Dec 29 2006 1:50PM

HerSchy Environmental Inc

(559) 641-7340

p. 1

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By dehloptoxic at 1:09 pm, Jan 04, 2007

December 29, 2006

Mr. Barney Chan Alameda County Health Care Services Agency Environmental Health Services 1131 Harbor Bay Parkway, Ste. 250 Alameda, California 94502-6577

RE: December 2006 Quarterly Groundwater Monitoring Report and

Summary of Remediation

Alaska Gas

6211 San Pablo Avenue Oakland, California

Dear Mr. Chan:

Attached for your review and comment is the January 2, 2007 "Results of the December 2006 Quarterly Groundwater Monitoring Event and Summary of Remediation, Alaska Gasoline Company, Oakland, California, Case #RO0000127" report prepared by HerSchy Environmental, Inc upon my behalf, for the above-referenced site.

As the legally authorized representative of the above-referenced project, I have reviewed the attached report and declare, under penalty of perjury, that the information and/or recommendations contained in the attached document are true and correct to the best of my knowledge.

Sincerely.

Mr. Pritpaul Sappal

January 2, 2007 Project A51-01

Mr. Barney Chan Alameda County Health Care Services Agency Environmental Health Services 1131 Harbor Bay Parkway, Ste. 250 Alameda, California 94502-6577

Re: Results of the December 2006 Quarterly Groundwater Monitoring Event and Summary of Remediation, Alaska Gasoline Company, Oakland, California, Case #RO0000127

Dear Mr. Chan:

HerSchy Environmental, Inc. is pleased to present the results of the most recent quarterly groundwater monitoring event for the above-referenced site. A summary of remediation progress is also presented. The air abatement equipment was constructed and operates pursuant to the Authority to Construct permit #10975, issued by the Bay Area Air Quality Management District. The site is located at 6211 San Pablo Avenue, which is on the northwest corner of San Pablo Avenue and 62nd Street in Oakland, Alameda County, California (Figure 1). Groundwater monitoring was performed on December 1, 2006.

METHODS OF INVESTIGATION

Groundwater Sampling Procedures:

Groundwater samples were collected from five of the seven monitoring and extraction wells on December 1, 2006. Monitoring well MW-4 and extraction well EX-1 were found to have floating product, and therefore were not sampled. All monitoring wells were measured for static water level and total depth using an electric sounder prior to initiating sampling. Depth to groundwater was recorded to the nearest 0.01 feet on field sampling data sheets. The groundwater elevation in the monitoring wells was calculated by subtracting the measured depth to groundwater from the surveyed well elevation. The depth to groundwater, total depth of the well, and well diameter were used to calculate the purge volume.

At least three casing volumes were purged from each well prior to collecting a groundwater sample using a Waterra electric pump and dedicated hoses. Physical characteristics (temperature, electrical conductivity, and pH) were measured at the initiation of purging and then again just prior to collection of the groundwater sample. These characteristics were recorded on field sampling data sheets which are presented in Appendix A. One sample from each well was collected and contained in three 40-milliliter vials. Each of the sample containers were filled completely to form a positive meniscus, capped, and checked to ensure no air bubbles were present.

Samples were sealed in a ziplock bag and placed in a cooler chest with frozen gel packs ("blue ice") immediately after sampling. Samples were maintained at, or below, four degrees Celsius until

delivered to the laboratory. Groundwater samples were handled under chain-of-custody documentation until delivered to a California certified laboratory.

Laboratory Analysis:

Groundwater samples were analyzed for gasoline-range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE). Samples were analyzed using EPA method 8020 for BTEX and MTBE. Groundwater samples were also analyzed for the fuel oxygenates and additives MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butanol (TBA), 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) using EPA method 8260b.

RESULTS OF INVESTIGATION

Groundwater Conditions:

Because MW-4 and EX-1 contained floating product, groundwater data from these wells were not used in determining the groundwater flow direction or gradient.

Groundwater was present beneath the site at an average depth of 7.34 feet below the surveyed well elevations during the December 2006 monitoring event. Groundwater elevation during this quarter averaged 28.53 feet above mean sea level. This represents an increase in average groundwater elevation of about 0.48 feet since the August 2006 monitoring event, based on average depth to groundwater. Groundwater flow direction was approximately South 9 degrees West at a gradient of 0.03 on December 1, 2006. Groundwater conditions are summarized in Table 1 and are presented graphically in Figure 2.

Table 1
Groundwater Conditions, Alaska Gasoline, Oakland

Well Number	Elevation	Depth to GW	GW Elevation
November 17, 2005			
EX-1	33.28	NS	NS
MW-1R	36.67	8.41	28.26
MW-2	36.33	7.88	28.45
MW-3	35.12	7.56	27.56
MW-4	34.11	0.75' free product	
MW-5	35.17	6.47	28.70
MW-6	36.07	7.80	28.27
Flow Direction = $S.35$ V	W.; Gradient = .010		
February 8, 2006			
COLUALY OF LOUD			
• •	33.28	4.92*	28.36*
EX-1*	33.28 36.67	4.92 * 6.81	28.36* 29.86
EX-1* MW-1R			
EX-1* MW-1R MW-2	36.67	6.81	29.86
EX-1* MW-1R MW-2 MW-3	36.67 36.33	6.81 6.24	29.86 30.09
EX-1* MW-1R MW-2 MW-3 MW-4 MW-5	36.67 36.33 35.12	6.81 6.24 6.00	29.86 30.09
EX-1* MW-1R MW-2 MW-3 MW-4	36.67 36.33 35.12 34.11	6.81 6.24 6.00 0.27' free product	29.86 30.09 29.12

Table 1										
Groundwater Conditions, Alaska Gasoline, Oakland										
Well Number	Elevation	Depth to GW	GW Elevation							
May 5, 2006										
EX-1	33.28	0.81' free product								
MW-1R	36.67	7.46	29.21							
MW-2	36.33	6.89	29.44							
MW-3	35.12	6.65	28.47							
MW-4	34.11	0.39' free product								
MW-5	35.17	6.10	29.07							
MW-6	36.07	6.81	26.26							
Flow Direction = S. 28 V	V.; Gradient = .013									
August 18, 2006										
EX-1	33.28	0.69' free product								
MW-1R	36.67	8.58	28.09							
MW-2	36.33	8.05	28.28							
MW-3	35.12	7.73	27.39							
MW-4	34.11	0.46' free product								
MW-5	35.17	6.77	28.40							
MW-6	36.07	7.97	28.10							
Flow Direction = S. 19 V		7.57	20.10							
	.,									
December 1, 2006										
EX-1	33.28	1/16 inch free product								
MW-1R	36.67	6.56	30.11							
MW-2	36.33	7.58	28.75							
MW-3	35.12	8.51	26.61							
MW-4	34.11	0.48' free product								
MW-5	35.17	6.47	28.70							
MW-6	36.07	7.60	28.47							
Flow Direction = S. 9 W.	Flow Direction = S. 9 W.; Gradient = .03									

Elevations in feet NS = buried and not sounded or sampled * = Screen drowned, all free product previously extracted during testing on 12/27/05

Based on the data gathered from the site monitoring wells, the groundwater flow direction is toward San Francisco Bay, located approximately 0.75 miles southwest of the site. Regional groundwater flow appears to parallel the surface grade in the area.

Groundwater Quality:

Groundwater samples were submitted to the laboratory and analyzed for the above-mentioned fuel constituents. Certified analytical reports and chain-of-custody documentation are presented in Appendix B and are summarized in Tables 2 and 3 below. Historical data are presented in tabular form in Appendix C, with data from MW-!R, MW-2, and MW-3 presented graphically in Plates 1 through 3, respectively.

Table 2

Laboratory Analytical Results for Groundwater, Alaska Gasoline, Oakland								
Well No	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE		
November	17, 2005							
EX-1	NA	NA	NA	NA	NA	NA		
MW-1R	2,500	66	290	75	290	1,300		
MW-2	760	19	0.64	15	13	1,000		
MW-3	200,000	2,400	ND	ND	ND	580,000		
MW-4	NA	NA	NA	NA	NA	NA		
MW-5	71	0.81	ND	1.1	ND	1.4		
MW-6	1,100	30	ND	4.4	9.0	2,400		
February 8	8, 2006							
EX-1	NA	NA	NA	NA	NA	NA		
MW-1R	3,300	100	310	86	470	1,400		
MW-2	10,000	1,500	7.6	660	380	4,300		
MW-3	470,000	3,800	660	ND	790	490,000		
MW-4	NA	ŃΑ	NA	NA	NA	NA		
MW-5	50	ND	ND	ND	ND	1.0		
MW-6	3,600	220	43	66	160	2,700		
May 5 200	1 4							
May 5, 200	NA	NIA	NIA	NA	NA	NA		
EX-1 MW-1R	3,400	NA 170	NA 350	97	550	1,100		
MW-1K MW-2	-	1,800	ND			5,800		
MW-3	15,000 400,000	•	ND ND	1,200 ND	1,200 ND	590,000		
MW-4	400,000 NA	3,300 NA	NA NA	NA NA	NA	390,000 NA		
MW-5	ND	NA ND	ND	ND	ND	0.93		
MW-6	1,600	130	21	37	65	1,400		
11111 0	1,000	150	21	37	05	1,100		
August 18,								
EX-1	NA	NA	NA	NA	NA	NA		
MW-1R	5,800	190	1,000	230	1,000	490		
MW-2	360	11	ND	13	9.7	160		
MW-3	310,000	1,800	ND	ND	ND	440,000		
MW-4	NA	NA	NA	NA	NA	NA		
MW-5	ND	ND	ND	ND	ND	1.0		
MW-6	270	27	ND	3.0	4.0	240		
December	1, 2006							
EX-1	NA	NA	NA	NA	NA	NA		
MW-1R	410	1.7	6.3	1.2	47	100		
MW-2	11,000	1,000	ND	990	910	2,100		
MW-3	270,000*	ND	ND	ND	ND	290,000		
MW-4	NA	NA	NA	NA	NA	NA		
MW-5	ND	0.69	ND	ND	0.52	0.97		
MW-6	1,700	ND	ND	ND	ND	1,700		

All results presented in parts per billion (ppb)
MTBE results by EPA method 8260b

NA= no analysis

* = value due to MTBE

Table 3								
Laborate	ory Anal	ytical Re	sults for G	roundwate	er, Alaska G	asoline	, Oakland	
Sample	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Methanol	Ethanol
November 17, 2005								
MW-1R	ND	ND	110	1,600	ND	ND	NA	NA
MW-2	ND	ND	26	810	ND	ND	NA	NA
MW-3	ND	ND	24,000	49,000	ND	ND	NA	NA
MW-5	ND	ND	ND	ND	ND	ND	NA	NA
MW-6	ND	ND	190	9,500	ND	ND	NA	NA
February 8, 2006								
MW-1R	ND	ND	130	1,400	ND	ND	NA	NA
MW-2	ND	ND	120	2,800	ND	ND	NA	NA
MW-3	ND	ND	26,000	49,000	ND	ND	NA	NA
MW-5	ND	ND	ND	ND	ND	ND	NA	NA
MW-6	ND	ND	180	7,800	ND	ND	NA	NA
May 5, 2006								
MW-1R	ND	ND	100	2,400	ND	ND	NA	NA
MW-2	ND	ND	150	4,300	ND	ND	NA	NA
MW-3	ND	ND	21,000	86,000	ND	ND	NA	NA
MW-5	ND	ND	ND	ND	ND	ND	NA	NA
MW-6	ND	ND	53	3,100	ND	ND	NA	NA
August 18, 2006								
MW-1R	ND	ND	36	2,900	ND	ND	NA	NA
MW-2	ND	ND	4.6	600	ND	ND	NA	NA
MW-3	ND	ND	23,000	79,000	ND	ND	NA	NA
MW-5	ND	ND	ND	ND	ND	ND	NA	NA
MW-6	ND	ND	11	2,400	ND	ND	NA	NA
December 1, 2006								
MW-1R	ND	ND	4.7	100	ND	ND	NA	NA
MW-2	ND	ND	67	2,000	ND	ND	NA	NA
MW-3	ND	ND	11,000	90,000	ND	ND	NA	NA
MW-5	ND	ND	ND	ND	ND	ND	NA	NA
MW-6	ND	ND	92	800	ND	ND	NA	NA

ND = below detectable concentrations All results in parts per billion (ppb)

NA = no analysis NS = not sampled

Plate 1: Historical Concentrations in MW-1R

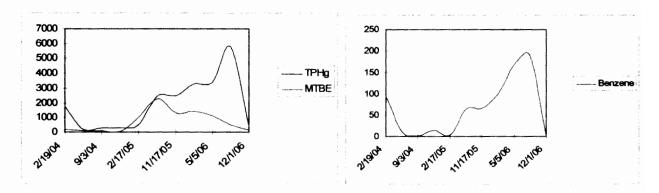


Plate 2: Historical Concentrations in MW-2

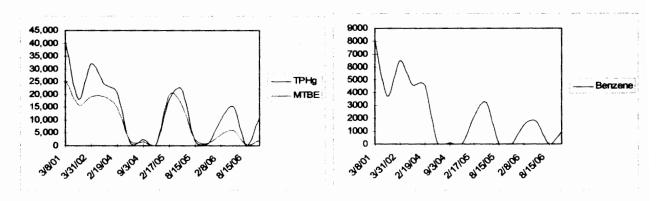
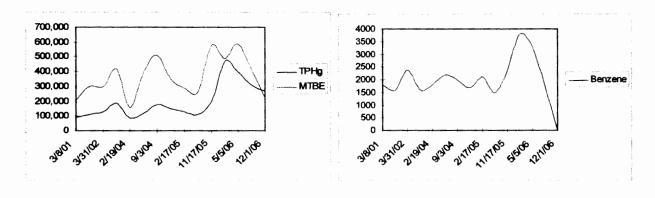


Plate 3: Historical Concentrations in MW-3



SOIL VAPOR EXTRACTION

The soil vapor extraction system (SVES), consisting of a thermal oxidizer equipped with a blower capable of producing up to 250 cubic feet per minute air flow and vacuum of up to 10 inches of mercury, has been operating at the site since August 31, 2006. Periods of down-time have been short and infrequent, usually related to propane delivery issues or water production issues. Table 4 presents a summary of the unit's operating and destruction efficiencies and amount of contaminants removed and discharged based on periodic monitoring of flow rates and laboratory results from samples collected. Please note that Table 4 only represents those dates in which laboratory samples were collected; field measurements of concentrations are not useful due to the previously high concentrations present, as well as excessive water production, both of which adversely affect field equipment. A summary of all site visits and certified laboratory results for vapor are presented in Appendix D.

Parts per million by volume (ppmv) VOCs as gasoline-range TPH can be converted to micrograms per liter (ug/l) by multiplying by 4.1 based on the mole weight of TPH. One liter is equal to 0.03531 cubic feet. To calculate pounds per day (lbs/day) of VOCs, the formula is as follows:

(ug/l)(gm/1,000,000)(kg/1,000 gm)(2.2 lbs/kg) = lbs/l VOCs

Converting lbs/l to total lbs:

(lbs/l)(1/.03531 cf)(cfm)(operating minutes) = lbs VOCs

where cf = cubic feet cfm = cubic feet per minute

Table 4: Alaska Gas SVES Destruction and Removal Efficiency										
	Hour	Hours of	Influent	Effluent	Air Flow	Destruciton	Effluent	VOCs Removed	Total VOCs	Percent
	Meter	Operation	(ppmV)	(ppmV)	(cfm)	Efficiency (%)	Release (lbs/day)	(lbs/day)	Removed (lbs)	Operating
TPH-G						(70)	(IDS/Gay)			
8/31/2006	0									
9/11/2006	126	126	3300	0	76.5	100.00	0.000	92.86	487.54	48
10/19/2006	1037	911	0	0	37	100.00	0.000	0.00	0.00	100
10/27/2006	1222	185	530	0	16	100.00	0.000	3.12	24.05	96
12/7/2006	2183	960.8	287.8	0.23	43	99.92	0.004	4.55	182.24	100
12/20/2006	2491	308.6	143.2	0.082	46	99.94	0.001	2.42	31.16	99
BENZENE										
8/31/2006	0									
9/11/2006	126	126	54	0	76.5	100.00	0.000	1.19	6.23	48
10/19/2006	1037	911	0	0	37	100.00	0.000	0.00	0.00	100
10/27/2006	1222	185	2.7	0 .	16	100.00	0.000	0.01	0.10	96
12/7/2006	2183	960.8	3.8	0	43	100.00	0.000	0.05	1.88	100
12/20/2006	2491	308.6	3.8	0.0025	46	99.93	0.000	0.05	0.65	99

Approximately 6.18 pounds of product (TPHg) removed is the equivalent to one gallon of product. About 725 pounds, or 117 gallons, of product have been removed at this site since startup. Destruction efficiency of this system is well over 99 percent, with 0.004 pounds or less of TPHg and no measurable concentrations of benzene discharged to the atmosphere.

CONCLUSIONS AND RECOMMENDATIONS

Frcc product thickness has returned to approximately 0.48 feet in MW-4 since pumping the product in the September 25, 2006 free product removal test. After five weeks of recovery, only 0.03 feet of product was measured. After eight weeks of recovery, 0.48 feet of product was measured. The December 1 measurement of product in EX-1 indicates there has been no recovery since the product removal test. However, water levels have been rising on-site since August, and are approaching the top of the screened interval in EX-1. Any free product recharge at this point may not be observed accurately, as recharging product may be above the screened interval and outside of the casing. Nevertheless, recharge appears to be slow, as observed by weeks of measurement after the product removal test and prior to the rise in groundwater.

Groundwater concentrations are variable throughout the year based on seasonal groundwater level fluctuations, but appear to be on an overall downward trend. HerSchy Environmental, Inc. is currently working to permit and obtain property owner permissions to perform the direct-push off-site assessment recently approved to assess the off-site migration of dissolved and/or free phase product. The adjacent properties in which this work is planned, while not in the public right-of-way, are owned by the City of Oakland. However, this assessment work will include only temporary borings, hopefully avoiding insurance issues with the City of Oakland. Assuming that obtaining permissions and permits proceed smoothly, HerSchy anticipates installing the off-site borings in early 2007.

The operation of the soil vapor extraction system is monitored every few days by HerSchy staff working locally. Adjustments are made to optimally and economically remediate the site based on subsurface conditions. Individual extraction lines are opened or closed, as appropriate, based on concentrations so that only productive wells are used. Recently, water production from the system (from high water levels) approached 200 gallons per day. We have been closely monitoring the system, and have had to reduce the vacuum to the extraction wells, possibly decreasing the air flow slightly, but likely reducing the water production greatly. In addition, HerSchy Environmental, Inc. will begin installation of a catalytic oxidizer, which will allow the oxidizer to operate at much lower temperatures, reducing propane costs.

If you have any questions or need additional information, please contact the undersigned at the letterhead address or at (559) 641-7320.



With best regards, HerSchy Environmental, Inc.

cott Jackson

Professional Geologist #₹948

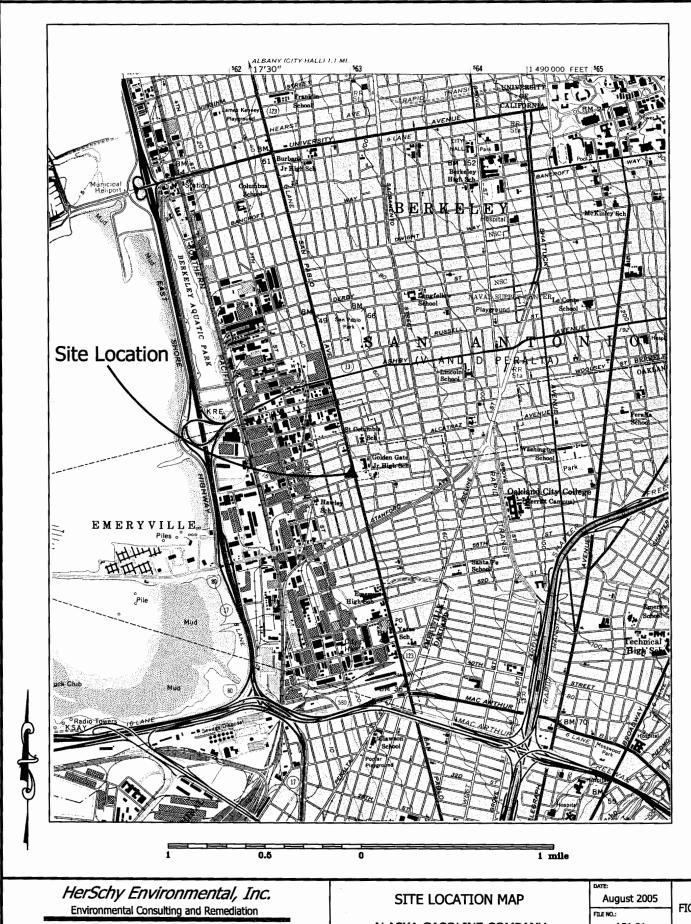
pc: Mr. Pritpaul Sappal

Mr. Hernan Gomez, Oakland Fire Services Agency Mrs. Susan M. Torrence, Deputy District Attorney

Ms. Irma C. Salinas, Bay Area Air Quality Management District

Well No	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Methanoi	Ethano
2/17/2005														
MW-1R	530	3.4	ND	ND	2.6	1,000	ND	ND	100	ND	NA	NA	ND	N
MW-2	18,000	2,100	31	800	680	20,000	ND	ND	1,000	ND	NA	NA	ND	NI
MW-3	130,000	2,100	420	210	730	290,000	ND	ND	11,000	ND	NA	NA	ND	N
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N.
MW-5	51	0.74	ND	0.94	ND	1.5	ND	ND	ND	ND	ND	ND	ND	N
MW-6	5,600	190	34	41	110	10,000	ND	ND	780	2,000	ND	ND	ND	N
EX-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N
5/24 & 26/2														
MW-1R	NA	NA	NA	NA	NA	NA	ND	ND	610	ND	ND	ND	NA	N
MW-2	22,000	3,200	52	1,400	1,700	16,000	ND	ND	NS	NS	ND	ND	NS	N
MW-3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	N
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N
MW -5	ND	ND	ND	ND	ND	1	ND	ND	NS	NS	ND	ND	NS	N
MW-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N
EX-1	NA	NA	NA	NA	NA	NA	ND	ND	NS	NS	NS	NS	NS	N
8/15 & 17/2	005													
EX-1	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/
MW-1R	2,500	64	240	61	210	2,300	ND	ND	210	ND	ND	ND	NA	N.
MW-2	2,000	66	ND	46	47	2,400	ND	ND	95	880	ND	ND	NA	N
MW-3	110,000	1,500	ND	ND	ND	260,000	ND	ND	21,000	25,000	ND	ND	NA	N.
MW-4	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/
MW-5	ND	ND	ND	ND	ND	0.88	ND	ND	ND	ND	ND	ND	NA	N
MVV -6	1,800	27	ND	6	23	3,800	ND	ND	300	3,500	ND	ND	NA	N
11/17/2005														
EX-1	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N
MW-1R	2,500	66	290	75	290	1,300	ND	ND	110	1,600	ND	ND	NA	N
MVV-2	760	19	0.64	15	13	1,000	ND	ND	26	810	ND	ND	NA	N
/IVV-3	200,000	2,400	ND	ND	ND	580,000	ND	ND	24,000	49,000	ND	ND	NA	N
∕ IW-4	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N
MW- 5	71	0.81	ND	1.1	ND	1.4	ND	ND	ND	ND	ND	ND	NA	N
√W-6	1,100	30	ND	4.4	9	2,400	ND	ND	190	9,500	ND	ND	NA	N

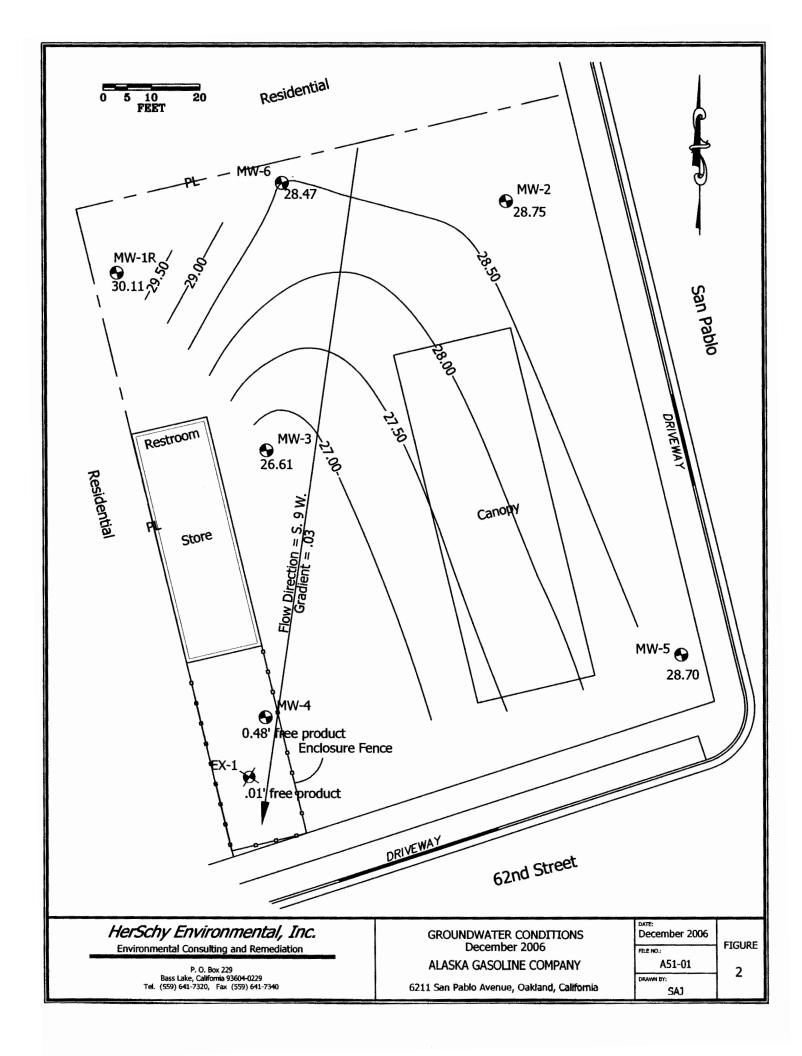
Well No	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Methanol	Ethanol
						<u>"'' </u>								
2/8/2006														
EX-1	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-1R	3,300	100	310	86	470	1,400	ND	ND	130	1,400	ND	ND	NA	NA
MW-2	10,000	1,500	7.6	660	380	4,300	ND	ND	120	2,800	ND	ND	NA	NA
MW-3	470,000	3,800	660	ND	790	490,000	ND	ND	26,000	49,000	ND	ND	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-5	50	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	NA	NA
MW-6	3,600	220	43	66	160	2,700	ND	ND	180	7,800	ND	ND	NA	NA
5/5/2006														
EX-1	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-1R	3,400	170	350	97	550	1,100	ND	ND	100	2,400	ND	ND	NA	NA
MW-2	15,000	1,800	ND	1,200	1,200	5,800	ND	ND	150	4,300	ND	ND	NA	NA
MW-3	400,000	3,300	ND	ND	ND	590,000	ND	ND	21,000	86,000	ND	ND	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-5	ND	ND	ND	ND	ND	0.93	ND	ND	ND	ND	ND	ND	NA	NA
MW-6	1,600	130	21	37	65	1,400	ND	ND	53	3,100	ND	ND	NA	NA



P. O. Box 229 Bass Lake, California 93604-0229 Tel. (559) 641-7320, Fax (559) 641-7340 ALASKA GASOLINE COMPANY

6211 San Pablo Avenue, Oakland, California

DATE:				
August 2005	ETCLIDE			
FILE NO.:	FIGURE			
A51.01	4			
DRAWN BY:	1			
WEA				



APPENDIX A

GROUNDWATER FIELD

SAMPLING DATA SHEETS

HerSchy WATER SAMPLE FIELD DATA SHEET Environmental

Client Name: ALASKA GAS	Location: OAKLAND
Purged By: WEST	Sampled by: WEST
	dwater Surface Water Other
Casing Diameter (inches): 2 3	4 X 5 6 Other
Casing Elevation (feet/MSL):	Volume in Casing (gal.):
Depth of Well (feet):	Calculate Purge Volume (gal.):
Depth to Water (feet): 4,96	Actual Purge Volume (gal.):
Date Purged:	Date Sampled:
	E. C. TEMP. TURBIDITY
Sheen Y/N?:	Odor:
Purging Equipment:	
Sampling Equipment:	
Remarks: GRAM SAMPLE FLOATUNG PROBUCT	12-01-06
Sampler's Signature:	SIN JUN
/Water Sample Sheet.wpd	

Client Name: _	ALASKA	GAS	Location: _	OAKLA	WD	
Purged By:	WEST		Sampled by:	WES	T	
Sample ID: M	W-IR T	ype: Groundw	ater 🔀 Surfa	ce Water	Other	
Casing Diamete	r (inches): 2	X 3	4 5	6 Oth	ner	-
			Volume in C			
Depth of Well (feet): 23,4	70 c	alculate Purge Vo	lume (gal.):	8.2	
	(feet):	56 A	ctual Purge Volun	ne (gal.):	8.24	
Date Purged: _	12-01-	06	Date Sampled:	1201	-06 (7755
TIME	VOLUME	pН	E. C.	TEMP.	TURBIDI	TY
0740		7,78	412	60.5	CLOUI	<u>7</u> >
			403	65,7		
Sheen Y/N?:	υ		Odor:	NONE		
Purging Equipm	ent:	WAT	ERNA			
Sampling Equips	ment:	WAT	BANA BAN			
Remarks:						
Sampler's Signat	ture:	dus S. h	1254			
Water Sample Sheet.wpd	/					

Client Name: ALASKA GAS Location: OAKLAND
Purged By: WEST Sampled by: WEST
Sample ID: MW-2 Type: Groundwater X Surface Water Other
Casing Diameter (inches): 2 3 4 5 6 Other
Casing Elevation (feet/MSL): 36.33 Volume in Casing (gal.): 2,2 Depth of Well (feet): 20.90 Calculate Purge Volume (gal.): 6,5+ Depth to Water (feet): 7,58 Actual Purge Volume (gal.):
Date Purged: 12-01-06 Date Sampled: 12-01-06 0840
TIME VOLUME pH E. C. TEMP. TURBIDITY
0827 - 6.62 775 67.1 Cloury
7837 6.5 6.69 778 67,6 CLOUDY
Sheen Y/N?: NO Odor: Petholeum
rurging Equipment: WATERIA
ampling Equipment: WATERA
temarks:
ampler's Signature: John J. Muss
Vater Sample Sheet.wpd

Client Name:	ALASKA	GAS	Location:	OAKLA	UN
Purged By:	WEST		Sampled b	oy: <u>WES</u>	T
Sample ID:	NW-3	Type: Groundy	vater X Sur	face Water	Other
Casing Diamet	er (inches): 2_	× 3	45	6 O	ther
					2.1
Depth of Well	(feet):	(20)	Calculate Purge V	olume (gal.):	6,2
Depth to Wate	r (feet):8	51 A	Actual Purge Vol	ume (gal.):	6.2+
Date Purged:	12-01-	06	Date Sampled	: _/2-01	-06 0720
TIME	VOLUME	pН	E. C.	TEMP.	TURBIDITY
0707		7.46	738	59,4	CLOUDY
0716	6,2	7.69	729	66.3	Clour
Sheen Y/N?: _	ν		Odor:	SUGHT U	INKNUW OWOR
Purging Equipn	nent:	WATER	2R17		
Sampling Equip	ment:	WATE	SRFA		
Remarks:					
Sampler's Signa	ture:	John S.	West		
Water Sample Sheet.wp	d /				

HerSchy WATER SAMPLE FIELD DATA SHEET Environmental

Client Name: ALASKA GAS	Location: OAKLAND
Purged By:	Sampled by:
Sample ID: MW-4 Type: Grou	undwater X Surface Water Other
	4 \ 5 6 Other
Casing Elevation (feet/MSL):	Volume in Casing (gal.): Calculate Purge Volume (gal.):
Depth of Well (feet):	Calculate Purge Volume (gal.):
Depth to Water (feet): 5.95	_ Actual Purge Volume (gal.):
Date Purged:	Date Sampled:
TIME VOLUME pH	E. C. TEMP. TURBIDITY
$\sim \mathcal{N}$	
A	
Sheen Y/N?:	Odor:
Purging Equipment:	
Sampling Equipment:	
Remarks: 5,47 TOP OF PR	UDUCT 5.95 TO WATER
	12-01-06
Sampler's Signature:	S. Wast
/Water Sample Sheet.wpd	

HerSchy WATER SAMPLE FIELD DATA SHEET Environmental

Client Name:	ALASKA	GAS	Location: _	OAKLAN	J D
Purged By: _	WEST		Sampled by	WES	T
Sample ID: 1	nw-\$5	Type: Grounds	water X Surfa	ce Water	Other
Casing Diamet	ter (inches): 2_	<u>×</u> 3	_ 4 5	_ 6 O	ther
Casing Elevati	on (feet/MSL):	35,17	Volume in (Casing (gal.): _	3,0
Depth of Well	(feet): 24	4.90	Calculate Purge Vo	lume (gal.):	9.0
Depth to Wate	er (feet):6		Actual Purge Volur		a .
Date Purged:	12-01-	06	Date Sampled:	12-01-	-06 6910
TIME	VOLUME	•	E. C.	TEMP.	TURBIDITY
0855		6.78	718	66.4	Cloury
7905	9	6,73	670		Cloury
Sheen Y/N?: _	~		Odor:	10NE	***
Purging Equipr	nent:	h	JATERRA		
Sampling Equip	oment:	(JATERRA WATERRA		
Remarks:					
Sampler's Signa	ature;	John I	Mess		
Water Sample Sheet.w					

Client Name: <u>ALASKA GAS</u>	Location: _	OAKCAL	10
Purged By: WEST	Sampled by	: _ UES	T
Sample ID: MW-6 Type: Ground	water X Surfa	ice Water	Other
Casing Diameter (inches): 2 3	45	6 Ot	her
Casing Elevation (feet/MSL): 36.07 Depth of Well (feet): 23.10 Depth to Water (feet): 7.60	Calculate Purge Vo	olume (gal.):	7,6
Date Purged: 12-01-06	Date Sampled:	12-01	·06 0823
TIME VOLUME pH 0809 — 7.09 0820 7.6 6.80	E. C. 495	TEMP.	TURBIDITY C (OUDY
Sheen Y/N?:		Nine	·
Sampling Equipment: WAT			
Remarks:			
Sampler's Signature:	Mess		
Water Sample Sheet.wpd			

APPENDIX B

CERTIFIED ANALYTICAL REPORTS FOR GROUNDWATER
WITH CHAIN-OF-CUSTODY

Environmental Testing Services

2333 Shuttle Drive, Atwater, CA 95301

Phone; (209) 384-2930

Certificate # 2480

Fax: (209) 384-1507

HerSchy Environmental P.O. Box 229

Client Project ID: Alaska Gas - Oakland Reference Number: 9642

Sampled: 12-01-08 Received: 12-01-06

Bass Lake, CA 93604 Attn: Red Rafilainen

Sample Description: Water

Extracted: 12-05-06 Analyzed: 12-05-06

Sample Prep/Analysis Method: EPA 5030/8015, 8020

Lab Numbers: 9642-1W, 2W, 3W, 4W, 5W

Reported: 12-19-06

TOTAL PETROLEUM HYDROCARBONS - GASOLINE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (ug/L)	SAMPLE ID MW-1R (ug/L)	SAMPLE ID MW-2 (ug/L)	SAMPLE ID MW-3 (ug/L)	SAMPLE ID MW-5 (ug/L)	SAMPLE ID MW-6 (ug/L)	
MTBE	0.50	130	2200	220000	1.0	1800	
BENZENE	0.50	1.7	1000	ND	0.69	ND	
TOLUENE	0.50	6.3	ND	ND	ND	ND	
ETHYL BENZENE	0.50	1.2	990	ND	ND	ND	
TOTAL XYLENES	0.50	47 .	910	ND	0.52	ND	
GASOLINE RANGE HYDROCARBONS	50	410	11000	270000°	ND	1700°	
Report Limit Multiplication Fa Report Limit Multiplication Fa		1 100	100	2000 10000	1	10 100	

*Gasoline value due to MTBE.

Surrogate % Recovery: FID: 108%/PID: 182% PID: 104% / PID: 98.0% FID: 99.7% / PID: 162% FIO: 102% / PID; 102% FID: 107% / PID; 108% instrument ID: VAR-GC1 VAR-GC1 VAR-GC1 VAR-GC1 VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

APPROVED BY:

James C. Phillips/ Laboratory Director or Clari J. Cone / Laboratory Manager

Reported: 12-19-06

CASTLE ANALYTICAL LABORATORY

Phone: (209) 384-2930 2333 Shuttle Drive, Atwater, CA 95301 **Environmental Testing Services** Fax: (209) 384-1507 Cartificate No. 2480 Client Project ID: Alaska Gas Oakland Sampled: 12-01-08 HerSchy Environmental Reference Number: 9642 P.O. Box 229 Received: 12-01-06 Sample Description: Water Extracted: 12-06-06 Bass Lake, CA 93604 Attn: Red Rafilainen Sample Prep/Analysis Method: EPA 5030/8260 Analyzed: 12-06-06

Lab Numbers: 9642-1W, 2W, 3W, 4W, 5W

GASOLINE ADDITIVES AND SOLVENTS BY EPA METHOD 8260 GC/MS

ANALYTE	REPORTING LIMIT (µg/L)	SAMPLE ID MW-1R (µg/L)	SAMPLE ID MW-2 (µg/L)	SAMPLE ID MW-3 (µg/L)	SAMPLE ID MW-5 (Hg/L)	SAMPLE ID MW-6 (µg/L)
FUEL OXYGENATES						
Methyl tert-Butyl Ether (MTBE)	0.50	100	2100	290000	0.97	1700
Di-isopropyl Ether (DIPE)	0.50	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether (ETBE)	0.50	ND	ND	ND	ND	NĎ
tert-Amyl Methyl Ether (TAME)	0.50	4.7	87	11000	ND	92
tert-Butanol (TBA)	20	100	2000	90000	ND	800
VOLATILE HALOCARBONS &	ROMATICS					
1,2-Dichloroethana (1,2-DCA)	0.50	ND	ND	ND	ND	ND
Ethylene Dibromide (EDB)	0.50	ND	ND	ND	ND	ND
Report Limit Multiplication Factor: Report Limit Multiplication Factor		1 50	10° 100	1000° 10000	1	5* 50

Report limit raised due to matrix Interference

Surrogate Recoveries					
1,2-Dichloroethane-d4 Toluene-d8 Instrument ID: Varian 2100T	90.2% 84.6%	105% 97.7%	87.6% 84.0%	126% 111%	103% 91.6%
matroment to: valian Zioni					

Analytes reported as ND were not detected or below the Practical Quantitation Limit Practical Quantitation Limit = Reporting Limit × Report Limit Multiplication Factor $(\mu g/L) = \text{micrograms}$ per liter or parts per billion (ppb)

APPROVED BY:

James C. Phillips 7 Laboratory Director or Clari J. Cone / Laboratory Manager

APPENDIX C HISTORIC GROUNDWATER QUALITY DATA

Well No	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Methanol	Ethanol
2/19-20/20	04													Zinanoi
MW-1R	1,800	95	130	44	200	220	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	21,000	4,600	120	970	2,000	15,000	NA	NA	NA	NA	NA	NA.	NA.	NA
MW-3	86,000	1,800	630	ND	ND	160,000	NA	NA	NA	NA	NA NA	NA.	NA.	NA NA
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA.	NA	NA
MW-5	ND	ND	ND	ND	ND	1.5	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA NA
MW-6	1,900	280	58	17	160	2,700	NA	NA	NA	NA	NA	NA NA	NA NA	
EX-1	120,000	9,500	4,300	840	3,900	150,000	NA	NA	NA	NA	NA NA	NA	NA NA	NA NA
5/24-25/20	04													- 4
MW-1R	210	12	10	5.4	23	79	ND	ND	2.1	37	ND	ND	ND	ND
MW-2	1,200	120	3	63	67	1,900	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	120,000	2,200	ND	180	220	400,000	ND	ND	15,000	ND	ND	ND	ND	ND
νν-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
∕W-5	ND	ND	ND	ND	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND
√W-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA
EX-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/3/2004														
MW-1R	300	1.5	7.1	9.4	42	81	ND	ND	1.6	ND	ND	ND	ND	ND
√W-2	2,300	120	ND	51	70	1,700	ND	ND	26	ND	ND	ND	ND	ND
VV-3	180,000	2,000	ND	ND	ND	510,000	ND	ND	14,000	ND	ND	ND	ND	ND
√W-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA NA
/W-5	100	6.4	ND	ND	0.79	4.2	ND	ND	ND	ND	ND	ND	ND	ND
√W-6	1,100	27	ND	14	27	2,200	ND	ND	85	ND	ND	ND	ND	ND
EX-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/2/2004														
/W-1R	290	14	30	9.5	45	45	ND	ND	1.1	ND	NA	NA	ND	ND
∕W-2	530	35	ND	17	30	520	ND	ND	28	100	NA NA	NA NA	ND	ND
/W-3	150,000	1,700	ND	ND	ND	350,000	ND	ND	31,000	140,000	NA	NA	ND	ND
/W-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA NA
/W-5	ND	2.6	ND	1.7	0.87	1	ND	ND	ND	ND	ND	ND	ND	ND
/W-6	1,800	32	ND	5.4	11	4,100	ND	ND	170	270	ND	ND	ND	
X-1	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA NA	NA NA	NA NA	ND NA

Vell No	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Methanol	Ethanol
2/17/2005														
MW-1R	530	3.4	ND	ND	2.6	1,000	ND	ND	100	ND	NA	NA	ND	ND
MW-2	18,000	2,100	31	800	680	20,000	ND	ND	1,000	ND	NA.	NA	ND	ND
MW-3	130,000	2,100	420	210	730	290,000	ND	ND	11,000	ND	NA	NA.	ND	ND
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA.	NA	NA NA
MW-5	51	0.74	ND	0.94	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND
MW-6	5,600	190	34	41	110	10,000	ND	ND	780	2,000	ND	ND	ND	
EX-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND NA
5/24 & 26/2	005													- s
MW-1R	NA	NA	NA	NA	NA	NA	ND	ND	610	ND	ND	ND	NA	NA
MW-2	22,000	3,200	52	1,400	1,700	16,000	ND	ND	NS	NS	ND	ND	NS	NS
MW-3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.
MW-5	ND	ND	ND	ND	ND	1	ND	ND	NS	NS	ND	ND	NS	NS
MW-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EX-1	NA	NA	NA	NA	NA	NA	ND	ND	NS	NS	NS	NS	NS	NS
8/15 & 17/2	005													
EX-1	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-1R	2,500	64	240	61	210	2,300	ND	ND	210	ND	ND	ND	NA	NA
MW-2	2,000	66	ND	46	47	2,400	ND	ND	95	880	ND	ND	NA	NA.
MW-3	110,000	1,500	ND	ND	ND	260,000	ND	ND	21,000	25,000	ND	ND	NA	NA
MW-4	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-5	ND	ND	ND	ND	ND	0.88	ND	ND	ND	ND	ND	ND	NA	N/
MW-6	1,800	27	ND	6	23	3,800	ND	ND	300	3,500	ND	ND	NA	N.A
11/17/2005														
EX-1	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-1R	2,500	66	290	75	290	1,300	ND	ND	110	1,600	ND	ND	NA	N/
MW-2	760	19	0.64	15	13	1,000	ND	ND	26	810	ND	ND	NA	N.A
MW-3	200,000	2,400	ND	ND	ND	580,000	ND	ND	24,000	49,000	ND	ND	NA	N/
MW-4	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-5	71	0.81	ND	1.1	ND	1.4	ND	ND	ND	ND	ND	ND	NA	N/
MW-6	1,100	30	ND	4.4	9	2,400	ND	ND	190	9,500	ND	ND	NA	N/

Well No	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Methanol	Ethanol
2/8/2006														
EX-1	NA	NA	NA	NA	NA	NA	N/A	N/A	NI/A	N 14 A				
MW-1R	3,300	100	310	86	470	1,400	ND		N/A	N/A	N/A	N/A	N/A	N/A
MW-2	10,000	1,500	7.6			•		ND	130	1,400	ND	ND	NA	NA
MW-3		•		660	380	4,300	ND	ND	120	2,800	ND	ND	NA	NA
	470,000	3,800	660	ND	790	490,000	ND	ND	26,000	49,000	ND	ND	NA .	NA
MW-4	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-5	50	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND		
MW-6	3,600	220	43	66	160	2,700	ND	ND					NA	NA
						_,, 00	110	NO	180	7,800	ND	ND	NA	NA
5/5/2006														- •
EX-1	NA	NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	NI/A	NI/A	
MW-1R	3,400	170	350	97	550	1,100	ND	ND				N/A	N/A	N/A
MW-2	15,000	1,800	ND	1,200	1,200	5,800	ND		100	2,400	ND	ND	NA	NA
MW-3	400,000	3,300	ND	ND	-	•		ND	150	4,300	ND	ND	NA	NA
MW-4	NA	-			ND	590,000	ND	ND	21,000	86,000	ND	ND	NA	NA
		NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-5	ND	ND	ND	ND	ND	0.93	ND	ND	ND	ND	ND	ND	NA	NA
MW-6	1,600	130	21	37	65	1,400	ND	ND	53	3,100	ND	ND	NA	NA

APPNDIX D

RECORD OF AIR MONITORING AND
CERTIFIED ANLAYTICAL RESULTS FOR VAPOR



Alaska Gas Data Sheet

Site Address:	6211 San	Pablo Av	e., Oakland,	CA 94606												Well Pro	duct Thick	kness (ft))	,
'	Total	Hours	Vacuum	Flow - pitot	Flow -	Dilution	Recirc Valve (#	SVE Wells operating	Influent	Effluent	Water in		Dilution	High	Propane	EX-1	MW-4	other	Field	Notes
	Hours		(H20 col.)	(#3) (scfm)	Manifold	Valve (%	tums open)		(ppm)	(ppm)	Tank (ft)	Cont.(F)	Cont. (F)	Limit (F)	(% full)				person	
Date					(scfm)	open)														
	System	Down - N	o propane				_						4505.00	4500.00	00.00/					
9/8/2006	-		-	78		5	3	limited initial set	-		0.00'	1650.0°	1527.0°	1526.0°	80.0%		-	N/A	LT	
							ell hookups****													
	HerSch		ly onsite doin	g work, includ		etion of all we	ell hookups*													
9/14/2006	-	198	49	-	62	5	3	ali		-	0.00	1427.0°	1334.0°		85.0%	-	-	N/A	SR	
9/15/2006	-	223	49	-	58	5	3	all	-	-	0.00	1424.0°	1332.0°	1332.0°	70.0%	-	-	N/A	SR	
9/16/2006	-	247	50	-	58	5	3	all	-		0.00	1443.0°	1352.0°	1352.0°	52.0%	••	-	N/A	SR SR	
9/17/2006		270	49	_	58	5	3	ali	-	-	0.00	1446.0°	1351.0°	1350.0°	39.0%	-	-	N/A	SR	
9/18/2006	-	295	49	-	58	5	3	all	-	-	0.00	1448.0°	1352.0°		80.0%	-	-	N/A	LT	
9/19/2006	-	315	46	58		5	3	all	-	-	0.00	1437.0°	1345.0°		69.0%	-	-	N/A	LT	
9/22/2006	••	390	49	49	-	2	3	all	-	-	0.40	1493.0°	1368.0°		70.0%	_	-	N/A	LT	
9/22/2006	-	391	49	51	-	2	3	all, except VE-1, 2, 3	-	-	0.40	1517.0°	1407.0°	1406.0°	70.0%	-	-	N/A	Li	
9/25/2006	***HerSch				overy from		nutting off more var				5 451	4044.00	4400.00	4407.00	E0 00/	0.01	_	N/A	SR	
9/27/2006		511	42	43	-	2	3	only VE-3,4,5,7,10,13	-	-	0.40	1614.0°	1488.0°	1487.0° 1491.0°	58.0% 5.0%	0.01 0.01	_	N/A	SR	
10/3/2006		652				. 2	3	only VE-3,4,5,7,10,13	-	-	0.40	1623.0°	1492.0°	1491.0	3.0%	0.01	_	IVA	on	
10/12/2006	***HerSch						arge, repositioned p				0.30	1451.0°	1286.0°	1265.0°	40.0%	0.01	_	N/A	LT	
10/19/2006	-	1037	30	37	-	2	3 3	3-4 wells open, ID not n	-	-	0.30	1692.0°	1541.0°	1540.0°	58.0%	0.01	0.04	N/A	HH	
10/25/2006	-	1180	32	25	-	2	3	VE-3,4,5,7,10,13 VE-3,4,5,7,10,13		_	0.20	1706.0°	1555.0°	1554.0°	80.0%	_	0.04	N/A	LT	
10/27/2006	-	1222	30	16	-	2	3	VE-3,4,5,7,10,13 VE-3,4,5,7,10,13	-	-	0.20	1520.0°	1400.0°	1400.0°	00.078	0.01	0.03	N/A	LT	
11/3/2006	-	1394 1535	33 32	36 32	-	2	3	VE-3,4,5,7,10,13	_	_	0.20	1505.0°	1392.0°	1392.0°	_	-	-	N/A	LT	
11/9/2006				az and, unsure of	-	_	3	VE-3,4,5,7,10,13	-	_	0.20	1300.0	1032.0	1032.0				147		
11/18/2006	1823.9	1 Eventas 787.4	per notes tou	ına, unsure or	completio	n (Hea)	2 hook from fully	VE-3,4,5,7,8,10,13	_	_	2.00'	1182.0°	1137.0°	1161 0º	61.0%	_	_	N/A	Red	System shutdown for maintenance
11/21/2006	1023.9	101.4		~	_	_	closed	¥E-0,4,0,7,0,10,10	_	_	2.00	1102.0	1101.0		01.0.0					-,
11/22/2006	1825.8	789.3	_	_	_			VE-2,4,5,7,9,11,12	24.8	1.6	2.00	variable	variable	variable	61.0%	_	_	N/A	Red	System restarted with new configuration
11/22/2000	1023.0	769.5	_	-	_	_	open	* Conc. are found on SV			2.00		maintenan							•
11/23/2006	_	-	_	_	_	_		VE-2,4,5,7,9,11,12	50.8*	0.0	2.00'		1539.0°		37.0%	-	_	N/A	Red	
11/20/2000	_		_	_			open	72 2,4,0,7,0,1.1,12	* taken aft				g system:							
11/27/2006	1944.8	908.2	-	-	-	_		VE-1,3,4,5,8,12,13	29*	0.0	2.00		1591.0°		80.0%	-	-	N/A	Red	
11/21/2000	1044.0	500.2					ореп	,.,.,.,.,.	* taken aft											
11/28/2006	1966.5	930	_	73	_	_	•	VE-1,3,4,5,8,12,13	142.0	0.3	2.00'	1710.0°	1588.0°	1628.0°	56.0%	none	0.48	N/A	Red/Jol	nn
11/20/2000	1000.0	300	"2"-65cfm				open	,_,,_,,,		•										
11/30/2006	2016.5	980	21	61	_	-		VE-1,3,4,5,8,12,13	150.9	0.0	2.00	1721.0°	1600.0°	1624.0°	64.0%		-	N/A	Red	
	2010.0	****	"2"-no read	٠.			open													
12/7/2006	2182.8	1146.3	25	43	_	-		VE-2,3,4,5,9,12,13	119.0	0.0	2.00	1724.0°	1598.0°	1624.0°	83.0%	-	-	N/A	Red	System down- no propane? Restarted,
			"2"-noread				fully open													readings taken after somewhat stabilized
12/13/2006	2328.1	1291.5		system adjus	tments	-		VE-1,3,4,5,7,9,12,13	N/A	N/A	2.00	not read	not read	not read	52.0%	none	1.07	N/A	Red	meet with Rob Larson re: sys operations
			system unsi				open													and system inquiries
12/14/2006	2348.7	1312.2	_	45	42	-	5.5 back from fully	VE-1,3,4,5,7,9,12,13	N/A	N/A	2.00	1718.0°	1564.0°	1609.0°	64.0%	-	-	N/A	Red	Oscar and Mark Rodin onsite performing
							open													sys changes/mods
12/20/2006	2491.4	1454.8	-	46	-	-	6.75 back from	VE-1,3,4,5,8,9,13	N/S	N/S	near full	1448.0°	1351.0°	1378.0°	57.0%	none	0.71	N/A	Red	Tank full prod. A lot of H2Q. Recirc, Valve
							fully open													opened fully to stem H20 prod.
12/22/2006	2536.6	1500	-	33	~	-		VE-1,3,4,5,8,9,13	N/S	N/S	full	1638.0°	1495.0°	1518.0°	71.0%	-	-	, N/A	Red	Quicksite visit to meet NRC
							fully open				[emptied]									
2nd reading				29								1595.0°	1470.0°	1495.0°				N/A	Red	
	After tani	was drair	ned the recirc	valve was clo	sed back	to 6.25 tums	back from full to cr	reate proper vacuum, hop	efully with I	ess wate										
12/26/2006	2633.1	1596.5	-	32	-	-	6.25 back from	VE-1,3,4,5,8,9,13	NS	N/S	near full	1587.0°	1462.0°	1486.0°	8.0%	-	-	N/A	Red	
							fully open				[emptied]									0
12/27/2006	2658.8	1622.2		30	_	95	6.25 back from	VE-1,3,4,5,8,9,13	N/S	0.0	~200 gal	1537.0°	1413.0°	1440.0°	75.0%	-	0.75	N/A	Red	Oscar installs 1500 gal knockout tank
							fully open												D	
2nd reading	2660.7	1624.1	-	45	52	95		VE-1,2,3,4,5,10,12,13	N /S	0.0	~200 gal	1460.0°	1352.0°	1375.0°	-	-	-	N/A	Red	
							open													

Environmental Testing Services 2333 Shuttle Drive, Atwater, CA 95301 (209) 384-2930 Certificate No. 2480 (209) 384-1507

HerSchy Environmental

P.O. Box 229

Bass Lake, CA 93604 Attn: Scott Jackson Client Project ID: Alaska Gas - Oakland

Reference Number: 9442 Sample Description: Air

Sample Prep/Analysis Method: 5030/8015M, 8020

Lab Number: 9442-1V Sample ID: Effluent Sampled: 09-11-06 Received: 09-11-06 Analyzed: 09-12-06

Reported: 09-14-06

TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	PQL* (ug/L)	PQL* (ppmv)	AMOUNT (ug/L)	AMOUNT (ppmv)	
MTBE	0.50	0.14	ND	ND	
BENZENE	0.50	0.16	ND	ND	
TOLUENE	0.50	0.13	ND	ND	
ETHYL BENZENE	0.50	0.11	ND	ND	
TOTAL XYLENES	0.50	0.11	ND	ND	
GASOLINE RANGE HYDROCARBONS	50	12	ND	ND	
Dilution Factor:	1				

Instrument ID:	VAR-GC1	

*PQL - Practical Quantitation Limit

Analytes reported as ND were not detected or below the Practical Quantitation Limit

APPROVED BY:

James C. Phillips/Laboratory Director or Clari J., Cone / Laboratory Manager

Environmental Testing Services Certificate No. 2480	2333 Shuttle Drive, Atwater, CA 95301	(209) 384-2930 (209) 384-1507	
HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Sampled: 09-11-06	
P.O. Box 229	Reference Number: 9442	Received: 09-11-06	
Bass Lake, CA 93604	Sample Description: Air	Analyzed: 09-12-06	
Attn: Scott Jackson	Sample Prep/Analysis Method: 5030/8015M, 8020 Lab Number: 9442-2V	Reported: 09-14-06	
ii .	Sample ID: Influent		

TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	PQL* (ug/L)	PQL* (ppmv)	AMOUNT (ug/L)	AMOUNT (ppmv)	
MTBE	25	6.9	820	230	
BENZENE	25	7.8	170	54	
TOLUENE	25	6.6	420	110	
ETHYL BENZENE	25	5.7	84	19	
TOTAL XYLENES	25	5.7	380	86	
GASOLINE RANGE HYDROCARBONS	2500	610	13000	3300	
Dilution Factor:	50				

Instrument ID:	VAR-GC1	

*PQL - Practical Quantitation Limit Analytes reported as ND were not detected or below the Practical Quantitation Limit

APPROVED BY:

James C. Phillips / Laboratory Director or
Clari J. Gone / Laboratory Manager

CHAIN OF CUSTODY

Location: 2333 Shuttle Drive, Bldg 908/909, Atwater, CA 95301 Certificate No. 2480 Mailing Address: 2333 Shuttle Drive, Atwater, CA 95301 PAGE Phone: (209) 384-2930 - Fax: (209) 384-1507 Customer: REQUESTED ANALYSES Method of Shipment: Address: SAMPLE MATRIX
(s) solid (l) liquid (o) other
BTEX/TPH-GAS NUMBER OF CONTAINERS SAMPLE TYPE (g) grab (c) composite (d) discrete Electronic Deliverables (EDF) 8260 City/State/ZIP: Notes: Phone / FAX: Oxy's / EDB / DCA by TRPH 418.1M TPH-DIESEL Proj # / P.O. #: 8260 Report Attention: Sampler Signature: Printed: Lab ID# **SAMPLE ID** DATE TIME DESCRIPTION/LOCATION OBSERVATIONS/REMARKS EFFLUENT 19-11-06 9-11-06/1223 -2V [NFLUENT Total number of containers submitted to Signature Printed Name Company Name Date Time the laboratory Relinguished by: HERSCHY Note: All special requests (e.g. quick turn times) must be cleared 9-11-62 Received by: CASILE 4/20 through authorized laboratory Relinquished by: personnel. Received by: Relinquished by: RESULTS DUE: Received by: VERBAL WRITTEN



Report Number: 52882

Date: 10/25/2006

Henry Hurkmans Blue Rock Environmental, Inc. 1169 Chess Drive Suite C Foster City, CA 94404

Subject: 2 Vapor Samples Project Name: Alaska Gas Project Number: FR-3 P.O. Number: FR-3101906

Dear Mr. Hurkmans,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Project Name: Alaska Gas

Project Number: FR-3

Matrix : Air

Lab Number: 52882-01

Report Number: 52882 Date: 10/25/2006

Sample Date :10/19/2006

Sample: influent

Sample Date :10/19/2006		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Toluene	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Ethylbenzene	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Total Xylenes	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Methyl-t-butyl ether (MTBE)	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Benzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/20/2006
Toluene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/20/2006
Ethylbenzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/20/2006
Total Xylenes (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/20/2006
Methyl-t-butyl ether (in ppmv)	< 0.10	0.10	ppmv	EPA 8260B	10/20/2006
TPH as Gasoline	< 20	20	mg/m3	EPA 8260B	10/20/2006
TPH as Gasoline (in ppmv)	< 5.0	5.0	ppmv	EPA 8260B	10/20/2006
Toluene - d8 (Surr)	96.9		% Recovery	EPA 8260B	10/20/2006
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	10/20/2006

Approved By:

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Project Name: Alaska Gas

Project Number: FR-3

Matrix: Air

Lab Number: 52882-02

Report Number: 52882 Date: 10/25/2006

Sample Date :10/19/2006

Sample: effluent

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Toluene	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Ethylbenzene	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Total Xylenes	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Methyl-t-butyl ether (MTBE)	< 0.20	0.20	mg/m3	EPA 8260B	10/20/2006
Benzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/20/2006
Toluene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/20/2006
Ethylbenzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/20/2006
Total Xylenes (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/20/2006
Methyl-t-butyl ether (in ppmv)	< 0.10	0.10	ppmv	EPA 8260B	10/20/2006
TPH as Gasoline	< 20	20	mg/m3	EPA 8260B	10/20/2006
TPH as Gasoline (in ppmv)	< 5.0	5.0	ppmv	EPA 8260B	10/20/2006
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	10/20/2006
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	10/20/2006

Approved By:

Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number: 52882

Analysis Method

Date

Analyzed

Date: 10/25/2006

Units

Method Reporting

Limit

Measured Value

QC Report : Method Blank Data

Project Name: Alaska Gas

Project Number: FR-3

Parameter	Measured Value	Method Reportin Limit	g Units	Analysis Method	Date Analyzed
Benzene	< 0.20	0.20	mg/m3	EPA 8260B	10/19/2006
Toluene	< 0.20	0.20	mg/m3	EPA 8260B	10/19/2006
Ethylbenzene	< 0.20	0.20	mg/m3	EPA 8260B	10/19/2006
Total Xylenes	< 0.20	0.20	mg/m3	EPA 8260B	10/19/2006
Methyl-t-butyl ether (MTBE)	< 0.20	0.20	mg/m3	EPA 8260B	10/19/2006
Benzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/19/2006
Toluene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/19/2006
Ethylbenzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/19/2006
Total Xylenes (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/19/2006
Methyl-t-butyl ether (in ppmv)	< 0.10	0.10	ppmv	EPA 8260B	10/19/2006
TPH as Gasoline	< 20	20	mg/m3	EPA 8260B	10/19/2006
TPH as Gasoline (in ppmv)	< 5.0	5.0	ppmv	EPA 8260B	10/19/2006
Toluene - d8 (Surr)	96.4		%	EPA 8260B	10/19/2006
4-Bromofluorobenzene (Surr)	105		%	EPA 8260B	10/19/2006

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Parameter

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Rev: 051805



Report Number: 53018

Date: 11/2/2006

Henry Hurkmans Blue Rock Environmental, Inc. 1169 Chess Drive Suite C Foster City, CA 94404

Subject: 2 Vapor Samples

Project Name: Alaska Gas, Oakland

Project Number: FR-3

P.O. Number: FR-3 102706

Dear Mr. Hurkmans,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Disaribution: White Can't F



Report Number: 53018

Date: 11/2/2006

Project Name: Alaska Gas, Oakland

Project Number: FR-3

Sample: Influent

Matrix: Air

Lab Number: 53018-01

Sample Date :10/27/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	8.8	0.20	mg/m3	EPA 8260B	10/28/2006
Toluene	24	0.20	mg/m3	EPA 8260B	10/28/2006
Ethylbenzene	4.9	0.20	mg/m3	EPA 8260B	10/28/2006
Total Xylenes	120	0.25	mg/m3	EPA 8260B	10/30/2006
Methyl-t-butyl ether (MTBE)	150	0.25	mg/m3	EPA 8260B	10/30/2006
Benzene (in ppmv)	2.7	0.050	ppmv	EPA 8260B	10/28/2006
Toluene (in ppmv)	6.3	0.050	ppmv	EPA 8260B	10/28/2006
Ethylbenzene (in ppmv)	1.1	0.050	ppmv	EPA 8260B	10/28/2006
Total Xylenes (in ppmv)	28	0.060	ppmv	EPA 8260B	10/30/2006
Methyl-t-butyl ether (in ppmv)	40	0.10	ppmv	EPA 8260B	10/30/2006
TPH as Gasoline	2100	25	mg/m3	EPA 8260B	10/30/2006
TPH as Gasoline (in ppmv)	530	7.0	ppmv	EPA 8260B	10/30/2006
Toluene - d8 (Surr)	92.1		% Recovery	EPA 8260B	10/30/2006
4-Bromofluorobenzene (Surr)	112		% Recovery	EPA 8260B	10/30/2006

Approved By:

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Project Name: Alaska Gas, Oakland

Project Number: FR-3

Matrix : Air

Lab Number : 53018-02

Report Number: 53018

Date: 11/2/2006

Sample Date :10/27/2006

Sample: Effluent

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Toluene	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Ethylbenzene	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Total Xylenes	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Methyl-t-butyl ether (MTBE)	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Benzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/28/2006
Toluene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/28/2006
Ethylbenzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/28/2006
Total Xylenes (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/28/2006
Methyl-t-butyl ether (in ppmv)	< 0.10	0.10	ppmv	EPA 8260B	10/28/2006
TPH as Gasoline	< 20	20	mg/m3	EPA 8260B	10/28/2006
TPH as Gasoline (in ppmv)	< 5.0	5.0	ppmv	EPA 8260B	10/28/2006
Toluene - d8 (Surr)	94.1		% Recovery	EPA 8260B	10/28/2006
4-Bromofluorobenzene (Surr)	111		% Recovery	EPA 8260B	10/28/2006

Approved By:

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Joel Kiff

Report Number: 53018

Analysis Method Date

Analyzed

Date: 11/2/2006

Method

Reporting

Limit Units

Measured

Value

QC Report : Method Blank Data

Project Name: Alaska Gas, Oakland

Project Number: FR-3

Parameter	Measured Value	Method Reportin Limit	ng Units	Analysis Method	Date Analyzed
Benzene	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Toluene	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Ethylbenzene	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Total Xylenes	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Methyl-t-butyl ether (MTBE)	< 0.20	0.20	mg/m3	EPA 8260B	10/28/2006
Benzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/28/2006
Toluene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/28/2006
Ethylbenzene (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/28/2006
Totał Xylenes (in ppmv)	< 0.050	0.050	ppmv	EPA 8260B	10/28/2006
Methyl-t-butyl ether (in ppmv)	< 0.10	0.10	ppmv	EPA 8260B	10/28/2006
TPH as Gasoline	< 20	20	mg/m3	EPA 8260B	10/28/2006
TPH as Gasoline (in ppmv)	< 5.0	5.0	ppmv	EPA 8260B	10/28/2006
Toluene - d8 (Surr)	93.9		%	EPA 8260B	10/28/2006
4-Bromofluorobenzene (Surr)	109		%	EPA 8260B	10/28/2006

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

<u>Parameter</u>

KIFF (2)		2795 2r Davis, (Lab: 5 Fax: 5	CA 95 30.29 30.29	5616 97.48 97.48	100							SF	1G #	/ La	b No	D.			5	3	01	8			•				Pag	e _1	-	of .	7
Project Contact (Hardcopy or PDF Company / Address: Buck Ra 1169 Chess Dr. Ste Phone #: Fai	To):	· ·	Cali	ifornia	a EDI	Rep	ort?		Ē.	Yes	5	ZNo)				С	hai	n-o	f-C	usto	ody	Re	CO	rd a	and	An	aly	sis	Requ	est		
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G50-5229292 65 Project #: P.C. FR3 Project Name: Alaska C).#: Z-3		EDF			le To		ail A	ddre	ss):					level						-EPA 82	OB)	8260B)	rinking \		()					□ 24	hr	For Lab Use Only
Project Name: Alaska C	396		San	MDIET	Sign	ddfe:		-/		/					EPA 8021	0.5 ppb			(B)	98	,2 EDB	PA 828	st (EPA	24.2 D	15M)	8015N							o de
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Project Address: 6211 San Pablo Au Oakland, CA	1		_												MTBE (EPA 82608) per	MTBE (EPA 8260B)	8280B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates (EPA 8260B)	Lead Scav.(1,2 DCA & 1,2 EDB-EPA	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	Total Lead (EPA 6010)	W.E.T. Lead (STLC)		ľ		1	_
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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- · Results; and
- · Chain of Custody (copy).



WORK ORDER #: 0612158

Work Order Summary

CLIENT:

Mr. Reijo Ratilainen

HerSchy Environmental

P.O. Box 229

Bass Lake, CA 93604

Mr. Reijo Ratilainen BILL TO:

HerSchy Environmental

P.O. Box 229

Bass Lake, CA 93604

PHONE:

559-641-7320

P.O. #

FAX:

12/07/2006

PROJECT #

CONTACT:

A51-01 Alaska Gas

DATE RECEIVED: DATE COMPLETED:

12/20/2006

Kyle Vagadori

			RECEIPT
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.
01A	EFFLUENT 1	Modified TO-3	Tedlar Bag
02A	EFFLUENT 2	Modified TO-3	Tedlar Bag
03A	INFLUENT 1	Modified TO-3	Tedlar Bag
03AA	INFLUENT 1 Duplicate	Modified TO-3	Tedlar Bag
04A	INFLUENT 2	Modified TO-3	Tedlar Bag
05A	Lab Blank	Modified TO-3	NA
06A	LCS	Modified TO-3	NA
06B	LCS	Modified TO-3	NA

CERTIFIED BY:

Sinda d. Fruman

DATE: 12/20/06

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07 Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



LABORATORY NARRATIVE Modified TO-3 HerSchy Environmental Workorder# 0612158

Four 1 Liter Tedlar Bag samples were received on December 07, 2006. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with photo ionization and flame ionization detection. The TPH results are calculated using the response of Gasoline. A molecular weight of 100 is used to convert the TPH ppmv result to ug/L. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. See the data sheets for the reporting limits for each compound.

Requirement	ТО-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples.</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Samples EFFLUENT 1, EFFLUENT 2, INFLUENT 1, INFLUENT 1 Duplicate and INFLUENT 2 were transferred from Tedlar bags into summa canisters to extend the hold time from 72 hours to 14 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.



- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/PID/FID

Client Sample ID: EFFLUENT 1

Lab ID#: 0612158-01A

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.063	0.26	0.10	0.42

Client Sample ID: EFFLUENT 2

Lab ID#: 0612158-02A

	RPt. Limit	крт. цт	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (C5+ Hydrocarbons) ref. to Gasoline	€ 0.092	0.38	0.23	0.95

Client Sample ID: INFLUENT 1

Lab ID#: 0612158-03A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.10	0.32	3.7 M	12 M
Toluene	0.10	0.38	2.1	7.9
Ethyl Benzene	0.10	0.44	0.16	0.70
Total Xylenes	0.20	0.88	3.8	16
Methyl tert-butyl ether	0.10	0.36	22	79
TPH (C5+ Hydrocarbons) ref. to Gasoline	2.5	10	280	1200
C2-C4 Hydrocarbons ref. to Gasoline	2.5	10	7.6	31

Client Sample ID: INFLUENT 1 Duplicate

Lab ID#: 0612158-03AA

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.10	0.32	3.7 M	12 M
Toluene	0.10	0.38	2.0	7.7
Ethyl Benzene	0.10	0.44	0.15	0.66
Total Xylenes	0.20	0.88	3.8	16
Methyl tert-butyl ether	0.10	0.36	22	78
TPH (C5+ Hydrocarbons) ref. to Gasoline	2.5	10	280	1200
C2-C4 Hydrocarbons ref. to Gasoline	2.5	10	7.8	32

Client Sample ID: INFLUENT 2

Lab ID#: 0612158-04A



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/PID/FID

Client Sample ID: INFLUENT 2

Lab ID#: 0612158-04A

Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.11	0.34	3.8 M	12 M
Toluene	0.11	0.40	2.3	8.7
Ethyl Benzene	0.11	0.46	0.20	0.85
Total Xylenes	0.21	0.92	4.2	18
Methyl tert-butyl ether	0.11	0.38	20	73
TPH (C5+ Hydrocarbons) ref. to Gasoline	2.6	11	280	1100
C2-C4 Hydrocarbons ref. to Gasoline	2.6	11	7.6	31



Client Sample ID: EFFLUENT 1 Lab ID#: 0612158-01A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: 61 Dil. Factor:	121609 2.53	[일본] 마니스 보고 있는 하는 하는 사람이 되는 것은		Date of Collection: 12/7/06 Date of Analysis: 12/16/06 02:40 PM	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
Benzene	0.0025	0.0081	Not Detected	Not Detected	
Toluene	0.0025	0.0095	Not Detected	Not Detected	
Ethyl Benzene	0.0025	0.011	Not Detected	Not Detected	
Total Xylenes	0.0051	0.022	Not Detected	Not Detected	
Methyl tert-butyl ether	0.0025	0.0091	Not Detected	Not Detected	
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.063	0.26	0.10	0.42	
C2-C4 Hydrocarbons ref. to Gasoline	0.063	0.26	Not Detected	Not Detected	

		Method
Surrogates	%Recovery	Limits
Fluorobenzene (PID)	117	75-125
Fluorobenzene (FID)	121	75-150



Client Sample ID: EFFLUENT 2

Lab ID#: 0612158-02A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: 6 Dil. Factor:	121610 3.67		Date of Collection: 12/7/06 Date of Analysis: 12/16/06 03:22 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
Benzene	0.0037	0.012	Not Detected	Not Detected	
Toluene	0.0037	0.014	Not Detected	Not Detected	
Ethyl Benzene	0.0037	0.016	Not Detected	Not Detected	
Total Xylenes	0.0073	0.032	Not Detected	Not Detected	
Methyl tert-butyl ether	0.0037	0.013	Not Detected	Not Detected	
TPH (C5+ Hydrocarbons) ref. to Gasoline	9 0.092	0.38	0.23	0.95	
C2-C4 Hydrocarbons ref. to Gasoline	0.092	0.38	Not Detected	Not Detected	

		Method
Surrogates	%Recovery	Limits
Fluorobenzene (PID)	91	75-125
Fluorobenzene (FID)	92	75-150



Client Sample ID: INFLUENT 1

Lab ID#: 0612158-03A

MODIFIED EPA METHOD TO-3 GC/PID/FID

Dil. Factor:	101		Date of Analysis: 12/16/06 03:49 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
Benzene	0.10	0.32	3.7 M	12 M	
Toluene	0.10	0.38	2.1	7.9	
Ethyl Benzene	0.10	0.44	0.16	0.70	
Total Xylenes	0.20	0.88	3.8	16	
Methyl tert-butyl ether	0.10	0.36	22	79	
TPH (C5+ Hydrocarbons) ref. to Gasoline	2.5	10	280	1200	
C2-C4 Hydrocarbons ref. to Gasoline	2.5	10	7.6	31	

M = Reported value may be biased due to apparent matrix interferences.

		Method
Surrogates	%Recovery	Limits
Fluorobenzene (PID)	118	75-125
Fluorobenzene (FID)	125	75-150



Client Sample ID: INFLUENT 1 Duplicate

Lab ID#: 0612158-03AA

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: 6 Dil. Factor:	6121612 101		Date of Collection: 12/7/06 Date of Analysis: 12/16/06 04:27 PM	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.10	0.32	3.7 M	12 M
Toluene	0.10	0.38	2.0	7.7
Ethyl Benzene	0.10	0.44	0.15	0.66
Total Xylenes	0.20	0.88	3.8	16
Methyl tert-butyl ether	0.10	0.36	22	78
TPH (C5+ Hydrocarbons) ref. to Gasoline	2.5	10	280	1200
C2-C4 Hydrocarbons ref. to Gasoline	2.5	10	7.8	32

M = Reported value may be biased due to apparent matrix interferences.

Surrogates	%Recovery	Method Limits
Fluorobenzene (PID)	114	75-125
Fluorobenzene (FID)	123	75-150



Client Sample ID: INFLUENT 2 Lab ID#: 0612158-04A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6121613	Date of Collection: 12/7/06
Dil. Factor:	106	Date of Analysis: 12/16/06 04:54 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.11	0.34	3.8 M	12 M
Toluene	0.11	0.40	2.3	8.7
Ethyl Benzene	0.11	0.46	0.20	0.85
Total Xylenes	0.21	0.92	4.2	18
Methyl tert-butyl ether	0.11	0.38	20	73
TPH (C5+ Hydrocarbons) ref. to Gasoline	2.6	11	280	1100
C2-C4 Hydrocarbons ref. to Gasoline	2.6	11	7.6	31

M = Reported value may be biased due to apparent matrix interferences.

Surrogates	%Recovery	Method Limits
Fluorobenzene (PID)	116	75-125
Fluorobenzene (FID)	125	75-150



Client Sample ID: Lab Blank

Lab ID#: 0612158-05A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: 61 Dil. Factor:	21604 1.00		Date of Collection: N Date of Analysis: 12	医克马特氏征 计统一设计记录
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.0010	0.0032	Not Detected	Not Detected
Toluene	0.0010	0.0038	Not Detected	Not Detected
Ethyl Benzene	0.0010	0.0043	Not Detected	Not Detected
Total Xylenes	0.0020	0.0087	Not Detected	Not Detected
Methyl tert-butyl ether	0.0010	0.0036	Not Detected	Not Detected
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	Not Detected	Not Detected
C2-C4 Hydrocarbons ref. to Gasoline	0.025	0.10	Not Detected	Not Detected
Container Type: NA - Not Applicable				
				Method
Surrogates		%Recovery		Llmits
Fluorobenzene (PID)		116		75-125
Fluorobenzene (FID)		113		75-150



Client Sample ID: LCS Lab ID#: 0612158-06A

MODIFIED EPA METHOD TO-3 GC/PID/FID

 School of the state of the 	그림 그는 이렇게 나온지 않는데 돌아가고 있다. 이 나는 것이 없다.	[설명 물리에는 10] 다루드 : - [1] 요즘은 20 P. 다양이
File Name:	6121616b	Date of Collection: NA
	그는 전다. 그리고 한민준이고 있는 점점 그렇게 된 것 같아 된 것이 되었다면 하는 것이 없다.	- 제작되다. 학회, 자리의 대한 경험 경험 경험, 1996년 대한 학생이다. 이 시간
Dil. Factor:	1.00	Date of Analysis: 12/16/06 06:46 PM

Compound	%Recovery
Benzene	88
Toluene	99
Ethyl Benzene	87
Total Xylenes	90
Methyl tert-butyl ether	96

Container Type: NA - Not Applicable

		Metriod
Surrogates	%Recovery	Limits
Fluorobenzene (PID)	116	75-125



Client Sample ID: LCS Lab ID#: 0612158-06B

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6121618	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/16/06 07:58 PM

Compound		%Recovery
TPH (C2+ Hydrocarbons) ref. to Gasoline		110
Container Type: NA - Not Applicable		
S	N.D.	Method
Surrogates	%Recovery	Limits
Fluorobenzene (FID)	115	75-150



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Project Manager REIJO RATILAIN Collected by: (Print and Sign) REIJO RATILAIN Company HerSchur Env. Email Address PO Box 2009 City BASS LAKE	NEN (355	Project Info P.O. # Project # Project Name	D:	<u>u</u>	Irn Around Time: Normal Rush	tar Dree	sure/Vacuum
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EFFLUENT 2		12706	15:58	THE BIEX, MI				
INFLUENT 1		12 700	13:40	TPHE BIEX, MI				
INFLUENT 2		12 7 00	15:48	TPHY BTEX M	tbl			
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- Results; and
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WORK ORDER #: 0612439

Work Order Summary

CLIENT:

Mr. Reijo Ratilainen

BILL TO: Mr. Reijo Ratilainen

HerSchy Environmental

HerSchy Environmental

P.O. Box 229

Bass Lake, CA 93604

Bass Lake, CA 93604

PHONE:

559-641-7320

P.O. Box 229

Alaska Gas P.O. #

FAX: DATE RECEIVED:

12/20/2006

PROJECT # CONTACT:

Kyle Vagadori

DECEMO

DATE COMPLETED:

12/22/2006

			RECEIPT
FRACTION#	NAME	TEST	VAC./PRES.
01A	Effluent 1	Modified TO-3	Tedlar Bag
02A	Effluent 2	Modified TO-3	Tedlar Bag
03A	Influent 1	Modified TO-3	Tedlar Bag
04A	Influent 2	Modified TO-3	Tedlar Bag
05A	Lab Blank	Modified TO-3	NA
06A	LCS	Modified TO-3	NA
06B	LCS	Modified TO-3	NA

CERTIFIED BY:

12/22/06 DATE:

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07 Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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Page 1 of 12



LABORATORY NARRATIVE Modified TO-3 HerSchy Environmental Workorder# 0612439

Four 1 Liter Tedlar Bag samples were received on December 20, 2006. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with photo ionization and flame ionization detection. The TPH results are calculated using the response of Gasoline. A molecular weight of 100 is used to convert the TPH ppmv result to ug/L. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. See the data sheets for the reporting limits for each compound.

Requirement	TO-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples.</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.



- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/PID/FID

Client Sample ID: Effluent 1

Lab ID#: 0612439-01A

	Rot. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
Toluene	0.0010	0.0038	0.021	0.078
Ethyl Benzene	0.0010	0.0043	0.0012	0.0051
Total Xylenes	0.0020	0.0087	0.0038	0.016
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	0.082	0.34

Client Sample ID: Effluent 2

Lab ID#: 0612439-02A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.0010	0.0032	0.0025	0.0079
Toluene	0.0010	0.0038	0.026	0.10
Ethyl Benzene	0.0010	0.0043	0.0014	0.0060
Total Xylenes	0.0020	0.0087	0.0068	0.030
Methyl tert-butyl ether	0.0010	0.0036	0.0011	0.0040
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	0.12	0.49
C2-C4 Hydrocarbons ref. to Gasoline	0.025	0.10	0.036	0.14

Client Sample ID: Iufluent 1

Lab ID#: 0612439-03A

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
Benzene	0.050	0.16	4.4 M	14 M
Toluene	0.050	0.19	1.4	5.4
Ethyl Benzene	0.050	0.22	0.14	0.63
Total Xylenes	0.10	0.43	3.9	17
Methyl tert-butyl ether	0.050	0.18	13	48
TPH (C5+ Hydrocarbons) ref. to Gasoline	1.2	5.1	140	580
C2-C4 Hydrocarbons ref. to Gasoline	1.2	5.1	3.2	13

Client Sample ID: Influent 2

Lab ID#: 0612439-04A

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
Benzene	0.049	0.16	3.8 M	12 M
Toluene	0.049	0.18	1.2	4.6



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/PID/FID

Client Sample ID: Influent 2

Lab	ID#:	06124	139-()4A
-----	------	-------	-------	-----

Ethyl Benzene	0.049	0.21	0.14	0.61
Total Xylenes	0.098	0.42	3.8	17
Methyl tert-butyl ether	0.049	0.18	12	42
TPH (C5+ Hydrocarbons) ref. to Gasoline	1.2	5.0	120	490
C2-C4 Hydrocarbons ref. to Gasoline	1.2	5.0	2.8	12



Fluorobenzene (FID)

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Effluent 1

Lab ID#: 0612439-01A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: d1 Dil. Factor:	1.00		Date of Collection: Date of Analysis: 1	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.0010	0.0032	Not Detected	Not Detected
Toluene	0.0010	0.0038	0.021	0.078
Ethyl Benzene	0.0010	0.0043	0.0012	0.0051
Total Xylenes	0.0020	0.0087	0.0038	0.016
Methyl tert-butyl ether	0.0010	0.0036	Not Detected	Not Detected
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	0.082	0.34
C2-C4 Hydrocarbons ref. to Gasoline	0.025	0.10	Not Detected	Not Detected
Container Type: 1 Liter Tedlar Bag				
Surrogates		%Recovery		Method Limits
Fluorobenzene (PID)		100		75-125

92

75-150



Client Sample ID: Effluent 2 Lab ID#: 0612439-02A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: d¹ Dil. Factor:	122110 1.00		Date of Collection: 12/20/06 Date of Analysis: 12/21/06 01:08 P		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
Benzene	0.0010	0.0032	0.0025	0.0079	
Toluene	0.0010	0.0038	0.026	0.10	
Ethyl Benzene	0.0010	0.0043	0.0014	0.0060	
Total Xylenes	0.0020	0.0087	0.0068	0.030	
Methyl tert-butyl ether	0.0010	0.0036	0.0011	0.0040	
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	0.12	0.49	
C2-C4 Hydrocarbons ref. to Gasoline	0.025	0.10	0.036	0.14	
Container Type: 1 Liter Tedlar Bag					
Surrogates		%Recovery		Method Limits	
Fluorobenzene (PID)		105		75-125	
Fluorobenzene (FID)		98		75-150	



Client Sample ID: Influent 1

Lab ID#: 0612439-03A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: d1 Dil. Factor:	22113 50.0		Date of Collection: 12/20/06 Date of Analysis: 12/21/06 03:	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.050	0.16	4.4 M	14 M
Toluene	0.050	0.19	1.4	5.4
Ethyl Benzene	0.050	0.22	0.14	0.63
Total Xylenes	0.10	0.43	3.9	17
Methyl tert-butyl ether	0.050	0.18	13	48
TPH (C5+ Hydrocarbons) ref. to Gasoline	1.2	5.1	140	580
C2-C4 Hydrocarbons ref. to Gasoline	1.2	5.1	3.2	13

M = Reported value may be biased due to apparent matrix interferences.

		Method
Surrogates	%Recovery	Limits
Fluorobenzene (PID)	111	75-125
Fluorobenzene (FID)	115	75-150



Client Sample ID: Influent 2 Lab ID#: 0612439-04A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: d122114 Dil. Factor: 48.8			Date of Collection: 12/20/06 Date of Analysis: 12/21/06 04:04	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.049	0.16	3.8 M	12 M
Toluene	0.049	0.18	1.2	4.6
Ethyl Benzene	0.049	0.21	0.14	0.61
Total Xylenes	0.098	0.42	3.8	17
Methyl tert-butyl ether	0.049	0.18	12	42
TPH (C5+ Hydrocarbons) ref. to Gasoline	1,2	5.0	120	490
C2-C4 Hydrocarbons ref. to Gasoline	1.2	5.0	2.8	12

M = Reported value may be biased due to apparent matrix interferences.

		Method
Surrogates	%Recovery	Limits
Fluorobenzene (PID)	111	75-125
Fluorobenzene (FID)	106	75-150



Client Sample ID: Lab Blank Lab ID#: 0612439-05A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: d1 Dil. Factor:	22104 1.00		Date of Collection: N Date of Analysis: 12	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.0010	0.0032	Not Detected	Not Detected
Toluene	0.0010	0.0038	Not Detected	Not Detected
Ethyl Benzene	0.0010	0.0043	Not Detected	Not Detected
Total Xylenes	0.0020	0.0087	Not Detected	Not Detected
Methyl tert-butyl ether	0.0010	0.0036	Not Detected	Not Detected
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	Not Detected	Not Detected
C2-C4 Hydrocarbons ref. to Gasoline	0.025	0.10	Not Detected	Not Detected
Container Type: NA - Not Applicable				
Surrogates		%Recovery		Method Limits
Fluorobenzene (PID)		106		75-125
Fluorobenzene (FID)		98		75-150



Fluorobenzene (PID)

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS Lab ID#: 0612439-06A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: d122121b Dil. Factor: 1.00	Date of Collection: NA Date of Analysis: 12/21/06 09:	12 PM
Сотроили	%Reco	overy
Benzene	10	6
Toluene	11	0
Ethyl Benzene	10	3
Total Xylenes	90)
Methyl tert-butyl ether	11	4
Container Type: NA - Not Applicable		
Surrogates	%Recovery Lim	

118

75-125



Client Sample ID: LCS Lab ID#: 0612439-06B

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name: d122122 Dil. Factor: 1.00	내가 보겠어? 그렇게 이번 가지 아니 사용하는 바다 나는 나는 그 그리고 어디로 다짐	Date of Collection: NA Date of Analysis: 12/21/06 10:19 PM			
Compound		%Recovery			
TPH (C2+ Hydrocarbons) ref. to Gasoline		96			
Container Type: NA - Not Applicable					
Surrogates	%Recovery	Method Limits			
Fluorobenzene (FID)	120	75-150			



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