HerSchy Environmental, Inc.

November 11, 2005
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 August, 2005 Quarterly Groundwater Monitoring, 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. 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 August 15 and 17, 2005.

METHODS OF INVESTIGATION

Groundwater Sampling Procedures:

Groundwater samples were collected from three of the seven monitoring wells (MW-1R, MW-3, MW-6) on August 15, 2005, and from two more of the seven monitoring wells on August 17, 2005 (MW-2, MW-5). Monitoring wells EX-1 and MW-4 were found to have 0.83 and 0.50 feet of floating product, respectively, 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 8260.

RESULTS OF INVESTIGATION

Groundwater Conditions:

Because EX-1 and MW-4 contained floating product, no samples were collected from these wells. Groundwater data from wells with floating product is not used in determining the groundwater flow direction or gradient.

Groundwater was present beneath the site at an average depth of 7.78 feet below the surveyed well elevations during the August 2005 monitoring event. Groundwater elevation during the August 2005 monitoring event averaged 28.09 feet above mean sea level. This represents a decrease in average groundwater elevation of about 1.17 feet since the May 2005 monitoring event based on average depth to water in the two wells sampled last quarter (MW-2 and MW-5). Groundwater flow direction is estimated at South 38 degrees West at a gradient of 0.013. 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 2, 2004*			
EX-1	33.28	1.25' free product	------
MW-1R	36.67	8.49	28.18
MW-2	36.33	7.65	28.68
MW-3	35.12	6.88	28.24
MW-4	34.11	0.63' free product	------

Table 1 (Continued)

Well Number	Elevation	Depth to GW	GW Elevation
MW-5	35.17	6.43	28.74
MW-6	36.07	7.57	28.50
Flow Direction = S. 63 W.; Gradient = .0083			
February17, 2005*			
EX-1	33.28	0.34' free product	------
MW-1R	36.67	6.57	30.10
MW-2	36.33	5.86	30.47
MW-3	35.12	5.01	30.11
MW-4	34.11	1.50' free product	------
MW-5	35.17	4.88	30.29
MW-6	36.07	5.70	30.37
Flow Direction = S. 55 W.; Gradient = .0036			
May 24 and 26, 2005*			
EX-1	33.28	NS	NS
MW-1R	36.67	NS	NS
MW-2	36.33	6.39	29.94
MW-3	35.12	NS	NS
MW-4	34.11	0.48' free product	28.79 (Estimated)
MW-5	35.17	6.02	29.15
MW-6	36.07	NS	NS
Flow Direction = S. 16 W.; Gradient = .0097; Estimate only			
August 15 & 17, 2005*			
EX-1	33.28	0.83' free product	------
MW-1R	36.67	8.55	28.12
MW-2	36.33	7.99	28.34
MW-3	35.12	7.71	27.41
MW-4	34.11	0.5' free product	------
MW-5	35.17	6.75	28.42
MW-6	36.07	7.91	28.16
Flow Direction = S. 38 W.; Gradient = .013			

Elevations in feet * survey conducted 7/8/04

NS = buried and not sounded or sampled

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 Table 2 below:

Table 2
Laboratory Analytical Results for Groundwater, Alaska Gasoline, Oakland

Well No	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
November 2, 2004						
EX-1	NA	NA	NA	NA	NA	NA
MW-1R	290	14	30	9.5	45	45
MW-2	530	35	ND	17	30	520
MW-3	150,000	1,700	ND	ND	ND	350,000
MW-4	NA	NA	NA	NA	NA	NA
MW-5	ND	2.6	ND	1.7	0.87	1.0
MW-6	1,800	32	ND	5.4	11	4,100
February 17, 2005						
EX-1	NA	NA	NA	NA	NA	NA
MW-1R	530	3.4	ND	ND	2.6	1,000
MW-2	18,000	2,100	31	800	680	20,000
MW-3	130,000	2,100	420	210	730	290,000
MW-4	NA	NA	NA	NA	NA	NA
MW-5	51	0.74	ND	0.94	ND	1.5
MW-6	5,600	190	34	41	110	10,000
May 24 and 26, 2005						
EX-1	NA	NA	NA	NA	NA	NA
MW-1R	NA	NA	NA	NA	NA	NA
MW-2	22,000	3,200	52	1,400	1,700	16,000
MW-3	NA	NA	NA	NA	NA	NA
MW-4	NA	NA	NA	NA	NA	NA
MW-5	ND	ND	ND	ND	ND	1.0
MW-6	NA	NA	NA	NA	NA	NA
August 15 and 17, 2005						
EX-1	NA	NA	NA	NA	NA	NA
MW-1R	2,500	64	240	61	210	2,300
MW-2	2,000	66	ND	46	47	2,400
MW-3	110,000	1,500	ND	ND	ND	260,000
MW-4	NA	NA	NA	NA	NA	NA
MW-5	ND	ND	ND	ND	ND	0.88
MW-6	1,800	27	ND	6.0	23	3,800

All results presented in parts per billion (ppb) NA= no analysis
MTBE results by EPA method 8260 ND= below detectable limits

As requested by your office, groundwater samples were also analyzed for the fuel additives di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butanol (TBA), 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), methanol, and ethanol. Laboratory analytical results are presented in Appendix B and are summarized in Table 3 below:

Table 3
Laboratory Analytical Results for Groundwater, Alaska Gasoline, Oakland

Sample	TAME	TBA	Methanol	Ethanol
November 2, 2004				
MW-1R	1.1	ND	NA	NA
MW-2	28	100	NA	NA
MW-3	31,000	140,000	NA	NA
MW-5	ND	ND	NA	NA
MW-6	170	270	NA	NA
February 17, 2005				
MW-1R	100	ND	NA	NA
MW-2	1,000	ND	NA	NA
MW-3	11,000	ND	NA	NA
MW-5	ND	ND	NA	NA
MW-6	780	2,000	NA	NA
May 24 and 25, 2005				
MW-1R	NS	NS	NS	NS
MW-2	610	ND	NA	NA
MW-3	NS	NS	NS	NS
MW-5	ND	ND	NA	NA
MW-6	NS	NS	NS	NS
August 15 and 17, 2005				
MW-1R	210	ND	NA	NA
MW-2	95	880	NA	NA
MW-3	21,000	25,000	NA	NA
MW-5	ND	ND	NA	NA
MW-6	300	3,500	NA	NA

ND = below detectable concentrations
All results in parts per billion (ppb)
NA = no analysis
NS = not sampled

There was no EDB, 1,2-DCA, DIPE, or ETBE detected in the groundwater samples during the August 2005 monitoring event. Ethanol and methanol were not detected in any of the groundwater samples during the May 2004 monitoring event and are no longer being included in the laboratory analysis.

CONCLUSIONS AND RECOMMENDATIONS

All of the on-site monitoring wells sampled during the August 2005 event were impacted, to varying degrees, with gasoline constituents. No samples were collected from EX-1 or MW-4 due to the presence of floating product in those wells. The highest concentrations detected this quarter are from MW-3, the well that historically has recorded the highest contaminant concentrations of the wells without floating product. Concentrations remain relatively low in MW-5. This is likely due to the up-gradient location of MW-5 relative to the USTs. Relatively high concentrations of petroleum hydrocarbons remain in soil and groundwater beneath the subject site. This is clearly evident by the fact that monitoring well MW-4 continues to contain floating product, and well EX-1 now contains floating product, though in past sampling events it had not.

The authority to construct (ATC) for the soil vapor extraction system (SVES) has cleared the Bay Area Air Quality Management District (BAAQMD). We have applied for, and are now awaiting, an electrical permit from the City of Oakland for SVES construction and operation. An on-site meeting with a PG&E representative and an independent electrical contractor took place on November 2, 2005 for the purpose of clarifying the utilities requirements and plans within the SVES enclosure.

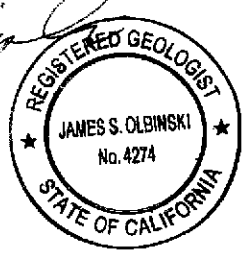
If you have any questions or need additional information, please contact the undersigned at the letterhead address or at (559) 641-7320.

With best regards,
HerSchy Environmental, Inc.

William E. Ackland
Hydrogeologist

Edward L. Kaczmarek
Geologist

James S. Olbinski
Registered Geologist #4274



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

HerSchy Environmental, Inc.

Environmental Consulting and Remediation

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

SITE LOCATION MAP

ALASKA GASOLINE COMPANY

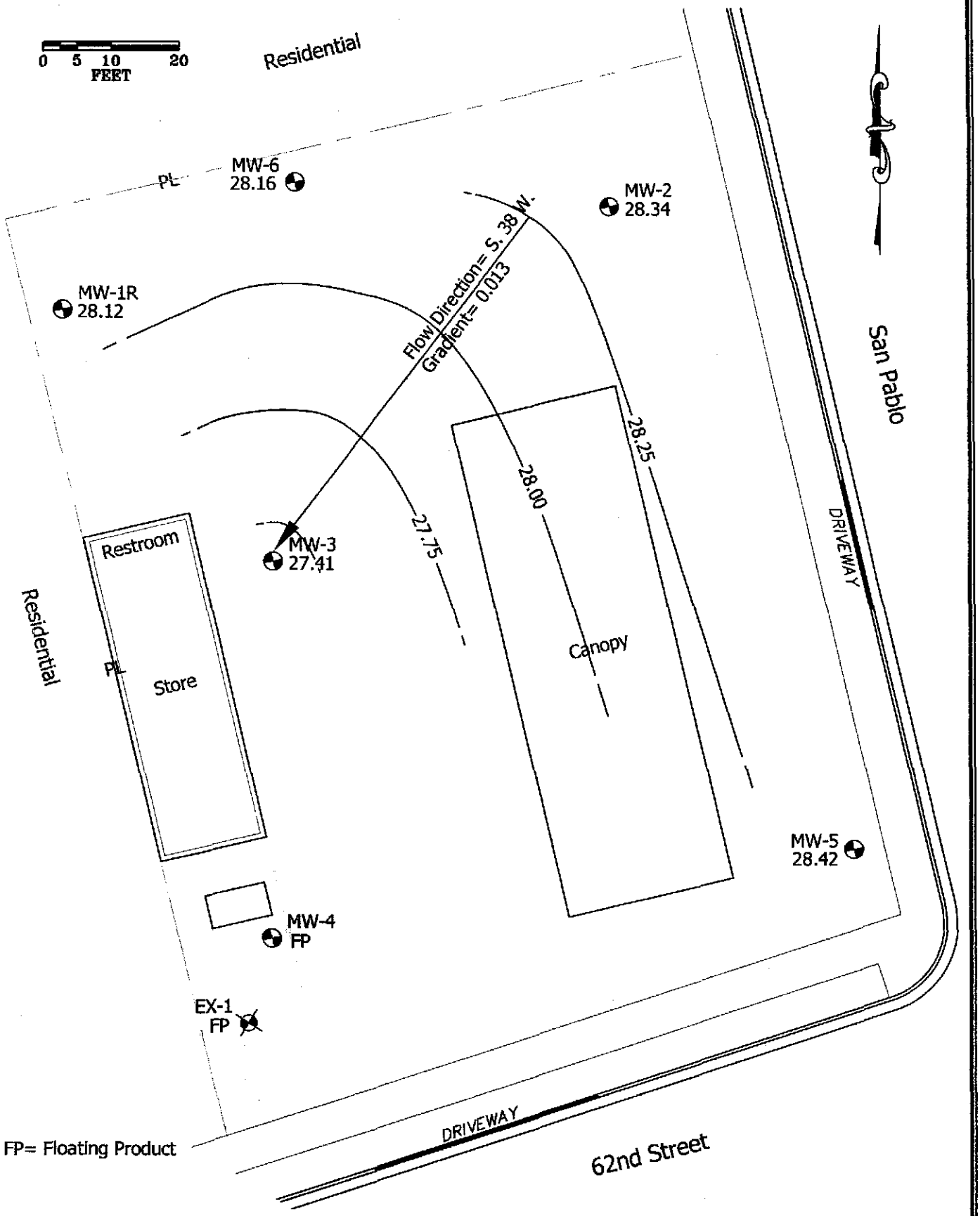
6211 San Pablo Avenue, Oakland, California

DATE: August 2005

FILE NO.: A51.01

DRAWN BY: WEA

FIGURE 1



HerSchy Environmental, Inc.
Environmental Consulting and Remediation
P. O. Box 229
Bass Lake, California 93604-0229
Tel. (559) 641-7320, Fax (559) 641-7340

AUGUST 2005 GROUNDWATER CONDITIONS

ALASKA GASOLINE COMPANY

6211 San Pablo Avenue, Oakland, California

DATE: October 2005

FILE NO.: A51-01

DRAWN BY: JSO

FIGURE 2

APPENDIX A

GROUNDWATER FIELD

SAMPLING DATA SHEETS

HerSchy **WATER SAMPLE FIELD DATA SHEET**
Environmental

Client Name: ALASKA GAS Location: OAKLAND

Purged By: _____ Sampled by: _____

Sample ID: EX-1 Type: Groundwater X Surface Water _____ Other _____

Casing Diameter (inches): 2 _____ 3 _____ 4 X 5 _____ 6 _____ Other _____

Casing Elevation (feet/MSL): 33.28 Volume in Casing (gal.): _____

Depth of Well (feet): _____ Calculate Purge Volume (gal.): _____

Depth to Water (feet): _____ Actual Purge Volume (gal.): _____

Date Purged: _____ Date Sampled: _____

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
		N/A			

Sheen Y/N?: _____ Odor: PETROLEUM

Purging Equipment: _____

Sampling Equipment: _____

Remarks: DEPTH TO PRODUCT 5.08
DEPTH TO WATER 5.91
.83 FT OF PRODUCT

Sampler's Signature: _____

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-1R Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 36.67 Volume in Casing (gal.): 2.4

Depth of Well (feet): 23.40 Calculate Purge Volume (gal.): 7.3

Depth to Water (feet): 8.55 Actual Purge Volume (gal.): 7.5

Date Purged: 08-15-05 Date Sampled: 08-15-05 1417

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
1405	-	2.71	826	38.1	MUDDY
1415	7+	2.95	762	39.5	CLOUDY

Sheen Y/N?: Y Odor: PETROLEUM

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John S. Miller

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

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 Y 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 36.33 Volume in Casing (gal.): 2.1

Depth of Well (feet): 20.90 Calculate Purge Volume (gal.): 6.4

Depth to Water (feet): 7.99 Actual Purge Volume (gal.): 7+ ~~1300~~

Date Purged: 08-17-05 Date Sampled: 08-17-05 1300

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
1248	✓	6.84	749	73.3	CLEAR
1257	6.5	6.91	661	70.5	CLOUDY

Sheen Y/N?: Y Odor: PETROLEUM

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John S. Wilson

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-3 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 33.12 Volume in Casing (gal.): 2.2

Depth of Well (feet): 21.20 Calculate Purge Volume (gal.): 6.6

Depth to Water (feet): 7.71 Actual Purge Volume (gal.): 7+

Date Purged: 08-15-05 Date Sampled: 08-15-05 1355

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
1347	-	6.10	922	69.0	Cloudy
1356	6.5	6.45	898	65.9	Cloudy

Sheen Y/N?: Y Odor: PETROLEUM

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John S. Wilson

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: _____ Sampled by: _____

Sample ID: MW-4 Type: Groundwater X Surface Water _____ Other _____

Casing Diameter (inches): 2 X 3 _____ 4 _____ 5 _____ 6 _____ Other _____

Casing Elevation (feet/MSL): 34.11 Volume in Casing (gal.): _____

Depth of Well (feet): _____ Calculate Purge Volume (gal.): _____

Depth to Water (feet): _____ Actual Purge Volume (gal.): _____

Date Purged: _____ Date Sampled: _____

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
		N/A			

Sheen Y/N?: _____ Odor: PETROLEUM

Purging Equipment: _____

Sampling Equipment: _____

Remarks: DEPTH TO PRODUCT 5.92
DEPTH TO WATER 6.42
.5 FT OF PRODUCT

Sampler's Signature: _____

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-5 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 35.17 Volume in Casing (gal.): 2.9

Depth of Well (feet): 24.90 Calculate Purge Volume (gal.): 9.0

Depth to Water (feet): 6.75 Actual Purge Volume (gal.): 9+

Date Purged: 08-17-05 Date Sampled: 08-17-05 1323

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
1308	-	6.86	675	69.5	MUDDY
1320	9	6.81	641	66.9	CLOUDY

Sheen Y/N?: Y Odor: SULFER

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John S. West

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-6 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 36.07 Volume in Casing (gal.): 2.5

Depth of Well (feet): 23.10 Calculate Purge Volume (gal.): 7.5

Depth to Water (feet): 7.91 Actual Purge Volume (gal.): 8+

Date Purged: 08-15-05 Date Sampled: 08-15-05 1435

TIME	VOLUME	pH	E.C.	TEMP.	TURBIDITY
1424	-	6.93	~~487~~	67.7	CLOUDY
1432	7.5	5.77	542	58.6	CLOUDY

Sheen Y/N?: V Odor: PETROLEUM

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John J. West

/Water Sample Sheet.wpd

APPENDIX B

CERTIFIED ANALYTICAL REPORTS

WITH CHAIN-OF-CUSTODY

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate #2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Sampled: See Below
P.O. Box 229	Reference Number: 8485	Received: 08-19-05
Bass Lake, CA 93604	Sample Description: Water	Extracted: 08-19-05
Attn: William Ackland	Sample Prep/Analysis Method: EPA 5030/8015M, 8020	Analyzed: 08-19-05
	Lab Numbers: 8485-1W, 2W, 3W, 4W, 5W	Reported: 08-29-05

TOTAL PETROLEUM HYDROCARBONS - GASOLINE WITH BTEX DISTINCTION

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 (µg/L)	SAMPLE ID MW-6 (µg/L)
MTBE	0.50	2300	2600	260000	0.88	3800
BENZENE	0.50	64	66	1500	ND	27
TOLUENE	0.50	240	ND	ND	ND	ND
ETHYLBENZENE	0.50	61	46	ND	ND	6.0
TOTAL XYLENES	0.50	210	47	ND	ND	23
GASOLINE RANGE HYDROCARBONS	50	2500	2000	110000	ND	1800
Report Limit Multiplication Factor:		5	5	200	1	5
Report Limit Multiplication Factor for MTBE only:		100	100	10000		500
Date Sampled:		08-15-05	08-17-05	08-15-05	08-17-05	08-15-05

Surrogate % Recovery:	FID: 116% / PID: 105%	FID: 159% / PID: 117%	FID: 91.5% / PID: 84.8%	FID: 92.5% / PID: 90.3%	FID: 103% / PID: 96.0%
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 / Environmental Lab Director or
Clari J. Cone / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate # 2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental
P.O. Box 229
Bass Lake, CA 93604
Attn: William Ackland

Client Project ID: Alaska Gas - Oakland
Reference Number: 8485
Sample Description: Water
Analyst: Jim Phillips

Method: EPA 5030/8015M,8020
Instrument ID: Var-GC1
Extracted: 08-19-05
Analyzed: 08-19-05
Reported: 08-29-05

QUALITY CONTROL DATA REPORT

ANALYTE	Gasoline	MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylenes
Spike Concentration:	110	2.16	1.34	7.58	1.82	8.88
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
LCS Batch #:	VW-8195bhp2	VW-8195bhp2	VW-8195bhp2	VW-8195bhp2	VW-8195bhp2	VW-8195bhp2
LCS % Recovery:	104%	101%	103%	100%	107%	105%
Surrogate Recovery:	97.7%	92.4%	92.4%	92.4%	92.4%	92.4%
Control Limits:	70-130 %	70-130 %	70-130 %	70-130 %	70-130 %	70-130 %
MS/MSD Batch #:	VW-8195bhp2	VW-8195bhp2	VW-8195bhp2	VW-8195bhp2	VW-8195bhp2	VW-8195bhp2
Spike Concentration:	110	2.16	1.34	7.58	1.82	8.88
MS % Recovery:	101%	108%	103%	100%	110%	107%
Surrogate Recovery:	102%	96.5%	96.5%	96.5%	96.5%	96.5%
MSD % Recovery:	96.9%	99.5%	97.4%	102%	112%	110%
Surrogate Recovery:	106%	100%	100%	100%	100%	100%
Relative % Difference:	3.63%	8.18%	5.77%	1.32%	1.87%	2.95%
Method Blank :	ND	ND	ND	ND	ND	ND
Surrogate Recovery:	87.1%	85.5%	85.5%	85.5%	85.5%	85.5%

The LCS (Laboratory Check Sample) is a control sample of known, interferent free matrix that is fortified with representative analytes and analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery is used for validation of sample batch results. Due to matrix effects, the QC limits and recoveries for MS/MSD's are advisory only and are not used to accept or reject batch results.

APPROVED BY: *Clari J. Cone*
Clari J. Cone
Laboratory Manager

APPROVED BY: *James C. Phillips*
James C. Phillips
Laboratory Director

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate #2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Sampled: See Below
P.O. Box 229	Reference Number: 8485	Received: 08-19-05
Bass Lake, CA 93604	Sample Description: Water	Extracted: 08-22-05
Attn: William Ackland	Sample Prep/Analysis Method: EPA 5030/8260	Analyzed: 08-22-05
	Lab Numbers: 8485-1W, 2W, 3W, 4W, 5W	Reported: 08-29-05

GASOLINE ADDITIVES 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 (µg/L)	SAMPLE ID MW-6 (µg/L)
FUEL OXYGENATES						
Methyl tert-Butyl Ether (MTBE)	0.50	2300	2400	260000	0.88	3800
Di-isopropyl Ether (DIPE)	0.50	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether (ETBE)	0.50	ND	ND	ND	ND	ND
tert-Amyl Methyl Ether (TAME)	0.50	210	95	21000	ND	300
tert-Butanol (TBA)	20	ND	880	25000	ND	3500
VOLATILE HALOCARBONS						
1,2-Dichloroethane (1,2-DCA)	0.50	ND	ND	ND	ND	ND
Ethylene Dibromide (EDB)	0.50	ND	ND	ND	ND	ND
Report Limit Multiplication Factor:		20*	10*	1000*	1	20*
Report Limit Multiplication Factor for MTBE:		200	200	10000		200
Date Sampled:		08-15-05	08-17-05	08-15-05	08-17-05	08-15-05

** Report limit raised due to matrix interference*

Surrogate Recoveries					
1,2-Dichloroethane-d4	90.0%	90.9%	90.2%	85.4%	87.0%
Toluene-d8	81.4%	82.8%	84.4%	77.6%	80.0%

Instrument ID: HP 5972 MS
Analytes reported as ND were not detected or below the Practical Quantitation Limit
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor
(µg/L) = micrograms per liter or parts per billion (ppb)

APPROVED BY: _____

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

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate #2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Method: EPA 5030/8260
P.O. Box 229	Reference Number: 8485	Instrument ID: HP 5972 MS
Bass Lake, CA 93604	Sample Description: Water	Prepared: 08-22-05
Attn: William Ackland	Analyst: Scott Foster	Analyzed: 08-22-05
		Reported: 08-29-05

QUALITY CONTROL DATA REPORT

SPIKE ID: VWMS-8225

	Reporting Limit µg/L	BLANK Result µg/L	Spiking Level µg/L	Control Spike %R	%R Limits
COMPOUNDS					
t-Butyl Alcohol (t-BA)	20	ND	75.0	88.0%	57.6-163
Methyl t-butyl ether (MTBE)	0.50	ND	2.50	88.0%	64.7-134
Diisopropyl ether (DIPE)	0.50	ND	2.50	85.2%	58.2-135
Ethyl t-Butyl ether (ETBE)	0.50	ND	2.50	86.4%	65.0-132
t-Amyl methyl ether (TAME)	0.50	ND	2.50	86.0%	61.0-139
1,2-Dichloroethane (1,2-DCA)	0.50	ND	2.50	86.4%	70.1-145
Ethylene dibromide (EDB)	0.50	ND	2.50	86.8%	55.0-156
Surrogates:					
1,2-Dichloroethane-d4	1.00	95.7%	10.0	72.6%	80.0-118
Toluene-d8	1.00	83.1%	10.0	69.2%	74.1-129

	Spiking Level µg/L	MATRIX SPIKE %R	MATRIX SPIKE DUP %R	%R Limits	%RPD
COMPOUNDS					
t-Butyl Alcohol (t-BA)	75.0	96.5%	99.9%	39.7-178	3.39%
Methyl t-butyl ether (MTBE)	2.50	106%	111%	55.3-144	4.26%
Diisopropyl ether (DIPE)	2.50	88.8%	87.2%	54.9-135	1.82%
Ethyl t-Butyl ether (ETBE)	2.50	85.2%	88.4%	54.0-136	3.69%
t-Amyl methyl ether (TAME)	2.50	71.2%	79.2%	39.6-131	9.17%
1,2-Dichloroethane (1,2-DCA)	2.50	89.6%	93.6%	73.9-147	4.37%
Ethylene dibromide (EDB)	2.50	93.6%	90.4%	63.3-141	3.48%
Surrogate:					
1,2-Dichloroethane-d4	10.0	80.4%	81.0%	68.9-128	0.743%
Toluene-d8	10.0	70.2%	66.9%	68.0-128	4.81%

The LCS (Laboratory Check Sample) is a control sample of known, interferent free matrix that is fortified with representative analytes and analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery is used for validation of sample batch results. Due to matrix effects, the QC limits and recoveries for MS/MSD's are advisory only and are not used to accept or reject batch results.

APPROVED BY: _____

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

CASTLE ANALYTICAL LABORATORY

CHAIN OF CUSTODY

Location: 2333 Shuttle Drive, Bldg 908/909, Atwater, CA 95301
Mailing Address: 2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930 - Fax: (209) 384-1507

Certificate No. 2480

PAGE 1 OF 1

Customer: ALASKA GAS
Address:
City/State/ZIP: OAKLAND
Phone / FAX:
Proj # / P.O. #:
Report Attention: BILL
Sampler Signature: John S. West
Printed: JOHN S. WEST

Lab ID#	SAMPLE ID	DATE	TIME	DESCRIPTION/LOCATION	SAMPLE TYPE (g) grab (c) composite (d) discrete	SAMPLE MATRIX (s) solid (l) liquid (o) other	REQUESTED ANALYSES: BTEX/TPH-GAS	MTBE	TPH-DIESEL	TRPH 418.1M	Oxy's / EDB / DCA by 8260	8260	Electronic Deliverables (EDF)	NUMBER OF CONTAINERS	OBSERVATIONS/REMARKS
~~—~~	~~EXT~~	—	—	—	—	—	~~X~~	~~X~~			~~X~~			~~3~~	
8485-1W	MW-1R	08-15	1417		G	L	X	X			X			3	
-2W	MW-2	08-17	1300												
-3W	MW-3	08-15	1358												
-4W	MW-5	08-17	1323												
-5W	MW-6	08-15	1435												

Method of Shipment:

Notes:

	Signature	Printed Name	Date	Time	Company Name
Relinquished by:	John S. West	JOHN S. WEST	08-19	1110	HERSCHY ENV.
Received by:					
Relinquished by:					
Received by:					
Relinquished by:					
Received by:	Yuridia Ambriz	Yuridia Ambriz	8/19/05	1110	Castle Analytical

15 Total number of containers submitted to the laboratory

Note: All special requests (e.g. quick turn times) must be cleared through authorized laboratory personnel .

RESULTS DUE : _____

☐ VERBAL ☐ WRITTEN