January 16, 2008

Ms. Donna Drogos
Alameda County
Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Ste. 250
Alameda, California 94502-6577

RE: Results of November 2007 Quarterly Groundwater Monitoring
Alaska Gas
6211 San Pablo Avenue
Oakland, California

Dear Ms. Drogos:

Attached for your review and comment is the January 16, 2008 *Results of November 2007 Quarterly Groundwater Monitoring* 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

HerSchy Environmental, Inc.

January 16, 2008
Project A51-01

Ms. Donna Drogos
Alameda County
Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Ste. 250
Alameda, California 94502-6577

Re: **Results of November 2007 Quarterly Groundwater Monitoring**
Alaska Gasoline Company
6211 San Pablo Avenue
Oakland, California
Case #RO0000127

Dear Ms. Drogos:

HerSchy Environmental, Inc. (HerSchy), on behalf of Mr. Pritpaul Sappal of the Alaska Gasoline Company, has prepared this report summarizing the results of the most recent quarterly monitoring event. Also included is a summary of progress with the soil vapor extraction system (SVES), status of on-going permitting, and status of off-site work. 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 November 8, 2007.

METHODS OF INVESTIGATION

Groundwater Sampling Procedures

Groundwater samples were collected from six of the seven monitoring and extraction wells on November 8, 2007. Extraction well EX-1 was found to have low levels of free product, and therefore was 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. All purge water is stored on-site in either

55-gallon drums or the excess water tank attached to the remediation unit. When water levels in storage tanks near capacity, the water is then removed by a licensed hauler and disposed of in a state-approved repository. Physical characteristics (temperature, electrical conductivity, and pH) were measured at the initiation of purging and at each purged well volume. These characteristics were recorded on field sampling data sheets and 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 either frozen gel packs or ice immediately after sampling. Samples were maintained at, or below, four degrees Celsius until delivered to the laboratory. All groundwater samples are stored, transported, and delivered under proper chain-of-custody documentation and delivered to a California certified laboratory.

SVES Monitoring

The SVES was shutdown on November 19, 2007 due to low productivity in terms of a cost-effective remediation effort. Further discussion of SVES activities is included below. Prior to shutdown, regular monitoring of the SVES included measurements of various physical system properties and was performed on at least a monthly basis. Samples for laboratory analyses collected from the SVES are taken from influent and effluent air streams. Air samples are collected utilizing a vacuum box and tedlar bags attached to the influent and effluent air stream. Negative pressure created by the vacuum box fills the tedlar bags with process air. Air samples are packed in sealed, unchilled containers for transport immediately following sampling. Air flow readings are taken with a hotwire style velocity meter inserted into the influent air stream. All air samples are stored, transported, and delivered under proper chain-of-custody documentation and delivered to a California certified laboratory.

Monitored parameters include, but are not limited to the following:

- Measurement of influent & effluent concentrations using either a portable organic vapor analyzer (OVA) or laboratory analysis
- Air flow readings into the oxidizer
- System runtime hours
- System temperature levels
- Water production levels
- Vacuum exerted on vapor extraction wells (as needed)
- Currently operating vapor extraction wells

A comprehensive table of field monitoring data is included as Appendix B.

Laboratory Analysis

Vapor and groundwater samples were analyzed for gasoline-range total petroleum hydrocarbons (TPHg) by EPA method 8015M, benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA method 8021B. 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

SoakEase™ absorbent product socks are currently being utilized in well EX-1 where free product has been a recurrent issue. Product levels in socks have been monitored in concert with SVES monitoring activities and are replaced as needed. Since September 28, 2007, approximately 2 gallons have been removed through the use of the product-specific socks. Product thickness in EX-1, during the November sampling event, was recorded at ¼-inch.

Groundwater was present beneath the site at an average depth of 7.48 feet below the average surveyed well elevation during the November 2007 monitoring event. Groundwater elevation during this quarter averaged 28.12 feet above mean sea level. This represents a decrease in average groundwater elevation of approximately 0.15 feet since the August 2007 monitoring event. It should also be noted here that wells MW-1R and MW-4, which have been excluded from past groundwater data calculations, are included this quarter. Groundwater flow direction was approximately South 65 degrees West at a gradient of 0.012 on November 8, 2007. Groundwater conditions are summarized in Table 1 and are presented graphically in Figure 2. A comprehensive table of historical groundwater data is included as Appendix C.

Table 1
Groundwater Conditions
Alaska Gasoline, Oakland

Well Number	Elevation	Depth to GW	GW Elevation
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	28.7
MW-6	36.07	7.6	28.47
Flow Direction = S. 9 W.; Gradient = 0.03			

Table 1 *(continued)*

Groundwater Conditions

Alaska Gasoline, Oakland

Well Number	Elevation	Depth to GW	GW Elevation
February 23, 2007			
EX-1	33.28	NS	------
MW-1R	36.67	NA	NA
MW-2	36.33	6.27	30.06
MW-3	35.12	6.15	28.97
MW-4	34.11	0.97' free product	------
MW-5	35.17	5.59	29.58
MW-6	36.07	6.78	29.29
Flow Direction = S. 39 W.; Gradient = 0.012			
May 10, 2007			
EX-1	33.28	0.30' free product	--
MW-1R	36.67	6.39*	--
MW-2	36.33	6.83	29.50
MW-3	35.12	6.54	28.58
MW-4	34.11	0.47' free product	--
MW-5	35.17	5.9	29.27
MW-6	36.07	6.72	29.35
Flow Direction = S. 39 W.; Gradient = 0.012			
August 16, 2007			
EX-1	33.28	0.08' free product	--
MW-1R	36.67	9.33*	--
MW-2	36.33	7.26	29.07
MW-3	35.12	7.62	27.50
MW-4	34.11	NM	--
MW-5	35.17	6.79	28.38
MW-6	36.07	7.94	28.13
Flow Direction = S. 49 W.; Gradient = 0.022			
November 8, 2007			
EX-1	33.28	0.01' free product	--
MW-1R	36.81	8.83	27.98
MW-2	36.33	7.81	28.52
MW-3	35.12	7.52	27.60
MW-4	34.11	6.60	27.51
MW-5	35.17	6.43	28.74
MW-6	36.07	7.71	28.36
Flow Direction = S 65 W; Gradient = 0.012			

Elevations in feet above mean sea level (MSL)
* well not surveyed at time of sampling
NA – Not applicable
** See Groundwater Data Section for details

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. Groundwater samples were not collected from well EX-1 due to the presence of free product as noted in Table 1 above. Table 2 summarizes analytical data for the current quarter along with data from the previous six quarters. Certified analytical reports and chain-of-custody documentation for the current quarter are presented in Appendix D.

Table 2
Laboratory Analytical Results for Groundwater
Alaska Gasoline

	TPHg	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*TAME*	*TBA*
MW-1R								
August 18, 2006	5,800	190	1,000	230	1,000	490	36	2,900
December 1, 2006	410	1.7	6.3	1.2	47	100	4.7	100
February 23, 2007	ND	ND	0.51	ND	1.4	2.6	ND	ND
May 10, 2007	ND	ND	ND	ND	2.0	5.9	ND	ND
August 16, 2007	ND	ND	ND	ND	ND	ND		
November 8, 2007	1,300	11	82	54	270	1.4	ND	ND
MW-2								
August 18, 2006	360	11	ND	13	9.7	160	4.6	600
December 1, 2006	11,000	1,000	ND	990	910	2,100	87	2,000
February 23, 2007	3,200	210	ND	270	85	900	33	1,400
May 10, 2007	590	31	ND	39	22	200	5.9	250
August 16, 2007	650	49	ND	71	49	100	3.5	82
November 8, 2007	110	1.6	ND	1.9	1.5	23	0.64	48
MW-3								
August 18, 2006	310,000	1,800	ND	ND	ND	440,000	23,000	79,000
December 1, 2006	270,000	ND	ND	ND	ND	290,000	11,000	90,000
February 23, 2007	220,000	ND	ND	ND	ND	260,000	15,000	33,000
May 10, 2007	140,000	ND	ND	ND	ND	180,000	7,100	80,000
August 16, 2007	69,000*	ND	ND	ND	ND	85,000	3,400	180,000
November 8, 2007	34,000*	ND	ND	ND	ND	38,000	1,400	140,000
MW-4								
August 18, 2006	NA	NA	NA	NA	NA	NA	NA	NA
December 1, 2006	NA	NA	NA	NA	NA	NA	NA	NA
February 23, 2007	NA	NA	NA	NA	NA	NA	NA	NA
May 10, 2007	NA	NA	NA	NA	NA	NA	NA	NA
September 6, 2007	49,000	710	840	ND	10,000	3,600	510	32,000
November 8, 2007	64,000	1,300	2,600	1,000	8,500	1,500	360	14,000
MW-5								
August 18, 2006	ND	ND	ND	ND	ND	1	ND	ND
December 1, 2006	ND	0.69	ND	ND	0.52	0.97	ND	ND
February 23, 2007	73	ND	ND	ND	ND	1.7	ND	ND
May 10, 2007	ND	ND	ND	ND	ND	1.5	ND	ND
August 16, 2007	ND	ND	ND	ND	ND	1.3	ND	ND
November 8, 2007	ND	ND	ND	ND	ND	1.5	ND	ND

Table 2 *(continued)*
Laboratory Analytical Results for Groundwater
Alaska Gasoline

	TPHg	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*TAME*	*TBA*
MW-6								
August 18, 2006	270	27	ND	3	4	240	11	2,400
December 1, 2006	1,700	ND	ND	ND	ND	1,700	92	800
February 23, 2007	ND	ND	ND	ND	ND	15	ND	ND
May 10, 2007	ND	3.0	ND	ND	1.9	26	2	48
August 16, 2007	ND	ND	ND	ND	ND	1.4	ND	ND
November 8, 2007	ND	ND	ND	ND	ND	5.3	ND	ND
EX-1								
February 19-20, 2004	120,000	9,500	4,300	840	3,900	150,000	*NA*	*NA*

- All reported values in parts per billion (ppb)
- ND = below laboratory detection limits
- NA = not analyzed
- NS = not sampled

No DIPE, ETBE, EDB, or 1,2-DCA was reported in groundwater samples during the November 2007 sampling event. Ethanol and methanol were not reported in any of the groundwater samples during the May 2004 monitoring event and are no longer being included in the laboratory analyses. Concentration trend graphs are included in Appendix E and are shown for several constituents in Plates 1 & 2.

SOIL VAPOR EXTRACTION SYSTEM

On November 19, 2007, the soil vapor extraction system (SVES) was shut-down due to a substantial drop in cost-effectiveness; the unit simply cost too much to operate without providing sufficient results. HerSchy had been continually evaluating the operating efficiency of the SVES unit throughout its operation, and recent findings suggest that there is a diminishing ability to mobilize contaminants remaining in soil. These findings are based on influent vapor levels that are exhibiting asymptotic trends near zero while hydrocarbon concentrations in groundwater samples remain at relatively high levels. After consideration of both the operational costs and the declining effectiveness, of the current configuration of the remediation unit, the decision was made to de-activate the SVES. Your office was notified shortly after in a letter dated November 21, 2007.

The SVES, in its current configuration, operated between August 31, 2006 and November 19, 2007. The SVES originally consisted 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. The system was modified to operate in catalytic mode due to relatively low influent hydrocarbon concentrations. SVES activities halted from January 31, 2007 to February 21, 2007 while notifying the Bay Area Air Quality Management District (BAAQMD) of system modifications and startup. SVES activities also halted from April 30, 2007 to May 25, 2007 due to system retrofitting associated with a dual phase extraction test. Aside from those time periods mentioned, system down-time has been short and infrequent, usually

related to water production issues. Table 3 presents a summary of the SVES destruction and removal efficiencies based on a combination of periodic field monitoring of influent and effluent airstreams, associated flow rates, and laboratory sample results.

Table 3

Alaska Gas SVES Destruction and Removal Efficiency (Catalytic Mode)

Date	Hour Meter	Hours of Operation	Influent (ppm)	Effluent (ppm)	Air Flow (cfm)	Destruction Efficiency (%)	Effluent Release (lbs/day)	VOCs Removed (lbs/day)	Total VOCs Removed (lbs)	Percent Operating
2/21/07	3420.4	0	6.1	0	30.8	100.00	0.000	0.069112	0.000000	0
2/21/07	3421.4	1	0.7	0		100.00	0.000	0.000000	0.000000	100
2/22/07	3445.8	24.4	0.5	0	21.3	100.00	0.000	0.003918	0.003983	102
2/27/07	3563.5	117.7	1.6	0.15	40.5	90.63	0.002	0.023837	0.116899	98
3/21/07	4092.9	529.4	0.3	0	44.2	100.00	0.000	0.004878	0.107594	92
3/29/07	4283.8	190.9	0.4	0	35.2	100	0.000	0.005179	0.041197	99
4/30/07	5046.6	762.8	0.4	0	35.2	100	0.000	0.005179	0.164617	103
	***System shutdown 4/30/07 for DPE Test									
	***System restarted 5/25/07, System hours for 5/25 back calculated from 5/29									
5/25/07	5056.2									
5/29/07	5152.2	96	220	0.5	55	99.77	0.010	4.450990	17.803963	100
6/08/07	5392.4	240.2	132	0	79	100.00	0.000	3.835945	38.391413	111
6/18/07	5635.6	243.2	210	0.62	73	99.70	0.017	5.639148	57.143363	101
7/13/07*	6230.9	43.6	80.5	0	88.5	100.00	0.000	2.620658	4.760863	91
7/19/07	6372.3	141.4	91	0	90.5	100.00	0.000	3.029432	17.848407	98
8/08/07	6861.9	489.6	35	0	120	100.00	0.000	1.544972	31.517428	107
8/13/07	6998.3	136.4	30.6	0	121	100.00	0.000	1.362003	7.740718	114
9/06/07	7552.0	553.7	33	0	130	100.00	0.000	1.578079	36.40759	100
9/28/07	8083.1	531.1	0	0	93	n/a	0.000	0.0000	0.0000000	101
10/16/07	8515.0	431.9	0	0	80	100.00	0.000	0.0000	0.0000000	100
10/24/07	8707.2	192.2	0	0	89	100.00	0.000	0.0000	0.0000000	100
10/29/07	8825.1	117.9	0	0	105	100.00	0.000	0.0000	0.0000000	98
11/8/07	9062.8	237.7	0	0	114	100.00	0.000	0.0000	0.0000000	110
11/19/07**	9329.3	266.5	7	0	75	100.00	0.000	0.193122	2.144453	101

System down on 6/25/07, restarted 7/11/07
** System shutdown until further notice
ppmV – parts per million by Volume
cfm – cubic feet per minute
lbs - pounds

According to a combination of field data and laboratory analytical data, since the oxidizer was restarted in catalytic mode, approximately 214.19 lbs or 34.66 gallons of product have been removed by the system. Approximately 940.65 lbs of hydrocarbons or 152 gallons of product have been removed since soil vapor extraction began in August 2006. Destruction efficiency has been roughly 99.53 % with no more than 0.170 pounds of hydrocarbon product emitted per day to the atmosphere. A comprehensive table of SVES field data is included as Appendix D.

CONCLUSIONS AND RECOMMENDATIONS

The only reported fuel constituent in wells MW-5 and MW-6 this quarter was MTBE at 1.5 ppb and 5.3 ppb, respectively. Both reported values were below the San Francisco regional water quality control board (SFRWQCB) environmental screening levels (ESLs) for groundwater that is a potential source of drinking water.

Wells MW-1R and MW-2 through MW-4 were reported as impacted with fuel constituents to varying degrees. Aside from TPHg in MW-4, the highest reported dissolved concentrations this quarter were from well MW-3, which has historically contained the highest contaminant concentration, apart from wells with free product. TPHg was reported in wells MW-1R and MW-2 through MW-4, with the highest reported concentration in MW-4 at 64,000 ppb. MTBE was reported in all sampled wells this quarter, with the highest reported concentration in well MW-3 at 38,000 ppb. Concentrations of TAME and TBA were reported in wells MW-2 through MW- 4 this quarter, with the highest concentrations existing in well MW-3. TAME and TBA were reported in MW-3 at 1,400 ppb and 140,000 ppb, respectively. Historically, concentrations in wells MW-2 and MW-6 have tended to correlate proportionately with groundwater rise and fall, while concentration trends in other site wells have not.

Relatively high concentrations of petroleum hydrocarbons remain in soil and groundwater beneath the subject site. This is evident by the fact that extraction well EX-1 continues to contain free product. Isoconcentration maps for TPHg and MTBE are attached as Figures 3 and 4, respectively.

After completion of three previously approved direct push borings, HerSchy submitted a request to Alameda County Health Care Services (ACHCS) staff for a modification of the remaining previously approved locations along with a proposal for additional sampling points based on preliminary results. At this time, we are waiting to proceed with the modified and added locations until approval from the Alameda County Health Care Services (ACHCS). Two previously approved and permitted permanent monitoring wells on Marshall Street remain uninstalled at this time due to continued insurance and/or surety bond issues with the City of Oakland. It is our understanding at this time, that the property owner, Mr. Sappal, is currently awaiting consultation with ACHCS staff to discuss his difficulties at obtaining insurance and/or surety bonds for the proposed permanent wells on Marshall Street.

HerSchy continues its attempts at moving forward with establishing access agreements with the City of Oakland Housing Authority (HA) and is currently awaiting a formal response to our access agreement request or issuance of said agreement. At this time, HerSchy has temporarily halted pursuing a request for access to Mr. Wang's property to the southwest of the subject property. This is due to several factors which include unreturned written access agreement requests and refusal of verbal requests as well as modification of the property use. During the time since first contact was made regarding this property up to its present condition, the property has changed from an undeveloped and vacant lot to being

occupied by two, two-story apartment buildings complete with landscaping, fencing, and paving. In light of the difficulties obtaining the agreement, the new structures on site, and HerSchy's proposal for modified boring locations, pursuance of this agreement has been placed on hold until approval or consultation with ACHCS staff.

In a letter dated June 12, 2007 from the ACHCS office, modifications for a dual phase extraction (DPE) test were amended and approved. We are currently waiting for groundwater levels to rise to seasonal highs to conduct the DPE test in order to reduce the risk of extending the smear zone beyond its current limits. The DPE test will include monitoring observation wells for induced vacuum to assess radius-of-influence of dual phase extraction. In addition to EX-1, monitoring wells MW-3 and MW-4 will also be included during the extraction test as they continue to be reported with high levels of dissolved contaminants. Based on historical groundwater data, seasonal highs for groundwater elevations typically occur during the first quarter on or near the month of February.

As mentioned previously, the soil vapor extraction system (SVES) was shutdown November 19, 2007 due to several factors. A review of recent operations suggested that either the ability to mobilize contaminants had diminished or the affected soil was depleted of available hydrocarbon contaminants within the effective radii of the SVES. These findings are based on influent vapor levels that are exhibiting asymptotic trends near zero while hydrocarbon concentrations in groundwater samples remain at relatively high levels. After consideration of the declining effectiveness of the current configuration of the remediation unit, the decision was made to de-activate the SVES. In the *Results of August 2007 Quarterly MonitoringReport*, HerSchy proposed intermittent operation, or cycling, of the existing oxidizer as a means to increase cost-effectiveness. HerSchy continues to await a response to this proposal.

Alternate or modified remediation options have been under review by HerSchy staff and include limited excavation, installation of a "trench-and-gate" system, cycling of the existing SVES operation, dual phase extraction, additional in-well or in-situ vapor stripping, and others. HerSchy is currently employing SoakEase™ product socks in well EX-1 to address the presence of free product. To date, two product socks have been utilized and subsequently removed after saturation. A third sock is currently installed in well EX-1. Replacement frequency continues to be monitored to ensure that product sock use continues to be a cost effective remedial option.

HerSchy continues to request a meeting to discuss the more aggressive remedial options with ACHCS staff to determine the most prudent and efficient method permissible.

SCHEDULE AND CLOSING

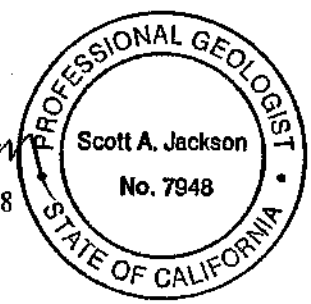
The next monitoring and sampling event is scheduled for February 2008. We appreciate the opportunity to work with you on this matter. Please contact Reijo Ratilainen (559) 760-0037 or Scott Jackson (559) 641-7320 with any questions or for additional information.

Sincerely,

HerSchy Environmental, Inc.

Reijo Ratilainen
Project Geologist

Scott Jackson, P.G. #7948
Senior Project Geologist



Figures
1 - Site Plan
2 - Groundwater Elevation Diagram
3 - TPHg Isoconcentration Diagram
4 - MTBE Isoconcentration Diagram
5 - TBA Isoconcentration Diagram

Appendices
A - Groundwater Field Sampling Data Sheets
B - SVES Field Monitoring Data
C - Historical Groundwater Data
D - Certified Analytical Reports for Groundwater Sampling
E - Concentration Trend Graphs

cc: Mr. Pritpaul Sappal
Mr. Hernan Gomez, Oakland Fire Services Agency
Ms. Alyce Sandbach, 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

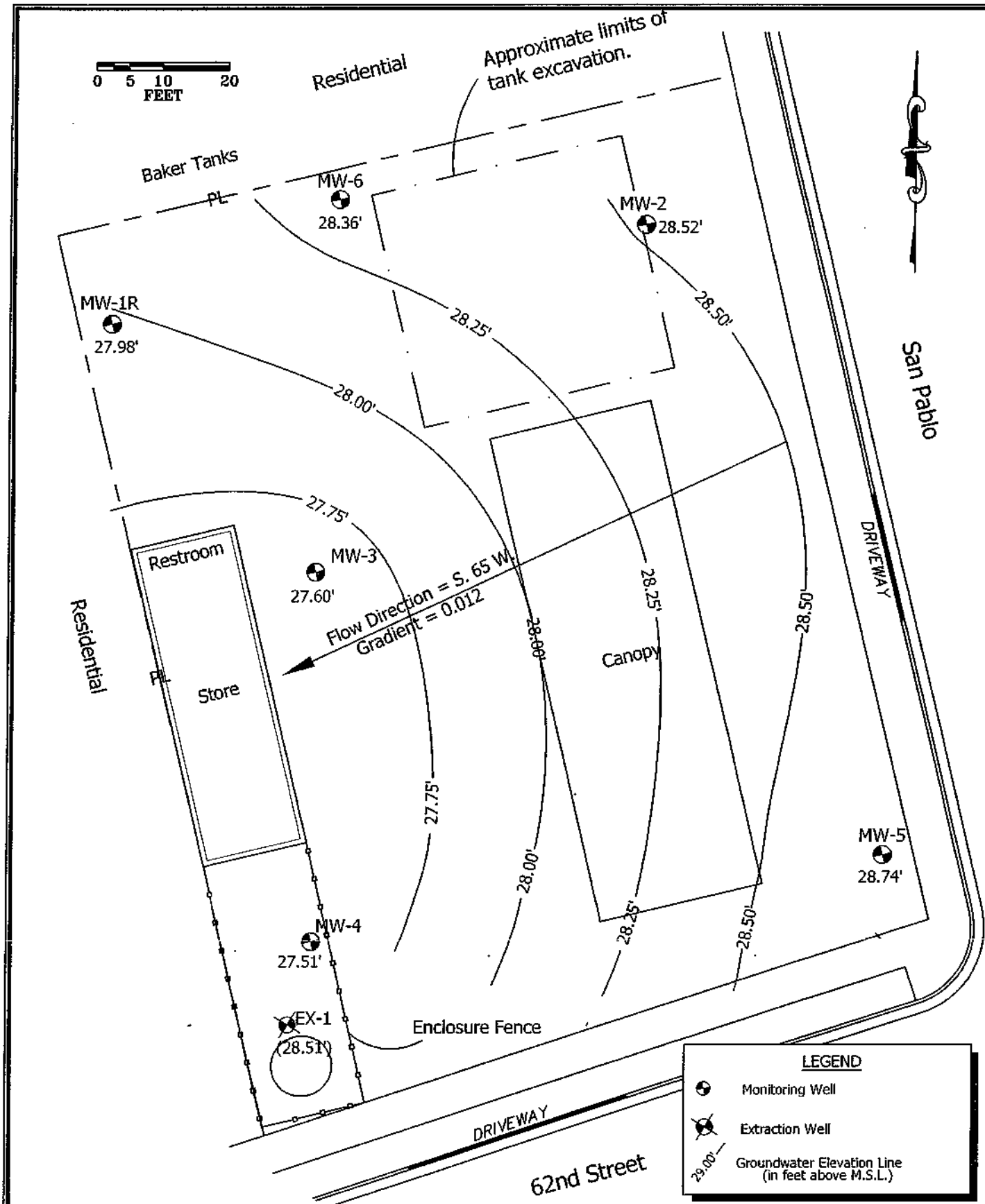
SITE LOCATION MAP

ALASKA GASOLINE COMPANY

6211 San Pablo Avenue, Oakland, California

DATE:	August 2005
FILE NO.:	A51.01
DRAWN BY:	WEA

FIGURE 1

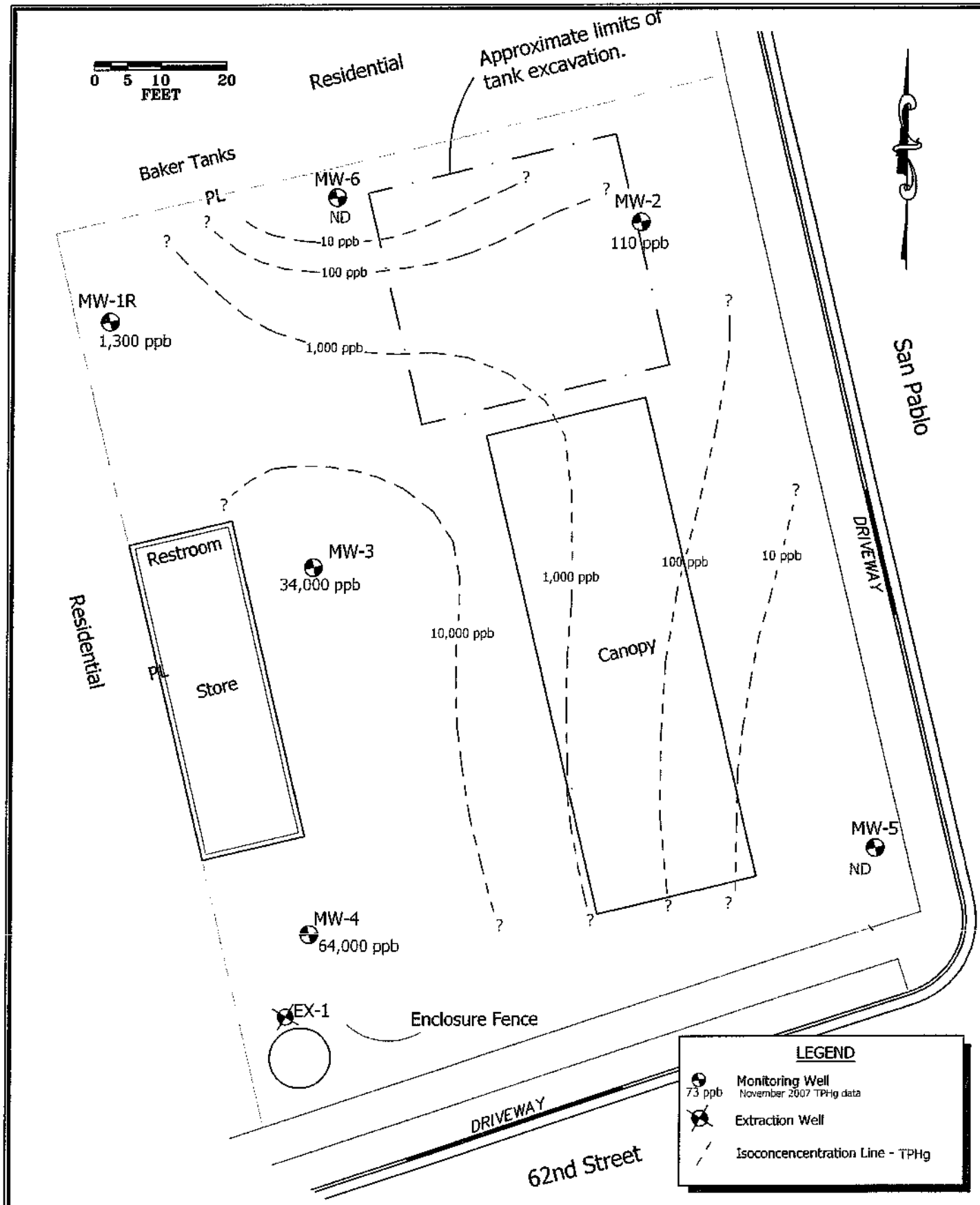


HerSchy Environmental, Inc.
Environmental Consulting and Remediation
P. O. Box 229
Bass Lake, California 93604-0229
Tel. (559) 641-7320, Fax (559) 641-7340

GROUNDWATER CONDITIONS
November 2007
ALASKA GASOLINE COMPANY
6211 San Pablo Avenue, Oakland, California

DATE: December 3, 2007
FILE NO.: A51-01
DRAWN BY: RER

FIGURE 2



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

Isoconcentration Map - TPHg

ALASKA GASOLINE COMPANY

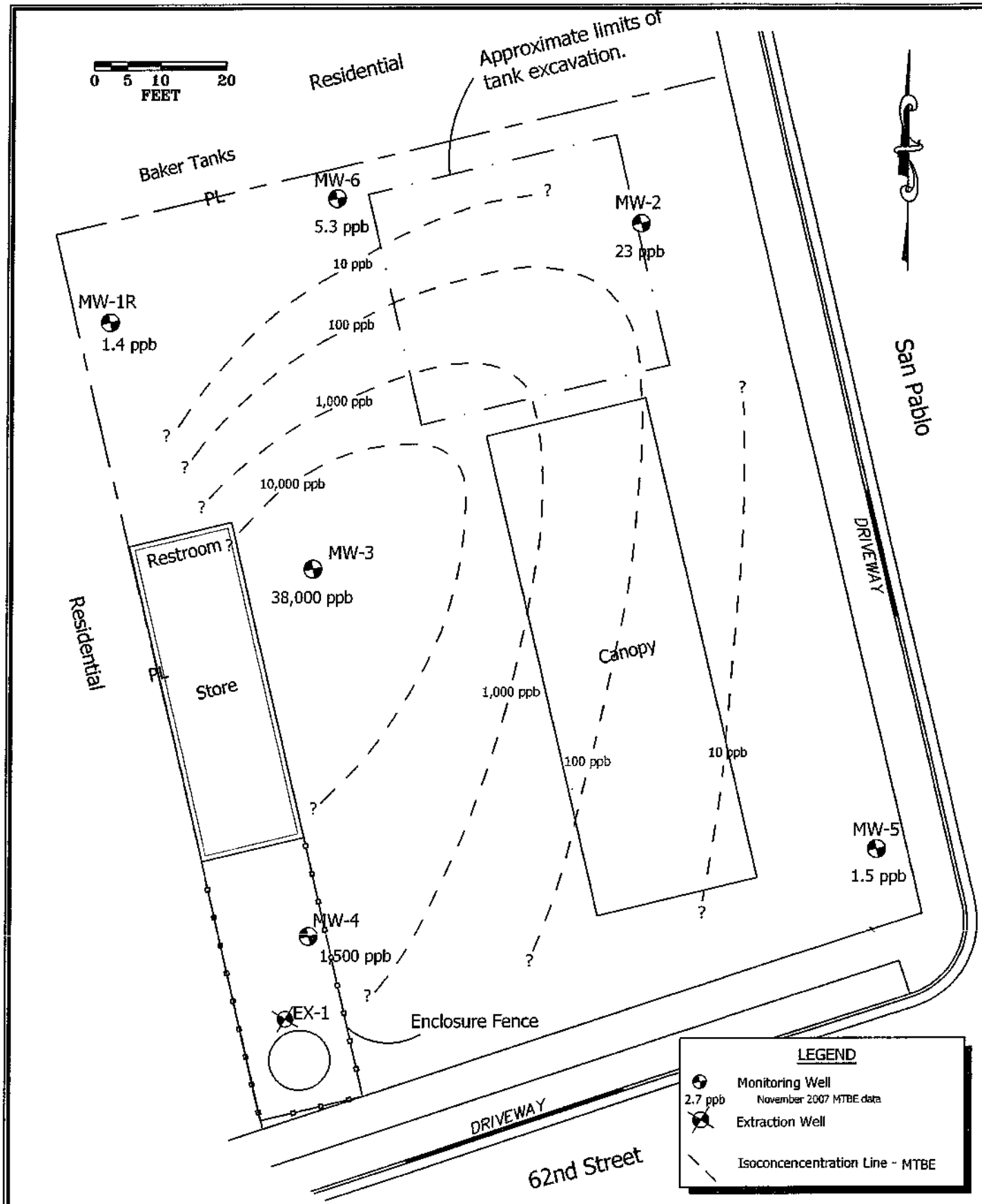
6211 San Pablo Avenue, Oakland, California

DATE: December 3, 2007

FILE NO.: A51-01

DRAWN BY: RER

FIGURE 3

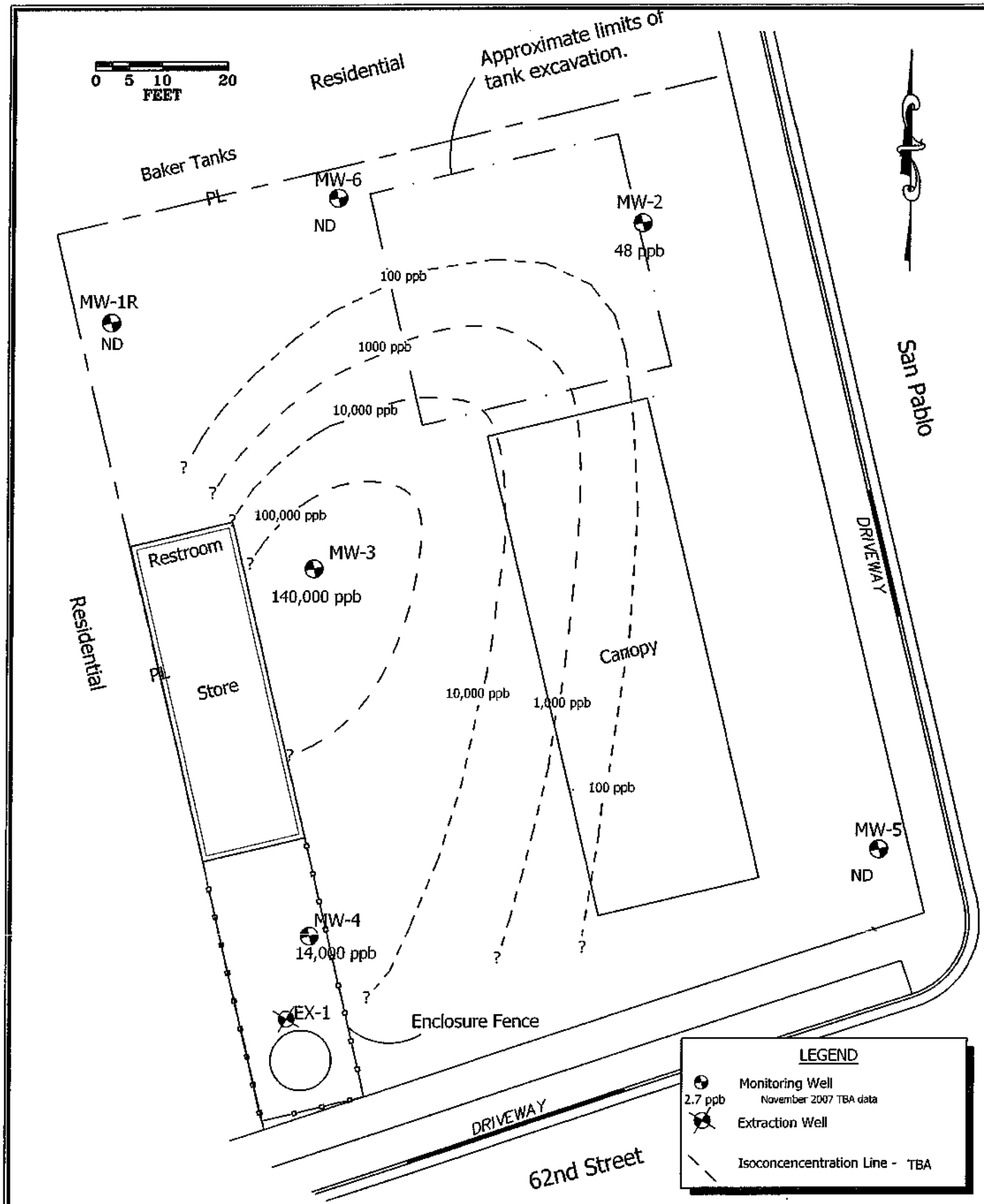


HerSchy Environmental, Inc.
Environmental Consulting and Remediation
P. O. Box 229
Bass Lake, California 93604-0229
Tel. (559) 641-7320, Fax (559) 641-7340

Isoconcentration Map - MTBE
ALASKA GASOLINE COMPANY
6211 San Pablo Avenue, Oakland, California

DATE: December 3, 2007
FILE NO.: A51-01
DRAWN BY: RER

FIGURE 4



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

Isoconcentration Map - TBA
ALASKA GASOLINE COMPANY
6211 San Pablo Avenue, Oakland, California

DATE: December 3, 2007
FILE NO.: A51-01
DRAWN BY: RER

FIGURE 5

APPENDIX A

Groundwater Field Sampling Data Sheets

HerSchy Environmental **WATER SAMPLE FIELD DATA SHEET**

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

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

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

Casing Elevation (feet/MSL): ____ Volume in Casing (gal.): 13.2

Depth of Well (feet): 28.68 Calculate Purge Volume (gal.): 39.6

Depth to Water (feet): 5.10 Actual Purge Volume (gal.): 40+

Date Purged: 11-08-07 Date Sampled: 11-08-07 1001

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0916	~	7.58	815	63.8	BLACK CLOUDY
0923	13.2	7.63	786	67.5	BLACK CLOUDY
0930	26.4	7.47	806	68.7	BLACK CLOUDY
0938	39.6	7.48	780	68.7	LESS CLOUDY

1/4" PRODUCT IN BAILER.

Sheen Y/N?: ~~YES!~~ NO Odor: PETROLEUM

Purging Equipment: MONSOON PUMP

Sampling Equipment: BAILER

Remarks: NOTE: PETROLEUM SMELLS LIKE "PIPE CUTTING OIL" - ALSO FEEL LIKE OIL PER REG. WELL SHOULD BE 40' DEEP. WHEN SOUNDING BOTTOM WELL, BOTTOM WAS ~~SHOOT~~. SOFT. G~29' 11' OF MUD? IN WELL.

Sampler's Signature: John S. Wesa

/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): ____ Volume in Casing (gal.): 2.2

Depth of Well (feet): 22.65 Calculate Purge Volume (gal.): 6.7

Depth to Water (feet): 8.83 Actual Purge Volume (gal.): 6.7+

Date Purged: 11-08-07 Date Sampled: 11-08-07 0645

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0627	-	7.08	419	66.3	CLEAR
0631	2.2	6.94	446	69.0	CLOUDY
0636	4.4	7.00	504	68.9	CLOUDY
0642	6.7	7.22	542	68.6	CLOUDY

Sheen Y/N?: N Odor: NONE

Purging Equipment: BAILER

Sampling Equipment: BAILER

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-2 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 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): 7.81 Actual Purge Volume (gal.): 6.4

Date Purged: 11-08-07 Date Sampled: 11-08-07 0751

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0739	/	7.16	632	67.4	CLOUDY
0742	2.1	7.22	654	69.4	CLOUDY
0745	4.2	7.24	686	70.0	CLOUDY
0748	6.4	7.19	660	69.5	CLOUDY

Sheen Y/N?: N Odor: NONE

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-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.): 6.7

Depth to Water (feet): 7.52 Actual Purge Volume (gal.): 6.7+

Date Purged: 11-08-07 Date Sampled: 11-08-07 0715

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0701	✓	6.83	638	65.8	CLOUDY
0705	2.2	6.68	636	67.8	CLOUDY
0708	4.4	6.95	653	69.0	CLOUDY
0712	6.7	7.03	668	68.8	CLOUDY

Sheen Y/N?: SLIGHT SHEEN H Odor: PETROLEUM

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John S. West

/Water Sample Sheet.wpd

HerSchy **WATER SAMPLE FIELD DATA SHEET**
Environmental

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

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

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

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

Depth of Well (feet): 19.70 Calculate Purge Volume (gal.): 6.4

Depth to Water (feet): 6.60 Actual Purge Volume (gal.): 6.4+

Date Purged: 11-08-07 Date Sampled: 11-08-07 0850

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0828	✓	7.82	928	65.6	CLOUDY
0834	2.1	7.84	883	67.3	CLOUDY
0839	4.2	7.96	892	68.0	CLOUDY
0844	6.4	7.75	893	68.0	CLOUDY

Sheen Y/N?: Y Odor: PETROLEUM

Purging Equipment: BAILER

Sampling Equipment: BAILER

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-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.): 3.0

Depth of Well (feet): 24.90 Calculate Purge Volume (gal.): 9.6

Depth to Water (feet): 6.43 Actual Purge Volume (gal.): 9+

Date Purged: 11-08-07 Date Sampled: 11-08-07 0815

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0802	✓	7.24	765	67.4	Cloudy
0805	3	7.27	733	68.2	Cloudy
0808	6	7.26	731	68.7	Cloudy
0811	9	7.29	725	68.6	Cloudy

Sheen Y/N?: N Odor: NONE

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John S. Wood

/Water Sample Sheet.wpd

HerSchy **WATER SAMPLE FIELD DATA SHEET**
Environmental

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): 7.71 Actual Purge Volume (gal.): 7.5+

Date Purged: 11-08-07 Date Sampled: 11-08-07 0733

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0722	~	7.45	567	67.4	CLOUDY
0724	2.5	7.46	593	67.1	CLOUDY
0727	5	7.31	599	67.1	CLOUDY
0730	7.5	7.31	599	66.9	CLOUDY

Sheen Y/N?: N Odor: NONE

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John S. West

/Water Sample SheetLwpd

APPENDIX B

SVES Field Monitoring Data

Alaska Gas Data Sheet

Site Address: **6211 San Pablo Ave., Oakland, CA 94608**

Date	Total Hours	Hours	Flow - pitot (#3) (scfm)	Flow - Manifold (scfm)	Pressure ("-water)	Recirc Valve (# turns open)	SVE Wells operating	Air Sparge system operation	Influent (ppm)	Effluent (ppm)	Water in Tank (approx. gal's)	Temp. Cont.(F)	Dilution Cont. (F)	High Limit (F)	Propai (% ful
**** Note: system down from 1/30/2007 evening until catalytic system start on 2/21/2007 *****															
2/21/2007	3420.4	n/m	31	30.8	n/m	full open	VE-1,2,3,4,5,6,7,12	AS-1,2,4,5	6.1	0.0	220				
	3421.4	n/m	n/m	n/m	n/m	full open	VE-1,2,3,4,5,6,7,12	AS-1,2,4,5	0.7	0.0	220	1262	1002	1001	85
2/22/2007	3445.8	25.3	22	21.3	n/m	full open	VE-1,2,3,4,5,6,7,12	AS-1,2,4,5	0.5	0.0	220	1391	1125	1122	78
2/23/2007	3472.7	52.2	26	n/m	n/m	full open	VE-1,2,3,4,5,6,7,12	off	n/m	n/m	220	1341	1117	1113	68
**** system efficiency tests ****															
(1) with all wells open & recirc valve full open															
			n/m	29.2	-31										
(2) with VE-1,2,3,4,5,6,7,12 open & recirc full open															
			n/m	29.3	-31										
(3) with VE-1,2,3,4,5,6,7,12 open & recirc closed 6 turns from full open															
			49	52.5	-60										
(4) with VE-1,2,3 open & recirc closed 5 turns from full open (attempt to dewater short screen intervals)															
*prior to close															
			41	42.5	-43										
*after close															
			19	~10	-56	(H20 in influent line)									
(5) with VE-1,2 open and recirc valve closed 6 turns from full open															
			15	over	-66										
*after 8 minutes			n/m	n/m	-90	--> water being produced slowly (~0.5 cm/5 minutes in visible influent water pipe)									
****System returned to pre-efficiency test status - VE-1,2,3,4,5,6,7,12 open & recirc full open															
2/27/2007	3563.4	143	39	40.5	-46	full open	VE-1,2,3,4,5,6,7,12	off	n/m *	n/m *	220	992	878	878	72
3/21/2007	4092.9	672.4	--	44.2	~43	6 turns back from full open	All open	off	0.3	0.1	220	953	850	849	72
****System efficiency tests****															
(1) w/wells 1,2,3,4,5,6 open only & recirc @ 6turns closed from full closed															
			0 to -1 (?)	16.2	~55				0.0	n/m		1088	--	--	--

Alaska Gas Data Sheet (*continued*)

Site Address: **6211 San Pablo Ave., Oakland, CA 94608**

Date	Total Hours	Hours	Flow - pitot (#3) (scfm)	Flow - Manifold (scfm)	Pressure ("-water)	Recirc Valve (# turns open)	SVE Wells operating	Air Sparge system operation	Influent (ppm)	Effluent (ppm)	Water in Tank (approx. gal's)	Temp. Cont.(F)	Dilution Cont. (F)	High Limit (F)	Propar (% ful
	-after 5 minutes, recirc closed 1/2 turn more after readings taken														
			13	--	~80							1098	--	--	--
	-after 15 minutes														
			25	--	~90							1048	--	--	--
	* Notes: aprroximately 35 gallons of water produced; VE-12 appears to be in relatively loose soil as pressure does not hold when isolated														
	(2) w.wells 1,2,3,4,5,6,11 open & recirc closed 6.25 turns from full open														
			45	--	~80							950	--	--	--
3/26/2007	4211.9	791.5	35	--	~80	-5.5	VE-1,2,3,4,5,6,11		--	--	990	1086	947	946	--
	* recirculation valve closed back to 5.5 turns closed from full open														
			30	29.6	~60										
3/29/2007	4283.8	863.3	~15	21.8	~56	-5.5	VE-1,2,3,4,5,6,11	AS-1,4,5	0.0	n/m	0	1145	987	986	79
	* 1,100 gallons of water removed in the am, prior to site readings														
	* Air Sparge system turned on, test AS-1 w/VE-1,2,3,4,5,6,7,13 open (AS-1 @ 5 scfm)														
	--	--	29	31.4	~85	-6.5			0.0	n/m	--	1036	921	921	
	**** On site leave, AS-1,3,4 set on 45 min on cycle from 7am to 8:30pm														
	--	--	37	35.2	~84	-6.5	VE-1,2,3,4,5,6,7,13		0.4	n/m	--	1015	899	899	79
4/18/2007	4763.2	1342.8	31	--	--	--	VE-1,2,3,4,5,6,7,13	AS-1,4,5	--	--	1485	1165	999	--	--
	4736.7		20	--	--	full open	all open	off	--	--		1171	981	979	72
4/19/2007	4786.1	1365.6	30	--	--	--	all open	off	--	--	1485	1088	945	--	81
4/30/2007	5046.6	1626.2	33	--	--	full open	all open	off	--	--	0	1147	994	993	
	* System shutdown to prepare for dual phase extraction test														
	* plumb system to conduct DPE test on EX-1, disconnect all other VE wells from system.														
5/25/2007	*system hooked back up to Vapor Extraction Wells, also to include MW-4 and EX-1														
5/29/2007	5152.2	1731.8	55	--	--	~6.0	all open	off	220	0.5	0	960	885	886	
	--	--	55	83	--	~6	all open	off	116	0.2	0	956	895	894	--

Alaska Gas Data Sheet (*continued*)

Site Address: **6211 San Pablo Ave., Oakland, CA 94608**

Date	Total Hours	Hours	Flow - pitot (#3) (scfm)	Flow - Manifold (scfm)	Pressure ("-water)	Recirc Valve (# turns open)	SVE Wells operating	Air Sparge system operation	Influent (ppm)	Effluent (ppm)	Water in Tank (approx. gal's)	Temp. Cont.(F)	Dilution Cont. (F)	High Limit (F)	Propai (% ful
	***TEST														
	w/all wells open - flow at 53.5 cfm at manifold														
	w/wells 10,11,12,13 closed & recirc full open														
									450	--	--	1200	938	935	
	on leave from site PID influent readings holding steady @ ~250 ppm														
6/1/2007	5227.6	1807.2	37	46.1	--	full open	all open	off	104	--	--	1140	1000	999	
			56	80	--	~6.0	all open	off	157	0	--	dropping...			
	*Restart AS system - after ~5-10 minutes blower motor appears to be malfunctioning														
	- on leave -->		57	--	--	~6.0	all open	off	150	0	--	945	917	918	
6/4/2007	5297.1	1876.6	61	--	--	~6.0	all open	off	135	0	--	909	865	865	
	Individual line sampling on EX-1 & MW-4, with regular vacuum														
			EX-1 @ 645ppm												
			MW-4 @ 610 ppm												
	Testing														
	w/dilution control manually opened to approx 85%(normally at 95%) to increase airflow to burner														
				pitot reads 87 cfm											
				manifold reads 60 cfm											
	w/dilution control at 90%														
				pitot reads 73 cfm											
				mainfold reads 59.5 cfm											
	sampling of influent points gives														
				influent (post dilution) @ 86 ppm											
				Influent (@ manifold, pre-blower) @ 88 ppm											
	5298.7	1878.2	75	--	--	~6.0	all open	off	124	--	--	786	760	759	--
	***Dilution control held at 90% for this reading														

Alaska Gas Data Sheet (*continued*)

Site Address: **6211 San Pablo Ave., Oakland, CA 94608**

Date	Total Hours	Hours	Flow - pitot (#3) (scfm)	Flow - Manifold (scfm)	Pressure ("-water)	Recirc Valve (# turns open)	SVE Wells operating	Air Sparge system operation	Influent (ppm)	Effluent (ppm)	Water in Tank (approx. gal's)	Temp. Cont.(F)	Dilution Cont. (F)	High Limit (F)	Propai (% ful
	Meet Rob Larson of Mako Industries to do efficiency tests on system.														
	* note - with access caps to EX-1 and MW-4 cracked to "bleed in" air, PID concentrations spike significantly.														
	-possibly due to residual product in transfer lines. Or combination of slight increase in airflow from highly contaminated wells moving more vapor phase VOC's														
6/6/2007	5348.2	1927.8	57	77	--	--	all open	off	130	0	--	677	819	819	68
6/8/2007	5392.4	1972	59	79	--	~6.0	all open	restarted AS-1,4,5	132	0	--	695	835	832	78%
6/15/2007	5559.1	2138.6	56	74.5	--	--	all open	AS-1,4,5 AS-1 @ 4 cfm, AS-5 @ 3 cfm	101	0	--	922	850	850	76
6/18/2007	5635.6	2215.2	58	73	--	--	all open	AS-1,4,5 AS-1 @ 4 cfm	93	0	--	891	820	820	--
7/11/2007	6187.3	2766.9	133	--	--	--	all open		--	--	--	88	88	88	82
	***Flame out on arrival, it appears it went out on June 25, 2007 ~8-9am and did not shut the system down.														
	***system restarted ***														
			65	87.5	--	--	all open	AS-1,4,5 AS-5 @ 0 cfm opened to 4 cfm	139	0	--	744 -...and Rising-	688	684	--
			85	97	--	--		AS-1 @ 4 cfm, AS-4 @ 3 cfm				773	730	727	
7/13/2007	6230.9	2810.4	68	88.5	--	--	all open	AS-1,4,5 AS-1 @ 3.5 cfm, AS-5 @ 3.5 cfm	80.5	0	--	843	788	787	70
	-on leave-		74	89.5	--	--	all open		91	0	--	835	802	--	
7/19/2007	6372.3	2951.9	66	90.5	--	--	all open	AS-1,4,5 AS-1 @ 4.5 cfm, AS-5 @ 3 cfm AS-4 @ 4 cfm	77	0	--	842	784	783	82
	***bailed approximately 6 gallons of free product from EX-1														
8/8/2007	6661.9	3441.5	71	120	--	--	all open	AS-1,4,5	35	0	--	803	749	748	--

Alaska Gas Data Sheet (*continued*)

Site Address: **6211 San Pablo Ave., Oakland, CA 94608**

Date	Total Hours	Hours	Flow - pitot (#3) (scfm)	Flow - Manifold (scfm)	Pressure ("-water)	Recirc Valve (# turns open)	SVE Wells operating	Air Sparge system operation	Influent (ppm)	Effluent (ppm)	Water in Tank (approx. gal's)	Temp. Cont.(F)	Dilution Cont. (F)	High Limit (F)	Propar (% ful
8/13/2007	6998.3	3577.8	77	121	–	–	all open	AS-1,4,5 AS-4 @ 3.5 cfm	30.6	0	–	756	712	711	
		***bailed approximately 2 gallons of free product from EX-1													
8/16/2007		*****Air sparge system found to be effecting (creating bubbles) in newly installed well MW-1R. Air sparge system left off until proper evaluation can take place.													
9/6/2007	7552.0	4131.5	83	130+	–	–	all open	off	33	0	~25 gallons	718	681	681	82
9/28/2007	8083.1	4662.7	93	–		–	all open	off	0	0	~25 gallons	677	642	642	75
		****Install 4" Soakese product sock into EX-1 to recover free product passively													
10/16/2007	8515	5094.5	80	–	–	–	all open	off	0	0	–	746	696	696	72
10/17/2007		****SoakEase product sock full and replaced													
10/24/2007	8707.2	5286.7	89	–	–	–	all open	off	0	0	–	694	655	655	
		****product sock replaced at 80% full or so													
10/29/2007	8825.1	5404.6	86	105	–	–	all open	off	0	0	–	700	661	660	
		****Air Sparge line test conducted this day (See test data tab for further results)													
11/8/2007	9062.8	5642.4	81	114	–	–	all open	AS-1,2,3,5 now in cycle	–	–	–	727	685	685	
11/19/2007	9329.3	5908.9	75	–	–	–	all open	AS-1 AS-1@3.0 cfm	7	0	–	767	718	717	
		****System shutdown after review of system operations and NOV received by Mr. Sappal													

APPENDIX C

Historical Groundwater Data

Groundwater Analytical Results

Alaska Gasoline

6211 San Pablo Avenue

Oakland, California

	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB
MW-1												
November 7, 1999	5,700	170	59	22	85	20,000	NA	NA	NA	NA	NA	NA
March 8, 2001	17,000	480	160	52	170	38,000	NA	NA	NA	NA	NA	NA
November 17, 2001	16,000	230	210	60	250	22,000	NA	NA	NA	NA	NA	NA
March 31, 2002	12,000	61	ND	ND	29	35,000	NA	NA	NA	NA	NA	NA
September 9, 2003	19000	ND	ND	ND	ND	50000	NA	NA	NA	NA	NA	NA
December 9, 2003	22000	150	ND	ND	ND	65,000	NA	NA	NA	NA	NA	NA
MW-1R												
November 17, 2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
March 31, 2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
September 9, 2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
December 9, 2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
February 19-20, 2004	1,800	95	130	44	200	220	NA	NA	NA	NA	NA	NA
May 24-25, 2004	210	12	10	5.4	23	78	ND	ND	2.1	37	ND	ND
September 3, 2004	300	1.5	7.1	9.4	42	81	ND	ND	1.6	ND	ND	ND
November 2, 2004	290	14	30	9.5	45	45	ND	ND	1.1	ND	NA	NA
February 17, 2005	530	3.4	ND	ND	2.6	1000	ND	ND	100	ND	NA	NA
May 24 & 26, 2005	NA	NA	NA	NA	NA	NA	ND	ND	610	ND	ND	ND
August 15 & 17, 2005	2,500	64	240	61	210	2,300	ND	ND	210	ND	ND	ND
November 17, 2005	2,500	66	290	75	280	1,300	ND	ND	110	1,600	ND	ND
February 8, 2006	3,300	100	310	86	470	1,400	ND	ND	130	1,400	ND	ND
May 5, 2006	3,400	170	350	97	550	1,100	ND	ND	100	2,400	ND	ND
August 16, 2006	5,800	190	1,000	230	1,000	490	ND	ND	36	2,900	ND	ND
December 1, 2006	410	1.7	6.3	1.2	47	100	ND	ND	4.7	100	ND	ND
February 23, 2007	ND	ND	0.51	ND	1.4	2.6	ND	ND	ND	ND	ND	ND
May 10, 2007	ND	ND	ND	ND	2.0	5.9	ND	ND	ND	ND	ND	ND
August 16, 2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
November 8, 2007	1,300	11	32	54	270	1.4	ND	ND	ND	ND	ND	ND
MW-2												
November 7, 1999	6,000	1,300	92	50	400	6,800	NA	NA	NA	NA	NA	NA
March 8, 2001	41,000	8,100	870	2,000	4,100	26,000	NA	NA	NA	NA	NA	NA
November 17, 2001	16,000	3,700	180	610	640	16000	NA	NA	NA	NA	NA	NA
March 31, 2002	32,000	6,500	270	1700	2700	19000	NA	NA	NA	NA	NA	NA
September 9, 2003	24,000	4600	ND	1200	440	19000	NA	NA	NA	NA	NA	NA
December 9, 2003	31000	6200	170	1800	2700	19000	NA	NA	NA	NA	NA	NA
February 19-20, 2004	21,000	4,600	120	970	2,000	16,000	NA	NA	NA	NA	NA	NA
May 24-25, 2004	1,200	120	3	63	67	1,900	ND	ND	ND	ND	ND	ND
September 3, 2004	2,300	120	ND	51	70	1,700	ND	ND	26	ND	ND	ND
November 2, 2004	530	35	ND	17	30	520	ND	ND	28	100	NA	NA
February 17, 2005	18,000	2,100	31	800	660	20,000	ND	ND	1,000	ND	NA	NA
May 24 & 26, 2005	22,000	3,200	52	1,400	1,700	16,000	ND	ND	NS	NS	ND	ND
August 15 & 17, 2005	2,000	66	ND	46	47	2,400	ND	ND	95	880	ND	ND
November 17, 2005	760	19	0.64	15	13	1000	ND	ND	25	810	ND	ND
February 8, 2006	10,000	1,500	5	660	380	4,300	ND	ND	120	2,600	ND	ND
May 5, 2006	15,000	1,800	ND	1,200	1,200	5,800	ND	ND	150	4,300	ND	ND
August 18, 2006	360	11	ND	13	9.7	160	ND	ND	4.8	600	ND	ND
December 1, 2006	11,000	1,000	ND	990	910	2,100	ND	ND	87	2,000	ND	ND
February 23, 2007	3,200	210	ND	270	85	900	ND	ND	33	1,400	ND	ND
May 10, 2007	590	31	ND	39	22	260	ND	ND	5.9	250	ND	ND
August 16, 2007	650	49	ND	71	49	100	ND	ND	3.5	62	ND	ND
November 8, 2007	110	1.6	ND	1.9	1.6	23	ND	ND	0.84	48	ND	ND
MW-3												
November 7, 1999	43,000	850	70	ND	85	120,000	NA	NA	NA	NA	NA	NA
March 8, 2001	90,000	1600	ND	ND	ND	210,000	NA	NA	NA	NA	NA	NA
November 17, 2001	110,000	1600	ND	ND	ND	300,000	NA	NA	NA	NA	NA	NA
March 31, 2002	130,000	2400	670	300	390	300,000	NA	NA	NA	NA	NA	NA
September 9, 2003	190000	1600	ND	ND	ND	420000	NA	NA	NA	NA	NA	NA
December 9, 2003	170000	2000	ND	ND	ND	4,600,000	NA	NA	NA	NA	NA	NA
February 19-20, 2004	86,000	1,600	630	ND	ND	160,000	NA	NA	NA	NA	NA	NA
May 24-25, 2004	120,000	2,200	ND	160	220	400,000	ND	ND	15,000	ND	ND	ND
September 3, 2004	180,000	2,000	ND	ND	ND	510,000	ND	ND	14,000	ND	ND	ND
November 2, 2004	150,000	1,700	ND	ND	ND	350,000	ND	ND	31,000	140,000	NA	NA
February 17, 2005	130,000	2,100	420	210	730	290,000	ND	ND	11,000	ND	NA	NA
May 24 & 26, 2005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
August 15 & 17, 2005	110,000	1,500	ND	ND	ND	260,000	ND	ND	21,000	25,000	ND	ND
November 17, 2005	200,000	2,400	ND	ND	ND	590,000	ND	ND	24,000	49,000	ND	ND
February 8, 2006	470,000	3,800	660	ND	790	490,000	ND	ND	26,000	49,000	ND	ND
May 5, 2006	400,000	3,300	ND	ND	ND	590,000	ND	ND	21,000	66,000	ND	ND
August 18, 2006	310,000	1,300	ND	ND	ND	440,000	ND	ND	23,000	79,000	ND	ND
December 1, 2006	270,000	ND	ND	ND	ND	290,000	ND	ND	11,000	60,000	ND	ND
February 23, 2007	220,000	ND	ND	ND	ND	260,000	ND	ND	15,000	33,000	ND	ND
May 10, 2007	140,000	ND	ND	ND	ND	180,000	ND	ND	7,100	80,000	ND	ND
August 16, 2007	69,000*	ND	ND	ND	ND	86,000	ND	ND	3,400	180,000	ND	ND
November 8, 2007	34,000*	ND	ND	ND	ND	38,000	ND	ND	1,400	140,000	ND	ND

*Gasoline value due to MTBE

Groundwater Analytical Results

Alaska Gasoline

6211 San Pablo Avenue

Oakland, California

	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB
MW-4												
November 17, 2001	64,000	860	1400	360	1600	140,000	NA	NA	NA	NA	NA	NA
March 31, 2002	76,000	4,400	4,700	690	2,700	150,000	NA	NA	NA	NA	NA	NA
September 9, 2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
December 9, 2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
February 19-20, 2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
May 24-25, 2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
September 3, 2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
November 2, 2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
February 17, 2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
May 24 & 26, 2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
August 15 & 17, 2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
November 17, 2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
February 8, 2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
May 5, 2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
August 18, 2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
December 1, 2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
February 23, 2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
May 10, 2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
September 5, 2007	49,000	710	840	ND	10,000	3,600	ND	ND	510	32,000	ND	ND
November 8, 2007	64,000	1,300	2,600	1,000	8,500	1,500	ND	ND	360	14,000	ND	ND
MW-5												
November 17, 2001	210	15	12	11	23	4.8	NA	NA	NA	NA	NA	NA
March 31, 2002	120	11	7.4	5.1	16	4.2	NA	NA	NA	NA	NA	NA
September 9, 2003	ND	1.5	ND	ND	ND	1.7	NA	NA	NA	NA	NA	NA
December 9, 2003	130	32	ND	2.6	0.57	5	NA	NA	NA	NA	NA	NA
February 19-20, 2004	ND	ND	ND	ND	ND	1.5	NA	NA	NA	NA	NA	NA
May 24-25, 2004	ND	ND	ND	ND	ND	0.55	ND	ND	ND	ND	ND	ND
September 3, 2004	100	6.4	ND	ND	0.79	4.2	ND	ND	ND	ND	ND	ND
November 2, 2004	ND	2.6	ND	1.7	0.87	1	ND	ND	ND	ND	ND	ND
February 17, 2005	81	0.74	ND	0.94	ND	1.5	ND	ND	ND	ND	ND	ND
May 24 & 26, 2005	ND	ND	ND	ND	ND	1	ND	ND	NA	NA	ND	ND
August 15 & 17, 2005	ND	ND	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND
November 17, 2005	71	0.81	ND	1.1	ND	1.4	ND	ND	ND	ND	ND	ND
February 8, 2006	60	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND
May 5, 2006	ND	ND	ND	ND	ND	0.93	ND	ND	ND	ND	ND	ND
August 18, 2006	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND
December 1, 2006	ND	0.69	ND	ND	0.52	0.97	ND	ND	ND	ND	ND	ND
February 23, 2007	73	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND
May 10, 2007	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND
August 16, 2007	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND
November 8, 2007	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND
MW-6												
November 17, 2001	3500	160	260	85	420	1500	NA	NA	NA	NA	NA	NA
March 31, 2002	3200	410	170	82	260	3000	NA	NA	NA	NA	NA	NA
September 9, 2003	800	49	ND	7.4	ND	1700	NA	NA	NA	NA	NA	NA
December 9, 2003	970	150	9.9	31	33	1200	NA	NA	NA	NA	NA	NA
February 19-20, 2004	1,900	280	56	17	160	2,700	NA	NA	NA	NA	NA	NA
May 24-25, 2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
September 3, 2004	1,100	27	ND	14	27	2,200	ND	ND	65	ND	ND	ND
November 2, 2004	1,800	32	ND	5	11	4,100	ND	ND	170	270	ND	ND
February 17, 2005	5,600	190	34	41	110	10,000	ND	ND	780	2,000	ND	ND
May 24 & 26, 2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
August 15 & 17, 2005	1,600	27	ND	6	23	3,500	ND	ND	300	3,500	ND	ND
November 17, 2005	1,100	30	ND	4	9	2,400	ND	ND	190	9,500	ND	ND
February 8, 2006	3,600	220	43	66	160	2,700	ND	ND	160	7,800	ND	ND
May 5, 2006	1,600	130	21	37	65	1,400	ND	ND	53	3,100	ND	ND
August 18, 2006	270	27	ND	3	4	240	ND	ND	11	2,400	ND	ND
December 1, 2006	1,700	ND	ND	ND	ND	1,700	ND	ND	92	600	ND	ND
February 23, 2007	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND
May 10, 2007	ND	3.0	ND	ND	1.9	26	ND	ND	2	46	ND	ND
August 16, 2007	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND
November 8, 2007	ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND

Groundwater Analytical Results

Alaska Gasoline

6211 San Pablo Avenue

Oakland, California

	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB
EX-1												
February 19-20, 2004	**120,000**	**9,600**	**4,300**	**840**	**3,900**	**150,000**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
May 24-25, 2004	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
September 3, 2004	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
November 2, 2004	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
February 17, 2005	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
May 24 & 25, 2005	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	ND	ND	NS	NS	NS	NS
August 15 & 17, 2005	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
November 17, 2005	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
February 8, 2006	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
May 5, 2006	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
August 18, 2006	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
December 1, 2006	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
February 23, 2007	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
May 10, 2007	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
August 16, 2007	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
November 8, 2007	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

APPENDIX D

Certified Analytical Reports for Groundwater Sampling

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: Red Ratilainen

Client Project ID: Alaska Gas - Oakland
Reference Number: 10630
Sample Description: Water
Sample Prep/Analysis Method: EPA 5030/8015B, 8021B
Lab Numbers: 10630-2W, 3W, 4W, 5W, 6W

Sampled: 11-08-07
Received: 11-08-07
Extracted: 11-09-07
Analyzed: 11-09-07
Reported:11-16-07

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-4 (ug/L)	SAMPLE ID MW-5 (ug/L)
MTBE	0.50	ND	27	31000	1100	1.5
BENZENE	0.50	11	1.6	ND	1300	ND
TOLUENE	0.50	82	ND	ND	2600	ND
ETHYL BENZENE	0.50	54	1.9	ND	1000	ND
TOTAL XYLENES	0.50	270	1.5	ND	8500	ND
GASOLINE RANGE HYDROCARBONS	50	1300	110	34000*	64000	ND
Report Limit Multiplication Factor:		5	1	200	100	1
Report Limit Multiplication Factor for MTBE only:				10000		

Gasoline value due to MTBE.

Surrogate % Recovery:	FID: 100% / PID: 100%	FID: 100% / PID: 103%	FID: 99.1% / PID: 99.4%	FID: 122% / PID: 108%	FID: 100% / PID: 122%
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
Clark 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: Red Ratilainen

Client Project ID: Alaska Gas - Oakland
Reference Number: 10630
Sample Description: Water
Sample Prep/Analysis Method: EPA 5030/8015B, 8021B
Lab Numbers: 10630-7W

Sampled: 11-08-07
Received: 11-08-07
Extracted: 11-09-07
Analyzed: 11-09-07
Reported: 11-16-07

TOTAL PETROLEUM HYDROCARBONS - GASOLINE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (ug/L)	SAMPLE ID MW-6 (ug/L)
MTBE	0.50	4.0
BENZENE	0.50	ND
TOLUENE	0.50	ND
ETHYL BENZENE	0.50	ND
TOTAL XYLENES	0.50	ND
GASOLINE RANGE HYDROCARBONS	50	ND
Report Limit Multiplication Factor:		1

Surrogate % Recovery:	FID: 98.1% / PID: 111%
Instrument ID:	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

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 - Oakhurst	Method: EPA 5030/8015M,8020
P.O. Box 229	Reference Number: 10630	Instrument ID: Var-GC1
Bass Lake, CA 93604	Sample Description: Water	Extracted: 11-09-07
Attn: Red Ratilainen	Analyst: Jim Phillips	Analyzed: 11-09-07
		Reported: 11-16-07

QUALITY CONTROL DATA REPORT

ANALYTE	Gasoline	MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylenes
Spike Concentration:	220	3.68	2.64	19.4	4.04	23.2
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
LCS Batch #:	VW-N097	VW-N097	VW-N097	VW-N097	VW-N097	VW-N097
LCS % Recovery:	87.2%	84.8%	94.4%	95.3%	87.2%	87.8%
Surrogate Recovery:	99.2%	101%	101%	101%	101%	101%
Control Limits:	70-130 %	70-130 %	70-130 %	70-130 %	70-130 %	70-130 %
MS/MSD Batch #:	VW-N097	VW-N097	VW-N097	VW-N097	VW-N097	VW-N097
Spike Concentration:	220	3.68	2.64	19.4	4.04	23.2
MS % Recovery:	85.0%	72.8%	85.8%	85.0%	90.3%	90.6%
Surrogate Recovery:	104%	105%	105%	105%	105%	105%
MSD % Recovery:	79.4%	71.6%	79.0%	83.3%	87.3%	84.9%
Surrogate Recovery:	104%	106%	106%	106%	106%	106%
Relative % Difference:	6.35%	1.41%	8.22%	2.11%	3.33%	6.48%
Method Blank :	ND	ND	ND	ND	ND	ND
Surrogate Recovery:	101%	111%	111%	111%	111%	111%

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 / Laboratory Director or
Clari J. Cone / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate No. 2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Sampled: 11-08-07
P.O. Box 229	Reference Number: 10630	Received: 11-08-07
Bass Lake, CA 93604	Sample Description: Water	Extracted: 11-09-07
Attn: Red Ratillainen	Sample Prep/Analysis Method: EPA 5030/8260B	Analyzed: 11-09-07
	Lab Numbers: 10630-2W, 3W, 4W, 5W, 6W	Reported: 11-16-07

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-4 (µg/L)	SAMPLE ID MW-5 (µg/L)
FUEL OXYGENATES						
Methyl tert-Butyl Ether (MTBE)	0.50	1.4	23	38000	1500	1.5
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	ND	0.64	1400	360	ND
tert-Butanol (TBA)	20	ND	48	140000	14000	ND
VOLATILE HALOCARBONS & AROMATICS						
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:		1	1	100*	20*	1
Report Limit Multiplication Factor for MTBE:				10000	200	

** Report limit raised due to matrix interference*

Surrogate Recoveries					
1,2-Dichloroethane-d4	91.8%	82.4%	98.1%	98.5%	113%
Toluene-d8	92.0%	94.2%	91.6%	92.0%	97.0%

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 / Laboratory Director or
Clan J. Cone / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate No. 2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Sampled: 11-08-07
P.O. Box 229	Reference Number: 10630	Received: 11-08-07
Bass Lake, CA 93604	Sample Description: Water	Extracted: 11-08-07
Attn: Red Ratiltainen	Sample Prep/Analysis Method: EPA 5030/8260B	Analyzed: 11-09-07
	Lab Numbers: 10630-7W	Reported: 11-16-07

GASOLINE ADDITIVES AND SOLVENTS BY EPA METHOD 8260 GC/MS

ANALYTE	REPORTING LIMIT (µg/L)	SAMPLE ID MW-6 (µg/L)
FUEL OXYGENATES		
Methyl tert-Butyl Ether (MTBE)	0.50	5.3
Di-isopropyl Ether (DIPE)	0.50	ND
Ethyl tert-Butyl Ether (ETBE)	0.50	ND
tert-Amyl Methyl Ether (TAME)	0.50	ND
tert-Butanol (TBA)	20	ND
VOLATILE HALOCARBONS & AROMATICS		
1,2-Dichloroethane (1,2-DCA)	0.50	ND
Ethylene Dibromide (EDB)	0.50	ND
Report Limit Multiplication Factor:		1

Surrogate Recoveries	
1,2-Dichloroethane-d4	93.6%
Toluene-d8	86.9%

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 / Laboratory Director or
Clari J. Cone / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate No. 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: 10630	Instrument ID: HP 5972 MS
Bass Lake, CA 93604	Matrix: Water	Prepared: 11-09-07
Attn: Red Ratillainen	Analyst: Scott Foster	Analyzed: 11-09-07
		Reported: 11-16-07

QUALITY CONTROL DATA REPORT

SPIKE ID: VWMS-N097

	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	109%	27.2 - 178.4
Methyl t-butyl ether (MTBE)	0.50	ND	2.50	110%	59.7 - 153.0
Diisopropyl ether (DIPE)	0.50	ND	2.50	86.6%	72.1 - 129.6
Ethyl t-Butyl ether (ETBE)	0.50	ND	2.50	103%	68.1 - 130.8
t-Amyl methyl ether (TAME)	0.50	ND	2.50	106%	60.2 - 137.1
1,2-Dichloroethane (1,2-DCA)	0.50	ND	2.50	111%	91.2 - 137.6
Ethylene dibromide (EDB)	0.50	ND	2.50	113%	69.5 - 128.9
Surrogates:					
1,2-Dichloroethane-d4	1.00	101%	10.0	102%	81.7 - 125.4
Toluene-d8	1.00	94.3%	10.0	91.1%	90.3 - 112.6

	Spiking Level µg/L	MATRIX SPIKE %R	MATRIX SPIKE DUP %R	%R Limits	%RPD
COMPOUNDS					
t-Butyl Alcohol (t-BA)	75.0	103%	107%	45.1 - 151.2	3.81%
Methyl t-butyl ether (MTBE)	2.50	111%	118%	70.9 - 144.1	5.56%
Diisopropyl ether (DIPE)	2.50	86.8%	92.0%	73.6 - 126.5	5.82%
Ethyl t-Butyl ether (ETBE)	2.50	103%	105%	74.8 - 128.1	1.54%
t-Amyl methyl ether (TAME)	2.50	96.8%	96.0%	62.6 - 118.6	0.823%
1,2-Dichloroethane (1,2-DCA)	2.50	106%	110%	85.4 - 144.6	3.94%
Ethylene dibromide (EDB)	2.50	96.0%	104%	73.3 - 125.1	8.38%
Surrogate:					
1,2-Dichloroethane-d4	10.0	105%	110%	80.2 - 126.9	4.94%
Toluene-d8	10.0	87.6%	82.6%	82.6 - 114.9	5.88%

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 / Laboratory Director or
Clark S. 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: HUASICA GAS
Address:
City/State/ZIP: OAKLAND
Phone / FAX:
Proj # / P.O. #:
Report Attention: Ken
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	TEPH on floating product			Electronic Deliverables (EDF)	NUMBER OF CONTAINERS	OBSERVATIONS/REMARKS
10630-1W	EX-1	11-08	1001		G	L	X	X			X						3	Hold as per Paijo
-2W	MW-1R		0645															
-3W	MW-2		0751															
-4W	MW-3		0715															
-5W	MW-4		0845															
-6W	MW-5		0815															
-7W	MW-6		0733															
-8W	EX-1-Product												X					HOLD

	Signature	Printed Name	Date	Time	Company Name
Relinquished by:	John S. West	JOHN S. WEST	11-08	1400	HERSCHY ENV
Received by:		Dianna Vang	11-08	1400	Castle Lab
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

Method of Shipment:

Notes:

Total number of containers submitted to the laboratory

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

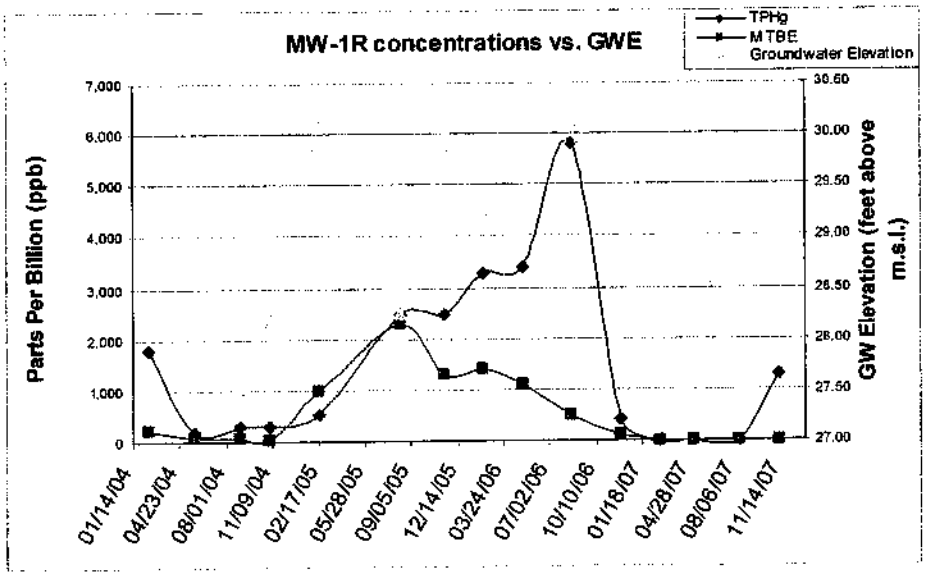
RESULTS DUE : _____

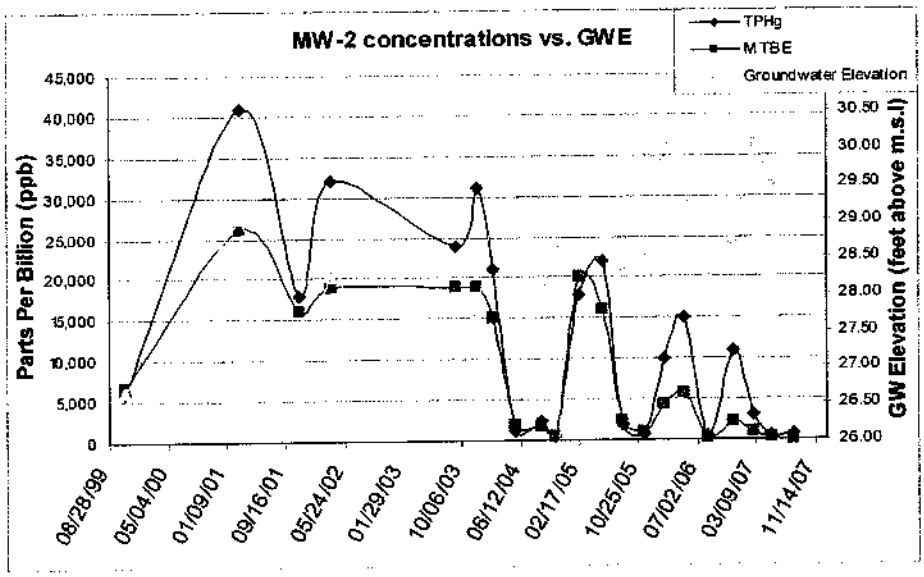
☐ VERBAL ☐ WRITTEN

APPENDIX E

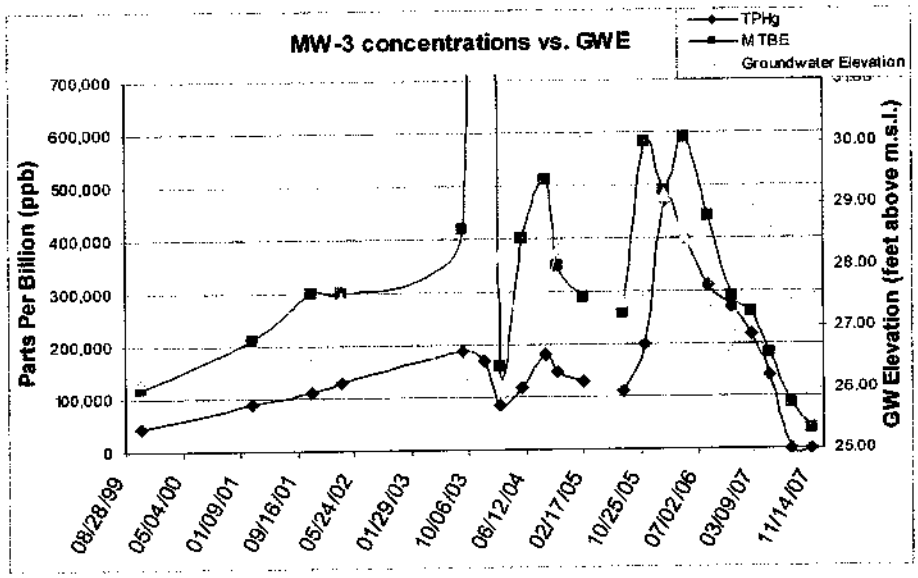
Concentration Trend Graphs

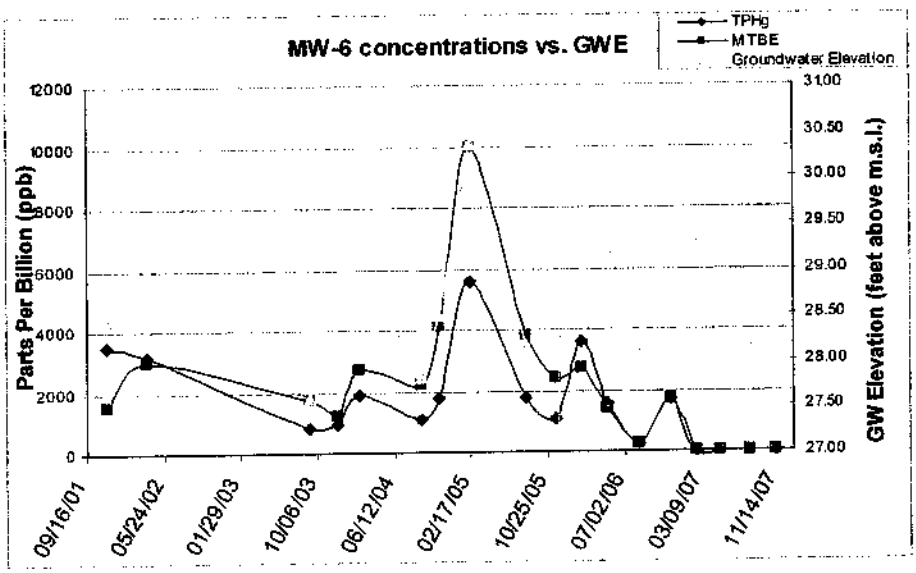
TPHg and MTBE Concentration Trends in Groundwater for Selected Wells (Page 1 of 3)





TPHg and MTBE Concentration Trends in Groundwater for Selected Wells (Page 2 of 3)





Benzene Concentration Trends in Groundwater for Selected Monitoring Wells (Page 3 of 3)