H2OGEOL
A GROUND WATER CONSULTANCY

ENVIRONMENTAL
PROTECTION
99 MAR -3 PM 3:26

Ms. Madhulla Logan
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

March 01, 1999

RE: Fourth of Four Required Groundwater Monitoring Events (First Quarter, 1999) at Runnels Industries, Inc., 3590 Enterprise Avenue, Hayward, CA.

Dear Ms. Logan;

This letter report documents the fourth of the four quarterly groundwater monitoring events required in your letter dated April 06, 1998 that was addressed to Mr. Al Gant at Runnels Industries, Inc., 3590 Enterprise Avenue in Hayward, California. The location of the 3590 Enterprise Avenue property is shown in Figure 1.

1.0 POTENTIOMETRIC SURFACE GRADIENT AND DIRECTION OF GRADIENT

Depth to water in each monitoring well was measured to +/- 0.01 feet using a Solinst Model 101 water level meter between 08:06 and 08:13 on February 04, 1999. The depth to water was converted to potentiometric surface elevation by subtracting the measured depths to water from the casing top elevation. This information in presented in Table 1 along with the water surface elevations from previous monitoring events.

For the five monitoring wells there are four triangles with a well at each apex for which a groundwater gradient and flow direction (more precisely direction of groundwater gradient, since the horizontal hydraulic conductivity anisotropy is unknown) may be calculated using the three-point problem approach. The groundwater gradient direction and gradient for each of the triangles are included in Table 2 that also provides this information for previous monitoring events.

Figure 2 presents a potentiometric surface map showing well locations and groundwater surface contours as measured on November 03, 1998 using the method of minimum area triangles in a minimum bounded field. The average direction of groundwater gradient on February 04, 1999 was south 64.03 degrees west with a slope (gradient) of 0.0035 feet per foot.

2.0 MONITORING WELL PURGING AND SAMPLING

The monitoring wells were purged by pumping with an "ES-60" submersible pump marketed for monitoring well purging by Enviro-Tech Services Co. of Martinez, California. Field measured water quality parameters were measured using a Cambridge Scientific Industries Hydac™ Conductivity Temperature pH Tester. Well purging activities and the field measured water quality parameters are documented in Attachment A. For each well, purging continued until specific conductance stabilized to +/- 5% on consecutive readings.

Groundwater samples were collected for halogenated volatile organic compound analysis by U.S. EPA Method 8010 from monitoring wells MW-1 through MW-5. The samples were collected directly from the discharge end of the purge pump delivery tubing at a pumping rate of less than 1 L/minute. Water samples were collected, in duplicate, into 40-mL glass vials with Teflon™ septum lids.

Groundwater sample bottles were labeled and placed in an ice chest with a 2 Liter plastic bottle containing ice. A Chain-of-Custody form was filled out and was delivered with the ice chest to Chromalab, Inc. of Pleasanton, California, a state certified laboratory (DTSC No. 1094).

3.0 GROUNDWATER ANALYTICAL RESULTS

Groundwater samples from MW-1 through MW-5 were submitted to Chromalab for analysis by EPA Method 8010 for halogenated volatile organic compounds. Copies of the laboratory report and chain-of-custody documentation are contained in Attachment B.

Six Method 8010 analytes were identified in groundwater from the five monitoring wells at the 3590 Enterprise Avenue property. These compounds and their respective maximum contaminant levels (MCLs) are listed below

Concentration in micrograms per Liter	MW-1	MW-2	MW-3	MW-4	MW-5	MCL
1,1-Dichloroethane	<0.50	3.5	4.5	<0.50	19	5.0
1,1-Dichloroethene	<0.50	3.0	11	1.1	160	6.0
Trans-1,2-Dichloroethene	0.82	<0.50	<0.50	<0.50	<0.50	10.0
Cis-1,2-Dichloroethene	2.9	<0.50	<0.50	<0.50	0.92	6.0
Trichloroethene	42	2.7	<0.50	<0.50	7.0	5.0
Tetrachloroethene	1.2	<0.50	<0.50	<0.50	<0.50	5.0

Primary compounds 1,1-Dichloroethane (11-DCA) and 1,1-Dichloroethene (11-DCE) were present in up/cross gradient wells MW-3 and MW-2. Down/cross gradient well MW-4 contained 11-DCE. The 11-DCE concentration exceeded its MCL in well MW-3. These compounds were otherwise below their respective MCLs in the other wells referred to.

In centrally located monitoring well MW-5 Trichloroethene (TCE) was almost just above its MCL, 11-DCA exceeded its MCL by a factor of almost four and 11-DCE by a factor of 26. In light of this and the previous groundwater data, including location B-7, reported in the September 30, 1997 Additional Site Investigations report, an off site source to the east is suggested.

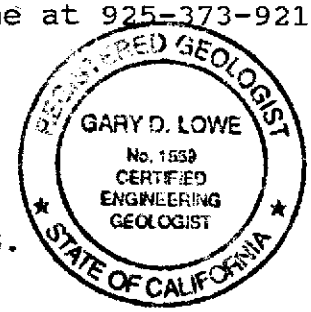
Primary compounds TCE was found in down/cross gradient well MW-1 and MW-5 and upgradient well MW-2. The MCL for TCE was exceeded in MW-1 by a factor of eight and barely exceeded in MW-5.

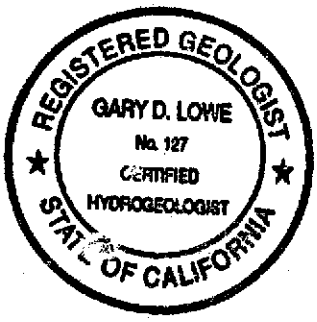
There are no further quarterly monitoring events scheduled.

Please do not hesitate to call me at 925-373-9211 should you have any questions.

Sincerely,

Gary D. Lowe, R.G., C.E.G., C.HG.
Principal, Hydrogeologist





xc: Mr. Al Gant

TABLE 1
WATER LEVEL MEASUREMENTS
RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE, HAYWARD, CALIFORNIA

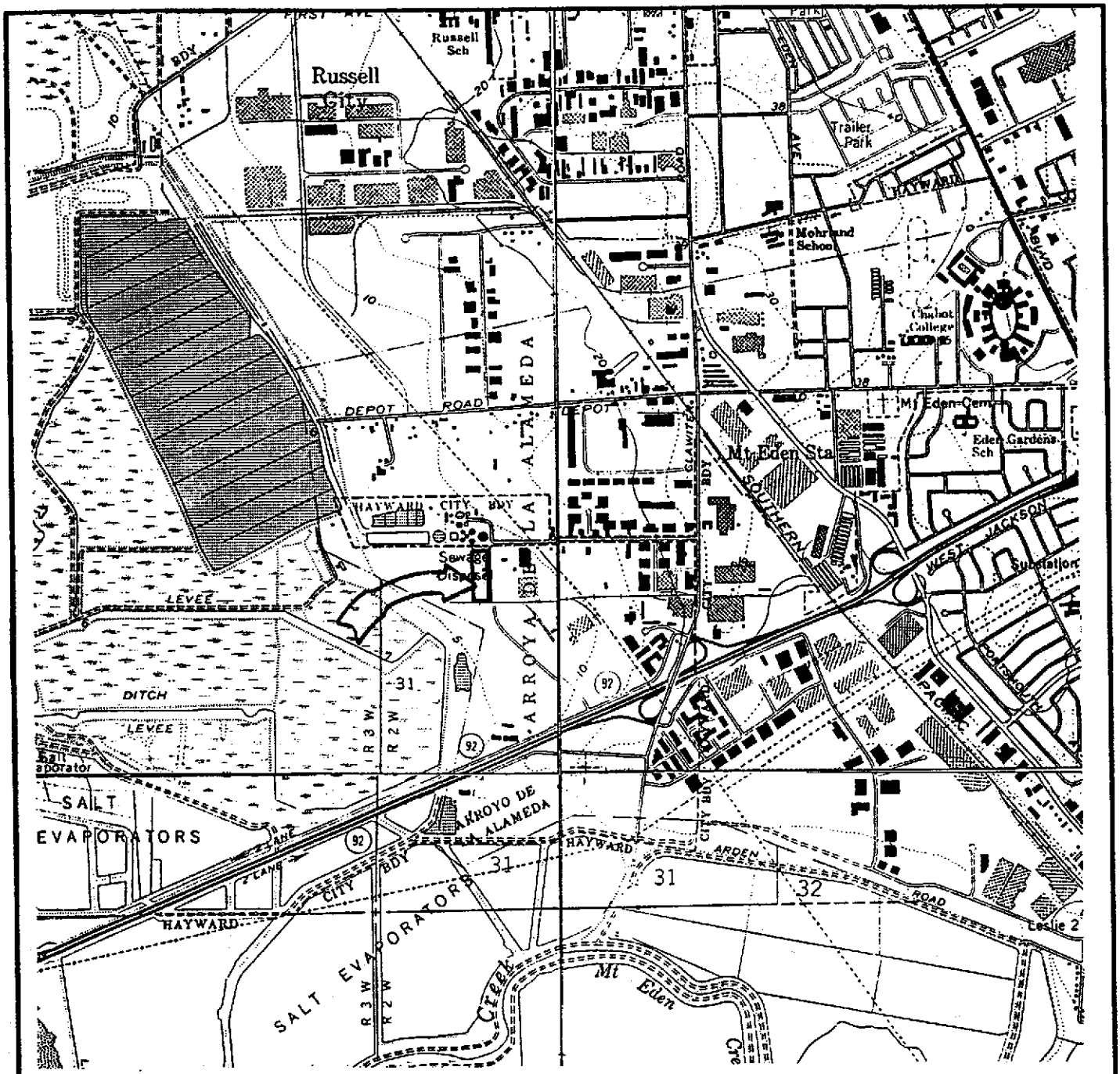
WELL		TIME	DEPTH TO WATER feet	GROUNDWATER ELEVATION
MW-1. Inst.12/03/85. TD = 15.65. Screen Interval not available.	EL:			9.96
	8/20/97	7:48	8.56	1.40
	5/7/98	8:54	7.78	2.18
	8/3/98	8:04	8.36	1.60
	11/3/98	8:04	8.44	1.52
	2/4/99	8:06	6.86	3.10
MW-2. Inst. 08/18/97. TD = 12.14. Screen Interval 7.1-12.1.	EL:			8.86
	8/20/97	7:26	6.41	2.45
	5/7/98	8:52	5.84	3.02
	8/3/98	8:06	6.10	2.76
	11/3/98	8:06	6.22	2.64
	2/4/99	8:08	5.21	3.65
MW-3. Inst. 08/18/97. TD = 12.15. Screen Interval 7.1-12.1.	EL:			7.91
	8/20/97	7:18	5.77	2.14
	5/7/98	8:49	4.56	3.35
	8/3/98	8:08	5.77	2.14
	11/3/98	8:08	5.98	1.93
	2/4/99	8:10	4.10	3.81
MW-4. Inst. 08/18/97. TD = 12.65. Screen Interval 7.6-12.6.	EL:			8.47
	8/20/97	7:44	7.34	1.13
	5/7/98	8:47	6.36	2.11
	8/3/98	8:10	7.27	1.20
	11/3/98	8:10	7.29	1.18
	2/4/99	8:12	5.52	2.95
MW-5. Inst. 08/18/97. TD = 12.68. Screen Interval 7.5-12.65.	EL:			8.86
	8/20/97	7:35	7.55	1.31
	5/7/98	8:44	6.62	2.24
	8/3/98	8:12	7.30	1.56
	11/3/98	8:11	7.45	1.41
	2/4/99	8:13	5.86	3.00

TABLE 2
POTENTIOMETRIC SURFACE GRADIENTS AND DIRECTIONS
RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE, HAYWARD, CALIFORNIA

WELL TRIANGLE			GRADIENT	GRADIENT DIRECTION
8/20/97				
MW-1	MW-2	MW-5	0.0049	S 59.43 °W
MW-2	MW-3	MW-5	0.0074	S 82.55 °W
MW-3	MW-4	MW-5	0.0053	N 73.08 °W
MW-1	MW-4	MW-5	0.0015	S 46.79 °W
		AVE	0.0048	S 73.92 °W
5/7/98				
MW-1	MW-2	MW-5	0.0039	S 69.98 °W
MW-2	MW-3	MW-5	0.0080	N 84.72 °W
MW-3	MW-4	MW-5	0.0067	N 65.82 °W
MW-1	MW-4	MW-5	0.0015	S 77.59 °W
		AVE	0.0050	S 89.26 °W
8/3/98				
MW-1	MW-2	MW-5	0.0054	S 62.85 °W
MW-2	MW-3	MW-5	0.0064	S 74.01 °W
MW-3	MW-4	MW-5	0.0049	S 85.54 °W
MW-1	MW-4	MW-5	0.0034	S 61.53 °W
		AVE	0.0050	S 70.98 °W
11/3/98				
MW-1	MW-2	MW-5	0.0052	S 58.61 °W
MW-2	MW-3	MW-5	0.0063	S 71.32 °W
MW-3	MW-4	MW-5	0.0038	N 86.52 °W
MW-1	MW-4	MW-5	0.0020	S 47.69 °W
		AVE	0.0043	S 67.77 °W
MW-1	MW-2	MW-5	0.0026	S 53.17 °W
MW-2	MW-3	MW-5	0.0060	N 86.98 °W
MW-3	MW-4	MW-5	0.0048	N 61.48 °W
MW-1	MW-4	MW-5	0.0006	S 8.60 °E
		AVE	0.0035	S 64.03 °W

TABLE 3
VOLATILE HALOGENATED ORGANIC COMPOUNDS
IN GROUNDWATER
RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE, HAYWARD, CALIFORNIA
(all concentrations in micrograms per liter)

	Vinyl chloride	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	TRANS-1,2-Dichloroethene	CIS-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
MW-1. Installed 12/03/85. TD = 15.65. Screen Interval not available.										
8/20/97	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	44	< 5.0
5/7/98	< 0.5	< 0.5	< 0.5	2.4	< 0.5	< 0.5	< 0.5	3.3	39	1.3
8/3/98	< 0.5	< 0.5	< 0.5	2.2	< 0.5	< 0.5	< 0.5	3.0	36	1.1
11/3/98	< 0.5	< 0.5	< 0.5	2.3	< 0.5	< 0.5	0.80	2.2	28	< 0.5
2/4/99	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.82	2.9	42	1.2
MW-2. Installed 08/18/97. TD = 12.14. Screen Interval 7.1-12.1										
8/20/97	< 0.5	4.5	< 0.5	3.9	< 0.5	< 0.5	< 0.5	< 0.5	5.0	< 0.5
5/7/98	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/3/98	< 0.5	1.1	< 0.5	1.1	< 0.5	< 0.5	< 0.5	< 0.5	2.2	< 0.5
11/3/98	< 0.5	3.7	< 0.5	3.0	< 0.5	< 0.5	< 0.5	< 0.5	3.4	< 0.5
2/4/99	< 0.5	3.5	< 0.5	3.0	< 0.5	< 0.5	< 0.5	< 0.5	2.7	< 0.5
MW-3. Installed 08/18/97. TD = 12.15. Screen Interval 7.1-12.1										
8/20/97	< 0.5	5.9	< 0.5	13	0.6	< 0.5	< 0.5	< 0.5	0.5	< 0.5
5/7/98	< 0.5	2.9	< 0.5	4.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
8/3/98	< 0.5	2.7	< 0.5	7.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/3/98	< 0.5	4.7	< 0.5	10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2/4/99	< 0.5	4.5	< 0.5	11	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-4. Installed 08/18/97. TD = 12.65. Screen Interval 7.6-12.6										
8/20/97	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5
5/7/98	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.7	< 0.5
8/3/98	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.72	< 0.5
11/3/98	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2/4/99	< 0.5	< 0.5	< 0.5	1.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-5. Installed 08/18/97. TD = 12.68. Screen Interval 7.5-12.65										
8/20/97	< 0.5	25	< 0.5	170	< 0.5	0.9	< 0.5	< 0.5	8.6	< 0.5
5/7/98	0.5	16	< 0.5	140	< 0.5	< 0.5	< 0.5	< 0.5	7.4	< 0.5
8/3/98	< 0.5	16	0.53	150	< 0.5	< 0.5	< 0.5	< 0.5	7.5	< 0.5
11/3/98	< 0.5	15	< 0.5	150	< 0.5	< 0.5	< 0.5	< 0.5	5.3	< 0.5
2/4/99	< 0.5	19	< 0.5	160	< 0.5	< 0.5	< 0.5	0.92	7.0	< 0.5
Ca MCL mg/L ug/l	.0005 .5	.005 5.0	.0005 .5	.006 6.0	.200 200	.005 5	.01 10	.006 6.0	.005 5.0	.005 5.0



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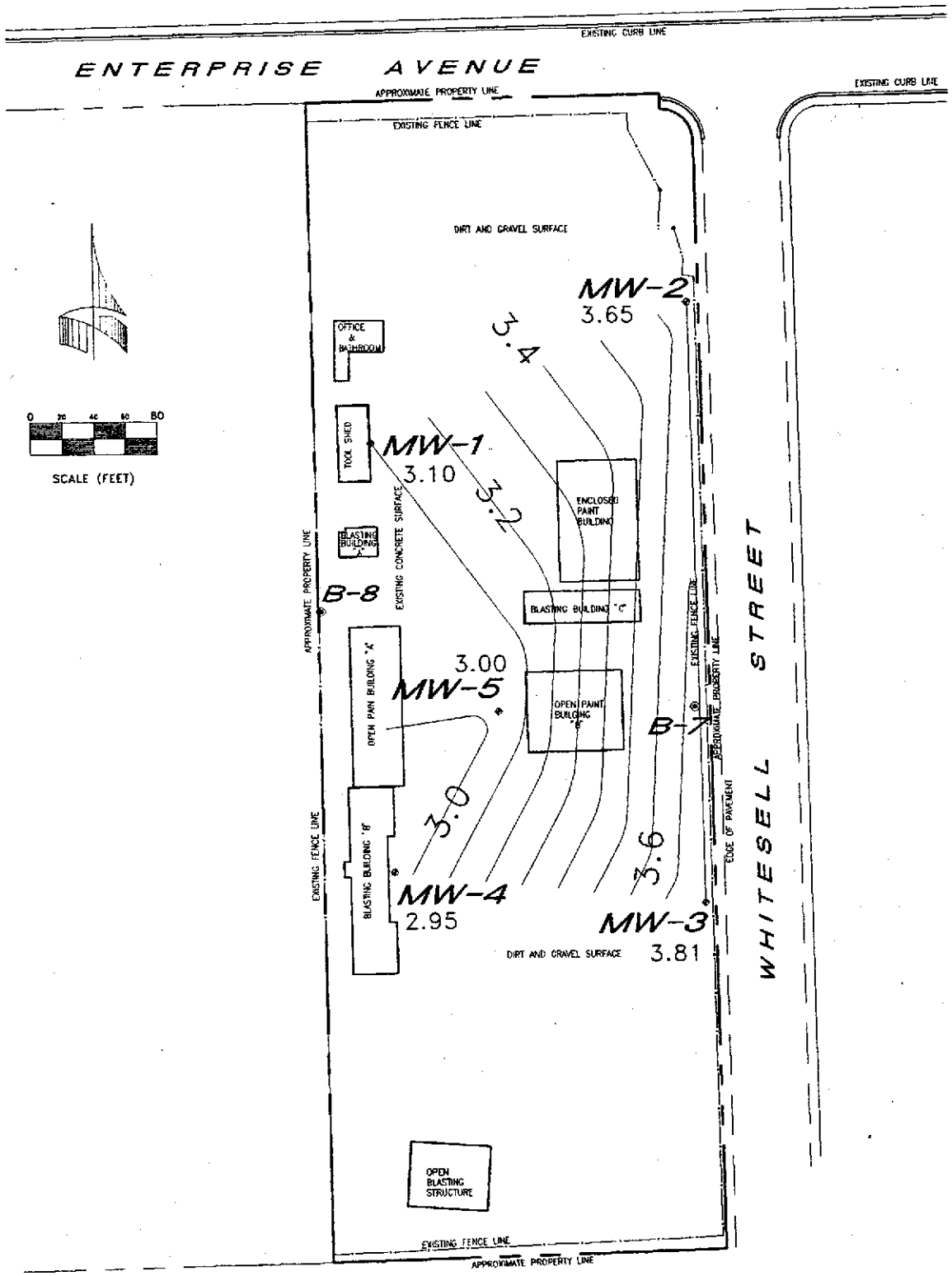
SITE LOCATION MAP
RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE
HAYWARD, CALIFORNIA

FIGURE
1



Well survey by Ron Archer, Civil Engineer, Inc., August 20, 1997. Top of casing elevations: MW-1 = 9.96; MW-2 = 8.86; MW-3 = 7.91; MW-4 = 8.47; and MW-5 = 8.86.

CONTOUR INTERVAL 0.1 FEET

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POTENTIOMETRIC SURFACE MAP FOR 02/04/99
RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE
HAYWARD, CALIFORNIA

FIGURE
2

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A GROUND WATER CONSULTANCY

P.O. Box 2165 ■ Livermore, California 94551 ■ (925) 373-9211

ATTACHMENT A

FIELD DATA SHEET
LOG OF WELL SAMPLING ACTIVITIES

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW-1 Project Name: 3590 Enterprise Avenue, Hayward, CA Date: 02/04/99

Sampled by: G. Lowe Weather Conditions: _____

Well Location: _____ Well Casing Diameter: 2-inch Depth of Well Casing: 15.65

Measuring Point: Top of PVC Casing Initial Depth to Water: 6.86 Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): 1.41 / 4.22 Well Borehole Volume: _____

Purging Method: Centrifugal Pump/Peristaltic Pump; Grundfos Submersible Pump; Centrifugal Pump/ES-60 Submersible; ES-40/-60 Submersible Pump X

Sampling Method: Peristaltic Pump; Grundfos Submersible Pump; Teflon Bailer; ES Sub. Pump @ < 1L/min. X

Purging Rate: See below Total Discharge: 4.25 Casing Volumes Purged: 3.37

Comments: _____

Waste Water Disposal: To drum.

Starting Time: _____

Time Pump on: 09:31

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.		Dil. Factor		S.C. (uS/cm)	Color
02/04/99	09:[illegible]	4	7.96	62.2		x		=	1296	
	:3[illegible]	4.75	7.93	62.4		x		=	1233	
	:36	4.5	7.88	62.3		x		=	1296	
	:36	4.75	7.82	62.5		x		=	1357	
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		

Sample Identification: 3590/MW-1 Sample Time: 09:38

TURBIDITY ANALYSIS

Finishing Time: _____ Time Analyzed: _____ NTU Value: _____

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW-2 Project Name: 3590 Enterprise Avenue, Hayward, CA Date: 02/04/99

Sampled by: G. Lowe Weather Conditions: _____

Well Location: _____ Well Casing Diameter: 2-inch Depth of Well Casing: 12.14

Measuring Point: Top of PVC Casing Initial Depth to Water: 5.21 Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): 1.11 / 3.33 Well Borehole Volume: _____

Purging Method: Centrifugal Pump/Peristaltic Pump; Grundfos Submersible Pump; Centrifugal Pump/ES-60 Submersible; ES-40/-60 Submersible Pump X

Sampling Method: Peristaltic Pump; Grundfos Submersible Pump; Teflon Bailer; ES Sub. Pump @ < 1L/min. X

Purging Rate: See below Total Discharge: 3.25 Casing Volumes Purged: 3.38

Comments: _____

Waste Water Disposal: To drum.

Starting Time: _____

Time Pump on: 0917

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.		Dil. Factor		S.C. (uS/cm)	Color
02/04/99	09:10	3.0	7.96	60.7		x		=	1295	
	09:21	3.25	7.90	61.4		x		=	1283	
	:41	3.5	7.85	61.5		x		=	1306	
	:49	3.25	7.81	61.0		x		=	1315	
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		

Sample Identification: 3590/MW-2 Sample Time: 09:24

TURBIDITY ANALYSIS

Finishing Time: _____ Time Analyzed: _____ NTU Value: _____

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW- 3 Project Name: 3590 Enterprise Avenue, Hayward, CA Date: 02/04/99

Sampled by: G. Lowe Weather Conditions: _____

Well Location: _____ Well Casing Diameter: 2-inch Depth of Well Casing: 12.15

Measuring Point: Top of PVC Casing Initial Depth to Water: 4.10 Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): 1.29 / 3.8L Well Borehole Volume: _____

Purging Method: Centrifugal Pump/Peristaltic Pump; Grundfos Submersible Pump; Centrifugal Pump/ES-60 Submersible; ES-40/-60 Submersible Pump X

Sampling Method: Peristaltic Pump; Grundfos Submersible Pump; Teflon Bailer; ES Sub. Pump @ <1L/min. X

Purging Rate: See below Total Discharge: 4.5 Casing Volumes Purged: 3.49

Comments: _____

Waste Water Disposal: To drum.

Starting Time: _____

Time Pump on: 0905

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.		Dil. Factor		S.C. (µS/cm)	Color
02/04/99	09:07	3.5	7.91	61.0		x		=	1303	
	09:08	3.75	7.86	61.2		x		=	1321	
	09:09	4	7.84	61.1		x		=	1330	
	09:10	4.25	7.80	61.6		x		=	1331	
	:	4.5				x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		

Sample Identification: 3590/MW- 3 Sample Time: 09:12

TURBIDITY ANALYSIS

Finishing Time: _____ Time Analyzed: _____ NTU Value: _____

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW- 4 Project Name: 3590 Enterprise Avenue, Hayward, CA Date: 02/04/99

Sampled by: G. Lowe Weather Conditions: _____

Well Location: _____ Well Casing Diameter: 2-inch Depth of Well Casing: 12.65

Measuring Point: Top of PVC Casing Initial Depth to Water: 5.52 Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): 1.14 / 3.42 Well Borehole Volume: _____

Purging Method: Centrifugal Pump/Peristaltic Pump; Grundfos Submersible Pump; Centrifugal Pump/ES-60 Submersible; ES-40/-60 Submersible Pump X

Sampling Method: Peristaltic Pump; Grundfos Submersible Pump; Teflon Bailer; ES Sub. Pump @ <1L/min. X

Purging Rate: See below Total Discharge: 1.8 Casing Volumes Purged: 2.05

Comments: _____

Waste Water Disposal: To drum.

Starting Time: 0

Time Pump on: 0739

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.		Dil. Factor		S.C. (µS/cm)	Color
02/04/99	0744	1.2 empty				x		=		
	07:48	1.4	7.74	61.2		x		=	2210	
	07:53	1.6	7.68	60.5		x		=	2200	
	08:51	1.7	7.65	59.9		x		=	2230	
	08:53	1.8	7.67	59.6		x		=	2210	
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		

Sample Identification: 3590/MW- 4 Sample Time: 0859

TURBIDITY ANALYSIS

Finishing Time: _____ Time Analyzed: _____ NTU Value: _____

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW- 5 Project Name: 3590 Enterprise Avenue, Hayward, CA Date: 02/04 /99

Sampled by: G. Lowe Weather Conditions: _____

Well Location: _____ Well Casing Diameter: 2-inch Depth of Well Casing: 12.68

Measuring Point: Top of PVC Casing Initial Depth to Water: ~~6.84~~ 6.82 Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): ~~3.27~~ 1.09 / 3.27 Well Borehole Volume: _____

Purging Method:
- Centrifugal Pump/Peristaltic Pump
- Grundfos Submersible Pump
- Centrifugal Pump/ES-60 Submersible
- ES-40/-60 Submersible Pump X

Sampling Method:
- Peristaltic Pump
- Grundfos Submersible Pump
- Teflon Bailer
- ES Sub. Pump @ < 1L/min. X

Purging Rate: See below Total Discharge: 3.5 Casing Volumes Purged: 3.21

Comments: _____

Waste Water Disposal: To drum.

Starting Time: 09:21

Time Pump on: _____

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.		Dil. Factor		S.C. (µS/cm)	Color
02/04/99	~~09~~ :25	2.5	7.55	60.0		x		=	1916	
	:25	2.75	7.52	60.1		x		=	1705	
	:26	3.0	7.57	60.2		x		=	1880	
	:27	3.25	7.49	60.0		x		=	1712	
	:	3.5				x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		
	:					x		=		

Sample Identification: 3590/MW- 5 Sample Time: 08:29

TURBIDITY ANALYSIS

Finishing Time: _____ Time Analyzed: _____ NTU Value: _____

H2OGEOL
A GROUND WATER CONSULTANCY

P.O. Box 2165 ■ Livermore, California 94551 ■ (925) 373-9211

ATTACHMENT B

LABORATORY ANALYTICAL REPORT
SAMPLE CHAIN OF CUSTODY

CHROMALAB, INC.

Environmental Services (SDB)

February 18, 1999 *Submission #:* 9902054

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: February 4, 1999

re: One sample for Volatile Halogenated Organics analysis.
Method: *SW846 Method 8010A July 1992*

Client Sample ID: 3590/MW-1
Spl#: 227469 *Matrix:* WATER
Sampled: February 4, 1999 *Run#:* 17274 *Analyzed:* February 4, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	105	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	0.82	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	2.9	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	42	0.50	N.D.	95.5	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	1.2	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	123	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE (Freon 113)	N.D.	2.0	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1
DICHLORODIFLUOROMETHANE	N.D.	1.0	N.D.	--	1

Oleg Nemtsov
Analyst

Michael Verona
Operations Manager

925-373-9222 fx 0218
1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID 868-0140157

CHROMALAB, INC.

Environmental Services (SDB)

February 18, 1999 *Submission #:* 9902054

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: February 4, 1999

re: One sample for Volatile Halogenated Organics analysis.
Method: *SW846 Method 8010A July 1992*

Client Sample ID: 3590/MW-2
Spl#: 227470 *Matrix:* WATER
Sampled: February 4, 1999 *Run#:* 17274 *Analyzed:* February 4, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	105	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	3.5	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	2.7	0.50	N.D.	95.5	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	N.D.	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	123	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	2.0	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1
DICHLORODIFLUOROMETHANE	N.D.	1.0	N.D.	--	1

Oleg Nemtsov
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Michael Verona
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CHROMALAB, INC.

Environmental Services (SDB)

February 18, 1999 *Submission #:* 9902054

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: February 4, 1999

re: One sample for Volatile Halogenated Organics analysis.
Method: *SW846 Method 8010A July 1992*

Client Sample ID: **3590/MW-3**
Spl#: 227471 *Matrix:* WATER
Sampled: February 4, 1999 *Run#:* 17274 *Analyzed:* February 4, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	11	0.50	N.D.	105	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	4.5	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	N.D.	0.50	N.D.	95.5	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	N.D.	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	123	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	2.0	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1
DICHLORODIFLUOROMETHANE	N.D.	1.0	N.D.	--	1

Oleg Nemtsov
Analyst

Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

February 18, 1999 *Submission #:* 9902054

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: February 4, 1999

re: One sample for Volatile Halogenated Organics analysis.
Method: *SW846 Method 8010A July 1992*

Client Sample ID: **3590/MW-4**
Spl#: 227472 *Matrix:* WATER
Sampled: February 4, 1999 *Run#:* 17274 *Analyzed:* February 4, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	1.1	0.50	N.D.	105	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	N.D.	0.50	N.D.	95.5	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	N.D.	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	123	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	2.0	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1
DICHLORODIFLUOROMETHANE	N.D.	1.0	N.D.	--	1

Oleg Nemtsov
Analyst

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Operations Manager

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(925) 484-1919 • Facsimile (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

February 18, 1999 *Submission #:* 9902054

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: February 4, 1999

re: One sample for Volatile Halogenated Organics analysis.
Method: *SW846 Method 8010A July 1992*

Client Sample ID: **3590/MW-5**
Spl#: 227473 *Matrix:* WATER
Sampled: February 4, 1999 *Run#:* 17274 *Analyzed:* February 4, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	160	0.50	N.D.	105	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	0.92	0.50	N.D.	--	1
1,1-DICHLOROETHANE	19	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	7.0	0.50	N.D.	95.5	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	N.D.	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	123	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	2.0	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1
DICHLORODIFLUOROMETHANE	N.D.	1.0	N.D.	--	1

Oleg Nemtsov
Analyst

Michael Verona
Operations Manager

925-373-9222 FAX 8818 1220 Quarry Lane • Pleasanton, California 94566-4756

9902054/227469 - 73

44425

H2OGEOL A GROUNDWATER CONSULTANCY

P.O. BOX 2165
LIVERMORE, CALIFORNIA 94551-2165

SAMPLER(S): Gary D. Lowe

SAMPLER'S SIGNATURE:

CHAIN OF CUSTODY

DATE: 02/04/99 PAGE 1 of 1

Sample Source:
Runnels Industries
3590 Enterprise Avenue
Hayward, California

ANALYTE

SAMPLE RECIEPT:
TOTAL No of CONTAINERS 10
CHAIN OF CUSTODY SEALS
RECD GOOD CONDITION/COLD
CONFORMS TO RECORD
LAB NO.

FAX RESULTS TO (510) 373-9222

SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.	Halogenated Halocarbon Compounds EPA 8010	NUMBER OF CONTAINERS
3590/MW-1	02/04/99	09:38	WATER		X	2
3590/MW-2	02/04/99	09:34	WATER		X	2
3590/MW-3	02/04/99	09:12	WATER		X	2
3590/MW-4	02/04/99	08:59	WATER		X	2
3590/MW-5	02/04/99	08:29	WATER		X	2

SUBM #: 9902054 REP: GC
CLIENT: H2OGEOL
DUE: 02/11/99
REF #:44425

NOTE:
10-DAY
TURNAROUND

RELINQUISHED BY:
SIGNATURE
TIME 10:15
PRINTED NAME Gary D. Lowe
DATE 02/04/99
COMPANY H2OGEOL

RELINQUISHED BY:
SIGNATURE
TIME
PRINTED NAME
DATE
COMPANY

RECEIVED BY:
SIGNATURE
TIME
PRINTED NAME
DATE
COMPANY

RECEIVED BY LABORATORY:
SIGNATURE D. Cassidy 10:15
PRINTED NAME C. Cassidy 2/4/99
DATE
COMPANY Chromalab, Inc. 02/04/99