

A GROUND WATER CONSULTANCY

ENVIRONMENTAL PROTECTION

98 MAY 28 AM 10:12

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

May 26, 1998

RE: First of Four Required Groundwater Monitoring Events (Second Quarter, 1998) at Runnels Industries, Inc., 3590 Enterprise Avenue, Hayward, CA.

Dear Ms. Logan;

This letter report documents the first 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 08:44 and 08:54 on May 07, 1998. The depth to water was converted to potentiometric surface elevation by subtracting the measured depths to water from the casing top elevation. This information is presented in the following table.

WELL AND GROUNDWATER ELEVATIONS
MAY 07, 1998

Table with 5 columns: Well Number, Top of Casing Elevation (feet, msl), Time of Depth Measurement, Depth to Water (feet), Groundwater Surface Elevation (feet, msl). Rows include MW-1 through MW-5.

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:

Well Triangle	Gradient Direction	Gradient
1,2,5	S 69.98°W	0.00388
2,3,5	N 84.72°W	0.00799
3,4,5	N 65.82°W	0.00667
1,4,5	<u>S 77.59°W</u>	<u>0.00151</u>
Average	S 89.26°W	0.00501

Figure 2 presents a potentiometric surface map showing well locations and groundwater surface contours as measured on May 07, 1998 using the method of minimum area triangles in a minimum bounded field.

## 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.

Ms. Madhulla Logan  
May 26, 1998  
Page 3

Eight 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
Vinyl Chloride	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1-Dichloroethane	<0.50	0.60	2.9	<0.50	16	5.0
1,1-Dichloroethene	2.4	<0.50	4.4	<0.50	140	6.0
Cis-1,2-Dichloroethene	3.3	<0.50	<0.50	<0.50	<0.50	6.0
Trichloroethene	39	<0.50	<0.50	2.7	<0.50	5.0
Tetrachloroethene	1.3	<0.50	<0.50	<0.50	<0.50	5.0

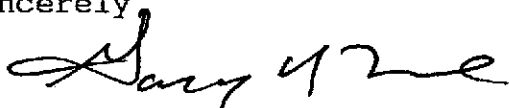
Primary compounds 1,1-Dichloroethane (11-DCA) and 1,1-Dichloroethene (11-DCE) were present in up/cross gradient well MW-3 and 11-DCA was present in up/cross gradient well MW-2. Down/cross gradient well MW-1 contained 11-DCE. These compounds were below their respective MCLs. In centrally located monitoring well MW-5 11-DCA exceeded its MCL by a factor of three and 11-DCE by a factor of 23. 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 Trichloroethene (TCE) and Tetrachloroethene (PERC) were found in down/cross gradient wells MW-1 and MW-4. The MCL for TCE was exceeded in MW-1.

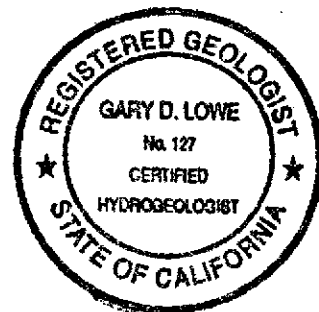
The biodegradation product vinyl chloride was found at its MCL (0.5 µg/L) in MW-5 and the biodegradation product Cis-1,2-Dichloroethene was found below its MCL in MW-1.

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

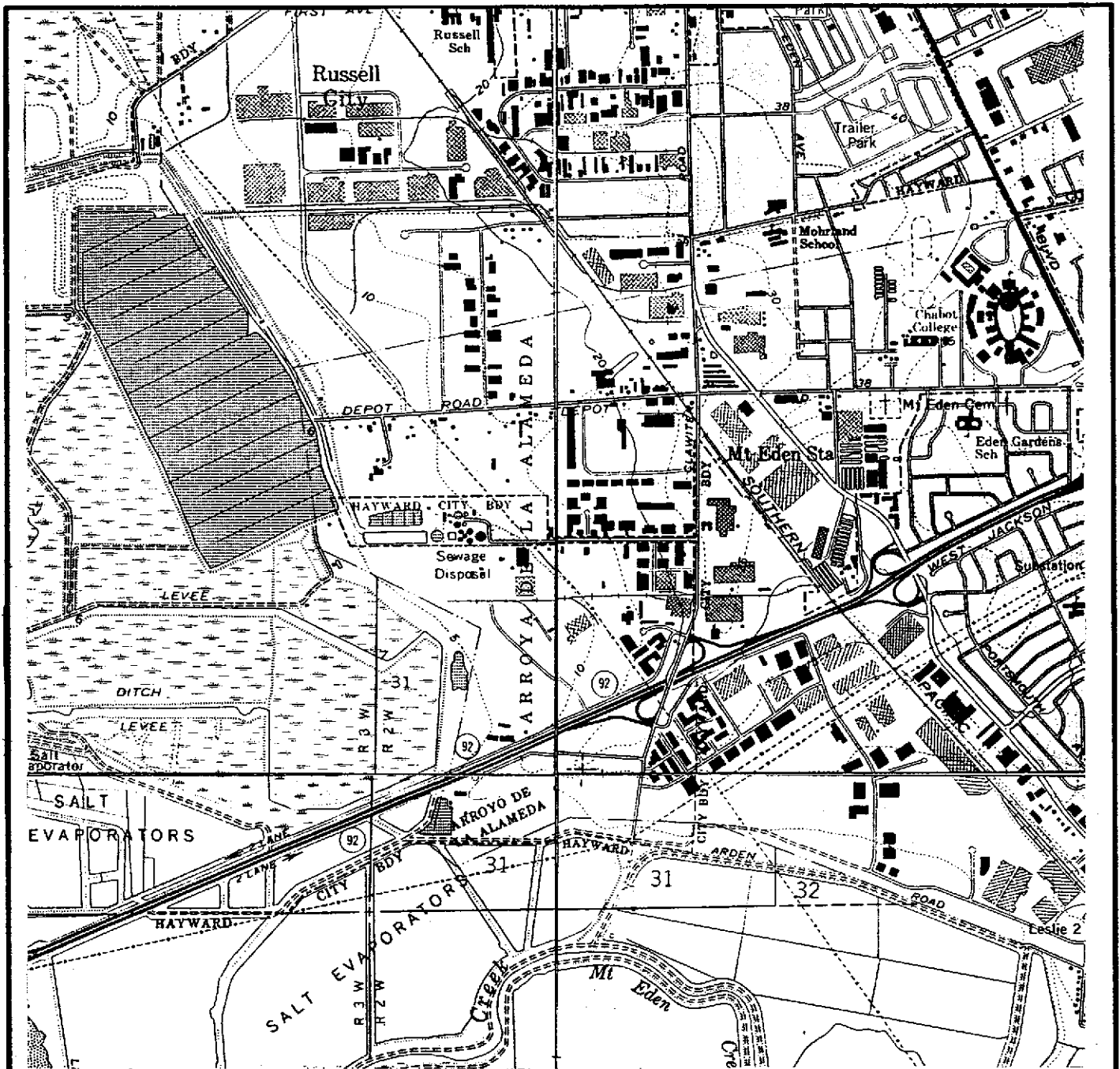
Sincerely,



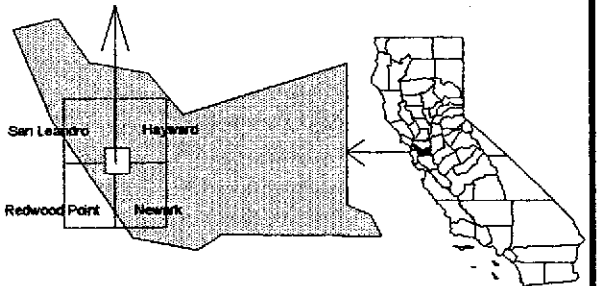
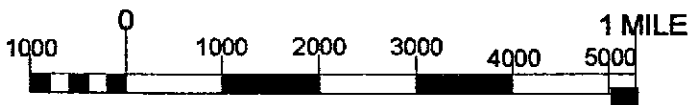
Gary D. Lowe, R.G., C.E.G., C.HG.  
Principal, Hydrogeologist



xc: Mr. Al Gant



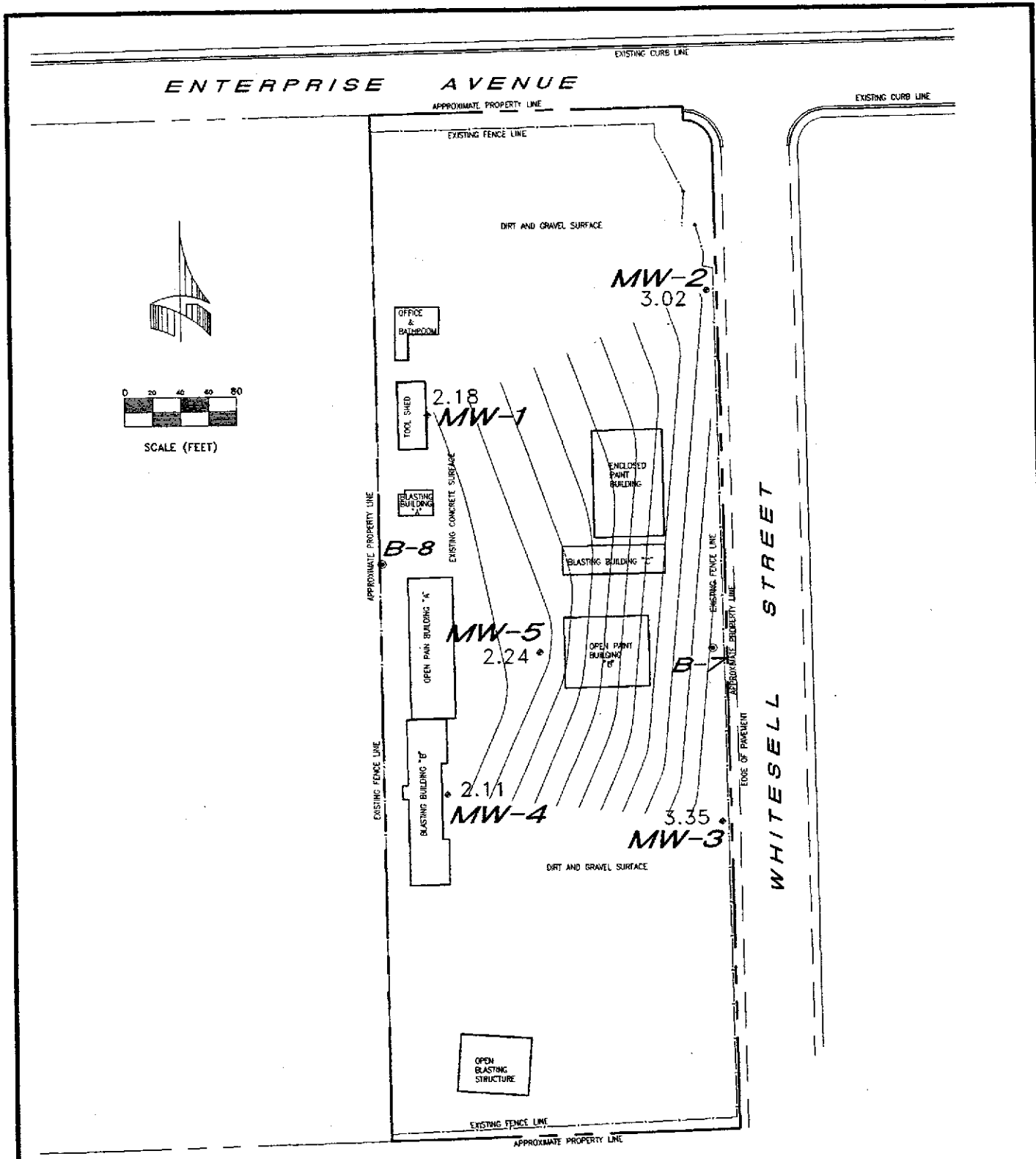
Base from U.S. Geological Survey  
 7.5 Minute Series Topographic Maps  
 San Leandro - Hayward  
 Redwood Point - Newark  
 Editions of 1959, Photorevised 1980



**H<sub>2</sub>OGEOL**  
 A GROUND WATER CONSULTANCY

**SITE LOCATION MAP**  
**RUNNELS INDUSTRIES, INC.**  
**3690 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



POTENTIOMETRIC SURFACE MAP FOR 05/07/98  
 RUNNELS INDUSTRIES, INC.  
 3690 ENTERPRISE AVENUE  
 HAYWARD, CALIFORNIA

FIGURE  
 2



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: 05/07/98

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: 7.78 Final Depth to Water: Not measured

Casing Volume (1 vol./3 vol): 1.26 / 3.78 Well Borehole Volume: \_\_\_\_\_

Purging Method: Centrifugal Pump/Peristaltic Pump Sampling Method: Peristaltic Pump  
 Grundfos Submersible Pump Grundfos Submersible Pump  
 Centrifugal Pump/ES-60 Submersible Teflon Bailor  
 ES-40/60 Submersible Pump X ES Sub. Pump @ <1L/min. X

Purging Rate: See below Total Discharge: \_\_\_\_\_ Casing Volumes Purged: \_\_\_\_\_

Comments: \_\_\_\_\_

Waste Water Disposal: To drum.

Starting Time: 10:07

Time Pump on: 10:06

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (uS/cm)	Color
05/07/98	:				x	=		
	10:11	4	7.78	62.1	x	=	1760	
	10:13	4.5	7.51	61.8	x	=	1800	
	10:15	5	7.77	62.2	x	=	1810	
	10:16	5.5	7.71	62.2	x	=	1790	
	:				x	=		
	:				x	=		
	:				x	=		
	:				x	=		
	:				x	=		
	:				x	=		

Sample Identification: 3590/MW-1 Sample Time: 10:18

TURBIDITY ANALYSIS

Finishing Time: 10:25 Time Analyzed: \_\_\_\_\_ NTU Value: \_\_\_\_\_

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW-2 Project Name: 3590 Enterprise Avenue, Hayward, CA Date: 05/07/98

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: 5.84 Final Depth to Water: Not measured

Casing Volume (1 vol./3 vol): 1.01 / 3.02 Well Borehole Volume: \_\_\_\_\_

Purging Method: Centrifugal Pump/Peristaltic Pump Sampling Method: Peristaltic Pump  
 Grundfos Submersible Pump Grundfos Submersible Pump  
 Centrifugal Pump/ES-60 Submersible Teflon Bailor  
 ES-40/60 Submersible Pump X ES Sub. Pump @ <1L/min. X

Purging Rate: See below Total Discharge: \_\_\_\_\_ Casing Volumes Purged: \_\_\_\_\_

Comments: Sample 209:36 & 259

Waste Water Disposal: To drum.

Starting Time: 09:45

Time Pump on: 09:50

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (uS/cm)	Color
05/07/98	:				x	=		
	09:57	3	7.47	62.2	x	=	1610	
	09:58	3.5	7.41	62.3	x	=	1600	
	09:59	4	7.76	62.7	x	=	1590	
	09:59	4.5	7.25	62.7	x	=	1580	
	:				x	=		
	:				x	=		
	:				x	=		
	:				x	=		
	:				x	=		
	:				x	=		

Sample Identification: 3590/MW-2 Sample Time: 09:59

TURBIDITY ANALYSIS

Finishing Time: 10:07 Time Analyzed: \_\_\_\_\_ NTU Value: \_\_\_\_\_

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW-3 Project Name: 3590 Enterprise Avenue, Hayward, CA Date: 05/07/98

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: 4.56 Final Depth to Water: Not measured

Casing Volume (1 vol./3 vol): 1.24/3.64 Well Borehole Volume: \_\_\_\_\_

Purging Method: Centrifugal Pump/Peristaltic Pump  
Grundfos Submersible Pump  
Centrifugal Pump/ES-80 Submersible  
ES-40/80 Submersible Pump X  
 Sampling Method: Peristaltic Pump  
Grundfos Submersible Pump  
Teflon Bailor  
ES Sub. Pump @ <1L/min. X

Purging Rate: See below Total Discharge: \_\_\_\_\_ Casing Volumes Purged: \_\_\_\_\_

Comments: \_\_\_\_\_

Waste Water Disposal: To drum.

Starting Time: 09:26

Time Pump on: 09:31

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (uS/cm)	Color
05/07/98	:					x	=	
	09:35	4	7.79	63.0		x	= 1590	
	09:42	4.5	7.78	63.1		x	= 1580	
	09:49	5	7.76	63.0		x	= 1590	
	09:57	5.5	7.75	62.9		x	= 1760	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	

Sample Identification: 3590/MW-3 Sample Time: 09:40

TURBIDITY ANALYSIS

Finishing Time: 09:45 Time Analyzed: \_\_\_\_\_ NTU Value: \_\_\_\_\_

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW-4 Project Name: 3590 Enterprise Avenue, Hayward, CA Date: 05/07/98

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: 6.62 Final Depth to Water: Not measured

Casing Volume (1 vol./3 vol): 0.96/2.89 Well Borehole Volume: \_\_\_\_\_

Purging Method: Centrifugal Pump/Peristaltic Pump  
Grundfos Submersible Pump  
Centrifugal Pump/ES-80 Submersible  
ES-40/80 Submersible Pump X  
 Sampling Method: Peristaltic Pump  
Grundfos Submersible Pump  
Teflon Bailor  
ES Sub. Pump @ <1L/min. X

Purging Rate: See below Total Discharge: \_\_\_\_\_ Casing Volumes Purged: \_\_\_\_\_

Comments: Empty at 08:05 ; 09:10

Waste Water Disposal: To drum.

Starting Time: 08:59

Time Pump on: 09:07

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (uS/cm)	Color
05/07/98	08:59	2				x	=	
	09:12	3.5	7.24	62.2		x	= 2570	
	09:14	4	7.12	61.8		x	= 2700	
	09:16	4.5	7.20	61.6		x	= 2710	
	09:18	5	7.22	61.3		x	= 2500	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	

Sample Identification: 3590/MW-4 Sample Time: 09:21

TURBIDITY ANALYSIS

Finishing Time: 09:26 Time Analyzed: \_\_\_\_\_ NTU Value: \_\_\_\_\_



**LOG OF WELL SAMPLING ACTIVITIES**

Well Identification: MW-5 Project Name: 3580 Enterprise Avenue, Hayward, CA Date: 05/07/98

Sampled by: G. Lowe Weather Conditions: \_\_\_\_\_

Well Location: \_\_\_\_\_ Well Casing Diameter: 2-inch Depth of Well Casing: 12.63

Measuring Point: Top of PVC Casing Initial Depth to Water: 6.62 Final Depth to Water: Not measured

Casing Volume (1 vol./3 vol): 0.92 / 2.91 Well Borehole Volume: \_\_\_\_\_

Purging Method: Centrifugal Pump/Peristaltic Pump Sampling Method: Peristaltic Pump  
Grundfos Submersible Pump Grundfos Submersible Pump  
Centrifugal Pump/ES-60 Submersible Teflon Bailor  
ES-40/60 Submersible Pump X ES Sub. Pump @ <1L/min. X

Purging Rate: See below Total Discharge: \_\_\_\_\_ Casing Volume Purged: \_\_\_\_\_

Comments: \_\_\_\_\_

Waste Water Disposal: To drum.

Starting Time: 10:25

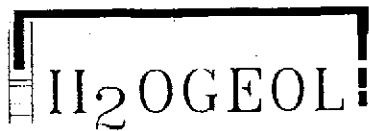
Time Pump on: 10:30

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (µS/cm)	Color
05/07/98	:					x	=	
	10:32	3	7.15	61.8		x	=	2090
	10:34	3.5	7.18	61.5		x	=	2010
	10:35	4	7.16	61.8		x	=	2090
	10:36	4.5	7.14	61.7		x	=	2040
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	

Sample Identification: 3580/MW-5 Sample Time: 10:36

**TURBIDITY ANALYSIS**

Finishing Time: 10:45 Time Analyzed: \_\_\_\_\_ NTU Value: \_\_\_\_\_



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)

May 15, 1998

Submission #: 9805117

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES  
Received: May 7, 1998

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

Client Sample ID: 3590/MW-3

Spl#: 184640

Sampled: May 7, 1998

Matrix: WATER

Run#: 12744

Analyzed: May 12, 1998

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (ug/L)	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	4.4	0.50	N.D.	97.0	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	2.9	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.	104	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.	93.0	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

Oleg Nemtsov  
Chemist

Michael Verona  
Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

May 15, 1998

Submission #: 9805117

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES  
Received: May 7, 1998

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

Client Sample ID: 3590/MW-2

Spl#: 184639

Sampled: May 7, 1998

Matrix: WATER

Run#: 12744

Analyzed: May 12, 1998

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (ug/L)	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.	97.0	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	0.60	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.	104	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.	93.0	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

Oleg Nemtsov  
Chemist

Michael Verona  
Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

May 15, 1998

Submission #: 9805117

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES  
Received: May 7, 1998

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

Client Sample ID: 3590/MW-1

Spl#: 184638  
Sampled: May 7, 1998

Matrix: WATER  
Run#: 12744

Analyzed: May 12, 1998

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	2.4	0.50	N.D.	97.0	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	3.3	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	39	0.50	N.D.	104	1
Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240A					
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	1.3	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	93.0	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

Oleg Nemtsov  
Chemist

Michael Verona  
Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

May 15, 1998

Submission #: 9805117

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES  
Received: May 7, 1998

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

Client Sample ID: 3590/MW-4

Spl#: 184641  
Sampled: May 7, 1998

Matrix: WATER  
Run#: 12744

Analyzed: May 12, 1998

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.	97.0	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	2.7	0.50	N.D.	104	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.	93.0	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

Oleg Nemtsov  
Chemist

Michael Verona  
Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

May 15, 1998

Submission #: 9805117

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES  
Received: May 7, 1998

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

Client Sample ID: 3590/MW-5

Spl#: 184642

Matrix: WATER

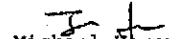
Sampled: May 7, 1998

Run#: 12744

Analyzed: May 12, 1998

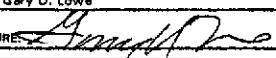
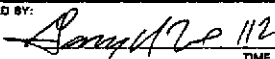
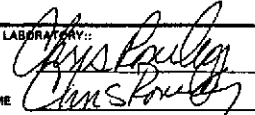
ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	0.50	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	140	0.50	N.D.	97.0	1
Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240A					
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	16	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	7.4	0.50	N.D.	104	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
CHLOROENZENE	N.D.	0.50	N.D.	93.0	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROENZENE	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

  
Oleg Nemtsov  
Chemist

  
Michael Verona  
Operations Manager

9805117/134633-42

39728

H <sub>2</sub> OGEOL A GROUNDWATER CONSULTANCY						CHAIN OF CUSTODY				
P.O. BOX 2165 LIVERMORE, CALIFORNIA 94551-2165						DATE: 05/07/98	PAGE 1	of 1		
SAMPLER(S): Gary D. Lowe						Sample Source: Runnels Industries 3590 Enterprise Avenue Hayward, California				
SAMPLER'S SIGNATURE: 						ANALYTE				
SAMPLE RECEIPT: TOTAL No. of CONTAINERS _____ CHAIN OF CUSTODY SEALS _____ RECT'D GOOD CONDITION/COLD _____ CONFORMS TO RECORD _____ LAB NO. _____						SUBM #: 0389117 REP: GC CLIENT: H2OGEOL DUE: 05/14/98 REF: H:39728				
FAX RESULTS TO (510) 373-9222						Halogenated Hydrocarbon C EPA 8010				
SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.						NUMBER OF CON
3590/MW-1	05/07/98	10:18	WATER		X					2
3590/MW-2	05/07/98	09:59	WATER		X					2
3590/MW-3	05/07/98	09:40	WATER		X					2
3590/MW-4	05/07/98	09:31	WATER		X					2
3590/MW-5	05/07/98	10:38	WATER		X					2
						NOTE: 10-DAY TURNAROUND				
RELINQUISHED BY: SIGNATURE:  PRINTED NAME: Gary D. Lowe DATE: 05/07/98						RELINQUISHED BY: SIGNATURE: _____ PRINTED NAME: _____ DATE: _____				
RECEIVED BY: SIGNATURE: _____ PRINTED NAME: _____ DATE: _____						RECEIVED BY LABORATORY: SIGNATURE:  PRINTED NAME: Chris Powell DATE: 05/12/98				

510-373-9222 x 6614

1220 Quarry Lane • Pleasanton, California 94566-4758  
(925) 484-1919 • Facsimile (925) 484-1098  
Federal ID #08-0140157

FORM R-802008-01-01-13-97