL
CONFIRMATIONS**

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

**Processing is complete. No errors were found!
Your file has been successfully submitted!**

<u>Submittal Type:</u>	GEO_WELL
<u>Report Title:</u>	4th Quarter Groundwater Monitoring GEO_WELL
<u>Facility Global ID:</u>	T0600101804
<u>Facility Name:</u>	ALASKA GASOLINE
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Stratus Environmental, Inc.
<u>Username:</u>	STRATUS NOCAL
<u>IP Address:</u>	50.192.223.97
<u>Submittal Date/Time:</u>	11/2/2017 2:53:53 PM
<u>Confirmation Number:</u>	2279548346

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STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

**Processing is complete. No errors were found!
Your file has been successfully submitted!**

Submittal Type:

EDF

Report Title:

4th Quarter Groundwater Monitoring EDF

Report Type:

Monitoring Report - Semi-Annually

Facility Global ID:

T0600101804

Facility Name:

ALASKA GASOLINE

File Name:

Final_v2.zip

Organization Name:

Stratus Environmental, Inc.

Username:

STRATUS NOCAL

IP Address:

50.192.223.97

Submittal Date/Time:

11/2/2017 3:05:31 PM

Confirmation Number:

2521898269

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)

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