

erSchy Environmental, Inc.



December 7, 2004 Project A51-01

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

Re: Results of November, 2004 Quarterly Groundwater Monitoring, Alaska Gasoline Company, Oakland, California, Case #RO0000127

Dear Mr. Chan:

HerSchy Environmental 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 November 2, 2004. Initial work included the drilling, sampling, and laboratory analysis of soil and groundwater. Details of this investigation are contained in the April 22, 1999 report titled, "Results of Underground Storage Tank (UST) Site Assessment, Alaska Gasoline Company, Oakland, California", prepared by HerSchy Environmental.

METHODS OF INVESTIGATION

Groundwater Sampling Procedures:

The depth to groundwater in each well was measured to the nearest 0.01 feet using an electric sounder prior to initiating groundwater sampling activities. The groundwater elevation was determined for each well by subtracting the depth to groundwater from the surveyed well elevation. The depth to groundwater, total depth of the well, and the well diameter were used to calculate the volume of groundwater within the well casing. 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, diisopropyl 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 wells MW-4 and EX-1 contained floating product, no samples were collected from these wells, and groundwater data from these wells was not used in determining the groundwater flow direction or gradient. Groundwater was present beneath the site at an average depth of 7.40 feet below the surveyed well elevations during the November, 2004 monitoring event. Based upon the most recent survey (performed July 8, 2004) the elevation of groundwater during the November, 2004 monitoring event averaged 28.47 feet above mean sea level. This is an increase in groundwater elevation of 0.67 feet since the September, 2004 monitoring event. Groundwater flow direction was South 63 degrees West at a gradient of .0083 during the November, 2004 monitoring event. Groundwater conditions are summarized in Table 1 and presented graphically in Figure 2.

		Table 1	· · ·
Gro	undwater Conditi	<u>ons, Alaska Gasoline, Oa</u>	<u>ikland</u>
Well Number	Elevation	Depth to GW	GW Elevation
December 9, 2003		······································	
MW-1	34,70	7,50	27.20
MW-2	34,94	7.20	27.74
MW-3	33.74	6.45	27.29
MW-4	32.38	0.25'free product	
MW-5	33.75	6.13	27.62
MW-6	34.68	7.11	27.57
Flow Direction $=$ S. 56	W: Gradient $= .007$	75	

	(C	Fable 1 ontinued)	
Well Number	Elevation	Depth to GW	GW Elevation
February 19-20, 200	4		
MW-1R	Not Surveyed	5.45	
MW-2	34.94	5.81	29.13
MW-3	33.74	5.56	28.18
MW-4	32.38	0.25' free product	
MW-5	33.75	5.11	28.64
MW-6	34.68	5.61	29.07
EX- 1	Not Surveyed	3.96	
Flow Direction = $S.4$	2 W; Gradient = .0154	4	• •
May 24-25, 2004			
MW-1R	Not Surveyed	8.58	****
MW-2	34.94	7.79	27.15
MW-3	33.74	6.99	26.75
MW-4	32.38	0.33'free product	
MW-5	33.75	6.57	27.18
MW-6	34.68	Not Available	Not Available
EX-1	Not Surveyed	0.76' free product	
Flow Direction = S. 7	1 W; Gradient = .008	1	
September 3, 2004*			
MW-1R	36.67	9.15	27.52
MW-2	36.33	8.43	27.90
MW-3	35.12	7.53	27.59
MW-4	34.11	0.7'free product	
MW-5	35.17	7.01	28.16
MW-6	36.07	8.25	27.82
EX-1	33.28	1.2' free product	
Flow Direction = S. 5	55 W.; Gradient = .007	5	
November 2, 2004*			
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	والمحاولين والمراجع
MW-5	35.17	6.43	28.74
MW-6	36,07	7.57	28.50
EX-1	33,28	1.25' free product	
Flow Direction = S. ϵ	53 W.; Gradient = .008	3	
Elenation in Cost		· · · · · · · · · · · · · · · · · · ·	

Elevations in feet * new survey (7/8/04)

Based on the data gathered from the site monitoring wells without floating product, 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 abovementioned fuel constituents. Certified analytical reports and chain-of-custody documentation are presented in Appendix B and summarized in Table 2 below:

			Table 2) · · · · · · · · · · · · · · · · · · ·		
<u>Labo</u>	ratory Anal	<u>ytical Results</u>	<u>s for Groun</u>	dwater, Alaska (<u>Gasoline, O</u>	akland
Well No.	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
December 9	, 2003					
MW-1	22,000	150	ND	ND	ND	66,000
MW-2	31,000	6,200	170	1,600	2,700	19,000
MW-3	170,000	2,000	ND	ND	ND	4,500,000
MW-4	NA	NA	NA	NA	NA	NA
MW-5	130	32	ND	2.6	0.57	5.0
MW-6	970	150	9.9	31	83	1,200
February 19	9-20, 2004					
MW-1R	1,800	95	130	44	200	220
MW-2	21,000	4,600	1 20	970	2,000	15,000
MW-3	86,000	1,800	630	ND	ND	160,000
MW-4	NA	NA	NA	NA	NA	NA
MW-5	ND	ND	ND	ND	ND	1.5
MW-6	1,900	280	58	17	160	2,700
EX-1	120,000	9,500	4,300	840	3,900	150,000
May 24-25,	2004					
MW-1R	210	12	10	5.4	23	79
MW-2	1,200	120	3.0	63	67	1,900
MW-3	120,000	2,200	ND	180	220	400,000
MW-4	NA	NA	NA	NA	NA	NA
MW-5	ND	ND	ND	ND	ND	0.55
MW-6	NA	NA	NA	NA	NA	NA
EX-1	NA	NA	NA	NA	NA	NA

Table 2 (Continued)						
Well No.	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
September 3	3, 2004					
MW-1R	300	1.5	7.1	9.4	42	81
MW-2	2,300	120	ND	51	70	1,700
MW-3	180,000	2,000	ND	ND	ND	510,000
MW-4	NA	NA	NA	NA	NA	NA
MW-5	100	6.4	ND	ND	0.79	4.2
MW-6	1,100	27	ND	14	27	2,200
EX-1	NA	NA	NA	NA	NA	NA
November 2	2, 2004					
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
EX-1	NA	NA	NA	NA	NA	NA

All results presented in parts per billion (ppb)

MTBE results by EPA method 8260

NA= no analysis

ND= below detectable limits

As requested by your office, groundwater samples were also analyzed for the fuel 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), ethylene dibromide (EDB), methanol, and ethanol. Laboratory analytical results are presented in Appendix B and summarized in Table 3 below:

		Table 3			
<u>Laboratory Analytical Results for Groundwater, Alaska Gasoline, Oakland</u>					
Sample	TAME	TBA	Methanol	Ethanol	
May 24-25, 2004					
MW-1R	2.1	37	ND	ND	
MW-2	ND	ND	ND	ND	
MW-3	15,000	ND	ND	ND	
MW-5	ND	ND	ND	ND	
September 3, 200	4				
MW-1R	1.6	ND	NA	NA	
MW-2	26	ND	NA	NA	
MW-3	14,000	ND	NA	NA	
MW-5	ND	ND	NA	NA	
MW-6	85	ND	NA	NA	

		Table 3 (Continued)		
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

All results in parts per billion (ppb)

ND = below detectable concentrations

NA = no analysis

There was no EDB, 1,2-DCA, DIPE, or ETBE detected in the groundwater samples during the November, 2004 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 analyzed.

All of the on-site monitoring wells sampled during the November, 2004 event are impacted with gasoline constituents. No samples were collected from MW-4 and EX-1 due to the presence of floating product. Other than MW-4 and EX-1, concentrations are highest in the down gradient well MW-3. Concentrations are significantly lower in MW-5 than any of the other wells, reflecting its distance from, and up gradient location relative to, the USTs.

CONCLUSIONS AND RECOMMENDATIONS

A remedial action plan (RAP) was sent to your office on September 17, 2004. Implementation of the RAP will begin upon approval. Quarterly groundwater monitoring will continue at the site. Efforts are being made to install up to two groundwater monitoring wells off site to delineate the gasoline product plume. A work plan for the installation of off site monitoring wells was submitted and subsequently approved in correspondence from your office. The next quarterly monitoring event is currently scheduled for February, 2005. If you have any questions or need additional information, please contact me at the letterhead address or at (559) 641-7320.

With best regards, HerSchy Environmental, Inc.

Joshua Teves Project Geologist

James S. Olbinski Registered Geologist #4274

pc:

Mr. Pritpaul Sappal Mr. Syed Nawab, Alaska Gasoline Company Mr. Hernan Gomez, Oakland Fire Services Agency Mrs. Susan M. Torrence, Deputy District Attorney

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APPENDIX A

GROUNDWATER SAMPLING

FIELD DATA SHEETS

	HerSchy WATER SAMPLE FIELD DATA SHEET
	Client Name: Alatic (2015 - Orldand
	Burnet D. (a) with GUS Location: <u>JAU/UMG</u>
	Sampled by: <u>JANUL</u>
	Sample ID: <u>MW-1K</u> Type: Groundwater <u>X</u> Surface Water <u>Other</u>
	Casing Diameter (inches): 2 X 3 4 6 0ther
	Casing Elevation (feet/MSL): 36.67 Volume in Casing (gal): 245
	Depth of Well (feet): 23.4 Calculate Purge Volume (gal): 7.34
	Depth to Water (feet): 8,49 Actual Purge Volume (gal):
	Date Purged: $11 - 2 - 04$ Date Sampled: $11 - 2 - 04$ /
	TIME VOLUME PH E.C. TEMP. TURBIDITY
	1510 - 7.22 599 6t.4 Murky
	<u>1526 X.0 F.18 595 67.5 11</u>
·	
	Other Observations Retals.
time	Purging Equipments 1. 1/1 + P((re)
đe.	$\begin{array}{c} \text{Sompling Equipment:} \underline{1} \\ \hline \end{array} \\ \hline \\ \\ \hline \end{array} \\ \hline \end{array} \\ \hline \\ \\ \hline \end{array} \\ \hline \end{array} \\ \hline \\ \\ \hline \end{array} \\ \hline \end{array} \\ \hline \\ \\ \\ \\$
	Beneral
	Sampler's Signature: All Hunk
	/Water Sample Sheet, wpd
	~ 100

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HerSchy WATER SAMPLE FIELD DATA SHEET Environmental	
Client Name: Alaska Gas Location: Oakland	
Purged By: Gumle Sampled by: Gumle	
Sample ID: <u>MW-</u> Type: Groundwater X Surface Water Other	
Casing Diameter (inches): 2 X 3 4 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Casing Elevation (feet/MSL): 36.33 Volume in Casing (gal.): 2.17 Depth of Well (feet): 20.9 Calculate Purge Volume (gal.): 6.52 Depth to Water (feet): 7.65 Actual Purge Volume (gal.): 7.0	
Date Purged: <u>11 - 2 - 04</u> Date Sampled: <u>11 - 2 - 04</u>	1630
$\frac{1617}{1625} \xrightarrow{\text{VOLUME}} p_{\text{H}} \xrightarrow{\text{pH}} \underbrace{\text{E.C.}}_{\text{F.C.}} \underbrace{\text{TEMP.}}_{\text{67.9}} \underbrace{\text{TURBIDIT}}_{(1000)} \underbrace{(1000)}_{(1000)} \underbrace{(1000)}_{(1$	ry ′ ≁-
(1, p)	
Other Observations: Odor: <u>J/g5t jetrullun</u>	
Purging Equipment: Water a	
Sampling Equipment:	
Remarks:	
	*
Sampler's Signature:	<u>, </u>
/Water Sample Sheet.wpd	. .

Environmental	E FIELD DATA SHEET
Client Name: Alorsha Gas	Location: Dalland
Purged By: Swymle	Sampled by:
Sample ID: <u>MW3</u> Type: Ground	water X Surface Water Other
Casing Diameter (inches): 2 3	456Other
Casing Elevation (feet/MSL): 33.12	Volume in Casing (gal.): 2 35
Depth of Well (feet): <u>21.2</u>	Calculate Purge Volume (gal.): <u>7.05</u>
Depth to Water (feet):	Actual Purge Volume (gal.):
Date Purged: 11 - 2 - 04	Date Sampled: 11 - 2 - 04
TIME VOLUME pH	E.C. TEMP. TURBIDIT
$\frac{1759}{1506}$ <u>7.15</u>	- 1011 +0.8 Cloud
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Other Observations:	- Odor: Struhi Petrolein
Purging Equipment:)
Sampling Equipment:	
Remarks:	х
	7, 7
Sampler's Signature:	Tunk

HerSchy WATER SAM Environmental	PLE FIELD DATA SHEET
Client Name: Alaska Go	15 Location: Daldand
Purged By:	Sampled by: <u>Gunle</u>
Sample ID: $MW - 4$ Type: G	roundwater X Surface Water Other
Casing Diameter (inches): 2	3 4 5 6 Other
Casing Elevation (feet/MSL): <u>34</u> Floating Product Depth of Wet (feet): <u>5.54</u> Depth to Water (feet): <u>6.17</u>	Volume in Casing (gal.): VA Calculate Purge Volume (gal.): Value Actual Purge Volume (gal.): Value
Date Purged: <u> - え - 6</u> TIME VOLUME pH	$\frac{4}{1} \text{Date Sampled: } \frac{11 - 2 - 34}{1 - 2 - 34}$
	$F_{\mathcal{K}}$
Other Observations:	Odor: Petroleum
Purging Equipment:	<u>}</u>
Sampling Equipment:V Remarks:63 ff Float	ing Product
Sampler's Signature:	Thursday.
/Water Sample Sheet.wpd	J d wood - c
$\mathcal{O}\mathcal{V}\mathcal{V}$	

HerSchy WATER SAMPLE FIELD DATA SHEET Environmental	·
Client Name: Alaska Gas Location: Oakland	
Purged By: Gumle Sampled by: Gumle	
Sample ID: MW-5 Type: Groundwater X Surface Water Other Other	
Casing Diameter (inches): 2 3 4 5 6 0ther	
Casing Elevation (feet/MSL): 35.17 Volume in Casing (gal.): 3.03	
Depth of Well (feet): 24.9 Calculate Purge Volume (gal.): 9.09	
Depth to Water (feet): 6.43 Actual Purge Volume (gal.): 10.0	
Date Purged: $11 - 2 - 04$ Date Sampled: $11 - 2 - 04$ 16	.[0
$\frac{1556}{1605} \xrightarrow{\text{VOLUME}} pH & E.C. & \text{TEMP.} \\ \frac{7.20}{7.18} \xrightarrow{7.71} \frac{68.9}{69.3} \xrightarrow{\text{TURBIDITY}} 11$	
Other Observations: Odor: NONC	
Sampling Equipment 11	
Sampung Equipment:	
Kemarks:	•
<u> </u>	
Sampler's Signature:	
/Water Sample Sheet.wpd	-

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HerSchy WATER SAMPLE FIELD DATA SHEET Environmental
Client Name: Alaska Gas Location: Dakland
Purged By: GUML Sampled by: GUML
Sample ID: <u>MW-b</u> Type: Groundwater <u>X</u> Surface Water Other
Casing Diameter (inches): 2 X 3 4 5 0 0ther
Casing Elevation (feet/MSL): 36.07 Volume in Casing (gal.): 2.55 Depth of Well (feet): 23.10 Calculate Purge Volume (gal.): 7.64 Depth to Water (feet): 7.57 Actual Purge Volume (gal.): ff
Date Purged: 11 - 2 - 04 Date Sampled: 11 - 2 - 04 1550
TIME VOLUME pH E.C. TEMP. TURBIDITY 1536 7.19 7.35 67.2 Murky 1544 84 7.20 621 67.5 Cloudy
Other Observations: Odor: Odor: Odor: Defruieum /Sulfer Purging Equipment: MATERIA
Sampling Equipment:
Remarks:
Sampler's Signature: MAL HAMAN
/Water Sample Sheet.wpd

Envir	onmental
Client	Name: <u>Maska bas</u> Location: <u>Dalama</u>
Purge	By: GUMLe Sampled by: GUMLe
Sampl	e ID: $\underline{E} \times - \underline{I}$ Type: Groundwater \underline{X} Surface Water Other
Casing	5 Diameter (inches): 2 3 4 X 5 6 Other
Casing Depth Depth	to Water (feet): 5,88 Actual Purge Volume (gal.):
Date F TII	hurged: 11-2-04 Date Sampled: 11-2-04 ME VOLUME pH E.C. TEMP. TURBIDITY
Other (Observations: Odor: Petcole(a ho
Purging	g Equipment:
Sampli	ng Equipment: /// (
Remari	s: 1.25 Ft. Floating Product
	r's Signature: Ap// A.

APPENDIX B

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CERTIFIED ANALYTICAL RESULTS--GROUNDWATER

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CASTLE ANALYTICAL LABORATORY

Environmental Testing Services 2333 Shuttle Drive, Atwater, CA 95301		Phone: (209) 384-2930
Certificate #2480		Fax: (209) 384-1507
HerSchy Environmental P.O. Box 225 Bass Lake, CA 93604 Attn: Joshuø Teves	Client Project ID: Alaska Gas - Oakland Reference Number: 7527 Sample Description: Water Sample Prep/Analysis Method: EPA 5030/8015M, 8020 Lab Numbers: 7527-1W, 2W, 3W, 4W, 5W	Sampled: 11-02-04 Received: 11-05-04 Extracted: 11-09-04 Analyzed: 11-10-04 Reported: 11-18-04

TOTAL PETROLEUM HYDROCARBONS - GASOLINE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT	SAMPLE ID MW-1R	SAMPLE ID MW-2	SAMPLE ID MW-3	SAMPLE ID MW-5	SAMPLE ID MW-6	
	µg/L	(ug/L)	(µg/L)	(µg/L)	(µgr.)	(µg/r.)	
мтвЕ	0.50	39	460	270000	1.0	3300	
BENZENE	0.50	14	35	1700	2.6	32	
TOLUENE	0.50	30	ND	ND	ND	ND	
ETHYLBENZENE	0.50	9.5	17	ND	1.7	5.4	
TOTAL XYLENES	0.50	45	30	ND	0.87	11	
GASOLINE RANGE HYDROCARBONS	50	290	530	150000	ND	1800	÷
Report Limit Multiplication Report Limit Multiplication	n Factor: n Factor for MTBE only:	1	2 50	500 10000	1	5 100	

Surrogate % Recovery:	FID: 119%/ PID: 119%	FID: 12044 / PID: 11154	FID: 111%/ P(D; 117%	rid: 10714 / Pic: 10014	FID: 101% / PID: 102%
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 Practicel Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

ANALYST: Clair J. Cone . C. Phillips of APPROVED BY: James C. Phillips Laporatory 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 P.O. Box 229 Bass Lake, CA 93604 Attn: Joshua Teves	Client Project ID: Alaska Gas - Oakland Reference Number: 7527 Sample Description: Watar Sample Prap/Analysis Method: EPA 5030/8260 Lab Numbers: 7527-1W, 2W, 3W, 4W, 5W	Sampled: 11-02-04 Received: 11-05-04 Extracted: 11-08-04 Analyzed; 11-08-04 Reported: 11-18-04				

GASOLINE ADDITIVES BY EPA METHOD 8260 GC/MS

ANALYTE	REPORTING LIMIT (µ9/L)	EPORTING SAMPLE ID LIMIT MW-1R (µg/L) (µg/l)		SAMPLE 1D MW-3 (µ9 ^{/L})	SAMPLE ID MiW-5 (yg/L)	SAMPLE ID MW-6 (µg/L)
FUEL OXYGENATES						
Methyl tert-Bulyl Ether (MTBE)	0.50	45	520	350000	1,0	4100
Di-isopropyl Ether (DIPE)	0.50	ND	ND	ND	ND	ND
Ethyl tert-Bulyl Ether (ETBE)	0.50	ND	ND	ND	ND	NO
tert-Amyl Methyl Ether (TAME)	0.50	1.1	28	31000	ND	170
terl-Butanol (TBA)	20	ND	100	140000	ND	270
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: Report Limit Multiplication Factor Report Limit Multiplication Factor	for MTBE; for TAME:	1	1 5D	1000 10000	1	1 500 20

* Report limit raised due to matrix Interference

Surrogate Recoveries	· · · · · · · · · · · · · · · · · · ·				
1.2-Dichloroethane-d4	112%	109%	97,1%	84.5%	99.8%
Toluene-d8	94.1%	101%	87.5%	90.9%	96.9%

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)

James C. Phillips Jernes C. Phillips Jeboratory Director ANALYST: an al APPROVED BY

CASTLE ANALYTICAL LABORATORY

Location: 2333 Shuttle Drive, Bldg 908/909, Atwater, CA 95301

Certificate No. 2480

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