

erSchy Environmental

ENVIRONMENTAL
PROTECTION

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April 28, 1999
Project A51-01.01

Mr. Hernan Gomez
Oakland Fire Services Agency, OES
505 14th Street, Ste. 510
Oakland, CA 94612

Re: Results of Underground Storage Tank (UST) Site Assessment, Alaska Gasoline Company, Oakland, California

Dear Mr. Gomez:

HerSchy Environmental is pleased to present the results of drilling, sampling, and laboratory analysis in the vicinity of USTs at the above-referenced property. The property is a service station and convenience store located at 6211 San Pablo Avenue, which is on the northwest corner of San Pablo Avenue and 62nd Street in Oakland, Alameda County, California. The purpose of this work was evaluate soil conditions in the vicinity of three 10,000-gallon USTs used to store gasoline. The evaluation was performed in preparation of lining of the USTs. The USTs were partially exposed by excavation for liner installation at the time of the investigation. Groundwater is present at an approximate depth of ten feet. Due to site restrictions related to the excavation and shallow groundwater conditions, three vertical borings were drilled adjacent to the USTs.

RESULTS OF INVESTIGATION:

Drilling and Soil Sampling:

Three soil borings (B-1 through B-3) were drilled to collect soil samples from adjacent to the USTs. Soil samples were collected from each boring at a depth of ten feet which is at or near the capillary fringe above groundwater. Boring B-1 was advanced to 15 feet where an additional soil sample was collected. Groundwater was allowed to stabilize within the hollow-stem augers, the depth to groundwater measured, and a groundwater sample was collected using a disposable bailer.

Drilling was performed using hollow stem auger drilling equipment fitted with eight-inch diameter augers. Augers were steam cleaned prior to arriving on site. Soil samples were collected using a California modified split spoon sampler equipped with brass liners. The samples were collected at depths of ten feet in all of the borings by

driving the sampler ahead of the drill bit. An additional sample was collected from 15 feet in boring B-1. The split spoon sampler was cleaned between sampling events. Boring locations are presented in the Figure 1. Groundwater was measured at a depth of 10.20 feet in boring B-1. A groundwater sample was collected in paired 40 milliliter bottles fitted with teflon-lined septa. The bottles were filled completely to form a positive meniscus and checked after capping to ensure that no air bubbles were present in the sampling vials.

Soil samples were field screened using a portable organic vapor analyzer (OVA). A portion of the sample retrieved from each sampling interval was placed in a plastic zip-lock bag, sealed in the bag for a minimum of ten minutes at 70 degrees Fahrenheit or more, and the OVA probe inserted into the bag to evaluate concentrations of volatile organic compounds (VOCs) in soil.

Soil encountered during drilling consisted primarily of clay and silty clay (CL) and clayey silt (ML) from the surface to a depth of 15 feet, the total depth of boring B-1. Strong gasoline odors were noted in all of the samples collected. Boring logs are presented in Appendix A.

Samples were maintained in a cooler chest with frozen gel packs ("blue ice"), and maintained at a maximum of four degrees Celsius until delivered to the laboratory. Soil samples and drill cuttings were described in accordance with the Unified Soil Classification System by a California Registered Geologist. Borings were backfilled to surface grade with neat cement. Drill cuttings were incorporated into the existing soil stockpile resulting from the excavation to expose the USTs.

Soil samples were analyzed for gasoline-range total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylenes (BTEX), and for methyl tertiary butyl ether (MTBE). A one groundwater and four soil samples were analyzed for TPH, BTEX, and MTBE using approved methods (EPA method 8015/8020). Certified analytical reports and chain of custody documentation is presented in Appendix B and summarized in Table 1 below:

Table 1

Laboratory Analytical Results, Alaska Gasoline, Oakland

Sample	TPH	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
B-1 @ 10'	440	2.3	4.8	7.4	31	3.7
B-1 @ 15'	74	1.4	1.6	1.6	6.3	4.8
B-2 @ 10'	290	3.6	9.0	5.8	24	2.0
B-3 @ 10'	460	3.8	18	7.6	37	86
B-1, GW	99,000	10,000	4,300	3,100	11,000	48,000

All results expressed in parts per million (ppm)
 GW results expressed in parts per billion (ppb)

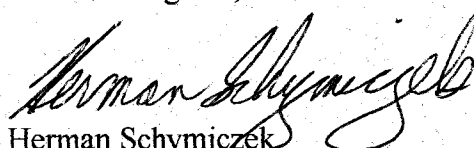
All of the samples contained significant concentrations of gasoline constituents. Groundwater beneath the site has been impacted by petroleum hydrocarbons. The additive MTBE was detected in all of the soil samples and in groundwater.

Conclusions:

Based on the results of this investigation, it appears that significant concentrations of gasoline constituents are present in soil and groundwater beneath the site. Based on the concentrations of gasoline constituents and groundwater conditions encountered, it appears that further investigation is warranted. Lining of the USTs should be based on the physical inspection of the tanks, and performed if they are structurally sound.

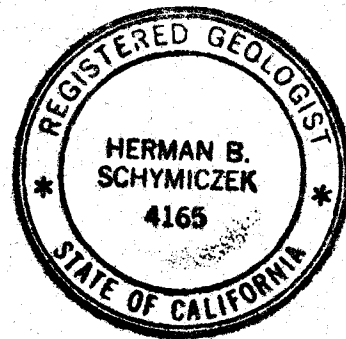
If you have any questions or need additional information, please contact me at the letterhead address or at (559) 641-7320.

With best regards,



Herman Schymiczek
Registered Geologist #4165

pc: Mr. Pritpaul Sappal, Alaska Gasoline Company
Mr. Shivcharanjit Lal, Alaska Gasoline Company
Mr. Don Hwang, Alameda County Health Care Services



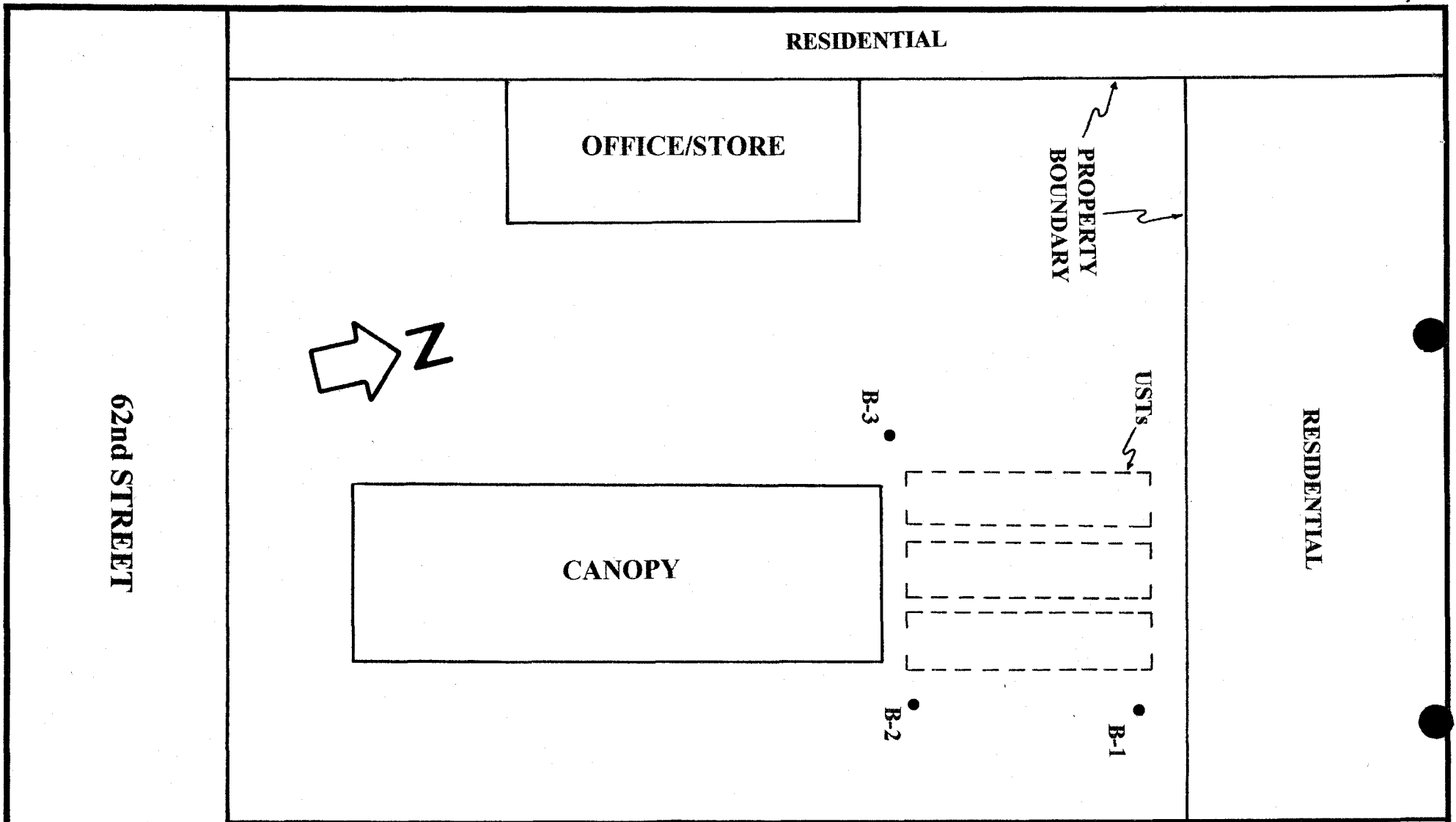


FIGURE 1 - BORING LOCATIONS

SCALE: 1" = 20'

APPROVED BY:

DRAWN BY **HBS**

DATE: 4/27/99

REVISED

ALASKA GASOLINE COMPANY
Oakland, California

HerSchy Environmental

DRAWING NUMBER












APPENDIX A

BORING LOGS

WELL/ NA
 BORING B-1
 PAGE 1 OF 1

CLIENT Alaska Gasoline Company
 DATE DRILLED 4-16-99
 LOCATION Oakland
 HOLE DIAMETER 8"
 HOLE DEPTH 15'
 WELL DEPTH NA
 WELL DIAMETER NA
 ELEVATION not surveyed

LOGGED BY H. Schymiczek
 DRILLED BY West Hazmat
 DRILLING METHOD HSA
 SAMPLING METHOD Split Spoon
 CASING TYPE NA
 SLOT SIZE NA
 GRAVEL PACK NA

WELL COMPLETION DETAIL	MOISTURE CONTENT	BLOWS/FOOT	DEPTH (FEET)	SAMPLE	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
			0			CL	Approx. 2" asphalt.
						CL	Clay, dk. grey, distinct hydrocarbon odor
						CL	Silty clay, grey.
			5			ML	Clayey silt, grey, distinct gasoline odor.
						ML	Clayey silt, grey, distinct gasoline odor.
	dmp	11	10			ML	Clayey silt, grey, trace v. fine sand faint gasoline odor, no stain; OVA = 230.5 ppm.
		9				ML	
	wet	8	15			CL	Silty clay, brown, faint gasoline odor, no stain; OVA = 146 ppm.
		13				CL	
							note: measured water @ 10.2' after 15 min., collected water sample.
							T.D. = 15'

WELL/ NA

BORING B-2

PAGE 1 OF 1

CLIENT Alaska Gasoline Company
 DATE DRILLED 4-16-99
 LOCATION Oakland
 HOLE DIAMETER 8"
 HOLE DEPTH 10'
 WELL DEPTH NA
 WELL DIAMETER NA
 ELEVATION not surveyed

LOGGED BY H. Schymiczek
 DRILLED BY West Hazmat
 DRILLING METHOD HSA
 SAMPLING METHOD Split Spoon
 CASING TYPE NA
 SLOT SIZE NA
 GRAVEL PACK NA

WELL COMPLETION DETAIL	MOISTURE CONTENT	BLOWS/FOOT	DEPTH (FEET)	SAMPLE	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
			0			CL	Approx. 2" asphalt. Clay, dk. grey, nearly black.
			5			CL	Silty clay, grey.
			8				
	amp		6			CL	Silty clay, grey, distinct gasoline odor, no stain; OVA = 151.6 ppm.
			9				
							T.D. = 10'

WELL/ NA

 BORING B-3

 PAGE 1 OF 1

CLIENT Alaska Gasoline Company

LOGGED BY H. Schymiczek

DATE DRILLED 4-16-99

DRILLED BY West Hazmat

LOCATION Oakland

DRILLING METHOD HSA

HOLE DIAMETER 8"

SAMPLING METHOD Split Spoon

HOLE DEPTH 10'

CASING TYPE NA

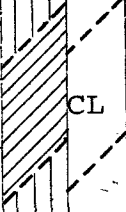

WELL DEPTH NA

SLOT SIZE NA

WELL DIAMETER NA

GRAVEL PACK NA

ELEVATION not surveyed

WELL COMPLETION DETAIL	MOISTURE CONTENT	BLOWS/FOOT	DEPTH (FEET)	SAMPLE	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
			0			ML	Approx. 2" asphalt. Clayey silt, grey.
			5			CL	Silty clay, grey.
			8				
	dmp	12	10			ML	Clayey silt, grey, trace v. fine sand distinct gasoline odor, no stain; OVA = 1,960 ppm.
		14					T.D. = 10'

APPENDIX B

CERTIFIED ANALYTICAL REPORTS

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate #2079

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: Herman Schymiczek	Client Project ID: Alaska Gasoline Co. - Oakland Reference Number: 2202 Sample Description: Soil Sample Prep/Analysis Method: EPA 5030/8015M, 8020 Lab Numbers: 2202-1S, 2S, 3S, 4S	Sampled: 4-16-99 Received: 4-16-99 Extracted: 4-22-99 Analyzed: 4-23-99 Reported: 4-26-99
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TOTAL PETROLEUM HYDROCARBONS - GASOLINE BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (mg/kg)	SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID
		B-1 @ 10' (mg/kg)	B-1 @ 15' (mg/kg)	B-2 @ 10' (mg/kg)	B-3 @ 10' (mg/kg)
MTBE	0.010	3.7	4.8	2.0	86
BENZENE	0.0050	2.3	1.4	3.6	3.8
TOLUENE	0.0050	4.8	1.6	9.0	18
ETHYL BENZENE	0.0050	7.4	1.6	5.8	7.6
TOTAL XYLENES	0.0050	31	6.3	24	37
GASOLINE RANGE HYDROCARBONS	1.0	440	74	290	460
Report Limit Multiplication Factor:		50	20	50	50
Report Limit Multiplication Factor MTBE only:					1000

Surrogate % Recovery:	NA	NA	NA	NA
Instrument ID:	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

ANALYST: Clari J. Cone
Clari J. Cone

APPROVED BY: James C. Phillips
James C. Phillips
Environmental Lab Director

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate #2079

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: Herman Schymiczek	Client Project ID: Alaska Gasoline Co. - Oakland Reference Number: 2202 Sample Description: Water Sample Prep/Analysis Method: EPA 5030/8015M, 8020 Lab Numbers: 2202-5W	Sampled: 4-16-99 Received: 4-16-99 Extracted: 4-19-99 Analyzed: 4-19-99 Reported: 4-26-99
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TOTAL PETROLEUM HYDROCARBONS WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT	SAMPLE ID
	$\mu\text{g/L}$	B-1 GW $\mu\text{g/L}$
MTBE	0.50	48000
BENZENE	0.50	10000
TOLUENE	0.50	4300
ETHYL BENZENE	0.50	3100
TOTAL XYLENES	0.50	11000
GASOLINE RANGE HYDROCARBONS	50	99000
Report Limit Multiplication Factor:		1000

Surrogate % Recovery:	FID:102% / FID:99.6%
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

ANALYST: Cliff J. Cane
Cliff J. Cane

APPROVED BY: James C. Phillips
James C. Phillips
Environmental Lab Director

